

Plant Materials Center	In cooperation with these National Parks
Aberdeen, ID	Craters of the Moon NM
Alderson, WV	Stones River NB
Beltsville, MD	Cumberland Gap NHP George Washington MP Great Smoky Mountains NP
Big Flats, NY	Acadia NP
Bridger, MT	Glacier NP Yellowstone NP
Cape May, NJ	Acadia NP
Corvallis, OR	Crater Lake NP Mt. Rainier NP Olympic NP
Rose Lake, MI	Apostle Islands NL Isle Royale NP.
Knox City, TX	Big Bend NP Chickasaw NRA
Lockford, CA	Sequoia and Kings Canyon National Park
Los Lunas, NM	Carlsbad Caverns NP Capulin Volcano NP Grand Canyon NP Hubbell Trading Post NHS Pipe Spring NM Zion NP
Meeker, CO	Bryce Canyon NP Dinosaur NM Grand Teton NP, Great Sand Dunes NP&P Lassen Volcanic NP Mesa Verde NP Rocky Mountain NP Yosemite NP

WHAT THE PROGRAM HAS DONE

NATIVE PLANT DEVELOPMENT

This program is developing new seed/plant technology, methodology, and sources that help meet the needs and goals of both agencies.

- Increased or tested more than 1,400 native species or ecotypes.
- Initiated more than 40 test projects to develop establishment, management, seed production, and processing techniques of grasses and forbs and the propagation of trees and shrubs.
- Developed successful propagation techniques for over 700 native species that were not commercially available.
- Produced approximately 30,000 PLS pounds of native grass/forb seed and 720,000 native tree/shrub seedlings.
- Assisted 31 National Parks under 105 separate projects with 12 Plant Materials Centers to revegetate over 4,000 acres.
- Increased the revegetation success rate and reduced the need to revegetate a second time.

TECHNOLOGY DEVELOPMENT AND TRANSFER

Technical Information has been compiled, published, and distributed to various federal state and private institutions which has assisted in reducing duplication of efforts and paved the way for interagency coordination of reclamation specifications. With the current focus on native species and eco-system-based management, this program is making a significant contribution in the area of native plant technology.

- Developed a series of computer tools (Seed Rate Calculator) and a guide (Road Revegetation Cost Estimating Guidelines) to assist with seeding rate specification and aid in standardization of specifications.
- Published a 240-page publication, "Native Plant Propagation Techniques for National Parks". This publication summarizes seed collection and propagation technology for over 200 native plant species.

- Prepared technical notes and presented papers at professional meetings and workshops.
- 750 native plant propagation protocols have been entered into the multi-agency internet website, www.nativeplantnetwork.org
- Developed a revegetation site in the NPS Inside NPS intranet website. The site provides basic How to as well as FLHP program guidelines, specifications, cost estimating and links to information sources.

NRCS PLANT MATERIALS CENTERS

The Natural Resources Conservation Service maintains 26 Plant Materials Centers throughout the United States, including Alaska and Hawaii. These centers have been developing plant materials for conservation programs since the early 1930s. Each center is located to take advantage of climate, topography, and soils in parts of two or more states (see map).

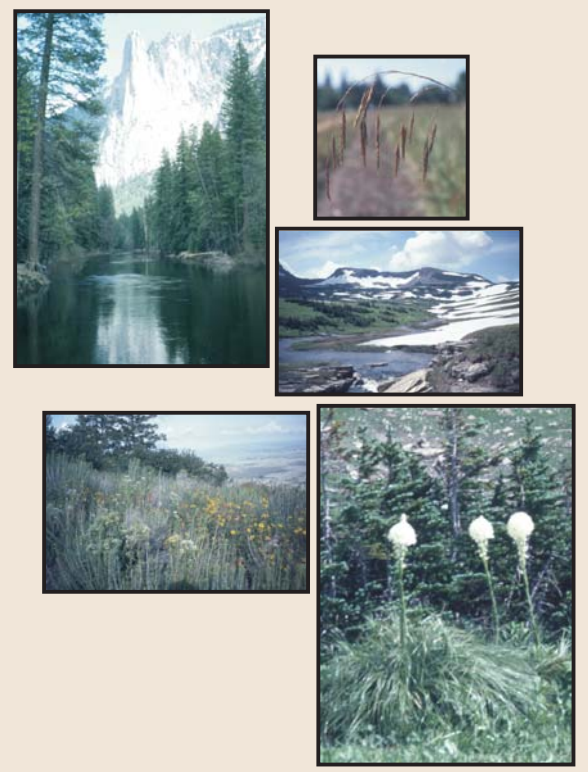
The NRCS program screens a large number of species used in revegetation work. Selected ecotypes are increased as technology develops, and seeds are made available for field-testing. High standards of seed quality and genetic integrity are guaranteed by isolating fields for each species. Computers are used to maintain accurate records on plant collections, varieties and species viability tests. Each center is equipped with seed cleaning facilities to handle a wide variety of native plants to produce high-quality, weed free seeds and transplants.

Some centers work with native threatened or endangered species that may potentially be used in various conservation programs. Eventually the centers will be able to supply plants that existed in historical settings but that are currently limited to a specific historic site.

NRCS TECHNICAL ASSISTANCE

Under the cooperative agreement the Natural Resources Conservation Service may also supply technical assistance directly to park managers. Each state NRCS office has specialists who can assist with information about adapted plants, the best seed sources, and the availability of specific species. They can also provide information about standards and specifications used on critical areas as well as seed quality standards. This expertise exchange will result in better success with NPS revegetation projects.

