

National Native Plant Materials Development Program: Ensuring Options in a Changing Climate

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Desert Managers Restoration Workshop
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Science Editorial

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- Plants are essential to the survival of our planet – to its ecology, biodiversity, and climate.
- Vigorous high-quality scientific research in the plant sciences will be crucial for the world's future.
- Yet basic plant science research has struggled to take root in the U.S. ... Federal support for fundamental plant science research has been less than 2%.
- The amount awarded on a competitive basis to academic and research institutions constitutes only about 2% of extramural spending for life sciences research (\$382 million out of \$17 billion in 2005).



Level III Ecoregions of Western U.S. and BLM Management Areas



National Native Plant Materials Development Program

- History of the Program
- Need for the Program
- Funding & Leveraging Investment
- Native Plant Materials Development Process
- Partners
- Accomplishments
- Coordination with LCC's & Contacts



National Native Plant Materials Development Program

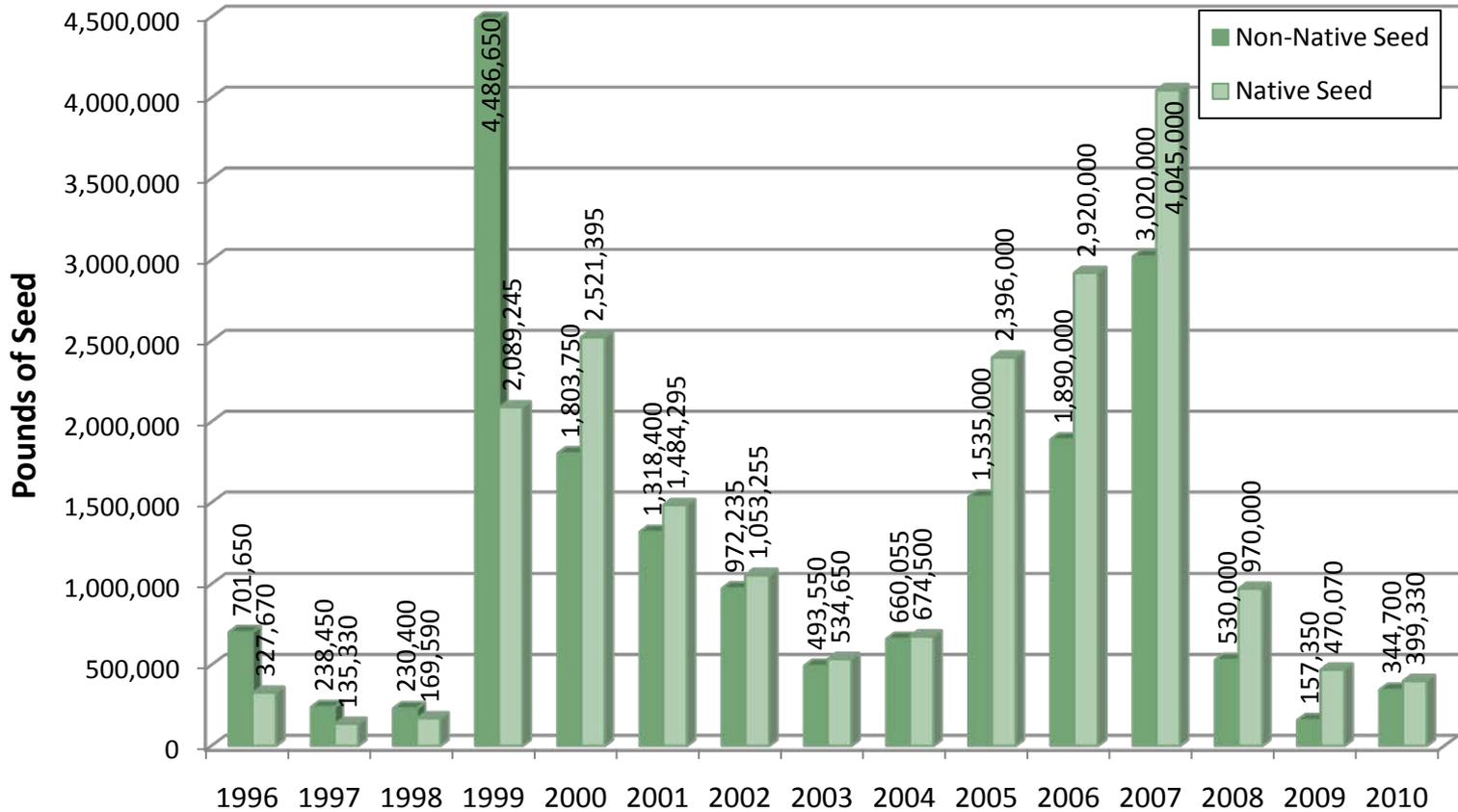


House of Representatives' FY2001 Conference Report

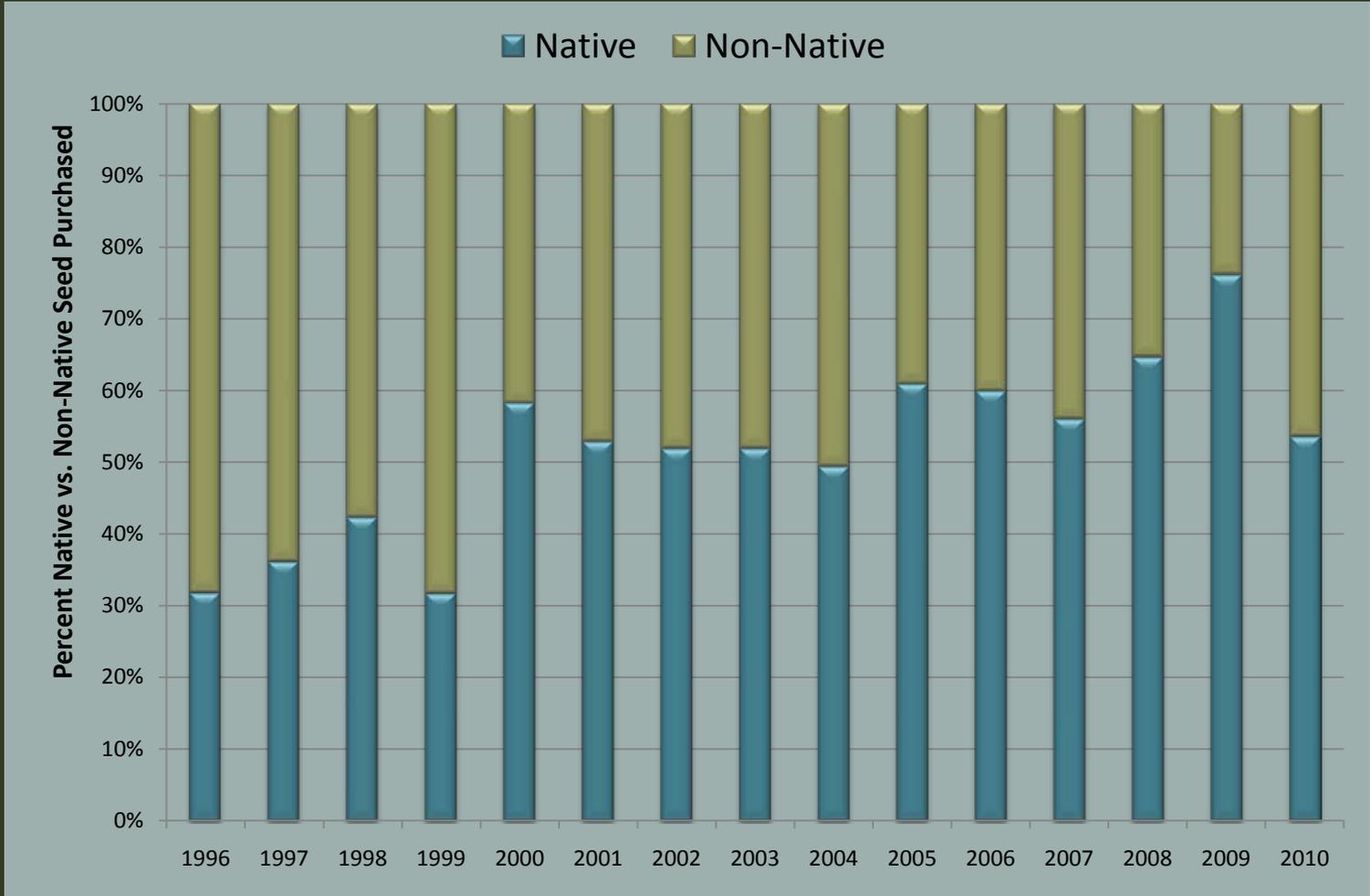
- Directs "...the agencies to develop a long-term program to manage and supply native plant materials for various Federal land management restoration and rehabilitation needs.
- Recommends "... the interagency Plant Conservation Alliance lead this effort."

