

Chapter 10: Community Design

10.0 Accomplishments Since 2007

The adoption of the Village and Hamlet development option enables the incorporation of the principles of smart growth in developing complete communities that will function as traditional towns. Also, New Castle County's adoption of redevelopment incentives and support for mixed use plans leads to better community design.

In addition to these design options, the County continues to support and encourage the development of Hometown Overlay. The expanded use of the overlay zoning districts will allow us to permit flexible options for preserving and enhancing areas within New Castle County that have a unique character which could be threatened by conventional suburban development.

The County has also adopted several measures to allow certain "civic uses" appropriate in or near residential communities by permitting churches and school on local roads.

10.1 Sustainable Design Standards

Sustainability has been a growing concern globally in land use planning in recent years. As communities experience increased growth, especially on more marginal land, there has been an increasing awareness of the long-term ramifications of growth patterns on the environment. The American Planning Association (APA) Policy Guide on Planning for Sustainability¹² states that planners should consider "whether the Earth's resources will be able to meet the demands of a growing human population that has rising aspirations for consumption and quality of life, while maintaining the rich diversity of the natural environment or biosphere." The patterns of human development, whether they are physical, social, and economic, affect sustainability at the local and the global level. The very nature of planning is "integrally related to defining how, where, and when human development occurs, which affects resource use." As illustrated by APA, planning for sustainability includes the following *processes*, *practices* and *outcomes*.

Planning processes include:

- Making planning decisions in a holistic and fully-informed manner that involves all segments of the community and the public and private sectors.
- Educating all age groups to raise public understanding of and regard for the future consequences of current planning decisions and ultimately change human behavior.

¹² <http://www.planning.org/policy/guides/adopted/sustainability.htm>

Planning practices include:

- Developing a future-oriented vision, which looks beyond current needs and recognizes environmental limits to human development.
- Fostering projects/activities that promote economic development by: efficiently and equitably distributing resources and goods; minimizing, reusing and recycling waste; and protecting natural ecosystems.
- Upholding a widely held ethic of stewardship that strongly encourages individuals and organizations to take full responsibility for the economic, environmental, and social consequences of their actions, balancing individual needs and wants with nature and the public good.
- Taking leadership in the drafting and implementation of local, regional and state policies that support sustainability.

Planning outcomes include:

- Local and regional development patterns that expand choice and opportunity for all persons, recognizing a special responsibility to address the needs of those that are disadvantaged.
- Resilient, diverse, and self-sufficient local economies that meet the needs of residents and build on the unique characteristics of the community to the greatest extent possible.
- Communities with a healthy economy, environment and social climate that function in harmony with natural ecosystems and other species and allow people to lead healthy, productive and enjoyable lives.

10.2 Goals, Objectives, and Strategies

Goals:

1. Promote design which is compatible with the community and its surroundings.

Appropriate design is essential to the sustainability of neighborhoods and communities. Design must be compatible with its surroundings and promote a sense of place. Design includes architectural elements as well as the composition of land uses within the community.

Objectives:

1. Create compact mixed-use development opportunities in areas appropriate for such development, especially within urban and urban-transition areas.

Mixed-use developments provide the opportunity for residents to walk to work and necessary services. These developments offer environmental sustainability, in that reliance on vehicles is greatly reduced. Density within these developments is often higher than typical suburban

developments, allowing open space to be preserved in areas less desirable or appropriate for dense development.

2. Promote environmentally and economically sustainable growth.

The appropriate design of communities can help promote and guide sustainable growth. The appropriate mix of land uses, architecture, housing, and businesses can allow a community to grow in a planned and efficient manner with interconnections between related and complimentary uses. Without appropriate community design, growth may occur in an unplanned and unconnected manner, leading to environmentally and economically unsustainable communities with which future generations will need to cope.

3. Establish stewardship and preservation of the unique character of the County's villages and hamlets.

New Castle County contains numerous unique villages and hamlets. As original owners are replaced with new owners, stewardship will be necessary to continue and enhance their presence and protect them from irreversible damage from incompatible development, changes in land use, inappropriate demolition, vacancy, or blight.

Strategies:

1. Land Use:

- a. Reduced dependence upon fossil fuels, underground metals, and minerals by promoting:
 - Compact development that minimizes the need to drive,
 - A mix of integrated community uses — housing, shops, workplaces, schools, parks, civic facilities — within walking or bicycling distance,
 - Human-scaled development that is pedestrian-friendly,
 - Development oriented around public transit,
 - Home-based occupations and work that reduce the need to commute, and
 - Local food production and agriculture that reduces the need for long-range transport of food.

