

Native Plant Framework for the Forest Service Eastern Region

3 March 2004.

Introduction

This framework is intended to encourage resource managers in multiple disciplines to use native species for restoration, rehabilitation and revegetation. It was prepared in response to one of the actions suggested in The Non-native Invasive Species Framework for Plants and Animals of the Eastern Region (2003) and provides one approach for national forests/prairies to meet the direction of Executive Order 13112: "Provide for restoration of native species and habitat conditions in ecosystems that have been invaded." (by non-native invasive species).

The Oconto River Seed Orchard and the Toumey Nursery have leadership for Forest Service tree seed and seedling production in the Lake States. Other areas within the region obtain tree seeds and seedlings from local sources. Until recently, the demand and availability of native shrub and herbaceous materials has been limited. With the growing concern over non-native invasive species, the value and demand for native species is expected to increase. Most foresters recognize that planting trees from non-local areas can yield undesirable results - the same is true for shrubs and herbaceous material. While this Framework is intended to focus on the need for increased production of native shrubs and herbaceous material, the principles presented here apply to trees as well.

By implementing a Native Plant Program, the Eastern Region will be better situated to:

- Maintain the composition, structure and function of native plant communities
- Maintain the genetic diversity of native plant species
- Reduce the threat of non-native invasive plant species
- Provide guidance for interdisciplinary programs to acquire, propagate and effectively use native plant materials for revegetation.

The goal of the R9 Native Plant Program is:

To contribute to maintaining biodiversity and ecosystem health through use of locally adapted, populations of native species for restoration, rehabilitation and revegetation .

The following objectives will help reach this goal:

- ***Encourage/support native plant programs on each national forest/prairie***
- ***Expand the capability to secure native plant material through collection, production, or partnerships as well as developing the necessary facilities and equipment to support native plant programs on national forests.***
- ***Encourage administrative studies, research and monitoring that support native plant programs.***

Laws, Regulation and Policy

Laws, regulations and policy related to native plants programs are summarized in Appendix 1.

General Principles

Native plants are defined as indigenous terrestrial and aquatic plant species that evolved naturally in an ecosystem. As such, locally native plants are adapted to their habitats and are essential to sustaining healthy and productive ecosystems. Natural regeneration of native plants should be employed where conditions are favorable. Where natural re-colonization is not likely to occur in the desired timeframe, active restoration of native plants is encouraged.

Plant resource specialists should be consulted to develop management prescriptions as well as to verify that appropriate plant materials are collected or purchased. Production of plant materials for restoration, rehabilitation or revegetation can require years, and project managers should identify appropriate sources of plant material before creating a need. Plant materials used should be carefully evaluated to ensure they are healthy, free of pests/diseases and are properly handled, stored and conditioned for use. If locally adapted native materials are not available, project managers should consider modifying or delaying projects, implementing projects in stages, or the temporary establishment of non-persistent cover or nurse crops.

The best available information should be used to select ecologically adapted plant materials for each site and situation. Local adaptation is ensured by use of seed collection zones that limit movement of plant materials. Ideally these zones should be genetically based and species specific, but unfortunately this information is often not available. In the absence of this information, guidelines should be developed by each Forest/Prairie in consultation with the Regional Geneticist. Region 9 tree seed collection zones (Appendix 2) serve as guidelines for trees. For other species, ecological units (e.g. subsections as illustrated in Appendix 3) could be considered as seed collection zones until unit specific guidelines are developed. These zones should be updated as additional information becomes available. Local seed collection protocols should be developed by each Forest/Prairie in consultation with appropriate specialists. These protocols should ensure genetically diverse samples, not jeopardize existing plant populations, and address germination, seed processing and storage.

Native plant materials are the first choice for restoration, rehabilitation, and revegetation. In situations where locally adapted native plant materials will not meet management objectives, it may be necessary to use non-native species. In these cases, only species that are non-aggressive and non-persistent should be used. Non-native invasive species should not be used at any time.

Additional materials or techniques that limit erosion, reduce sedimentation or enhance establishment may be required in some cases. Optimally, these materials should be weed free and disease free.

Finally, the effectiveness of native seeding or planting should be monitored. Records should be maintained that describe regeneration techniques and sources of seed used. Adaptive management is encouraged to achieve desired results.

Action Plan (note – while the lead responsibilities for action items are listed as “Botany” the intent is coordination of multi-disciplinary involvement and shared leadership to advance native species programs) :

1. Encourage/support native plant programs on each national forest/prairie

- a. Survey Forests to assess current situation of native plant needs and programs as well as status of state certification. - (*Schultz and Ulaszek, by winter 2004-5*)
- b. Brief RLT, post key references on R9 webpage and assist forests in developing local programs (*Botany Program Leader, ongoing*)
- c. Forests work in partnership to develop native species programs. – *Native Species Team and RO and Forest Botany and other Program Leaders by Winter 2004-5*
 - i. Provide guidelines to develop forest/prairie lists of priority native species needed.
 - ii. Provide a template/directions for summarizing ecological and site characteristics that support successful establishment (e.g. Native Species Journal, Wild Ones etc)
 - iii. Draft seed collection guidelines.
 - iv. Provide guidelines for developing sources of native plant materials through Forest Service nurseries and orchards, businesses, state facilities, partners and encourage the development of local industry/growers.
 - v. Collaborate with NE State and Private Forestry and partners.

