



Delaware Statewide Forest Strategy

*Report to the
U.S. Forest Service
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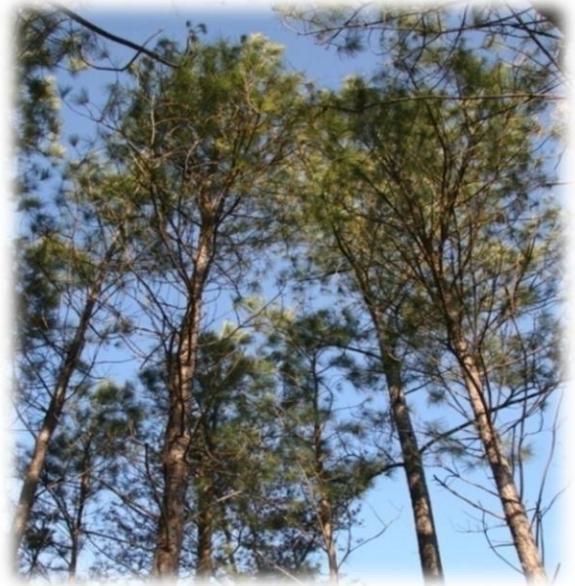
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INTRODUCTION

Delaware's forests – rural and urban, public and private – are vital to our environment, our way of life, and our economy. The Delaware Forest Service (DFS), working with other organizations and our citizens, strives to ensure that our forests will continue to provide the numerous benefits that all Delawareans enjoy. This statewide forest strategy identifies actions to maintain and enhance our rural and urban forests. Prior to completing the strategy, the DFS also completed a statewide forest resource assessment, with guidance from the Delaware Forest Stewardship Committee and other stakeholder input, which identified the priority issues, threats, and opportunities facing Delaware's forests. The assessment also identified priority rural and urban landscapes. A summary of the issues and landscape areas are presented below; the entire document is available at: <http://dda.delaware.gov/forestry>.

To address the issues, threats, and opportunities facing Delaware's rural and urban forests, the DFS worked with various stakeholders and organizations and developed 19 comprehensive, long-term strategies to guide its efforts. Furthermore, each strategy contains multiple action items with performance goals to help measure success. Many of the action items will require years, if not decades, to achieve and many will also require partnering with multiple organizations – public and private – to accomplish. Nonetheless, we believe this document is an excellent guide to help the DFS focus limited resources on the most important issues currently facing Delaware's forests.

The 19 strategies are presented in two formats. First, the strategies and corresponding action items are correlated with the seven criteria of forest sustainability, endorsed by the United States and 11 other countries in 1995 through the effort known as the Montreal Process and adopted by the state foresters of the 20 northeastern states and the District of Columbia. This presentation is consistent with the forest conditions and trends



information presented in Delaware's State Assessment. The seven criteria address all aspects of forests and their management – both biological and social – specifically, biological diversity, productive capacity, forest health, soil and water resources, carbon cycles, social aspects, and legal and economic issues. There is at least one indicator that helps to present the data within each criterion.

The strategies are also presented in a matrix using the four issues identified within the state assessment. This method illustrates the actions that the DFS will implement to address each issue. This matrix also identifies the various resources that are available to help implement the actions as well as performance goals/measures for each action item. These performance goals will help the DFS identify shorter-term (including annual) performance targets to implement the strategies and monitor interim progress. Additionally, the matrix also demonstrates how each strategy supports the National Priorities for State and Private Forestry.

Lastly, this assessment was completed by staff within the DFS in consultation with a variety of stakeholders and with the guidance of our Forest Stewardship Committee. [See Appendix 1] While DFS staff wrote this document, we have attempted to capture the input and recommendations of all our stakeholders.

PRIORITY ISSUES

The DFS used a two-part process to identify the highest priority issues, threats, and opportunities for Delaware’s forests. First, the DFS completed a comprehensive five-year strategic plan in 2008 through a facilitated process with forty participants representing a variety of stakeholders, including other public (state, federal, local) agencies, landowners, nongovernmental organizations, consultant foresters, forest industry, and recreationists. Through this effort, the stakeholders identified the critical issues facing Delaware’s forests and then defined goals and objectives for the DFS to address in the subsequent five years (2009-2013).

Second, Delaware’s Forest Stewardship Committee participated in a facilitated process in 2009 that took the issues identified from the five-year strategic planning process and identified any additional issues, threats, and opportunities using guidance from the Statewide Assessment and Strategy process. The result was very similar to the outcomes of the strategic planning process.

Lastly, once the issues, threats, and opportunities were drafted, the DFS shared them with other stakeholders through presentations/site visits and the Internet to determine if any changes were appropriate. Relatively few substantive edits were received and they were subsequently incorporated into the final list.

Four issues were identified:

- (1) Forest Health and Functionality,
- (2) Forest Markets,
- (3) Sustainable Forest Management, and
- (4) Public Awareness and Appreciation of Forests.

The following is an overview of each issue and its related threats and opportunities. The State Assessment contains a more thorough review of this information.

Issue #1: Forest Health and Functionality.

A sufficient, healthy forestland base ensures the perpetual production of forest outputs (lumber, wildlife habitat, recreational opportunities, water quality protection, etc.).

Background:

Forests provide a plethora of environmental and economic benefits and it is crucial that Delaware maintain a sufficient amount of healthy forestland to perpetuate these benefits. A full representation of the various forest types (cypress swamps, pine forests, bottomland hardwoods, etc.) is needed to provide the habitat necessary for various plant and animal species. Additionally, certain forests provide important environmental benefits – such as water quality and quantity (wetlands, riparian buffers, groundwater recharge areas). A sufficient base of working forests is necessary to supply the timber needed to support a viable forest industry. Furthermore, strategically located afforestation (forest expansion) can provide significant environmental benefits, such as connecting large forested blocks and creating or expanding forested corridors and riparian buffers. Urban forests also provide numerous benefits and are important to a community’s quality of life. Municipalities need to include urban forestry issues in their long-term plans. In all cases – urban and rural – healthy forests are vital to their sustainability.

Landowners and foresters must work to ensure that our forests are as free from forest pests and invasive species as possible. Future efforts must address all of these factors to help ensure the long-term health and viability of Delaware’s forests and help us meet one of the national State and Private Forestry (S&PF) priorities – *Protect Forests from Threats.*



Threats:

The long-term health and sustainability of Delaware's forests are threatened by multiple challenges:

- *Forest Loss, Fragmentation and Parcelization* – Delaware's overall forested acreage is shrinking – primarily due to development. Six percent of Delaware's remaining unprotected forests (16,000 acres) were included in proposed housing developments from 2002 to 2009. Many riparian forests have also disappeared, which has contributed to Delaware's water quality challenges. Delaware's remaining forests are also in smaller blocks; the number of large, contiguous forested blocks (over 250 acres) is decreasing. Today's average forest ownership is less than 10 acres, compared to over 30 acres just three decades ago. All of these issues not only present challenges for forest management, wildlife habitat, water quality, water retention and recharge, but they also increase the amount of forest "edge," which often leads to the introduction of invasive plants and reduces the habitat for certain interior forest-dwelling species, especially migratory songbirds.
- *Exotic Invasive Species* – The cumulative effects and potential future impacts of non-native invasive pests are significant and growing. While there are no known significant recent introductions of forest pests to Delaware, several potential threats are located in surrounding states that could severely impact our forests. These include the emerald ash borer, Asian longhorned beetle, European pine shoot borer, Sirex woodwasp, and Sudden Oak Death. Likewise, invasive plants, including Norway maple, mile-a-minute weed, autumn olive, phragmites, and privet continue to spread throughout our forests, particularly in urban areas and those on the rural/suburban fringe.



- *Uncontrolled Native Species* – In addition to exotic species, there are also native threats to our forests. An overabundance of white-tailed deer has begun to degrade Delaware's forests – particularly hardwood forests in northern Delaware. Bacterial leaf scorch (BLS), a disease once considered a relatively minor nuisance for urban forests, is now leading to the decline and death of several red oak species throughout Delaware. The southern pine beetle also has the potential to destroy thousands of acres of valuable loblolly pine forests.
- *Loss of Certain Forest Types* – Recent statewide inventories have shown that certain less desirable types of forests are increasing, such as red maple and sweetgum, while other more desirable types are decreasing significantly, particularly softwood forests (such as loblolly pine, Atlantic white-cedar, and baldcypress) and hickory. This has repercussions not only for timber production but also wildlife habitat.
- *Wildfire* – While wildland fire is not a substantial threat in Delaware, it is a concern in certain landscapes and forest types. Urban sprawl has occurred throughout much of Delaware and has resulted in a significant increase in the wildland-urban interface (WUI), particularly in coastal areas where the invasive reed, phragmites is found.

Opportunities:

Several opportunities are available to address the threats to forest health and functionality:



- *Reduce Forest Loss, Fragmentation, and Parcelization* – Protect forests, particularly in high priority areas, through a combination of public and private funding. Continue to provide existing incentives, and explore opportunities for new incentives, for landowners to maintain their forestland. Encourage state, county, and local governments to incorporate forests and forest benefits into land-use planning processes as well as urban tree canopy goals.
- *Improve the Diversity of Forest Types* – Work with other agencies and organizations to establish reasonable, scientifically-based goals for maintaining/restoring a representation of the various native forest types (species composition) and types of forestland (upland, floodplain/wetland, headwaters forests) while balancing the interests of landowners and society and then partner with various organizations to achieve these goals.
- *Control Native Pest and Non-Native Invasive Species* – Continue to monitor for both non-native and native pests and attempt to eliminate any “hot spots” before they spread and cause significant damage and loss.
- *Reduce Wildfire* – Properly train and equip volunteer fire companies to fight wildland fires, utilize prescribed fire, and work with at-risk communities in the wildland/urban interface (WUI) to reduce the chance of catastrophic WUI fires.

Issue #2: Forest Markets. Adequate and diverse forest markets are available to forest landowners to satisfy the goals for their property.

Background:

A stable, robust and diverse market for all forest products – not just for high quality timber but also for poorer quality species and non-timber markets such as carbon – contributes to Delaware’s economy and helps ensure long-term sustainable forest management. Furthermore, landowners must have the ability to generate income from their forestland; otherwise, they are much more likely to convert their forestland to other non-forest uses, such as development. To foster these markets, it is vital that current, comprehensive inventories of the forest resource are available. Without markets, we cannot achieve the long-term, sustainable management of our forests, as well as one of the key S&PF national priorities – *Conserving Working Forestlands*.