Demand for Native Plant Materials

BLM Consolidated Seed Buys



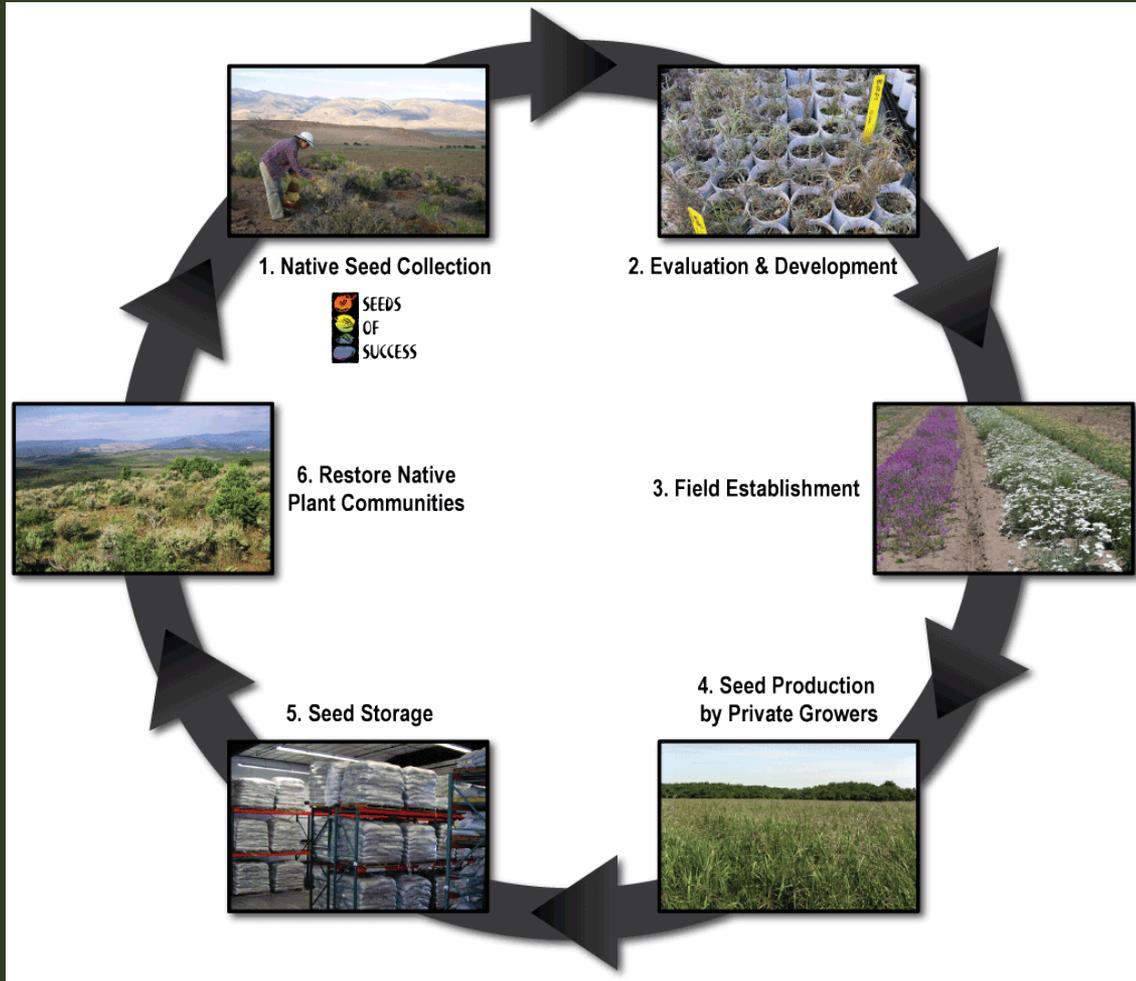
Consolidated Seed Buy



Demand for Native Plant Materials

	Native		Non-Native	
Habit	Species	Cost/Pound	Species	Cost/Pound
Grasses	<i>Hesperostipa comata</i> (needle and thread grass)	\$35.00	<i>Agropyron cristatum</i> (crested wheatgrass)	\$1.19
Forbs	<i>Lupinus sericeus</i> (silky lupine)	\$90.00	<i>Sanguisorba minor</i> (small burnet)	\$2.01
Shrubs	<i>Artemisia nova</i> (black sagebrush)	\$25.00	<i>Bassia prostrata</i> (forage kochia)	\$8.00

Native Plant Materials Development Process



Strategy for Native Seed Increase

Increase seed storage capacity to 5M lbs.

