

*Strategic Plan 2*  
for the U.S. National Arboretum



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# Strategic Plan 2

## for the U.S. National Arboretum

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- assess the nutritional needs of Americans,
- sustain a competitive agricultural economy,
- enhance the natural resource base and the environment, and provide economic opportunities for rural citizens, communities, and society as a whole.

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# *Contents*

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About The U.S. National Arboretum Strategic Plan	2
Identity	4
Mission	4
Values	5
Vision	6
Research	7
Gardens and Horticulture	10
Education and Public Outreach	12
Collections	16
Human Resources	18
Financial Resources	20
Safe Environment	22
Facilities	24

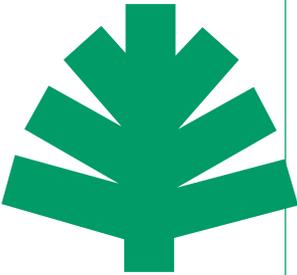
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# **About The U.S. National Arboretum Strategic Plan**

This 2003 strategic plan is based on the first U.S. National Arboretum strategic plan developed in 1995. The first plan was intended to guide programmatic development at the arboretum for 5-10 years. During that time, new challenges, technological advances, and changes in the industries and constituencies that we serve precipitated the need for a revised strategic plan.

The revision process began with a review of the original strategic plan by the arboretum's management units. Suggested changes were given to the Strategic Plan Revision Team. It was charged with drafting a new strategic plan. This new plan



was to be based on the original one, suggested revisions supplied by the management units, and projections of how the U.S. National Arboretum can best position itself in the near future to meet likely challenges. The team members were selected from each management unit to represent diverse viewpoints. The team included senior employees who were involved in the

drafting of the first plan and new employees who provided a fresh perspective. Lively and respectful discussions and debates developed the plan to its present form. This new plan is a consensus document. It is intended to be a tool that will help the arboretum in meeting the challenges and opportunities to be faced in the next 5-10 years.

The need to make the plan more comprehensive became clear during its revision. Inclusion of new suggestions coming from the management units resulted in redundancy. The review team identified a few key issues that were based on similar changes proposed separately by different management units.



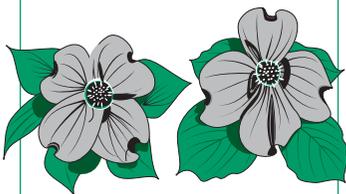
The team determined that these issues justify individual attention under separate headings. As a result, the new sections in the revised plan are: Research, Gardens and Horticulture, Education and Public Outreach, Collections, Human Resources, Financial Resources, Safe Environment, and Facilities.

Recently, boundaries between work functions have blurred and staff collaboration has increased. So all parts of this revised plan are intended to apply to the entire arboretum and not to specific management units. This is also appropriate, because all staff members contribute to the fulfillment of the arboretum's mission.

To avoid exclusion of any contributor, we do not mention most private groups and foundations specifically in this document. We do, however, mention the Friends of the National Arboretum and the National Bonsai Foundation because their missions are guided by arboretum needs. We are very fortunate to have contributors—far too extensive to be listed here—whose contributions to the U.S. National Arboretum are vital and greatly appreciated.

This strategic plan was developed to serve as a guide for strengthening and improving the U.S. National Arboretum in the next several years. It is designed to fit with the U.S. National Arboretum Master Plan and is a living and working document. It will evolve during its lifespan. To the extent possible, it should be used as a tool for future planning and program development, ensuring that it is consistent with the direction that we have chosen to take. The plan is flexible enough to allow the U.S. National Arboretum to excel in a variety of possible fiscal, organizational, and societal environments. As new and exciting opportunities and difficult challenges appear, our gifted and dedicated staff, supporters,

and volunteers will be ready to meet them. Our visions and values convey our commitment and dedication, not only to the U.S. National Arboretum, but also to serving the public and improving the environment.