Threats:

The long-term viability of forest markets in Delaware and the Delmarva Peninsula face several challenges and threats:

- *Lack of Traditional Forest Markets* – The recent economic downturn has further accelerated the decline of traditional forest products markets on the Delmarva Peninsula. Timber prices in Delaware have declined as much as 50 percent since 2005. The number of sawmills is approximately half of the total from just 15 years ago and this includes the closure

of the largest pine sawmill in the region. Pulpwood markets have remained relatively stable but only two mills purchase pulpwood in Delaware and one of those is currently in bankruptcy.

- *Few Markets for Non-Wood Forest Products* – Markets for non-wood products, such as carbon, wetland mitigation, and endangered species mitigation, are very important and have the potential to provide consistent income to landowners; however, none have yet to materialize on a significant scale. Currently, hunting leases are the only significant non-wood market for forest landowners.
- *Poor Markets for Low-Quality Wood* – There is very little demand for low quality hardwood species in Delaware. This lack of markets has contributed to the proliferation of low-valued red maple and sweetgum forests because these species are often not removed during timber harvests. Bio-energy is a developing market that could provide new demand for low quality hardwoods but Delaware’s existing incinerator law severely restricts the use of wood for bio-energy purposes.



- *Inadequate Forest Inventories* – Delaware (and the entire Delmarva Peninsula) lacks a comprehensive, current analysis of the forest resource and the amount of wood (and other products) that the forest can produce sustainably. Before one can encourage new forest markets, an accurate forest inventory is needed to ensure there is a sufficient forest base to sustain both new and existing markets.

Opportunities:

Several opportunities could maintain and enhance Delaware’s forest markets:

- *Accurate Forest/Wood Inventories* – Improve and refine the state’s forest inventory to develop better acreage estimates of the various forest types/species and the amount of wood available for various markets. Coordinate with surrounding states when developing potential forest markets to ensure that any new wood markets are both sustainable and properly sized to the supply available.
- *Improve Traditional Forest Markets* – Work with various agencies, organizations, forest industry, and landowners both in Delaware and surrounding states to maintain and support the traditional forest product markets. Develop new markets for low-valued timber species, including bio-energy.
- *Non-Wood/Ecosystem Services Markets* – Promote and facilitate markets for ecosystem services, including the Bay Bank Program and Regional Greenhouse Gas Initiative (RGGI), and ensure these markets reward rural and urban forest management (not just afforestation).



Issue #3: Sustainable Forest Management.

Delawareans must sustainably manage their rural and urban forests.

Background:

Ultimately, we must not only maintain adequate acreage of rural and urban forests to perpetuate the numerous benefits we receive, but we must also sustainably manage these areas if Delawareans are to reap the full rewards of their forestland. Most of these forests are, and will continue to be, privately owned (or owned by homeowners or communities in the case of urban forests). Therefore, these landowners must have the knowledge, ability, and technical assistance to manage their forests for the public good. Furthermore, owners often need financial assistance to help them complete important management activities. Financial and technical (foresters and arborists) assistance not only helps the forest landowner, but also ensures that our rural and urban forests are thriving and providing for the public well being of future generations. Without sustainable management, we cannot meet the national S&PF priorities to *Enhance Public Benefits from Trees and Forests* and *Conserve Working Forestlands*.

Threats:

The long-term sustainability of Delaware's urban and rural forests is threatened by two major issues:

- *Lack of Technical Assistance* – Many forest owners do not utilize professional forestry assistance. In fact, less than one-half of Delaware's timber harvests currently utilize the expertise of a professional forester. While not using a professional forester does not always result in poor forest management, often times it produces not only poor quality forests but also less income for the landowner. Urban and community forests face similar challenges – many cities and towns do not have sufficient expertise to inventory or develop a management plan for their publicly-owned forests.

- *Lack of Financial Assistance* – Financial assistance is necessary to help landowners and communities sustainably manage their forests. Forest management typically only produces sporadic income for landowners and often it is decades between timber harvests – particularly for landowners of small woodlots. Financial assistance, such as cost shares for forest management activities, helps to ensure that landowners can and will complete non-income generating activities, such as timber stand improvement, wildlife habitat enhancement, and water quality protection activities. Likewise, funding also benefits cities and towns, providing the money needed to purchase trees for planting, complete an inventory of the community's trees, or secure an arborist for pruning and other tree care issues. Often urban forestry budgets are the first to be cut or reduced during difficult economic times. Financial assistance combined with technical advice is a cornerstone for sound forest management.



Opportunities:

Opportunities to improve forest management include:

- *Rural Forest Management and Assistance* – Provide technical forestry assistance to landowners for a variety of forestry issues and coordinate with other natural resource professionals (such as wildlife biologists) to provide comprehensive landowner assistance. Seek ways to reach more landowners, including new landowners and small woodlot owners (under 10 acres), to offer professional forestry assistance and improve forest management. Explore the possibility for providing assistance to landowners on a landscape scale, such as in a watershed to help achieve larger-scale goals. Maintain and expand cost-share programs to help landowners complete forest management activities and enhance their forests (timber production, wildlife habitat enhancement, water quality protection, etc.). Maintain existing programs to encourage long-term forest management (property tax exemptions, etc.) and explore the opportunities for additional incentives.
- *Urban Forest Management and Assistance* – Provide technical forestry assistance to municipalities and civic associations to develop long-term plans for their urban forests, including a comprehensive inventory, maintenance plan, and tree canopy goals. Seek opportunities to reach more communities and civic associations to provide them with professional urban forestry assistance. Maintain and expand funding, including private funding, to support urban forest management activities – such as tree planting and tree maintenance projects. Consider methods to provide certified arborists/urban foresters for municipalities.



Issue #4: Public Awareness and Appreciation of Forests. Delawareans must understand and appreciate the importance of forests and forest management.

Background:

Everyone – including landowners, homeowners, community and civic leaders, and students – must appreciate and understand that forests and their proper stewardship are necessary for our continued high quality of life. Credible, current, and easy-to-understand information within the context of ongoing student and adult education can help the general public to not only understand the broad array of benefits that forests provide, but also the intricacies, techniques and practices necessary to achieve forest objectives. Often, sound silvicultural techniques are not aesthetically pleasing and this issue must be addressed through increased forestry education. If the public does not appreciate and understand forests and their appropriate management, we cannot meet any of the national S&PF objectives to *Protect Forests from Threats, Enhance Public Benefits from Trees and Forests* and *Conserve Working Forestlands*.

Threats:

Raising public awareness and understanding of forests and forest management has several challenges:

- *Student/Teacher Education* – Many students' exposure to forestry and other natural resources is limited to only a few disjointed forestry issues and concepts, and many times their lessons focus on forests that are outside of Delaware or even the United States. Similarly, opportunities for teachers and other educators to learn about forests and forestry in Delaware are very limited during both their formal education and continuing education experiences.



- *Landowner/Homeowner Education* – Most forest and tree owners have little or no forestry knowledge. Similarly, the DFS has found that its educational programs continually reach the same small minority of landowners and communities. The DFS and its partners must find new methods to reach (and interest) more forest and tree owners.
- *Public Understanding and Support for Forests and Forest Management* – The public must understand and lobby for forests and forestry; public support leads to well-funded forestry programs and organizations. Public support is even more important if we are to complete the state strategies as the state and other governments face increasing budget pressures.
- *Delaware’s Diversity of Land Use Ideas* – There is a wide diversity of strong ideas and interests regarding land and its use in Delaware. The DFS and its partners must understand these issues the state strategies are implemented.

Opportunities:

Opportunities to raise public awareness and understanding of forestry issues include:

- *Student Education* – Encourage a comprehensive forestry/natural resource curriculum within schools, from elementary through high school. Offer a variety of educational opportunities for all grades that are correlated to state educational standards. Encourage outdoor classrooms at schools and assist with incorporating these classrooms into the schools’ curriculum. Continue to support natural resource educational programs outside of traditional school programs.
- *Teachers/Educators* – Continue to work with partners to integrate Project Learning Tree and its related curricula (Project Wet, Project Wild) into teacher continuing education courses and into teacher curriculum at local colleges. Partner with other organizations to

increase natural resource learning opportunities outside the classroom, including the State Forest Education Centers. Explore avenues to reach more teachers and educators with forestry and other natural resource educational materials.

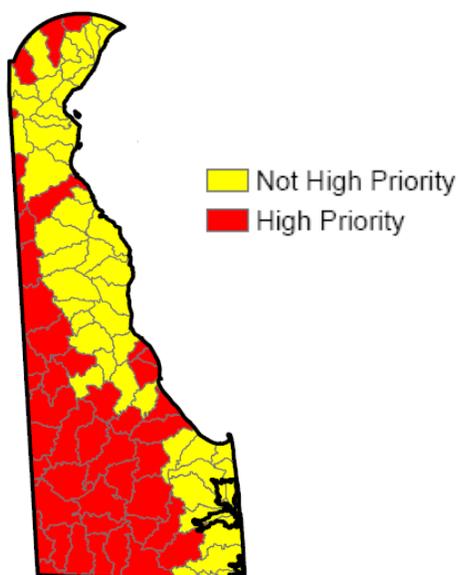
- *Forest Landowners* – Provide educational opportunities, including electronic media and discussions with other landowners (Tree Farmers, etc.), to the large majority of forest landowners who have little or no forestry knowledge. Explore opportunities to provide forest management information to new landowners.
- *Communities and Municipalities* – Provide urban forestry education to municipal leaders and civic groups so they include trees and other “green infrastructure” in their planning and budgeting processes. Explore opportunities to provide urban forestry educational opportunities to civic associations.
- *General Public* – Maintain and execute a marketing plan for the DFS that includes forestry education and promotes rural and urban forestry successes. Continue to provide the general public with specific, message-focused educational opportunities related to forestry.

RURAL PRIORITY LANDSCAPE AREA

The Delaware Forest Service (DFS) utilized separate Geographic Information System (GIS) analyses to identify the critical rural and urban forest landscapes. The rural forest analysis involved the overlay of 23 layers of data. Some layers were recommended by U.S. Forest Service (USFS) guidelines; other layers were added by DFS staff because they were clearly relevant in Delaware. A few additional layers were incorporated based on recommendations made by members of the Forest Stewardship Committee, which subsequently assigned weights to the 23 input layers for the model.

Following the initial GIS analysis, the composite scores were aggregated by USGS HUC 12 watersheds and a mean value was established for each watershed. An initial threshold value was established to identify the rural priority landscapes. The Delaware Forest Stewardship Committee then removed and added several watersheds to better reflect the highest priority rural landscape based on similar efforts by other organizations and first-hand knowledge of the areas. Due to Delaware's small size and rather homogeneous land type, only one rural priority area was used (see Figure 1).

