



Sub-Issue 3.4: Forest Regeneration							
Long-term Strategy	Priority Landscape Area(s)	Secondary Issues Addressed	Program Areas that Contribute	Key Stakeholders	Resources Available/ Required to Implement	Measure of Success	Supports National Objective
1. Work to identify, understand and resolve, where possible, the forest regeneration issues in the state	Statewide	1, 2, 4, 5, 7, 8, M3, M4, M5, M8	Stewardship, Conservation Education, Competitive grants, Fire, Utilization & Marketing	Landowners, land management agencies, forest products sector, wildlife and recreation communities	WVDOF staff, state and federal agencies/ NGOs, consultants, WVU Extension and Forestry staff, Research	Forest regeneration issues are well understood and measures are available to resolve any concerns that arise	1.1, 1.2, 2.1, 2.2, 3.1, 3.4, 3.5, 3.6, 3.7
Sub-Issue 3.5: Habitat Diversity and Conservation							
Long-term Strategy	Priority Landscape Area(s)	Secondary Issues Addressed	Program Areas that Contribute	Key Stakeholders	Resources Available/ Required to Implement	Measure of Success	Supports National Objective
1. Increase efforts to identify, protect, and restore high priority conservation forest ecosystems, unique native ecological communities, and other significant habitats; will include invasives control in CWPMAs	Statewide, with emphasis in the habitat diversity and conservation priority areas; will include focused efforts in the Potomac Highlands Cooperative Weed and Pest Management Area and other CWPMAs as they are established	1, 2, 4, 5, 7, M1, M3, M5, M7, M9	Stewardship, Conservation Education, Fire, Competitive grants, Forest Health, Special Programs	WVDOF, other state and federal agencies, forest landowners, NGOs	WVDOF staff, public agencies/ NGOs, consultants, Research, WVU Extension and Forestry staff, adjacent state agencies	MOUs, increased acreages protected and restored	1.1, 1.2, 2.1, 2.2, 3.1, 3.2, 3.4, 3.5, 3.6



Sub-Issue 3.5: Habitat Diversity and Conservation (cont.)							
Long-term Strategy	Priority Landscape Area(s)	Secondary Issues Addressed	Program Areas that Contribute	Key Stakeholders	Resources Available/ Required to Implement	Measure of Success	Supports National Objective
2. Participate in Fire Learning Network to better understand the importance of and uses for prescribed fire in certain types of silvicultural and ecological habitats	Statewide, when used to achieve specific silvicultural, habitat, and ecological goals	2, 5, 7, M5, M10	Stewardship, Conservation Education, Fire, Special Grants, Forest Health, Competitive grants	WVDOF, WVDNR, other state and federal agencies, NGOs, forest landowners, NWTf	WVDOF staff, public agencies/ NGOs, Research, WVU Extension and Forestry staff	Prescribed fire benefits are well understood and used to achieve specific goals when applicable	1.1, 1.2, 2.1, 3.5, 3.6, 3.7
Sub-Issue 3.6: Public Lands							
Long-term Strategy	Priority Landscape Area(s)	Secondary Issues Addressed	Program Areas that Contribute	Key Stakeholders	Resources Available/ Required to Implement	Measure of Success	Supports National Objective
1. Add to the area available to demonstrate forest management	Lands adjacent to state forests; counties west of I-79 and north of I-64 for a new state forest	1, 2, 3.1, 3.4, 3.5, 4, 7, 8, M3, M4, M5, M6, M8, M11	Forest Legacy, Competitive grants	Willing sellers of land, Forest Legacy, TNC, land trusts, the public	WVDOF staff, Governor's support/ funding from the Outdoor Heritage Conservation Fund or Forest Legacy	Add to the state forest system	1.1, 1.2, 2.2, 3.4, 3.5, 3.6, 3.7
2. Cooperate with other public agencies to achieve forest management goals	Public lands	2, 3.1, 3.4, 3.5, 4, 7, 8, M3, M4, M5, M6, M8, M11	Fire, Stewardship, Forest Health, Competitive grants	State and Federal agencies and land managers, the public	WVDOF staff/ Interagency MOUs and cooperative efforts	Active interagency projects are occurring	1.1, 1.2, 2.1, 2.2, 3.1, 3.4, 3.5, 3.6, 3.7



Sub-Issue 3.6: Public Lands (cont.)							
Long-term Strategy	Priority Landscape Area(s)	Secondary Issues Addressed	Program Areas that Contribute	Key Stakeholders	Resources Available/ Required to Implement	Measure of Success	Supports National Objective
3. Continue to update forest management plans	State forests	2.2, 2.5, 3.1, 3.4, 3.5, 4.2, 7.1, 7.2, 7.3, 7.4, 8.2, 8.3, 8.4, M3, M4, M5, M6, M8, M11	Fire, Stewardship, Conservation Education, Forest Health, Competitive grants	State and federal agencies, and the public	WVDOF staff/ Interagency MOUs and Agreements	Goal: all plans updated every 10 years; CE goals and target included by 2015	1.1, 1.2, 2.1, 2.2, 3.1, 3.4, 3.5, 3.6, 3.7
4. Maintain boundaries	State forests	2, 3, 4, 5, 7, 8, M3, M4, M5, M6, M8, M11	Fire, Competitive grants	WVDNR - Parks & Recreation, WVDNR Law Enforcement, WVDNR Land & Streams, state land managers and adjoining landowners and managers	WVDOF state land managers/ contractors, funds to pay workers, buy paint and signs	Goal: all boundaries repainted every 10 years	1.1, 1.2, 2.2, 3.4, 3.5, 3.6, 3.7
5. Invasive species control	Public land	2, 3.1, 3.4, 3.5, 4, 7, 8, M3, M4, M5, M6, M8, M11	Forest Health, Competitive grants, Conservation Education, Stewardship	Oil and gas companies, Loggers, WVDA, Invasive Species Working Group	WVDOF staff, USFS Research, CWPMA, WVU, Statewide Invasive Species Plan/ Contractors and Summer intern program, Competitive grants	Identify, prioritize, and treat areas on State Forests	1.1, 1.2, 2.2, 3.4, 3.5, 3.6, 3.7
6. Encourage natural regeneration	Public land	2, 3.1, 3.4, 3.5, 4, 7, 8, M3, M4, M5, M6, M8, M11	Forest Health, Competitive grants, Conservation Education, Stewardship	WVDNR - Wildlife, NPS, USACE, USFS, contractors and summer interns program, WVWF, Farm Bureau	WVDOF staff, USFS Research, WVU/ Competitive grants	Goal: new silvicultural prescriptions provide requirements for regeneration	1.1, 1.2, 2.1, 2.2, 3.4, 3.5, 3.6, 3.7



Sub-Issue 3.6: Public Lands (cont.)							
Long-term Strategy	Priority Landscape Area(s)	Secondary Issues Addressed	Program Areas that Contribute	Key Stakeholders	Resources Available/ Required to Implement	Measure of Success	Supports National Objective
7. Provide diverse wildlife habitat	State forests	2, 3.1, 3.4, 3.5, 4, 7, 8, M3, M4, M5, M6, M8, M11	Forest Health, Competitive grants	WVDNR - Wildlife, USFWS, State land managers/foresters, wildlife managers and biologists, NWTF, RGS, WVWF, NGOs	WVDOF staff, WVDNR/ Project funding help from NWTF, RGS, and others	Each new project provides approx. 10 percent of area specifically for wildlife	1.1, 1.2, 2.1, 2.2, 3.4, 3.5
8. Provide for RT&E species	State forests	2, 3.1, 3.4, 3.5, 4, 7, 8, M3, M4, M5, M6, M8, M11	Forest Health, Competitive grants, Stewardship	WVDNR - Wildlife, USFWS, State land managers/foresters, wildlife managers and biologists, NGOs	WVDOF staff, WVDNR, NGO input/ Competitive grants	Identify potential habitat, protect existing habitat and expand where possible	1.1, 1.2, 2.2, 3.4, 3.5



WV Issue 3 – Sustainability of Forest Resources

Sub-Issue 3.1: Growth, Yield, and Management

3.1: Long-term Strategy 1

Gather data and information from USFS Forest Inventory & Analysis on forest growth and yield so as to monitor forest conditions and trends in the state and make sound management recommendations.

Strategy Narrative

The WVDOF will work closely with the Forest Service’s Northern Research Station Forest Inventory and Analysis (FIA) unit to analyze and interpret the data they collect about the condition of the forest resource in West Virginia. This information will heavily influence the administration of the Forest Stewardship Program.

Interaction will occur with the Forest Legacy, Conservation Education, Water Quality, Fire, Forest Health, and other programs. Most notably, there will be considerable interaction with the Utilization, Marketing, and Economic Development program.

Stakeholders with a high interest in this activity will include NIPF landowners, public land management agencies, and the forest products industry.

This strategy will require personnel from state and federal agencies cooperating closely with consultants, private sector foresters, and university researchers. State funds and federal grants will be necessary to implement this strategy.

