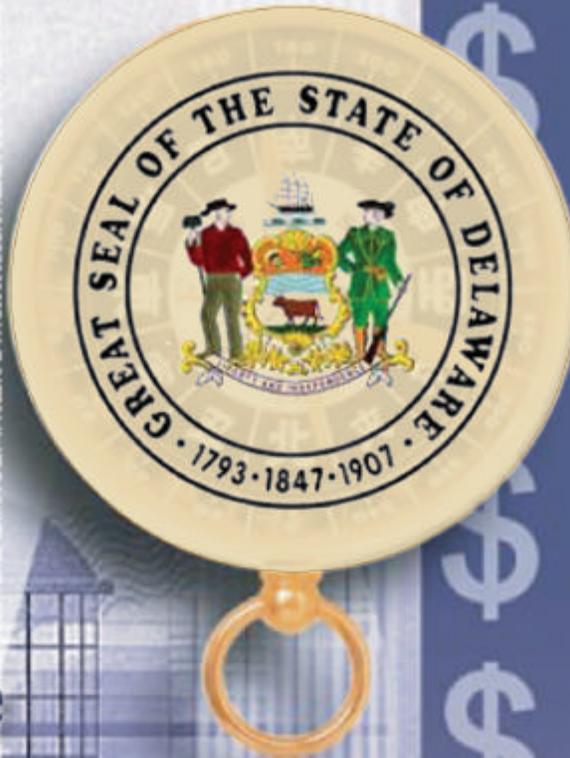


Delaware Strategies for State Policies and Spending

5 Year Update
July, 2004



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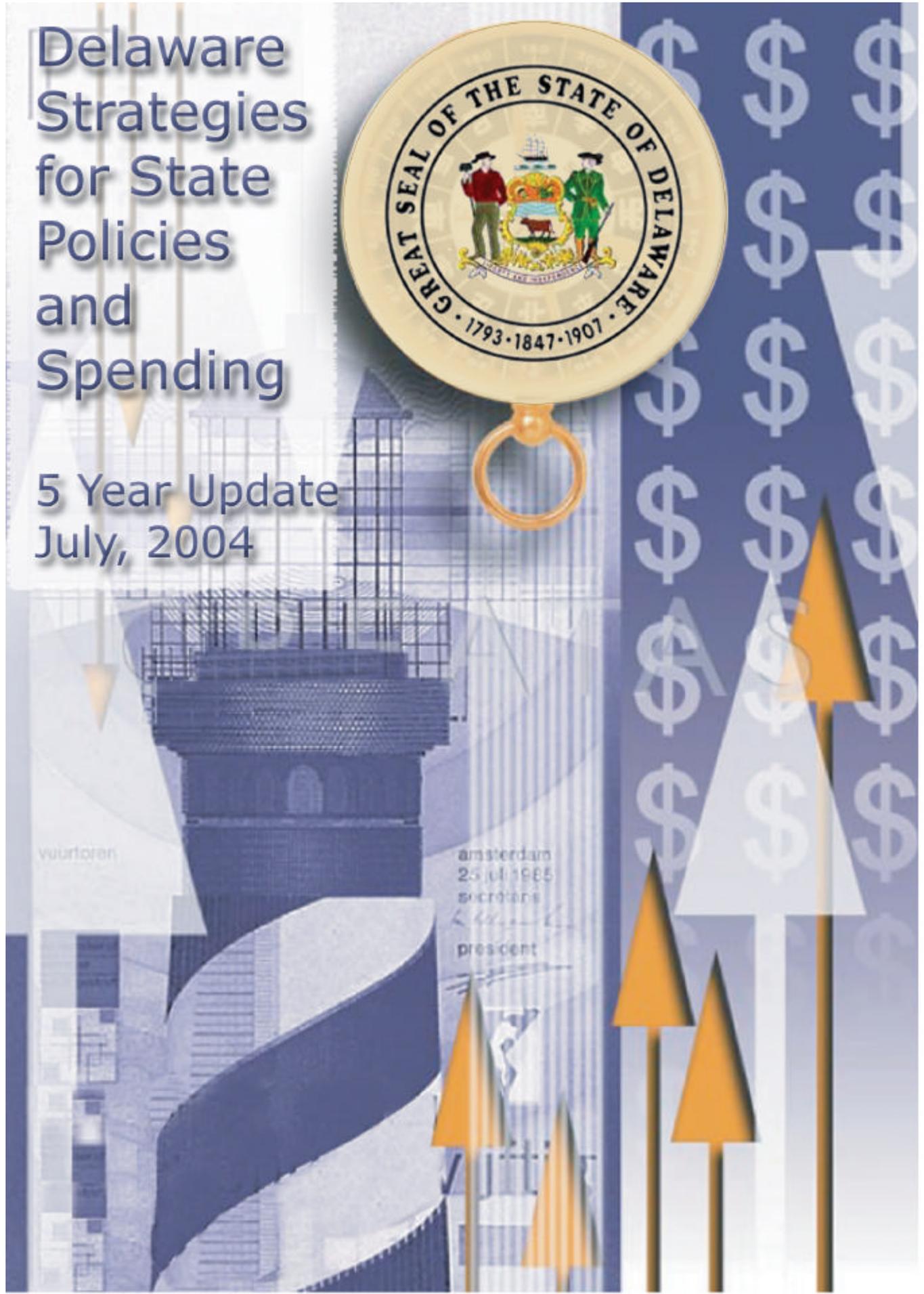


Table of Contents

Executive Summary	i
I. Introduction	4
A. Using this document	4
B. Purpose	5
C. Landmark achievements since 2001	6
D. Public outreach	8
E. Why work towards a more livable Delaware?	9
F. Timeline	11
G. Review of historical planning actions	13
H. The State Strategy Goals	16
I. Overall indicators of development concern	17
J. Legal basis	19
K. Why a 5 year update?	21
II. Coordinating Government	22
A. Executive Order 14	22
B. Key Legislation	23
1. HB 255	23
2. Livable Delaware Advisory Council	24
3. PLUS	25
C. The Strategies in Relation to County and Municipal Plans	27
III. Directing Growth	31
A. Strategy Maps (just behind the Directing Growth index tab)	
B. Data Approach	31
C. Strategy Areas: Descriptions	32
• Investment Level 1	32
• Investment Level 2	38
• Investment Level 3	42
• Investment Level 4	50
D. Other Map Designations	55
IV. Investing Tax Dollars Effectively	57
A. The State Role in Infrastructure Provision	57
V. Improving Housing Choice	63
A. Compact Development	63
B. Open Space Design Technique	68

Table of Contents

C. Community Design	71
D. Promoting Development in Growth Areas	75
E. State Housing Authority & Home Financing	76
VI. Preserving Delaware	81
A. Green Infrastructure	81
B. Strategies for preserving open space and farmland	84
C. The Open Space Program	85
D. Agricultural Lands Preservation	87
E. Forest Legacy Program	89
F. Urban and Community Forestry	90
G. Growth and Water Quality	91
H. Growth and Air Quality	93
I. Growth and Water Supplies	94
J. Growth and Land Management	95
VII. Involving Citizens	97
A. Citizen’s involvement in land use decisions	97
B. Making an Effective Presentation at a Public Hearing	99
VIII. Promoting Sustainable Jobs	103
A. Promoting high quality, sustainable jobs	103
B. Brownfields	108
C. Infill and Redevelopment	109
IX. Works Cited	113
Appendices	
Appendix A -- Matrix of Strategies for State Policies and Spending in Investment Levels	A-1
Appendix B -- Absorbtion Analysis	B-1
Appendix C – Spatial Data Analysis Approach	C-1

Executive Summary

The purpose of this document, as with the original *Strategies for State Policies and Spending* document, is to coordinate land use decision-making with the provision of infrastructure and services in a manner that make best use of our natural and fiscal resources. The importance of such coordination lies in the fact that land use decisions are made at the local level while the bulk of infrastructure (e.g., roads and schools) and services (e.g., emergency services and social services) that support land use decisions are funded by the State.

Thus, the development of this document with local governments and citizens helps to create a unified view toward growth and preservation priorities that all governments can use to allocate resources. To demonstrate the State's commitment to principles of this document, State agencies are directed to fund only those projects that are in compliance with these strategies.

In essence, there are two fundamental policies that guide the State Strategies:

1. State spending should promote quality, efficiency, and compact growth; and,
2. State Policies should foster order and resource protection, not degradation.

It is important to note that none of the maps contained within this document are “parcel-based,” so it is still necessary to thoroughly investigate the constraints of a particular land parcel with the local jurisdiction that controls the land use decision. Thus, any land development activity must meet all of the relevant local codes and ordinances.

This document is intended for a diverse audience including state agencies, local governments, developers, and citizens. The various chapters are organized around topic areas, and tabbed for ease of use.

Following is a brief discussion of the contents of each section of this document.

Introduction

In 1999, the Cabinet Committee on State Planning Issues approved the first State Strategies. The first document was developed to guide state investment decisions to promote efficient development patterns, protect agriculture and open space, discourage sprawl, and communicate with local governments on land use matters. This document is a scheduled five- year update to the original document.

During the update process the Office of State Planning Coordination consulted state agencies, county governments, metropolitan planning organizations, and local governments for comments. State certified municipal and county comprehensive plans were also referred to during the data gathering process.

Executive Summary

In addition, the State Planning Office held a total of 7 public meetings – two in each of Delaware’s three counties, and one in the city of Wilmington to accept the public’s comments on the State Strategies text and maps. Comments were also accepted in writing, through e-mail and also via a specially created online form.

Coordinating Government

Governor Minner developed her Livable Delaware agenda to enhance efforts to implement the State Strategies. To do this she focused her administration’s efforts on administrative and legislative initiatives to strengthen land use planning efforts at the State and local levels. Key initiatives included:

- The issuance of Executive Order 14 – directing State agencies to develop Livable Delaware plans;
- House Bill 255 – a far reaching piece of legislation that created a plan certification process and reformed the annexation process, among other things; and,
- Senate Bill 65 – Preliminary Land Use Services (PLUS) for the review of development projects early in the development process.

Directing Growth

In this update, the map designations have been changed from names, such as “**Community**”, “**Developing**” and “**Rural**” to **Levels 1 – 4** and “**Out-of-Play**” to avoid confusion caused by misinterpreting names. Levels 1 through 3 identify which areas of the state are most prepared for growth and where the state can make the most cost-effective infrastructure investments, for the likes of schools, roads and public safety. In the Level 4 areas where development is not currently preferred, the state will make investments that will help preserve a rural character such as, investments to promote open space and agriculture. Out-of-Play lands are those that generally cannot be developed for reasons including, they are Federal- or State-owned protected lands, parkland, the development rights have been purchased, or State or local regulations prohibit development on them.

Investing Effectively

The State makes significant investments influenced by where and how growth occurs. For instance, 201 schools receive nearly two-thirds of their funding from the State; DelDOT is responsible for maintaining nearly 90% of the over 12,000 lane miles in Delaware (the nationwide average for states is approximately 20%); and the State also funds 14 State Service Centers that deliver more than 160 programs and services to accommodate approximately

Executive Summary

600,000 visits annually. Thus, the need to coordinate with those making land use decisions cannot be stressed enough.

In part, the State Strategies are meant to act as a guide for adequate infrastructure provision throughout Delaware while minimizing the burden on the State's taxpayers. Thus, the three general strategies are:

1. Towns, counties and the state are collectively involved in the infrastructure planning process;
2. Existing infrastructure should be utilized before new infrastructure is constructed; and,
3. When it is necessary to expand new infrastructure, it should be expanded in a logical manner that aims to serve first those areas closest to existing services.

Improving Housing Choice

Various house siting techniques can provide a great deal of cost savings which ultimately can open up housing choices for many more people. In particular use of properly designed compact development can significantly reduce housing costs. Besides the decrease in infrastructure costs (on average, about 32 %) compact development produces a more diverse range of transportation options, a more economical extension of services and utilities, and the location near existing developed areas and higher densities enable natural qualities and agriculture areas to be preserved and protected.

Preserving Delaware

Just as "built" infrastructure such as roads, water, sewer and electric are always carefully planned; so should "green infrastructure" be planned, designed, and invested in. The State has allocated and continues to allocate significant resources for land preservation. Since 1990, the State's Open Space program has invested more than \$209 million to preserve more than 43,000 acres of land. In addition, more than 76,000 acres of agriculture land have been permanently protected with more than \$90 million spent for the purchase of preservation easements. Planning is essential because much of this activity requires contiguous parcels to be effective. The Livable Delaware Advisory Council's Green Infrastructure Subcommittee was charged with recommending strategies for conservation and management of natural resources, recreational lands and working lands. They were also asked to work towards creating an interconnected network of green spaces which this chapter reviews.

Executive Summary

Involving Citizens

The best opportunity for citizens to get involved with land use decision making process is to attend local government public hearings and workshops for local planning commissions and boards of adjustments. The development of a Comprehensive Plan is perhaps the most important step for the town or county. This document sets the overall pattern of land use. Additionally, all land use regulations are based on this document. Many jurisdictions conduct extensive public participation efforts to gauge citizen input on these documents.

Promoting Sustainable Jobs

Quality jobs located in areas that can support them and that enhance Delaware's quality of life is the focus of Delaware's economic development programs. Some of the key issues in promoting sustainable jobs include promoting infill and redevelopment especially of brownfield sites. Making the redevelopment of brownfields easier and more financially attractive has been a key goal of Livable Delaware. Other considerations are promoting cleaner, high-paying jobs of the future to replace jobs in the manufacturing sector and helping Delaware's cities and towns attract entrepreneurs who fuel the New Economy.

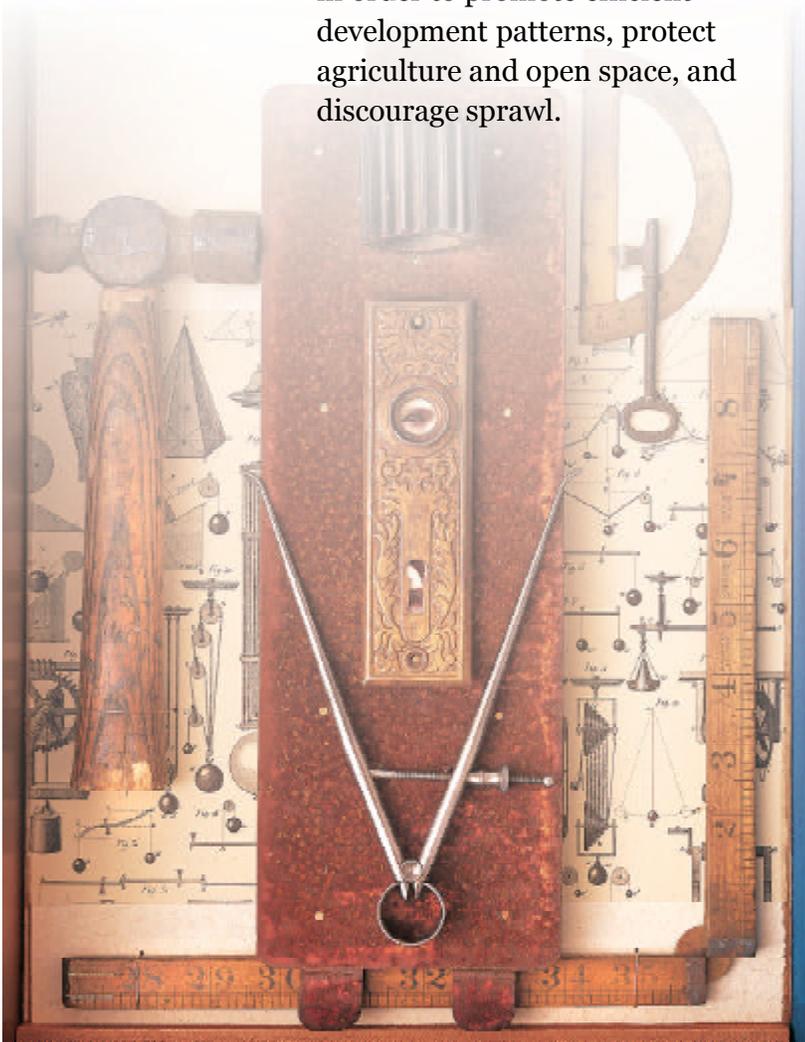
Introduction

Using this document

The Strategies for State Policies and Spending will be used to guide State agency operating and capital budget requests. With these policies as a guideline, state government will make appropriate, cost effective investments in all areas of the State in order to promote efficient development patterns, protect agriculture and open space, and discourage sprawl.

This document is intended for a diverse audience, and will be used by State Agencies, local governments, and citizens. The various chapters are organized around topic areas, and tabbed for ease of access. It is hoped that this approach will make this document accessible to the wide range of Delawareans who will use it.

It is important to note that none of the maps contained within this document are “parcel-based”, so it is still necessary to thoroughly investigate the constraints of particular land parcel, even though they may be contained in the one of the growth oriented investment levels of the Strategies for State Policies and Spending. It is equally important to note that while this document and map series directs State investments, it is not a land use plan. In Delaware, the State has delegated land use authority to the local governments. Any land development activity must meet all of the relevant local codes and ordinances.



Introduction

Purpose:

This five-year update of the **Strategies for State Policies and Spending** builds on the groundwork laid in 1999 by the Cabinet Committee on State Planning Issues. The document is a result of extensive coordination with local governments and state agencies to determine which areas are most prepared for growth and where the state can make the most cost-effective investments in roads, schools and other public facilities and services.

In 2001, Governor Ruth Ann Minner announced her Livable Delaware agenda, which embraced the 1999 efforts but determined to make them real. Her first initiative was Executive Order 14, which called on state agencies to implement the **Strategies for State Policies and Spending** by reviewing their budgets, programs and policies and aligning them with the principles of Livable Delaware.

Those principles are:

1. Invest taxpayers' dollars efficiently while slowing sprawl
2. Preserve farmland and open space
3. Encourage infill and redevelopment that avoids greenfields
4. Facilitate attractive affordable housing
5. Preserve our quality of life through sustainable development



Introduction

Landmark Achievements since 2001

Since 2001, landmark legislation and policy changes have begun to change how and where development occurs in Delaware. Among those changes:

- **House Bill 255**, enacted in 2001, requires local governments to adopt comprehensive plans showing future growth areas before they can annex. They also must complete a plan of services detailing how and when services will be provided to the annexed parcel (i.e. sewer, utilities, police). The law also requires local governments to rezone within 18 months of adopting those comprehensive plans, ensuring that the plans provide predictability to residents, developers, and the state as it weighs where to make investments. The state has provided almost \$300,000 in financial and technical assistance, and more than 90% of our 57 municipalities are engaged in some stage of updating or developing their plan.
- **House Bill 192**, passed in 2001, changed the formula for open space acquisition via realty transfer tax revenues. The change made \$9 million a year available for open space acquisition and another \$1 million for stewardship of acquired lands, plus additional funds for greenways grants. With that expected cash flow, the state
- is able to preserve more strategic parcels over multiple years, such as Cooch's Bridge near Newark, the site of Delaware's only Revolutionary War battle, which was threatened by encroaching development and traffic.
- **Senate Bill 65**, passed in 2003, overhauled the Land Use Planning Act, replacing it with the Preliminary Land Use Service (PLUS). Before the change, state agencies often weighed in at the 11th hour with their review and comments on development projects – too late to influence the project. Now the state's review has moved to the front end of the application process – before the developer has made a significant investment and in time to suggest changes that will improve traffic circulation, minimize environmental impacts, and create a more livable development. Under the new law, the state's review includes residential subdivisions.
- **Senate Bill 183**, enacted in 2001, enabled the Delaware Economic Development Office's Strategic Fund to be used for matching grants for brownfields assessment and cleanup. Since 2001, we have multiplied by 6 the amount of funds available for these matching grants (now \$100,000 from DEDO and up to \$50,000 from

Introduction

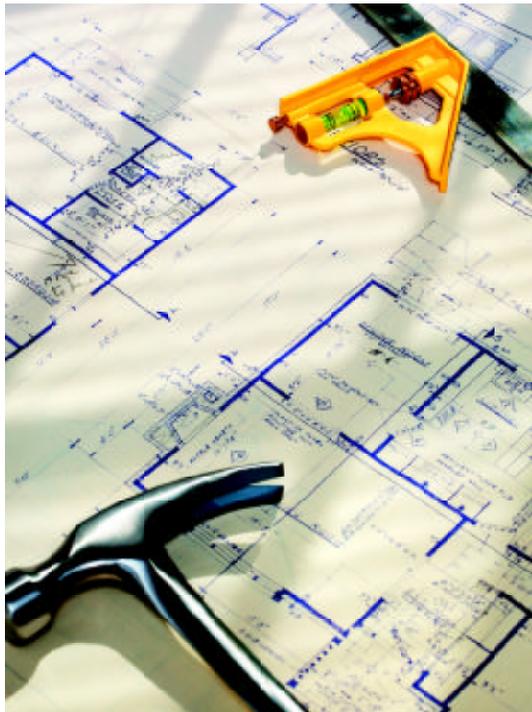
Landmark Achievements since 2001

The Department of Natural Resources and Environmental Control). Cannery Village, which transformed an abandoned cannery into a mixed commercial and residential development in Milton, was the first recipient of those enhanced grants.

- The **Office of State Planning Coordination** (State Planning Office) has evolved into a more hands-on, consultative agency with certified planners dedicated to each county and its municipalities. The Office's partnership with the University of Delaware Institute for Public

Administration leverages the resources available to help Delaware's local governments plan thoughtfully and comprehensively.

- To help communities preserve their local character and require higher quality design and planning from developers, The Conservation Fund and the State Planning Office produced a guidebook, "**Better Models for Development in Delaware,**" with the assistance of a volunteer committee and funding from the Department of Natural Resources and Environmental Control. The guide will provide communities with tools to plan and design more attractive commercial and residential developments that consume less land.
- Investments in **Delaware's GIS mapping capabilities** and high-resolution aerial photography have enabled the state to pinpoint the level of growth that is occurring throughout the state and display multiple layers of land-use information to planners and the public. All three counties now have digital parcel map data available to help them plan more effectively.



Introduction

Public Outreach and Comments

A total of 7 public meetings – 2 in each of Delaware’s 3 counties, and 1 in the city of Wilmington – were held to accept comments on the Strategies for State Policies and Spending Text and Maps. Comments were also accepted in writing at the meetings and through an on-line form.

During the update process the State Planning Office consulted with state agencies, county governments, municipal planning organizations, and local governments for their comments on the document. While gathering data, the state consulted comprehensive plans which are state certified as well as those currently in the state review process.



“We need to pursue a strategy that will keep sprawl in check, reduce traffic congestion, strengthen our towns and cities, and protect our huge investment in roads, schools, and other infrastructure. I propose to call it *Livable Delaware*.”

— Governor Ruth Ann Minner (March 2001)

Introduction

Why work toward a more Livable Delaware?

Delaware is changing rapidly both in population numbers and where people live. Should the state of Delaware be concerned about land use planning? After all, land use decisions are a local matter – aren't they? Actually "no", they're not really just a local matter.

Though land use decisions are made by local jurisdictions (municipal and county) the impact of each Delawarean's decision of where to live affects us all statewide. The affect can be felt both fiscally as taxpayers, and in the livability of our state.

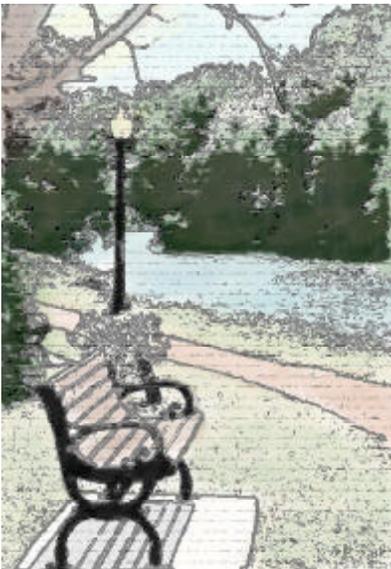
Unlike most other states, Delaware provides many of the services and a great deal of infrastructure throughout the state. State government

provides social services, prisons, roads, transit, the largest police force in the state, approximately 70% of school funding, 50% of library construction funding and 60% of paramedic funding. The cost of providing these services is greatly affected by our pattern of land use change. In general, the more spread

out we are, the more costly it is for taxpayers. Thus, for the state to allocate resources efficiently, we need to determine a clear path to our goal. Comprehensive Plans are the best available tool for setting our path and determining where to make investments.

We also need to be concerned about current land use trends and their impacts. The predominant pattern in Delaware is large-lot housing developments which are disconnected from other developments and needed services. Additionally, household sizes are shrinking. The consequences, possibly unintended, of this development pattern are:

- Limited housing options that may not be responsive to the future needs of an aging population
- Fewer people consuming larger amounts of land, much of it farmland and open space
- Housing costs that seem cheaper in new suburban developments, but transportation costs (gas, extra cars, maintenance) which are greater and offset the housing cost savings



Introduction

Why work toward a more Livable Delaware?

- Road congestion due to increased commuting which also means less personal time and more stress from dealing with traffic
- Higher costs to taxpayers for new infrastructure to support sprawling, low density development¹
- Increased emergency response times
- Polluted air – with much of Delaware a non-attainment area for safe ozone levels, there is a possibility of serious ramifications such as increased health costs, higher cancer rate and fewer federal funds

These patterns along with population trends are of concern to the state because they put unnecessary strain on our fiscal and natural resources. We can not afford for this trend to continue. Approved housing developments will already meet the demand for those desiring a low density/large lot suburban life-style. We need other development choices that will be relevant to current and future populations.

Given the above trends, it is clear that we need to plan. The next question is, “How do we plan?” Because state and local governments have different, yet intertwined

responsibilities, the answer is that we need to plan together as partners.

Because state government doesn't make direct land use decisions, what should the state's role be in this matter? In essence, the state must lead in assuring that development decisions are made cooperatively between all levels of government. The state, local governments and neighboring jurisdictions all need to work in the interest of the common good. The intention of the *Strategies for State Policies and Spending* and Livable Delaware initiatives is to look at our expectations, define a vision, and work towards our goals in collaboration with all levels of government.

¹ Natural Resources Defense Council. (1998). *Another Cost of Sprawl: The Effects of Land Use on Wastewater Utility Costs*. www.nrdc.org/cities/smartGrowth/cost/costinx.asp.

History of Planning Concerns in Delaware



Delaware establishes a State Planning Council, charged with developing a Preliminary Comprehensive Development Plan, detailing the most desirable pattern of land use, and defining a transportation plan, open space plan, and public facility plan for the state.

1959

The Delaware State Planning Office submits its 1967 Preliminary State Comprehensive Development Plan to Governor Charles L. Terry, Jr. The plan contains a generalized land use map for the entire state, and seven goals: Concentrate urban development, preserve agricultural and open land, maximize utility of major highways through controlled access, encourage mass transportation, provide health, welfare and educational services, provide urban services in development areas and encourage growth of non-polluting industries.



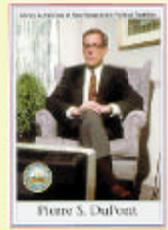
1968



The Delaware Tomorrow Commission, created by Gov. Sherman Tribbitt, issues its report. Their goals included discouraging sprawl, preserving farmland and the use of existing industrial sites. They concluded that a supplement was needed to the Coastal Zone Act (1971) to control industrial uses in coastal areas with a comprehensive statewide land use planning act

1976

The Intergovernmental Task Force, created by Gov. Pierre duPont reviews and examines the delivery of services (excluding education) by each level of government to determine the most cost effective method of delivery. The Task Force suggests reforms in several areas.



1979



The Environmental Legacy Committee submits "Shaping Tomorrow's Environment Today," to Gov. Michael Castle. The report led to the passage of the Quality of Life Act, requiring regular revision of county comprehensive land use plans.

1987

Gov. Thomas Carper establishes the Cabinet Committee on State Planning Issues, which begins public outreach efforts to create a vision for Delaware in the 21st Century.



Ruth Ann Minner served as Lt. Gov. during this administration.

1994

- Gov. Carper appoints Dave Hugg III as to lead the Office of State Planning Coordination and staff the Cabinet Committee on State Planning Issues.
- Gov. Carper unveils the \$220 million 21st Century Fund investment strategy using funds from the New York State abandoned property settlement. The Legislature supports his proposal of improving education, economic competitiveness, revitalizing communities and preserving the environment. Between fiscal years 1994 and 1999 Delaware directs \$160 million to program areas related to land use.
- Gov. Carper adopts the Cabinet Committee's recommended 10 "Shaping Delaware's Future" goals.
- Gov. Carper signs the "Shaping Delaware's Future" amendment to the Quality of Life Act.

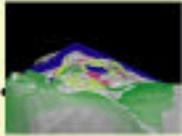


1995

- Gov. Carper amends the Land Use Planning Act to strengthen the state's commenting process on major development proposals. The Act also establishes the Office of State Planning Coordination, which helps provide timely land use planning comments to local governments. Gov. Carper also signs the Corridor Preservation Act protecting certain highways from development to preserve their capacity.
- The first county comprehensive plans are due as mandated by the "Shaping Delaware's Future" Act.

1996

History of Planning Concerns in Delaware, continued



- The State Planning Office creates the Delaware Geographical Information System with computerized layers to show how factors such as transportation, agriculture and employment districts interact.
- The "Choices for Delaware" growth summit is held and results in 11 pieces of proposed legislation.