Figure 1. Rural Priority Landscape Area.



However, the DFS divided this area into sub-areas, based on watersheds, to better describe the rural priority area. This division may also be used in some future strategies to help prioritize certain activities on the landscape. The five divisions within the rural priority landscape area are:

- Blackbird Creek
- Chesapeake Basin
- Delaware Estuary Basin
- Inland Bays Basin Headwaters
- Piedmont Basin

A review of the rural priority area, including a brief discussion of each sub-area, is in the State Assessment.

URBAN PRIORITY LANDSCAPE AREAS

The DFS evaluated all of Delaware's 57 incorporated municipalities using a GIS. The model for analysis used a formula that weighted each community according to four (4) criteria and formula listed below:

1. Percentage of urban tree canopy (UTC) (25%)
2. Percentage of impervious surface (25%)
3. Population density (35%)
4. Percentage of fire risk in the wildland urban interface (15%)

As part of the analysis, the DFS created a municipal UTC layer and a fire risk layer. The final step involved calculating the percentages of UTC, impervious surfaces, and fire risk in a spreadsheet program.



The result of the analysis yielded an indexed list of all 57 communities in Delaware ranging from zero (0) to one-hundred (100).

Higher ranking indicates higher priority for U&CF program delivery. This indexed list was spatially joined to the map of municipal areas within the GIS to indicate where the priority areas were located. Scores ranged from 75.1 to 10.4. After examining several possible "cutoffs" for high-priority status, a value of 34.5 was chosen. This resulted in about 40 percent (23/57) of Delaware's municipalities receiving high priority.

The DFS divided the 23 communities that comprise the high priority urban forestry areas into two strata. The first group [See Table 1 in Appendix 2] consists of the 17 communities with high demand placed on limited urban forestry resources, i.e., urban tree canopy (UTC). The second group of six communities [See Table 2 in Appendix 2] is composed of those having the greatest risk of wildfire in the wildland/urban interface (WUI). Wildfire risk was defined as greater than 10 percent of total area.

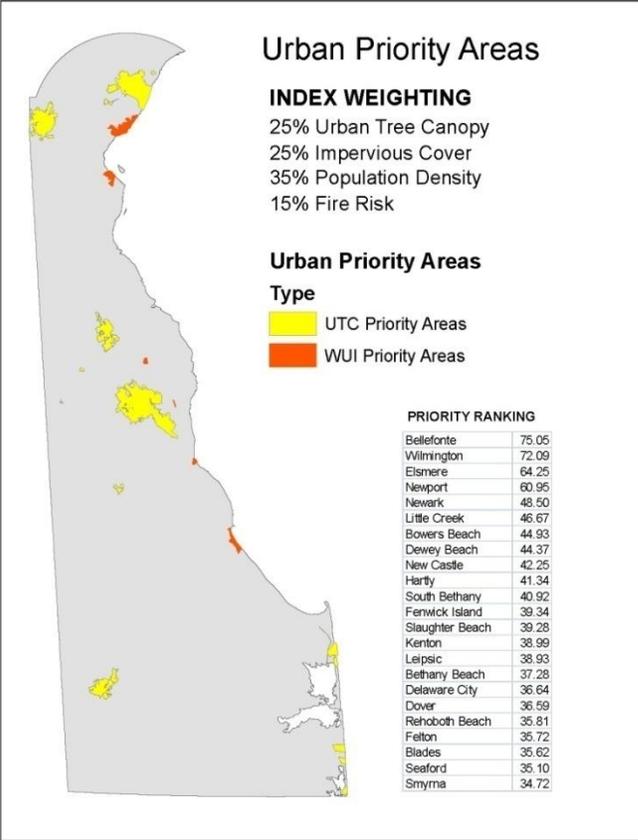
Figure 2 (at right) shows Delaware's 23 high priority communities and their classification as either a UTC or WUI community.

The demands placed upon the urban forest are the primary factor in the process to determine the urban forestry priority areas. The communities that comprise the UTC Priority Areas have a high population density, low tree canopy percentage, or a combination of both. These communities range from large metropolitan areas such as the Wilmington/Newark corridor to small towns such as Kenton and Hartly. Depending upon the level of capacity, these communities would rank higher in priority for funding related to developing and implementing urban tree canopy goals.

Only six of the 23 high priority urban areas are considered to have the greatest risk of wildfire, and they are (from north to south): the City of New Castle, Delaware City, Leipsic, Little Creek, Bowers Beach, and Slaughter Beach.

Though they range from populated urban areas such as the City of New Castle to rural towns like Bowers Beach, these targeted communities have priority for funding to develop and implement Community Wildfire Protection Plans (CWPP).

Figure 2. Urban Priority Landscape Areas.



MULTI-STATE PRIORITY AREAS

In addition to the five rural and two urban forest priority landscape divisions, the DFS also identified multi-state priority areas. A more thorough description is included within the State Assessment.

- **Chesapeake Bay Watershed**
- **I-95 Corridor**
- **Delmarva Peninsula**
- **Delaware River Watershed**



STATE STRATEGIES

Delaware's State Assessment identified four major issues facing Delaware's forests:

- **Forest Health and Functionality.**
A sufficient, healthy forestland base ensures the perpetual production of forest outputs (lumber, wildlife habitat, recreational opportunities, water quality protection, etc.).
- **Forest Markets.** Adequate and diverse forest markets are available to landowners to satisfy the goals for their property.
- **Sustainable Forest Management.**
Delawareans must sustainably manage their rural and urban forests.
- **Public Awareness and Appreciation of Forests.**
Delawareans must understand and appreciate the importance of forests and forest management.

Within each of these four issues, related threats and opportunities were identified. To address these core issues, the DFS worked with its partner organizations to develop 19 strategies and 78 action items.

To help readers better understand the strategies as they relate to the issues and the items described within the state assessment, the 19 strategies are presented in two fashions below.

The strategies are first presented using the seven criteria of forest sustainability, the same framework used for Delaware's State Assessment. This helps readers understand how the strategies will address the items discussed within the assessment.

Secondly, the strategies are presented in matrix form by issue. Please note that strategies often address multiple issues.

Criterion 1 – Conservation and Biological Diversity

While there is information available on the total land area of forests over time, it is apparent that foresters and other professionals need additional information concerning specific forest types (historical presence, current acreage, etc.) in order to set reasonable, scientifically-based goals for long term forest cover and restoration. To that end, the DFS and its partners have developed strategies that attempt to refine our current inventories, develop long-term restoration/protection goals, and actions to implement the restoration goals.

Establish scientifically-based, reasonable goals for both forest protection and the long-term maintenance and restoration of a variety of forest types (species composition), including state rare forest types.

- Establish goals, including a prioritization process, for forestland protection and conservation within critical forest landscapes (working with partners such as DNREC Division of Fish & Wildlife, U.S. Fish & Wildlife Service, etc.)—including headwater forests, large contiguous forest blocks (over 250 acres), and forested wetlands.
- Establish goals for maintaining and (where needed) restoring a variety of forest types, and identify areas for possible enhancement/expansion of forest types, including state rare types such as baldcypress, Atlantic white-cedar, ancient sand- ridge oak forests, and Coastal Plain rich woods.
- Establish goals and identify areas on state-owned lands to manage for “old growth” characteristics.
- Identify critical forested blocks (landscapes) to connect using tree plantings (afforestation) to improve overall ecological quality and value.



Protect forestland through conservation easements and, when appropriate, fee simple acquisition.

- Secure permanent, dedicated funding for Delaware’s Forestland Preservation Program and seek other sources to augment the Forestland Preservation funding.
- Protect critical forests, primarily through conservation easements, using Forestland Preservation Program, Forest Legacy, Open Space, county, and nongovernmental funding sources, and maintain a process to annually inspect/review eased properties.

Utilize prescribed fire for forest and wildlife habitat restoration and management.

- Continue to provide prescribed fire expertise and assistance for silvicultural and wildlife habitat enhancement projects.
- Complete a statewide operational and safety standard for prescribed burning based on existing National Wildfire Coordinating Group (NWCG) standards (including State Fish & Wildlife and State Parks).

Maintain and enhance wildlife habitat, particularly endangered and/or threatened species habitat, during forest management activities.

- Incorporate the Delaware Wildlife Action Plan into forest management, conservation, and protection activities.
- Work with partners (e.g., DNREC Division of Fish & Wildlife, U.S. Fish & Wildlife Service) to maintain, protect, and enhance habitat for federally listed threatened and endangered plant and animal species that are forest-dependent.



Criterion 2 – Maintenance of Productive Capacity of Forest Ecosystems

To maintain the productive capacity of our forests, sound information is needed to determine the current net growth (removals) of forest products and the amount available for ongoing, sustainable harvests. The DFS has identified the following strategies to provide a more detailed understanding of our forest harvests.

Maintain an updated, accurate inventory of Delaware's forests (public and private), including forest types/species, age, growth and removals.

- Work with the U.S. Forest Service and other partners to develop better acreage estimates of the various forest types/species, including loblolly pine, and improve the estimate of acreage by size (seedlings/saplings, pole, sawtimber).
- Work with sawmills and timber buyers to develop estimates of annual timber harvest removals (hardwood, pine, pulpwood, sawtimber).
- Develop a database to record urban and community tree inventories throughout Delaware (number of trees in each community, species types, etc.).



Criterion 3 – Maintenance of Forest Ecosystem Health and Vitality

Delaware's forests are facing a wide array of potentially damaging insects, diseases, and invasive species. Additionally, while wildland fire is not a major threat, there is the potential for damaging wildland fires in certain forest types (e.g., young loblolly pine stands) and in the wildland/urban interface in coastal areas (due to phragmites). Long-term strategies are necessary to address these threats and minimize their potential impacts.

Maintain and, where possible, improve forest health.

- Maintain a Natural Disaster/Forest Health Emergency Response Plan, which includes protocols and responses for forest pests (native and non-native) and natural disasters (hurricanes, ice storms, etc.).
- Continue statewide and regional forest health programs, in cooperation with USFS, APHIS, DDA Plant Industries Section, Cooperative Extension, and adjoining state agencies, to monitor forest pests, including invasive pests (EAB, ALB, etc.) as well as native pests (southern pine beetle, bacterial leaf scorch, etc.). Activities shall include an annual aerial survey, permanent plots, deer exclosures, and traps.
- Establish a cost-share program for targeted efforts to improve forest health by stopping infestations of new pests to Delaware or eradicating isolated infestations of invasive species.
- Continue to work with the Division of Fish & Wildlife and other partners to stabilize the white-tailed deer population, such as by promoting quality deer management principles and continuing to participate of Delaware's Deer Management Advisory Committee.



