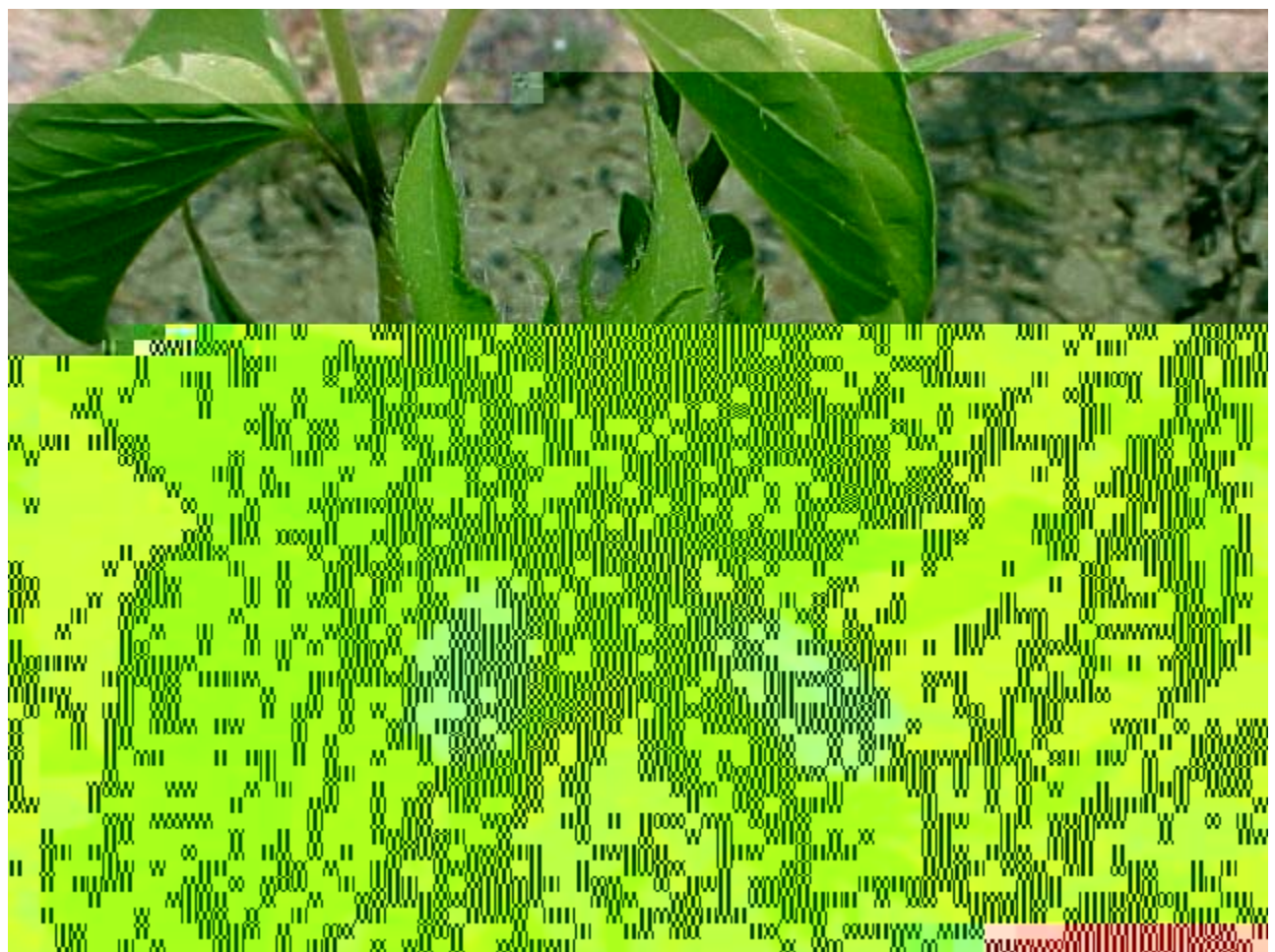

USDA Forest Service
Southern Regional Framework
For
Non-Native Invasive Species



(Jacquemontia tamnifolia, Non-Native Invasive Species, Cahaba River gravel bar)