1997

- The Delaware General Assembly establishes a \$116 million Infrastructure Investment Plan.
- Gov. Carper signs bills expanding the membership of the Advisory Panel on Intergovernmental Planning and Coordination, establishing a Delaware Geographic Data Committee, and strengthening planning at the town and city level.
- Responding to increased public interest in land use issues, the State Planning Office updates its website: <http://www.state.de.us/planning>.

1998



- The Delaware Strategies for State Policies and Spending document is approved by the Cabinet Committee for State Planning Issues.

1999

- The American Farmland Trust awards Delaware for leading the nation in the percentage of land permanently preserved with public funds.
- The General Assembly passes two land use bills, one making the transfer of development rights easier and another linking the adequacy of schools to residential land development in New Castle County.
- The Cabinet Committee awarded \$1,238,959 in infrastructure planning grants.



Ruth Ann Minner is elected as Delaware's Governor; the first woman to hold the office in the state's history.



2000

- Gov. Minner and Lt. Gov. John Carney unveil the Livable Delaware Agenda with Executive Order 14. The plan is a comprehensive strategy to direct growth where the state, county and local governments are most prepared for it in terms of infrastructure, services and thoughtful planning.
- Several key pieces of legislation pass regarding graduated impact fees, comprehensive plan implementation (HB255), annexation standards, brownfields development, the Livable Delaware Advisory Council and Open Space Funding restructuring.
- Lt. Governor John Carney serves as chairman of the Livable Delaware Advisory Committee.
- Gov. Minner appoints Constance Holland as the Director of the State Planning Coordination Office.
- Advisor Lee Ann Walling heads a summit for citizens on visual preferences in community design.

2001



More key Livable Delaware Legislation is passed.



2002

- The PLUS process bill is signed into law, allowing earlier interactions between developers and state interests.
- Brownfields legislation provides incentives for redevelopment of former industrial sites.
- An impressive 90% of Delaware municipalities are involved in some stage of the comprehensive planning process.
- A five year update is drafted for the Strategies for State Policies and Spending.

2003

Historical Actions

Review of Historical Planning Actions

1988 — Quality of Life Act

In 1988, the General Assembly passed the Quality of Life Act, which requires that each county develop and adopt a comprehensive plan and update it every five years. The Quality of Life Act requires that County Comprehensive Plans address the following: future land use; transportation sewer and water; conservation; recreation and open space; housing; intergovernmental coordination; historic preservation; economic development; and community design.

1995 — Shaping Delaware's Future

Cabinet Committee on State Planning Issues' Role in Growth Issues

Purpose and Code Provisions:

The Cabinet Committee on State Planning Issues is responsible for the orderly growth and development of the state, including recommending desirable patterns of land use, and the location of necessary major public facilities (§9101, Title 29, Delaware Code). To fulfill its responsibilities and guide the

allocation of state resources, the Cabinet Committee on State Planning Issues (CCSPI) instructed the Office of State Planning Coordination (State Planning Office), working with state agencies planners, to prepare a map and supporting strategies based on departmental plans and policies as well as the Shaping Delaware's Future goals.

Membership:

The Cabinet Committee on State Planning Issues includes the Secretary of Agriculture, the Secretary of Natural Resources and Environmental Control, the Secretary of Transportation and the Director of the Economic Development Office by official designation in the Delaware Code. Others may be added by the governor. Governor Minner has added her Livable Delaware Advisor (who serves as chairman), the Budget Director, the Secretary of Education, the Secretary of Finance, the Secretary of Health and Social Services, the Secretary of Safety and Homeland Security, the State Planning Director, and the Director of Housing. Staff support is provided by the State Planning Office working with member agency planning staff.

Historical Actions

Review of Historical Planning Actions

The State Planning Office, which staffs the Cabinet Committee on State Planning Issues, represents the state on significant land development issues. It provides coordinated comments on land use development proposals to local governments, landowners and developers. It explores innovative approaches to guiding the state's land development.

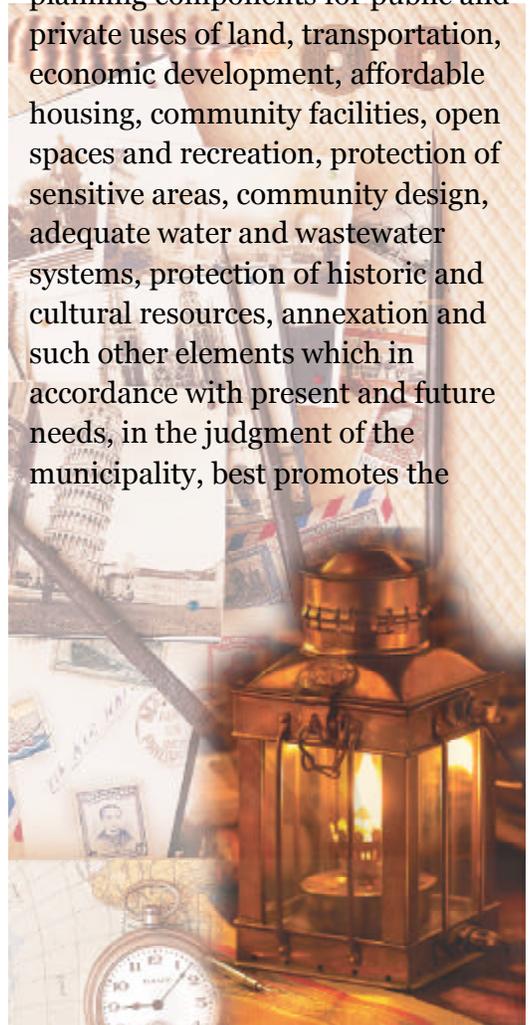
1996 — Municipal Planning Responsibilities

Municipalities are also required to plan by Title 22, Section 702 of the Delaware Code. The law requires them to adopt a comprehensive plan and review it every five years. According to the code a comprehensive plan is:

“...a document in text and maps, containing at a minimum, a municipal development strategy setting forth the jurisdiction's position on population and housing growth within the jurisdiction, expansion of its boundaries, development of adjacent areas, redevelopment potential, community character, and the general uses of land within the community, and critical community development and infrastructure issues.”

For municipalities with a population of more than 2,000, a comprehensive plan must also include:

“...a description of the physical, demographic and economic conditions of the jurisdiction; as well as policies, statements, goals and planning components for public and private uses of land, transportation, economic development, affordable housing, community facilities, open spaces and recreation, protection of sensitive areas, community design, adequate water and wastewater systems, protection of historic and cultural resources, annexation and such other elements which in accordance with present and future needs, in the judgment of the municipality, best promotes the



Historical Actions

Review of Historical Planning Actions

health, safety, prosperity and general public welfare of the jurisdiction’s residents.”

The History of Planning Concerns in Delaware

Just as the “suburbanization” of America began in the 1950s, so did Delaware’s concerns about its effects.

Partly due to economic good fortune after World War II, Delaware surged in population and economic activity in the late 1940s and ‘50s. The affordability of automobiles and first homes prompted Delaware to build suburbia, a practice still continuing today.

Population growth, new businesses, and housing developments transformed Delaware’s landscape. Insightful Delawareans questioned this fast-paced development. Through the years and various gubernatorial administrations, solutions were sought, land use planning reports were issued, and recommendations were made.

Starting with the State Planning Council in 1959, Delaware officials sought ways to manage growth. From its 1968 comprehensive plan to its 1976 Delaware Tomorrow Commission to its 1995 “Shaping Delaware’s Future” goals, the state has tried, with varying degrees of success, to direct new development to already developed areas, to protect farmland and to maintain a high quality of life – all the while encouraging economic vitality.



Strategies

Strategies for State Policies and Spending ²

1. Direct investment and future development to existing communities, urban concentrations, and growth areas.
2. Protect important farmlands and critical natural resource areas.
3. Improve housing quality, variety, and affordability for all income groups.
4. Ensure objective measurement of long-term community effects of land use policies, and infrastructure investments.
5. Streamline regulatory processes and provide flexible incentives and disincentives to encourage development in desired areas.
6. Encourage redevelopment and improve the livability of existing communities and urban areas, and guide new employment into underutilized commercial and industrial sites.
7. Provide high quality employment opportunities for citizens with various skill levels to retain and attract a diverse economic base.
8. Protect the state's water supplies, open spaces, farmlands, and communities by encouraging revitalization of existing water and wastewater systems and the construction of new systems.
9. Promote mobility for people and goods through a balanced system of transportation options.
10. Improve access to educational opportunities, health care and human services for all Delawareans.
11. Coordinate public policy planning and decisions among state, counties and municipalities.

These goals have been embraced by Governor Ruth Ann Minner's Administration, and form the foundation of her Livable Delaware Agenda.

² The full title of the original document was, "Shaping Delaware's Future: Managing Growth in 21st Century Delaware, Strategies for State Policies and Spending." This list reflects the revised goals as of October 30, 1998.

Strategies

Overall indicators of development concern

Growth's mix of benefits and difficulties have characterized the "suburbanization" of America since the 1950s, when urban citizens began an exodus from the traditional population centers to outlying areas.

Historically, the pace of change has been slower in Delaware; but recently, it has accelerated at a startling pace.

Here are a few indicators of that growth:

- Delaware's population increased by over 17% between 1990 and 2000.
- Most of that increase was in unincorporated areas, where population has more than doubled.
- Delaware's residential areas grew by over 15% between 1992 and 1997.
- Commercial and industrial uses increased by over 8% during that period.
- The Delaware Population Consortium predicts that 249,374 more people will call Delaware home by 2030. This more than 32% growth rate comes, in part, from people moving to Delaware, attracted by employment, quality of life, low taxes and prices, and by natural amenities in the coastal areas.³
- Over the 30-year span between 2000 and 2030, according to the Population Consortium's projections, Kent County⁴ will have grown by nearly 27%, New Castle County by over 22%, and Sussex County – the fastest growing county – by almost 65%.
- Households, the most prolific consumers of land, will grow significantly more than the population - over 38% between 2000 and 2030 – probably as a result of declining family size, greater longevity, and growing numbers of singles.
- Development pressure leads to an increase in the number of building permits issued by municipalities. For example, Georgetown issued an average of 20 to 30 building permits each year in the mid-1990s. In recent years, Georgetown has issued approximately 120 permits annually. In the Town of Milton, an average of 22 residential building permits were issued annually between 1990 and 2002, with a total of 98 permits issued in 2002.
- With people come vehicles. Both the total numbers of vehicles and the miles they are driven are increasing faster than the population is growing. According to the U.S. Census, Delaware's population increased by over 17% between 1990 and 2000 while the

³ 2003 Delaware Population Consortium numbers were used for this document.

⁴Please see the shaded box on page 19.

Strategies

Overall indicators of development concern

number of Delaware households owning one or more automobile increased by nearly 21% over the same time period. Average Annual Vehicle Miles Traveled doubled between 1980 and 2001, while Delaware's population increased approximately 32% between 1980 and 2000.



- DelDOT projects that, if current trends continue, vehicle miles traveled (VMTs) will increase at a rate nearly three times as fast as population growth.

The trend in Delaware has been toward growth in unincorporated areas outside towns. In 1960, Delaware's population was more evenly distributed between incorporated places (cities and towns) and unincorporated, rural areas. According to the 1960 census, more than 39% of Delawareans lived in towns and cities and almost 61% lived outside towns. By 1990, according to the U.S. Census, approximately 29% of Delaware's population lived in towns and cities.

This trend has continued. According to the 2000 census, the population in incorporated places has fallen to just over 27% of Delawareans. More than 72% of Delawareans now live outside town and city limits.

Note: Kent County has noted their objection to the use of the Delaware Population Consortium projections in this document. It is their formal position that the Consortium figures "do not accurately reflect the past, present, and future growth in Kent County." The perceived discrepancies in the population projections most likely reflect a combination of factors, including data sharing issues between the County and the Consortium, the methodology of the Consortium, and rapidly accelerating demographic trends not easily captured in population projection models. Staff from the County and the Population Consortium are collaborating to resolve any differences, and develop projections that accurately reflect growth in Kent County.

The spatial data analysis process which led to the development of the Strategies maps does not rely upon Population Consortium projections as an input. The Strategies maps will not be effected in any way should the Consortium revise its population projections for Kent County within the five year period covered by these Strategies.

The Absorption Analysis completed as part of this Strategies update has relied upon these projections. This analysis indicates that at a moderate residential density there are ample vacant developable land resources available in Kent County to accommodate expected residential growth between 2004 and 2030.

Legal Basis

The Legal Basis for the Strategies for State Policies and Spending

Summary

The Strategies for State Policies and Spending provides a policy framework for planning in Delaware. Developed by the Cabinet Committee on Planning Issues, to fulfill its directives under Title 29, Chapter 91 of the Delaware Code, the strategies provide a framework for the infrastructure and service investments by state agencies. The strategies also provide overall regional planning guidance for counties and local jurisdictions, and are based largely on local desires and planning efforts which were enabled and required by Titles 9 and 22 of the Del. C., and certified by the state as directed by Title 29, Chapter 91 of the Del.C.

The Strategies for State Policies and Spending:

This document outlines strategies that will guide state decisions about growth. The Delaware Code (Title 29, Chapter 91) creates the Cabinet Committee on State Planning Issues (CCSPI) to advise the governor on land use planning, growth, and infrastructure investment policy issues.

To achieve this objective, the Cabinet Committee, through the State Planning Office, developed this

document to provide policy guidance for state activities, and to serve as a framework for the plans and actions of local governments.

The Cabinet Committee defined two fundamental policies to guide these strategies and achieve Livable Delaware goals:

1. State spending should promote quality, efficiency, and compact growth
2. State policies should foster order and resource protection, not degradation.

Because Delaware is small, the state government provides a broad range of public services and infrastructure, including nearly 90% of the public roads, the largest police force in the state, funding for schools, grant and loan funding for water and sewer plants, and a broad range of human and social services. Where and how growth occurs is critically important to the ability of the state to provide these services efficiently and cost effectively. Nationwide, countless studies⁵ have shown that compact growth (development that occurs in a compact pattern, near existing infrastructure and services) provides a much more cost effective and efficient development pattern that consumes less land.

⁵ See Appendices for list of studies consulted.

These strategies will guide the investments made by state agencies, and ensure that those public investments are efficient, equitable, and promote compact growth and resource conservation. State agencies are directed to fund only those projects that are in compliance with these strategies.

Role of the Cabinet Committee on State Planning Issues, from Title 29, Chapter 91, Section 9101 of the Delaware Code.

1. Recommendations for the most desirable general pattern of land use within the State, in light of the best available information concerning topography, climate, soil and underground conditions, water courses and bodies of water and other natural or environmental factors, as well as in light of the best available information concerning the present and prospective economic bases of the State, trends of industrial, population or other developments, the habits and standards of life of the people of the State and the relation of land use within the State to land use within adjoining areas;
2. The major circulation pattern recommended for the State, including major routes and terminals of transportation and communication facilities, whether used for movement of people and goods within the State or for movement from and to adjoining areas;

3. Recommendations concerning the need for and the proposed general location of major public and private works and facilities, such as utilities, flood control works, water reservoirs and pollution control facilities, military or defense installations and other governmentally financed or owned facilities; and
4. Recommendations on land use planning actions that are subject to review and comment pursuant to Chapter 92 of Title 29 .

Local governments and counties in Delaware have been delegated the authority to manage land use planning and regulations within their jurisdictions. These local governments are essential partners in implementing these strategies and ensuring an efficient pattern of land use. The Delaware Code (Titles 9 and 22) requires that these jurisdictions all prepare comprehensive land use plans. These plans are reviewed by the State Planning Office, the Governor's Council on Planning Coordination (Livable Delaware Advisory Committee), and eventually certified by the State Planning Office or the Governor (Title 29, Chapter 91). The process, which has been embodied in the Delaware Code, ensures intergovernmental coordination by making certain that the state, county, and local governments are all planning together, and it provides the Council and Governor with recommendations on resolving disagreements.



Introduction

Why a 5 Year Update?

Comprehensive planning documents are a reflection of public policies at a particular time, and they require continual review, revision and refinement. This document updates the original Strategies for State Policies and Spending approved in 1999; shows progress made on Governor Minner's Livable Delaware agenda through 2003; and includes more recent data. The purpose of this document is to provide the basis for near-term spending decisions, to define long term development issues, and to assist local planning efforts. It should be periodically revisited – just as county and municipal plans are – to reflect demographic, economic and land use trends, and to analyze specific issues.



These strategies are based on a vision that extends at least 20 years into the future, but they should be updated every five years. Ideally, this review should be synchronized with county and municipal planning efforts, and with other state planning documents, such as the Statewide Long Range Transportation Plan, the Statewide Housing Assessment, and the State

Historic Preservation Plan. These reviews must address federal requirements such as those defined in the Clean Air Act Amendments and the Clean Water Act.

State, county and municipal planning strategies do not always perfectly align. State, county, and municipal governments address issues on different scales. These governments make spending decisions for different reasons, and they interact with taxpayers on different levels. Such differences do not indicate planning failure; but instead represent opportunities for more detailed discussions. These variations are some of the reasons a state strategy and map are needed.

Throughout the process, discussions with local governments resulted in numerous refinements to reflect actual uses of land and local knowledge of development constraints. This strategy will serve Delaware best if it is continually refined to reflect new data, to address emerging trends, and to respond to local planning decisions. To this end, the state is works with county and municipal jurisdictions to incorporate new data as it becomes available, and to focus on land use and infrastructure issues that might not be addressed at a statewide scale.

Coordinating Government

2001 Livable Delaware Executive Order 14 The Livable Delaware Agenda

On March 22, 2001, Governor Ruth Ann Minner issued Executive Order No. 14, establishing the Livable Delaware Agenda. Concerned with quality of life, the agenda strives to protect the positive aspects of living, working, raising families and enjoying recreation in Delaware. The order was prompted by the forecast of dramatic population increases, the challenges of sprawl, traffic congestion, farmland loss, disappearing open space, shortage of affordable housing, and diminished quality of air and water. The Livable Delaware Agenda implements strategies that previous administrations helped to build. Governor Minner wanted to assure that taxpayers' money be used to support planned development that is consistent with the Strategies for State Policies and Spending and approved local plans.

The Governor's first step was to order the state to put its own house in order. Each state agency was directed to produce a Livable Delaware Implementation Plan⁶ to

show how their missions could be carried out while fulfilling the Livable Delaware strategies. She also asked the agencies to identify any impediments to achieving the goals. Further, each state office had to show how budget planning would be used in concert with the strategies. The Governor also called for the drafting of any necessary legislation.

These action plans were completed by each state agency and reviewed by the Cabinet Committee on State Planning Issues by October 31, 2001. All of state government was on board and the Livable Delaware Agenda was underway.

⁶ Links to the Livable Delaware Implementation Plans for the state agencies are found on: <http://www.state.de.us/planning/livedel/details.htm>

Coordinating Government

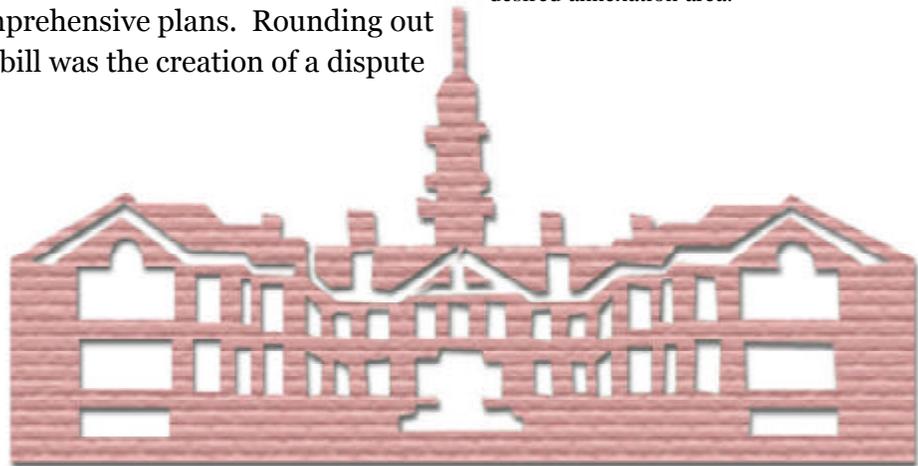
The Passage of House Bill 255

On July 13, 2001, Governor Minner took up the fight against unwise development and sprawl by signing three bills from her Livable Delaware Agenda into law. One of the bills, HB 255, was a huge step toward making comprehensive planning a reality in Delaware.

HB 255 is a far reaching piece of legislation that dramatically reshaped planning in Delaware by creating a plan certification process and reforming annexation requirements. House Bill 255 requires municipalities to have plans of services⁷ for annexation. It further directs counties and municipalities to match their zoning to their comprehensive plans. Rounding out the bill was the creation of a dispute

resolution process for disagreements between levels of government, and the provision of funding to help municipalities with comprehensive plans. This bill created the incentive for local governments to write and implement their plans, and now more than 90% of Delaware's jurisdictions are engaged in planning. At the time this document went to press, 37 municipalities have comprehensive plans that are either certified by the state or completed awaiting certification.

⁷A Plan of Service is a form completed by a municipality which details how the local government will provide services – such as water, sewer, and police protection — to the desired annexation area.



Coordinating Government

Livable Delaware Advisory Council

Senate Bill 105 (signed on 6/14/01) creates an Advisory Council on Planning, chaired by Lt. Governor John Carney. The Advisory Council, named by Governor Minner, includes representatives of local governments, counties, homebuilders, agriculture, civic associations, and others. The Council also includes the cochairs of the Bond Bill Committee. The group has key responsibilities under Livable Delaware and has created subcommittees for specific issues.

Duties of the Advisory Council:

- Assist the Governor in addressing state development and land use issues.
- Recommend legislation, policies and tools that support the Governor's Livable Delaware initiative.
- Provide recommendations to the Governor on state agency Livable Delaware implementation plans.
- Approve and monitor livability indicators.
- Facilitate dispute resolution for government jurisdictions involved in land use planning issues.
- Other duties assigned by the Governor.

Composition of the Advisory Council:

- A Chair to be appointed by the Governor.

- Chair of the Cabinet Committee on State Planning Issues.
- The County Administrator or County Executive or their designee, representing each of Delaware's counties.
- The President or a designee representing the Delaware League of Local Governments.
- The cochairs of the Joint Bond Bill Committee.
- Eight members, appointed by the Governor, representing the following: agriculture and/or agribusiness; homebuilders; business; real estate and development; environmental interests; community development; historic preservation; and civic associations.
- The Secretaries of Transportation, Natural Resources and Environmental Control, Agriculture, and the Director of Economic Development shall serve by virtue of their positions.

The subcommittees have addressed and reviewed a number of issues and reported back to the Livable Delaware Advisory Council. Since many key stakeholders are represented in their membership, they've been a valuable source of guidance for the Council.

Coordinating Government

The Preliminary Land Use Service (PLUS)

The Office of State Planning Coordination (State Planning Office), working with partners from the private sector, state and local government, drafted a revision of the Land Use Planning Act (29, Del. Code, Chapter 92), also known as “LUPA,” which dated to the 1970s. This revision updates the LUPA process to provide more timely technical input to the development community and to local government decision-makers. The new process — the Preliminary Land Use Service (PLUS) — was signed into law as Senate Bill 65 on August 14, 2003.

The State Planning Office considered the concerns of stakeholders when developing the PLUS process, an update of the LUPA process designed to meet the needs of developers and local governments more efficiently.

The new process provides:

- More timely decisions – state agency reviews happen earlier in the process. This ensures that the state agency comments are heard early enough to help local governments.
- More consistency – the standards by which state reviewers comment on proposals should stay consistent over time.

- More choices – state agency comments offer constructive options to improve project plans.
- More information exchange – PLUS is more specific on what project information should be reviewed. This way comments are more targeted and eliminate confusion over extraneous information.

The Revised Process

The new PLUS process involves reviews by all applicable state agencies at the start of the land development process, adding value and knowledge to the process without taking away the authority of local governments to make land use decisions.

Purpose

This new, up-front process has a threefold purpose:

- To identify and mitigate potential impacts of development which may affect areas beyond local boundaries;
- To fully integrate state and local land use plans; and
- To bring state agency staff together with developers, and local officials, early in the process.

Coordinating Government

The Preliminary Land Use Service (PLUS)

Benefits

This updated process will benefit applicants in several ways:

- It will speed the process when a proposal is included in a certified comprehensive plan;
- It will promote the sharing of ideas and resources among state, county, and local governments.

Improvements

Applicants may explain their projects to planners representing all state agencies and have a constructive dialogue. The streamlined process will shorten state response time to more closely coordinate with local timelines. State comments will be received early enough to be useful and will more completely reflect state and local land use plans and regulations.



Coordinating Government

The Strategies in Relation to County and Municipal Comprehensive Plans

Purpose of the strategies

The strategies guide state infrastructure investment decisions, for both direct investments (facilities for which the state is responsible) or indirect (infrastructure supported through state grants, loans or appropriations).

The strategies set priorities for the state's management of regulatory programs, land protection, state lands, and buildings. They are also a framework for state comments on local comprehensive planning and land use decisions.

Supporting actions are developed through continued coordination with counties, municipalities and various stakeholders. These policies are flexible enough to reflect the diversity of Delaware, and the needs of areas that don't neatly fit into specific strategy classes. State agency decisions now have criteria expressing the intent of state policies on land development.

The criteria and underlying data will be comprehensively reviewed every five years. The strategies and maps will be adjusted to reflect changing trends. The updated strategies will continue to provide a basis for state comments on the county and

municipal governments' review of their comprehensive plans. These reviews are required every five years. The updates will keep the strategies current and will continue the intergovernmental coordination necessary for the proper linking of land use, infrastructure, and resource protection decisions.

State agencies will still make site-specific decisions about particular infrastructure issues and enforce regulatory processes. Such decisions will examine the unique circumstances at each site. These decisions will be based on the guidance given by the investment strategies.

In jurisdictions with certified comprehensive plans the Strategies document and maps shall not be construed to impede plan review, permitting processes, or other State regulatory programs with the intent of disapproving growth otherwise permitted and within designated growth areas described by the local jurisdiction's comprehensive plan.

The accompanying strategy map is a graphic representation of the state's policies and guide state agencies as they make investment decisions. It reflects the overall development

Coordinating Government

The Strategies in Relation to County and Municipal Comprehensive Plans

pattern envisioned by Livable Delaware and developed in coordination with comprehensive plans of the state, counties and local governments.

The strategies and maps are not intended to replace local land use plans, but rather to guide the development of county and municipal plans. The strategies do not restrict landowners' rights to use or develop their lands nor do they restrict a purchaser's option to live anywhere desired.

The strategies do create a framework for where the state will allocate its resources and focus state program efforts. The strategies and the map recognize that some development will continue to occur in outlying areas in response to individual decisions, to the extent permitted by county plans and regulations.

How will the state use the strategies?

The state will use the strategies and map as a guide when allocating new state funding for farmland preservation, open space preservation, transportation investments, housing development,

water, and wastewater financing. The state will use the strategies as guidelines to direct funds to existing communities and growth areas and to protect critical farmland and open space from sprawl.

State agencies will use the map as a basis for a review of programs and policies. The State Planning Office will also use the strategies when reviewing comprehensive plans and land use proposals. This analysis may result in policy revisions, new intergovernmental agreements, and tools such as the open space and historic tax credits.

How will the counties and municipalities use the strategies?

Although the strategies and map are not meant to prohibit development or limit local authorities' control over land use, they will be a critical component to be examined during county and municipal comprehensive plan development and revision process required under the Delaware Code.

They will also be part of the state guidance for municipal planning and for intergovernmental coordination between counties and municipalities.

Coordinating Government

The Strategies in Relation to County and Municipal Comprehensive Plans

The strategies and map will be an integral part of the criteria used for state review and comment to local governments under the Preliminary Land Use Service (PLUS).

The state's relationship to county and municipal authorities

Delaware's county and municipal governments have the authority to plan for and manage land use and to institute zoning and other controls required to implement comprehensive plans. This tradition of local control over land use is appropriate and reflects the conviction that

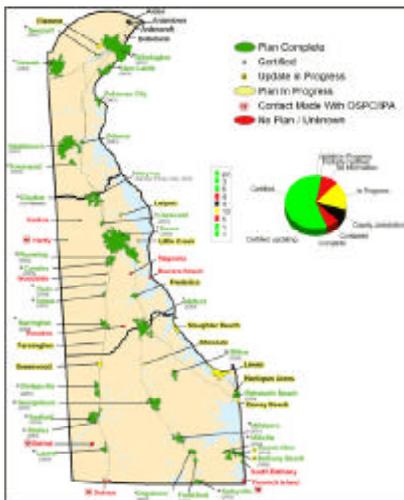
decisions about land use should be made by those most closely involved.

The state respects this long-standing tradition of local control over land use. Yet the state government has a continuing involvement in the overall land use patterns because of its responsibility to the state taxpayers. The state provides or financially supports many major public services and facilities (transportation, health care,

education, corrections and Safety and Homeland Security) and is responsible for protecting the state's natural resources, and for ensuring the overall economic health of the state. The state also assists local governments financially by providing grants and loans. It is for these reasons that the Cabinet Committee on State Planning Issues is charged by statute with recommending the overall pattern of development for the state and the need for and location of major public facilities.