Minimize the impact of wildfires on public safety and forest health.

- Continue a cooperative arrangement with the Delaware State Fire School to provide wildland fire training courses to volunteer firefighters and other interested individuals.
- Continue cooperative efforts with the U.S. Forest Service to support and provide the Federal Excess Personal Property (FEPP) in Delaware.
- Develop community wildfire protection plans (CWPP) for communities in WUI priority areas.
- Provide wildland firefighting educational programs to all fire companies within rural critical forest areas and urban WUI priority areas and refresher courses every five years.
- Continue wildland fire mitigation grants (minimum \$1,000 allocation) to communities within high-risk wildland fire danger areas to reduce the chances for catastrophic fires.
- Provide wildland firefighting equipment grants to volunteer fire companies within high-risk wildland fire danger areas, including at least \$10,000 annually to VFCs within rural and urban WUI priority areas.
- Maintain a minimum of 50 NWCG-qualified, wildland firefighter Type II (FFT2) personnel for both out-of-state fire response and in-state prescribed burns.



Criterion 4 – Conservation and Maintenance of Soil and Water Resources



Forests play a vital role in protecting and improving soil and water quality. This role is particularly important in Delaware because most of its waterways are considered impaired by the EPA. Additionally, over one-third of Delaware is located within the nationally-recognized Chesapeake Bay Watershed. Strategies to maintain and increase forest cover, particularly riparian forests, headwaters of watersheds, and in critical groundwater recharge areas are very important.

Maintain and improve water quality through forest establishment, forested buffers, forest restoration, and protecting headwater forests.

- Permanently protect headwater and wetland forests.
- Restore wetland/floodplain forests within critical forest landscapes (working with NRCS, DNREC, etc.).
- Establish forested buffers along impaired waterways and isolated forested wetlands, particularly within critical forested landscapes, by working with partner organizations such as the Delaware Natural Heritage and Endangered Species Program, USDA NRCS, and the U.S. Fish & Wildlife Service.
- Support the establishment of buffer ordinances at the state and county levels.
- Continue monitoring forest management operations to ensure they do not degrade water quality

Criterion 5 – Maintenance of Forest Contribution to Global Carbon Cycles

The long-term effects of climate change could be dramatic within Delaware due to its location along the Atlantic seaboard and low elevation. The primary action widely promoted to combat the effects of climate change is reducing the concentrations of atmospheric carbon – sequestering carbon in wood is one method to achieve this reduction.

- Promote and facilitate markets for ecosystem services for forest landowners – including carbon – by continuing to support the Bay Bank Program in cooperation with the Pinchot Institute, Maryland Forest Service, and other organizations.
- Continue to work with DNREC to enhance the opportunity for forest management and urban forestry carbon credits through the Regional Greenhouse Gas Initiative (RGGI).



Criterion 6 – Maintenance and Enhancement of Long-Term Multiple Socio-Economic Benefits to Meet the Needs of Societies

Delaware’s forests, both rural and urban, are critical to Delawareans’ quality of life. Our forests enhance our recreational experiences, provide wood products that we all use, and our forest industries employ thousands of people generating millions of dollars in wages. Most of Delaware’s forests (85 percent) are privately owned; it is important that owners have the opportunity to generate income from their forestlands. Maintaining existing forest markets and encouraging new ones is an important goal to help ensure the perpetuation of forestland. Additionally, continued investment in forest management and research is important to maintain and improve our knowledge and understanding of Delaware’s forests.

Increase the acreage of privately owned forests that are sustainably managed.

- Develop and maintain a comprehensive GIS database within the DFS by 2011 to track state and private forest management activities and accomplishments and to prompt foresters when future management activities are planned for follow-up with landowners. Link this database to other natural resource agencies’ databases, including DNREC (Divisions of Water Resources, Fish & Wildlife, etc.)
- Continue to support and promote the Tree Farm program.
- Work with forest industry, forest landowners, and other organizations to address unsustainable timber harvests (high-grading) through a combination of activities, including landowner education and improved markets for low quality timber.



- Work with other organizations (public and private) to maintain and enhance cost-share and incentive payment programs for landowners (such as EQIP and CSP) to conduct forest management and enhancement activities, particularly within high-priority forest areas.
- Continue to provide non-cost share incentive programs, such as property tax reductions and exemptions, and explore new opportunities for landowners who sustainably manage their forestland.
- Explore opportunities to increase forest management opportunities for landowners enrolled in Delaware's farmland assessment program.
- Maintain technical forestry assistance for landowners.
- Explore new programs to reach the increasing number of small woodlot landowners that are not typically served with other programs (less than 10 acres of woodland).



Increase urban tree canopy.

- Work with communities and other organizations to address heat islands by developing a protocol for parking lot shade requirements in new developments and attempt to install at least one demonstration project in each county by 2015.
- Incorporate urban tree canopy goals into municipal plans by working with the State Planning Office, municipalities, and NGOs to set urban tree canopy goals and identify priority areas for maintaining and expanding urban forests.
- Continue to provide the community forestry (matching) grant program to help communities achieve tree canopy goals and

secure dedicated, nongovernmental funding for the program.

- Afforest vacant open space managed by civic associations.
- Work with municipalities to develop storm water mitigation strategies using tree planting and forest conservation.

Increase the number of urban/community forests that are sustainably managed.

- Develop urban forest management plans with tree inventories and an urban tree canopy goal for each of Delaware's communities within critical forested areas.
- Help civic associations complete management plans for their urban forest resources.
- Provide technical assistance to municipalities to help them improve their urban forestry programs.

Increase the number of urban forestry professionals.

- Increase the number of certified arborists in Delaware through workshops and other training opportunities.
- Explore opportunities for municipalities to share an arborist or urban forester (multiple communities funding one professional).

Maintain and expand the opportunities for traditional forest markets and operators (loggers, sawmills, etc.).

- Continue to provide educational opportunities for forestry operators (timber buyers, loggers, etc.), including the Maryland/Delaware Master Logger program.
- Meet at least annually with forestry operators to discuss challenges and opportunities.



- Maintain and expand traditional wood markets (loggers, sawmills, chip mills, etc.) by working with other organizations such as the Delaware Economic Development Office, Delaware Forestry Association, USDA Rural Development, and the Maryland Forest Service.
- Encourage niche markets for forest products.

Create markets for low-value, low-quality wood and dedicated woody crops such as for bio-energy and bio-fuels.

- Conduct an analysis of the amount of low value/quality wood available (by county), including waste wood, for bio-energy and other uses.
- Work with other partners to address the restrictions on wood/biomass bio-energy facilities by Delaware’s incinerator law.
- Promote *Fuels for Schools* program and attempt to have one school converted to wood energy by 2015.
- Develop at least one new market for low-value wood by promoting and facilitating new markets – such as bio-energy – and ensure these markets are properly sized for the supply available (including working with forestry agencies of adjoining states).

Create markets for non-wood products.

- Explore opportunities to include forest landowners in agri-tourism programs and events.
- Promote and facilitate markets for ecosystem services for forest landowners – including carbon – by continuing to support the Bay Bank Program in cooperation with the Pinchot Institute, Maryland Forest Service, and other organizations.



Criterion 7 – Legal, Institutional, and Economic Framework for Forest Conservation and Sustainable Management

To ensure the perpetuation of forests for the long term, governments must include provisions to promote forests and assist forest landowners in their policies, laws, and long term planning processes. Governments also need to include forest protection and enhancement within their budgeting processes. The DFS, working with our partners, identified the following strategies concerning the legal, institutional and economic framework for forest conservation.

Conduct forestry research, in cooperation with partners, on priority forestry issues, including data gaps.

- Partner with Delaware State University and the University of Delaware to develop research projects for the McIntire-Stennis research funds.
- Continue to conduct research projects on forest health issues, including white-tailed deer, bacterial leaf scorch, and forest health indicators.
- Continue to partner with the U.S. Forest Service Forest Inventory and Analysis (FIA) Program to develop better estimates of Delaware’s forest resources.
- Partner with DNREC and other organizations to study the potential impacts of climate change on the forest and opportunities to address and mitigate its effects.



Increase landowners’ and governments’ knowledge and appreciation of forests and forest management.

- Establish a position within the DFS to coordinate adult education programs. Incorporate forests and related issues into state, county, and municipal land-use planning processes to help decrease the rate of forest loss and fragmentation in the state.



- Provide educational opportunities for forest landowners – in the classroom, through the electronic media, train-the-trainer programs, etc. – by working with other government agencies and NGOs on a variety of issues including forest management, intergenerational transfer, and tax issues. Utilize State Forests as demonstration sites.

- Explore opportunities to provide forest and tree management information to new landowners and new homeowners.
- Provide urban forestry-based educational programs to community leaders, civic associations, and homeowners on topics such as tree care, incorporating trees into land use planning, and environmental benefits of urban forests.

Increase teachers' and students' understanding and appreciation of forests and forest management.

- Establish outdoor classrooms at schools and assist with incorporating these classrooms into the schools' curriculum (tree planting projects, monitoring water quality, etc.).
- Continue to partner with the Delaware Association for Environmental Education (DAEE) to incorporate natural resources

curriculum (*No Child Left Inside*) into schools throughout Delaware.

- Incorporate the Project Learning Tree (PLT) curriculum into pre-service (teacher) programs at Delaware colleges and universities.
- Work with other natural resource agencies and Department of Education (DOE) to incorporate a course on agriculture and natural resources as part of statewide school curriculum by 2015.
- Further integrate the two State Forest Education Centers into local schools' educational programs.



- Continue to provide forestry educational opportunities to elementary schools throughout Delaware through Arbor Day, wildland fire prevention (Smokey Bear), national wood products week, and other in-class programs.
- Continue to work with partners to provide natural resource learning opportunities outside of the classroom, such as Envirothon, Science Olympiad, and 4-H Forestry programs.





STRATEGY MATRIX

As discussed previously, below are the 19 strategies presented in matrix form by issue. Please note that strategies often address multiple issues. For each strategy, the matrix also includes:

- Priority Landscape Areas Addressed
- Other State Issues Addressed
- Key Stakeholders
- Resources Available/Required to Implement the Strategy
- Performance Goals/Measures of Success
- National S&PF Objectives Supported

This information allows the reader to view the strategies that address each issue identified in the state assessment, performance goal(s) for each strategy, what resources and other organizations will assist with the strategy, and how this strategy supports the S&PF national priorities.