- b. Reduction of activities that encroach upon nature through:
 - Guiding development to existing developed areas and minimizing development in outlying, undeveloped areas,
 - Maintaining a well-defined "edge" around each community that is permanently protected from development ,

- Remediation and redevelopment of brownfield sites and other developed lands that suffer from environmental or other constraints,
 - Promotion of regional and local designs that respect the regional ecosystems and natural functions which support human communities, and
 - Creation of financial and regulatory incentives for infill development; elimination of disincentives
- c. Meeting human needs fairly and efficiently by:
- Eliminating disproportionate environmental burdens and pollution experienced by historically disadvantaged communities.

2. Transportation:

- a. Reduced dependence upon fossil fuels through:
- Reduction in vehicle trips and vehicle miles traveled through compact, infill, and mixed use development,
 - Use of alternatives to the drive-alone automobile, including walking, bicycling, and public transit,
 - Development and use of vehicles powered by renewable fuel sources,
 - Local street designs that encourage pedestrian and bicycle use and discourage high speed traffic, and
 - Street designs that support/enhance access between neighborhoods and to neighborhood-based commercial developments.
- b. Meeting human needs fairly and efficiently, by:
- Providing affordable, efficient transportation alternatives for everyone, especially low-income households, elders, and others comprising 30% of the national population that cannot or do not own cars.

3. Housing:

- a. Reduced dependence upon fossil fuels, extracted underground metals, and minerals through:
- Solar-oriented design of development,
 - Use of regenerative energy heating and cooling source alternatives to fossil fuels,

- Provision of housing near places of employment, and
 - Selection of building materials with low "embodied energy," which require less energy-intensive production methods and long-distance transport.
- b. Reduced dependence upon chemicals and unnatural substances through:
- Use of chemical-free and non-toxic building materials,
 - Reduction of waste and recycling of building waste materials and promotion of recycling by residents, and
 - Landscape design standards that minimize the use of pesticides and herbicides.
- c. Reduction of activities that encroach upon nature, through:
- Reuse of existing buildings and sites for development,
 - Compact and clustered residential development, including reduced minimum lot sizes,
 - Removal of code obstacles to using recycled materials for building,
 - Water conservation measures to minimize environmentally destructive side effects of developing new water sources,
 - Responsible stormwater management that reuses and restores the quality of on-site run-off (example: constructed marsh or wetlands systems),
 - Reduction or elimination of impervious paving materials,
 - Use of recycled building materials, helping to minimize the mining of virgin materials,
 - Use of "cradle-to grave" (life cycle) analysis in decision-making for materials and construction techniques, and
 - Recycling of building construction waste materials and appropriate deconstruction techniques.
- d. Meeting human needs fairly and efficiently, by providing for:
- Communities and housing developments that are socially cohesive, reduce isolation, foster community spirit, and share resources (example: cohousing),
 - Housing that is affordable to a variety of income groups within the same community,
 - A diversity of occupants in terms of age, social, and cultural groups, and
 - Housing located near employment centers.

4. Economic Development:

- a. Encourage businesses that reduce dependence upon fossil fuels, extracted underground metals, and minerals; for example, businesses that:
- Reduce employee and product transport vehicle trips,
 - Use regenerative energy alternatives to fossil fuel, or that are working to reduce dependence on fossil fuel,
 - Do not use or are reducing use of cadmium, lead, and other potentially toxic metals and minerals that can accumulate in the biosphere, and
 - Are locally-based or home-based, reducing or eliminating the need to commute.
- b. Encourage businesses that reduce dependence upon chemicals and unnatural substances; for example, enterprises that:
- Actively seek ways to minimize the use of toxic manufactured substances,
 - Meet or exceed clean air standards,
 - Minimize or reduce use of chemicals and employ proper disposal and recycling mechanisms for these,
 - Use agricultural methods that reduce or minimize use of pesticides, herbicides, and manufactured fertilizers, and
 - Use byproducts of other processes or whose wastes can be used as the raw materials for other industrial processes.
- c. Encourage businesses that reduce activities that encroach upon nature; for example, enterprises that:
- Use recycled or by-products of other businesses, minimizing the use of virgin raw materials,
 - Prevent activities that emit waste or pollutants into the environment,
 - Use agricultural approaches that build up rather than deplete topsoil, and conserve or minimize water use,
 - Maintain natural terrain, drainage, and vegetation, minimizing disruption of natural systems, and
 - Re-use processed water.
- d. Encourage businesses that meet human needs fairly and efficiently; for example, enterprises that:
- Fulfill local employment and consumer needs without degrading the environment,

- Promote financial and social equity in the workplace,
- Create vibrant community-based economies with employment opportunities that allow people economic self-determination and environmental health, and
- Encourage locally-based agriculture, such as community supported agriculture, providing a nearby source of fresh, healthy food for urban and rural populations.