The development of spending and resource management strategies does not change the basic relationship between levels of government as it relates to land use, nor do these strategies reduce the local governments' authority to make land use decisions consistent with either their statutory authority or their locally adopted comprehensive plans.

The strategy does establish a framework for where the state intends to allocate its resources and focus its program efforts. In this way, the state fulfills its obligations to effectively make public investments and manage taxpayers' resources, while respecting the tradition of local government



Status of Municipal Comprehensive Plans -
- Graphic courtesy of the University of Delaware (UD) Institute for Public Administration (IPA).

Coordinating Government

The Strategies in Relation to County and Municipal Comprehensive Plans

authority over basic land use decisions.

Strategies Guidance for the Regional Planning Process

Regional, multi-jurisdictional approaches to planning and to the timing of infrastructure investment are increasingly important for those areas of the state where development pressures are strong, infrastructure capacity is lacking, and the interest of the various jurisdictions involved might not be entirely consistent. In addition, such regional efforts can consider otherwise overlooked natural functions such as watersheds and drainage basins, and such overarching issues as their ability to absorb pollutants.

It is important to coordinate multi-jurisdictional visions for these rapidly developing areas to prevent unwise development, soothe traffic problems, and reduce stress on natural resources. There is a clear and growing need for better intergovernmental coordination that would lead to significant resource protection and more efficient, timely investments in infrastructure.

Working as part of a team effort with county and local jurisdictions, state efforts include undertaking regional

planning efforts in selected subareas.

Regional planning is critical because state and county plans are fairly general, resulting in the need for more thorough analysis of specific sites and development considerations (carrying capacity, site limitations, interconnections between developments, overall character, community values, developer and landowner interests). These efforts would result in policies and spending strategies that better address timing, design and development requirements, as well as resource protection.

This initiative represents a logical continuation of the intergovernmental coordination efforts and the efforts to facilitate comprehensive planning at county and local levels.

It also puts the state at the table in areas where, due to significant development pressures, the state will have a major investment and resource management responsibility.

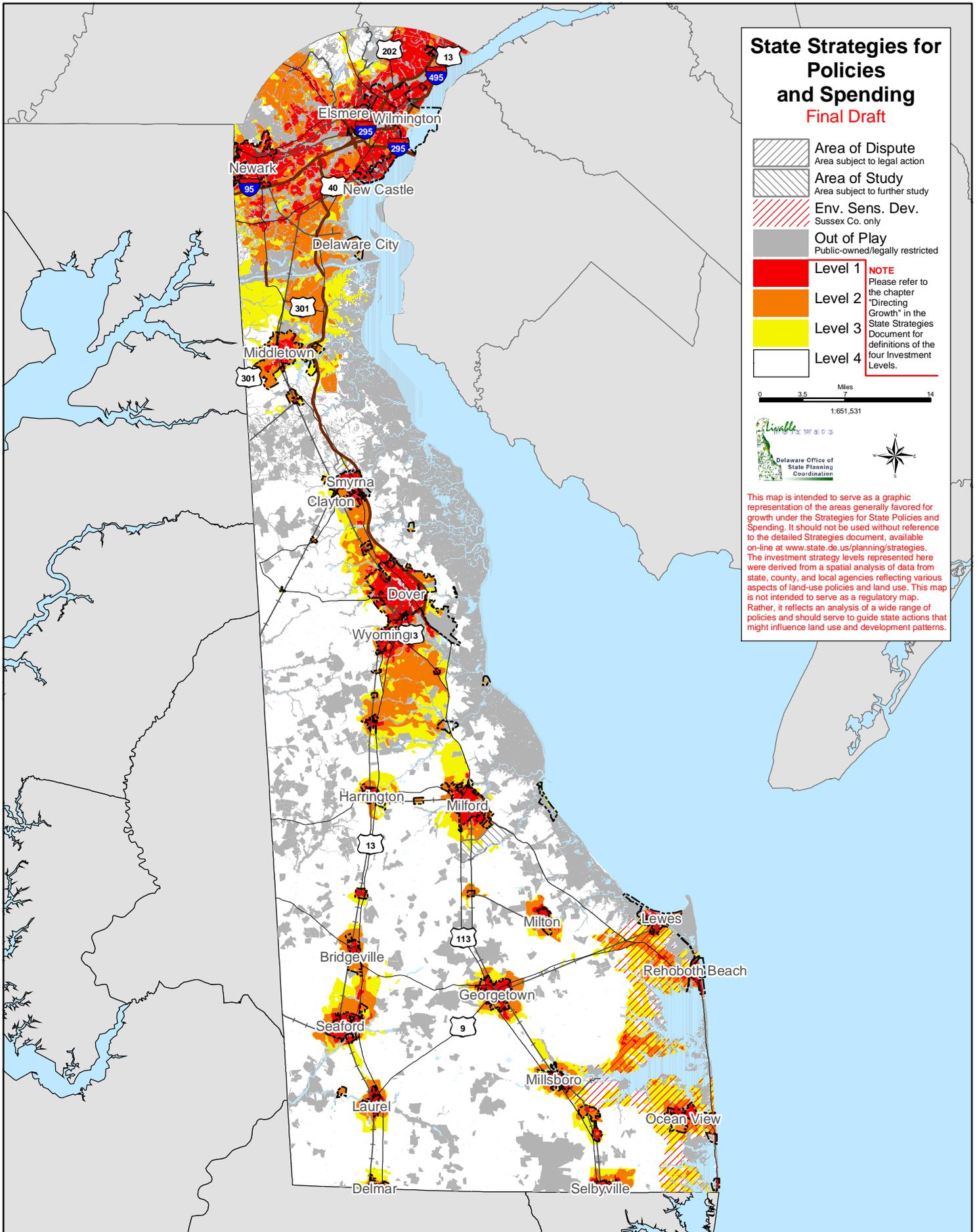
State Strategies for Policies and Spending

Final Draft

-  **Area of Dispute**
Area subject to legal action
-  **Area of Study**
Area subject to further study
-  **Env. Sens. Dev.**
Sussex Co. only
-  **Out of Play**
Public-owned/legally restricted
-  **Level 1** NOTE
Please refer to the chapter "Directing Growth" in the State Strategies Document for definitions of the four Investment Levels.
-  **Level 2**
-  **Level 3**
-  **Level 4**



This map is intended to serve as a graphic representation of the areas generally favored for growth under the Strategies for State Policies and Spending. It should not be used without reference to the detailed Strategies document, available on-line at www.state.de.us/planning/strategies. The investment strategy levels represented here were derived from a spatial analysis of data from state, county, and local agencies reflecting various aspects of land-use policies and land use. This map is not intended to serve as a regulatory map. Rather, it reflects an analysis of a wide range of policies and should serve to guide state actions that might influence land use and development patterns.



State Strategies for Policies and Spending

New Castle Co.

Final Draft

-  Area of Dispute
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-  Area of Study
Area subject to further study
-  Env. Sens. Dev.
Sussex Co. only
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Public-owned/legally restricted
-  Level 1
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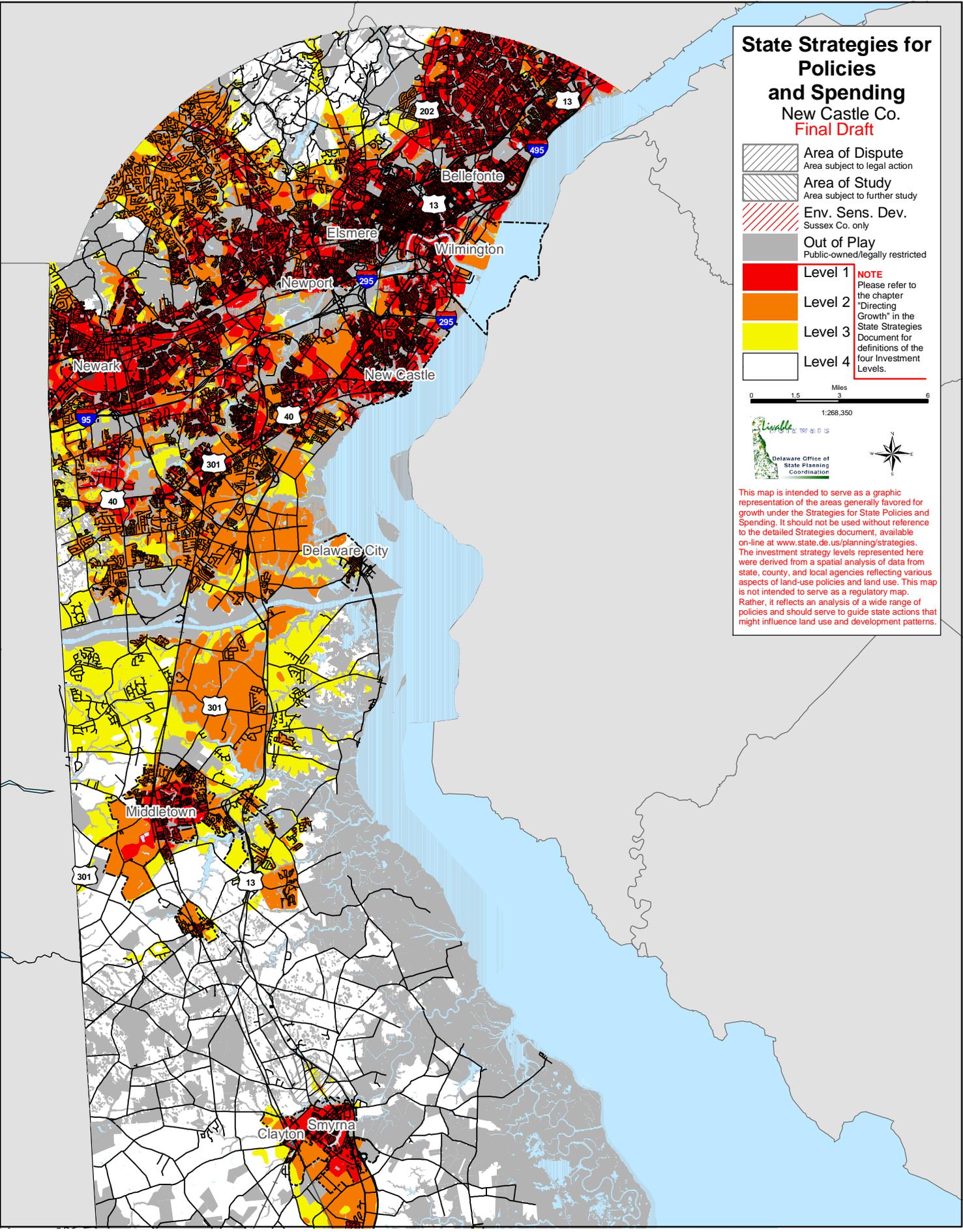
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1:268,350



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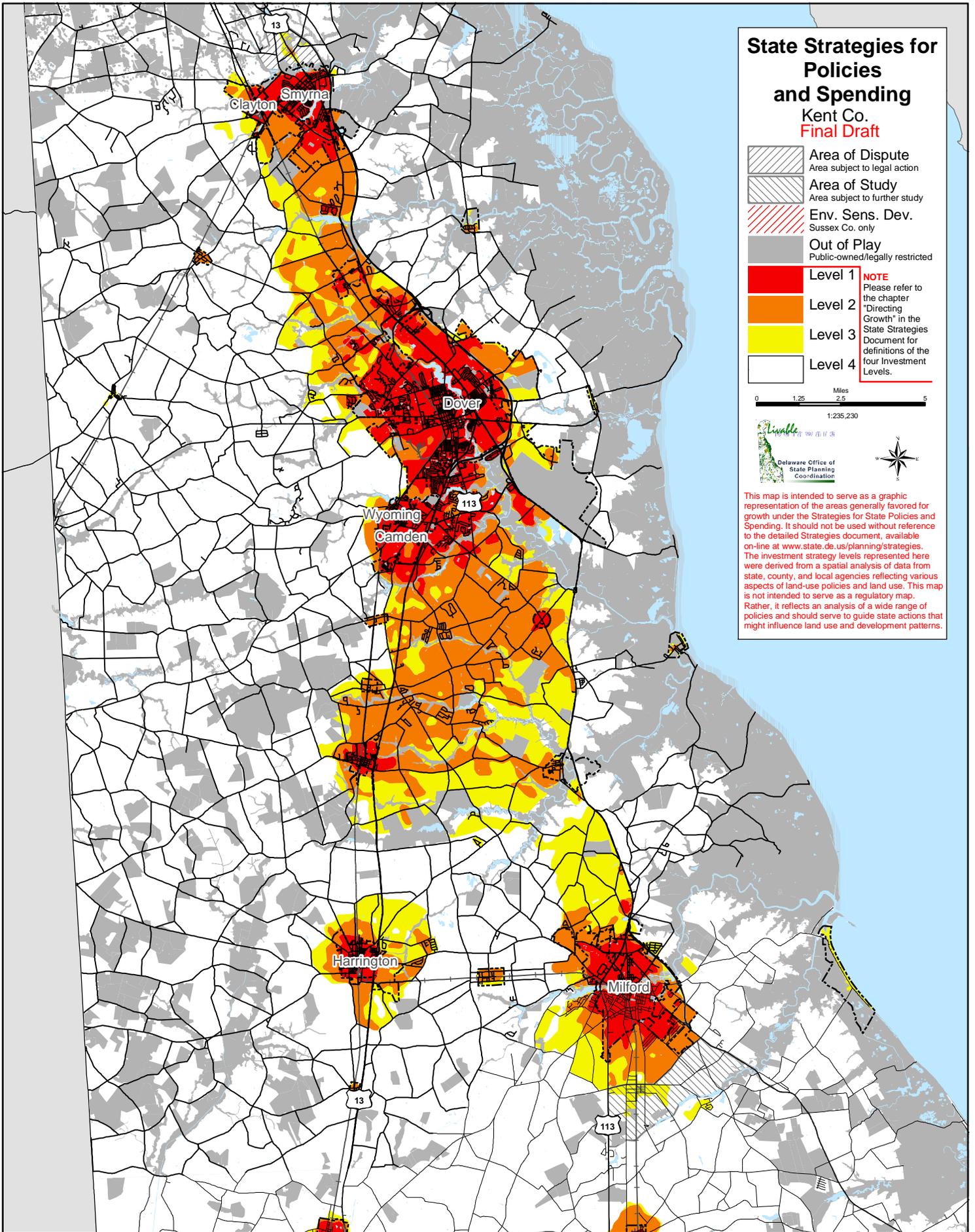
State Strategies for Policies and Spending

Kent Co. Final Draft

-  Area of Dispute
Area subject to legal action
-  Area of Study
Area subject to further study
-  Env. Sens. Dev.
Sussex Co. only
-  Out of Play
Public-owned/legally restricted
-  Level 1 **NOTE**
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State Strategies for Policies and Spending

Sussex Co. Final Draft

-  Area of Dispute
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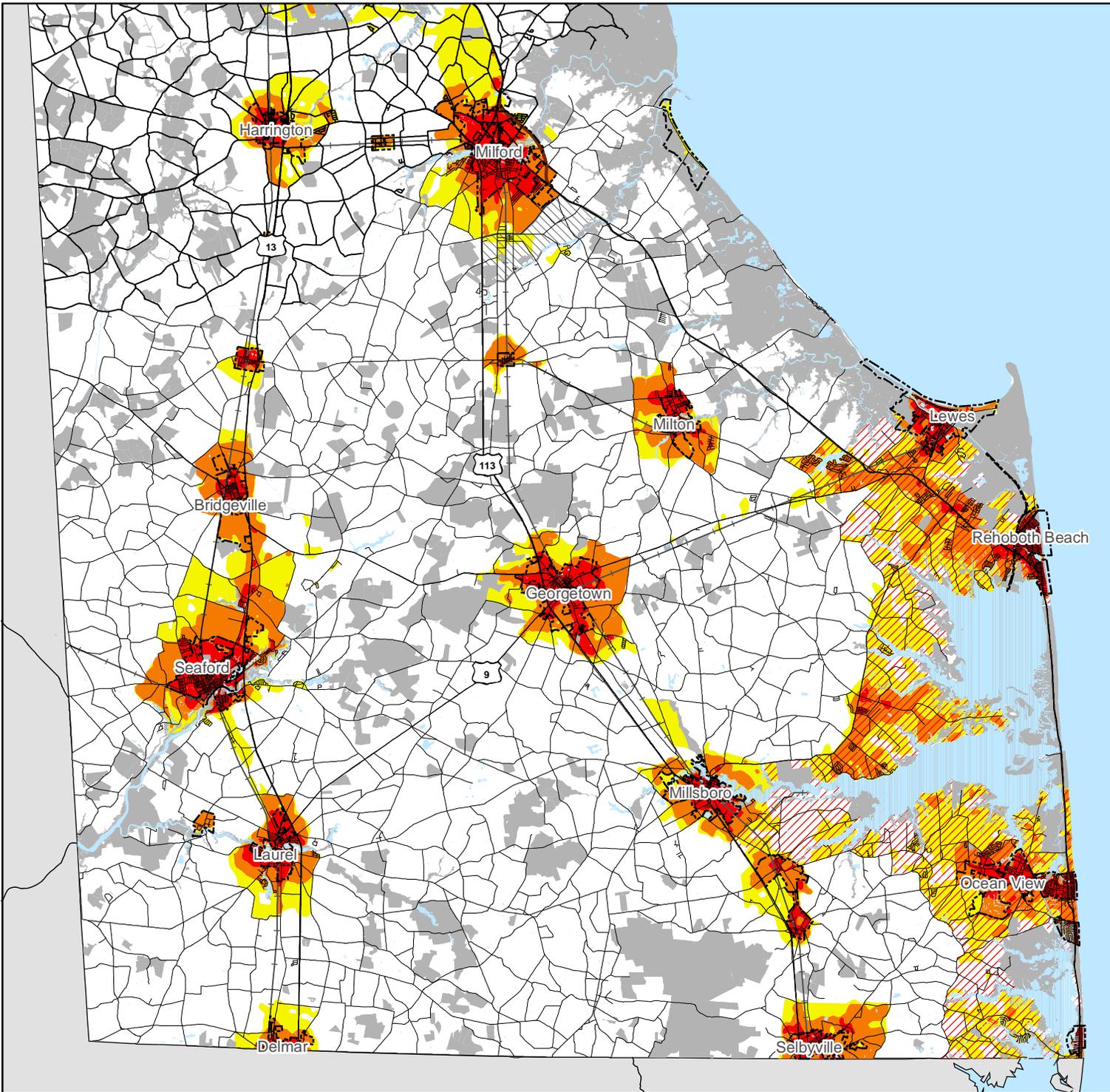
NOTE
Please refer to the chapter "Directing Growth" in the State Strategies Document for definitions of the four Investment Levels.



1:314,197



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Directing Growth

Spatial Data Analysis Approach to Update the *Strategies for State Policies and Spending Map*

Strategy Maps

The update of the *Strategies for State Policies and Spending* map was created using a spatial data analysis that balances state, county and local policies that favor growth for different areas of the state with policies that argue against growth. The analysis creates a statewide spatial data set that reflects the combined policies of all levels of government to highlight which areas are most appropriate for growth.

Process

The Office of State Planning Coordination (State Planning Office) teamed with the University of Delaware's Institute for Public Administration (IPA) to analyze spatial data from state, county and local agencies to create maps for the *Strategies* update. This analysis combines data sets that depict lands in three main categories:

- Lands that are out of play; that is, not available for development or redevelopment,
- Lands for which state and local policies do not favor growth, and

- Lands for which state and local policies do favor growth.

Using Spatial Analyst software from ESRI⁸, the team created a state-wide data set consisting of a grid in which each grid cell has one of a range of values reflecting the combination of these three categories of data. The higher scores in the positive range reflect a stronger preference for development. The lower scores in the negative range reflect a stronger preference for open space preservation and management for natural resources and habitat preservation. Lands that are not available for any development or redevelopment were taken out of play. These scores were used to create a draft *Strategies for State Policies and Spending* map depicting the varying levels of growth preference.

(Please see the appendix for the complete explanation of the spatial data analysis.)

⁸ ESRI refers to the Environmental Systems Research Institute, Inc. which specializes in geographic information systems (GIS), <http://www.esri.com>.

Directing Growth

Introduction to the Investment Levels:

In this Strategy update, the map area designations have been simplified from specific names (e.g., Community) to **Investment Level's 1, 2, 3 and 4** to avoid any misinterpretation of what a “name” might mean. Furthermore, the Levels are not meant as ascending levels of importance, but rather as a way to distinguish the different types of funding priorities within each area.

Investment Level 1:

Description:

- Investment Level 1 Areas are often municipalities, census designated places, or urban/urbanizing places in counties.
- Density is generally higher than in the surrounding areas.
- There are a variety of transportation opportunities available. Typical transportation

projects include new or expanded facilities and services for all modes of transportation. These modes include public transportation facilities and services. The modes also include bicycle and pedestrian facilities when favorable development patterns and densities exist.

- Buildings may have mixed uses, (for example a business on the first floor and apartments above).
- There is a sense of place and a character to the surroundings.
- The area shares a common identity.
- May be considered as Transfer of Development Rights (TDR) receiving areas.



Strategy:

In areas where population is concentrated, commerce is bustling, and a wide range of housing types

Directing Growth

Investment Level 1:

already exist; state policies will encourage redevelopment and reinvestment.

What is an Investment Level 1 Area?

People have historically congregated for access to convenient housing, commerce and social interaction. Whether we call them villages, towns or cities, these areas are characterized by a lively pace, a core commercial area, several modes of transportation and a variety of housing options, often ranging from detached single-family homes to multifamily apartments.

Brownfields can be redeveloped in urban areas where a century of investment in infrastructure exists.

These population centers are often built around a traditional central business district or “downtown,” which offers a wide range of opportunities for employment, shopping and recreation. They usually have a concentration of cultural and entertainment

facilities, and a wide array of public institutions, services and amenities (such as post offices, police and fire stations, libraries, hospitals and other health care). Although the scale of these population centers varies throughout the state, from cities such as Wilmington to smaller towns such as Milton, this document will call them all by one name: Investment Level 1 Areas.

These relatively compact patterns of development tend to have a human scale and are notably walkable. Investment Level 1 Areas provide a range of transportation choices, making it possible to pursue daily requirements by foot, bike, bus or private vehicle depending on needs and circumstances.

Investment Level 1 Areas may also have overlooked opportunities in the form of underused or previously used sites (some of which are called “brownfields”), as well as a century or more of public and private investment in services, facilities and buildings. These are places where significant investment already exist in roads, bridges and airports, water and sewer systems, schools, commercial and industrial buildings, and houses.

Directing Growth

Investment Level 1:

Investment Level 1 Areas provide regional and local identity and a sense of place for personal and business activities. Delaware is a collection of 57 incorporated communities, from its largest cities – Wilmington, Newark and Dover – to smaller cities such as Milford, Georgetown, Seaford, Middletown and even to numerous smaller communities throughout the state. There are also many intensely developed areas throughout the state that function in a similar manner. These Investment Level 1 Areas drive Delaware’s economic engine.



The state’s goals clearly recognize the value of these Investment Level 1 Areas and provide for their continued health and vitality through reinvestment and redevelopment, and through the efficient use and maintenance of existing public and private investments.

Investment Level 1 Strategies:

In Investment Level 1 Areas, state investments and policies should support and encourage a wide range of uses and densities, promote other transportation options, foster efficient use of existing public and private investments, and enhance community identity and integrity. Decisions about investments and policies should be based on these principles:

Transportation –

- Provide the greatest number of transportation options, emphasizing public transportation, walking, and bicycling.
- Make existing infrastructure and planned improvements as safe and efficient as possible.
- Typical transportation projects include new or expanded facilities and services for all modes of transportation, including public transportation facilities and services when favorable development patterns and densities exist.
- Projects will also include those that manage traffic flow and congestion, support economic development and redevelopment efforts, and

Directing Growth

Investment Level 1:

encourage connections between communities and the use of local streets for local trips.

Water and wastewater –

- Direct maximum assistance to upgrades, reconstruction, treatment improvements, and system expansions within Investment Level 1 Areas.
- Place priority on existing systems for improved efficiency, enhanced water quality management, and additional capacity for redevelopment, infill, and for new community development that supports efficient and orderly land use patterns.



State facilities and investments –

- Investment Level 1 Areas are priority locations for new public uses and expanded existing uses.
- The state should promote locations for schools and other facilities that would enhance community integrity and encourage the use of more than one transportation option.

- State investments in public facilities, such as schools, libraries, courts and health-care and public safety buildings, should be strategically located to foster community identity and vitality, and complements the historic character.
- In Investment Level 1 Areas, the state will renovate, reconstruct or replace existing educational facilities that have community support and fit into sensible development patterns and densities. The state will use existing school sites wherever possible within or contiguous to existing towns, if those sites are adequately served by public water and sewer, and do not place additional strain on land use or transportation.

Open space, parks and other resources –

- Support development and maintenance of recreational and open space facilities to serve Investment Level 1 area needs, including urban parks and recreational areas, waterfronts, and links between uses and throughways (greenways, bikeways, and so forth).

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Investment Level 1:

- State funds would be used to protect a specific critical resource and also for greenways and other green areas that provide clear visual boundaries.
- Promote the wise use of Investment Level 1 Areas' land and water resources, and the protection of habitat for species that are compatible with developed areas.
- Invest in forestry studies, planting new trees, maintaining existing forested areas, and street trees. Mature urban forested resources help cool a city by 6 to 8 degrees a day, reducing energy costs.

Housing –

- Promote a mixture of housing types and prices; protect and enhance existing housing choices.
- Restore and improve existing neighborhoods, promote viable downtowns and reuse of older residential, industrial and commercial zones, and improve access to health, safety, education and other services.
- Investment Level 1 Areas are excellent locations for compact development. This style of development – which can include

what is called “new urbanism” or “neotraditional design” – should include a mixture of uses, a range of residential unit types, and allow for higher overall densities than typical suburban development styles. Because this design style draws its inspiration from traditional town development patterns, compact development is usually an excellent choice for redevelopment and infill projects.

Economic Development –

- Work with Investment Level 1 Areas to identify and aggressively market underused, abandoned, or “brownfield” sites, in a manner consistent with the Investment Level 1 Areas' character and needs.
- Programs should promote creation of jobs near residential areas, focusing on jobs for the underemployed, and should include state assistance for community-based redevelopment and revitalization efforts.
- Leadership should be local, but the state may provide technical expertise and regional coordination.

Directing Growth

Investment Level 1:

Other public services –

- Focus health and social services on under-served and disadvantaged populations.
- Support community-based programs for revitalization.
- Public safety objectives include providing adequate law enforcement services and safety, effective emergency services, and reduced vulnerability to natural and man-made hazards.
- Use incentives to promote revitalization, historic preservation, reinvestment, viability, and enhancement of community character.
- Investment Level 1 would most appropriately be designated as receiving zones under Transfer of Development Rights programs (TDR), providing for a greater range of densities, housing and development options for future growth. (Such programs allow the sale of development rights from areas where development is discouraged to areas where it is encouraged, such as Investment Level 1 Areas.) County or local governments that adopt these programs will define the parameters and regulations that will guide the programs in a manner which is best suited to the conditions in the local jurisdiction.

the Strategies maps may be one tool to guide the development of County or local TDR programs.

Overall, it is the state's intent to use its spending and management tools to maintain and enhance community character, to promote well-designed and efficient new growth, and to facilitate redevelopment in Investment Level 1 Areas.

Employment Strategies for Level 1 Investment Areas:

- Aggressively market through the state's economic development efforts, and through cooperative ventures with county and local entities.
- Promote a balance between places of work and residence, provide several transportation options and seek reductions in peak-hour traffic congestion.
- Improve compatibility of adjacent uses, minimize impacts on natural resources through good design and development practices, support agribusiness, and achieve agricultural and forestry program objectives.
- Support more efficient land use patterns, protect farmlands and natural areas, and enhance the vitality of existing communities.

Directing Growth

Investment Level 2:

Description:

This investment level has many diverse characteristics. These areas can be composed of:

- Less developed areas within municipalities.
- Rapidly growing areas in the counties that do, or will have public water and wastewater services and utilities.
- May be considered as Transfer of Development Rights (TDR) receiving areas.
- Areas which are generally adjacent or near Investment Level 1 Areas.
- Smaller towns and rural villages; which should grow consistently with their historic character.
- Suburban areas with public water, wastewater, and utility services.

What are Investment Level 2 areas?

These diverse areas surround many municipalities and also seem to be the most

popular portion of Delaware's developed landscape. They serve as transition areas between the Investment Level 1 Areas and the state's more open, less populated areas.

These areas are often characterized by a limited variety of housing types (predominantly detached single-family dwellings), commercial and office uses serving primarily local residents (examples: food, drugs, video rental, and so forth), and a limited range of entertainment, parks and recreation, cultural and institutional facilities.

Innovative developers, architects and land use experts recognize that the historic design of suburban developments could be improved by incorporating a mix of housing types and limited commercial uses as well as interconnecting roads and bikeways between developments. They also recognize that compact development strategies may fit within areas adjacent to existing towns and population centers. These elements, designed with a greater concern for aesthetics and the environment, would revive the feel of the traditional "village," providing a stronger sense of community. Pike



Directing Growth

Investment Level 2:

Creek in New Castle County is an example of this kind of innovative development.