Performance Outcomes

Accurate and complete data will be available in order to make informed management recommendations and decisions.

Timeline

This is ongoing. Annual and periodic FIA updates will allow the WVDOF to monitor forest conditions and trends frequently.



3.1: Long-term Strategy 2

Accurately locate in a GIS database all NIPF lands and all “managed” forest lands in the state, including Stewardship, Tree Farm, Managed Timberland, corporate forests, public lands and others.

Strategy Narrative

The WVDOF’s GIS specialist will work with WVDOF and FIA personnel, as well as the Tree Farm Program, State Tax Department, county assessors, company foresters, and others to locate all categories of forest lands in the state. This will provide an accurate estimate of the “managed” forest acreage in the state, as well as to identify priority areas for increasing the number of acres being professionally managed.

All program areas and identified issues will benefit from this information, as will all stakeholders interested in the forests of West Virginia.

This strategy will require personnel from state and federal agencies cooperating closely with consultants, private sector foresters, and university researchers. State funds and federal grants will be necessary to implement this strategy.

Performance Outcomes

All forest lands in the state will be identified, located and placed into a GIS database. Management type will be broken down by category, as listed above, as well as those areas not being “managed.”

Timeline

The goal is to have this completed by 2015. After that, it will be easier to track changes on a regular interval, to be determined at a later date.



3.1: Long-term Strategy 3

Bring more NIPF lands into the Stewardship Program and at a faster rate. Retain these lands as “current” stewardship properties, which will require updating plans after the initial 10-year period.

Strategy Narrative

WVDOF foresters, consultants, and WVU Extension will identify ways to focus efforts on stewardship planning. The WVDOF will work closely with the USDA Forest Service to implement the new Stewardship Project which will become effective in 2011 or 2012. The WVDOF will also work closely with the Natural Resource Conservation Service (NRCS) Environmental Quality Incentives Program (EQIP) to identify ways to work together on this long-term strategy.

All program areas and identified issues will benefit from this information, as will all stakeholders interested in the forests of West Virginia.

This strategy will require personnel from state and federal agencies cooperating closely with consultants, university researchers, and other interested parties. State funds and federal grants will be necessary to implement this strategy.

Performance Outcomes

Improvement in retention rates of “stewardship plan” landowners, and an increase in the rate of new plans being prepared.

Timeline

Both performance measures above will improve by 2015.



3.1: Long-term Strategy 4

Employ the full range of cost share and financial assistance programs to enable NIPF landowners to actively manage their forests.

Strategy Narrative

WVDOR will work closely with the NRCS and its EQIP program to provide more financial assistance to NIPF landowners for forestry practices. This will benefit all forestry programs and issues in the state.

Key stakeholders will include NIPF landowners, consultants, government agencies, and other interested organizations. The WVDOR will work closely with NRCS, the USFS, and WVU Extension on this strategy.

Federal grants and state budgets will be required to fund forester involvement, while cost share/financial assistance funds must be available in order for most NIPF landowners to participate.

Performance Outcomes

An increase in the number of acres of NIPF lands having intermediate, pre-harvest, and post-harvest silvicultural treatments, as well as necessary forest health treatments.

Timeline

Acreage increases each year through 2015, when a new Assessment/Strategy will be prepared.



3.1: Long-term Strategy 5

Work more closely with Family Forest Owners (FFOs) to better understand their concerns and priorities; and also to provide them with professional forestry technical assistance and educational materials to help them meet their needs in a sound, scientific manner.

Strategy Narrative

There are an estimated 243,000 FFOs in West Virginia and about 70 percent of them own 20 acres of forest land or less. Another 30,000 FFOs own between 20 and 49 acres of forest land. The total FFO acreage in the state is estimated to be over 7 million acres. These landowners, many of whom are “new” to forest landownership, often have objectives that are different from the larger traditional forest landowners. It is imperative that we work closer with these FFOs, understand their reasons for forest landownership, and find ways to assist them in professionally managing their properties.

All WVDOF program areas, all primary issues identified in the Assessment, and most of the potential multi-state projects identified, will benefit from working closer with FFOs and more fully understanding their concerns. There is definitely a conservation education aspect that flows both ways on this topic, which will help resolve associated issues.

Many landowners do not understand how to get proper information about how and when to sell timber or to conduct a proper timber sale. Thus, they often realize a lower than fair payment for their timber and they are often faced with a poor logging operation on their property. Call Before You Cut (CBYC) is an ongoing project initiated in Ohio that strives to: 1) Encourage private landowners to contact professional foresters for advice and/or assistance with timber harvesting and forest management activities; 2) Encourage landowners to seek reputable loggers for timber sales on their property and to provide information to landowners about proper timber sales contracts.

Other key stakeholders include state and federal agencies, consultants, WVU Extension, and other interested parties. Considerable resources in terms of grants, personnel, budget, and creative ideas/new techniques will be required to begin reaching FFOs.

Performance Outcomes

Increase the number of FFO acres covered by Stewardship Plans. Explore the practicality of landscape-level plans as a way to increase the number of acres covered by Stewardship Plans for this ownership group. Begin working with the UCF program to reach some of these landowners, who are located adjacent to or near communities, especially those who own less than 20 acres of forest land. Emphasize the CBYC program so that FFOs will have access to professional foresters and certified loggers for any timber sales on their properties.

Timeline

This will be ongoing for many years.



3.1: Long-term Strategy 6

Work to ensure appropriate educational, training, and employment opportunities available to professional foresters, technicians, loggers, mills, and others, in order to adequately manage the state's forests.

Strategy Narrative

An educated and trained workforce is essential to properly manage the forests of the state. Adequate markets for products are also a necessity, in order to provide sufficient economic incentives to practice forest management.

The Conservation Education, Stewardship, and Utilization, Marketing, & Economic Development programs will need to work together to address this issue. Potential multi-state programs related to biomass, existing and non-traditional markets, the Call Before You Cut Program, and others have a role in finding solutions to issues related to this strategy.

Key stakeholders are all of the forest landowners of the state, the forest products industry, WVDOF, consultants, private industry foresters, the WVU Division of Forestry and Natural Resources, and others. Competitive grants and other funding sources will be required to fully address this issue.

Performance Outcomes

Adequate numbers of trained foresters, technicians, loggers, and mill workers will be available to assist in the management of the state's forest resources. Adequate markets will be available to sell the products which are the result of professionally and scientifically managed forests.

Timeline

Ongoing efforts will occur for training and educational opportunities, including continuing education credit courses.



Sub-Issue 3.2: Fire and Forest Health

3.2: Long-term Strategy 1

Meet annually with the Fire Program manager to identify potential efforts to reduce the negative impacts of wildfires on the state's forests.

Strategy Narrative

The quality of the state's forests is negatively impacted by wildfires. Negative impacts occur to soils, habitat, ecosystem health and vigor, tree quality, and other related items. Fewer wildfires mean a healthier forest ecosystem and more sustainable forest resources.

Wildfires occur statewide, but there are 14 "hot" counties in the southern and southwestern part of the state where wildfires occur more frequently. Special efforts will be directed toward these counties (see Issue 5). WVDOF Conservation Education, Water Quality, Fire, Forest Health, and Utilization & Marketing Programs, as well as several multi-state programs, are impacted by this sub-issue.

The entire forestry community is a key stakeholder on this issue. WVDOF, local fire departments, public agencies, large private landowners, and other cooperators must all be involved in addressing this sub-issue. State monies, federal grants, and other funding sources are required to deal with this problem.

Performance Outcomes

A reduction in the frequency of wildfires and the acreage burned.

Timeline

This is ongoing, but the WVDOF will review wildfire occurrence and acreage burned over a 5-year period to assess effectiveness.



3.2: Long-term Strategy 2

Work with the Forest Health Program to keep forest health issues under control.

Strategy Narrative

The Forest Health Program has statewide responsibilities, but the WVDOF will concentrate efforts on NIPF lands and State Forests. Managing forest health issues in such a way as to keep them under control is the WVDOF's goal, relying primarily on the West Virginia Department of Agriculture (WVDA).

All other program areas and issues, as well as several multi-state issues, are impacted by forest health problems. Primary stakeholders include all classifications of forest landowners. In addition to the WVDOF and WVDA, partners needed are USDA agencies, WVU, and others.

State budget dollars and federal grants are necessary to survey, monitor, evaluate, and treat various forest pests.

Performance Outcomes

Forest health issues remain “manageable”, with no significant increase in the range or severity of important forest pests.

Timeline

Ongoing. Periodic meetings and annual reviews will occur with the West Virginia Department of Agriculture to evaluate all forest health issues.



3.2: Long-term Strategy 3

Identify those invasive plants most likely to negatively impact the state's forests and begin control measures as they become practical.

Strategy Narrative

Non-native invasive plant occurrences are causing concern in the natural resource community. The problems or potential problems these plants are causing are not well understood at this point. At the very least, many of these plants are occupying space formerly occupied by native plants. At the very worst, they may be causing severe ecological problems on many fronts.