Regional Leadership Team

R8 Non-Native Invasive Species Strategy

Executive Summary and Priority Action Items

The purpose of the Southern Region (R8) Non-Native Invasive Species Strategy is to provide an effective interdisciplinary framework to implement Non-Native Invasive Species (NNIS) management programs. The implementation will include R8 National Forests, State and Private Forestry, and Research and Development programs as applicable.

The goal of the R8 NNIS Program in the South is to reduce, minimize, or eliminate the potential for introduction, establishment, spread, and impact of non-native invasive species across all landscapes and ownerships. The vision for this program is to protect native ecosystems and biodiversity, as well as begin restoration of desired ecological functions or components after NNIS removal.

There are nine (9) Program Elements based on the high priority management actions identified by the National Invasive Species Council (NISC 2001). These are as follows:

- *Leadership and Coordination*
- *Current Status and Trends*
- *Prevention*
- *Early Detection and Rapid Response*
- *Control and Management*
- *Restoration*
- *Partnerships and Cooperation*
- *Research*
- *Information and Education*

Priority Action Items for Non-Native Invasive Species (NNIS)

The following is a summary of the highest priority implementation items as determined by the R8 NNIS Strategy Steering Committee and Working Group:

- Designate NNIS Coordinators at regional and forest levels. Incorporate existing or establish Memoranda of Understandings and Cooperative Agreements as needed to facilitate cooperative management of NNIS on national forest system and surrounding lands. Initiate or continue engagement with government, state and private partners.
- Include direction in the budget advice for incorporating NNIS into all appropriate program areas. Identify and provide information on alternative funding sources.
- Identify and implement prevention and control measures using multi-funding, partnerships, agreements and volunteers.
- Explore use of the Wyden amendment for NNIS control. Where there are shared infestations among mixed ownership work with partners to develop rapid response plans that can be implemented across jurisdictional lines.
- Compile lists of existing and potential occurrences of NNIS on each unit.

- Prioritize NNIS posing the highest threats. Identify information gaps. Query forests to determine R8 NNIS status and information gaps; provide for information transfer to Research and State and Private Forestry.
- Prioritize forest surveys, inventories and treatments based on threats to ecosystems and highest probability of NNIS occurrence, including but not limited to:
 - Threatened & Endangered species habitat, rare communities, etc.;
 - Designated special land allocations (e.g. Wilderness, Wild and Scenic Rivers, etc.);
 - Project proposal areas;
 - Migration pathways, (ex. urban interfaces, Rights-of-Way, water courses, etc.);
 - Administrative sites.
- Provide training in identification, reporting and management of selected invasive non-native species to all Forest Service personnel. Collaborate with Research as well as State and Private Forestry to identify mutual priorities.
- Implement existing preventive measures and explore new ways to implement appropriate cleaning of all equipment to prevent spread of NNIS.
- Use all appropriate tools such as biological, cultural, chemical and physical controls for management of priority NNIS.
- Monitor effectiveness of treatments and programs. Utilize Natural Resource Information System (NRIS) for storage and analysis of NNIS plant treatment data.
- Identify and provide sources of alternative native or noninvasive species for use in rehabilitation and restoration projects.
- Provide information to partners about NNIS and alternatives to use of NNIS.
- Develop a NNIS communications plan for the Southern Region. Develop and maintain a R8 NNIS web site; coordinate with Public Affairs on the four threats web site.