Establish ecoregional native plant materials development programs

Expand seed collection and curation to 100,000 accessions

Develop seed transfer zones for 250 species

Provide programmatic leadership & infrastructure



National Native Plant Materials Development Program Annual Funding

FY2001 - \$5.3 m

FY2006 - \$4.4 m

FY2002 - \$4.7 m

FY2007 - \$4.6 m

FY2003 - \$2.3 m

FY2008 - \$4.6 m

FY2004 - \$4.6 m

FY2009 - \$5.8 m

FY2005 - \$4.6 m

FY2010 - \$8.1 m

FY2011 - \$7.6 m

2001-2011 Total : \$56.6 million

National Native Plant Materials Development Program

Leveraged Funds (2001-2007)

Royal Botanic Gardens Kew	\$2.3m
Chicago Botanic Garden	\$2.1m
Native Seed Network	\$1.7m
Center for Plant Conservation	\$1.5m
Uncompahgre Plateau Project	\$1.4m
Lady Bird Johnson Wildflower Center	\$0.8m
PCA/NFWF Grant Program	\$1.3m
Great Basin NPSIP (20+ partners)	\$3.0m
Pacific Northwest (OR/WA)	\$1.5m

\$15 million

Partners on Native Plant Materials (over 500)

- Research Institutions 83
- Industry 118
- Federal Govt. 199
- Tribal Entities 22
- State Govt. 20
- Local Govt. 24
- Non-Profit Organizations 95
- Botanic Gardens 24