In this particular sub-issue strategy, the WVD OF will focus control and/or eradication efforts on NIPF lands where special habitat diversity and important ecosystems occur, as identified in Issue 3 of the Assessment. Invasive species impact or will impact almost every program and issue with which WVD OF deals. The stakeholders are many and varied, but a focus will be placed upon NIPF landowners in this strategy section. It will require a multi-agency, university, and Extension effort to formulate effective strategies to deal with this problem.

Participate in the newly formed Potomac Highlands CWPMA.

Performance Outcomes

Invasive plants remain manageable and under control.

Timeline

This effort will be ongoing. Over the next five years, and the WVD OF will need much more information on the extent of invasive species in West Virginia and their impacts, as well as better information on control measures.



Sub-Issue 3.3: Reforestation of Mined Lands and Other Lands

3.3: Long-term Strategy 1

Reforest lands affected by mining practices.

Strategy Narrative

According to some estimates, there are between 200,000 and 500,000 acres of previously mined lands in the state that are not adequately reforested. Some have reforested naturally but are not adequately stocked. Some areas are in need of replanting. Many previously mined areas have been re-vegetated with grass, apparently for erosion control. The vast majority of these areas were formerly forested.

There is a growing recognition that what has occurred on mined lands is not acceptable and that efforts should be made to reforest these former forest lands. This is true in all of the coal producing states in the Appalachian region. It will require coordinated efforts by federal and state agencies, research universities, coal companies, and others to solve this land use problem.

This particular strategy has relevance to several programs, including Stewardship, Forest Health, Conservation Education, Water Quality, Marketing & Utilization, and others. It will require federal grants, state dollars, and coal industry dollars to adequately address this problem.

Performance Outcomes

There will be a steady increase in the number of acres of previously mined lands being replanted or reforested naturally, as well as an increase in the number of acres of newly mined areas being replanted to trees rather than re-vegetated with grass.

Timeline

In the short term, the WVDOF will need more accurate information on the extent and locations of mined areas. To reforest all of these acres successfully will take several decades, if reforestation efforts continue at the current rate. According to one source at the Office of Surface Mining (OSM), approximately 3,000 - 4,000 acres of mined lands in West Virginia are reforested each year. The reforestation rate could, of course, be accelerated significantly with adequate funding.



3.3: Long-term Strategy 2

Reforest old farms and pastures, riparian areas, and other lands as opportunities arise under various state and federal programs.

Strategy Narrative

Most abandoned or reverting farm land was planted to trees throughout the 1950s, 60s, and 70s. However, there is still a need to plant such areas on an annual basis. In addition, there are riparian areas in need of planting, streambank stabilization projects, wildlife habitat plantings, and several of the 2008 Farm Bill financial assistance programs that involve tree plantings. It is the WVDOF's intention to provide an adequate number of seedlings annually to meet the requests of all landowners and agencies.

The Conservation Education, Water Quality, and other programs will also benefit from this strategy. Competitive grants, other state and federal dollars, WVDOF staff, and consultants will all be involved with this. The WVDOF's state tree nursery will be responsible for producing enough seedlings annually to meet these needs.

Performance Outcomes

More acres converted, reforested and planted with seedlings. Adequate tree seedlings are available for all areas needing tree planting and for all landowners desiring to do so.

Timeline

Annually, according to needs and requests.

3.3: Long-term Strategy 3

Maintain a viable nursery to produce seedlings compatible for planting in West Virginia.

Strategy Narrative

WVDOF will work to ensure that the Clements Nursery remains economically viable; producing enough quality seedlings each year to meet the state's planting needs. This will benefit all WVDOF programs and impact several of the multi-state projects. All categories of stakeholders interested in forestry will be involved in this. WVDOF staff, other state and federal agencies, and others will be involved at some level. It is the WVDOF's goal for the nursery operations to be self sufficient.

Performance Outcomes

Clements Nursery remains viable and produces an adequate variety, quality, and quantity of seedlings to supply most planting needs in West Virginia.

Timeline

Annually



Clements State Tree Nursery, Mason County West Virginia. (Dave Fattaleh, retired, WV Department of Commerce.



Sub-Issue 3.4: Forest Regeneration

3.4: Long-term Strategy 1

Work to identify, understand, and resolve the forest regeneration issues in the state.

Strategy Narrative

A lack of information about forest regeneration problems in the state has been identified as a significant data gap. Scientific information is needed in order to make management recommendations. Most of the supposed “forest regeneration problems” in West Virginia are anecdotal in nature. The WVDOF will need to determine the factual existence and extent of the problem, the various types of contributing factors, and then make solid management recommendations about how to resolve the issues.

All other programs and issues identified in the Assessment are in some way linked to this strategy. All sectors of the forestry, wildlife, and natural resource communities are stakeholders in this effort. It will require the full range of expertise and funding to fully understand and resolve this issue.

Performance Outcomes

Forest regeneration issues are well understood and measures are available to resolve any concerns that arise. Adequate regeneration of desirable species occurs, in most instances, to fully populate new forest stands.

Timeline

Ongoing. Conduct an overview of the problem in the first year to determine what is known, what needs to be known, what is factual, and what is not. Set priorities for gathering additional information during 2012 - 2015.



Sub-Issue 3.5: Habitat Diversity and Conservation

3.5: Long-term Strategy 1

Increase efforts to identify, protect, and restore high-priority conservation forest ecosystems, unique native ecological communities, and other significant habitats on State Forests and NIPF lands. This will include invasive species control in the Potomac Highlands Cooperative Weed and Pest Management Area (CWPMA) and any similar areas that are established in the future.

Strategy Narrative

State and federal agencies, non-governmental organizations (NGOs), universities, and other forestry entities are extremely interested in these types of projects. Recognizing the importance of this aspect of forest ecology and its role in healthy forest ecosystems is just now becoming commonly accepted by all affected parties and stakeholders.

The Forest Legacy, Fire, Conservation Education, Forest Health, Water Quality, and other programs, including potential multi-state projects, will all be involved in this issue. Grant funding, federal and state monies, cost-share activities, volunteer efforts, and other means will be involved in finding solutions and implementing strategies.

Multi-partner groups, like the current Potomac Highlands CWPMA, will be necessary to effectively solve some of the problems. That group involves state and federal agencies, private citizens, NGOs, universities and other research entities, Extension, and others.

Performance Outcomes

Indicators of performance success will include such things as: identifying all areas of ecological importance, increased acreages protected and/or restored, the number of MOU's in effect, projects undertaken, and projects completed.

Timeline

Annual progress will be monitored. The overall efforts of the strategy will be ongoing for many years to come.



3.5: Long-term Strategy 2

Participate in the Fire Learning Network to better understand prescribed fire's importance and use in certain types of silvicultural prescriptions and for certain types of ecological habitats.

Strategy Narrative

Prescribed fires, under carefully controlled and monitored conditions, can have important silvicultural, habitat diversity, and other ecological benefits. While prescribed fire has been common in other parts of the country for many years, it is somewhat new to West Virginia.

WVDOP is interested in working with public agencies, universities, NGOs, and others to begin implementing prescribed fire projects where it is determined to be beneficial. A certain degree of education and acceptance will be necessary for all parties to become fully engaged in these activities.

The Conservation Education, Fire, and Forest Health programs will be highly involved initially. Federal grants, state budgets, and other funding sources will be necessary. Research entities and Extension will have roles, as will forestry-related companies, consultants, NGOs, and private landowners.

Performance Outcomes

Prescribed fire benefits are well understood and actively used to achieve specific goals, when the situation warrants it.

Timeline

Year one – Initiate involvement.

Ongoing in future years.



Sub-Issue 3.6: Public Lands

State Forests (SFs) are the WVDOF's "public lands" priority area. According to State Code, the SFs are an important resource: for silvicultural and scientific research; developed and undeveloped outdoor recreation; propagation of forest trees; wildlife and fisheries management, aesthetic preservation; hunting and fishing; timber production; and demonstration of state-of-the-art forest management. Therefore, they should be managed on a multiple-use basis. By following these mandates, the WVDOF helps support the objectives and meet the goals of other statewide strategies.

State Forests support the sustainability of forest resources in the state, providing for forest regeneration, and habitat diversity and conservation. Demonstration areas on State Forests are educational and help improve public perceptions of forestry, as well as address future issues that will affect the WVDOF. State Forest management practices protect riparian areas. Forest health threats on State Forests are surveyed, monitored, and evaluated by the WV Department of Agriculture (WVDA). The WVDOF works with WVDA to manage and eradicate pests and educate the public regarding forest health issues on State Forests. The management of State Forests contributes to ecological services, biomass energy potential, wood products, and timber quality.

3.6: Long-term Strategy 1

Increase the area available to demonstrate forest management to the public.