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USDA Forest Service Southern Regional Strategy For Non-Native Invasive Species

Introduction

Invasive species threaten the sustainability of our forest ecosystems, regionally, nationally, and globally. Forests within the thirteen states of the Southern Region are rich in biological diversity and provide vital goods and services. The current infestations and growing threat of non-native invasive species can displace diversity and habitats, disrupt vital ecosystem functions, and degrade productivity and recreational benefits. Non-native invasive plants, insects, diseases, mammals, fish, mussels, snails and earthworms have increased in their range and severity, while others await entry through global commerce. A well conceived and organized program of invasive species prevention and management is warranted and overdue. This Non-Native Invasive Species Strategy for the Southern Region is part of an ongoing national effort to combat existing non-native invasive species populations and curtail entry of new non-native invasive species.

The purpose of this document is to provide an interdisciplinary framework to strategically plan Non-Native Invasive Species (NNIS) management programs affecting Southern Region (R8) National Forests as well as State and Private Forestry and Research and Development programs as appropriate. This framework identifies the Goal, Vision and Program Elements for NNIS strategic management. It further identifies roles and responsibilities of State and Private Forestry, Research and Development, as well as the Regional Office, Forest Supervisors, and District personnel associated with the implementation guide to accomplish the stated program elements.

The definition of non-native invasive species is based on Executive Order 13112. A species is considered a non-native invasive if:

- 1) it is not native (i.e. alien) to the ecosystem under consideration, and
- 2) its introduction causes or is likely to cause economic or environmental harm or harm to human health.

There are a number of laws, regulations and policies that relate to NNIS management on National Forest system lands, only a few of which are listed here. The principles of Forest Service Manual (FSM) 2080 address Noxious Weed Management on National Forest Systems and can be interpreted broadly to accomplish the objectives of Executive Order 13112 for all NNIS plant and animal species.

The Goal of the R8 NNIS Program in the South is to reduce, minimize, or eliminate the potential for introduction, establishment, spread, and impact of non-native invasive species across all landscapes and ownerships.

The Vision for the Southern Region is to implement appropriate and successful measures to prevent and control non-native invasive species. A NNIS management program is envisioned that: protects native ecosystems and biodiversity and moves toward restoration of native plants and animals; involves coordination between the National Forest System, State and Private Forestry, and the Southern Research Station; and utilizes cooperative partnerships with other federal agencies, state and local governments, tribes, non-governmental organizations, neighboring landowners and others to achieve the stated goal. In order to do this, the entire Southern Region must respond quickly to prevent, detect, control, manage and/or eradicate NNIS infestations, and restore the desired ecological function following NNIS removal.

R8 NNIS programs tier to the following Program Elements based on high priority management actions identified by the National Invasive Species Council (NISC 2001):

- *Leadership and Coordination*
- *Current Status and Trends*
- *Prevention*
- *Early Detection and Rapid Response*
- *Control and Management*
- *Restoration*
- *Partnerships and Cooperation*
- *Research*
- *Information and Education*

Program Elements

A. Leadership and Coordination

The Chief of the Forest Service has identified invasive species as one of the four threats to the nation's ecosystems. In response to this national threat, the Forest Service has a role as the leading forest research, forest health, and federal resource management agency. Each employee has a role in addressing invasive species threats at their level of responsibility. Success will be best achieved through an integrated interdisciplinary approach. Collaboration with states, Research Stations, State and Private Forestry and Tribes is ongoing and is expected to expand. The Southern Region will take an active leadership role, facilitating cooperation and coordination among other government entities and partners to achieve mutual NNIS goals on National Forest System and surrounding lands.

The R8 NNIS Steering Committee will provide leadership to reach the R8 NNIS Goal and Vision.

The Working Group is chartered by the Steering Committee to draft this Strategic Plan as well as other associated NNIS documents to institutionalize NNIS programs for the USDA Forest Service Southern Region.

B. Current Status and Trends

In order to implement an effective NNIS management program, the Regional Office, with the assistance of R8 Forests, will determine the current status and trends of priority NNIS in the region. The Districts will do the same on each unit. Districts should prioritize inventory and monitoring of NNIS based on threats to ecosystems and highest probability of occurrence; this will include a program to track presence and size of NNIS infestations in areas where NNIS are likely to be introduced or spread. Existing information will be used to compile lists of NNIS for each unit, determine which species pose the highest threat, and to prioritize future survey needs and control efforts.