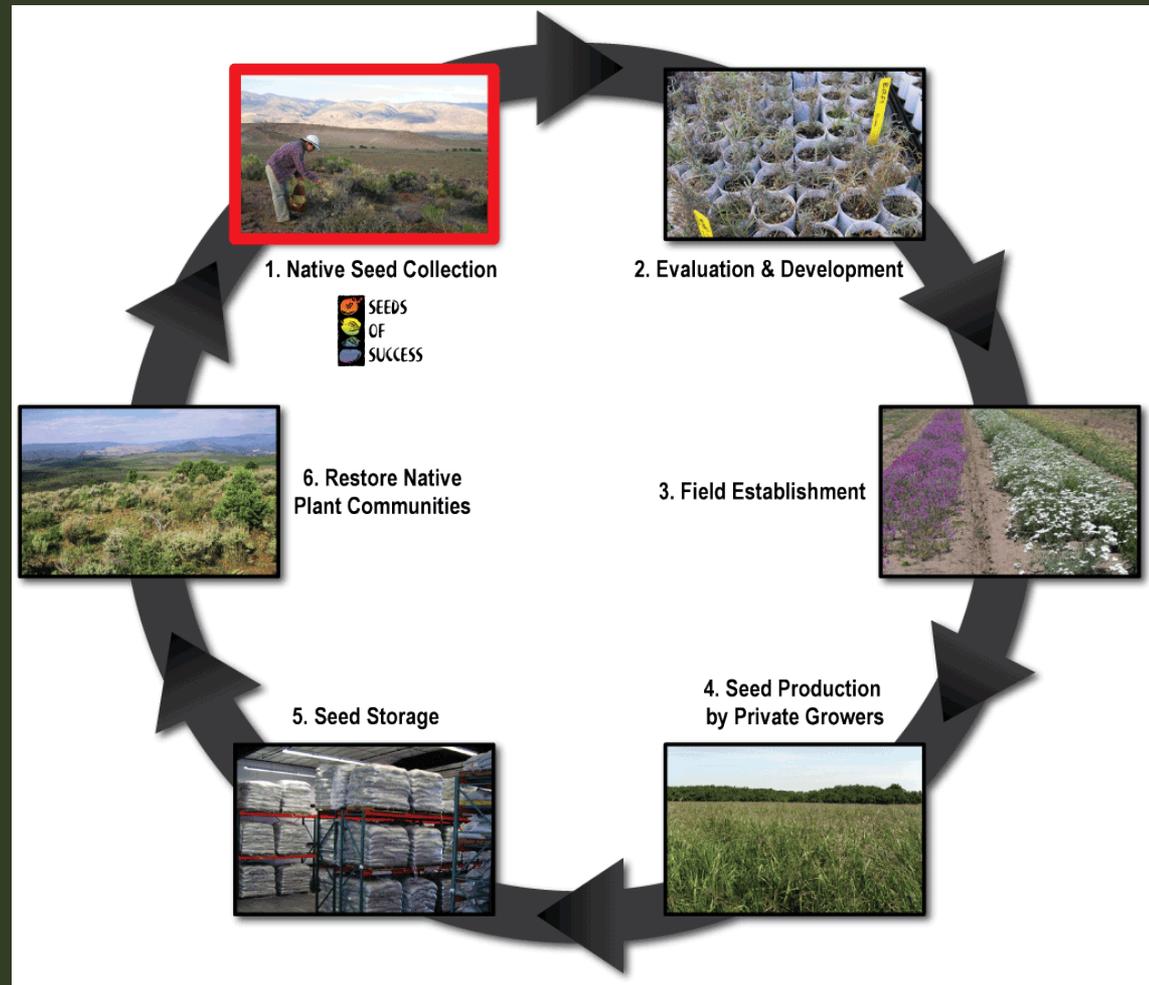
Ecoregional Native Plant Programs

- Great Basin Native Plant Selection & Increase Program
- Colorado Plateau Native Seed Program
- Pacific Northwest Native Plant Program
- California Native Plant Program
- Southwestern Deserts



Native Plant Materials Development Process

Native Seed Collection



Seeds of Success

Priority Species

Restoration Value

Early, Mid, and Late Successional
Species

Shrubs, **FORBS**, Trees, and Grasses



Eriogonum ovalifolium



Balsamorhiza sagittata



Penstemon speciosus

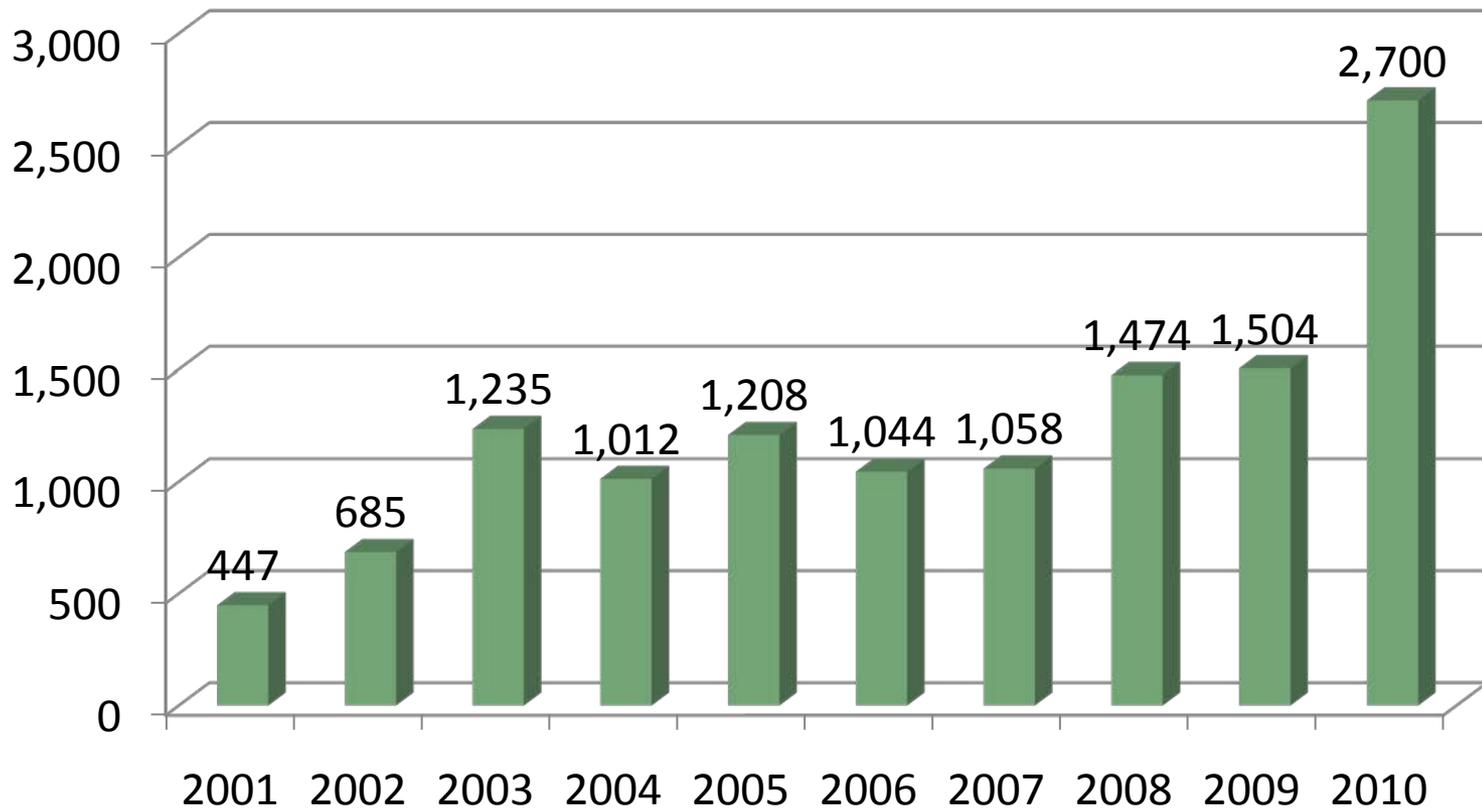
Native Plant Materials Development Program