Strategy Narrative

Adding to the State Forest system in either the Forest Legacy Areas, or in the north western counties of West Virginia, would provide more public land for the residents of the state. The north western region of West Virginia lacks public forest land. Any State Forest expansion into these parts of the state will require a "willing seller", funding; or possibly a land donation.

Performance Outcomes

Add to the State Forest system.

Timeline

The goal is to achieve this in the next five years.



3.6: Long-term Strategy 2

Cooperate with other agencies to achieve management goals on public lands.

Strategy Narrative

The State Lands Manager is working with other agencies on three specific working groups all dealing with forest health issues: the Gypsy Moth Working Group, the Hemlock Conservation Group and the Invasive Species Working Group; in addition, other cooperative efforts are occurring with the CWPMA, the Fire Learning Network, High Elevation Restoration Working Group, the Monongahela National Forest, and various other potential partnerships.

Performance Outcomes

The goal is to work together to maximize WVDOF efforts to protect important forest resources on public lands in West Virginia.

Timeline

Utilizing interagency MOUs, the WVDOF will strive to meet forest health management goals set by the three forest health working groups mentioned above over the next ten years, as well as increase interaction with the Monongahela National Forest over the next five years.

3.6: Long-term Strategy 3

Continue to update State Forest management plans.

Strategy Narrative

The management plans for the State Forests are considered to be active documents that are updated as needed. Updating these plans involves coordinating with other state agencies that have management responsibilities on these properties, state and federal agencies which manage similar properties, and those agencies which manage for rare, threatened and endangered species that may occur on these properties.

Performance Outcomes

These include: acres inventoried, boundary lines marked, wildlife habitat projects accomplished, timber stands marked and sold, erosion control projects completed, invasive species control



projects implemented, and other forestry and natural resource projects as identified in annual work plans. All State Forest plans will include goals and targets for interpretive projects and educational activities.

Timeline

Each State Forest plan will be revised and upgraded once every ten years. By 2015, all State Forest plans will CE goals and targets.

3.6: Long-term Strategy 4

Maintain State Forest property boundaries.

Strategy Narrative

Part of land management is designating property boundaries on the ground. This work is dependent upon having funds for materials, labor, and contractors.

Performance Outcomes

All State Forest property boundaries are painted and maintained.

Timeline

The goal is to work with adjoining landowners and other managing agencies to make sure the boundaries are freshly marked every ten years.

3.6: Long-term Strategy 5

Invasive species control.

Strategy Narrative

Invasive species control work is important to maintain native plant diversity and functioning ecosystems. Management activities on State Forests can accidentally introduce non-native invasive species (NNIS). Private contractors are often required to help control invasive species



and these contractors require funding. The WVDOF is working with other public land managers through the Invasive Species Working Group on a statewide invasive species plan.

Performance Outcomes

Identify, prioritize, and continue to treat NNIS and develop more effective ways to control NNIS on State Forests.

Timeline

Completed in the next ten years.

3.6: Long-term Strategy 6

Encourage natural regeneration.

Strategy Narrative

It is important to encourage natural regeneration on public lands. The importance of regeneration is not always clear to non-industrial private landowners and they are often lacking in knowledge about how to achieve adequate regeneration. Regeneration can also be cost prohibitive under certain circumstances for some tree species. On public lands, it is a wise investment and vital to maintaining species diversity. There are opportunities to apply these same principles to family forests; one of the purposes of State Forests is to demonstrate sound, scientific forest management.

Performance Outcomes

Each time a new silvicultural prescription is prepared for a stand on a State Forest, a portion of that project will be dedicated to creating conditions suitable for natural regeneration.

Timeline

Continuous.



3.6: Long-term Strategy 7

Provide diverse wildlife habitat.

Strategy Narrative

One of the mandates for the management of State Forests is to demonstrate sound, scientific, multiple-use management. To that end, providing diverse wildlife habitat is important. This is accomplished through working with the other land management agencies and also obtaining funding from outside sources, such as the National Wild Turkey Federation (NWTf) and the Ruffed Grouse Society (RGS). This work is primarily for early successional habitat and/or savannah development that will provide age class diversity, as well as other important habitat types and conditions.

Performance Outcomes

Ten percent of each new silvicultural project area will be managed specifically for wildlife.

Timeline

Continuous.

3.6: Long-term Strategy 8

Provide for rare, threatened and endangered species (RTE).

Strategy Narrative

The guidelines under which State Forests are managed dictate that special care will be given to the protection of existing rare, threatened, and endangered species and their required habitats. Consideration will be given to unique species and habitats when found. This is done by working with the state and federal wildlife agencies and can be funded with competitive grants.

Performance Outcomes

Identify potential habitat, protect existing habitat, and expand habitat where possible.

Timeline

Continuous.



Issue 4: Water Quality Strategy

State Issue 4: Water Quality Strategy Matrix							
Sub-Issue 4.1: Sedimentation of Streams							
Long-term Strategy	Priority Landscape Area(s)	Secondary Issues Addressed	Program Areas that Contribute	Key Stakeholders	Resources Available/ Required to Implement	Measure of Success	Supports National Objective
1. Continue to improve/enforce LSCA	Statewide	6.5, M1, M3	LSCA, UCF, CBP, Competitive grants	Private and public landowners, USDA, WVDOF, WVDEP, EPA	WVDOF staff/ Federal & State funding, Legislation	Number of valid LSCA complaints decreased	1.1, 2.2, 3.1, 3.5, 3.6
2. Assist / Support WVDEP oil and gas with reclamation issues	High priority sub-watersheds as identified	6.5, 3.3, M3, M7	LSCA	Private and Public Landowners, WVDOF, WVDEP, EPA, USDA	WVDOF staff/ Federal & State funding, Legislation	Reduction of sediment load in targeted watersheds	3.1, 3.5, 3.6
3. Support Legislation & policy that would require reforestation of surface mined lands	Statewide with an emphasis on abandoned mined lands and more recent surface mine areas	1.4, 1.5, 3.3, 6.5, M2, M3	LSCA, LOA	Public and Private Landowners, OSM, WVDEP, USDA, EPA	WVDOF staff/ Federal & State funding, Legislation	Areas successfully reforested to native forests	3.1, 3.5, 3.6
4. Reforest abandoned surface mined lands	High priority sub-watersheds as identified	1.4, 1.5, 3.3, 6.5, M2, M3	LSCA, LOA, Competitive grants	Landowners, Local citizen action groups, WV Coal Association, OSM, WVDEP, USDA, EPA	WVDOF staff/ Federal & state Funding	Areas successfully reestablished into native forests	3.1, 3.5, 3.6



Sub-Issue 4.2: Protection of Riparian Areas							
Long-term Strategy	Priority Landscape Area(s)	Secondary Issues Addressed	Program Areas that Contribute	Key Stakeholders	Resources Available/ Required to Implement	Measure of Success	Supports National Objective
1. Increase riparian planting /protection efforts	High priority sub-watersheds as identified	1.6, 3.5, 6.5, M1, M3, M5	LOA, Stewardship, Competitive grants	Landowners, FSA, Citizen action groups, NRCS, WVDA, USDA, WVCA, WVDEP, EPA	WVDOF staff/ Federal & State funding, Cost share	Stream Miles protected by Riparian cover increased	1.2, 2.2, 3.1, 3.5, 3.6
Sub-Issue 4.3: Impaired Watersheds							
Long-term Strategy	Priority Landscape Area(s)	Secondary Issues Addressed	Program Areas that Contribute	Key Stakeholders	Resources Available/ Required to Implement	Measure of Success	Supports National Objective
1. Assist WVDEP with their Nonpoint Source Program	Designated 303(d) listed watersheds	3.5, 4.1, 6.5, M1, M2, M3, M5, M7	LSCA, LOA	Landowners, Citizen action groups, WVDEP, WVDNR, WVDOF, EPA	WVDOF staff/ Federal & State Funding	Streams removed from 303(d) list	1.2, 2.2, 3.1, 3.5, 3.6
Sub-Issue 4.4: Protection of Public Drinking Water							
Long-term Strategy	Priority Landscape Area(s)	Secondary Issues Addressed	Program Areas that Contribute	Key Stakeholders	Resources Available/ Required to Implement	Measure of Success	Supports National Objective
1. Protect forested headwaters in watersheds with public intakes	Designated sub-watersheds with high numbers of public intakes	1.1, 6.5, M1, M3	LOA, LSCA, Fire, Competitive grants	Landowners, Citizen action groups, Local government, WVDEP, WVDHHR, WVDOF, EPA, USDA agencies	WVDOF staff/ Conservation easements, Federal & State funding	Increased water quality at intake point	1.2, 3.1, 3.5, 3.6



Sub-Issue 4.5: Chesapeake Bay Watershed							
Long-term Strategy	Priority Landscape Area(s)	Secondary Issues Addressed	Program Areas that Contribute	Key Stakeholders	Resources Available/ Required to Implement	Measure of Success	Supports National Objective
1. Continue support for the Chesapeake Bay Program	High priority Chesapeake Bay sub-watersheds	1.1, 1.2, 1.3, 1.4, 1.6, 2.1, 2.2, 3.5, 4.1, 4.2, 4.3, 4.4, 6.1, 6.5, M1, M5	WVDOF LOA, LSCA, Fire, Competitive grants	Landowners, Citizen action groups, Local government, WVDEP, WVCA, WVDOF, EPA, USDA agencies	WVDOF staff/ Federal & State funding, Cost share, Landowner buy-in	Stream miles improved and forested riparian acres increased.	1.1, 1.2, 2.2, 3.1, 3.5, 3.6



Good water quality is important to all West Virginian’s for a variety of reasons. Left photo: White water rafting on the New River in Fayette County, WV. Right photo: Moats Falls of the Tygart River in Barbour County, WV. (Both photos courtesy of Steve Shaluta, WV Department of Commerce).