Native Plants for National Parks



COST-EFFECTIVE PROGRAMS FOR

- RESOURCE MANAGEMENT
- REVEGETATION WITH NATIVE PLANTS
- THREATENED OR ENDANGERED SPECIES
- HISTORICAL PLANTS

A Cooperative Program between the National Park Service, U.S. Department of the Interior and Natural Resources Conservation Service, U.S. Department of Agriculture

INTRODUCTION

Ensuring ecosystem integrity is a concern for the National Park Service (NPS). Construction, maintenance, visitor use activities and natural occurrences such as flood, earthquakes and landslides result in disturbances to soil and vegetation.

The National Park Service is also concerned with the control of invasive species; the preservation of threatened and endangered species; and using historical plant materials to perpetuate or re-create period plantings at historical sites.

In 1989, the National Park Service and the Natural Resources Conservation Service (NRCS, formerly SCS) signed a cooperative agreement to share technical expertise and to develop indigenous native plant materials for use in park revegetation programs to meet these challenges.



Sulfur flowers

HOW THE PROGRAM WORKS

The NRCS Plant Materials Program is a nationwide program that can help provide genetic strains of plant materials that are native to an individual park. By working with the Plant Materials Center located in the most appropriate climatic and topographic region, each park now has a cost-effective means for evaluating plant materials and meeting vegetation resource management needs. This cost-sharing program provides a money saving alternative to developing a plant propagation facility at each park.

Cover photos clockwise from top left: Merced River, Yosemite National Park; Columbia brome, Corvallis Plant Materials Center, Oregon; Glacier National Park; bear grass, Knife Edge Trail, Mesa Verde National Park.



Haul Road revegetation, Grand Teton National Park

To use the plant materials program, park managers will identify what plant species are needed for revegetation projects. Seeds or plants will be planted, nurtured, and reproduced for two or three growing seasons. The center will ensure that the genetic characteristics are preserved, and the plants or seeds will then be returned to the park for planting.

WHAT THE PROGRAM CAN DO FOR YOU

- Identify plant species needed.
- Collect and process native seed.
- Provide high quality custom grown container plants and field production of native forb and grass seed from site-specific collections.
- Ensure genetic integrity.
- Provide technical assistance on site preparation, plant establishment; weed control, seed collection and processing.



Big Bend National Park revegetation project



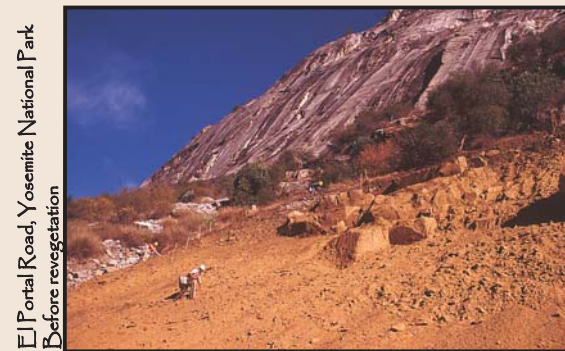
Mesa Verde Louisiana sage and yarrow, Plant Materials Center, Meeker

REQUESTING ASSISTANCE

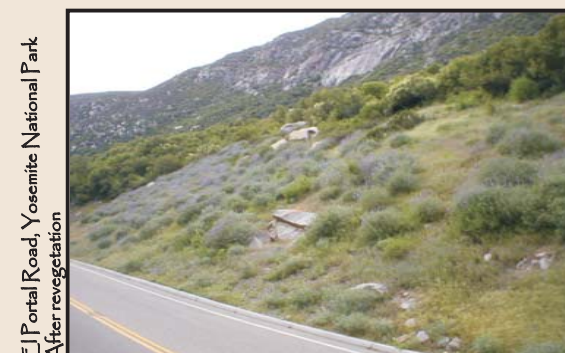
This program was originally developed to deal with projects under the Federal Lands Highway program (FLHP), which are administered by the NPS Denver Service Center (DSC). The program has since expanded to include non-FLHP projects related to native plant revegetation and restoration. To request assistance to establish a plant materials agreement, contact the DSC Technical Advisors.

NPS Technical Advisor
Denver Service Center
303-969-2292

NRCS Technical Advisor
Denver Service Center
303-969-2172



EI Portal Road, Yosemite National Park Before revegetation



EI Portal Road, Yosemite National Park After revegetation

CURRENT REVEGETATION PROJECTS

Cooperative Programs are currently underway at the following NRCS Plant Materials Centers and Parks.

- Alderson, WV Stones River NB
- Aberdeen, ID Craters of the Moon NM
- Beltsville, MD Cumberland Gap NHP
Great Smoky Mountains NP
George Washington Memorial Parkway
- Big Flats, NY Acadia NP
- Bridger, MT Yellowstone NP
Glacier NP
- Cape May, NJ Acadia NP
- Corvallis, OR Mount Rainier NP
Crater Lake NP
Olympic NP
- Knox City, TX Big Bend NP
- Lockford, CA Sequoia/Kings Canyon NP
- Los Lunas, NM Carlsbad Caverns NP
Grand Canyon NP
Hubble Trading Post NHS
Pipe Spring NM
Zion NP
- Meeker, CO Bryce Canyon NP
Dinosaur NM
Great Sand Dunes NP&P
Lassen Volcanic NP
Mesa Verde NP
Grand Teton NP
Rocky Mountain NP
Yosemite NP
- Rose Lake, MI Apostle Island NL
Isle Royale NP

Some previous projects include: Bandelier NM, Canyon Lands NP, Chickasaw NRA, Gateway NRA, Glen Canyon NRA, Lake Meredith NRA, Lava Beds NM, Natchez Trace Parkway, Petrified Forest NP, Sequoia/Kings Canyon NP, Shenandoah NP, Wupatki NM.