



# Strategic Goal 6

## Protect and Enhance the Nation's Natural Resource Base and Environment

High-quality soils and abundant supplies of clean air and water are the essential building blocks for production agriculture and forestry, many rural economies and all life. America's soils, water supplies and range and forest ecosystems produce the raw materials for food, clothing, shelter, and energy. They also provide the settings for recreation and other activities highly valued by Americans.

USDA is the steward of 192.5 million acres of National Forests and Grasslands. USDA also provides high-quality, science-based, and site-specific technical assistance to enable good stewardship on the 1.5 billion acres of non-Federal lands in the U.S.

The Department's activities are designed to help ensure that the Nation's natural resources meet the long-term needs of a dynamic society with an increasing population.

USDA's conservation activities on public and private lands are cooperative efforts with State, Tribal and local Governments, conservation districts, non-Governmental organizations, private land managers, and local interests. In the future, USDA will increase its emphasis on cooperative conservation to achieve natural resource and environmental quality goals. This plan will ensure that natural resource use and management decisions are made by the people most affected by the decisions and most knowledgeable about local conditions.

### Strategic Result: Healthy Watersheds, High Quality Soils and Sustainable Ecosystems

#### OBJECTIVE 6.1: PROTECT WATERSHED HEALTH TO ENSURE CLEAN AND ABUNDANT WATER

A healthy watershed is one in which local individuals and organizations, and other interested stakeholders, have defined and are working toward an acceptable balance of economic growth, environmental protection

and social activities. Healthy watersheds vary widely, depending on their resource conditions and the values and management objectives of their residents. In locally led watershed planning, people within a watershed assess natural resource conditions, develop proposals and recommendations, implement solutions and measure success. Specific resource concerns that can be addressed best through a watershed approach include water quality and quantity, wetlands, and other habitat improvement issues. In the next five years, USDA will measure the success of its efforts to improve watershed health by reductions in the potential for losses of sediment and in nutrients from agricultural operations. Objectives for sediment and nutrient reduction are indicators of the general trend in managing potential agricultural challenges to water quality. As new data on the effects of conservation become available, these objectives may be replaced with more comprehensive indicators of improved watershed health. For the National Forest System, environmental health will be measured by the proportion of fully functioning watersheds.

**Key Outcome:** Clean and Abundant Water

#### Performance Measures

##### 6.1.1 Reduce potential for delivery of sediment from agricultural operations

Baseline 2003
970 million tons.
Target 2010
900 million tons.

### 6.1.2 Reduce potential for delivery of nutrients from agricultural operations

Baseline 2003
6.5 million tons of potential annual nutrient delivery from agricultural operations.
Target 2010
Reduce potential annual nutrient delivery from agricultural operations by 500,000 tons.

### 6.1.3 Percentage of inventoried National Forest System forest and grassland subwatersheds where watershed/riparian functions are on an improving trend

Baseline 2002
27 percent.
Target 2010
41 percent.

#### Actionable Strategies

- Work with State, Tribal and local governments and nongovernmental organizations to develop watershed-level plans to protect water quality, enhance water supplies, and mitigate drought and flood hazards;
- Encourage business and industry investment in conservation on private lands supporting the development of innovative, market-based approaches to improve water quality and ensure adequate water supplies;
- Help producers to comply with Federal, State and local regulatory requirements through technical, financial and educational assistance;
- Expand research that addresses the measurement, transport and fate of agricultural pollutants and the policy, social and economic aspects;
- Reduce hazardous wildland fire fuels and invasive species on priority watersheds;
- Provide information and options to mitigate adverse impacts to watersheds from air pollution and acid rain;

- Conduct watershed condition monitoring, inventories and assessments;
- Provide methods to evaluate, improve and restore riparian wildlife and aquatic habitats in forests and grassland watersheds;
- Develop analytical systems and tools to evaluate the effects of conservation practices on improving and protecting water quality;
- Provide incentives to encourage landowners to adopt these more environmentally beneficial measures; and
- Increase acres of riparian and grass buffers.

### OBJECTIVE 6.2: ENHANCE SOIL QUALITY TO MAINTAIN PRODUCTIVE WORKING CROPLAND

High-quality soils support the efficient production of crops for food, fiber and energy. They also provide for the efficient cycling of nutrients and pesticides, help sequester carbon, and contribute to improved water and air quality and wildlife habitat. Soil-quality management focuses on maximizing its function for both agricultural and environmental benefits. Intensively used soils, such as for production of annual crops, are most vulnerable to degradation and damage. By reducing erosion and increasing the organic content of soil, the quality of working cropland is improved. Two-thirds of the Nation's land belongs to farmers, ranchers and other private landowners. USDA provides technical and financial assistance to landowners and land managers to conserve, maintain and improve natural resources on the Nation's private lands. These outcomes help the Nation meet society's demand for improved environmental quality and ultimately benefit society at large.