WV Issue 4 – Water Quality

Sub-Issue 4.1: Sedimentation of Streams

4.1: Long-term Strategy 1

Continue to improve and enforce the Logging Sediment Control Act (LSCA).

Strategy Narrative

In a state with a mandatory best management practice (BMP) compliance, licensing for loggers, and a regulatory inspection system for the state's harvesting operations; West Virginia's forest industry is required to meet legislatively mandated performance standards. However, the WVDOF has reorganized the program to go above and beyond legislative requirements with positive and measurable results. The WVDOF will continue to improve and refine efforts as funding and personnel allow.

Interaction with other programs is minimal, with the WVDOF LSCA/Water Quality program bearing the majority of the inspection and enforcement workload. Fire and Landowner Assistance personnel assist as workloads allow.

Stakeholders with a high interest in this activity include landowners, public land management agencies, the forest products industry, the West Virginia Department of Environmental Protection, and the Environmental Protection Agency.

This strategy will require personnel and cooperation from state and federal agencies and an increased presence and recognition from the USDA Forest Service. The program has great potential for tracking harvesting trends and monitoring sustainability criteria, as well as the obvious water quality improvements.

Performance Outcomes

The WVDOF will monitor the number of valid complaints received and compare this to historical data going back to 1992. If this number decreases, it indicates that the WVDOF is preventing problems before they become serious enough to be noticed by the public.

Timeline

This is an ongoing, continuous program.



4.1: Long-term Strategy 2

Assist and support the West Virginia Department of Environmental Protection (WVDEP) with reclamation issues related to oil and gas exploration and extraction.

Strategy Narrative

The WVDOF's direct participation, though important, is limited in this cooperative effort, as WVDEP is tasked with regulating land clearing, construction, and reclamation activities of the oil and gas industry. The WVDOF will operate in an advisory capacity as requested by the WVDEP. BMPs which are effective on logging roads are just as effective on well access roads. With the increasing size of sites needed for horizontal drilling technologies, there may be more need for reforestation of disturbed areas.

Programmatic involvement could include the LSCA/Water Quality Program for BMP implementation and advisement, the Landowner Assistance Program for possible reforestation initiatives, and the Fire Program for property access and road utilization for fire control.

Stakeholders with a high interest in this activity include landowners, public land management agencies, and the oil and gas industry. The key to the cooperative effort will be the West Virginia Department of Environmental Protection.

This strategy will require close cooperation between the WVDEP and the WVDOF, as well as cooperation and interest from the oil and gas industry and landowners. Neglected and abandoned well access roads are a measurable contributor to the stream sedimentation loads in many areas of the state; therefore, these are key areas requiring attention.

Performance Outcomes

A reduction in sediment loads to pre-disturbance levels in targeted watersheds.

Timeline

This is an ongoing strategy for as long as oil and gas exploration and extraction activities continue.



4.1: Long-term Strategy 3

Support legislation and government policy to encourage reforestation of surface mine sites.

Strategy Narrative

Current mine reclamation regulations make it difficult to properly return mined lands to forests. Several studies have shown that once graded and compacted, reclaimed mined land is not effectively reforested, even if the compacted soil is ripped or scarified. The most effective means of reforestation is to plant in loose overburden. Although the WVDOF has no direct involvement in introducing legislative and policy changes related to mine reclamation, the WVDOF can encourage and support such actions by the agencies that do have that responsibility.

This strategy will require leadership from all programs to maintain interest, though the primary interest will be from the Water Quality and Landowner Assistance programs.

Stakeholders with a high interest in this activity will include landowners, public land management agencies, and the coal industry. The key to successful change will rest with the West Virginia Department of Environmental Protection, the Federal Office of Surface Mining Reclamation and Enforcement, and the West Virginia Coal Association.

This strategy is important to reforestation, as the loss of forest land through surface mining continues to be a very real threat in the state. Though some natural reforestation is possible, the WVDOF can greatly enhance reforestation through proper artificial regeneration applications. Unfortunately, these practices are difficult to implement due to current mine reclamation requirements.

Performance Outcomes

A change in policy and/or legislation that would require reforestation on reclaimed mined land.

Timeline

This will be an ongoing strategy until such change is implemented.



4.1: Long-term Strategy 4

Reforest abandoned surface mined lands.

Strategy Narrative

Notwithstanding the limitations of the previous strategy, there are already areas of abandoned mine land in the state that are conducive to reforestation, but lack funding to replant trees. The WVDOF could use the priority watersheds identified in the Assessment to locate abandoned mine land tracts suitable for reforestation.

As a field-oriented strategy, WVDOF will rely on both the Water Quality and Landowner Assistance programs for planning and implementation.

Stakeholders with a high interest in this activity will include landowners, various citizen action groups, conservation organizations, public land management agencies, the coal industry, the West Virginia Department of Environmental Protection, and the Federal Office of Surface Mining Reclamation and Enforcement.

This program could start almost immediately if funding was available and could have a significant impact on water quality and forest sustainability.

Performance Outcomes

An increase in the acreage of former surface mine lands returned to forest land.

Timeline

This will be an ongoing strategy, dependent upon levels of funding provided, until all qualified tracts are reforested.



Sub-Issue 4.2: Protection of Riparian Areas

4.2: Long-term Strategy 1

Increase riparian tree planting and protection efforts.

Strategy Narrative

West Virginia has a lack of flat ground suitable for development and much of what does exist is located in stream bottoms and flood plains. This has led to significant encroachment by industry and urban development into riparian areas. There are areas where agriculture or inadequate landowner knowledge have led to riparian buffer degradation or outright removal. If restored, these riparian sites can be important for improving both stream quality and habitat diversity, since riparian areas tend to be ecologically rich and diverse.

The primary programs that will be involved within the WVDOF will be the Water Quality and Landowner Assistance programs, to educate and motivate landowners and get the practices in place.

Stakeholders with a high interest in this activity will include private landowners, public land management agencies, various citizen action groups, the WVDNR, the West Virginia DEP, the USDA Forest Service, NRCS, FSA, and the Environmental Protection Agency.

Though some funding is available through cost share programs already in place, there are many high-priority areas that are not being addressed due to the reliance on volunteer work and a lack of sufficient funding. With increased and stable funding, more areas will be targeted.

Performance Outcomes

An increase in the amount of stream miles planted or restored.

Timeline

This will be an ongoing program, for as long as funding remains and there are riparian areas in need of protection.



Sub-Issue 4.3: Impaired Watersheds

4.3: Long-term Strategy 1

Assist WVDEP with their non-point source water pollution program.

Strategy Narrative

The West Virginia Department of Environmental Protection has an excellent system in place for targeting non-point source polluted streams in the state and working towards their removal from the 303(d) list of impaired streams. The WVDOF can leverage resources by cooperating with WVDEP to complement programs, rather than duplicating efforts. The WVDOF advises and plans for forestry-related issues in WVDEP high-priority sub-watersheds.

The primary programs that are involved within the WVDOF are the Water Quality and Landowner Assistance programs. These programs will educate other stakeholders and provide advice and oversight to ensure that forestry operations are properly planned and implemented for maximum return on the investment of funds and time.

Stakeholders with a high interest in this activity will include public land management agencies, land owners, various citizen action groups, and conservation organizations, WVDEP, the USDA Forest Service, and the Environmental Protection Agency.

Though some funding is currently available, there is not enough funding to meet the demands to clean up all of the impaired streams within the state. With increased funding, more areas will be targeted; priority will be given to areas where identified high-priority sub-watersheds overlap with the WVDEP's targeted sub-watersheds.

Performance Outcomes

An increase in the number of streams removed from the 303(d) list of impaired streams.

Timeline

This will be an ongoing program for as long as funding remains and there are impaired streams to target.



Sub-Issue 4.4: Protection of Public Drinking Water

4.4: Long-term Strategy 1

Protect forested headwaters in watersheds with public water intakes.