2. Expand the capability to secure native plant material through collection, production, or partnerships as well as developing the necessary facilities and equipment to support native plant programs on national forests.

- a. Identify Forest Service partners for native species projects and potential funding sources – *RO and Forest Botany Programs as well as Partnership and Grants and Agreements Coordinators*)
- b. Provide Forests with examples of contracts, partnership agreements etc. - *RO and Forest Botany Programs as well as Partnership and Grants and Agreements Coordinators.*
- c. Raise awareness of the potential of Forest Service facilities such as Oconto River Seed Orchard and Toumey Nursery to produce locally native material when it is not available commercially - *Facility Managers and Native Species Team.*
- d. Develop a regional plan for native species training, education and partnerships across multiple disciplines - (*RO Botany Program Leader, FY04-05*).

3. Encourage administrative studies, research and monitoring that support native plant work

- a. Identify research priorities and prepare briefing materials for RLT to share with Research. – *Forest and RO Botany Programs, R9 Nurseries and Seed Orchards, FY 04 and beyond.*
- b. Conduct administrative studies on issues not addressed by research - *Forest and RO Botany, Ecology and Genetic Program Leaders, FY05-07 and beyond.*
- c. Monitor effectiveness of Native Plant Programs – *Forest and RO Botany, Ecology and Genetic Program Leaders, FY05-07 and beyond.*

Appendix 1 – Laws Regulation and Policy related to Native Species

Surface Mining Control and Reclamation Act of 1977 Section 515 Environmental Protection Performance Standards [30 U.S.C. 1265] SEC. 515 (b)(10)(b)(ii) amended October 30, 1986. - “Establish on the regarded areas, and all other lands affected, a diverse, effective, and permanent vegetative cover of the same seasonal variety native to the area of land to be affected and capable of self-regeneration and plant succession at least equal in extent of cover to the natural vegetation on the area; except, that introduced species may be used in the revegetation process where desirable and necessary to achieve the approved post mining land use plan;”

Executive Order 13112 on Invasive Species- February 3, 1999, Section 2 (a)(2)(IV) - “Provide for restoration of native species and habitat conditions in ecosystems that have been invaded.” (by non-native invasive species).

Executive Order on Beneficial Landscaping (April 26, 1994) – “For Federal grounds, Federal projects and federally funded projects...agencies shall, where cost effective and to the extent practicable: a) use regionally native plants for landscaping.”

National Invasive Species Management Plan - An Action Plan for the Nation – Restoration, Chapter E, Restoration, Actions Planned #35. - “Identify appropriate use of native and desirable non-native (non-invasive) species and encourage management practices that promote regeneration of native species.”

FSM 2523.03, 2.a Burned Area Emergency Rehabilitation - “Seeding or planting of grass, forbs, shrubs, or trees when needed to prevent unacceptable erosion, to prevent permanent impairment to ecosystem structure and function, or to prevent detrimental invasion by non-native plants. Natural recovery by native species is preferred.”

FSH 2509.18 Soil Management Chapter 2 – Soil Quality Monitoring, Eastern Region Interim Handbook Supplement 2.2 – Soil Quality Standards 5. - “Maintain or restore sufficient ground cover to prevent or control surface soil erosion following management activities. Native plant species are desired, although appropriate non-natives can provide temporary erosion protection and, in some cases, serve as a nurse crop. The use of mulch and amendments, such as fertilizer and lime, may be appropriate. Forests should develop erosion control revegetation guidelines specific to their ecological units and soils as needed.”

Draft FSH 2509.22 Soil and Water Conservation Practices Handbook – Eastern Region Handbook Supplement. (in development) Chapter 12.21 Road and Building Site Construction Practices 4.b. - “Native species are preferred and used wherever feasible.” Chapter 12.52 Vegetation Manipulation Best Management Practices 4.b. - “Native plant species will be used to the fullest extent feasible.”