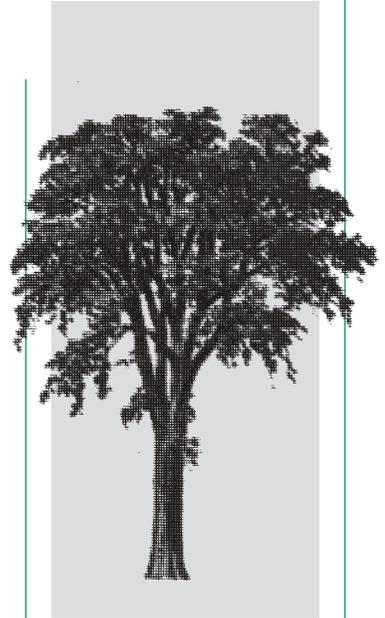


# *Strategic Plan 2*

## for the U.S. National Arboretum

### *Identity*

The U.S. National Arboretum is a U.S. Department of Agriculture research facility and living museum. We are dedicated to serving the public and improving our environment by developing and promoting improved landscape plants and new technologies through scientific research, educational programs, display gardens, and germplasm conservation. Various private sector entities, industry groups, governmental agencies, the scientific community, and other arboretums and botanical gardens partner with the arboretum to create a distinctive Federal center for these activities. The arboretum is a national center for public education that welcomes visitors in a stimulating and aesthetically pleasing environment.

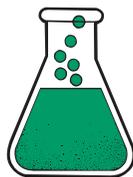
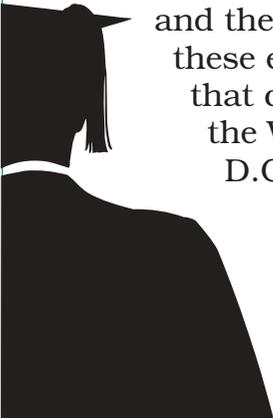


### *Mission*

The U.S. National Arboretum serves the public need for scientific research, education, and gardens that conserve and showcase plants to enhance the environment.

## Values At the U.S. National Arboretum we value—

- a commitment to sound environmental practices in relation to our research, education, plant collection management, land management, and site development.
- a highly qualified, diverse, and dedicated staff that is led with a participatory management philosophy.
- our combined emphasis on quality research and education.
- partnerships between government and private interests.
- open space, natural forests, gardens, research areas, and the balance of these elements that co-exist on the Washington, D.C., campus.
- effective programs that are supported by a sound infrastructure.
- the diverse collections of plants, books, artifacts, herbarium specimens, and other objects.
- our dedicated volunteers.
- the meaningful educational experiences that are provided to the public.
- a safe, secure work environment for employees and visitors.
- the special features and opportunities that locations in Washington, D.C., Beltsville, Maryland, and McMinville, Tennessee, provide to us.



## *Vision* We envision—

- a world-renowned center providing leadership in plant-related research, education, and display.
- a modern, state-of-the-art, technologically advanced facility.
- use of environmentally sound practices.
- an effective volunteer program and intern program.
- grants and private funding to support U.S. National Arboretum programs.
- a multicultural, well-diversified staff with nationally recognized expertise.
- a center for public education that welcomes national and international visitors with a wealth of diverse plants displayed in a stimulating and aesthetically pleasing environment.
- ease of physical access for all our visitors.
- virtual access to gardens, programs, and resources by developing and refining the U.S. National Arboretum web site.
- a strong collaborative relationship with our constituent industries and professionals to benefit the public.



## — RESEARCH —

**GOAL** To carry out a state-of-the-art, interdisciplinary research program responsive to the changing problems and priorities affecting landscape trees, shrubs, herbaceous perennials, floral plants, and turf.