As a reminder, below are the State and Private Forestry (S&PF) National Themes and Objectives approved by the National Association of State Foresters. Please note that the objectives are identified by number (1.1, 1.2, 2.1, etc.) and these reference numbers are used in the matrix.

National S&PF Themes and Objectives

- 1. Conserve and Manage Working Forest Landscapes for Multiple Values and Uses**
 - 1.1 Identify and conserve high priority forest ecosystems and landscapes
 - 1.2 Actively and sustainably manage forests
- 2. Protect Forests from Threats**
 - 2.1 Restore fire-adapted lands and/or reduce risk of wildfire impacts
 - 2.2 Identify, manage, and reduce threats to forest and ecosystem health
- 3. Enhance Public Benefits from Trees and Forests**
 - 3.1 Protect and enhance water quality and quantity
 - 3.2 Improve air quality and conserve energy
 - 3.3 Assist communities in planning for and reducing forest health risks
 - 3.4 Maintain and enhance the economic benefits and values of trees and forests
 - 3.5 Protect, conserve, and enhance wildlife and fish habitat
 - 3.6 Connect people to trees and forests, and engage them in environmental stewardship activities
 - 3.7 Manage trees and forests to mitigate and adapt to global climate change

The performance measures in **bold** within the matrix are either core S&PF performance measures approved for the S&PF Redesign process or directly related to those S&PF performance measures.

State Issue #1 (DE-1): Forest Health and Functionality. A sufficient, healthy forestland base ensures the perpetual production of forest outputs (lumber, wildlife habitat, recreational opportunities, water quality protection, etc.).

Strategy	Priority Landscape Area(s)	Other State Issues Addressed	Key Stakeholders	Resources Available/ Required to Implement	Performance Goals/ Measures of Success	National S&PF Objectives
<p>DE-1.1</p> <p>Maintain an updated, accurate inventory of Delaware's forests (public and private & rural and urban) including forest types/species, age, growth, and removals.</p>	Rural and Urban UTC Areas	Forest Markets	<p>USFS</p> <p>DNREC Division of Fish & Wildlife – Natural Heritage Program</p> <p>Forest industry</p>	<p>Forest Stewardship</p> <p>Forest Health</p> <p>State funds</p> <p>USFS FIA program</p>	<p>DE-1.1.1 Better acreage estimate of forest types and size classes. Updated loblolly pine estimate by 2012.</p> <p>DE-1.1.2 Develop annual estimates of timber harvest volumes. First survey in 2011.</p> <p>DE-1.1.3 Implement a U&CF tree inventory database in 2011.</p>	<p>1.1</p> <p>1.2</p> <p>3.4</p>
<p>DE-1.2</p> <p>Establish scientifically-based, reasonable goals for both forest protection and the long-term maintenance and restoration of a variety of forest types (species), including state rare forest types.</p>	Rural	Sustainable Forest Management	<p>USFS</p> <p>DNREC Division of Fish & Wildlife – Natural Heritage Program</p> <p>DNREC Division of Parks & Recreation</p> <p>USF&WS</p> <p>The Nature Conservancy</p> <p>USDA NRCS</p>	<p>Forest Stewardship</p> <p>Forest Health</p> <p>State funds</p> <p>DNREC Division of Fish & Wildlife</p> <p>The Nature Conservancy</p>	<p>DE-1.2.1 Establish goals including prioritization process for forestland protection and conservation including headwater forests, large contiguous forest blocks, and forested wetlands. Complete goals by 2013.</p> <p>DE-1.2.2 Establish maintenance and restoration goals for forest types including baldcypress, Atlantic white-cedar, etc. Complete by 2013.</p> <p>DE-1.2.3 Establish and identify areas on state-owned lands to manage for "old growth" characteristics. Complete by 2013.</p> <p>DE-1.2.4 Identify critical forested blocks to connect using tree plantings to improve ecological value. Complete by 2012.</p>	<p>1.1</p> <p>2.1</p> <p>3.5</p>

Strategy	Priority Landscape Area(s)	Other State Issues Addressed	Key Stakeholders	Resources Available/ Required to Implement	Performance Goals/ Measures of Success	National S&PF Objectives
<p>DE-1.3</p> <p>Protect forestland through conservation easements and, when appropriate, fee simple acquisition.</p>	Rural	Sustainable Forest Management	<p>Delaware Ag Lands and Forestland Preservation Programs</p> <p>USFS</p> <p>The Nature Conservancy</p> <p>The Conservation Fund</p> <p>County governments</p> <p>Land trusts</p>	<p>Delaware Ag Lands and Forestland preservation Programs (state funds)</p> <p>Forest Legacy Program</p> <p>Forest Stewardship</p> <p>State Open Space Council</p> <p>The Nature Conservancy</p> <p>The Conservation Fund</p> <p>Sussex County Land Trust</p> <p>Clean Water Advisory Council</p>	<p>DE-1.3.1 Protect 2,000 acres of forests within priority areas by 2015.</p> <p>DE-1.3.2 Secure permanent dedicated funding for the Delaware Forestland Preservation Program (including funds from the Clean Water Advisory Council) by 2015.</p>	<p>1.1</p> <p>1.2</p> <p>3.4</p> <p>3.5</p>
<p>DE-1.4</p> <p>Maintain and improve water quality through forest establishment, forested buffers, forest restoration, and protecting headwater forests.</p>	Rural and Urban	Sustainable Forest Management	<p>DNREC</p> <p>– Division of Soil & Water Conservation</p> <p>– Division of Water Resources</p> <p>– Division of Fish & Wildlife</p> <p>USDA NRCS</p> <p>Conservation Districts</p> <p>USF&WS</p> <p>Tax Ditch Associations</p>	<p>Forest Stewardship Program</p> <p>Chesapeake Bay Program</p> <p>USDA NRCS EQIP</p> <p>State funds</p> <p>Urban & Community Forestry</p> <p>EPA</p>	<p>DE-1.4.1 Permanently protect headwater forests—1,000 acres by 2015.</p> <p>DE-1.4.2 Restore wetlands/floodplain forests—250 acres by 2015.</p> <p>DE-1.4.3 Establish forested buffers along impaired waterways and isolated wetlands—25 miles by 2015.</p> <p>DE-1.4.4 Support the establishment of buffer ordinances at state and county levels.</p> <p>DE-1.4.5 Continue to monitor forest management operations to ensure they do not degrade water quality.</p>	<p>1.1</p> <p>3.1</p> <p>3.5</p> <p>3.7</p>

Strategy	Priority Landscape Area(s)	Other State Issues Addressed	Key Stakeholders	Resources Available/ Required to Implement	Performance Goals/ Measures of Success	National S&PF Objectives
<p>DE-1.5</p> <p>Maintain and enhance wildlife habitat, particularly endangered and/or threatened species habitat, during forest management activities.</p>	Rural	Sustainable Forest Management	<p>DNREC Division of Fish & Wildlife – Natural Heritage Program</p> <p>USF&WS</p>	<p>Forest Stewardship</p> <p>State funds</p> <p>SWAP funds</p>	<p>DE-1.5.1 Incorporate the Delaware Wildlife Action Plan into forest management, conservation, and protection activities.</p> <p>DE-1.5.2 Maintain, protect, and enhance habitat for federally listed threatened and endangered species that are forest dependent.</p>	<p>1.1</p> <p>3.5</p>
<p>DE-1.6</p> <p>Increase urban tree canopy.</p>	Urban UTC Priority Area	<p>Sustainable Forest Management</p> <p>Public Awareness and Appreciation</p>	<p>Municipalities</p> <p>Civic Associations</p> <p>County government</p> <p>State Planning Office</p> <p>Nonprofits</p> <p>Delaware Center of Horticulture</p> <p>Delaware Center for the Inland Bays</p> <p>DNREC</p> <p>Delaware Cooperative Extension</p>	<p>State funds</p> <p>U&CF funds</p> <p>Municipal and local funds</p> <p>Nonprofit funding</p> <p>Corporate funding (carbon credits)</p> <p>Urban and Community Forestry</p> <p>Local grants</p>	<p>DE-1.6.1 Work with communities and other organizations to address heat islands by developing a protocol for parking lot shade requirements in new developments. Install at least one demonstration project in each county by 2015.</p> <p>DE-1.6.2 Incorporate urban tree canopy goals into all 17 urban UTC priority communities by 2015.</p> <p>DE-1.6.3 Continue to provide community forestry matching grant program. Secure dedicated nongovernmental funding by 2015.</p> <p>DE-1.6.4 Afforest vacant open space managed by civic associations—125 acres in UTC priority communities by 2015.</p> <p>DE-1.6.5 Work with other state organizations and municipalities to develop and promote storm water mitigation strategies using tree planting and forest conservation. Install at least one demonstration project in each county by 2015.</p>	<p>1.2</p> <p>3.1</p> <p>3.2</p> <p>3.6</p> <p>3.7</p>

Strategy	Priority Landscape Area(s)	Other State Issues Addressed	Key Stakeholders	Resources Available/ Required to Implement	Performance Goals/ Measures of Success	National S&PF Objectives
<p>DE-1.7</p> <p>Maintain and, where possible, improve forest health.</p>	All	Sustainable Forest Management	<p>USFS</p> <p>APHIS</p> <p>DDA Plant Industries Section</p> <p>Delaware Cooperative Extension</p> <p>DNREC Division of Fish & Wildlife</p> <p>Delaware Forestry Association</p>	<p>Forest Health funds</p> <p>State funds</p> <p>APHIS</p> <p>Forest Stewardship</p> <p>Urban and Community Forestry</p>	<p>DE-1.7.1 Maintain a Natural Disaster/Forest Health Response Plan for forest pests and natural disasters. Complete by 2011.</p> <p>DE-1.7.2 Continue to monitor for forest pests: invasive (EAB, ALB, etc.) and native (BLS, SPB, etc.). Maintain aerial/ground surveys.</p> <p>DE-1.7.3 Establish a cost-share program for targeted efforts to stop new infestations or isolated infestations of forest pests. Initiate by 2013.</p> <p>DE-1.7.4 Continue to work with DNREC Division of Fish & Wildlife to stabilize the white-tailed deer population. Participate on Deer Management Advisory Committee.</p> <p>DE-1.7.5 Continue research projects on forest health issues, including the effects of various diseases, insects, and white-tailed deer.</p> <p>DE-1.7.6 Consider research projects to maintain and improve forest productivity, such as utilizing excess poultry manure and/or municipal wastewater as a fertilizer.</p>	<p>1.2</p> <p>2.2</p>
<p>DE-1.8</p> <p>Utilize prescribed fire for forest and wildlife habitat restoration and management.</p>	Rural	Sustainable Forest Management	<p>USFS</p> <p>Delaware State Fire School</p> <p>Volunteer Fire Companies</p> <p>DNREC Divisions of Fish & Wildlife and Parks & Recreation</p> <p>USDA NRCS</p> <p>USF&WS</p>	<p>State Fire Assistance</p> <p>Volunteer Fire Assistance</p> <p>State funds</p> <p>DNREC Division of Fish & Wildlife</p> <p>Forest Stewardship</p>	<p>DE-1.8.1 Continue to provide prescribed fire expertise and assistance for silvicultural and wildlife habitat enhancement projects.</p> <p>DE-1.8.2 Annually treat at least 250 acres to maintain/restore fire-adapted ecosystems.</p> <p>DE-1.8.3 Establish a statewide operational and safety standard for prescribed burning based on NWCG standards. Complete by 2015.</p>	<p>1.2</p> <p>2.1</p> <p>2.2</p> <p>3.5</p>