Region 8 Forest Health Protection will cooperate with our partners to expand, where possible, existing inventory and monitoring data sets, such as Forest Inventory and Analysis data (FIA) on a regional basis, and to include more information on the presence and abundance of invasive species. Forests should prioritize inventory and monitoring of NNIS based on threats to ecosystems and highest probability of occurrence, including a program to track presence and size of NNIS populations in areas where NNIS are likely to be introduced or to spread (roadsides, trails, access points, wildlife openings, rights-of-way, etc.).

C. Prevention

The most effective strategy against non-native invasive species is to prevent these from ever being introduced and established. Preventive measures typically offer the most cost-effective means to minimize or eliminate environmental and economic impacts. Prevention relies on a diverse set of tools and methods, including education. Preventive tools include, but are not limited to, equipment cleaning, use of NNIS-free materials, NNIS prevention methods in fire management, as well as development of Best Management Practices (BMPs) and contract clauses (USDA 1998). Establishing effective internal and external partnerships is critical for effective prevention and detection programs.

State and Private Forestry (S&PF) in general, and Forest Health Protection (FHP) in particular, are already deeply involved and committed to implementation of preventive measures, including providing funding, training, and technical assistance to Federal partners and State cooperators. The National Forest System is currently in the process of funding projects aimed at reducing the impact of NNIS plants and animals throughout the Region. There are active projects with universities, state forestry agencies, and private organizations currently underway. Several universities and state agencies currently receive direct funding through the use of the grants and agreements processes. This is expected to expand in the future.

D. Early Detection and Rapid Response

The Southern Region Forest Service will work with partners to detect new non-native invasive species infestations and support the infrastructure necessary to rapidly contain or eradicate these infestations.

Sometimes considered the “second line of defense” behind prevention, Early Detection Rapid Response (EDRR) is a critical component of any strong non-native invasive species management program. When new NNIS infestations are detected, a quick and coordinated containment and eradication response can reduce environmental and economic impacts. This results in lower cost and less resource damage than implementing a long-term control program after the species is established. Early detection of new infestations requires vigilance and regular monitoring of the managed area and surrounding ecosystems. In some instances a containment strategy versus rapid response may be appropriate for NNIS.

The Forest Service is well suited to improve its early detection capabilities through the collaborative and coordinated efforts of numerous agency programs, District offices, and partners.

E. Control and Management

The Southern Region will work cooperatively with other government entities, partners and tribes to reduce established non-native invasive species populations and limit their spread, thereby dramatically decreasing the associated economic and ecological impacts that can result.

Along with management, Forest Service policy (FSM 2080.1 (3), 2080.82 (2)) directs the use of Integrated Pest Management for NNIS control, including biological, mechanical, chemical, and cultural methods in accordance with the appropriate National Environmental Policy Act (NEPA) analysis.

F. Rehabilitation and Restoration

The Forest Service will strive to restore or rehabilitate areas degraded by NNIS to prevent re-infestation of NNIS and to help facilitate natural processes such as the movement of fire across the landscape. Where NNIS have been removed to prevent the degradation of ecosystem function or stem the loss of biodiversity, rehabilitation will be critical to restoration needs.

Restoring native communities can reduce the risk of future encroachment in areas where control measures have reduced or eliminated invasive species. R8 forests have a general awareness of the Executive Order and Manual (FSM 2081.03) direction to use native species but limited native seed and plant source material as well as genetic/provenance issues are limiting factors for restoration of native plant and animal populations. The Southern Region will be committed to lead and collaborate in utilizing native plants in stabilization and restoration projects.