Investment Level 2 Strategies:

- Base investments on available infrastructure to accommodate orderly growth.
- Encourage departure from the typical single-family-dwelling developments, and promote a broader mix of housing types and commercial sites.
- Encourage development that is consistent with the character of the area, higher densities, and use the existing streets and utilities.
- Encourage compact, mixed use development where applicable.
- Investment Level 2 would most likely be appropriate to designate as receiving zones under Transfer of Development Rights programs (TDR), providing for a greater range of densities, housing and development options for future growth. (Such programs allow the sale of development rights from areas where development is discouraged to areas where it is encouraged, such as Investment Level 2 areas.) County or local

governments that adopt these programs will define the parameters and regulations that will guide the programs in a manner which is best suited to the conditions in the local jurisdiction. The Strategies maps may be one tool to guide the development of County or local TDR programs.

Transportation –

- Encourage sensible development through a planned set of phased transportation investments, land use coordination, and policy actions consistent with zoning densities and designations.
- Transportation projects should expand or provide roadways, public transportation, pedestrian walkways, bicycle paths, and other transportation modes.
- Manage traffic flow, support economic development efforts, and encourage connections between communities and the use of local streets for local trips.

Water and wastewater –

- Extend existing or create new systems where logical, or where they would prevent future environmental or health risks.

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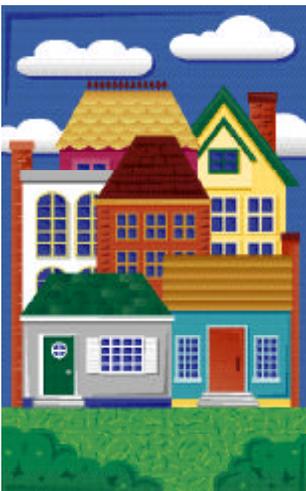
Investment Level 2:

Open space, agriculture and forestry –

- Protect critical waterways, promote establishment of greenways, and maintain “green” separators between more intensely developed areas.
- Provide transition zones between Investment Level 2 and Investment Level 4 areas.
- Invest funds to reestablish forests within community open space, plant new trees, control invasive species, maintain existing resources, and promote connectivity of open areas. Forested areas can help communities save on high grass mowing costs.

Housing and community facilities –

- Support residential growth supplemented with essential neighborhood services, such as churches, convenience stores, day-care centers, branch libraries, health clinics, dentists, hairdressers, and so forth.
- Encourage a broader mix of housing types and rehabilitation efforts to ensure safe and habitable housing.



- Investment Level 2 Areas may be appropriate locations for compact development. This style of development (often called “new urbanism” or “neotraditional design”) tends to include a mixture of uses, a range of residential unit types and allows for higher overall densities that typical suburban development styles. Because this design style draws its inspiration from traditional town development patterns, compact development may be an excellent choice for areas where new development is adjacent to or integrated into an existing community. This style of development may also be appropriate in newly developing areas to create a more human scale activity center with a sense of place.

Economic development –

- Focus on locating large, high-quality employers in Investment Level 2 Areas where the availability of sites close to infrastructure, services, and existing residences makes such locations viable.
- There may be many opportunities for small to medium sized businesses in Investment Level 2

Directing Growth

Investment Level 2:

Areas, especially in mixed use, compact development areas.

- Minimize impacts on transportation facilities and air quality (e.g. by locating employers in the designated Investment Level 1 Areas, or in appropriate locations in Investment Level 2).
- Focus on the mixing and linking of commercial and retail uses.

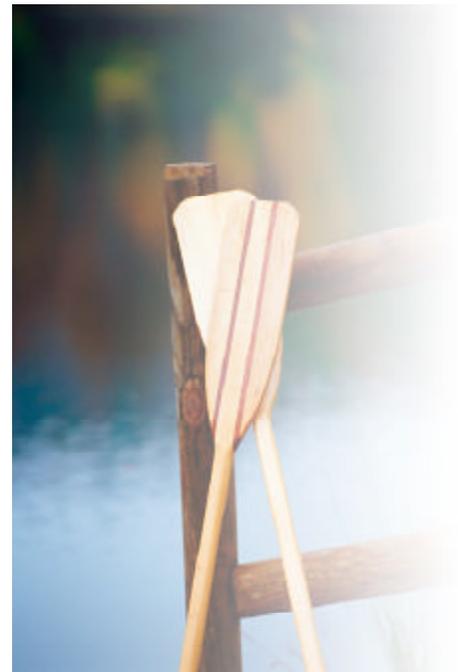
Educational facilities –

- Plan and construct new school facilities that fit into sensible development patterns.
- Locate school facilities on property owned by school districts, contiguous to existing towns or where access to public water and sewer services. Focus on supporting development goals, controlling undue expansion of current school transportation routes, and fostering community support of local educational facilities.

Other public services –

- Focus on providing adequate law enforcement, traffic and vehicle safety, reduction of hazard vulnerability, and needed emergency services.

Overall, the state's intent is to use its spending and management tools to promote well-designed development in these areas. Such development provides for a variety of housing types, user-friendly transportation systems, and provides essential open spaces and recreational facilities, other public facilities, and services to promote a sense of community.



Directing Growth

Investment Level 3:

Description

During the mapping process for this update of the State Strategies, some areas received a relatively low “pro growth” score. While the data analyzed indicated that there were still many factors that would support growth in the area, there may have been other factors which argued for land preservation, for longer term phased development, or both. We have called these areas “Investment Level 3.”

Investment Level 3 Areas generally fall into two categories. The first category is lands which are in the long term growth plans of counties or municipalities where development is not necessary to accommodate expected population growth during this five year planning period (or longer). In these instances, development in Investment Level 3 may be least appropriate among the three growth oriented investment levels in the near term future.

The second category includes lands which are adjacent to or intermingled with fast growing areas within counties or municipalities which are otherwise categorized as Investment Levels 1

or 2. These lands are most often impacted by environmentally sensitive features, agricultural preservation issues, or other infrastructure issues. In these instances, development and growth may be appropriate in the near term future, but the resources on the site and in the surrounding area should be carefully considered and accommodated by State Agencies and local governments with land use authority.

Investment Level 3 is further characterized by:

- Areas with leap frog development which is not contiguous with existing infrastructure.
- High priority agricultural lands directly adjacent to natural areas.
- Environmentally sensitive areas adjacent to areas which have some pro-development qualities.
- Areas that are experiencing some development pressure.
- Areas with existing but disconnected development.
- Areas planned for growth in the long term, but not in the short term. Development of these areas within the next five years may not

Directing Growth

Investment Level 3:

represent proper and efficient phasing of development.

- May be considered as Transfer of Development Rights (TDR) sending or receiving areas, depending on local conditions and locally developed TDR programs or ordinances.

What are Investment Level 3 areas?

Investment Level 3 areas are portions of county designated growth zones, development districts, or long term annexation areas in municipal comprehensive plans that aren't in the Investment Level 1 or 2 designation in the state's Strategy Map. In New Castle County these areas generally reflect phases 2 and 3 of the county's adopted waste water facility plan. In Kent County they mostly include areas outside Investment Level 1 or 2 Areas but within the county-designated "Growth (Overlay) Zone." This zone is determined by measuring a two-mile radius from existing wastewater system pumping stations. Also in Sussex County, environmentally sensitive areas not served by water or sewer infrastructure are most likely included in Investment Level 3. There are also areas designated as

Investment Level 3 in counties and municipalities where there are environmentally sensitive features, agricultural preservation issues, or other infrastructure issues which should be considered by State Agencies and local governments when considering spending decisions and/or development proposals.

Although these areas may be primarily used for agriculture today, they are experiencing development pressure, and may not remain predominately rural in the long term.

Investment Level 3 Strategies:

Due to the limits of finite financial resources, state infrastructure spending on "hard" or "grey" infrastructure such as roads, sewer, water, and public facilities will generally be directed to Investment Level 1 and 2 areas during this planning period. The State will consider investing in these types of infrastructure in Investment Level 3 Areas once the Investment Level 1 and 2 areas are substantially built out, or when the infrastructure or facilities are logical extensions of existing systems and deemed appropriate to serve a particular area.

Directing Growth

Investment Level 3:



Many of the Investment Level 3 areas designated by the counties include significant areas of important farmland and natural resources. Level 3 also includes portions of roadways designated for corridor capacity protection. For these broadly defined areas to be considered for development and to be properly served with state and county-provided infrastructure in the future, several issues should be addressed. These include the character, pattern,

spatial separation and timing of growth; federally mandated air and water quality goals and objectives; and the phasing of future sewer services.

This planning must consider the likely absorption rates for land, the expected requirements for various land uses, the expected growth in population, the value of underlying land and water resources, and the magnitude of public expenditures for infrastructure and services required as such land comes into development.

All three counties plan to provide central wastewater facilities and services to service future growth and to prevent future pollution problems. The state's interest is to cooperatively plan for and provide state infrastructure and services so that they are consistent with the phased extension or construction of wastewater systems, in order to achieve a compact, efficient growth pattern.

The development of these areas should reflect an orderly, phased and guided policy of infrastructure investment agreed to by both the local and state government. This will ensure that future development is timely, at densities and patterns which promote efficiency and protect critical resources, adequately examines natural resource and agricultural lands preservation objectives, can be adequately served with necessary public services (safety, health care, emergency response, libraries, and so forth) and is consistent with comprehensive plans and policies as these are revised over time.

Agricultural preservation actions are appropriate to define the borders between Investment Level 3 areas

Directing Growth

Investment Level 3:

and Investment Level 4 areas, and for protection of farmlands of high value and of sufficient scale to ensure continued agricultural viability, or which are an expansion of an existing preservation district. All such lands within a designated Investment Level 3 Area must be approved by the county planning body, the county-appointed agricultural lands preservation advisory board, and the Delaware Agricultural Lands Preservation Foundation.

Investment Level 3 Strategies:

- Adequately address, through land use controls and infrastructure timing, the character, pattern, spatial separation and timing of growth, as well as the phasing of future sewer services as part of the required review and revision of the county comprehensive plans.
- Incorporate incentives, zoning classifications and land development standards to ensure protection of important natural resources, archeological or historic sites, and open spaces.
- Incorporate innovative subdivision design that includes greater attention to the environment, aesthetics and interconnections with nearby subdivisions.
- Further the protection of important agricultural lands through Purchase of Development Rights programs, zoning, or other methods, where appropriate.
- Provide mechanisms for establishing phasing timetables and procedures, and processes for consideration and analysis of new land use, population or other data; and for addressing unexpected major development proposals.
- Recognize that state infrastructure investments may be appropriate where state and local governments agree that such actions are necessary to address unforeseen circumstances involving public health, safety, or welfare.
- Provide for a continuing reassessment of the extent of the Investment Level 3 areas, the magnitude of development activity, the expected population and employment growth, the desires of landowners and residents in the areas, and the fiscal limitations of state, county and local governments to support additional growth and infrastructure investment.

Directing Growth

Investment Level 3:

- Investment Level 3 would most likely be appropriate to designate as receiving zones under Transfer of Development Rights programs (TDR) if they are designated as growth areas in local or county plans, and the timing and phasing of infrastructure is addressed. TDR programs can provide for a greater range of densities, housing and development options for future growth. (Such programs allow the sale of development rights from areas where development is discouraged to areas where it is encouraged, such as Investment Level 3 areas.) In some cases it may also be appropriate to designate these areas as sending zones for TDR programs, depending on local conditions and program goals. County or local governments that adopt these programs will define the parameters and regulations that will guide the programs in a manner which is best suited to the conditions in the local jurisdiction. The Strategies maps may be one tool to guide the development of county or local TDR programs.

Transportation –

- Continue to invest in the regional roadway network, and in maintenance of the existing roadway system in Investment

Level 3. Investments in roadway safety will also be made.

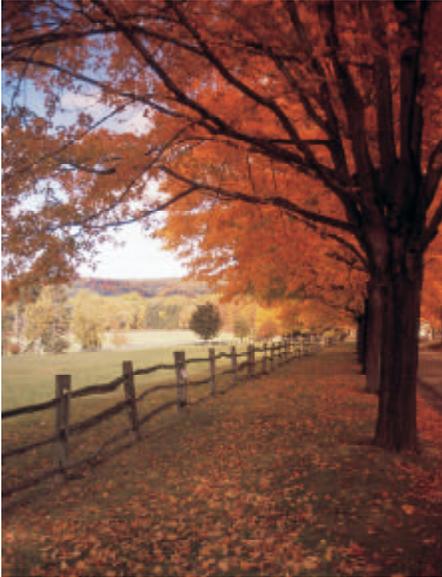
- Continue to protect the capacity of major transportation corridors such as Routes 1, 113, and 13 through the Corridor Capacity Preservation Program.
- Roadway improvements that are necessary to support new development activities will not be encouraged in Investment Level 3 Areas during this planning period. The State's finite resources for roadway capacity improvements will be prioritized in Investment Level 1 and 2 areas before being allocated to Investment Level 3.

Water and wastewater –

- The timing and provision of sewer systems must be coordinated with other infrastructure concerns, resource protection issues, and the expected pace and pattern of growth.
- State financial assistance to local government's water and wastewater facilities will be prioritized in Investment Level 1 and 2 areas before being considered in Investment Level 3. Investments needed to correct public health and existing environmental problems will be

Directing Growth

Investment Level 3:



considered on a case-by-case basis.

Open space, agriculture and forestry –

- Protect critical waterways, promote establishment of greenways, and maintain “green” separators between more intensely developed areas.
- Provide transition zones between Investment Level 3 and Investment Level 4 areas.
- Agricultural preservation activities and agribusiness may be appropriate on a limited basis where such actions help to define the boundaries of Investment Level 3 Areas.
- An expansion of forest protection and urban forestry programs within Investment Level 3 Areas will provide recreational and environmental benefits. Funds should be allocated to forest stewardship programs (tree planting), purchase of development rights, wild fire suppression, removal of invasive species, and promoting the forestry products industry.

Housing and community facilities –

- Investment Level 3 Areas may be appropriate locations for “Conservation Design” as an alternative to typical suburban style residential subdivisions. Conservation Design involves the protection of large portions of existing open space and farmland on a site, while clustering development on a smaller portion of the parcel. This design style often employs non-structural stormwater management practices, and other environmentally friendly design innovations. Developments designed in this style can blend in with their rural settings, protect critical environmental resources on the site, and provide a high degree of value for homeowners who truly want to live in a rural setting.
- In most cases, compact development would only be appropriate in Investment Level 3 Areas when associated with Transfer of Development Rights (TDR) programs that preserve a corresponding amount of agricultural land or natural resources. County or local governments that adopt these programs will define the

Directing Growth

Investment Level 3:

parameters and regulations that will guide the programs in a manner which is best suited to the conditions in the local jurisdiction.

- The State will continue to invest in housing rehabilitation and other assistance to those in existing homes with low to moderate incomes regardless of which investment level the home is located in.

Economic development –

- Agribusiness and forestry activities in these areas may be appropriate long-term uses that would provide employment opportunities, create identifiable edges for development, and provide recreational and environmental benefits.
- New, large scale employers will not be encouraged to locate in Investment Level 3 when there are suitable sites available in Investment Levels 1 and 2.

Educational facilities –

- Schools will not be encouraged to locate in Investment Level 3 when there are suitable sites available in Investment Levels 1 and 2.
- The advanced acquisition of school sites in Investment Level 3 may be appropriate, especially if school construction is not

expected during this five year planning period.

- Because school construction can be a major influence on residential and other development in an area, any proposal to locate a school in an Investment Level 3 Area should be carefully evaluated to determine its impact on infrastructure phasing and land use patterns in the area.

Other public services –

- Focus on providing adequate law enforcement, traffic and vehicle



Directing Growth

Investment Level 3:

safety, reduction of hazard vulnerability, and needed emergency services.

Overall, the state's intent is to acknowledge that while development in Investment Level 3 Areas may be appropriate, there are significant considerations regarding the timing, phasing, site characteristics, or Agency programs that should be weighed when considering growth and development in these areas.

Some lands designated Investment Level 3 are longer term growth areas, and are not necessary to accommodate expected population, household, and employment growth in the next five years (or more). In these areas there are likely to be other competing priorities for State resources during this planning period. Other areas designated as Investment Level 3 represent lands in the midst of rapidly growing areas designated Investment Levels 1 or 2

that are somehow impacted by natural resource, agricultural preservation, or other infrastructure issues. Development of these areas in the near term future may be appropriate, as long as State Agencies and local governments with land use authority investigate and accommodate the relevant issues on the sites and in the surrounding areas.

Investments in "green" infrastructure such as agricultural preservation, natural resource protection, parks and open space may be appropriate in some areas defined as Investment Level 3. The State will continue to invest in maintaining the quality of existing infrastructure and regional facilities in these areas, while supporting county and municipal growth management efforts where possible in this Investment Level.

Directing Growth

Investment Level 4:

What are Investment Level 4 Areas?

Delaware's leading industry today is agriculture, as it was a century ago. The state's open spaces and rural vistas are critical components of the quality of life Delawareans enjoy, as are the small settlements and historic villages reflecting earlier times. Marshlands, wooded areas and a network of waterways support an abundance of wildlife, provide recreation and help define the Delaware scene.

Delaware's Investment Level 4 areas are predominantly agricultural. These areas contain agribusiness activities, farm complexes and small settlements. They are typically found at historic crossroads or points of trade, often with rich cultural ties. (For example, such unincorporated areas as Clarksville in Sussex County, Star Hill in Kent County and Port Penn in New Castle County.)

Investment Level 4 areas also boast undeveloped natural areas, such as forestlands, and large recreational uses, such as state and county parks and fish and wildlife preserves. Sometimes, private recreational facilities, such as campgrounds or golf courses (often with associated

residential developments), are also situated in Investment Level 4 areas.

Some limited institutional uses may exist in such areas. Delaware's Investment Level 4 areas are also the location of scattered residential uses, featuring almost entirely single-family detached residential structures. These are homes for those who value the quiet and isolation provided by locations away from more developed settings, albeit with an almost total reliance on private vehicles for every transportation need.

Delaware's Investment Level 4 areas also include many unincorporated communities, typically with their own distinctive character and identity. These places reflect the rich rural heritage of the state.

Investment Level 4 areas depend on a transportation system of primarily secondary roads linked to roadways used as regional thoroughfares for commuting and trucking.

Strategies for Preserving Investment Level 4 Areas:

In Investment Level 4 areas, the state's investments and policies should retain the rural landscape and preserve open spaces and farmlands, and establish defined edges to more

Directing Growth

Investment Level 4:

concentrated development.

Decisions about investments and policies should rely on these principles:

- **Transportation** – In Investment Level 4 areas, the state will preserve existing transportation facilities and services, and manage the transportation system to support the preservation of the natural environment. Transportation projects will include only necessary drainage, maintenance, and safety improvements, and programs to manage regional highway facilities.
- **Water and wastewater** – Additional state investments in water and wastewater systems will be limited to existing or imminent

public health, safety or environmental risks only, with little provision for additional capacity to accommodate further development. The needs of isolated rural communities, particularly those identified as part of the Strong Communities initiative, will be addressed comprehensively. The intent of such consideration will be to provide critical health, safety, environmental, transportation, employment and housing services for these residents without creating new growth incentives. Investment Level 4 areas are appropriate locations for large spray irrigation wastewater treatment systems, particularly where they can achieve open space, forestry and agricultural objectives.

- **Development** – The state will manage its resources to limit continued development in Investment Level 4 areas, to enhance agriculture, agribusiness, and similar economic activities which are land or water dependent, to protect present and future water supplies, to preserve critical habitat to support a diversity of species, to preserve and enhance the housing stock, to maintain existing educational facilities and services where



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Investment Level 4:

economically feasible, to maintain effective public safety and emergency services, and to maintain the functionality and efficiency of transportation and other infrastructure.

- **Open space and farmland** – Farmland preservation actions focus on preserving a critical mass of agricultural land to ensure the health of the agriculture industry. They will also be used to develop permanent green edges around development areas by targeting farmlands at risk of development, promoting agribusiness activities, and preserving historic farmsteads and archeological sites. Open space investments should emphasize the protection of critical natural habitat and wildlife, aquifer recharge, sustainable agriculture and forestry activities, and increased acquisition of state forest lands. Open space investments will also provide for recreational activities, while helping to define growth areas.
- **Conservation Design** - Local land use regulations typically allow residential land uses in agricultural zones. Although residential development is not desirable in Investment Level 4 areas, it may be inevitable in some instances. Conservation design techniques should be used to ensure that the residential development is compatible with the rural character and natural resources present in the area. Conservation Design involves the protection of large portions of existing open space and farmland on a site, while clustering development on a smaller portion of the parcel. The overall density of the development proposal would not change. This design style often employs non-structural stormwater management practices, and other environmentally friendly design innovations. Developments designed in this style can blend in with their rural settings, protect critical environmental resources on the site, and provide a high degree of value for homeowners who truly want to live in a rural setting.
- **Rural communities** – The state will carry out programs to promote revitalization, historic preservation, reinvestment, vitality and enhancement of small rural communities. Some of these programs include working with residents to establish Crime Watch and other public safety efforts, improvements to streets and lighting, stricter code enforcement, neighborhood clean-up, weatherization and

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Investment Level 4:

rehabilitation of housing, and recreational activities for teenagers. Public investment in infrastructure and services to address social, economic and environmental concerns is appropriate in these communities. Developing vacant spaces within rural communities and contiguous development to maintain and enhance the character of those communities is also acceptable. Suitably scaled commercial and service uses that support sustainable communities are also desirable. Development that significantly expands the boundaries of a rural community or does not have a positive impact on the community is discouraged.

- **Other uses** – Investment Level 4 areas may be the location for certain uses that because of their specific requirements are not appropriate for location elsewhere. Such uses, expected

to be limited in number, could involve public safety or other uses that require their location outside designated investment areas. Industrial activity would be limited, except where specific requirements of major employers may dictate an exception for a use which, because of specific siting and potential conflicts with neighboring uses, should not be placed elsewhere.

Investment Level 4 areas would logically be the sending areas for Transfer of Development Rights (TDR) programs, allowing agricultural, rural, and natural resource uses to continue while promoting increased options for development in Investment Level 1 and 2 (and possibly 3) Areas. County



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Investment Level 4:

or local governments that adopt these programs will define the parameters and regulations that will guide the programs in a manner which is best suited to the conditions in the local jurisdiction. The Strategies maps may be one tool to guide the development of county or local TDR programs.

It is the state's intent to discourage additional development in Investment Level 4 areas unrelated to the areas' needs. It will do so through consistent policy decisions and by limiting infrastructure investment, while recognizing that state infrastructure investments may be appropriate where state and local governments agree that such actions are necessary to address unforeseen circumstances involving public health, safety, or welfare.

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Other Map Designations:

Out of Play

Lands that are not at all available for development or for redevelopment have been clipped out of the analysis and will be shown on the *Strategies* maps in a light gray color. These include publicly-owned lands, lands for which serious legal constraints on development are identified, and lands in some form of permanent open-space protection. A full list of those data sets used to map out of play lands and of the sources for those data sets is presented as part of a technical appendix at the end of the document.

Some lands that are in the “not favored” category (also described in the technical appendix) are included as out of play lands for New Castle County based on that county’s stringent Unified Development Code (UDC), which identifies some lands as “100% constrained” from development. Similarly, floodplain areas in Kent County have been identified as out of play based on Kent County subdivision code constraints on building in floodplains. Floodplains in New Castle County are part of that county’s 100% constrained lands.

There are not similar constraints on floodplains in Sussex County.

It is conceivable that public investments may be made in the “out of play areas” during the five year period covered by this update of the *Strategies*. Because many of these lands are in the ownership of the Federal, State, or local governments, it is expected that funds will be expended on maintenance and management of the lands. Since many of the out of play lands are public parks and natural areas it is expected that funds will be expended on environmental protection, mitigation, and park development. Similarly, it is possible that other public facilities intended to further health, safety, and welfare goals may be constructed on out of play lands that are already in public ownership that are not otherwise constrained by environmental features.

Area of Dispute

The designation “Area of Dispute” refers to lands which are currently subject to legal actions or other inter-jurisdictional disputes, regardless of whether the State is a

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Other Map Designations:

party to those disputes. “Area of Dispute” is shown as a hatched overlay on the Strategies maps, and does not supercede the investment levels otherwise shown on the maps. The State reserves the right to consider certification of comprehensive plans or plan amendments within lands designated “Area of Dispute” when and if the legal or inter-jurisdictional issues are resolved.

Area of Study

The designation “Area of Study” refers to lands which are currently subject to ongoing infrastructure planning studies, local or county comprehensive plans or plan amendments, or in some cases both. “Area of Study” is shown as a hatched overlay on the Strategies maps, and does not supercede the investment levels otherwise shown on the maps. It is conceivable that additional information regarding

future public facilities, capital infrastructure, annexation, or land development activities may come to light pending the completion of ongoing planning activity in these areas. The State reserves the right to consider certification of comprehensive plans or plan amendments within lands designated “Area of Study” when and if the planning studies, comprehensive plans, or plan amendments are completed.

Investing Effectively

Investing in Infrastructure and Using Tax Dollars Wisely

The State Role in Infrastructure Provision

The location of and investment in infrastructure across Delaware is often based in response to localized decisions. Due to the state's large role in funding infrastructure projects, these local decisions often translate into impacts felt by all of Delaware's taxpayers. The magnitude of the state's role in infrastructure provision can be clearly seen when the funding of transportation, wastewater, drinking water, schools, and other relatively immobile infrastructure is examined.

The State provides capital funds for a wide range of public infrastructure and facilities that serve all Delawareans. These investments include roads, bridges, schools, parks, libraries, water and sewer systems, courts, prisons, open space and natural resource protection, public housing, and community redevelopment projects among others. Almost without exception these investments are dependent in one way or another on land use patterns and the trends related to

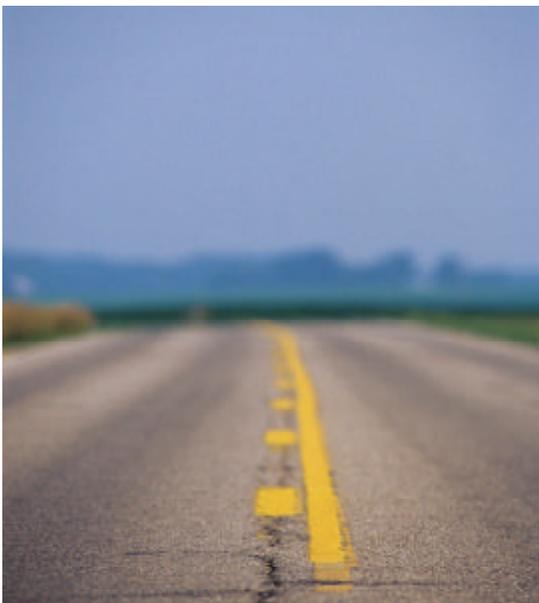
urban and suburban growth in the State. Quite simply, for these investments to be beneficial to the people they are meant to serve they must be planned and constructed in relation to where current and future Delawareans are going to live and work, and how they are going to travel between the two.

In reviewing the State budget for fiscal years 2002 and 2003 as an example it can be demonstrated that between \$240 and \$253 million in State funds were expended on these types of capital infrastructure and facility projects each year. In addition, in these budget years the State was responsible for allocating between \$125 and \$126 million in Federal and other funds for transportation and housing projects, which increased the total amount expended upon capital infrastructure and public facilities to approximately \$366 to \$379 million per year during these two fiscal years. The State clearly has a substantial fiscal stake in where and how growth occurs in Delaware. These State Strategies are intended to ensure that State investments are well coordinated

Investing Effectively

Investing in Infrastructure and Using Tax Dollars Wisely

with local government land use decisions so that these resources are used wisely and efficiently to serve the best interests of Delaware's citizens.



DelDOT is responsible for maintaining nearly 90% of the over 12,000 lane miles in Delaware. This level of responsibility is much higher than the nationwide average of approximately 20% state maintained roads. Although 25% of

Delaware's roads are eligible for federal funds for rehabilitation and restoration projects, this leaves a majority of the funding for road rehabilitation up to the state. In addition to capital infrastructure expenditures related to the rehabilitation and construction of

roads in Delaware, an increase in the number of lane miles in the state results in an increase in the budgets for maintenance and repair since an expanded road network requires expanded support services.⁹

The installation, operation, and maintenance of wastewater and drinking water infrastructure has traditionally been the domain of local governments in Delaware. The state is deeply involved in the funding of wastewater and drinking water infrastructure projects. The state provides grants and loans for wastewater infrastructure projects through The Delaware Pollution Control Revolving Fund and the 21st Century Fund's Wastewater Management Account. The Wastewater Facilities Advisory Council projects that \$256.5 million in future wastewater projects will need funding through 2009.¹⁰ Similar state funding is provided for drinking water projects through the Drinking Water State Revolving Fund administered by the Department of Health and Social Services' Division of Public Health.

The state also makes significant

⁹ Delaware Department of Transportation (2002). Delaware Transportation Facts 2002. www.deldot.net/static/pubs_forms/trans_facts/factbook_2002.pdf

¹⁰ Wastewater Facilities Advisory Council. (2003). Long-Term Wastewater Facilities Funding Plan FY 2004-FY2009. State of Delaware.