Strategy Narrative

Though this is a very broad strategy, it will be applied to very specific watershed areas. Protecting forested headwaters could incorporate any number of strategies already mentioned, such as reforestation of abandoned mine lands, increased BMP monitoring of logging operations, or seeking to develop new conservation easements to keep the land in forest. Forest management produces some of the cleanest water of any land use. The cleaner the water coming into the public intake, the cheaper and easier it is to treat for human consumption and other uses.

The primary programs that will be involved within the WVDOF are the Water Quality and Landowner Assistance Programs. These programs will educate other stakeholders and provide advice and oversight to ensure that forestry operations are properly planned and implemented for maximum return on the investment of funds and time. The Forest Legacy Program will likely purchase some conservation easements in forested headwaters, and the Fire Program will target many of these watersheds for increased fire prevention activities.

Stakeholders with a high interest in this activity include municipalities and local governments, various citizen action groups, public land management agencies, conservation organizations, WVDEP, the USDA Forest Service, the Environmental Protection Agency, and the West Virginia Department of Health and Human Resources.

Performance Outcomes

Water quality is monitored at most public intakes. Water quality parameters will be compared to past data to evaluate the effectiveness of this strategy.

Timeline

This will be an ongoing program for as long as funding remains or until it is no longer feasible to achieve further improvements in water quality.



Sub-Issue 4.5: Chesapeake Bay Watershed

4.5: Long-term Strategy 1

Continue support for the Chesapeake Bay Program.

Strategy Narrative

The key to this strategy is to increase public interest and support for the program. The Chesapeake Bay is high-priority for water quality improvement efforts. As such, significant funding is available and there is a higher-than-normal level of public awareness. Even so, there is still difficulty in finding landowners willing to participate in conservation efforts. Very high land values in the area make conservation and preservation efforts economically unattractive to many landowners.

The WVDOF's Chesapeake Bay Forester position, cooperatively funded by USFS, WVDEP and WVDOF, has made a positive impact upon the state's efforts by improving education and conservation activities in watershed tributaries. The WVDOF can continue to provide specialized forestry education and advice to cooperators and interested parties and increase awareness and interest in the program.

The primary programs that are involved within the WVDOF are the Water Quality and Landowner Assistance programs. These programs will educate other stakeholders and provide advice and oversight to ensure that forestry operations are properly planned and implemented for maximum return on the investment of funds and time. The Forest Legacy Program has significant impact by purchasing conservation easements in the area.

Stakeholders with a high interest in this activity include municipalities, local governments, various citizen action groups, public land management agencies, conservation organizations, the WVDEP, the USDA Forest Service, and the Environmental Protection Agency. The consequences of the activities affect areas outside the state, since this is part of a multi-state program.

Performance Outcomes

Performance can be evaluated by acres of land protected, and miles of streams improved by riparian restoration.

Timeline

This will be an ongoing program for as long as funding remains or until water quality impairment from non-point sources in the Chesapeake Bay watershed is reduced to an acceptable level.



Issue 5: Wildfire Management, Resource Protection, and Public Safety Strategy

State Issue 5: Wildfire Management, Resource Protection, and Public Safety Strategy Matrix							
Sub-Issue 5.1: Prevention, Preparedness, and Suppression							
Long-term Strategy	Priority Landscape Area(s)	Secondary Issues Addressed	Program Areas that Contribute	Key Stakeholders	Resources Available/ Required to Implement	Measure of Success	Supports National Objective
1a. Continue to provide timely and effective wildfire suppression services for the citizens of West Virginia. 1b. Continue to provide education and training in efforts to reduce overall fire occurrence and acres burned. 1c. Continue to provide advanced training opportunities	Statewide	2, 3, 4, 6, M5, M10	Fire, Competitive grants, Conservation Education	City, County, State, and Federal governments; Other cooperating partners, Land owners, Schools	WVDOF employees/ State and federal funds (State Fire Assistance (SFA) grants & Volunteer Fire Assistance (VFA) grants), VFDs, Other trained partners	Fewer fires and less acreage burned	1.1, 1.2, 2.1, 2.2, 3.1, 3.4, 3.5, 3.6



Sub-Issue 5.2: Southern Coal Fields "Predictive Burn Area" (14 Hot Counties)							
Long-term Strategy	Priority Landscape Area(s)	Secondary Issues Addressed	Program Areas that Contribute	Key Stakeholders	Resources Available/ Required to Implement	Measure of Success	Supports National Objective
1. Continue strong prevention, education and suppression presence in this area. Maintain investigative abilities in fire prone areas. Work with VFD's and local authorities to reduce number of fires and acres burned	14 "Hot" Counties - (Boone, Cabell, Clay, Fayette, Kanawha, Lincoln, Logan, McDowell, Mercer, Mingo, Nicholas, Raleigh, Wayne, Wyoming)	2, 3, 4, M5, M10	Fire, Competitive grants, Conservation Education	Volunteer Fire Departments, Coal companies, WVDEP; City, County, State, and Federal governments; Other cooperating partners. Schools, Land owners	WVDOF employees/ State and federal funds, VFDs, Other trained personnel	Prompt suppression efforts with decreased acres burned, and fewer fires	1.1, 1.2, 2.1, 2.2, 3.1, 3.3, 3.4, 3.5, 3.6
Sub-Issue 5.3: Mine Breaks							
Long-term Strategy	Priority Landscape Area(s)	Secondary Issues Addressed	Program Areas that Contribute	Key Stakeholders	Resources Available/ Required to Implement	Measure of Success	Supports National Objective
1. Locate, monitor, and contain exposed coal seams that are burning.	Southern coal fields, North central counties of West Virginia	3, 4, 6, M2, M10	Fire, Competitive grants	Coal companies, WVDEP; City, County, State and Federal governments; Other cooperating partners, Landowners	WVDOF staff/ State and federal funds	Work with coal companies to locate and establish control lines; reduce size and number of fires	1.2, 2.1, 2.2, 3.3



Sub-Issue 5.4: Identify Existing / New WUI Areas							
Long-term Strategy	Priority Landscape Area(s)	Secondary Issues Addressed	Program Areas that Contribute	Key Stakeholders	Resources Available/ Required to Implement	Measure of Success	Supports National Objective
1. Provide educational information and assistance to communities for development of CWPP plans; Assist with the implementation of existing plans; Expand the availability of the WUI program beyond the current Priority areas	Potomac Highlands, Eastern panhandle	1, 2, 3, 4, 6, M5, M6, M10	Fire, Competitive grants, Conservation Education, UCF, Stewardship	Homeowners associations, Community organizations, Volunteer fire departments; Local State and Federal governments; Other cooperating partners, Schools, Land owners	WVDOF staff/ State and Federal funds, Federal hazard mitigation grants,	Increased acres and communities involved in program and successful implementation of existing plans.	1.2, 2.1, 2.2, 3.2, 3.3, 3.4, 3.6
Sub-Issue 5.5: Location of Volunteer Fire Department Coverage in Forested Areas							
Long-term Strategy	Priority Landscape Area(s)	Secondary Issues Addressed	Program Areas that Contribute	Key Stakeholders	Resources Available/ Required to Implement	Measure of Success	Supports National Objective
1. Work to improve training and response capabilities of rural fire departments throughout the state	State Wide with priority on areas with less VFD presence	3, 4, 8, M10	Fire, Competitive grants	State Fire Marshal, USFS, NPS, Local State and Federal governments and Other cooperating partners, VFDs, Landowners	WVDOF staff/ Volunteer fire assistance, Funds from federal grants, Federal Excess Personal Property (FEPP)	Increase or continue cooperation with VFD's; Provide more timely and effective wildfire response; Fewer gaps in response areas	1.2, 2.1, 2.2, 3.2, 3.3, 3.4, 3.6



Sub-Issue 5.6: Wildfire Fuels / Fire Potential							
Long-term Strategy	Priority Landscape Area(s)	Secondary Issues Addressed	Program Areas that Contribute	Key Stakeholders	Resources Available/ Required to Implement	Measure of Success	Supports National Objective
1. Monitor wildland fire fuels to predict or prevent catastrophic fire activity. Locate and map potential "problem" areas	State Wide with emphasis on 14 "hot" counties, plus Putnam, Wood, Monongalia, Berkeley, and Jefferson counties	3, 7, 8, M10	Fire, Competitive grants	Local State and Federal governments; Other cooperating partners, Landowners, Agencies	WVDOF staff/ State and Federal funds	Map all high risk fire areas in the state	1.2, 2.1, 2.2, 3.2, 3.3, 3.4, 3.6, 3.7
Sub-Issue 5.7: Lack of Public Understanding of Prescribed Fire and WVDOF Participation in the "Fire Learning Network"							
Long-term Strategy	Priority Landscape Area(s)	Secondary Issues Addressed	Program Areas that Contribute	Key Stakeholders	Resources Available/ Required to Implement	Measure of Success	Supports National Objective
1. Assist and support other state and federal agencies and NGOs in prescribed fire activities; WVDOF will participate in the FLN	The Nature Conservancy Lands, USFS lands, State owned lands	2, 3, 7, 8, M10	Fire, Competitive grants, Stewardship, Conservation Education, Forest health	The Nature Conservancy, USFS, Local State and Federal governments; Other cooperating partners, Agencies	WVDOF staff/ State and Federal funds, USFS, TNC, Other agency personnel	Partnerships with TNC, USFS, Other agencies; Increased public understanding of the role of fire in ecosystem management; Plan and conduct a prescribed burn on a State Forest	1.1, 1.2, 2.1, 2.2, 3.3, 3.5, 3.6