5. **Open Space /Recreation:**

a. Reduce dependence upon fossil fuels, extracted underground metals, minerals, by:

- Providing recreational facilities within walking and bicycling distance,
- Using local materials and native plants in facility design to reduce transport distances and reduce maintenance, and
- Landscape and park maintenance minimizing use of equipment powered by fossil fuels.

b. Reduce dependence upon chemicals and synthetic substances, for example, by:

- Using alternatives to chemical pesticides and herbicides in park and facility maintenance (example: integrated pest management).

c. Reduce encroachment upon nature through actions such as:

- Funding for open space acquisition,
- Preservation of wilderness areas,
- Urban gardens, community gardens,
- Preservation of wildlife habitats and biological diversity of area ecosystems,
- On-site composting of organic waste,
- Restoration of damaged natural systems through regenerative design approaches,
- Creation of systems of green spaces within and among communities,
- Development of responsible alternatives to landfilling of solid waste,
- Using regionally native plants for landscaping, and
- Encouraging landscape and park maintenance that reduce the use of mowers, edgers, and leaf blowers.

6. **Infrastructure:**

- a. Reduce dependence upon fossil fuels, extracted underground metals, minerals, by promoting:
 - Facilities that employ renewable energy sources, or reduce use of fossil fuel for their operations and transport needs.
- b. Reduce dependence upon chemicals and synthetic substances, by promoting:
 - Treatment facilities that remove or destroy pathogens without creating chemically-contaminated byproducts, and
 - Design approaches and regulatory systems that focus on pollution prevention, re-use and recycling.
- c. Reduce activities that encroach upon nature, through:
 - Promotion of innovative sewage and septic treatment that discharges effluent meeting or exceeding federal drinking water standards while minimizing or eliminating the use of chemicals (example: greenhouse sewage treatment facilities),
 - Recognition of the "cradle to grave" costs of waste generation and disposal, and
 - Promotion of and removal of regulatory barriers to composting and graywater reuse systems.
- d. Meet human needs fairly and efficiently, by:
 - Cleaning, conserving, and reusing wastewater at the site, neighborhood or community level, reducing the need for large, expensive collection systems and regional processing facilities.

7. Growth Management:

- a. Reduce dependence upon fossil fuels, extracted underground metals, minerals, by promoting:
 - Development near existing transport systems; minimizing need for new road and highway construction.
- b. Reduce activities that encroach upon nature by promoting:

- Appropriate development and population growth policies linked to carrying capacity of natural systems and community facilities, and
 - Development patterns that respect natural systems such as watersheds and wildlife corridors.
- c. Meet human needs fairly and efficiently by promoting:
- Fair and equitable growth management policies maintaining diversity in local populations and economies.

8. Floodplain Management:

- a. Reduce activities that encroach upon nature by:
- Guiding development away from floodplains,
 - Guiding development away from barrier beaches, and
 - Preserving or restoring wetland areas along rivers for natural flood control.

9. Watershed Planning:

- a. Reduce activities that encroach upon nature, such as:
- Preservation and enhancement of water quality,
 - Reduction in water use,
 - Recharge of groundwater basins,
 - Use of flood control and stormwater techniques that enhance and restore natural habitats, and
 - Prevention of wetlands destruction; restoration of degraded wetlands.

10. Resource Conservation:

- a. Reduce dependence upon fossil fuels, extracted underground metals, and minerals by:
- Minimizing energy use,
 - Encouraging the development of renewable energy sources,
 - Discouraging the use of products that utilize packaging derived from non-renewable, non-degradable resources,
 - Promoting the recycling of waste materials derived from non-renewable, non-degradable resources, and

- Developing community gardens that reduce the need for long-range transport of food and associated consumption of fossil fuels.
- b. Reduce activities that encroach upon nature; for example, by:
- Promoting the preservation and planting of trees and other vegetation that absorb carbon dioxide and air pollutants.

11. Planning Processes:

- a. Support activities that reduce dependence upon fossil fuels, extracted underground metals, and minerals; for example, by:
- Encouraging and enabling people to use transport other than gasoline-powered vehicles.
- b. Support activities that reduce dependence upon chemicals and unnatural substances; for example, by:
- Educating citizens and public servants about both short- and long-term risks associated with the use and disposal of hazardous materials.
- c. Support activities that reduce encroachment upon nature; for example, through:
- Educational efforts to reduce levels of consumption and waste generation at the household and community levels.
- d. Support meeting human needs fairly and efficiently by:
- Integrally involving local community residents in setting the vision for and developing plans for their communities and regions,
 - Establishing avenues for meaningful participation in decision-making for all citizens and in particular for historically disadvantaged people,
 - Providing for equitable educational opportunities for all members of society, and
 - Promoting retraining of those displaced in the short-term by a shift to a more sustainable economy.