### ACTION 1

Acquire germplasm and use genetic diversity to develop plants with improved horticultural characteristics including pest and disease resistance

#### Strategies

- Acquire, establish, maintain, evaluate and introduce germplasm; breed, select, and release new cultivars or improved germplasm
- Use, maintain, and enhance existing collections at the arboretum through inter-unit cooperation
- Develop improved technologies that are faster and more efficient to screen germplasm for useful characteristics
- Develop improved breeding and gene transfer methods by integrating conventional and biotechnological approaches



## ACTION 2

Develop environmentally friendly methods and technologies that improve and protect plant health

### Strategies

- Develop environmentally sound pest management strategies for crops and landscapes
- Investigate the biology and impact of pests and diseases
- Identify and develop technology for the rapid identification of pathogens
- Develop new pesticides with low toxicity

## ACTION 3

Establish a center for systematic research focusing on cultivated plants and their relatives

### Strategies

- Use the herbarium to support the needs of systematic research of cultivated plants and their relatives
- Supply accurate plant identification to the arboretum and its stakeholders
- Support national germplasm work within the Agricultural Research Service and other organizations
- Develop an extensive program on the systematics of native and cultivated woody plants integrating both conventional and molecular approaches

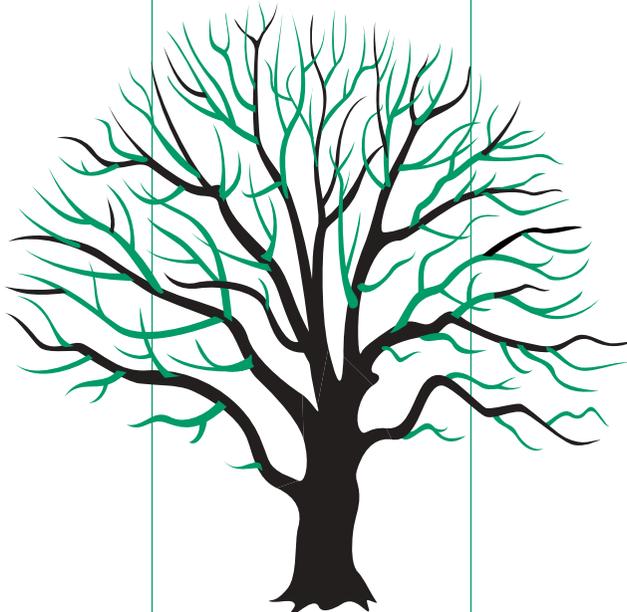


## ACTION 4

Develop research programs on plant growth, plant development, and resource management

### Strategies

- Investigate the biology of ornamental and turf crop production
- Develop environmentally sound and efficient industry production practices for the nursery and floral industries
- Develop improved methods for growing, propagating, and maintaining plant material



## — GARDENS AND HORTICULTURE —

**GOAL** To maintain, improve and develop gardens, collections, and natural areas for diverse uses.

### ACTION 1

Maintain outstanding gardens, plant collections, and public displays in an environmentally responsible and aesthetically pleasing manner

#### Strategies

- Acquire and document a wide variety of plants
- Develop management plans for individual areas that incorporate state-of-the-art, environmentally sound horticultural practices that increase overall efficiency
- Focus attention on developing integrated pest management, invasive species management, and tree care strategies for the urban landscape environment
- Use landscape architects and landscape designers in development of the arboretum grounds
- Showcase important U.S. National Arboretum plant introductions and discoveries
- Develop professional standards for maintaining gardens, collections, and displays

### ACTION 2

Define, optimize, and implement educational and research opportunities

#### Strategies

- Maximize use of unique and valuable germplasm and material with value for breeding or other research

- Design and implement gardens and other displays that demonstrate botanical and horticultural educational themes
- Involve all units in development of management plans for gardens, displays, collections, and natural areas, including principles and policies
- Identify, evaluate, and release promising plant materials

### ACTION 3

Conserve and restore natural areas, woodlands, water bodies, and meadows in balance with developed features on the Washington, D.C., campus