Sub-Issue 5.8: Silvicultural Benefits of Prescribed Fire							
Long-term Strategy	Priority Landscape Area(s)	Secondary Issues Addressed	Program Areas that Contribute	Key Stakeholders	Resources Available/ Required to Implement	Measure of Success	Supports National Objective
1. Continue to assist and support other State and Federal agencies in their prescribed fire activities; Plan and conduct a prescribed burn on State Forest land	Public lands (State, Federal, TNC, WVU, etc.)	2, 3, 7, 8, M5, M10	Fire, Competitive grants, Stewardship, Conservation Education, Forest health	USFS, TNC, WVDNR Wildlife, WVU, USFWS	WVDOF staff/ State and Federal funds WVU, USFS staff and personnel, TNC	Increased cooperation with USFS, WVDNR Wildlife, TNC, on prescribed fires; Increased public understanding; Completion of a prescribed burn on a State Forest	1.1, 1.2, 2.1, 2.2, 3.3, 3.5, 3.6
Sub-Issue 5.9: Property Values in the Wildland-Urban Interface							
Long-term Strategy	Priority Landscape Area(s)	Secondary Issues Addressed	Program Areas that Contribute	Key Stakeholders	Resources Available/ Required to Implement	Measure of Success	Supports National Objective
1. Monitor and evaluate the value of damage caused by wildfires throughout the state as populations grow and land uses change	Public and private lands damaged by wildfire	1, 3, 4, 6, M5, M6, M10	Fire, Competitive grants, Stewardship, UCF	Local State and Federal governments; Other cooperating partners, Land owners	WVDOF staff/ State and Federal funds	More accurate property damage values from wildfire assessed, especially in WUI areas	1.1, 2.2, 3.3



WV Issue 5 – Wildfire Management - Resource Protection, and Public Safety

Sub-Issue 5.1: Prevention, Preparedness, and Suppression

5.1: Long-term Strategy 1

- 1a) Continue to provide timely and effective wildland fire suppression services to the citizens of West Virginia.
- 1b) Continue to provide education and training to the public in efforts to reduce overall fire occurrence and acres burned.
- 1c) Improve training opportunities for WVDOF personnel, so that they can continue to provide quality wildland fire suppression services.

Strategy Narrative

The prevention, preparedness and suppression program covers the entire state. There is the potential for wildland fires to occur in every county. The WVDOF will continue to use federal and state funds and work with federal, state and local authorities to provide the most efficient wildland fire suppression services to the citizens of the state.

Performance Outcomes

- 1) Fewer human caused wildfires, as a result of more and better fire prevention activities.
- 2) Less acreage burned, as a result of better training and more effective use of equipment and suppression tactics.

Timeline

The majority of the prevention and preparedness work takes place during the winter and summer months of the year while the bulk of the suppression activities take place during the fall (October-December) and spring (March-May). These activities are ongoing.



Sub-Issue 5.2: Southern Coal Fields "Predictive Burn Area" (14 Hot Counties)

5.2: Long-term Strategy 1

Continue strong prevention, education, and suppression presence in this area. Maintain a strong investigative presence and maintain investigative abilities in fire-prone areas. Work with VFD's and local authorities to reduce the number of fires and acres burned.

Strategy Narrative

In this 14-county area of the state, 57 percent of West Virginia's wildfires occur, as well as 95 percent of the state's total acres burned. With this amount of wildland fire activity, there will be a constant presence of WVDOF personnel. The WVDOF uses federal grant funds to help train and equip local fire agencies. The WVDOF will continue emphasis in this area in efforts to reduce the number of wildland fires and decrease the size of the fires that do occur.

Performance Outcomes

Reduce the number of fires and acres burned in this area of the state, compared to historical averages.

Timeline

Reduction in the number of fires and acres burned in this area by 2015.

Sub-Issue 5.3: Mine Breaks

5.3: Long-term Strategy 1

Continue to locate, monitor and contain burning exposed coal seams.

Strategy Narrative

In the past, grant funds have been available to treat mine breaks in efforts to reduce the number of fires and acres burned by their occurrence. Through similar means of funding and working with local mining and land companies, new and existing mine breaks need to be treated or re-treated.



Performance Outcomes

Improved working relationships with timber and coal companies in locating and establishing control lines around exposed burning coal seams. Reduce the number and size of fires caused by burning exposed coal seams.

Timeline

A reduction in the number of fires and acres burned as a result of mine breaks by 2015.

Sub-Issue 5.4: Identifying Existing and New Wildland-Urban Interface (WUI) Areas

5.4: Long-term Strategy 1

Provide educational information and assistance to communities for development of Community Wildfire Protection Plans (CWPP). Assist with the implementation of existing plans. Expand the availability of the WUI program beyond the current priority area.

Strategy Narrative

The WVDOF currently has a successful WUI/CWPP program in the eastern panhandle area of the state. As population increases and land use changes occur throughout the state, the need to expand the WUI/CWPP program to other developing areas of the state is becoming apparent.

Performance Outcomes

Increased number of communities and acres involved in the CWPP program. Increase the number of existing plans that are successfully implemented.

Timeline

Once a community shows interest in having a CWPP completed, the WVDOF will try to have a completed plan within six months. Prepare 10 new CWPP plans by 2015.



Sub-Issue 5.5: Location of Volunteer Fire Department Coverage in Forested Areas

5.5: Long-term Strategy 1

Work to improve training and response capabilities of rural / volunteer fire departments throughout the state.

Strategy Narrative

The WVDOF works closely with VFDs throughout the state to improve response capabilities. With the assistance of federal grant funds, the WVDOF is able to train VFD members and supply them with wildland firefighting clothing and equipment. This program must continue and it must expand in certain geographic areas in order to meet response time capabilities.

Performance Outcomes

Increase cooperation with VFDs and expand and increase the response capabilities in an effort to provide more timely and effective wildland fire suppression services to rural areas of the state.

Timeline

The WVDOF works with and trains VFDs during the summer and winter months when fire occurrence is limited. The availability of VFDs for training opportunities fluctuates with individual department membership and experience levels. By 2015 a significant number of VFDs and firefighters will be better trained and equipped to respond to wildfires.

Sub-Issue 5.6: Wildfire Fuels / Fire Potential

5.6: Long-term Strategy 1

Continue to monitor wildland fire fuels in an effort to predict or prevent catastrophic wildland fires. Locate and map potential high-risk areas.

Strategy Narrative

West Virginia has approximately 12 million forested acres within its boundaries. The majority of these forests are of the oak/hickory and mixed hardwood timber types. Combined with



increased timber activity throughout the state, there is potential for wildland fire to occur statewide. The WVDOF will monitor and locate areas of increased potential and areas of known higher fire occurrence, and take appropriate action.

Performance Outcomes

Continue operating the RAWS weather station network. Identify and map all potential problem areas caused by storms, insect or disease damage, and other reasons to aid in fire prevention efforts in these high risk areas.

Timeline

Monitoring of wildland fire fuels increases when the leaves and foliage begin to fall to the ground in the fall months, and when the temperatures begin to rise and the fuel moistures begin to lower in the spring months. Any significant changes in weather conditions are monitored for fire potential. High risk areas of the state will be mapped by 2015.

Sub-Issue 5.7: Lack of Public Understanding of Prescribed Fire and WVDOF Participation in the "Fire Learning Network"

5.7 Long-term Strategy 1

Assist and support cooperating state and federal agencies and non-governmental organizations (NGOs) with prescribed fire and ecosystem restoration activities. Work to improve public education activities through the Fire Learning Network.

Strategy Narrative

The WVDOF does not currently conduct prescribed burning on its properties, but will begin to consider implementing prescribed fires on State Forest land. The WVDOF will assist state and federal agencies, as well as NGOs, with their prescribed fire activities. Begin explaining the ecosystem benefits of fire in the WVDOF's public education activities, when appropriate. Wildfire and arson related problems are prevalent in certain parts of the state, and have been historically. Prevention and rapid response for suppression, as well as law enforcement actions, have been the focus of the WVDOF Fire Program for decades. Therefore, the agency must carefully consider how and where to begin implementing a prescribed burn program in West Virginia.



Performance Outcomes

Increase the cooperation and involvement with state agencies, The Nature Conservancy, and the USDA Forest Service on prescribed fires. This will help with public understanding of the role of prescribed fire in ecosystem restoration activities.