Strategy	Priority Landscape Area(s)	Other State Issues Addressed	Key Stakeholders	Resources Available/ Required to Implement	Performance Goals/ Measures of Success	National S&PF Objectives
<p>DE-1.9</p> <p>Minimize the impact of wildfires on public safety and forest health.</p>	All	<p>Sustainable Forest Management</p> <p>Public Awareness and Appreciation</p>	<p>USFS</p> <p>Delaware State Fire School</p> <p>Volunteer Fire Companies</p> <p>DNREC Division of Fish & Wildlife</p>	<p>State Fire Assistance</p> <p>Volunteer Fire Assistance</p> <p>State funds</p> <p>Delaware State Fire School</p> <p>Conservation Education</p>	<p>DE-1.9.1 Continue cooperative agreement with Delaware State Fire School to provide wildland firefighting courses. Teach 50 students per year.</p> <p>DE-1.9.2 Continue to support and provide the Federal Excess Personal Property (FEPP) program.</p> <p>DE-1.9.3 Provide wildland firefighting educational program to all fire companies within rural forest priority area and urban WUI priority area by 2015 and refresher courses every 5 years.</p> <p>DE-1.9.4 Provide wildland firefighting equipment grants to VFCs, including at least \$10,000 annually to VFCs within rural forest and urban forest WUI priority areas.</p> <p>DE-1.9.5 Maintain a minimum of 50 NWCG-qualified wildland firefighter Type II personnel.</p>	<p>1.2</p> <p>2.1</p> <p>2.2</p> <p>3.3</p> <p>3.5</p>
<p>DE-1.10</p> <p>Minimize the impact of wildfires on public safety and forest health.</p>	Urban WUI Area	<p>Sustainable Forest Management</p> <p>Public Awareness and Appreciation</p>	<p>USFS</p> <p>Delaware State Fire School</p> <p>Volunteer Fire Companies</p> <p>DNREC Division of Fish & Wildlife</p>	<p>State Fire Assistance</p> <p>Volunteer Fire Assistance</p> <p>State funds</p> <p>Delaware State Fire School</p> <p>Conservation Education</p>	<p>DE-1.10.1 Develop CWPPs for 7 communities in WUI urban priority areas. Complete by 2015.</p> <p>DE-1.10.2 Continue wildland fire mitigation grants to communities within high-risk wildland fire danger areas— 100 acres treated annually to reduce hazardous fuels.</p>	<p>1.2</p> <p>2.2</p> <p>3.3</p>

Issue #2 (DE-2): Forest Markets. Adequate and diverse forest markets are available to landowners to satisfy their goals for their property.

Strategy	Priority Landscape Area(s)	Other State Issues Addressed	Key Stakeholders	Resources Available/ Required to Implement	Performance Goals/ Measures of Success	National S&PF Objectives
<p>DE-2.1</p> <p>Promote the importance of Delaware's forests and forest industry.</p>	<p>Statewide</p>	<p>Forest Health and Functionality</p> <p>Public Awareness and Appreciation</p>	<p>Delaware Forestry Association</p> <p>Delaware Tree Farm Committee</p> <p>Forest industry</p> <p>Delaware Cooperative Extension</p>	<p>Delaware Economic Development Office</p> <p>Delaware Cooperative Extension</p> <p>USFS</p> <p>Forest Utilization & Marketing</p> <p>Conservation Education</p> <p>Forest Stewardship</p>	<p>DE-2.1.1 Complete an economic impact study of forests and the forest industry. Complete by 2012.</p> <p>DE-2.1.2 Complete a DFS marketing plan that includes a public campaign to promote forests and forestry. Complete in 2011.</p>	<p>3.4</p> <p>3.6</p>
<p>DE-2.2</p> <p>Maintain and expand the opportunities for traditional forest markets and operators (loggers, sawmills, etc.).</p>	<p>Statewide</p>	<p>Sustainable Forest Management</p>	<p>Delaware Forestry Association</p> <p>Delaware Tree Farm Committee</p> <p>Forest industry</p> <p>Delaware Cooperative Extension</p> <p>USDA Rural Development</p>	<p>DED0</p> <p>DDA</p> <p>USDA Rural Development</p> <p>USFS</p> <p>Forest Stewardship</p> <p>Forest Utilization and Marketing</p> <p>Urban and Community Forestry</p>	<p>DE-2.2.1 Continue to provide educational programs for forestry operators including the MD/DE Master Logger Program.</p> <p>DE-2.2.2 Meet at least annually with forestry operators to discuss opportunities and challenges. Initiate by 2011.</p> <p>DE-2.2.3 Maintain and expand traditional wood markets.</p> <p>DE-2.2.4 Explore opportunities to provide additional wood chips/shavings for poultry bedding.</p> <p>DE-2.2.5 Encourage niche markets for forest products. Establish an Internet-based marketing system for niche products.</p>	<p>1.2</p> <p>3.4</p> <p>3.6</p>

Strategy	Priority Landscape Area(s)	Other State Issues Addressed	Key Stakeholders	Resources Available/ Required to Implement	Performance Goals/ Measures of Success	National S&PF Objectives
DE-2.3 Create markets for low-value, low quality wood and dedicated woody crops such as for bio-energy and bio-fuels.	Statewide	Sustainable Forest Management	Delaware Forestry Association Delaware Tree Farm Committee Forest industry Delaware Cooperative Extension USDA Rural Development Delaware Energy Office	Delaware Economic Development Office DDA USDA Rural Development USFS Forest Stewardship Forest Utilization and Marketing Urban and Community Forestry	DE-2.3.1 Analyze the amount of low value/low quality wood available. Complete in 2012. DE-2.3.2 Address the restrictions on wood/ biomass energy facilities by Delaware's incinerator law. DE-2.3.3 Promote <i>Fuels for Schools</i> program. Attempt to have one school or other state-owned facility converted to wood by 2015. DE-2.3.4 Promote bio-fuel plantation development. DE-2.3.5 Develop a new market by 2015 for low-value wood by promoting and facilitating new markets and ensure these markets are properly sized for the available supply.	1.2 3.2 3.4 3.7
DE-2.4 Create markets for non-wood products.	Statewide	Sustainable Forest Management Public Awareness and Appreciation	Delaware Forestry Association Delaware Tree Farm Committee Bay Bank Program First State RC&D Council Delaware Cooperative Extension Delaware Energy Office	DDA Marketing Program DNREC Division of Air & Waste Management Forest Stewardship Forest Utilization and Marketing	DE-2.4.1 Promote and facilitate markets for ecosystem services. Continue to participate in the Bay Bank Program. DE-2.4.2 Continue to work with DNREC to enhance the opportunity for forest management and urban forestry carbon credits through RGGI. DE-2.4.3 Explore opportunities for forest landowners in agri-tourism.	1.2 3.4 3.7

Issue #3 (DE-3): Sustainable Forest Management. Delawareans must sustainably manage their rural and urban forests.

Strategy	Priority Landscape Area(s)	Other State Issues Addressed	Key Stakeholders	Resources Available/ Required to Implement	Performance Goals/ Measures of Success	National S&PF Objectives
<p>DE-3.1</p> <p>Increase the number of privately owned forests that are sustainably managed.</p>	<p>Rural</p>	<p>Forest Health and Functionality</p> <p>Public Awareness and Appreciation</p>	<p>Delaware Forestry Association</p> <p>Delaware Tree Farm Committee</p> <p>USDA NRCS</p> <p>DNREC Division of Fish & Wildlife</p> <p>Delaware Cooperative Extension</p>	<p>Forest Stewardship</p> <p>State funds</p> <p>EQIP and CSP</p> <p>State cost-share funds</p> <p>Chesapeake Bay</p>	<p>DE-3.1.1 Continue to support the Tree Farm Program.</p> <p>DE-3.1.2 Work with industry and landowners to address high-grading.</p> <p>DE-3.1.3 Maintain and enhance cost shares for forestry activities. Continue EQIP, CSP, and state cost share funds for forestry.</p> <p>DE-3.1.4 Continue non-cost share incentives for forest management—such as property tax reductions.</p> <p>DE-3.1.5 Explore new programs to reach small woodlot landowners.</p> <p>DE-3.1.6 Increase number of landowners in Farmland Assessment Act with forest management plans.</p> <p>DE-3.1.7 Develop comprehensive database to track state and private land forest management activities and accomplishments by 2011.</p> <p>DE-3.1.8 Continue to partner with the University of Maryland Extension Service and Delaware Cooperative Extension to sponsor the Delmarva Forestry Seminar as well as other regional forest landowner education opportunities.</p> <p>DE-3.1.9 Maintain technical forestry assistance to landowners. New stewardship plans for 7,000 acres by 2015, including 5,000 acres within rural priority area.</p>	<p>1.1</p> <p>1.2</p> <p>3.1</p> <p>3.4</p> <p>3.5</p> <p>3.6</p>

Strategy	Priority Landscape Area(s)	Other State Issues Addressed	Key Stakeholders	Resources Available/ Required to Implement	Performance Goals/ Measures of Success	National S&PF Objectives
DE-3.2 Increase the number of urban forestry professionals.	Urban UTC Area	Public Awareness and Appreciation	ISA Municipalities State Planning Office	State funds Municipal funds U&CF funds Urban and Community Forestry	DE-3.2.1 Increase the number of certified arborists in Delaware through training opportunities—150 by 2015. DE-3.2.2 Increase number of municipalities with a certified arborist/urban forester on staff. Have a certified arborist on staff for each of UTC priority areas by 2015.	1.2 3.1 3.6
DE-3.3 Increase the number of urban and community forests that are sustainably managed.	Urban UTC Area	Forest Health and Functionality Public Awareness and Appreciation	Municipalities Civic Associations County government State Planning Office Delaware Center of Horticulture Delaware Center for the Inland Bays DNREC Delaware Cooperative Extension	State funds U&CF funds Municipal and local funds Nonprofit funding Urban and Community Forestry	DE-3.3.1 Provide technical urban forestry assistance to municipalities. Increase the number of managing communities to 21 by 2015 (11 in 2010), including at least 10 within UTC priority communities. DE-3.3.2 Complete urban forest management plans with tree inventories and an urban tree canopy goal for all 17 UTC priority communities by 2015. DE-3.3.3 Assist civic associations with completing urban management plans—60 plans by 2015.	1.2 3.1 3.2 3.6

Issue #4 (DE-4): Public Awareness and Appreciation of Forests. Delawareans must understand and appreciate the importance of forests and forest management.