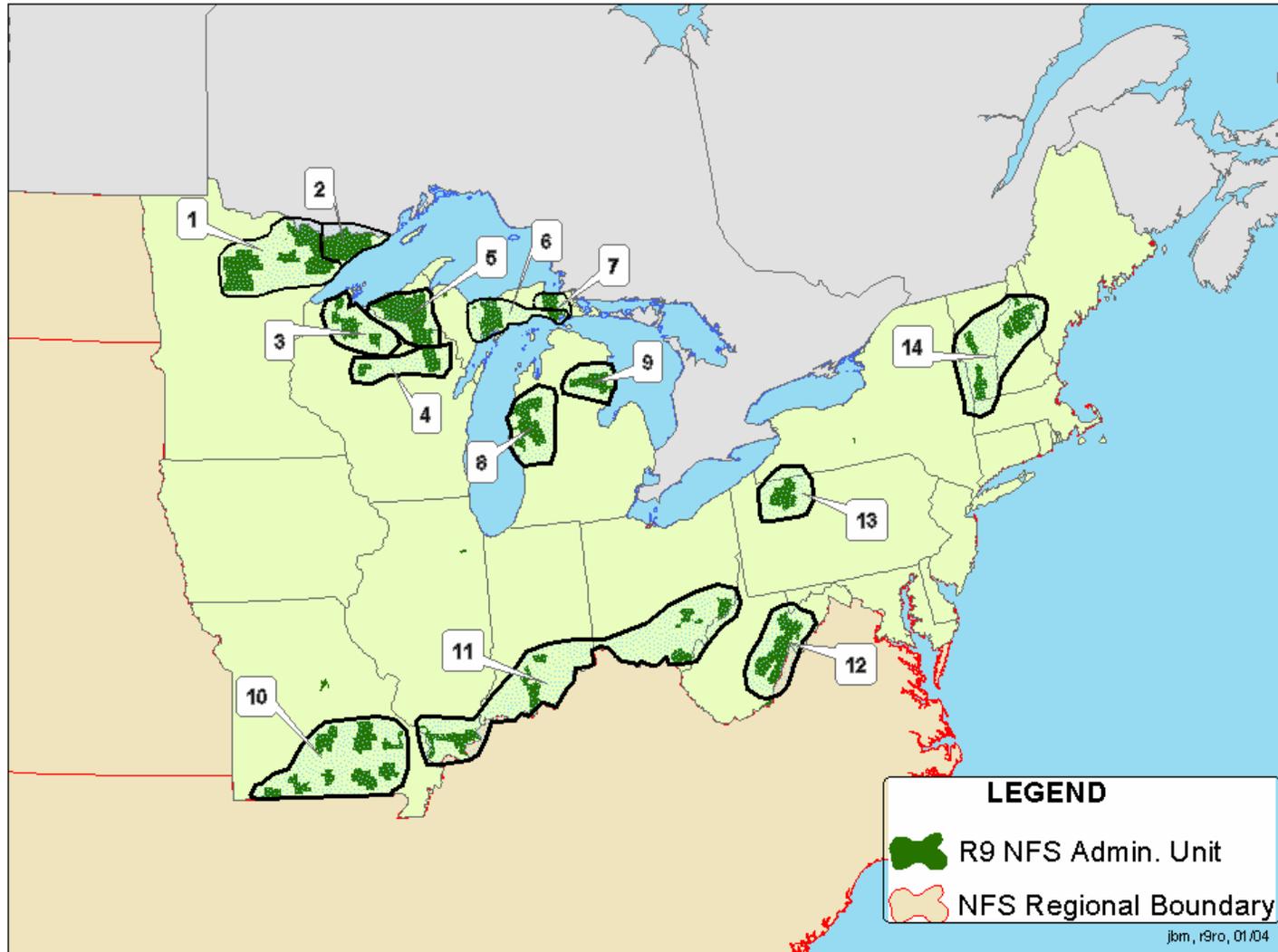
Principles for the Ecological Restoration of Aquatic Resources. U.S. EPA, 2003. Restoration Guiding Principles, Watershed Ecology Team, US EPA Office of Wetlands, Oceans and Watersheds - “Restore native species and avoid non-native species. American natural areas are experiencing significant problems with invasive, non-native (exotic) species, to the great detriment of our native ecosystems and the benefits we've long enjoyed from them. Many invasive species out compete natives because they are expert colonizers of disturbed areas and lack natural controls. The temporary disturbance present during restoration projects invites colonization by invasive species which, once established, can undermine restoration efforts and lead to further spread of these

harmful species. Invasive, non-native species should not be used in a restoration project, and special attention should be given to avoiding the unintentional introduction of such species at the restoration site when the site is most vulnerable to invasion. In some cases, removal of non-native species may be the primary goal of the restoration project.”

Federal Native Plant Conservation Committee Memorandum of Understanding - “Recognizing that native plant species are of aesthetic, ecological, educational, historical, recreational, and scientific value to the Nation and its people, the Committee's priorities will be driven by the following vision: for the enduring benefit of the Nation, its ecosystems, and its people, to conserve and protect our native plant heritage by ensuring that, to the greatest extent feasible, native plant species and communities are maintained, enhanced, restored, or established on public lands, and that such activities are promoted on private lands.”

Appendix 2 – USDA Forest Service Eastern Region Tree Seed Collection Zones (Contact Paul Berrang, Regional Geneticist)

1970 Tree Seed Collection Zones



Ecological Sections of the Northeastern United States (Draft 2004)