Timeline

State and federal cooperating partners conduct prescribed burns throughout the year. The WVDOF will offer assistance when possible. The WVDOF will plan and conduct at least one prescribed burn on a carefully selected State Forest location by 2015.

Sub-Issue 5.8: Silvicultural Benefits of Prescribed Fire

5.8 Long-term Strategy 1

Continue to assist and support cooperating state and federal agencies with their silviculturally related prescribed fire activities. Begin planning prescribed burns, where appropriate, on State Forest lands.

Strategy Narrative

The WVDOF does not currently practice prescribed burning on its own lands. The WVDOF will assist state and federal agencies with their silviculturally related prescribed fire activities. Identify at least one potential area on state forest lands for a prescribed burn to achieve silvicultural objectives.

Performance Outcomes

Increase the cooperation with state agencies, The Nature Conservancy, WVDNR, and the USDA Forest Service in the prescribed fire arena.

Conduct at least one silviculturally related prescribed burn plan on a State Forest.

Increase the public understanding of the role of prescribed fire to achieve certain kinds of silvicultural objectives, such as oak regeneration.



Timeline

State and federal cooperating partners conduct prescribed burns throughout the year. The WVDOF will offer assistance as requested or required. Plan and conduct a State Forest prescribed burn by 2015.

Sub-Issue 5.9: Property Values in the Wildland-Urban Interface

5.9 Long-term Strategy 1

Monitor and evaluate the property damage value and loss caused by wildland fire throughout the state as population grows and land uses change.

Strategy Narrative

The WVDOF is the primary response agency for all wildfire incidents on state and privately owned forest lands. By monitoring property values and land use changes, the WVDOF will be able to determine the value of property damage loss caused by wildfire and the expenses incurred in suppressing these fires.

Performance Outcomes

The ability to more accurately estimate the property damaged value and loss caused by wildfires and track expenses incurred in suppressing wildfires.

Timeline

Ongoing. Property values will be monitored as land usage changes and population increases.



Issue 6: Sustainability of Urban Forests Strategy

State Issue 6: Sustainability of Urban Forests Strategy Matrix							
Sub-Issue 6.1: Building Program Capacity at the Community Level							
Long-term Strategy	Priority Landscape Area(s)	Secondary Issues Addressed	Program Areas that Contribute	Key Stakeholders	Resources Available/ Required to Implement	Measure of Success	Supports National Objective
1. Target larger urbanized areas with technical and financial assistance to build successful urban forestry programs	Upper Ohio River Valley, Kanawha River Valley Upper I-79 corridor, Potomac River tributaries of the Chesapeake Bay	1.2, 2.2, 4.4, 4.5, 6.2, 6.4, 6.5, 6.6, M1, M3, M5, M6	Urban and Community Forestry, Competitive grants, Conservation Education	Municipal governments, Tree boards, Chesapeake Bay Program, USFS	WVDOF UCF staff, WVDOF Chesapeake Bay Forester/ USFS Redesign grants, WVU, WVSU	Increase in the number of larger, communities achieving 'Developing' and 'Managing' status in 'CARS'	1.1,1.2, 3.1, 3.2, 3.3, 3.4, 3.6, 3.7
Sub-Issue 6.2: Climate Change Mitigation and Energy Conservation							
Long-term Strategy	Priority Landscape Area(s)	Secondary Issues Addressed	Program Areas that Contribute	Key Stakeholders	Resources Available/ Required to Implement	Measure of Success	Supports National Objective
1. Promote urban canopy cover assessment, goal setting, and enhancement	Upper Ohio River Valley, Kanawha River Valley Upper I-79 corridor, Potomac River tributaries of the Chesapeake Bay	1.2, 4.4, 4.5, 6.1, 6.4, 6.5, 6.6, M1, M3, M5, M6	Urban and Community Forestry, Competitive grants, Forest Legacy, Conservation Education	Municipal governments, Tree boards, Chesapeake Bay Program, USFS	WVDOF staff, WVDOF GIS Specialist, WVDOF Chesapeake Bay Forester/ USFS Redesign grants, Project CommuniTree, WVU, Canaan Valley Institute	Increased canopy cover in areas with high population density and impervious surface area	1.1, 1.2, 3.1, 3.2, 3.4, 3.6, 3.7



Sub-Issue 6.3: Population Dynamics and Resource Allocation							
Long-term Strategy	Priority Landscape Area(s)	Secondary Issues Addressed	Program Areas that Contribute	Key Stakeholders	Resources Available/ Required to Implement	Measure of Success	Supports National Objective
1. Target small, rural communities with technical and financial assistance to build successful urban forestry programs.	I-79 corridor, Southern coal fields, Upper Ohio River Valley, Potomac River tributaries, Kanawha River Valley	1.2, 2.2, 4.3, 4.5, 5.4, 6.1, 6.2, 6.4, 6.5, 6.6, M1, M3, M5, M6	Urban and Community Forestry, Mountaineer Treeways, Competitive grants, Conservation Education	Community governments, Tree boards, Chesapeake Bay Program, USFS	WVDOF UCF staff, WVDOF Chesapeake Bay Forester/ USFS Redesign grants, Project CommuniTree, WVU, WVSU	Increase in the number of rural, priority communities participating in urban forestry and achieving 'Developing' status in 'CARS'	1.1, 1.2, 3.1, 3.2, 3.3, 3.4, 3.6, 3.7
Sub-Issue 6.4: Air Quality							
Long-term Strategy	Priority Landscape Area(s)	Secondary Issues Addressed	Program Areas that Contribute	Key Stakeholders	Resources Available/ Required to Implement	Measure of Success	Supports National Objective
1. Increase the capacity of trees within urban areas and surrounding forests to filter and reduce airborne pollutants	I-64 corridor, Upper Ohio River Valley, Potomac River tributaries, Upper I-79 corridor, Southern coal fields	1.1, 1.2, 3.3, 3.4, 5.1, 6.1, 6.2, 6.3, 6.5, 6.6, M1, M3, M5, M6	Urban and Community Forestry, Competitive grants, Forest Stewardship, Wildfire Management, Conservation Education, Forest Legacy	Municipal governments, Tree boards, Chemical and coal industries, Electric utilities, WVDEP, Chesapeake Bay Program, USFS	WVDOF UCF staff, WVDOF Chesapeake Bay Forester/ Industry partnerships, USFS Redesign grants, WVU, WVSU	Increase in canopy cover within urban areas and conservation of surrounding forest land buffering communities	1.1, 1.2, 2.2, 3.2, 3.4, 3.6, 3.7



Sub-Issue 6.5: Public Drinking Water Quality/Quantity							
Long-term Strategy	Priority Landscape Area(s)	Secondary Issues Addressed	Program Areas that Contribute	Key Stakeholders	Resources Available/ Required to Implement	Measure of Success	Supports National Objective
1. Enhance water quality and public benefits by increasing the ratio of tree canopy to impervious surface in urbanized areas	Potomac River tributaries, Upper Ohio River Valley, I-64 corridor, Kanawha River Valley, Upper I-79 corridor	1.2, 4.1, 4.2, 4.3, 4.4, 4.5, 6.1, 6.2, 6.3, 6.4, 6.6, M3, M5, M6, M7	Urban and Community Forestry, Competitive grants, Forest Stewardship, LSCA, Conservation Education, Forest Legacy	Municipal governments, Tree boards, Local water boards, Community watershed associations, WVDEP, WV Stream Partners Program, Chesapeake Bay Program, USFS	WVDOF UCF staff, WVDOF Chesapeake Bay Forester/ USFS Redesign grants, WV Stream Partners grants, Canaan Valley Institute, WVU, WVSU	Increase in canopy cover and permeable surface area within urbanized areas	1.1, 1.2, 2.2, 3.1, 3.4, 3.5, 3.6
Sub-Issue 6.6: Recreation							
Long-term Strategy	Priority Landscape Area(s)	Secondary Issues Addressed	Program Areas that Contribute	Key Stakeholders	Resources Available/ Required to Implement	Measure of Success	Supports National Objective
1. Promote an investment in urban recreation infrastructure and opportunities that will positively benefit climate mitigation, air quality, water quality, and quality of life	Kanawha River Valley, I-64 corridor, Upper Ohio River Valley, Potomac River tributaries, Upper I-79 corridor	1.2, 1.3, 1.4, 4.2, 4.5, 6.1, 6.2, 6.3, 6.4, 6.5, M1, M3, M5, M6	Urban and Community Forestry, Competitive grants, Forest Stewardship, Conservation Education	Municipal governments, Tree boards, Community watershed associations, WV Stream Partners Program, Chesapeake Bay Program, USFS	WVDOF UCF staff, WVDOF Chesapeake Bay Forester/ Park and Recreation Commissions, USFS Redesign grants, WV Stream Partners Grants, WVU, WVSU	Enhanced recreation opportunities in urban parks, green spaces, river parkways, pedestrian paths and bike trails	1.1, 1.2, 3.1, 3.2, 3.4, 3.5, 3.6, 3.7