#### Strategies

- Maintain the balance of open space, natural forests, gardens, and research areas that coexist on the Washington, D.C., campus
- Manage remaining native woodland areas in the arboretum to maintain their natural character
- Maintain the balance between features that promote research and public understanding of plants and features that produce a pleasant, relaxing atmosphere for visitors
- Integrate low-impact best management practices for dealing with stormwater in any new construction or development; where possible, retrofit existing features to improve stormwater management practices



## — EDUCATION AND PUBLIC OUTREACH —

**GOAL** To share the results of our work and the expertise of our staff with professional plant workers and the public.

### ACTION 1

Develop and enhance educational programs associated with research activities, grounds, and living public displays

#### Strategies

- Identify our cooperators and stakeholders, assess their educational needs, evaluate existing programs, and develop a comprehensive educational plan
- Develop diverse programs to serve a variety of interests and needs
- Explore partnerships with mission-related institutions, agencies, and organizations
- Develop and continue pertinent training programs, seminars, workshops, and lectures for staff and volunteers
- Improve dissemination of information through the Internet and a variety of other media
- Involve all units in development and execution of arboretum education and outreach activities

### ACTION 2

Develop and implement a visitor information plan that provides for visitor orientation and education about the U.S. National Arboretum

#### Strategies

- Conduct on-going evaluations of programs and customer needs



- Provide necessary materials to optimize the visitors' experience at the arboretum and on the Internet
- Improve interactive communications with visitors using tours, open houses, and other means such as the Internet
- Develop a comprehensive interpretive plan

### ACTION 3

Develop and enhance the U.S. National Arboretum web site

#### **Strategies**

- Develop and implement a plan to ensure that necessary labor and technological resources are available for web site development and maintenance
- Enhance and expand general gardening information available on the web site
- Develop and implement on-line registration for programs and events
- Incorporate evocative, high-quality images in web pages wherever feasible
- Incorporate listings of plant and herbarium holdings in the arboretum web site
- Refine web page design to make pages easier to use and more attractive

## ACTION 4

Develop a comprehensive public relations plan

### Strategies

- Convey the important accomplishments of the U.S. National Arboretum and related accomplishments of the Beltsville Agricultural Research Center and the Agricultural Research Service
- Develop an Ornamental Horticulture Information Center that will provide specialized information services on ornamental plants and accomplishments of the arboretum to the public and other stakeholders
- Strengthen the working relationship with the U.S. Department of Agriculture Office of Communications, the Agricultural Research Service Information Staff, botanical gardens and arboreta, and other Federal, public, and private organizations
- Implement a plan to improve inter-unit communication

## ACTION 5

Transfer technology and plants developed by the U.S. National Arboretum to the nursery and floral industries, the academic community, and the public

### Strategies

- Prepare final reports, scientific manuscripts, articles, and other written documentation that report research findings and recommendations
- Provide scientific and horticultural advice to professionals within Federal agencies, State and local governments, academia, private laboratories, and the industry

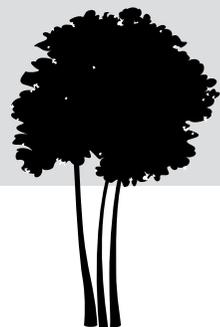
- Interact with formal and informal groups and the public
- Prepare reports and make presentations to foreign governments, other Federal agencies, industry leaders, and the academic community
- Participate at organized conferences and events

## ACTION 6

Develop and implement an information service on general ornamental horticulture and gardening

### Strategies

- Identify the information needs of the gardening public that the arboretum is best equipped to meet and determine the best media for delivery of this information
- Define the role of the arboretum library in meeting the need for ornamental horticulture and gardening information
- Determine staffing and technology needs and develop a phased plan to deploy these resources as they are obtained
- Measure the effect of this information service and develop a rationale for continued and increased support as necessary



## — COLLECTIONS —

**GOAL** To maintain collections of living plants, herbarium specimens, published literature, and other records and artifacts that document past work at the U.S. National Arboretum and provide materials to support present and future arboretum activities.