Investing Effectively

Investing in Infrastructure and Using Tax Dollars Wisely

infrastructure investments in schools and other relatively permanent sites. The state's 201 public schools receive nearly two-thirds of their funding from the state. The state also funds 14 State Service Centers that deliver more than 160 programs and services to accommodate approximately 600,000 visits annually. Finally, the state funds the largest police force in Delaware, The Delaware State Police, distributed in nine troops statewide.

Land Use and Infrastructure Expenditures

Perhaps the most important local decisions that impact the need for infrastructure provision are those pertaining to land use. In particular, local land use decisions determine the location, character, and intensity of development. These development decisions influence the need for infrastructure across the state.

Many studies have been conducted that examine the relationship between patterns of development and infrastructure expenditures. The relationship between land use and transportation has been studied extensively. At a commonsense level,

much can be understood about this connection. Development of any kind usually results in some additional vehicle miles traveled. This additional travel eventually results in the need for additional road maintenance or new road construction. The amount of travel generated by a given development depends on the development's size, location, use(s), and the availability and feasibility of other modes of transportation such as public or mass transit, walking, and bicycling. Studies have concluded that the cost to maintain and construct roads can be reduced by an average of nearly one-third when sprawling development is abandoned in favor of a more compact pattern of development.¹¹

The relationship between the cost to provide sewer and water infrastructure has also been examined in many studies. The provision of water and sewer infrastructure costs more for far-flung development because it requires the installation of more underground pipeline than development near existing service areas does. This intuitive concept is

¹¹ See reference list on pages 113-114, items: #2-5, 8, 10-12, 15, and 16.

Investing Effectively

Investing in Infrastructure and Using Tax Dollars Wisely

Expenditure Type	State Funds	Federal Funds	Other Funds	Total
Fiscal Year 2003				
Roads	\$84,285,454	\$69,371,180	\$436,534	\$154,093,168
Bridges	7,392,985	24,893,181	95,463	\$32,381,629
Suburban Streets	9,358,601			9,358,601
Public Education	116,649,800			116,649,800
Parks	1,080,000			1,080,000
Libraries	2,213,600			2,213,600
Minor Cap / Maint./ Resoration	6,007,000			6,007,000
Higher Education	10,500,000			10,500,000
Wastewater	3,300,000			3,300,000
Drinking Water	1,750,000			1,750,000
Judicial Facilities	2,114,100			2,114,100
Resource, Conservation, Development	4,500,000			4,500,000
State Police Facilities	0			0
Community Redevelopment Fund	1,005,000			1,005,000
Housing	3,406,000	30,567,900		33,973,900
Totals FY 2003	\$253,562,540	\$124,832,261	\$531,997	\$378,926,798
Fiscal Year 2002				
Roads	\$80,147,657	\$69,789,705	\$376,171	\$150,313,533
Bridges	8,284,952	24,539,139	681,204	33,505,295
Suburban Streets	11,164,519			11,164,519
Public Education	95,770,800			95,770,800
Parks	1,395,000			1,395,000
Libraries	3,889,300			3,889,300
Minor Cap / Maint./ Resoration	700,000			700,000
Higher Education	17,500,000			17,500,000
Wastewater	2,400,000			2,400,000
Drinking Water	0			0
Judicial Facilities	7,000,000			7,000,000
Resource, Conservation, Development	5,000,000			5,000,000
State Police Facilities	3,600,600			3,600,600
Community Redevelopment Fund	0			0
Housing	3,880,000	30,589,200		34,469,200
Totals FY 2002	\$240,732,828	\$124,918,044	\$1,057,375	\$366,708,247

supported by studies reporting average savings in water and sewer infrastructure costs of approximately 25% when a compact development pattern is pursued instead of a more sprawling development pattern.¹² In addition to hard infrastructure expenditures, operations and maintenance costs for wastewater and drinking water systems have also been found to be less costly in situations of compact development than they are in situations of sprawling development.¹³

The cost to provide school, service center, and law enforcement infrastructure is also influenced by patterns of land use. Development in certain locations can create new areas needing infrastructure service. Growth is best directed to areas that have excess infrastructure capacity. Studies have revealed two particular situations where a compact development pattern can reduce school spending.

Investing Effectively

Investing in Infrastructure and Using Tax Dollars Wisely

First, if growth is directed to those areas that have the ability to serve additional students, then a more efficient funding environment can be expected. Second, transportation costs under a compact development scenario would be reduced thanks to development occurring closer to schools. These findings can be applied to the provision of infrastructure such as service centers and state police barracks. If excess capacity exists at one of these sites then nearby development would result in a more efficient spending of tax-dollars. Also, development outside the area of these sites creates either the need for the construction of entirely new infrastructure or the expending of additional time and transportation costs to serve this new development.

State Strategies and Infrastructure Planning and Provision

In part, the State Strategies are meant to act as a guide for adequate infrastructure provision throughout Delaware while minimizing the

burden placed on the state's taxpayers. With this goal in mind, three general strategies related to infrastructure provision should be encouraged. First, it is desirable that towns, counties, and the state are collectively involved in the infrastructure planning process. Next, existing infrastructure should be utilized before new infrastructure is constructed. Finally, when it is necessary to expand infrastructure, this should be done in a logical manner that aims to serve first those areas closest to existing service areas.

A variety of approaches need to be employed in order to allow for effective and efficient infrastructure planning and provision. Many of the approaches listed below are discussed in detail in other sections of this document so they will only be mentioned here.

Infrastructure Planning Techniques

- Encourage the sharing of information through processes such as the Preliminary Land Use Service (PLUS) to expose the

¹² See reference list on pages 113-114, items: #2-4, 8, 10-12, 15, 16, and 19.

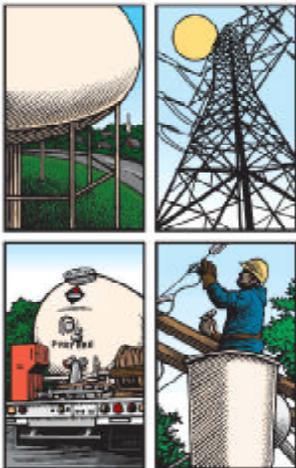
¹³ See reference list on pages 113-114, items: #7,14, and 17.

Investing Effectively

Investing in Infrastructure and Using Tax Dollars Wisely

realities of infrastructure needs and availability.

- Encourage the adoption and use of Transfer-of-Development-Rights (TDR) programs and cluster development techniques.
- Publicize the benefits of and encourage the use of transit-oriented and mobility-friendly design standards.
- Use the research and data analysis expertise of entities such as DelDOT, the Delaware Population Consortium, the Dover/Kent MPO, and WILMAPCO



Financial Assistance for Wastewater Management —

The Financial Assistance Branch of the Department of Natural Resources and Environmental Control (DNREC), Division of Water Resources provides planning, engineering, and financial assistance to a broad range of customers that request help in preventing or eliminating activities that cause water pollution.¹⁴

- Grants for the development of general wastewater facility plans, long range wastewater facility

plans, and regional wastewater facility plans.

- Engineering and technical assistance for developing new sanitary sewer districts or solving problems in existing sewer districts.
- Financial assistance in the form of economic feasibility studies, low interest loans, and grants for wastewater projects that eliminate sources of pollution or prevent future sources of pollution.

Safe Drinking Water

Drinking Water State Revolving Fund (DWSRF) – Capacity Development Program

DWSRF offers low interest loans and grants to community water systems for infrastructure improvements. The DWSRF assists community water systems in improving existing infrastructure to serve existing customers more efficiently.

The Capacity Development Program is helping public water systems in Delaware have technical, managerial and financial capabilities to meet the requirements of the Safe Drinking Water Act.

¹⁴ For more information call Branch Administrator: Alan J. Farling, P.E. at (302) 739-5081.

Improving Housing Choice

Compact Development

Rather than defining “sprawl” as growth itself, it is more accurately described as a growth pattern called “trend development.” This pattern can be understood by examining its location, density, and design. Location refers to where the growth is taking place in reference to existing infrastructure and population centers. Density defines how many housing units are built per acre. Design looks at the amenities included with the development, such as sidewalks, parks, open space and the separation of residential use from other uses.

The trend of “leapfrog development” refers to skipping over previously developed locations to favor areas at a greater distance from existing population and infrastructure

centers. This kind of development also tends to be low density; usually no more than four units per acre. Trend development is often characterized by separated land use, with considerable distance between residential, shopping, and employment centers. This requires a car to be used for travel to work and shopping. Trend developments often have wide streets and few, if any, sidewalks. Also, the street pattern offers few entrance and exit choices from the development. Cul-de-sacs tend to restrict traffic flow and limit entrance onto main roads to only a few locations.

The concepts of location, density, and design can also be used to describe compact development. The tendency to locate in approved growth areas contiguous to either a town or previously developed area is seen in compact development. Density levels for compact development tend to be higher than that of trend development; usually 5 to 7 dwelling units per acre, or more. Compact development typically includes an integrated pedestrian and bike network, newer streets interconnected with existing streets, intermingling of residential and

Infrastructure Savings with Compact Development



Improving Housing Choice

Compact Development

commercial uses, and the inclusion of parks or open space networks within developments.

The positive impacts of compact development include a more diverse range of transportation options, a more economical extension of public services and utilities, and the location near existing developed areas and higher densities enable natural qualities and agricultural areas to be preserved and protected.

Development patterns have an impact on infrastructure costs, private housing costs, land consumption, public sector costs and revenues, vehicle use, water quality and public safety. Evidence of the magnitude of this relationship has been shown in numerous studies that have quantified the relationships between development patterns and these impacts. There is a significant difference between the impacts created by trend and compact development.

The cost to provide infrastructure (sewer, water, school and roads) is shown to decrease as the density of

development increases. Studies show that compact development can save an average of 31.8%.¹⁵ Compact development is located closer to existing infrastructure and takes place at higher densities than trend development does so compact development will require fewer pipes in the ground and therefore cost less than trend development. Studies found an average savings of 26.8% with compact development.¹⁶ For water infrastructure, compact development saved an average of 25.3%.

Developers often pick up a significant portion of the tab for sewer and water capital expenditures. Also, the expense to operate and maintain a sewer or water system has a larger affect on taxpayers than the cost to invest in new infrastructure. As the number of connections per mile increases, the cost of water and sewer service decreases.¹⁷ Higher population and employment density is correlated with lower wastewater conveyance costs.¹⁸ Another study found that as lot size increases and the distance

¹⁵ See reference list on pages 113-114 items: #2, 5, 8, 11, 12, and 15.

¹⁶ See reference list on pages 113-114 items: #2-4, 8, 10-12, 15, 16, and 19.

¹⁷ See reference list on pages 113-114 item: #7

¹⁸ See reference list on pages 113-114 item: #14

Improving Housing Choice

Compact Development

from the water or sewer plant increases, the cost to provide water and sewer increases.¹⁹ Sewer and water operating costs are less for compact development than they are for trend development.

It was discussed that the pattern of development would not change the ultimate number of children living in an area. There was a modest, average school cost savings of 5.9% for compact development.²⁰ Some studies assume that school costs will go down as growth is directed (compact growth) to areas with excess school capacity. In this situation transportation costs would also decrease because students live closer to schools.

Road costs for maintenance and new construction reported a savings of 32.6% with compact development over that spent on trend development.²¹

Private housing costs were found to be reduced an average of 15.6% when compared with trend development.²²

Trend development uses more land with its larger lot sizes and more remote locations when compared with compact development. An average total land savings of 29.3% comes with using compact development over trend development.²³ Compact development saves an average of 31.9% agricultural land, and 42.4% for fragile environmental land.²⁴

The land savings has benefits such as protection of scenic vistas, preserved character of rural areas, and supporting the economic viability of active farm operations. Compact development protects the viability of agricultural uses and encourages the integration residential, agricultural and commercial uses, which promotes the fiscal health of the jurisdictions.

There are definite public sector cost and revenue benefits associated with compact development. Several examples are less expensive infrastructure provision, less expensive operating costs, and promoting fiscally beneficial

¹⁹ See reference list on pages 113-114, item: #17

²⁰ See reference list on pages 113-114, items: #2, 4, 8, 10, and 15.

²¹ See reference list on pages 113-114, items: #2-5, 8, 10-12, 15, and 16.

²² See reference list on pages 113-114, items: #2-3, 12, 14, 15, and 16.

²³ See reference list on pages 113-114, items: #1-5, 15, 16, and 19.

²⁴ See reference list on pages 113-114, items: #2, 3, 16, and 19.

Improving Housing Choice

Compact Development

integration of land uses. Studies report that a 32.5% more positive cost/revenue ratio for jurisdictions using compact growth.²⁵ Nearly a third less monetary support from taxes and fees is required by compact growth.

The pattern of development can influence how frequently people need to use vehicles for daily tasks. Trend development is often distant from existing employment and business districts making the car the only way to go from place to place. Compact development tends to place residential uses in the vicinity of

commercial uses so that a short car ride is plausible. Through the provision of pedestrian and bike networks, compact development tends to make walking or bicycling a more attractive option.

Compact development can result in 16.6% less vehicle miles traveled than trend development.²⁶

Water quality is also impacted through the imposition of impervious surface cover on previously undeveloped land. Increased impervious surface cover causes most stormwater to runoff quickly into stormwater drains rather than draining naturally and being filtered by the soil on its way to streams and rivers. The effects of this disruption of nature's drainage system are more frequent floods and droughts, erosion of streambanks due to increased runoff, and pollutants introduced by the non-filtered water. Trend development creates significantly more impervious surface cover than compact development does. Trend development tends to have more, wider roads than typically found in compact development. Compact development can result in an average of 42.9% less impervious surface cover.²⁷

Anecdotal evidence exists for public safety response times, but not many systematic studies have been done. EMS calls from compact



²⁵ See reference list on pages 113-114, items: #2, 3, 26, and 19.

²⁶ See reference list on pages 113-114, items: #1, 2, 5, and 13.

²⁷ See reference list on pages 113-114, items: #1, 2, 5, and 13.

Improving Housing Choice

Compact Development

development areas were, on average, responded to in approximately 27% less time.²⁸ Evidence suggests that a compact development pattern allows for more efficient provision of public safety services than trend development does.

The long-term cost of development includes operating and public service costs that must be borne by all of a jurisdiction's residents, not simply new arrivals. Evidence has shown that trend development has fiscal and public service impacts that can lead to a choice between the thinning of services and the raising of taxes. These characteristics tend to worsen the fiscal position of state and local governments and force the choice between the lowering service standards and the raising of taxes to maintain existing standards.

Delaware's physical landscape contains bustling urban environments, small towns, rural and agricultural areas; and pristine wetlands. Residents of Delaware are also fortunate to live in a state that has been fiscally well-managed. This enables taxes in Delaware to be relatively low. In 2003, only New Hampshire and Alaska had lower state and local tax burdens than Delaware has.²⁹ To preserve Delaware's sound fiscal situation and environmentally diverse landscape, the state needs a development pattern that efficiently uses public infrastructure and minimizes consumption of undeveloped land. The research provides strong evidence that a compact development pattern is well suited to maintaining Delaware's fiscal health and preserving the many characteristics that make Delaware a worthwhile place to live and work.

²⁸ See reference list on pages 113-114, item: #9.

²⁹ See reference list on pages 113-114, item: #18.

Improving Housing Choice

Open Space Design Techniques³⁰

Rural subdivisions on productive farmland are strongly discouraged. However, some rural lands are only marginally productive and may, inevitably, come under development pressure. Often, some development is permitted by the local jurisdiction. In such cases, there are still ways to protect the rural landscape by carefully planning the new development.

Each time a rural or suburban property is subdivided, an opportunity exists for adding land to a community-wide network of open space. Conservation subdivision design simply rearranges the development on each parcel so that half (or more) of the buildable land is set aside as open space. This allows the same number of houses to be built in a less land consumptive manner, allowing the balance of the property to be protected and added to a network of community green space. The density-neutral approach outlined below is a fair and equitable way to balance conservation and development in rural areas under development pressure.

Open space or cluster developments can be more profitable than conventional developments, because infrastructure costs are reduced and homes appreciate and sell for more. They can also minimize the loss of farmland and forest while increasing property values. These subdivisions provide the same number of dwelling units as conventional development. They are carefully designed, however, to preserve parts of a rural site and cluster the houses on the remainder.

Counties and municipalities in Delaware allow, and sometimes even encourage clustering as an option in their rural areas. Although new housing in the Investment Levels One and Two is the preferred development pattern, open space developments can be a profitable option for small-scale subdivisions on nonproductive rural land in the Investment Levels Three and Four. They can blend houses into the landscape and to some degree can allow for the continuation of working farms or ranches.

³⁰ Adapted from “Better Models for Development in Delaware,” Developed for Delaware by The Conservation Fund, the document is available on the State of Delaware Planning web site at: <http://www.state.de.us/planning>

Improving Housing Choice

Open Space Design Techniques

What are the Advantages of Open Space Design?

- Developers save money by not having to build as many streets, gutters, drains, or sidewalks.
- Many people prefer open space design because such developments provide access to nature and outdoor recreation, enhance property values, and reduce the time and expense of maintaining extra-large yards.
- The public benefits from open space design because it means less concrete and asphalt, less polluted runoff, more wildlife habitat, and more trees and green space.

The Conservation Design Concept

In his book *Growing Greener: Putting Conservation into Local Codes and Ordinances*, land use expert Randall Arendt explains how open space design works.

Designing subdivisions around the central organizing principle of land conservation is not difficult. However, it is essential that ordinances contain clear standards to guide the conservation design process. The four-step approach

described below has proven to be effective in laying out new full-density developments where all the significant natural and cultural features have been preserved.

Step One consists of identifying the land that should be permanently protected. The developer performs a detailed site analysis in order to precisely locate features to be conserved. The developer first identifies all the constrained areas, such as wetlands, floodplains, and steep slopes, called *Primary Conservation Area*. The developer then identifies *Secondary Conservation Areas*, which comprise noteworthy features of the property that are typically unprotected under current codes: mature woodlands, greenways and trails, river and stream corridors, prime farmland, hedgerows and individual free-standing trees or tree groups, wildlife habitat and travel corridors, historic sites and structures, scenic viewsheds, etc. After “greenlining” these conservation elements, the remaining part of the property becomes the Potential Development Area.

Improving Housing Choice

Open Space Design Techniques

Step Two involves locating sites of individual houses within the Potential Development Area so that their views of the open space are maximized. The number of houses is a function of the density permitted within the zoning district.

Step Three simply involves “connecting the dots” with streets and informal trails, **while Step Four** consists of drawing in the lot lines.

This approach reverses the sequence of steps in laying out conventional subdivisions, where the street system is the first thing to be identified, followed by lot lines fanning out to encompass every square foot of ground into house lots. When municipalities require nothing more than “house lots and streets,” that is all they receive. But by setting community standards higher and requiring significant open space as a precondition for achieving full density, officials can effectively encourage conservation subdivision design. The protected land in each new subdivision would then become building blocks that add new acreage to community-wide networks of interconnected open space each time a property is developed.



Improving Housing Choice

Community Design Subcommittee

Livable Delaware Community Design Subcommittee

The Community Design Subcommittee of the Livable Delaware Advisory Committee has produced a Community Design Publication which offers guidelines and inspiration for more innovative development in Delaware. Also, another product of the early meetings of the committee is the following **core values** list for better community design.

Core Values

Foundation of Community Design: The Impact on People

Good community design creates a strong quality of place which helps people cultivate a secure relationship with their neighbors, community and environment.

Community Design Core Values

A land development project starts with initial thoughts for how to use and develop the property. An early focus on good community design

provides the owner or developer with an alternative way of conceiving the project. The “core values” recognize specific contributing elements of good design and provide a base of guidelines.

The following recommendations present a hierarchical approach to planning a project. The assessment begins with understanding the site and thoughtful consideration of how community design impacts the lives of the residents. Considerations such as location character, surrounding patterns and scale of uses should be taken into account as the project evolves. Good design promotes a quality of place, enhances the self-image of the residents and allows identification with enjoyable surroundings.

Value 1: Land Features before Land Design

As a first step, identify and map the property’s assets to:

- incorporate or work around wetlands, steep slopes, established forests, waterways, historic or pre-historic sites;
- maximize habitat protection and minimize habitat fragmentation;

Improving Housing Choice

Community Design Subcommittee

- give protections of the natural resources priority before examining the layout of the project;
- put development on the least valuable areas rather than on the most valuable site elements; and
- incorporate the site's resources when designating areas for preservation and recreation.
- priority for smaller lots by reducing larger lots and dispersed uses;
- mixed uses;
- more compact and efficient land design;
- walk-ability;
- connectivity; and
- seamless transitions between uses rather than abrupt borders.

Value 2: Land Design before Yield

Instead of focusing on the potential project yield in number of units per acre, let the design flow from the:

- land features;
- desired appearance of finished project;
- functionality of the built environment;
- project's character; and
- appropriateness of the project's location in regard to neighbors, environment and surroundings.

Value 3: Cluster before Sprawl

Look at opportunities to cluster the project's components with:

Value 4: Scale before Statement

Determine the design and appropriateness of structures based on the general context of the area to:

- promote construction that is sensitive to the scale and context of the surroundings,
- rather than building the biggest, most impressive buildings possible;
- build structures designed to fit a human scale and perspective; and
- examine the manageability of home sites and proximity of buildings to each other.

Improving Housing Choice

Community Design Subcommittee

Value 5: Neighborhood before Individual Ownership

Pursue designs that accommodate social interaction and incorporate shared access to community resources by:

- examining the connection to adjacent uses – such as shopping, schools and recreation – rather than building individual homes and businesses on isolated sites;
- allowing the natural qualities of the site – such as water bodies or vistas – to be accessible to the entire community rather than limited to a few areas; and
- offering opportunities for interaction with others as well as individual areas for fostering pride of ownership and identity.

Value 6: Community Inclusion before Site Exclusion

Design projects that are place sensitive and foster identity by:

- avoiding real or perceived (designed-in) isolation, separation or exclusion such as that found in gated communities or those that focus layout inward and separate from neighborhood or community; and

- encouraging communication among neighbors through greenways, paths, open space corridors and compactness.

Value 7: Pedestrian before Vehicle

In the design, take the opportunity to put pedestrians first by:

- promoting walking and biking;
- making the automobile secondary in the design process, while recognizing its continuing necessity;
- recognizing that roadways can be more than just a means to convey vehicles;
- promoting the use of roads as open space and routes for other modes of travel; and
- minimizing excess vehicle travel by making roads friendly to walkers and bikers. This benefit added value of increasing community identity and integrity.

Value 8: Sensibility before Fad

Seek designs appropriate to the local market which reflect the lifestyles of area residents:

- resisting the architectural fad of the moment when those designs clearly do not fit the community;

Improving Housing Choice

Community Design Subcommittee

- designing a mix of types, styles and sizes of residential units; and
- building active, human-scaled commercial streets rather than huge shopping complexes with expansive parking areas.

Value 9: Context before Application

Focus on identifying, preserving and creating community character by:

- attention to scale and context-sensitive architecture;
- examining local vernacular styles rather than blind acceptance of corporate, regional or national designs; and
- providing for seamless transitions of uses and activities rather than rigid zoning districts and use requirements.

Value 10: Land Planning and Architectural Design before Engineering

Stress design flexibility and creativity by:

- avoiding reliance on rigid, engineering-based development parameters (such as those typically found in subdivision ordinances); and
- adopting more flexible standards for lot sizes/shapes, setback, floor

area ratios, turning radiuses and street widths.

Value 11: Community Character before Ordinance

Tailor land development controls to the community and regional setting by:

- using design to create quality places rather than relying on ordinances and standards to create community;
 - minimizing rigidity in the regulatory process;
 - avoiding merely mirroring “common usage” controls and approaches used elsewhere; and
 - avoiding approaches that were developed to fit unique circumstances of another jurisdiction – one size doesn’t fit all.
- As population has increased and the housing stock has increased at a greater rate, Delaware has lost agricultural land and forests and gained developed uses. Increasingly the trend has been toward growth outside of towns in the unincorporated areas.¹⁷
- Due to increasing sprawl, the decline of the cities and towns, and the loss of agricultural land, land use is a major public policy issue in Delaware.

Improving Housing Choice

Promoting Development in Growth Areas

- In Investment Levels 1 and 2, the state will promote a mixture of housing types and prices, and protection and enhancement of existing housing and choice. Investment in housing in combination with community revitalization and public services will be used to restore and improve existing neighborhoods, promote viable downtowns and reuse of older residential, industrial and commercial zones. In Investment Levels 2 and 3, state investments in housing in combination with community redevelopment, and other services will enhance smaller communities, and support moderate levels of primarily residential growth supplemented with essential neighborhood services. In Investment Levels 2 and 3, a broader mix of housing types and rehabilitation efforts to ensure safe and habitable housing will be encouraged. In Investment Level 4 areas, the state will manage its resources to limit continued development in support of agriculture, agribusiness, and similar economic activities that are land- or water- dependent, to protect water supplies, to preserve critical habitat to support a diversity of species, and to preserve the existing housing stock.

Quality of Life Issues:

- Quality of life issues are central to continued growth and development in Delaware. Crime rates in Delaware steadily dropped from 1995 to 2000. Throughout the state there are a variety of cultural, historical and recreational amenities that will continue to make the state a desirable place to live. A comparison of the cost of living in Delaware against other East Coast areas shows that Delaware is less expensive to live in than either Philadelphia or Washington, D.C. Additionally, cost of living data has remained fairly steady since 1995.
- The combination of the lower cost of living and the variety of cultural and recreational amenities in the state support continued growth in Delaware. The lower cost of living in Delaware in relation to adjoining East Coast metropolitan areas encourages the location of business that will create jobs in the state.

Improving Housing Choice

Delaware State Housing Authority

The Delaware State Housing Authority (DSHA) offers numerous homeownership programs to low- and moderate- income Delawareans. The DSHA also offers programs to assist in home rehabilitation. In addition to sponsoring programs that directly provide affordable housing to Delawareans, DSHA works with housing providers to assist them in meeting Delaware's housing needs. Investors, developers, local governments and non-profit organizations can obtain financial assistance from, or partner with, DSHA in order to provide more affordable housing opportunities to Delawareans.

1. Community Development Block Grants - (CDBG)

Each year, Kent and Sussex County and local municipalities within these counties apply to DSHA for a portion of this federal grant money. DSHA administers the funds to these governmental entities, which in turn use the money to help repair substandard housing and make infrastructure improvements in needy areas of each county. Municipalities can request sewer and water system improvements, street

repairs, street lights and other infrastructure improvements that support low- and moderate-income housing development.

2. Delaware Housing Partnership - (DHP)

This initiative combines 6% interest rate downpayment and closing cost loans of up to \$10,000 with pre-approved, newly-constructed affordable homes.

3. Emergency Shelter Grants Program - (ESGP)

The federal assistance provided under this program benefits emergency shelters by allowing them to expand services and renovate their shelters. It is offered by DSHA in Kent and Sussex Counties.

4. Housing Capacity Building Program - (HCBP)

This initiative helps providers of affordable housing increase their capacity to build and maintain affordable housing. A joint initiative of DSHA, the University of Delaware, the Delaware Community Investment Corporation and the Delaware Community Foundation, the program provides a range of

Improving Housing Choice

Delaware State Housing Authority

assistance including capacity building grants, training and technical assistance.

5. [Housing Development Fund - \(HDF\)](#)

The HDF is Delaware's primary financial resource to help housing providers across the state access financing to create or rehabilitate affordable housing, or offer unique housing programs for low- and moderate-income persons.

6. [Housing Rehabilitation Loan Program - \(HRLP\)](#)

This program offers loans of up to \$35,000 at 3% interest rates to low- and moderate-income home owners and landlords who rent to low-income tenants in order to make necessary State Housing Code repairs or handicapped-accessibility modifications.

7. [Live Near Your Work - \(LNYW\)](#)

The LNYW Program is a cooperative partnership between the state, local jurisdictions and employers to provide financial assistance to eligible employees in purchasing

homes near their places of employment.

8. [Low Income Housing Tax Credits - \(LIHTC\)](#)

This program provides a direct federal income tax credit to qualified owners and investors who build, acquire or rehabilitate rental housing units to rent to low-income Delawareans.

9. [Multi-Family Mortgage Revenue Bond Program - \(MFMRB\)](#)

This statewide program permits DSHA, through the issuance of tax-exempt mortgage revenue bonds to finance the acquisition, new construction or substantial rehabilitation of apartment complexes which are available for rent to low-income individuals and families.

10. [Neighborhood Revitalization Fund - \(NRF\)](#)

The goal of this program is to help entire communities restore their homes to state Housing Code standards. Neighborhoods and

Improving Housing Choice

Delaware State Housing Authority

communities apply to receive a set aside of funds that their home owners can access in the form of low-interest loans. Home owners residing in approved neighborhoods can access deferred low-interest rate loans of up to \$35,000; landlords can borrow up to \$25,000

11. Public Housing Home Ownership Program - (PHHOP)

This program, operated in Kent County only, provides Public Housing, Section 8, Capitol Green residents and Waiting List applicants with the opportunity to purchase their own homes in modest, residential neighborhoods.

12. Second Mortgage Assistance Loan Program - (SMAL)

This program provides up to \$5,000 (at 6% interest rate) in down payment and closing costs assistance to persons who have not owned a home in the past year.