G. Partnerships and Collaboration

Collaboration is an important overarching need in all of the Southern Region strategy objectives. Forest Service NNIS management activities need to be coordinated at all levels of the organization and across all programs. Partners include other federal agencies, state and local governments, tribes, non-governmental organizations, neighboring landowners and others. Collaboration for NNIS management means cooperating across ownerships, state lines and political jurisdictions. Examples of opportunities in the South include coordination with state invasive species councils, regional aquatic invasive species panels, pest advisory groups, and others. As has been stated in previous program elements, working with partners is an ongoing endeavor, but must be expanded for the NNIS strategic plan to work effectively.

H. Research

"In order for any invasive species program to be successful it must be based on sound science" (NISC 2001). Forest Health Protection (FHP) has developed an invasive plant management strategy, "State and Private Plant Management Strategy for Forest Health Protection, Southern Region," that outlines a vision, goals and activities needed to better address technology and scientific information needs for non-native invasive species management in the Southern Region. The Southern Research Station has research units with scientists researching various aspects of non-native invasive pests. FHP employs forest health specialists at several locations in the Region who are available to provide technical assistance on NNIS. The Forest Service research programs address insects, pathogens, invasive plants and animals.

I. Information and Education

Education and outreach are needed to raise the awareness of the non-native invasive species problem in the Southern Region and to reduce the chance of unintentional introduction of NNIS. Education is needed within the Forest Service to gain proficiency in NNIS recognition and appropriate management approaches. Through partnerships, the Forest Service can achieve a successful NNIS awareness and prevention campaign in the South. There is a wealth of NNIS information available on many websites, that could be included on R8 NNIS web sites or knowledge pages. For example, photographs of all NNIS plants are available for downloading from the University of Georgia's website at bugwood.org.

USDA Forest Service
Southern Region
Implementation Guide
Non-Native Invasive Species Management

The purpose of this document is to identify a set of action items from which to choose in order to implement Non-native Invasive Species (NNIS) management programs affecting Southern Region (R8) National Forests as well as State and Private Forestry and Research and Development programs as appropriate. These action items further identify roles and responsibilities of the National Forest System State and Private Forestry, Research and Development, and the Southern Regional Office, Forest Supervisors, and District personnel associated with accomplishment of Recommended Actions to achieve the stated Program Elements.

The implementation guide represents the comprehensive goals and actions the full R8 NNIS council would like to see accomplished if full funding, personnel and equipment is available. It is recognized, however, that these conditions do not often occur, therefore the action items have been separated into those of recognized high priority and those actions that will assist in full attainment of the goals and visions set forth in the NNIS strategic plan. Those actions listed under Recommended Actions are the ones that need the most concerted attention. The actions listed under Suggested Options are those which may be chosen by units as time, personnel and funding permits, or as those may better facilitate implementation of this strategy.

A. Leadership and Coordination

Recommended Actions:

1. Designate NNIS Coordinators at regional, forest, station and district levels to provide leadership to implement this framework in cooperation with other government entities and partners. These individuals will play a key role in implementing this Strategic Plan by coordination with interested disciplines and outside partners. FSM 2080 outlines direction and responsibilities of Regional, Forest, and District noxious weed coordinators that can be broadly applied to NNIS Coordinators (Line Officers by August 2004).
2. Include direction in the budget advice for incorporating and budgeting NNIS into all appropriate resource program areas (RO).
3. Identify and provide information on alternative funding sources for NNIS prevention and management activities and projects (All).
4. Secure internal support for use of the Wyden amendment for entering cooperative agreements

with willing private landowners, State, local and tribal governments or other public entities, educational institutions, and private nonprofit organizations, to facilitate prevention, early detection and rapid response, and control of NNIS when such activities will benefit resources on lands administered by the Forest Service (RO).