### ACTION 1

Document past and present work carried out at the U.S. National Arboretum

#### Strategies

- Complete computerization of records of all living plant collections
- Keep electronic records, herbarium specimens, and paper archives documenting important plant material grown, bred, or released by the arboretum
- Archive important records of work carried out by all arboretum units and locations
- Coordinate archiving activities with the National Agricultural Library (NAL) and National Archives and Records Administration (NARA), passing material to them for preservation when appropriate

### ACTION 2

Support present and future work carried out by plant researchers, educators, and horticulturists at the U.S. National Arboretum and other organizations with similar missions

#### Strategies

- Collect, propagate, and maintain plants necessary for breeding and other research and conserve wild and cultivated germplasm

- Collect, propagate, and grow plants to maintain attractive and diverse gardens and demonstrate botanical and horticultural educational themes
- Maintain and expand libraries necessary to support the work of all arboretum units
- Maintain and expand a diverse herbarium to provide materials for arboretum research and support accurate plant identification
- Secure and maintain collections of artifacts useful for interpreting the living collections to the public

### ACTION 3

Preserve rare, valuable, and irreplaceable materials associated with living collections

#### Strategies

- Develop secure, environmentally controlled facilities for storage of rare, valuable, and irreplaceable materials
- Curate collections using the best professional methods for preserving archived material
- Establish and implement methods for curating and cataloging various types of images
- Make collections available to staff and outside users in any way that is consistent with their long-term preservation, making full use of electronic means of virtual viewing and access
- Ensure that materials lent to the arboretum for display, research, or other purposes are carefully preserved while in our care



## — HUMAN RESOURCES —

**GOAL** Ensure adequate staffing with diverse human resources in a positive work environment.

### ACTION 1

Evaluate human resource needs; develop and implement a plan to meet them

#### Strategies

- Plan strategies for recruitment, retention, and training of staff and volunteers in collaboration with the ARS Recruitment Office and Human Resources Division
- Commit to implementing equitable incentive, recognition, and reward systems
- Provide training to broaden work skills to enable staff to adjust to changing work demands

### ACTION 2

Diversify and enrich the workforce, including interns and volunteers

#### Strategies

- Develop and implement programs to encourage minorities and the physically and mentally challenged to seek career opportunities in the plant sciences
- Identify, secure, and allocate resources that will achieve and sustain a more diverse and multicultural workforce
- Provide workforce diversity training for staff



## ACTION 3

### Foster greater inter-unit cooperation

#### Strategies

- Encourage and broaden effective in-house communication
- Integrate and coordinate, in a participatory manner, management of resources to respond to overall program needs
- Identify opportunities for collaborative efforts and implement plans to initiate collaborative projects



## — FINANCIAL RESOURCES —

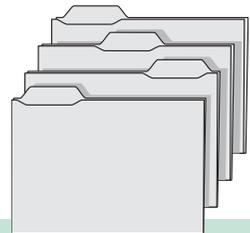
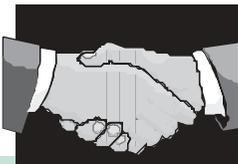
**GOAL** To secure an equitable support base for all areas through public and private funding

### ACTION 1

Develop future program initiatives to address needs within the Agricultural Research Service and the U.S. Department of Agriculture that will allow the U.S. National Arboretum to compete for initiative-based funding

#### Strategies

- Establish ongoing communication with key stakeholder and industry groups and work to bring them together with a unified voice
- Determine areas of expertise in research and technology transfer that have potential to be of benefit to stakeholders and industry groups
- Develop a phased plan of new initiatives that accounts for ongoing maintenance costs and inflation and includes an orderly timeline for implementation
- Develop a plan for mobilization of human and other resources to meet the needs of critical new initiatives



## ACTION 2

Develop a more effective and coordinated means of working with U.S. National Arboretum support groups to clarify needs and funding opportunities