13. Single Family

Mortgage Revenue Bond Program - (SFMRB)

Commonly referred to as the First-Time Home Buyers Program or the Bond Program, this program helps low- and moderate-income Delawareans afford homeownership by providing a **4.95% interest rate mortgage** to persons who have not owned a home in the past three years.

For more detailed information on any of the programs, please see the DSHA website at <http://www2.state.de.us/dsha/>

Improving Housing Choice

Delaware State Housing Authority

The Delaware State Housing Authority recommends the following steps to benefit housing in Delaware.

1. Inventory and analyze projected housing needs.

Each county in Delaware has done this through their comprehensive land use plans.

New Castle County identified the need for more affordable rental housing for families earning below 30% of the median income. New Castle County has also identified a need for reasonably priced assisted living housing.

Sussex County faces the challenge of an affluent second home/retirement market putting pressure on housing prices and availability.

Kent County works to implement an overall strategy for a balanced land use planning approach benefiting the housing community.

2. Develop goals, policies and objectives to address identified housing needs. Steps to this goal include preserving and improving

existing housing and developing new housing.

3. Identify sufficient land to provide housing for all income ranges, placing special emphasis on housing for low- and moderate-income families.
4. Make adequate provisions for existing and projected housing needs for all economic segments.
 - a. Ensure sufficient land supply, including land to be used for multi-family housing.
 - b. Offer a full range of housing choices including, but not limited to, multi-family housing, mixed-uses, manufactured homes, accessory living units and detached homes.
 - c. Offer various lot sizes and densities along with clustering and other design configurations.
 - d. Provide incentives or requirements that create additional affordable housing units.
 - e. Provide adequately for special populations including the elderly.
 - f. Permit accessory dwelling units in residential areas to encourage

Improving Housing Choice

Delaware State Housing Authority

social economic integration and to provide life cycle housing.

- g. Enforce property maintenance codes to protect all community members from the few that allow their property to deteriorate to substandard.
- h. Encourage infill development by allowing mobile/ manufactured homes on individual lots.
- i. Use small lots and small lot zoning to increase density and meet the needs of singles and the elderly.
- j. Reduce parking requirements for housing development where studies have shown that less is needed, as well as on transit corridors.

Preserving Delaware

Green Infrastructure

The term “Green Infrastructure” refers to an interconnected system of undeveloped lands that incorporates natural resource areas, recreational lands, and working lands. Large blocks of forests, rivers and streams, and farms are all examples of Green Infrastructure. Delaware’s Green Infrastructure serves as habitat for rare and endangered species, provides the basis for Delaware’s thriving agricultural industry, protects the quality of our air and water, provides places for Delawareans to enjoy the outdoors, and adds to the scenic quality of Delaware.

Multipurpose green space networks provide a framework for smart conservation and smart growth. Just as “built” infrastructure such as roads, water and electric are always carefully planned; so should “green infrastructure” be planned, designed, and invested in.

Through its Green Infrastructure subcommittee, the Livable Delaware Advisory Council has developed and approved preservation strategy for farmland and open space in Delaware.

The recommended goals for Green Infrastructure in Delaware:

- Preserve half of Delaware’s remaining, unpreserved commercially viable forest land by 2024.
- Preserve half of Delaware’s remaining, unpreserved cropland by 2024.
- Preserve 100% of the remaining natural resource and recreation priorities by 2024.

A healthy Green Infrastructure provides:

- Clean air and water
- Flood and erosion control
- Habitat
- Food and Fiber
- Scenic Vistas
- Invasive Species Management
- Quality of Life

The economics of Green Infrastructure encompass:

- **Agriculture & Forestry** — Healthy soils, pollinators and stable environmental conditions are essential for Delaware farmers

Preserving Delaware

Green Infrastructure

to put food on the table. Production of Agricultural and Forestry products contributed \$800 million to Delaware's economy in 2002.

- **Physical fitness** – healthy people save public health dollars
- **Recreation** – Fishing, hunting, and wildlife watching activities brought in \$127 million into Delaware's economy in 2001.
- **Tourism** – In 2002, almost 5.9 million people visited Delaware State Parks. Healthy beaches, state parks, and wildlife areas means more visitors to Delaware.
- **Increased property values** – A network of green space used as a common area enhances a community.

The **Livable Delaware Advisory Council's Green Infrastructure Subcommittee** was charged with recommending strategies for conservation and management of natural resources, recreational lands, and working lands. They were also asked to work towards creating an interconnected network of green spaces. The final recommendations of the subcommittee, endorsed by the Livable Delaware Advisory Council are:

1. **Incorporate Green Infrastructure maps into the 2004 update of the Strategies for State Policies and Spending maps.** Use these maps to direct future state program investments and to guide local land use planning.
2. **Develop innovative landowner incentives to protect green infrastructure within growth areas.** Density Bonuses to encourage compact development, Transfer of Development Rights programs and Conservation Design Practices are examples of incentives that can be used.
3. **Enhance and expand existing state programs to protect forests and forested wetlands throughout Delaware.** Support the development of the forestland conservation program in the Dept. of Agriculture and request the Open Space Council to develop forest preservation corridors with the Forest Stewardship Committee.
4. **Support the Delmarva Conservation Corridor initiative. Secure increased matching funds, support**

Preserving Delaware

Green Infrastructure

education on the ecological value that natural resources provide, and support Delmarva Conservation Corridor plan.

- 5. Adopt a 5-year goal to permanently protect 258,000 acres of natural resource and recreational lands and working lands.** Secure \$554 million, establish a stewardship fund, and create matching grants program for nonprofits.

Governor Minner proposed \$22 million in green infrastructure investments for Fiscal Year 2005 to begin implementing the Livable Delaware Advisory Council's recommendations.

Green Infrastructure serves as the umbrella under which many other State, local and private efforts for preserving Delaware's open space and farmlands fall.



Preserving Delaware

Strategies for Preserving Open Space and Farmland

Farmland preservation efforts focus on preserving a critical mass of agricultural land to ensure the health of the agriculture industry. They will also be used to develop permanent green edges around development areas by targeting farmlands at risk of development, promoting agribusiness activities, and preserving historic farmsteads and archeological sites.

Open-space investments should emphasize the protection of critical natural habitat and wildlife, aquifer recharge, sustainable agriculture and forestry activities, and increased acquisition of state forest lands. Open space investments will also provide for recreational activities, while helping to define growth areas.

Open Space Program

The Open Space Program was established by Title 7, Delaware Code, Chapter 75, the Delaware Land Protection Act. Delaware's Open Space Program was created on July 13, 1990 by the signing into law of the Land Protection Act and Subchapter II of the Realty Transfer Tax Act. The Division of Parks and Recreation in DNREC administers

the program. The Act established a 9-member Open Space Council that recommends specific land acquisition projects to the DNREC Secretary, based upon advice of an interagency working group. Funding sources for the acquisitions have included conservation revenue bonds, the 21st Century Fund, legislative appropriations, and the realty transfer tax.

Fortunately, a long term dedicated funding source for open space acquisition was acquired via passage of HB 192, Livable Delaware legislation passed during the first session of the 141st General Assembly. Under that legislation, the Open Space program is to be provided with \$9 Million annually for the next 17 years for open space purposes, a significant increase over the previous \$3 Million dollar funding level.

The Land Protection Act formalized a process for acquiring state conservation lands. According to the law, state agencies may acquire any interest in real property for the following purposes:

Preserving Delaware

The Open Space Program

- To protect and conserve all forms of natural and cultural resources.
- To protect and conserve biological diversity.
- To protect existing or planned parks, forests, wildlife areas, nature preserves or other recreation, conservation and cultural sites by controlling the use of contiguous or nearby lands.
- To preserve sites of special natural, cultural or geological interest.
- To connect existing open spaces into a cohesive system of greenways and resource areas.
- To provide for public outdoor recreation.
- To allow for water resource conservation.

According to the law, “It is the public policy of the state and its political subdivisions that the preservation of open spaces shall be accomplished through the acquisition of interests or rights in real property, or donation of said lands, and that said acquisition constitutes a public purpose for which public funds have been expended or advanced and should be continued.”

The Open Space Program is well coordinated on the state level. The 4 entities eligible for funding through the program are the Division of Parks and Recreation, the Division of Fish and Wildlife, the Division of Resource Management (Forestry), and the Division of Historical and Cultural Affairs. These agencies’ proposed projects are reviewed and discussed by an interagency working group consisting of staff from DNREC, Department of Agriculture, Department of State, Delaware Economic Development Office, Department of Transportation, Department of Administrative Services, and representatives from each county land use and parks departments. The Open Space Program is involved with many private and federal conservation partners also and these activities are coordinated on an ad hoc quarterly basis.

The Land Protection Act calls on the county governments to adopt and incorporate overlay zoning ordinances and environmental performance standards for lands included within designated state resource areas. The standards shall include, but not be limited to: (1)

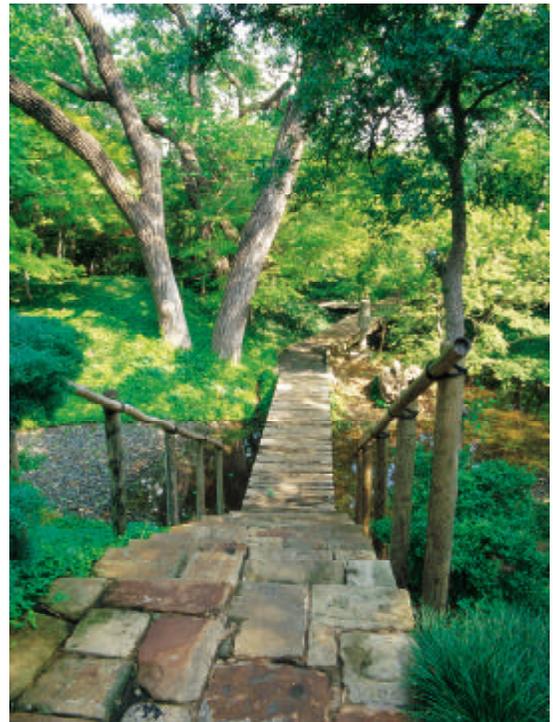
Preserving Delaware

The Open Space Program

establishment of site design requirements that minimize the loss of open space and associated values of state resource area lands and (2) establishment of technically based specific environmental performance standards and design criteria.

DNREC's Strategic Plan sets a goal for the Open Space Program to protect of 2,000 acres annually. This progress is tracked at the quarterly Open Space Council meetings and reported annually. Additionally, under the Land Protection Act, the program is required to prepare a 5-year report on the status and accomplishments of the program.

Since the passage of the Land Protection Act in 1990, the Open Space Program has protected 43,286 acres of land at a total cost of \$209,552,908.



Preserving Delaware

Agricultural Lands Preservation

Delaware Agricultural Lands Preservation Foundation

The Delaware Agricultural Lands Preservation Program was formed with the adoption of House Bill 200 in July, 1991. It is the only official state program in Delaware that protects land for agricultural purposes. The Foundation is staffed by Department of Agriculture Planning Section employees and is administered by a nine member, bipartisan board representing a broad spectrum of interests. The farmland preservation program has demonstrated significant success in its short thirteen year history. Delaware's farm preservation program has the highest percentage of permanently preserved farmland in relation to our total land area than any other state in the nation.

Landowner participation in the program is voluntary and has two components. First, landowners join the program by creating an Agricultural Preservation District. An Agricultural Preservation District contains at least 200 contiguous acres devoted to agricultural and related uses. Any lands fewer than 200 usable (and contiguous) acres

within three miles of an established district can be enrolled into the program as a District Expansion. Landowners who place their lands into Agricultural Preservation Districts agree to not develop their lands for at least 10 years, devoting the land only to agriculture and related uses. In return, the owners receive tax benefits, right-to-farm protection, and an opportunity to sell a preservation easement to the state that keeps the land free from development permanently.

There are now 134,747 acres in 564 Agricultural Preservation Districts and District expansions in Delaware. Out of the 134,747 acres in agricultural preservation districts, 411 properties encompassing approximately 76,848 acres have been permanently protected through the purchase of preservation easements for \$90,523,212. In recent years, the funding source for this development rights purchases has expanded to include both local and federal matching dollars. All three Delaware counties now contribute financial resources to the foundation effort. Delaware has also been very successful in the capture of federal farm preservation dollars.

Preserving Delaware

Agricultural Lands Preservation

High quality soils, significant agricultural infrastructure, historical and environmental significance are all considered when selecting farms for easement purchase. Many of these farms are contiguous to already protected land and complement the state's open space preservation efforts by creating natural buffers between development and public open space. Thus far, the program has been successful in striking a balance between two important goals:

1. **Preserving a critical mass of crop land, forest land, and open space** to sustain Delaware's number one industry and quality of life,
2. **Providing landowners an opportunity to preserve their land** in the face of increasing development pressures and decreasing commodity values.



Preserving Delaware

Forest Legacy

The Forest Legacy Program (FLP) is funded through the U.S. Forest Service's State and Private Forestry (S&PF) budget and administered by the Delaware Department of Agriculture. It provides funds to states to protect working forestlands that are threatened by development or other land uses, either through outright (fee simple) purchase or conservation easements. A conservation easement allows the landowner to continue to own the forest; however, the easement prohibits non-forest uses such as development. Landowners who chose to sell an easement must also

have a forest stewardship plan for their property that describes the activities needed to help achieve their objectives for the property; the Delaware Forest Service can write this plan with the landowner. The intent of FLP is to ensure forestlands continue to yield the forest products we use everyday, such as timber, wildlife habitat, and water quality



protection. Landowner participation in FLP is completely voluntary.

States may only use Forest Legacy funds in areas designated in their Assessment of Need (AON) - the AON describes the state's forests, the threats to the forests, and those areas within the state that contain the most important forests, which are called the Forest Legacy Areas. Once the Secretary of the United States Department of Agriculture (USDA) approves the AON, the state is eligible to receive Legacy funds to purchase land and easements within the designated Forest Legacy areas.

Delaware's AON was approved in December 1998, and there are four Legacy areas in Delaware - White Clay Creek, Blackbird/Blackiston, Redden/Ellendale, and Cypress Swamp. These areas contain the highest concentrations of forests in Delaware, including significant acreage already protected through public and private ownership.

Preserving Delaware

Urban and Community Forestry

The trees in our cities and communities are a vital component of our green infrastructure as they provide a wide array of benefits including cleaner air and water, wildlife habitat, temperature moderation, and aesthetics. The Delaware Forest Service's Urban and Community Forestry Program provides technical assistance to cities, towns, developers, and homeowners to help manage and improve this important forest resource.

The Delaware Forest Service has two full-time foresters who assist cities, towns, and communities with the management and care of their urban forestry resources. These foresters are available to help communities develop management plans for their publicly owned forests (such as city or county parks, street trees, etc.) as well as conduct an inventory of, and a maintenance schedule for, these trees. Program staff also work with developers, planners, and engineers to help educate them on methods to preserve trees during the development process. The Department of Agriculture maintains

a list of certified arborists who are available for tree pruning and other tree care services.

Through a federal grant, the Delaware Forest Service also offers approximately \$80,000 each year to communities throughout the state for tree planting, tree care, and tree management projects on publicly owned lands. The local community must match these grants with either nonfederal funds or in-kind services (volunteer time, staff time, etc.).

Preserving Delaware

Growth and Water Quality

Clean and plentiful water supplies, for consumption, swimming, fishing, agriculture and aesthetics are critical to Delaware's continued prosperity, yet nearly all of our surface water bodies do not meet water quality standards. For the past five years or more, DNREC has been actively developing what are termed Total Maximum Daily Loads, or "TMDLs", a major strategic priority of the Department with respect to water quality. The Federal Clean Water Act requires States to develop these TMDLs for water bodies in which existing pollution control activities are not sufficient to attain water quality standards. A TMDL sets a limit on the amount of pollutants that can be discharged into a water body such that water quality can improve and the standards can eventually be met. Achievement of TMDL targets is in large part depends on where growth occurs and how we manage the water pollutants that accompany that growth.

DNREC is working with diverse groups of citizens and government agency representatives in the context of Tributary Action Teams to draft pollution control strategies to implement these TMDLs.

The availability of regional sewer systems, discharges from wastewater treatment plants, location and density of individual on-site septic systems, use of riparian buffers and other "better site design" principles, and the management of stormwater are all factors which impact our ability to achieve TMDLs. The following programs have been identified as having the potential to help direct growth and address our water quality issues:

- **Delaware Water Pollution Control Revolving Fund and 21st Century Fund/Wastewater Management Account** – DNREC's Financial Assistance Branch directs water and wastewater investment to existing communities, urban concentrations and growth areas by evaluating and ranking all projects for consistency with Strategies for State Policies and Spending. The program addresses the goal of protecting the state's water supplies, open spaces, farmlands, and communities by encouraging revitalization of existing water and wastewater systems and construction of new systems.

Preserving Delaware

Growth and Water Quality

- **On-Site Wastewater Treatment and Disposal** – The Groundwater Discharges Section conducts site evaluations for the suitability of soils for on-site wastewater treatment and disposal systems.
- **Sediment and Stormwater Management** – This program regulates land development activities by ensuring that land disturbing activities are done in accordance with sediment and stormwater regulations. The program also provides technical assistance through locally delegated agencies.
- **Community and Large On-Site Wastewater Systems** – The Groundwater Discharges Section conducts site evaluations for large and community wastewater treatment and disposal systems.
- **Land Application of Wastewaters (Spray Irrigation)** – The Groundwater Discharges Section issues permits to wastewater treatment facilities which use agricultural land for final application of the reclaimed water.
- **National Pollutant Discharge Elimination System (NPDES)** – The NPDES program works to control pollution from activities that affect the quality of surface and ground water for direct discharges.



Preserving Delaware

Growth and Air Quality

Another critical environmental issue directly impacted by growth and sprawl is clean air. Delaware has a serious problem with ground level ozone and is in violation of the federal ozone standard. The 1990 federal Clean Air Act Amendments contain provisions for the attainment and maintenance of the National Ambient Air Quality Standard for ozone and prescribe certain actions we must take to achieve the standard and consequences should we fail to meet it. The Act's provisions aside, clean air is important for the health and well being of Delawareans and is a critical requirement for our continued growth and prosperity. Growth and prosperity, however, also make air pollution problems worse. More people and more sprawl translates into more air pollution; from cars, energy generating facilities, lawn mowers, boats, leaf blowers and the trappings of prosperity. Attainment of the ozone standard will require that we try to minimize air pollution by directing growth into areas that will allow us proximity to employment centers, schools and recreational facilities, that will provide access to a variety of transportation modes, and

that will generally minimize ozone formation. Several program enhancements contained in this plan address our clean air goals.

- **Local Air Quality Impact Analysis** – The Air Quality Management Section is working to better incorporate air quality impacts of development in local land use decision-making.

Preserving Delaware

Growth and Water Supplies

Water supply is another overarching and serious concern for Delaware as we plan for future growth.

Maintaining adequate water supply capabilities for domestic consumption, industrial use, habitat and fisheries protection, and agriculture, especially during times of drought, has been a challenge for Delaware. Increasing population puts additional pressure on limited resources and sprawl puts even additional strain on distribution and treatment infrastructure. Protection from contamination and a thorough understanding of the occurrence and

availability of our state's limited resources are critical to maintaining a Livable Delaware.

- **Source Water Assessment and Wellhead Protection** – The passage of SB119 in June 2001 created the Source Water Protection Program to protect the sources of water for public drinking water systems. The law requires that local ordinances be developed to protect wellhead areas and good and excellent recharge areas.
- **Water Supply Planning** – Directing growth into urban and developing areas requires that the necessary services such as water, sewer, and electric are available and dependable.



Preserving Delaware

Growth and Land Management

DNREC either owns, maintains leases, or in some manner preserves a great deal of land, either by purchasing it or through conservation or other easements. In most cases, DNREC's land holdings amount to permanent preservation and removal of those lands from the pressures of development. This is a straightforward technique to directing growth, however, it is not the only means, and it is costly. Private land owners, conservation-oriented organizations and other units of government have done much to remove land from the development picture. More land will inevitably be purchased or protected by these means, and additional resources will be required. Other avenues for redirecting growth and preserving natural areas and allowing for more informed decisions may be enhanced through the following means:

- **Brownfield/Voluntary Cleanup Program (VCP)** – The redevelopment of contaminated commercial and industrial sites is a tool that can be used to promote growth management and sustainable development principles. By redeveloping brownfields, we relieve some of the pressure to develop greenfields.
- **Conservation and Preservation Easement Program** – Government bodies, charitable corporations, or trusts may acquire property to retain its natural, scenic, or open space values. The program focuses on consolidation of open spaces into larger, contiguous units within new, adjoining developments.
- **Open Space Program** – As stated previously, the Open Space Program provides a mechanism for the State to acquire land for recreation and conservation purposes.
- **Delaware Land and Water Conservation Trust Fund Grants for Park Acquisition and Development and Greenways and Trails** – This provides an annual source of funding to counties and municipalities for acquisition and development of parks and greenway corridors.
- **Freshwater Wetlands** – Wetlands are one of the most productive environments and provide a host of benefits, including filtering pollutants from

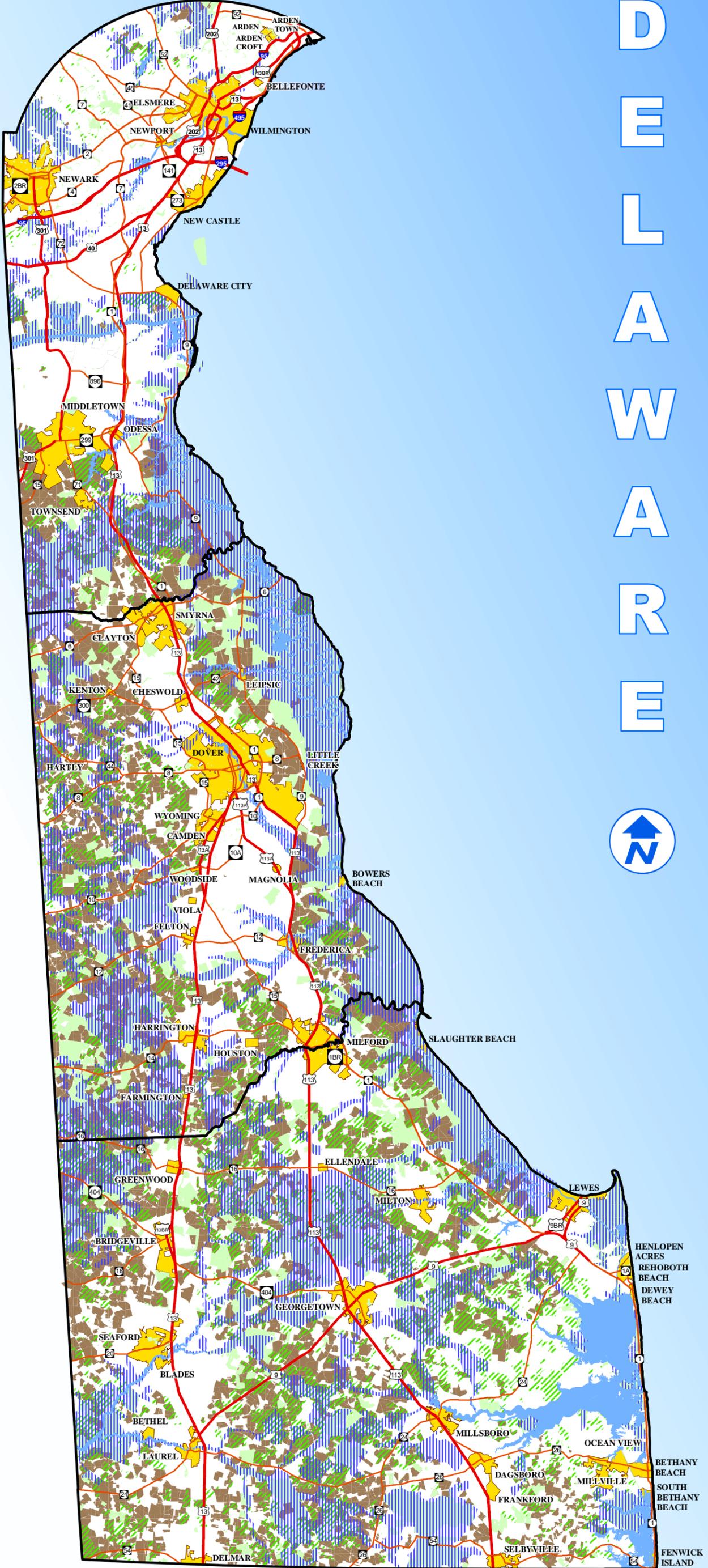
Preserving Delaware

Growth and Land Management

the water, providing protection from flooding, and supplying wildlife habitat. In particular, certain isolated freshwater wetlands in Delaware, such as Delmarva Bays, white cedar swamps and dune swale wetlands are especially vulnerable to the impacts of growth and sprawl. The State is looking for ways to protect and manage the highest valued freshwater wetlands.

A complete description of these programs can be found in DNREC's Livable Delaware Implementation Plan at <http://www.state.de.us/planning/livedel/details.htm>.





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GREEN INFRASTRUCTURE OF DELAWARE

All Focus Areas

MARCH 2004

LEGEND

- CROPLAND
- ◆ FORESTLAND
- NATURAL RESOURCES
- PRESERVED LANDS
- INCORPORATED MUNICIPALITIES
- WATER



■ The Cropland layer depicts the highest ranking 50% of the remaining unpreserved parcels with cropland that occur outside of state designated growth areas. This data was derived through use of the nationally recognized Land Evaluation Site Assessment system. This mapped data should be reviewed in conjunction with the text Livable Delaware Advisory Council approved "Green Infrastructure Strategy."

◆ The Forestland layer depicts the highest ranking 50% of the remaining unpreserved parcels with forestland that occur outside of state designated growth areas. This data was derived through use of the nationally recognized Land Evaluation Site Assessment system. This mapped data should be reviewed in conjunction with the text Livable Delaware Advisory Council approved "Green Infrastructure Strategy."

● This layer identifies a network of ecologically important natural resource lands of special state conservation interest. Generally, it depicts corridors of the largest, most connected natural habitat throughout the state, including forests, uplands and wetlands. It was derived through interpretation of the most important known rare species sites, existing protected lands, 1997 statewide aerial photography, regional ecological evaluations by the USF&W Service, The Nature Conservancy, and the Delaware Natural Areas, Natural Heritage, and Open Space Programs. The lines on the map must be considered on the basis of the scale at which they are shown and the data from which they were derived. The lines are not parcel based, nor are they exact, but a close approximation.