SOS National Collection



Yearly Seed Collections



Seeds of Success

Collections



Agricultural Research Service, USDA



Bureau of Land Management, USDOl (all western states)



Department of Defense – 6 Parcels

Fish and Wildlife Service, USDOl – 11 Refuges



U.S. Forest Service, USDA – 33 Forests

Private Land



State and Local Government - 20

The Nature Conservancy – 25 Preserves

12,000+ Collections in the SOS National Collection

Seeds of Success

Working Collection



**Developing
Germination Protocols**

**Common
Garden Studies**



Accomplishments

- Provided foundation seed for 193 native species to private growers.
- Enabled commercial availability of 122 native species.
- Coordinated almost 100 seed collecting teams.
- Made over 12,000 native seed collections.
- Evaluated more than 3,327 taxa of forbs, grasses & shrubs.
- Developed 4 training courses on selecting native plants, seed collecting, seed processing and trained over 2,000 people.
- Maintain the Seeds of Success website (www.nps.gov/plants/sos).



Coordination with LCC

- Over 500 collaborators in Native Plant Materials Development Program
- 10 Federal agencies and over 275 non-federal partners in Plant Conservation Alliance www.nps.gov/plants
- Research :Genetics and Climate Change, Seed Transfer Zones, Climate Envelopes, Vulnerability Indices, Seed Production, Restoration Techniques, Pollination Studies, Inventory and Monitoring, Life Histories, Adaptation Strategies



NPMDP Ecoregional Program Contacts

LCC	NPMD Ecoregional Program Contacts	Email Address	Phone
- Alaska	-Paul Krabacher	Paul_krabacher@blm.gov	907-271-3266
-North Pacific	-Mark Mousseaux	Mark_mousseaux@blm.gov	503-808-6048
- California	-Christina Lund	Christina_lund@blm.gov	916-978-4638
-Southern Rockies	-Dr. Wayne Padgett -Dr. Troy Wood	Wayne_padgett@blm.gov twood@usgs.gov	801-539-4076 928-523-7704
-Great Basin	- Dr. Nancy Shaw	nshaw@fs.fed.us	208-373-4360
-Great Northern	-Dr. Roger Rosentreter -Dr. Adrienne Pilmanis	Roger_rosentreter@blm.gov Adrienne_pilmanis@blm.gov	208-373-3824 307-775-6042
-Deserts	-Mike Howard -Christina Lund -Fred Edwards - Tim Hughes	Mike_howard@blm.gov Christina_lund@blm.gov Fred_Edwards@blm.gov Tim_Hughes@blm.gov	575-525-4348 916-978-4638 702-515-5022

Seeds of Success Partners



LCC	Contacts	Email	Phone
<ul style="list-style-type: none"> - Upper Midwest and Great Lakes - Eastern Tallgrass Prairie and Big Rivers 	<ul style="list-style-type: none"> - Dr. Kay Havens Chicago Botanic Garden 	khavens@chicagobotanic.org	847-835-8378
<ul style="list-style-type: none"> - North Atlantic 	<ul style="list-style-type: none"> - Bill Brumbeck NE Wild Flower Society - Dr. Ed Toth NYC Dept. of Parks and Rec. 	bbrumback@newfs.org Edward.Toth@Parks.nyc.gov	508-877-7630 x 3201 718-370-9044
<ul style="list-style-type: none"> - South Atlantic - Appalachian 	<ul style="list-style-type: none"> - Dr. Peter White University of North Carolina 	pswhite@unc.edu	919-962-6939
<ul style="list-style-type: none"> - Gulf Coast Prairie - Great Plains - Desert 	<ul style="list-style-type: none"> - Dr. Flo Oxley Lady Bird Johnson Wildflower Center 	oxley@wildflower.org	512-232-0160



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