### Strategies

- Publicize past and present technology transfer successes to support ongoing and future projects
- Provide a needs assessment to the Friends of the National Arboretum, the National Bonsai Foundation, and other private and public funding sources
- Establish projections of contributions that will be needed to initiate and support new program and infrastructure development at the arboretum
- Within designated ethical guidelines, develop and nurture relationships with potential donors and supporters

## ACTION 3

Secure funding for programs, activities, facilities, infrastructure improvements, and maintenance

### Strategies

- Seek increased funding for maintenance and programming as new developments and initiatives are undertaken
- Pursue direct private funding opportunities
- Secure additional modernization funding or repair and maintenance funding to improve facilities
- Identify facility and infrastructure improvements that are suitable for funding through private and public entities and provide this information to stakeholders

## — SAFE ENVIRONMENT —

**GOAL** To provide a safe and secure environment for visitors and employees.

### ACTION 1

Create a safe and secure environment for visitors

#### Strategies

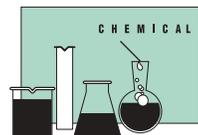
- Assess and improve security measures
- Upgrade facilities and gardens to provide safe access
- Develop and maintain an effective signage and visitor orientation program to inform visitors of safety, security, and evacuation guidelines

### ACTION 2

Create a safe and secure environment for staff and onsite cooperators

#### Strategies

- Assess and improve security measures and establish a comprehensive safety and security education program for employees
- Strengthen preventive maintenance programs for buildings, tools, equipment, and vehicles
- Review current fire detection and suppression systems and upgrade them as appropriate



### ACTION 3

Reduce the generation of hazardous waste materials and ensure that staff are aware of hazardous waste policies and procedures

#### Strategies

- Minimize hazardous waste generation by consolidating procurement and purchasing small quantities for which there is a clear and immediate need
- Continue to provide employees with comprehensive hazardous materials training
- Consolidate the handling of hazardous materials to a limited number of employees and inform all staff of the location of these materials and risks associated with them



## — FACILITIES —

**GOAL** To expand, improve, and modernize facilities to meet program needs.

### ACTION 1

Upgrade and update information technology infrastructure and software to meet current and future programmatic needs

#### Strategies

- Convert recordkeeping to electronic formats
- Evaluate internal information technology needs and implement a plan to address them with necessary staffing and equipment
- Strengthen public electronic accessibility to arboretum programs and resources

### ACTION 2

Upgrade existing facilities and improve operating procedures to reduce maintenance, conserve materials, and decrease operation and energy expenses

#### Strategies

- Identify and prioritize facility deficiencies and develop a plan to address them
- Increase energy efficiency and improve indoor air quality by replacing inefficient and obsolete heating, ventilation, and air-conditioning systems
- Evaluate, develop, and implement standard operating procedures and policies to make efficient use of utilities, vehicles, and equipment
- Automate systems whenever feasible
- Recycle and use recycled materials whenever feasible

### ACTION 3

Improve and expand facilities to meet the needs of research, education, and horticulture

#### Strategies

- Improve and develop appropriate and efficient irrigation systems and provide the expertise and resources to maintain them
- Construct state-of-the-art greenhouse and polyhouse facilities for plant propagation, production, growth, and maintenance
- Evaluate, develop, and implement an appropriate and effective stormwater management system
- Evaluate, renovate, and add—as needed—laboratories, auditorium, classrooms, offices, and spaces for exhibits, storage, and events to meet urgent and long-term program needs in support of the U.S. National Arboretum Master Plan

### ACTION 4

Provide improved facilities for U.S. National Arboretum visitors

#### Strategies

- Provide full access to public areas, where achievable, for all visitors
- Provide adequate drinking water and restroom facilities
- Provide food services and suitable eating areas
- Develop and implement a pedestrian and vehicular traffic management plan
- Develop and implement a program to market the arboretums grounds, facilities, programs, and activities



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