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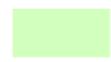


GREEN INFRASTRUCTURE OF DELAWARE

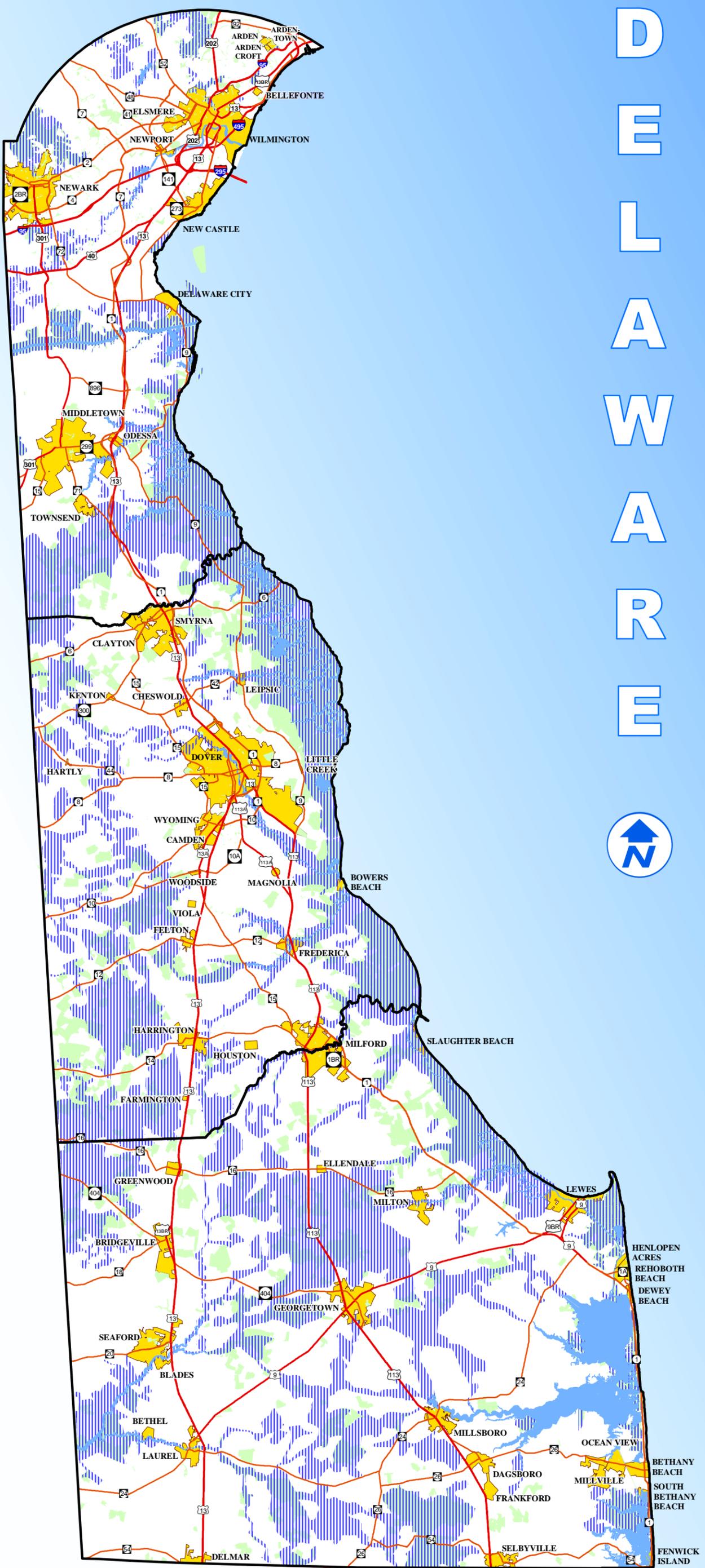
Natural Resources and Recreation Land Focus Areas

MARCH 2004

LEGEND

-  ● NATURAL RESOURCES
-  PRESERVED LANDS
-  INCORPORATED MUNICIPALITIES
-  WATER

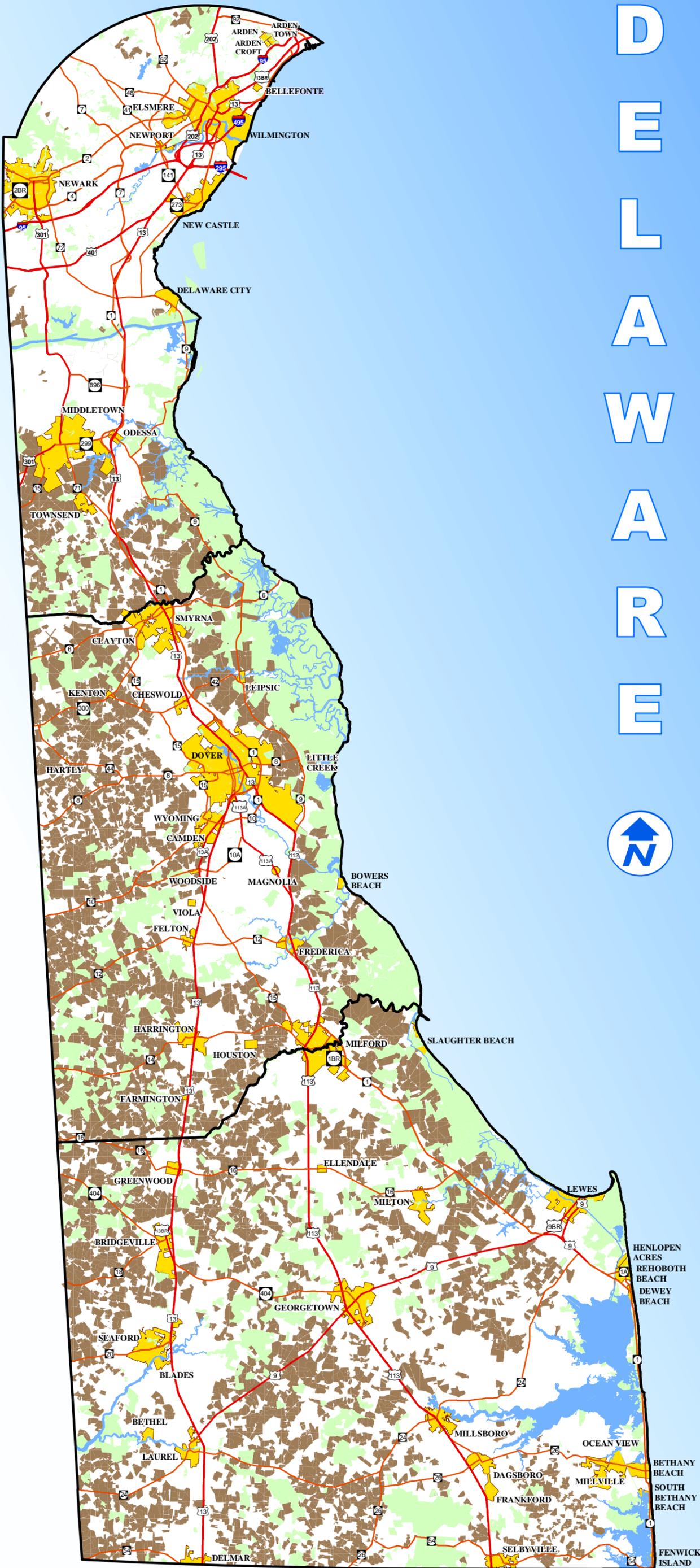
● This layer identifies a network of ecologically important natural resource lands of special state conservation interest. Generally, it depicts corridors of the largest, most connected natural habitat throughout the state, including forests, uplands and wetlands. This map was developed through the application of generally accepted principles and practices of ecology, and represents knowledge at the time of production. It was derived through interpretation of the most important known rare species sites, existing protected lands, 1997 statewide aerial photography, regional ecological evaluations by the USF&W Service, The Nature Conservancy, and the Delaware Natural Areas, Natural Heritage, and Open Space Programs. The lines on the map must be considered on the basis of the scale at which they are shown and the data from which they were derived. The lines are not parcel based, nor are they exact, but a close approximation. The scale of this map image is set for general display purposes only and is inappropriate for evaluation of the ecology at individual sites. Persons needing more detailed information are directed to contact the DNREC Natural Heritage Program or Natural Areas Program offices for assistance.



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GREEN INFRASTRUCTURE OF DELAWARE

Cropland Focus Areas

MARCH 2004

LEGEND

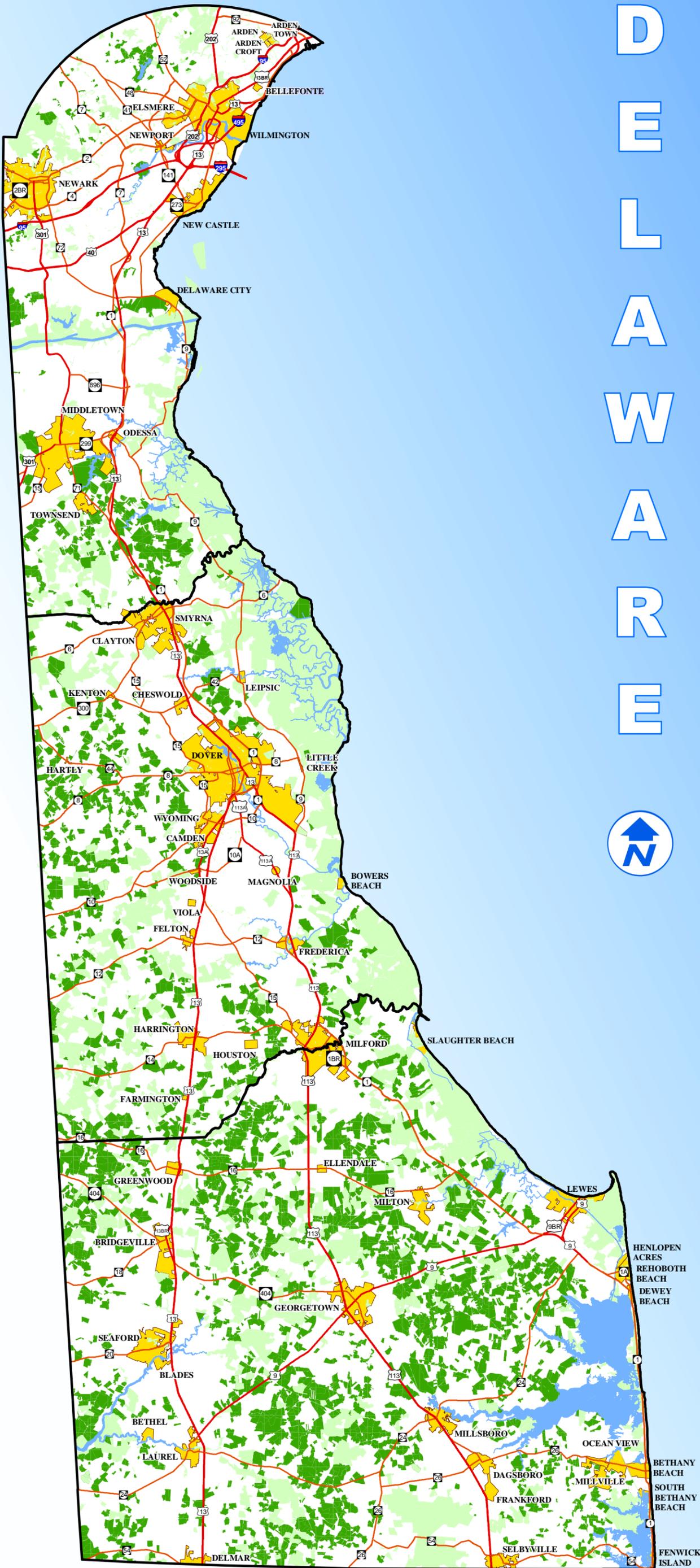
- CROPLAND
- PRESERVED LANDS
- INCORPORATED MUNICIPALITIES
- WATER

■ The Cropland layer depicts the highest ranking 50% of the remaining unpreserved parcels with cropland that occur outside of state designated growth areas. This data was derived through use of the nationally recognized Land Evaluation Site Assessment system. This mapped data should be reviewed in conjunction with the text of the Livable Delaware Advisory Council approved "Green Infrastructure Strategy."

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GREEN INFRASTRUCTURE OF DELAWARE

Forestland Focus Areas

MARCH 2004

LEGEND

- ◆ FORESTLAND
- PRESERVED LANDS
- INCORPORATED MUNICIPALITIES
- WATER

◆ The Forestland layer depicts the highest ranking 50% of the remaining unpreserved parcels with forestland that occur outside of state designated growth areas. This data was derived through use of the nationally recognized Land Evaluation Site Assessment system. This mapped data should be reviewed in conjunction with the text of the Livable Delaware Advisory Council approved "Green Infrastructure Strategy."

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Involving Citizens

Citizen Involvement in Land Use Decisions

Land use planning has been delegated to local jurisdictions in Delaware. Delaware's counties and municipalities have comprehensive plans, zoning ordinances, and other land use regulations that dictate what land uses are appropriate in various areas of the jurisdiction and how land will be developed.

Most local jurisdictions in the state have local planning commissions and boards of adjustment which serve in either a decision making or an advisory capacity to the local legislative body. Meetings of local town or county councils, planning commissions, and boards of adjustment are public. Most of these bodies hold public hearings or workshops about land use issues. As a citizen, this is your best opportunity to be involved with the land use decision making process in your area.

The development of a Comprehensive Plan is perhaps the most important step for the town or county. This document sets the overall pattern of land use, and all land use regulations are based upon

this document. Many jurisdictions conduct extensive public participation efforts to gauge citizen input on these important documents.

A Citizen's Guide to the Land Use Planning Process

Public Hearings can be citizen's avenue to participating in land use and community planning decisions. Public involvement is an important component of the planning process.

The phrase "public listening" describes the ideal public hearing: all parties – commission members, petitioners, opponents, proponents – together listening to one another, weighing all the options, and arriving decisions that promote the common good.³⁰

The public hearing is democracy at work and this section may serve as a guide for citizens interested in participating in this unique opportunity.

All incorporated municipalities in Delaware are enabled to have planning/zoning commissions.

³⁰ Adapted from "Plan Commission Public Hearings: A Citizen's Guide", Purdue University Cooperative Extension Service, 1999.

Involving Citizens

Citizen Involvement in Land Use Decisions

Finding out about the planning commission

The first step is to find out when the planning commission has its regular meetings and if it is working on any special projects. The local newspaper is a great source of information. Local newspapers usually cover the activities of the planning commission and often include the dates, time, and places for upcoming meetings. The “blue” pages of your local phonebook should list the numbers for local government offices in your area. A call to the city/town manager’s office, or planning office, should help you find out about your local planning commission’s meeting schedule.

Another source of information is the Internet. An increasing number of communities have on-line community calendars listing meeting times. If you don’t know if your community has a web site a visit to the Office of State Planning Coordination (State Planning Office’s) web site (<http://www.state.de.us/planning>) or the League of Local Governments (<http://www.ipa.udel.edu/localgovt/dllg/>

[municipalities/index.html](#)) site which is hosted by the University of Delaware, could provide the needed information. Many of these networks maintain online calendars.

Delaware’s “Open Meetings” and “Open Records Laws”

29 Del. C. § 10001 et. seq. states that Public Meetings and Public Records shall be available to citizens, except for the following exceptions:

Closed Meetings: include criminal investigations; employee evaluations; attorney client discussions; collective bargaining; real estate transactions; student disciplinary hearings; and attorney-client meetings.

Closed Records: include personnel, medical, and student files; trade, investigative, and intelligence documents; charitable donations; collective bargaining and pending lawsuits.

The Public Hearing Agenda
Planning commissions may differ in the way in which their agendas are

Involving Citizens

Citizen Involvement in Land Use Decisions

organized. the following is an example of a basic public hearing agenda.³²

1. Chair calls the hearing to order.
2. Secretary or plan director presents the application.
3. Plan director presents staff report.
4. The petitioner (individual proposing a project, zoning change request, and so forth) or representative presents facts and argument in support of a case.
5. Comments from organized groups, committees, or individuals regarding the merits of the case are heard.
6. Comments from organized groups, committees, or individuals in opposition to the case are heard.
7. Rebuttal by the petitioner is heard.
8. Chair may ask questions of the petitioner, supporters, and or opposition.
9. Chair closes the public hearing portion of the meeting.
10. Members discuss the petition.
11. Chair calls for a motion.
12. Members vote.

These steps are repeated for each petition before the commission. Items five (5) and six (6) are the opportunities for the general public to comment about the proposal. The following section outlines an effective way for members of the public to organize and present comments during a public hearing.

Guidelines for Making an Effective Presentation at a Public Hearing

Whether supporting or opposing a proposed plan, a citizen can make a more effective presentation by preparing in advance and following guidelines for behavior during the hearing.

Before the Public Hearing:

- After deciding to comment on an agenda item, think about the

³² Adapted from “Public Hearings: A Citizen’s Guide”, Perdue University Cooperative Extension Service, 1999.

Involving Citizens

Citizen Involvement in Land Use Decisions

logistics of organizing your comments. Determine if others will be addressing the same issues. If so, it is smart to coordinate your presentations to avoid duplication.

- Contact the planning commission before the hearing if you have any questions to ask about an item. Knowing the answers ahead of time will help you prepare your comments. Also, check on what time constraints will be imposed.
 - If using handouts or a long document, consider making your materials available to the commission several days before the hearing. Let them know if you plan to use slides or overhead visuals and work out details on who provide the equipment.
 - A certain amount of work beforehand helps ensure a successful presentation. Keep the following five steps in mind as you prepare.
- 1. Remember what your audience wants, expects, and needs.** What the planning commission needs to hear are **facts** in order to weigh evidence and make a decision. Strive to keep emotion and opinion out of your presentation.³³
 - 2. Clearly define your main ideas.** Before you try to communicate your ideas, be sure that they are clearly defined in your own mind. Keep focused on the main ideas, and support the important points with all other comments.
 - 3. Organize your thoughts.** After defining the main ideas, examine the arrangement and structure of the views. Decide the best sequence for the comments.
 - 4. Choose appropriate style and language.** Speaking before a planning commission requires an appropriate use of presentation style and language. Commissions may vary in levels of formality, but it is better to err on the side of being too formal than too casual.
 - 5. Make sure you are familiar with the subject matter.** You don't have to be an expert, but you should be familiar with your subject. If you refer to a document such as a comprehensive plan, you should know what the plan says and have a copy to refer to.

³³ *ibid.*

Involving Citizens

Citizen Involvement in Land Use Decisions

6. Practice. The last bit of preparation advice is to practice. It is a good idea to go over your remarks several times before you attend the meeting.³⁴

During the Public Hearing

It is important to register as a speaker when you arrive at the hearing. Look for a sign-in sheet or a staff person to check-in with. There are certain principles of behavior that should be followed in the public hearing. Be sure to arrive a few minutes before the scheduled starting time of the meeting. The following are guidelines for public hearing conduct:³⁵

- all comments and questions addressed to the chair;
- everyone addressed with title of respect (Mr., Ms., and so forth);
- polite, courteous, businesslike tone and manner (no yelling, smirking, rolling of eyes, giggling);
- no side conversations or whispering;
- no personal attacks;

- no threats; and
- no applause.

These simple rules of decorum can help keep the hearing on track and any discussions from getting out of hand. Someone else at the hearing may speak before you and voice many of the same concerns you were going to raise. If this happens, rather than repeating points that have already been made, it's better to express your agreement and present any new information that may be relevant.

After taking the time to prepare your presentation for the public hearing, it is still possible that you may disagree with the decision of the commission. If you find yourself in disagreement with land use and community planning decisions, there are some other steps you can take:

- Talk with your neighbors to find out if they share your views, then urge them to become involved.
- Be aware of local development patterns and their long-term impact on your community.

³⁴ "Presentations for Decision Makers: Strategies for Structuring and Delivering Your Ideas," Holcombe and Stein, 1983.

³⁵ "Indiana Citizen Planners Guide Part 1: Plan Commission Basics," Bergman, T., 1998.

Involving Citizens

Citizen Involvement in Land Use Decisions

- Attend other meetings that include land use, growth, and planning on their agendas.
- Research what other communities are doing.
- Focus on solutions rather than focusing on problems
- Talk to elected officials, and share your ideas.

There is great value in thinking about your community's future, and finding others who share your vision. The best way to steer that future is to realize that decisions we make today will affect us tomorrow. Broad-based citizen participation in land use and community planning is one way to ensure a desirable future.

State Planning Office and Livable Delaware web sites

The State Planning Office web site offers a wealth of information on projects going through the Preliminary Land Use Service (PLUS), land use planning news, meetings and spatial data. It can be found at:

<http://www.state.de.us/planning>

The Livable Delaware web site explains the program and offers information on the work of the Livable Delaware subcommittees.



Promoting Sustainable Jobs

Promoting High Quality, Sustainable Jobs

One of the principles of Livable Delaware is Preserve our Quality of Life through Sustainable Development. The Delaware Economic Development Office is focusing its efforts on economic development that supports that principle.

There is a strong emphasis on re-development, preserving greenspace, and ensuring quality jobs are located where infrastructure exists to support them. DEDO has a commitment to local, small business startups and expansions that build on local indigenous strengths.

1. Emphasis on job quality rather than quantity

Traditional economic development organizations get caught up in a job “body count.” Not all jobs are created equally. DEDO will focus on encouraging jobs that raise Delaware’s standard of living through higher wages and paid medical and other benefits. For example, DEDO is applying a Self-Sufficiency Index to Strategic Fund grant applications. The index calculates the hourly wage required for families of various sizes to thrive without public assistance. The index is calculated for

Wilmington, Newark, Dover and all three counties.

Not spending taxpayer dollars to attract jobs that may qualify for public assistance makes common sense. Also, the emphasis on quality jobs – especially in high-tech areas such as biotechnology – grows our standard of living with cleaner, fewer, higher-paying jobs that may have less of an impact on the environment, transportation infrastructure and our quality of life.

2. Focusing on Delaware’s industry clusters

Clusters are groups of inter-related industries that drive wealth creation in a region, primarily through export of goods and services. An industry cluster is different from the classic definition of industry sectors because it represents the entire value chain from suppliers to end users, including supporting services and specialized infrastructure.

DEDO’s new cluster-based economic development strategy concentrates on building on our economy’s existing strengths. A grow-our-own strategy is less likely to stress infrastructure and degrade quality of

Promoting Sustainable Jobs

life. The strategy focuses on attraction of firms that will support existing companies and skilled labor. The strategy also proactively nurtures a business climate that helps our strongest sectors grow.

Data analysis was utilized by DEDO to make the first cut of the clusters to focus on initially. However, qualitative factors also entered into the discussion. For example, DEDO chose not to focus on the transportation/distribution cluster because it would result in more truck traffic and a proliferation of large, featureless buildings and lower-paying jobs – even though the data indicated a strong concentration of economic activity within that cluster.

3. Build an entrepreneurial culture in Delaware and enhance its non-urban entrepreneurial capacity

Nationwide, 50% of all private sector workers work for small businesses. They annually create 75% of the new jobs. DEDO will help implement Governor Minner's New Economy Initiatives, including her proposals to encourage the growth of high-tech start-up companies – spawning clean, high quality jobs that will

provide Delaware with sustainable economic growth.

DEDO will help Delaware's non-urban areas recognize their unique assets and acquire the tools for growing successful entrepreneurs, enabling smaller businesses to grow and prosper throughout the state. A strategy of linking capital resources, connectivity and collaboration to build entrepreneurial capacity in smaller communities fits with Livable Delaware's principle of managing growth and guiding it to areas where existing services and infrastructure can handle it.

DEDO has conducted an initial assessment of the state's readiness to embark on a non-urban economic development strategy and recommended next steps. That effort won recognition from the federal Small Business Administration.

4. Create Infrastructure and Intergovernmental Relations Center of Excellence

DEDO historically has not been actively involved with the Land Use Planning Act. When DEDO was created in 1982, all land use planning functions were re-located to agencies

Promoting Sustainable Jobs

that were more likely to influence planning decisions. The traditional view of most economic development agencies has been that job creation takes precedence over concerns such as sprawl, congestion, environmental issues, etc. While a leader in GIS in the early 1990s, DEDO has not taken advantage of dramatic improvements in GIS technology as it has been applied to land use in Delaware.

DEDO will be a stronger partner in promoting more efficient community design where commercial and residential uses are co-mingled. DEDO will become engaged in the discussion over efforts to rezone and/or convert industrial land to residential use or parkland. Available commercial sites are rapidly dwindling, especially in New Castle County, and there should be an awareness of the importance of maintaining commercial sites where appropriate.

Within the new organizational structure of DEDO, there are six (6) supportive Centers of Excellence. One of the Centers is Infrastructure and Intergovernmental Relations. This Center will have several accountabilities related to Livable Delaware:

- Active participation in Land Use Planning Act/ Preliminary Land Use Service (PLUS) process where appropriate, especially when we have an opportunity to promote more progressive mixed-use (commercial/residential) development.
- A byproduct of that participation is interaction with other state agencies to become more familiar with environmental and traffic issues throughout the state and develop knowledge of DNREC and DelDOT permits, Clean Air Act emissions credits, Coastal Zone restrictions, Voluntary Cleanup Program, drainage/stormwater management, DOE, Department of Agriculture, Public Service Commission and other relevant state regulatory programs that affect development.
- Following the revised Strategies for State Policies and Spending, DEDO will help direct employers to growth areas where land is appropriately zoned and infrastructure is already in place.
- Actively promoting infill, reuse of existing sites and development of brownfields over “greenfields.”

Promoting Sustainable Jobs

- Enhancing our GIS expertise to be able to pinpoint appropriate sites within state's growth zones that are appropriate for development.

5. Promoting infill and redevelopment

Promoting infill and redevelopment is another key principle of Livable Delaware. In 2001, the General Assembly passed Senate Bill 183, which enabled the use of up to \$1 million a year in Strategic Funds to be used for brownfields matching grants. The first project to receive a matching grant under this legislation was Cannery Village in Milton, a conversion of the abandoned Draper King Cole Cannery complex to a mixed-use development with a diversity of housing styles and light commercial uses.

In 2003, Bond Bill epilogue language doubled the maximum amount of matching grant from \$50,000 to \$100,000 for sites that would include job creation. The total amount available for brownfields redevelopment and whether updated regulations are required will need to be addressed during the 2004 session.

Another issue being addressed is the brownfields application process from DNREC through DEDO. Through collaboration with DNREC, the business community and the Governor's Office, the state is streamlining the brownfields certification and application processes. A new brownfields coordinator positioned in the DNREC Secretary's Office will continue to troubleshoot these processes and liaison with DEDO.

6. Implementing the Governor's Energy Agenda

There are several recommendations within the Governor's Energy Task Force report that DEDO is responsible for implementing.

Recommendation B (i). As part of its economic development strategy, the State should recruit advanced energy technology companies and end-users with targeted financial initiatives.

As part of its cluster-based economic development strategy, DEDO will be attempting to cultivate entrepreneurial startups in high-tech fields such as environmental and energy technologies. New dollars will be recommended to seed startups, fund

Promoting Sustainable Jobs

Delaware-based venture capital opportunities, and provide incubation, technical, business and capital resources to these types of companies. A new Entrepreneurial and Small Business Support Center of Excellence and a new Capital Resources Center of Excellence are being established to provide assistance to just these types of companies.

More specifically, Governor Minner has recommended \$800,000 in performance-based grants to companies that manufacture certain clean-energy components such as solar cells, photovoltaic cells, fuel cells and wind-energy turbines. This legislation will be specifically targeted for the retention of the manufacturing jobs at Astro Power; but could also be used in conjunction with other incentives to encourage clean-energy companies to locate in Delaware.

Recommendation B (ii). The State should facilitate the development of a Fuel Cell Research Institute focused on basic and applied fuel cell technology research.

DEDO has been working closely with the University of Delaware, DuPont

and WL Gore on this concept and developed a detailed white paper outlining the potential for fuel cell research in Delaware and why the State should match the \$1 million earmark from the federal government for fuel cell research in Delaware. Governor Minner has proposed a state investment of \$200,000 a year over five years to match funds provided by the private sector and the University of Delaware.

Recommendation B (iii). The Delaware Economic Development Office and the State's electric utilities should address the needs of "high power quality" customers.

High-reliability power is a basic building block for the New Economy in Delaware. Understanding it and providing access to it could provide us with a strategic advantage in attracting high-technology manufacturers, research and development, and other high-paying, sustainable jobs. The first step is for DEDO to understand this issue, the needs of businesses that require high-reliability power, and the barriers to providing it. Our new Center for Infrastructure and

Promoting Sustainable Jobs

Intergovernmental Relations will be charged with this responsibility. This group also will research tools and incentives available in other states that encourage utilities to make this higher quality power available.

“Brownfields”

Defining a Brownfield

Brownfields are vacant or underused properties passed over for development because of obstacles such as real or perceived contamination. Brownfields have enormous potential for economic development, but they have failed to attract the private market due to concerns about liability and the potential costs involved in clean-up to acceptable environmental standards.

Recently, states and the federal government have introduced various initiatives to redevelop brownfield sites. These initiatives offer opportunities to revitalize urban areas by returning abandoned or underutilized brownfields to

productive use. Despite these opportunities, there are many challenges to brownfield reuse. The main risk is uncertainty. Older industrial properties introduce unknown issues about environmental conditions, costs, time frames, and long-term liability.

Good coordination between local, state, and federal government entities, strong community participation, the availability of liability relief and financing, and understanding cleanup standards, are essential to bring about the advantageous results that brownfield development offers.³⁶

The General Accounting Office estimates that there are 400,000 to 500,000 brownfield sites across the country. Brownfields come in all shapes and sizes: a closed gas station or dry cleaner, a vacant warehouse, an abandoned rail yard, a former coal plant, or a shuttered steel mill, to name a few.³⁷

³⁶American Planning Association (APA) web site, www.planning.org, Legislative Priorities.

³⁷APA web site, www.planning.org, “Toxic Turnabouts”, December 1998.

Promoting Sustainable Jobs

Infill and Redevelopment

Maintaining a Clear Edge between Town and Countryside

Delaware has many strong cities and towns as well as healthy rural landscapes. To safeguard the rural character of Delaware, it is good practice to maintain a clear edge between cities, towns, and countryside. This can be done by protecting agricultural land and open space while encouraging more compact, walkable communities. Another tool is encouraging infill development on vacant, underused, or overlooked land near transit and on reclaimed former industrial sites (brownfields). By maintaining this clear edge, Delaware can preserve its rural landscapes and at the same time enhance the vitality of its existing communities.

Infill as an alternative to sprawl

Delaware is developing land at a much faster rate than its population is growing. Although development on the urban fringe undoubtedly represents new investment, it also accounts for substantial long-term public costs. According to a report by the U.S. Office of Technology

Assessment, a single home built on the urban fringe requires \$10,000 more in public services than one built in the urban core.

One alternative to land consumptive suburban sprawl is to encourage more infill development. This makes more efficient use of public and private infrastructure by putting additional persons where roads, schools, sewers, and water lines already exist.

This does not mean overcrowding; in fact, many of Delaware's cities, small towns, and older suburbs have lost population in recent decades – so there are many opportunities for infill development on vacant lots, underutilized parcels, or abandoned properties, including former industrial sites.

Density with Amenities

Many worthy projects, including both infill development and green field development on the edge of town, have met with community opposition. The public may perceive compact development as a bad thing, but the problem is that in many projects density comes without any compensating amenity. Density with

Promoting Sustainable Jobs

Infill and Redevelopment

amenity can and does sell. Two of the most important amenities are high quality design and green space. For most people, the character of the neighborhood is far more important than the size of the lot.

Government Incentives to Offset High Cost

Local fees and costs for development, including construction impact fees, which fail to factor in the benefits of smart development can increase land and construction costs. Also, a shortage of suitable infill sites can make smart growth more expensive and complicated. Local and state governments need to provide incentives for the reuse of historic structures, brownfield development, downtown revitalization, development near transit, and other infill projects.