Strategy	Priority Landscape Area(s)	Other State Issues Addressed	Key Stakeholders	Resources Available/ Required to Implement	Performance Goals/ Measures of Success	National S&PF Objectives
<p>DE-4.1</p> <p>Increase landowners' and governments' knowledge and appreciation of forests and forest management.</p>	<p>Statewide</p>	<p>Sustainable Forest Management</p> <p>Forest Health and Functionality</p>	<p>Forest landowners</p> <p>Municipalities and County Government</p> <p>Delaware Cooperative Extension</p> <p>Delaware Forestry Association</p> <p>State Planning Office</p>	<p>Forest Stewardship</p> <p>Urban & Community Forestry</p> <p>Conservation Education</p> <p>Delaware Cooperative Extension</p> <p>Colleges and Universities</p>	<p>DE-4.1.1 Establish a position within the DFS to coordinate adult education programs. Reach at least 50 new (or those who previously never worked with forestry professionals) forest landowners annually in the rural priority area and 50 community leaders and civic associations in urban UTC priority communities annually. Complete by 2012.</p> <p>DE-4.1.2 Explore opportunities to provide forest and tree management info to new landowners and homeowners.</p> <p>DE-4.1.3 Provide educational opportunities for forest landowners via all avenues (print, media, Internet, etc.) and utilize State Forests as demonstration sites.</p> <p>DE-4.1.4 Incorporate forests and related issues into state, county, and local land-use planning.</p> <p>DE-4.1.5 Provide urban forestry educational programs (land use planning, tree care, etc.) to community leaders, civic associations, and homeowners.</p>	<p>1.2</p> <p>3.6</p>

Strategy	Priority Landscape Area(s)	Other State Issues Addressed	Key Stakeholders	Resources Available/ Required to Implement	Performance Goals/ Measures of Success	National S&PF Objectives
<p>DE-4.2</p> <p>Increase teachers' and students' understanding and appreciation of forests and forest management.</p>	<p>Statewide</p>	<p>Sustainable Forest Management</p>	<p>Delaware Department of Education</p> <p>Colleges and Universities</p> <p>DAEE</p> <p>Project Learning Tree</p> <p>DNREC</p> <p>Delaware Nature Society</p> <p>Delaware Cooperative Extension</p>	<p>Conservation Education</p> <p>Delaware Department of Education</p> <p>American Forest Foundation (PLT)</p> <p>Private funds</p> <p>Forest Stewardship</p> <p>Urban & Community Forestry</p> <p>Delaware Cooperative Extension</p>	<p>DE-4.2.1 Establish 10 new outdoor forestry classrooms by 2015 and assist with incorporating them into schools' curriculum.</p> <p>DE-4.2.2 Incorporate <i>No Child Left Inside</i> curriculum into schools. Continue to support DAEE.</p> <p>DE-4.2.3 Incorporate Project Learning Tree (PLT) curriculum into pre-service programs at Delaware college and university teaching programs.</p> <p>DE-4.2.4 Incorporate a course on ag and natural resources in statewide curriculum. By 2015.</p> <p>DE-4.2.5 Further integrate two State Forest Education Centers into local schools' curriculum. Bring 2,500 students annually to each center by 2015.</p> <p>DE-4.2.6 Continue providing forestry educational programs to elementary schools (Arbor Day, Smokey Bear, etc.). Reach 12,000 students annually.</p> <p>DE-4.2.7 Work with partners to continue providing natural resource learning opportunities outside the classroom (Envirothon, 4-H Forestry, etc.).</p>	<p>3.6</p>

INVESTMENT OF RESOURCES

The Delaware Forest Service (DFS) is the primary recipient for State and Private Forestry (S&PF) funds in Delaware. The DFS will utilize these funds to implement the strategies to address the issues and threats identified in the state assessment. This investment of funds reflects the joint interests of, and long-standing partnership with, the Federal government (USDA) and the State of Delaware, as envisioned in the Cooperative Forestry Act, P.L. 95-313:

“Congress finds that.....most of the productive forest land of the United States is in private, State, and local governmental ownership, and the capacity of the United States to produce renewable forest resources is significantly dependent on such nonfederal forest lands...” (Sec.2.a.1)

“It is the policy of the Congress that it is in the national interest for the Secretary to work through and in cooperation with State foresters, or equivalent State officials, nongovernmental organizations, and the private sector in implementing Federal programs affecting nonfederal forest lands.” (Sec. 2.c)

To participate in the achievement of this broad and important national vision from a Delawarean perspective, the DFS utilizes S&PF and other federal funds, state resources, and the assistance of many committed partner organizations and individuals.

ALLOCATION OF S&PF FUNDING

Currently, the DFS annually receives approximately \$550,000 to \$600,000 of S&PF funds (excluding Forest Legacy Acquisition funding). The DFS anticipates that it will continue to use approximately one-half of these funds to support portions of six DFS positions (salaries, other employment costs, and indirect costs) that assist with implementation of the state strategy.



These positions will assist with a broad range of activities identified in the state strategies, including:

- Technical forestry assistance to private landowners and forestry operators,
- Technical forestry assistance to communities, civic associations, and homeowners,
- Forest health monitoring and management,
- Wildland fire suppression and education, and
- Developing strategies, implementation plans, and performance goals for long-term strategies.

As mentioned, S&PF funds currently provide the salaries for a portion of six positions within the DFS (two forester positions, ½ of three additional forester positions, and ½ of a community relations position). These six positions are vital to the DFS and necessary to address and complete the state strategies.

Grants:

Other S&PF funds will be spent for grants to communities and other organizations as specified within the state strategies. Currently these grants total approximately \$125,000. Specifically:

- *Community Forestry Grants* – matching grants to communities and civic associations to implement urban forest management plans including efforts to attain urban tree canopy goals.
- *Rural Volunteer Fire Company Grants* – matching grants to rural volunteer fire companies to purchase wildland firefighting tools and gear.
- *Wildland Fire Mitigation Grants* – matching grants to rural communities to mitigate wildland fire danger.
- *Delaware State Fire School* – funding to continue the partnership to provide wildland firefighting courses annually to volunteer firefighters and other interested individuals.
- *Education Grants* – grants to schools to develop outdoor classrooms and associated forestry curriculum (such as Project Learning Tree).

Special Projects:

The DFS will use additional S&PF funds for special projects described within the strategies, as funding permits. The DFS anticipates using approximately \$100,000 annually – given the current S&PF budget level – for S&PF special projects. These projects would include:



- *Forest Inventory Studies* – projects to further refine Delaware’s forest inventory data (GIS analysis, etc.) and work with partners to develop science-based goals for acreage totals for various forest types and restoration efforts (baldcypress and Atlantic white-cedar restoration, etc.)

- *Economic Analysis* – study to update the estimated impact of forests and the forest industry on Delaware’s economy.
- *Chesapeake Bay* – funding to assist with achieving EPA’s TMDL for the Chesapeake Bay watershed, including implementation of various forestry BMPs, such as riparian buffers, urban tree canopy expansion goals, and forested wetland restoration.
- *Invasive Species Control/Forest Health Improvement* – funding to assist with targeted efforts to remove invasive species and/or improve forest health. This program would focus on stopping infestations of new pests to Delaware/Mid-Atlantic region or eradicating isolated infestations of invasive species.

Operating Budget:

The DFS anticipates using the remaining funds for supplies, contractual services, and travel expenses related to our S&PF programs. Expenses include field equipment, office supplies, telephone service, fuel, printing and shipping, and other general expenses.

INCREASED FUNDING SCENARIOS

The DFS would use increased S&PF funding, regardless of the amount, for grant programs and additional special projects. Such increases/new projects could include:

- Funding to work with other agencies and organizations to establish long-term goals for forest types and, funding permitting, assist with restoration projects to meet these goals,
- Additional funds for the community forestry grant program, particularly within urban priority forests,
- Additional funding for grants to establish outdoor classrooms at public and private schools, and
- Further analysis of Delaware’s FIA data to develop better estimates of forest types and inventories.

Increased budgets would likely not result in additional positions, except perhaps, for casual/seasonal employees to assist with special projects (e.g., summer interns to assist with field work, GIS analysis, etc.). Establishing additional full-time positions within the DFS is very difficult because the DFS must demonstrate long-term funding (minimum of three years) for any new positions.

TRANSLATING STRATEGIES INTO ANNUAL ACTIONS

The DFS has identified 19 strategies and 78 action items to address the threats and issues and the critical rural and urban forests identified within our state assessment. Many of these strategies include timelines for completion and/or performance measures to assess progress. The DFS plans to translate the strategies to annual actions as follows:

1. DFS staff members have worked with other natural resource agencies and organizations – including NRCS, USF&WS, DNREC, and The Nature Conservancy – to develop the state strategy goals and timelines. We will continue this relationship as we develop annual actions.
2. Additionally, the DFS has not established performance measure targets for some strategies because additional work is needed with partner organizations to develop credible goals. While this issue will likely require some work each year as new strategies are developed, new data becomes available, etc., the DFS hopes to establish performance targets for all strategies within two years (June 2012).
3. Each year, DFS staff will review the strategies to determine progress-to-date (accomplishments to date for each performance measure) including any unforeseen challenges that have impeded progress, such as funding constraints, data gaps, etc.

4. Considering progress-to-date and funds available, the DFS will work with our partners to establish annual action plans based on the state strategies. For those strategies that address multi-state/regional issues, the DFS will work with the appropriate state forestry agencies to update annual action plans.
5. The DFS will then review these annual action plans with the Forest Stewardship Committee to help ensure they are consistent with the state assessment and strategy.
6. DFS staff will develop annual grant proposals, with specific timelines and performance measures, based on the annual action plans in consultation with the NE Area S&PF program staff.