**Key Outcome:** Enhanced Soil Quality

**Performance Measures**

**6.2.1 Working cropland managed to improve soil quality and condition**

Baseline 2001
60 percent (227 million acres) of cropland was managed under systems that maintained or increased soil condition and soil carbon.
Target 2010
70 percent (264 million acres) of cropland managed under systems that maintain or improve soil condition and increase soil carbon.

**Actionable Strategies**

- Expand the focus of technical and financial assistance to emphasize management of soil quality on working croplands;
- Develop data and analytical tools to support soil quality protection and improvement, and document the benefits of conservation practices on soil quality;
- Cooperate with other agencies and the private sector in the development of innovative technologies that enhance soil quality and sequester atmospheric carbon; and
- Facilitate market-based and cooperative conservation efforts to engage private sector participation in conservation on working cropland.

**OBJECTIVE 6.3: PROTECT FORESTS AND GRASSLANDS**

Four serious threats pose an increasing risk to the values, goods and services provided by public and private forestland and grassland. These threats are:

- Wildland fire;
- Invasive species;
- Loss of open space; and
- Unmanaged outdoor recreation.

USDA helps landowners and operators address the risks on privately owned land. Most watersheds and landscapes are a wide variety of public land managed by several Federal agencies and private, State, Tribal and local land managers. Thus, USDA must work with land stewards to protect forestland, grassland and grazing land ecosystems.

Healthy, vigorous plant communities on diverse lands protect soil quality, prevent soil erosion, and provide sustainable forage and cover for livestock and wildlife. They also provide fiber and a diverse habitat for wildlife, improve water quality and sequester carbon. Active, science-based management of vegetation is essential to maintaining such healthy, diverse, and resilient ecosystems.

**Key Outcome:** Sustainable Forest and Rangeland Ecosystems

**Performance Measures**

**6.3.1 Number and percentage of acres of hazardous fuel treated by USDA that are in the wildland-urban interface and identified as high priority through collaboration consistent with the 10-Year Comprehensive Strategy Implementation Plan**

Baseline 2002
767,367 (100 percent).
Target 2010
2,500,000 (100 percent).

**6.3.2 Number and percentage of acres of hazardous fuel treated by USDA in Condition Classes 2 or 3 in Fire Regimes 1, 2, or 3 outside wildlife-urban interface, and identified as high priority through collaboration consistent with the 10-Year Plan**

Baseline 2002
293,127 (40 percent).
Target 2010
2,500,000 (100 percent).

**6.3.3 Percentage of priority acres restored and/or protected from invasive species on Federal and Cooperative Program lands**

<b>Baseline 2002</b>
90 percent.
<b>Target 2010</b>
90 percent.

**6.3.4 Percentage of National Forest System lands covered by travel management implementation plans**

<b>Baseline 2002</b>
66 percent.
<b>Target 2010</b>
100 percent.

**6.3.5 Percentage of the Nation for which forest inventory and analysis information is current within two years and accessible to external customers**

<b>Baseline 2002</b>
77 percent.
<b>Target 2010</b>
100 percent.

**6.3.6 Acres of land adjustments to conserve the integrity of undeveloped lands and habitat quality**

<b>Baseline 2002</b>
140,519 acres.
<b>Target 2010</b>
948,000 acres.

**6.3.7 Non-Federal grazing land managed to protect and improve resource quality**

<b>Baseline 2000</b>
288 million acres of grazing land in minimal or degrading vegetative condition.
<b>Target 2010</b>
188 million acres of grazing land in minimal or degrading vegetative conditions.

**Actionable Strategies**

- Streamline procedures on fuels treatment and forest restoration projects implemented in collaboration with Federal, State, Tribal and local Governments, and the private sector;
- Control invasive species using simplified environmental analysis procedures required under the National Environmental Policy Act;
- Assist communities in reducing fragmentation of forest and grassland ecosystems;
- Maintain public access to USDA land and water, and provide management direction that is consistent with applicable forest plans;
- Implement an annualized resource inventory in all States to help monitor the condition and impact of management on the health of forest ecosystems across the U.S.;
- Provide research information and technologies to better manage forest, grazing land and grassland ecosystems;
- Reduce the rate of loss of open space through the Forest Legacy and other land-adjustment programs that support this goal;
- Participate in grass banks and other partnerships to reduce parcelization and, thus, protect the resource base;
- Work with State and private partners to offer forest owners incentives for sustainable forest management;
- Expand and strengthen partnerships with Federal, State, Tribal and local governments and nongovernmental organizations to develop collaborative strategies to address grazing land health, land fragmentation, and invasive species at watershed scales;
- Provide incentives to adopt practices that improve grazing lands condition, plant vigor and diversity, and water management;
- Accelerate development of methodology to measure and monitor grazing land health and measure and document the benefits of conservation practices on grazing land condition; and

- Work with conservation districts and others to provide educational material and associated workshops on grazing land management and invasive species control.