To encourage development near transit stops, Fannie Mae has started a pilot program offering “location-efficient mortgages.” The program enables buyers who purchase homes near transit lines to qualify for larger mortgages, since they no longer have to spend as much on personal transportation. Under the Smart

Commute Initiative, eligible home buyers who purchase a home in Delaware within three-quarters of a mile of a rail station or bus stop may qualify for a mortgage. Borrowers may be able to have their qualifying income expanded to represent a portion of the savings they should realize from using public transportation.

Communities and organizations interested in downtown redevelopment should contact the “Delaware Main Street” program, which is administered by the Delaware Economic Development Office. Delaware Main Street helps historical commercial districts promote economic stability and enhance their unique sense of place.

Advantages of Infill Development:

- Uses existing roads and utilities
- Located close to cultural facilities, parks, and other amenities
- Provides certainty of development patterns
- Saves money for developers and residents
- Makes communities more walkable

Promoting Sustainable Jobs

Infill and Redevelopment

- Increases concentration of people near transit stops making it a more viable option

Infill development has considerable financial benefits. Using existing utilities and infrastructure reduces costs. A variety of federal and state tax incentives exists for rehabilitating historic buildings. Programs such as a Local Enterprise Zone can provide incentives for investment. An often overlooked advantage of investing in an infill site is the certainty provided by a mature development pattern and known neighbors.

Examples of Infill in Delaware

Successful and attractive infill projects can be found throughout Delaware. The Delaware Department of Natural Resources and Environmental Control have helped to remediate several sites including:

- A run-down building in the City of Wilmington was remediated after being vacated by a painting business. The Moveable Feast, a catering business, relocated to the site, invested over \$400,000 in building renovations, and hired 5 new employees.

- On Route 9 in New Castle, a contaminated car dealership was refurbished to become the new office for Wik Associates.
- A vacant Wilmington Housing Authority apartment building had fallen into disrepair, SBM Housing Inc. is in the process of remediating and rehabilitating the building for an SRO complex for 54 homeless men.
- The Delaware College of Art and Design has restored two vacant office buildings in downtown Wilmington for offices, classrooms, and student housing.
- Shipcarpenter Square, a successful infill project in Lewes, added residential units in a way that complements the surrounding rectilinear street pattern of this historic town. Rather than using a suburban-style layout with curvilinear street and cul-de-sacs, its 36 lots are arranged along a U-shaped street enclosing a 2-acre community green. All of the houses are 18th and 19th century historic homes rescued from demolition and moved to the site.

Promoting Sustainable Jobs

Infill and Redevelopment

- Other examples of redevelopment in Delaware are Cannery Village, Ships Tavern District, the Residences at Rodney Square, and a residential development on the Wilmington Riverfront.

Trends Affecting Infill Development

- Inner-city residents have far more money to spend than stores in which to spend it, according to the U.S. Department of Housing and Urban Development (HUD). In 48 cities studied, retail sales were \$8.7 billion less than the resident's buying power.
- Downtowns across America are reporting a strong increase in people choosing to live in center-city neighborhoods, townhouses, and loft apartments. The prime reasons for this are decreasing city crime rates, close access to urban amenities, and increasing traffic congestion in the suburbs.
- Growth in the over-65 senior population – expected to double in the next 20 years – is increasing the demand for infill housing close to activity centers. At the other end of the spectrum, young adults who are bored by

the suburbs want to live closer to the action.

- Although Delaware offers many fine examples of downtown and neighborhood rehabilitation, much of its urban heritage is threatened by the abandonment and demolition of historic buildings, including schools, post offices, and other historic structures. Likewise, road construction, insensitive infill development and suburban sprawl threaten Delaware's historic resources. As with our natural resources, we must identify what is important and develop strategies to maintain our historic resources.

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Table 1 -- Matrix of State Strategies in Investment Levels

	Level 1 Investment Areas (Brownfields and TDR Receiving Zones)	Level 2 Investment Areas	Level 3 Investment Areas	Level 4 Investment Areas
State Planning Office	Preliminary Land Use Service (PLUS) Review, Livable Delaware grants, community design assistance	Preliminary Land Use Service (PLUS) Review, Livable Delaware grants	Preliminary Land Use Service (PLUS) Review	Preliminary Land Use Service (PLUS) Review
DelDOT	Transportation and transit enhancements, bike lanes, Safe Routes to School, planning and design grants, highest priority for intersection improvements, expedited CTP	CTP Priority, Corridor Preservation	Long-range Transportation Plan, Corridor Preservation	Corridor Preservation

LEGEND

LIHTC - Low Income Housing Tax Credit
 HDF - Housing Development Fund
 HOME - HOME Investment Partnership Program
 LNYW - Live Near Your Work
 CDBG – Community Development Block Grant Program
 ARP - Acquisition Rehabilitation Program
 CLT/DoR – Community Land Trust/Deed of Restriction

Rural Communities – DSHA will carry out programs, via the CDBG program, to promote revitalization, reinvestment, vitality and enhancement of these small rural communities. This includes assistance with stricter code enforcement, weatherization and rehabilitation of housing. Investment in infrastructure to address public safety and welfare concerns is also appropriate.

	Level 1 Investment Areas (Brownfields and TDR Receiving Zones)	Level 2 Investment Areas	Level 3 Investment Areas	Level 4 Investment Areas
DEDO	Priority for job creation/location, priority for brownfields grants, priority for conduit tax exempt bond program and strategic funds, Neighborhood Assistance; focus of community education strategy	Priority for job creation/location, priority for brownfields grants, priority for conduit tax exempt bond program and strategic funds, Neighborhood Assistance; focus of community education strategy	Limited Focus	Promotion of agribusiness

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	Level 1 Investment Areas (Brownfields and TDR Receiving Zones)	Level 2 Investment Areas	Level 3 Investment Areas	Level 4 Investment Areas
Housing	LIHTC HDF HOME LNYW CDBG ARP CLT/DoR Green Housing Pilot	LIHTC HDF HOME LNYW CDBG ARP CLT/DoR Green Housing Pilot	Limited LIHTCs Limited HDF Limited HOME CDBG – existing housing only DoR – existing housing only	CDBG – existing housing only DoR – existing housing only Rural Community considerations – see below
DNREC	Highest priority (point) for sewer funding, grants for parks acquisition & development, greenways & trails grants, highest priority for recycling grants	Sewer funding, grants for parks acquisition & development, greenways & trails grants, open space preservation, recycling grants	Community septic, open space preservation	Septic, open space preservation

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	Level 1 Investment Areas (Brownfields and TDR Receiving Zones)	Level 2 Investment Areas	Level 3 Investment Areas	Level 4 Investment Areas
Education	Top priority for school sites, co-location of services (e.g. libraries)	Expedited approval for schools, charters, co-location of services	Limitations on charters and new schools	No charters or new schools
Agriculture	Highest priority for community and urban forestry	Community and Urban Forestry	Tarteted Agriculture Preservation and Community Forestry	Highest priority for Farmland Preservation
Office of Safety and Homeland Security	Enhanced policing (grants, bike cops, satellite offices, priority for locating future facilities). Top priority for locating EMS services	Focused measures to reduce response time.	Long-range planning but no near-term investment	Kent/Sussex pay for additional coverage
DHSS	Highest priority (points) for drinking water funding	Highest priority (points) for drinking water funding		

LEGEND

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	Level 1 Investment Areas (Brownfields and TDR Receiving Zones)	Level 2 Investment Areas	Level 3 Investment Areas	Level 4 Investment Areas
Other	Top priority for location of state services including libraries; enhanced funding for library services; Tax increment financing (TIFs) and development districts	High priority for location of state services, buildings; TIFs; development districts	Long-range planning but no near-term investment	

LEGEND

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Absorption Analysis

Of the Draft Update of the
Strategies for State Policies and Spending
 Using the
2002 Land Use/Land Cover Data
 And The
2003 Delaware Population Consortium Projections Series

Overview

The draft *Strategies for State Policies and Spending* update allows more than enough room to accommodate expected population and household growth in all three counties through 2030, according to an Absorption Analysis of the areas preferred for growth in the draft *Strategies* update. The absorption Analysis uses data on existing land use in 2002 and the *2003 Population Projections Series* from the Delaware Population Consortium.

This analysis was undertaken as a “reality check,” matching the draft *Strategies* against recent land use and land cover data to ensure that it does not overly restrict the potential for the development needed to meet the projected household growth for the next several decades. The analysis measures the amount of undeveloped but buildable land within the areas preferred for growth in the draft *Strategies* and takes into consideration the need for commercial, recreational, transportation, and utility development to support new residential development.

In Kent County, according to this analysis, there would be almost seven times as much land available in the areas preferred for growth in the draft *Strategies* as would be needed to meet projected household growth through the year 2030 at an average density of three housing units per acre. In New Castle County there would be more than two-and-a-half times as much land as needed at three units per acre. In Sussex County, there would be almost three-and-a-quarter times as much land as needed to meet projected household growth. (See Table 1)

Table 1
 Available versus Needed Acreage, Investment Levels 1, 2 and 3, 2002 - 2030

	Buildable Acres, 2002			Projected Household Growth	Ratio of Available to Needed Land		
	Total	% Residential*	Available for HUs		At 3 HU per Acre	At 5 HU per Acre	At 7 HU per Acre
Kent	42,624	76.70	32,693	14,305	6.86	11.43	16.00
New Castle	55,624	71.06	39,526	46,937	2.53	4.21	5.89
Sussex	71,427	78.88	56,342	45,191	3.74	6.23	8.73
State of Delaware	169,675	74.31	126,085	106,433	3.55	5.92	8.29

*Percent of total expected to be developed as residential, based on existing land use patterns.

Three units per acre is a relatively low density typical of a medium to large lot subdivision with lot sizes of approximately 14,500 square feet. In the areas preferred for growth in the draft *Strategies*, average densities are traditionally higher.

At the still moderate density of five units per acre, characterized by a mix of higher, medium or lower density residential development with average lot sizes of 8,700 square feet, the analysis shows that there would be more than eleven times as much available, buildable land as is needed to meet projected household growth in Kent County. In New Castle County there would be more than four times enough land and in Sussex County there would be more than six times as much available, buildable land as would be needed.

At the somewhat higher density of seven housing units per acre – more likely in some of these areas, which tend to be closer to the urban core of the state – the ratios of available land to needed land would be even higher. Seven units per acre would likely include some duplexes,

town houses, condominiums, and apartments, along with single-family lots of an average of approximately 6,200 square feet. These gross densities should be viewed as averages since apartments, townhouses and condominiums require substantially less land per dwelling unit than single-family homes.

This analysis does not take into consideration the likelihood that not all of the new housing units developed to meet projected growth will be built within the areas shown as investment levels 1, 2 or 3 in the draft *Strategies*. The *Strategies* anticipate and allow for growth outside of these areas. There is also the possibility of redevelopment, in which some areas not considered as buildable, but not currently residential – such as old commercial areas – may be redeveloped as residential land and therefore provide additional capacity.

To assume that all of the project household growth would have to be accommodated within these areas is unrealistic. However, as a reality check, this assumption helps test whether or not the draft *Strategies* would be too restrictive.

Data Analysis

This Absorption Analysis consists of a demographic model, a land use/land cover change model, and a comparison between the land/use land cover data and the draft investment levels of the *Strategies for State Policies and Spending*.

Data from the Delaware Population Consortium's *2003 Population Projections Series*¹ were used to estimate the number of new households that will be needed to meet projected population growth between 2002 and 2030. The Delaware Population Consortium's *2003 Population Projections Series* projects the growth in both population and households (housing units) for Delaware and each county in Delaware from 2000 through 2030. The Delaware Population Consortium includes analysts from the state, the counties, local governments, the University of Delaware, and the private sector working together, using objective data sources, to produce independent population projections for the state. State law requires the use of this data series in state planning activities.

The difference between estimated households in 2002 and projected total households in 2030 was used to determine the number of households needed to accommodate projected population growth between 2002 and 2030. Each "household," in population terms, can be considered a "housing unit" in land use terms.

According to this analysis, Kent County will need 14,305 new housing units between 2002 and 2030 to handle a projected population growth of 29,840 persons. New Castle County will need 46,937 housing units to handle 100,781 new persons. Sussex County will need 45,191 housing units to handle 94,971 new persons over the same period.

GIS Analysis – Land Uses

Using Geographic Information System (GIS) tools, the amount of land that is buildable, but not currently built-upon was calculated for the areas preferred for growth (Levels 1, 2 and 3) in the draft *Strategies* using Land Use/Land Cover data derived from 2002 statewide aerial photography². "Buildable" land includes agricultural lands, forested areas, and vacant lands.

To determine the percentage of buildable lands that should be considered in calculating new residential acreage, 2002 Land Use/Land Cover data were used to calculate the amount of land that was already built in each county and the percentage of different land uses within those built areas. Percentages were calculated for residential/urban, commercial, transportation/utility, institutional/governmental, and recreational uses.

¹ See <http://www.cads.r.udel.edu/demography/consortium.htm>

² See http://www.state.de.us/planning/info/lulcdata/2002_lulc.htm

In 2002 in Kent County, 76.7 percent of the built lands were in residential development. In New Castle County, 71.06 percent were residential. In Sussex County, 78.88 percent were in residential uses. (See Table 2)

These percentages of residential development were used as a guide to estimate future development patterns. The land availability model uses the assumption that future land development will follow similar patterns as past development and that the ratio of residential to other urban land uses would remain constant as new land is developed. These percentages were applied to calculate likely available lands needed for residential growth in the analysis.

Table 2
Land Use Distributions within Built Areas
2002 Land Use/Land Cover Data

	Kent County		New Castle County		Sussex County		State of Delaware	
	Acres	Percent	Acres	Percent	Acres	Percent	Acres	Percent
Res./Other Urban	42,227	76.70	76,625	71.06	63,707	78.88	182,558	74.31
Commercial	4,981	9.05	13,235	12.27	8,650	10.71	27,128	11.04
Transportation/Utility	4,338	7.88	8,370	7.76	3,705	4.59	17,151	6.98
Institutional	1,695	3.08	4,180	3.88	1,622	2.01	7,734	3.15
Recreation	1,811	3.29	5,421	5.03	3,083	3.82	11,088	4.51
Total Built	55,052	100	107,831	100	80,767	100	245659	100

Source: 2002 Delaware land Use/Land Cover Data

Conclusion

The draft *Strategies for State Policies and Spending* update allows more than enough room to accommodate expected population and household growth in all three counties through 2030.

Spatial Data Analysis Approach to Update the *Strategies for State Policies and Spending* Map

Executive Summary

The update of the *Strategies for State Policies and Spending* map was created using a spatial data analysis that balances state, county and local policies that favor growth for different areas of the state with policies that argue against growth. The analysis creates a statewide spatial data set that reflects the combined policies of all levels of government to highlight which areas are most appropriate for growth.

Process

The Office of State Planning Coordination teamed with the University of Delaware's Institute for Public Administration (IPA) to analyze spatial data from state, county and local agencies to create a new map for the *Strategies* update. This analysis combines data sets that depict lands in three main categories:

- Lands that are "out of play"; that is, not available for development or redevelopment,
- Lands for which state and local policies do not favor growth, and
- Lands for which state and local policies do favor growth.

Using Spatial Analyst software from ESRI¹, the team created a state-wide data set consisting of a grid in which each grid cell has one of a range of values reflecting the combination of these three categories of data. The higher scores in the positive range reflect a stronger preference for development. The lower scores in the negative range reflect a stronger preference for open space preservation and management for natural resource and habitat preservation. Lands that are not available for any development or redevelopment were taken out of play. These scores were used to create a draft *State Strategies* map depicting the varying levels of growth preference.

This analysis provided the basis for policy discussions involving state agencies, county governments, and municipal governments. These discussions allowed planners to identify areas of conflict or concern and to identify additional data sets with which to fine-tune the analysis. After several rounds of analysis, discussion and fine-tuning, the draft map was presented to the Governor's Advisory Council on Planning Coordination and the public for review and comment. Additional adjustments were made, based on public comments, and a final version of the map was presented for approval and submission to the Governor by the Cabinet Committee for State Planning Issues. The final version of the map is a vector/shapfile data set.

¹ Environmental Systems Research Institute

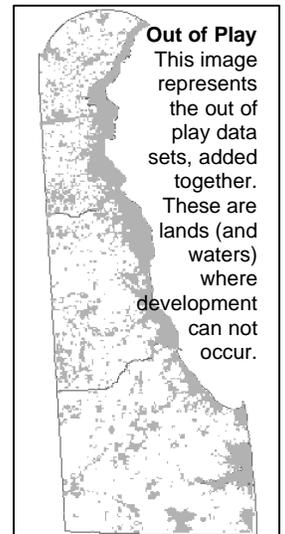
A Note on Data

It is important to note that the update of the *Strategies for State Policies and Spending* map was undertaken using the best spatial data available at the time of the analysis work (fall 2003 through spring 2004). Every effort was made to update data sets where appropriate, but it is the case that some spatial data sets have changed over time and parts of the map, especially in the “out of play” areas, may not directly match contemporary data during the effective life of the document and map².

State or local parklands, for example, may be created during the life of the document and map, but might not be shown as “out of play” until the next update of the map. Similarly, agricultural lands for which development rights have been purchased since the publication of the map may not be reflected until the next update.

Lands that are “out of play”

Lands that are not at all available for development or for redevelopment have been clipped out of the analysis and will generally be shown on the draft *Strategies* map in a light gray color³. These include publicly-owned lands, lands for which serious legal constraints on development are identified, and lands in some form of permanent open-space protection. A full list of out of play lands and of the sources for spatial data sets for those lands is presented in Table 1.



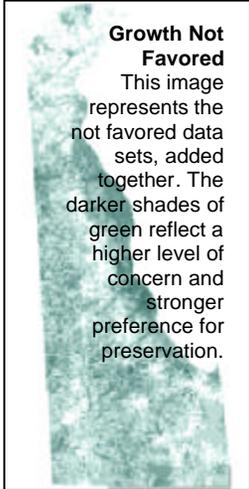
Description	Data Source
Major road and railroad ROWs	DeIDOT/OSPC
DeIDOT wetland mitigation sites	DeIDOT
DeIDOT-owned lands (permanent)	DeIDOT
DeIDOT scenic easements	DeIDOT
Dover AFB	OSPC
State, county and local parks	DNREC/Counties
Public owned/protected lands (incl. Federal)	DNREC/Counties
Purchased development rights	Dept. of Ag/Counties
Privately conserved lands	DNREC
Conservation easements	DNREC/Counties
Outdoor Rec. Inventory (ORI), out of play portion	DNREC
NCCo 100% constrained lands (UDC)	New Castle Co.
100-year floodplain (Kent Co.)	DNREC/FEMA
Tidal wetlands	DNREC

Some lands that are in the not favored category (described below) are included as “out of play” lands for New Castle County, based on that county’s stringent Unified Development Code (UDC), which identifies some lands as “100% constrained” from development. Similarly, floodplain areas in Kent County have

² The *Strategies* document and map are updated every five years.

³ RGB: 178,178,178; HEX: #b2b2b2

been identified as “out of play” based on Kent County subdivision code constraints on building in floodplains. Floodplains in New Castle County are part of that county’s 100% constrained lands. There are not similar constraints on floodplains in Sussex County.



Lands for which growth is not favored

Data sets from various state and local agencies are used to identify lands for which growth is less appropriate. These include data sets that map agricultural preservation districts for which development rights have not been purchased, state-identified resource areas not yet publicly-owned or protected by easement, wetlands not otherwise constrained from development, and areas not identified in county or municipal comprehensive plans as development or annexation areas. A full list of lands for which growth is not favored and of the sources for spatial data sets for those lands is presented in Table 2.

For lands for which several agencies or programs have identified a policy concern, more than one data set may contribute a negative factor to the data analysis. This accumulation tends to reflect a higher level of concern for a particular area and appropriately reflects a stronger preference for open space preservation and management for natural resource and habitat preservation.

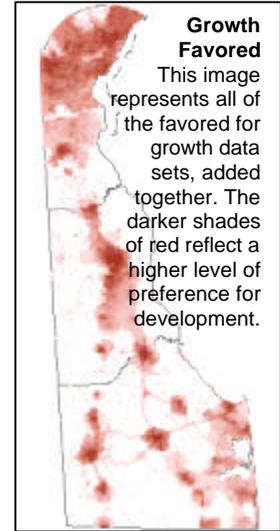
Description	Data Source
Areas outside of development districts	County Comp plans
Floodplain for Sussex Co.	DNREC/FEMA
DelDOT corridor capacity preservation areas	DelDOT/OSPC
DelDOT planning priority area	DelDOT/OSPC
Dover AFB, noise areas/AICUZ	DAFB
Dover AFB - Accident Potential Zones (APZ)	DAFB
Highest value Ag lands (LESA, "very high")	Dept. of Agriculture
Agricultural preservation districts	Dept. of Agriculture
High value working forest lands	Dept. of Agriculture
High-quality forest habitat	DNREC
Non-tidal wetlands	DNREC
100-foot buffer around tidal and non-tidal wetlands	DNREC/WRA
100-foot buffer around riparian corridors	USGS/WRA
State Resource Priorities/Natural Areas Inventory	DNREC
¼-mile buffer around selected historic resource sites	SHPO
Water Resource Protection Areas/Excellent Water Recharge Areas	WRA

Several of the data sets used to identify lands for which growth is not favored are related to the work of the Subcommittee that drafted the Green Infrastructure Strategy Recommendations approved by the Governor’s Advisory Council on Planning Coordination on December 8, 2003. These recommendations include setting a five-year goal to permanently protect 100,000 acres of natural

resources, recreational lands, and working lands and incorporating the Green Infrastructure priorities into the *State Strategy* map update. The map update analysis includes several data sets – including lands identified as natural resource and recreation priority areas, the highest value agricultural lands, high-value habitat areas, and working forest lands – as a direct result of the Green Infrastructure Strategy recommendations.

Lands for which growth is favored

State and local data sets are also used to identify lands for which there is a preference for growth. These include both high-intensity and low-intensity development districts identified in certified county comprehensive plans, lands within municipalities, certified municipal annexation areas, lands served by (or approved for service by) water and wastewater utilities, and areas that have already been developed (derived from the latest statewide land use and land cover data⁴). A full list of lands for which growth is favored and of the sources for spatial data sets for those lands is presented in Table 3.



As in the portion of the analysis that measures negative factors for growth, it is also possible that several agencies or programs may have identified and mapped the same lands as favorable for growth. The analysis accumulates these preferences into a stronger preference for development. It is also possible that, for areas for which some policies suggest growth and others suggest restricting growth, data inputs tend to cancel one another out.

Table 3.
Lands for which growth is favored

Description	Data Source
Annexation, short-term growth areas	Local Comp Plans
Annexation, long-term growth areas	Local Comp Plans
Future growth areas, lower intensity	County Comp Plans
Future growth areas, higher intensity	County Comp plans
Sewer districts	Counties/Consultants
Water Service (CPCN) areas	PSC/DNREC
Municipal boundaries	OSPC
Built areas (2002 LULC)	OSPC
2-mile buffer around high schools,	Dept. of Education
1-mile buffer around lower and middle schools	Dept. of Education
¼-mile buffer around transit routes (excluding major highways)	DART
Census 2000 Urban Areas (UAs)	Census Bureau
DE State Housing Authority designated sites	DSHA
Active projects layer	Counties

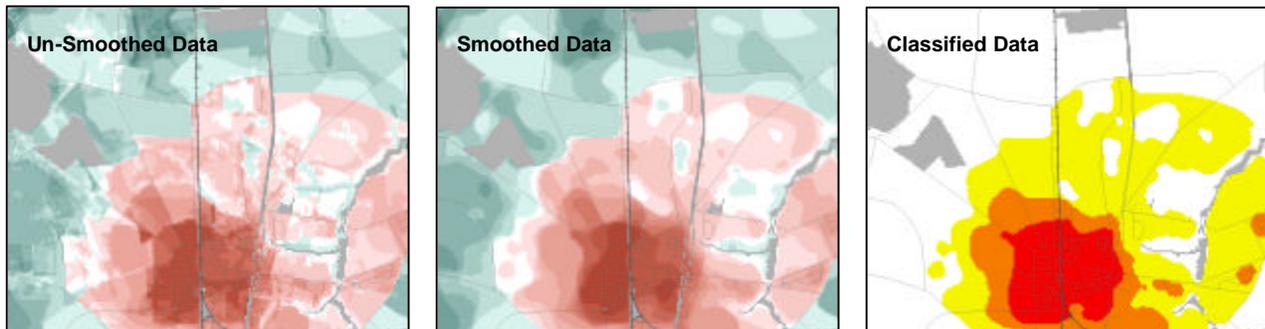
⁴ 2002 Statewide Land Use/Land Cover data, published by the Delaware Office of State Planning Coordination (http://www.state.de.us/planning/info/lulcdata/2002_lulc.htm).

Creating a combined data set

To combine these three types of data, the spatial data analysis team converted all input data sets (from all three categories) into matching grid-format data sets made up of 30-meter square grid cells covering the whole state. Cells in each data layer were given a score based on their status as favoring (+1), not favoring (-1), or completely restricting growth (0). The grid layers favoring and not favoring growth were combined using simple addition to produce a composite grid. The layers completely restricting growth were used as a mask to “erase” those areas from the scored grid – to take them “out of play.”

Possible scores for the remaining cells in the composite grid range from the negative of the total number of input layers not favoring growth to the total number of input layers which do favor growth. Higher scores indicate areas where growth is relatively more favored, while lower scores indicate areas where growth is relatively less favored.

The resulting statewide grid contains a high degree of variability and, as a result, “speckling.” To produce a more readable map, the grid was smoothed using a nine-cell by nine-cell median filter to bring the values of cells adjacent to one another more closely towards a common value.



The cell values of the smoothed grid-based data set were classified into major categories using statistical analysis to find natural breaks within the data set. Positive values were divided into three types of growth-favored investment levels. Level 1, made up of the areas that scored the highest as appropriate for development, is symbolized in red⁵. Level 2, the middle range of growth-favored lands, is symbolized in orange⁶. Level 3, the lands least favored for development, is symbolized in yellow⁷. The remaining values were classified as Level 4, symbolized in white⁸. In the final, vector, version of the data set, no polygons exist for areas in Level 4; Level 4 is simply the balance of the state not otherwise shown as being in Levels 1, 2 or 3 or in the “out of play” category.

⁵ RGB: 245,0,0; HEX: #f50000

⁶ RGB: 245,122,0; HEX: #f57a00

⁷ RGB: 245,245,0; HEX: #f5f500

⁸ RGB: 255,255,255; HEX: #ffffff

Creating a Polygon Data Set

For ease of use by state and local government agencies, the public, and the development community, the digital data version of the *Strategies* map is published as a vector data set, rather than as a raster data set. The composite grid was processed, based on the classification scheme noted above, into a data set in which the various investment level areas are represented by polygons, rather than groups of coded grid-cells. The polygons representing lands in Investment Level 4 were removed, to simplify the data set. Much of this land would fall into the “out of play” category. This data set was clipped to conform to the state boundary and trimmed to meet the shorelines of water bodies and the non-grid boundaries of major “out of play” lands. Each polygon carries a “level” attribute identifying which investment level it represents.

Overlay Zones

The draft *Strategies* map includes three overlay zones, the Environmentally Sensitive Developing Area (which applies only in Sussex County), an Area of Dispute, and an Area of Study.

The Environmentally Sensitive Developing Area, symbolized using red cross-hatching⁹, is incorporated into the draft *Strategies* as an overlay zone from the Sussex County Comprehensive Plan. This overlay zone was made part of the county’s Comprehensive Plan in recognition of the environmental sensitivity of this area and of the strong development pressures at play in eastern Sussex County.

The Area of Dispute, symbolized using grey cross-hatching¹⁰, reflects an area of southern New Castle County that the Town of Smyrna has moved to annex. Because the portion of the Town’s Comprehensive Plan reflecting that annexation proposal was not certified by the state, the state does not recognize the annexation. Because a lawsuit was in the judicial process at the time of the approval of the State Strategies, this area has been shown as an Area of Dispute, to recognize this legal dispute.

The Area of Study, symbolized using grey cross hatching¹¹, reflects a portion of northern Sussex County, adjacent to the City of Milford, which the City is considering as an annexation and growth area. The state is also considering this area as part of a possible future highway corridor. Therefore, the state and the City have agreed to continue studying the issues in this area, without settling on a definitive Investment Strategy at the time of the approval of the Strategies.

⁹ Line Fill. Width: 0.5. Color: Red (RGB: 245,0,0; HEX: #f50000). Angle: 45. Offset: 0. Separation: 3.

¹⁰ Line Fill. Width: 0.5. Color: Grey (RGB: 130,130,130; HEX: # 828282). Angle: 45. Offset: 0. Separation: 3.

¹¹ Line Fill. Width: 0.5. Color: Grey (RGB: 130,130,130; HEX: # 828282). Angle: -45. Offset: 0. Separation: 3.

Green Infrastructure of Delaware Maps

The Green Infrastructure of Delaware maps, created by a Subcommittee of the Governor's Advisory Council on Planning Coordination and used as data inputs in this analysis, are included in the draft *Strategies* document as separate maps showing green infrastructure focus areas for croplands, forest lands, and natural resources and recreation lands.