MONITORING AND REPORTING

The DFS will be responsible for monitoring and reporting Delaware's annual S&PF accomplishments. The state strategy matrix, presented above, provides performance measures/accomplishment targets for most of the strategies and action items. There are some strategies that do not currently have performance measures, primarily because preliminary work is needed to establish credible goals for the items (for example, restoring and maintaining various forest types within Delaware – an acreage goal needs to be established for each forest type). The DFS will work other agencies and organizations to develop meaningful, realistic targets for these strategies; we plan to finalize all performance measures (and targets) within two years (June 2012).

To ensure accurate reporting, the DFS will monitor and update accomplishments using a database established for this purpose, including the core S&PF performance measures approved for the S&PF Redesign process. This database will be spatially linked to a GIS system thereby allowing the DFS to provide results via both spatially (maps) and descriptively (text). The maps will display accomplishments both within and outside priority forested landscapes. (There are some strategies that do not have quantitative measures; obviously spatially linked reporting is not possible for these performance measures. The DFS will provide written summaries of the progress on these strategies.) Annual results will be published, not only through reporting to the U.S. Forest Service, but also through the DFS website and the DFS annual report to the Delaware Legislature.

As with the annual action plans (previously discussed), the DFS will present the annual accomplishment report to the Forest Stewardship Committee (and other partners). The DFS will then review the accomplishments with the Committee to determine if any revisions are needed to the performance measures and/or strategies, particularly considering any changes to budget, data

availability, new technology, etc. This information will then help the DFS develop its subsequent annual action plans.

SUMMARY

The DFS, working with the Forest Stewardship Committee and other partners, identified four issues facing Delaware's forests and rural and urban forest priority areas through the State Assessment. Likewise, the DFS and its partners identified 19 strategies and 78 action items, including performance measures and accomplishment targets, to address the issues. These strategies and action items constitute an ambitious plan to protect and enhance Delaware's forests, utilizing State and Private Forestry funds, state funds, and funding from a variety of other sources. The DFS will monitor progress, address data gaps, adjust performance measures and targets, and update the assessment and strategy as necessary.

By continuing our work with partners – both public and private organizations – we can achieve the goals described within the assessment and strategy and achieve our mission: *to conserve, protect, and enhance Delaware's forests through education, management, and professional assistance.*



STATEWIDE STRATEGY STAKEHOLDER PROCESS

The Delaware Forest Service (DFS) was the agency responsible for completing Delaware's Statewide Forest Resource Strategy. The DFS, working with various stakeholders and organizations, completed the Strategy process over a two-year period. Public input was encouraged and received. An overview of the development process is presented below; for additional information please contact the DFS office.

Strategic Planning Process – The DFS developed a five-year 2009-2013 Strategic Plan during 2008. This facilitated process identified critical issues facing forestry in Delaware (as well as the DFS) and goals and objectives for addressing these critical issues. Nearly 40 people, in addition to DFS staff, representing over 25 organizations participated in the planning process. The participating organizations and representatives included:

Center for the Inland Bays
 Certified Arborist (ISA)
 Community (Urban) Forestry Council
 Consulting Forester
 Delaware Center for Horticulture
 Delaware Department of Agriculture Plant Industries
 Delaware Department of Transportation
 Delaware Division of Fish and Wildlife
 Delaware Division of Fish and Wildlife,
 Natural Heritage Program
 Delaware Division of Parks and Recreation
 Delaware Equine Council
 Delaware Forestry Association
 Delaware Nursery and Landscape Association
 Delaware State Fire School
 Delaware Tree Farm Committee
 Forest Industry Representatives
 (sawmill owner & timber buyer)
 Forest Landowner (Non-industrial private
 landowner)
 Forest Stewardship Committee
 Glatfelter Pulp Wood Company (Forest Industry)
 Governor's Council on Forestry
 Hagley Museum and Library
 Municipality Representative (City of Lewes)
 New Castle County Conservation District
 The Conservation Fund
 The Nature Conservancy
 U.S. Forest Service

U.S. Fish and Wildlife Service
 USDA Natural Resources Conservation Service
 University of Delaware Cooperative Extension
 Service

More information on the DFS Strategic Plan is at:
http://dda.delaware.gov/forestry/2010_DFS_StrategicPlanSummary.pdf

Forest Stewardship Committee – As specified within the 2007 Farm Bill, Delaware's Forest Stewardship Committee was the group that guided the DFS during the development of the Strategy. The Committee's members represent a wide variety of organizations that work with forests including: Delaware Tree Farm, Delaware Forestry Association, Delaware Division of Fish and Wildlife, Delaware Natural Heritage Program, Governor's Council on Forestry, The Nature Conservancy, USDA Natural Resources Conservation Service, U.S. Forest Service, U.S. Fish and Wildlife Service, Delaware Nature Society, Sierra Club, forest industry, and a consulting forester. The Committee met on the dates below and addressed the following issues:

September 18, 2008 – Reviewed information concerning the State Strategy (and Assessment) and discussed the path forward.

December 15, 2009 – The Committee discussed and reviewed the timeline for completing the Strategy.

March 4, 2010 – The Committee reviewed a preliminary draft of the State Strategy, specifically a list of draft strategies and action items.

May 11, 2010 – The Committee approved the final draft of the State Strategy – with the understanding that additional changes could occur, such as incorporating any additional comments and correcting typographical errors, etc. The final draft of the document was also distributed to the Committee following this meeting to afford the members an additional opportunity to review and comment.

Other Stakeholder/Organization Involvement – In addition to the Forest Stewardship Committee, the DFS solicited and received input from other organizations and incorporated information from other planning processes into the Assessment.

NRCS Technical Committee – The State Forester is a member of the NRCS Technical Committee and he provided a brief review of the Assessment and

Strategy process to the Committee at its October 14, 2009 meeting. He then provided an overview of the Strategy (and Assessment), including the issues identified and the proposed rural and urban forest priority areas at the Committee's March 10, 2010 meeting. Additionally, an e-mail was distributed to the Committee on May 17, 2010 that provided the members the web address to view the draft Strategy and the process to submit comments.

State Wildlife Action Plan – The DFS incorporated the Delaware Wildlife Action Plan (DWAP) through interaction with the Delaware Division of Fish and Wildlife, Natural Heritage Program. First, the DWAP was a layer in the GIS analysis that developed the rural forest priority area. Second, Delaware Natural Heritage Program staff, in addition to serving on the Delaware's Forest Stewardship Committee, met with the State Forester on February 22, 2010 to discuss strategies to address the DWAP. This information was then incorporated into the State Strategy.

Delaware Forestry Association (DFA) – The DFS also provided information about the Strategy to the DFA, which represents forest landowners and forest industry. In addition to updating the membership through the Association's December 2009 newsletter and Board meetings throughout 2009 and early 2010, the State Forester presented an overview of the Strategy (and Assessment) at the Association's annual meeting on March 18. Copies of the proposed strategies were also available at the annual meeting.

Additionally, the DFS e-mailed the draft Strategy to the DFA Board on April 29, 2010 for review and comment.

Other Natural Resource Organizations – In addition to the organizations previously mentioned, DFS staff met and discussed the Strategy with staff from the USDA Natural Resources Conservation (in addition to the NRCS Technical Committee Meeting), Delaware Division of Water Resources, Delaware Division of Fish and Wildlife (including Natural Heritage Program staff), Delaware Division of Soil and Water Resources (which oversees the county Conservation Districts), the U.S. Fish and Wildlife Service, The Nature Conservancy, Governor's Council on Forestry, and the Community (Urban) Forestry Council.

Public Review – Lastly, the DFS provided the public with the opportunity to review the Strategy online. The Strategy was posted from May 4 through June 4, 2010. Also, a link to the online Strategy was posted on the Delaware Forestry Association's webpage during this period.

The DFS made every effort to solicit and incorporate comments from other natural resource organizations, landowners, forest industry, nongovernment organizations, and the general public. Every comment that was received was addressed. We believe the Strategy reflects the input of numerous organizations and individuals from across the diverse forestry and natural resource spectrum.



Table 1. UTC Priority Areas.

Community	Total Area (acres)	UTC (acres)	% UTC	Population	Population Per Sq. Mile	Managing Community
Fenwick Island	322.0	17.8	5.5	342	679	
Kenton	107.2	6.6	6.2	237	1,415	
Newport	295.0	19.5	6.6	1,122	2,433	
Dewey Beach	287.7	24.8	8.6	301	669	
Smyrna	3802.6	363.6	9.6	5,679	956	
Wilmington	7555.7	927.4	12.3	72,664	6,153	Yes
Felton	425.3	53.2	12.5	784	1,179	
South Bethany	339.0	43.4	12.8	492	929	
Hartly	35.8	5.8	16.1	78	1,395	
Seaford	3235.0	624.2	19.3	6,699	1,325	
Rehoboth Beach	1050.7	209.0	19.9	1,495	910	Yes
Dover	14912.7	3053.0	20.5	32,135	1,379	Yes
Bellefonte	112.69	24.1	21.4	1,249	7,097	
Bethany Beach	753.2	167.1	22.2	903	767	
Newark	5905.9	1432.2	24.3	28,547	3,093	Yes
Elsmere	635.0	161.3	25.4	5,800	5,843	
Blades	309.0	83.9	27.2	956	1,980	



Table 2. WUI Priority Areas.

Community	Total Area (acres)	Fire Risk (acres)	% Fire Risk	Population	Population Density	Managing Community
Slaughter Beach	889.5	593.0	66.7	198	142	
Leipsic	206.8	88.1	42.6	203	628	
Bowers Beach	204.6	79.9	39.1	305	954	
Delaware City	857.4	216.6	25.3	1,453	1,084	Yes
New Castle	2203.1	401.8	18.2	4,862	1,412	
Little Creek	65.3	7.2	11.0	195	1,911	



1-800-282-8685 (Delaware Only)

Forest Service Headquarters (Dover)	302-698-4500
Forestland Preservation	302-698-4550
Urban and Community Forestry Urban Forestry Grant Program Technical Assistance	302-659-6705
Blackbird State Forest (New Castle Co.)	302-653-6505
Redden State Forest (Sussex Co.)	302-856-2893
Forest Health Specialist Insect and Disease Identification	302-698-4553
Educational Programs Smokey Bear Project Learning Tree Speakers Bureau	302-698-4551
Wildfire Protection Program Wildfire Hazard Mitigation Grants Volunteer Fire Assistance Fire Classes Fire Crew	302-698-4550
Landowner Assistance Program Forest Stewardship Planning Cost-Share Assistance Watershed Protection	302-856-2893
Community Relations Program	302-698-4552

<http://dda.delaware.gov/forestry>