**OBJECTIVE 6.4: PROTECT AND ENHANCE WILDLIFE HABITAT TO BENEFIT DESIRED, AT-RISK AND DECLINING SPECIES.**

The Nation’s public and private lands provide habitat for more than 200,000 identified native species. Habitat fragmentation and loss, invasive species and declining resource quality continue to contribute to wildlife declines. Most at-risk species move between public and private lands during their life cycle. Thus, solutions must include cooperative conservation across public and private ownerships and access to USDA programs that assist landowners with restoring, improving and protecting wildlife habitat on their lands.

**Key Outcome:** Improved Wildlife Habitat Quality Supporting Desired Species and Species of Concern (At-Risk and Declining Species)

**Performance Measures**

**6.4.1 Wildlife habitat protected or improved to benefit at-risk and declining terrestrial and aquatic species on non-Federal land**

Baseline 2005
2 million acres of essential habitat improved to benefit declining and at-risk species.
Target 2010
9 million acres of essential habitat to benefit at-risk and declining species.

**6.4.2 Terrestrial and Aquatic habitat enhanced to achieve desired ecological conditions on Federal land**

Baseline 2005
2,001 miles of stream habitat enhanced.
Target 2010
2,400 miles of stream habitat enhanced.

Baseline 2002
<ul style="list-style-type: none"> <li>18,217 acres of lake habitat enhanced.</li> <li>209,427 acres of terrestrial habitat enhanced.</li> </ul>
Target 2010
<ul style="list-style-type: none"> <li>18,000 acres of lake habitat enhanced.</li> <li>225,000 acres of terrestrial habitat enhanced.</li> </ul>

**Actionable Strategies**

- Remove redundancies and streamline and improve efficiencies in interagency consultation and overall species conservation;
- Provide assistance to improve habitat for at-risk species;
- Maintain and restore critical terrestrial and aquatic habitats, and complete conservation-recovery actions for plant and animal species;
- Streamline compliance with the Migratory Bird Treaty Act;
- Focus land-retirement programs more sharply on protecting water quality and enhancing wildlife habitat;
- Assess the causes of decline of rare and at-risk species, and provide recommendations for reversing declines;
- Provide research information and technologies to better manage terrestrial and aquatic ecosystems;
- Emphasize wetland creation, restoration, enhancement, and protection to accelerate progress toward the President’s Wetlands Initiative;
- Cooperate with stakeholders in the public and private sectors to develop watershed and area-wide plans designed to restore, protect and manage wetlands;

- Facilitate the adoption of landscape-scale habitat protection plans that provide at-risk and declining species access to water, food, and shelter, as well as corridors for seasonal migration;
- Cooperate with Federal, State, Tribal and local governments and nongovernmental organizations to develop and adopt standard, science-based resource indicators to assess the condition of fish and wildlife resources; and
- Enhance technology to measure and document the benefits of conservation efforts on wetland and wildlife habitat condition.

### Key External Factors

Agricultural lands are co-mingled with urban and developing land as part of watersheds and ecosystems. Activities taking place in parts of forests, lands or watersheds outside USDA influence can work against the effects of improved management on agricultural land, so that the state of the watershed may fail to improve as expected.

Other factors include:

- The accelerated susceptibility and mortality of forest trees from drought, insects and disease;
- The introduction of new species of insects, pathogens and invasive plants into the U.S. This will increase demands on recreational growth, accelerated land parcelization and the continuing expansion of the wildland-urban interface;
- Extreme weather events, such as widespread flooding, drought, or other natural disasters, may exacerbate or expand resource problems, eliminate previous conservation gains, and may result in redirection of planned activities to provide emergency assistance;
- Rising land values and the increase in absentee landowners may cause landowners to be interested in short-term profitable uses for their land, rather than the long-term sustainability of their land and natural resources. Resulting land fragmentation poses significant challenges for protecting and sustaining soil, water, and related natural resources; and
- Landowners' ability to implement conservation practices or adopt new technology is strongly affected by their immediate economic situation and personal benefit-cost analysis of the value of conservation adoption. Increasing energy concerns are projected to have a significant effect on farm economics, which may stall conservation decision making.