Suggested Options:

5. Encourage the WO to draft a FSM 2070/2080 Supplement that includes all non-native invasive species as well as new regulations/orders, i.e. Plant Protection Act 2000, Executive Order 13112, etc. (RO NNIS Coordinator by December 2004).
6. Charter a regional council consisting of Non-Government Organizations (NGO), academia, southern group of state foresters, and other governmental agencies to address the issues of this Strategic Plan (RO Steering Committee).
7. Evaluate and develop Forest Plan direction, where needed, related to NNIS prevention and control including Forest-wide or Management Area-wide objectives and standards. Incorporate NNIS management guides in resource management plans (Forest level).
8. Coordinate with Planners and National Environmental Policy Act (NEPA) Coordinators to ensure clear and consistent direction on how to address effects on NNIS in NEPA documents. FSM 2080.44.6 outlines the responsibilities of Line officers to determine the risk of NNIS introduction or spread as part of the NEPA process for proposed actions (All).
9. Implement the strategy at all levels and include accountability measurements to track performance (NRIS). (RO, Forest, District)
10. Identify key players and administrative responsibilities of each for a communications plan (RO).

B. Current Status and Trends

Recommended Actions:

1. Working with state and federal partners, compile lists of existing and potential occurrences of NNIS in the region and on each unit. Maintain lists and identification guides of noxious weed threats and invasive taxa on the R8 NNIS Website. Revise lists periodically as needed (All).
2. Using information from risk assessments, prioritize species posing the highest threat to the National Forests (Regional Scale>Forest Scale>District Scale).
3. Identify information gaps at various scales (All).
4. Prioritize forest surveys and inventories based on both threat significance to ecosystems and the probability of NNIS occurrence (Forests). The highest priorities for NNIS surveys & treatment:
 - a. T&E habitat, rare communities, and high quality natural communities;
 - b. NNIS Migration pathways (including, but not limited to trails, lakes and other watercourses, urban interfaces, roadside and utility Rights-of-Way, and borrow pits used for fill material on and adjacent to national forest lands);
 - c. Project areas where soil disturbance is likely to occur (e.g. timber sale areas, wildlife openings and plantings, road construction, culvert and bridge repair or replacement and landline construction);
 - d. Designated land allocations (i.e. Wilderness, Wild & Scenic Rivers, Research Natural Areas, Special Interest Areas, roadless areas, scenic areas, etc.).

Suggested Options:

5. Construct and maintain lists of non-native invasive species on the R8 NNIS Website that threaten or occur on National Forests and provide ranking by threat potential (RO, Forests).
6. Incorporate inventory and treatment information into the NRIS database. Use these standardized techniques for the inventory, mapping, and monitoring of NNIS (Forests).

C. Prevention

Recommended Actions:

1. Provide training to National Forest and State and Private personnel in the region on identification and management of priority and potential-entry non-native invasive species (All).
2. Implement existing preventive measures to clean equipment before and after use on National Forests. Directions in FSM 2080.42 (7), .42 (8), .43 (10), .44 (8), .44 (10), and .81 (03) further outline the appropriateness of forest orders, contract and permit clauses and provisions for contractors and permittees to prevent the spread of NNIS (Forests, Districts, Contractors, Permittees).
3. Explore new ways to implement appropriate cleaning of equipment to prevent spread of NNIS. For example, vehicles and equipment include, but may not be limited to boats, fire equipment, contractor and partner equipment, and recreational vehicles (All).

Suggested Options:

4. Coordinate with the USDA Animal and Plant Health Inspection Service (APHIS) and each state agency (partners in the Cooperative Forestry Assistance Act of 1978, Section 22 (16 U.S.C. 2101) that have invasive species authority to comply with state efforts to prevent entry of NNIS (State & Private, Forests, Districts).
5. Work with cooperators to develop educational tools for multiple stakeholders and forest users to prevent spread of invasive species (All).
6. Cooperate with other governmental organizations and NGO's such as Southern Appalachian Man and the Biosphere, and Southeast Exotic Pest Plant Council, and Regional aquatic invasive species panels to develop and implement statewide strategies for minimizing the impact of NNIS within their respective states. Discourage the use or introduction of non-native invasive species by partners (Region, Forests).
7. Ensure that contaminated material is not used on National Forests including fill material, water, etc. (Forests, Districts).
8. Implement weed free livestock feed for use in all wilderness areas in FY04 (R8 Wilderness Specialist, Forests, Districts).
9. Encourage weed-free livestock feed on all national forest system lands in FY06 as outlined in the National NNIS Strategy. FSM 2080.42-6, .43-6, .44-7, .81-2 and 81-3 further outline that NNIS-free material is to be used and transported on National Forest system lands. Identify the availability and encourage development of local weed-free forage (State & Private, Forest Supervisors, Forest NNIS Coordinators).

10.

Suggested Options:

5. Remove or reduce NNIS from Forest Service administrative sites (structures, trailheads, recreation areas, boat landings, recreation summer homes etc.) (Districts).
6. Develop compendium of Best Management Practices for control available including techniques, tools, timing, etc (Working Group).
7. Focus on control of priority species and in priority areas as identified (Forests, Districts).
8. Work with cooperators to establish demonstration areas where land managers and other interested personnel can observe options for controlling the most prevalent invasive plant species including kudzu, privet, cogongrass and multiflora rose (Forests, S&P, Research).
9. Post risk assessment results on the regional web site for use in NEPA documents (RO).
10. Schedule regional pesticide applicator training and maintain a list of personnel certified to treat NNIS with herbicides (Region).
11. Explore opportunities to improve the efficiency of the NEPA process to facilitate treatment of NNIS, for example: vegetation management plans (Region, Working Group).

F. Rehabilitation and Restoration

Recommended Actions:

1. Identify alternative native or noninvasive species for use in rehabilitation and restoration projects. Provide sources of such material to be used in NNIS management on respective national forests (Working Group, Region, Forests).
2. Priority areas for restoration would include, but not be limited to, wilderness, rare communities, T&E habitat, Regional Forester Sensitive Species habitat, restoration prescriptions in forest plans, Special Interest Areas (Forests, Districts).

Suggested Options:

3. Working with partners, develop infrastructure for production, purchase, and warehousing of seed supplies and other native and desired nonnative plant materials on a regional basis and ecotype specific (Region, Forests, State & Private).
4. Monitor NNIS control projects to determine restoration needs (Forests, Districts).
5. Take advantage of opportunities, such as the lands program, to restore and propagate native species and to prevent spread of NNIS from inholdings (Forests, Districts).
6. Work with State and Private Forestry to identify mutual priorities for NNIS restoration interface. (Region, Forests, State & Private).

G. Partnerships and Collaboration

Recommended Actions:

- 1.

I. Information and Education

Recommended Actions:

1. Develop a NNIS communications plan for the Southern Region (RO Public Affairs).
2. Develop and maintain a R8 NNIS web site or coordinate with Public Affairs on the four threats web site. See Appendix A for suggested content (Region).

Suggested Options:

3. Attend/develop Regional NNIS training courses for plants and animals to be offered at Eastern and Southern Regions University (ESRU) or other venues, including abbreviated versions for the Regional Leadership Team, Forest Leadership Teams, as well as Regional and Forest program manager meetings (All).
4. Attend professional/conservation symposia and meetings, to network with partners and learn the latest in methods related to NNIS control, inventory and monitoring techniques, and programs.
5. Develop NNIS and Forest Plan "Lessons Learned" document that includes NNIS status and threats, native species emphasis and includes NNIS in Annual Forest Monitoring Reports (Region, Forests).
6. Develop displays and handouts with Public Affairs (Region, Forests, State & Private).
7. With partners, disseminate materials designed to educate the public on identification, proper handling, notification, avoidance procedures, and eradication of NNIS (All).
8. Work with publics (external and internal) regarding the safe use, handling, and application of herbicides proposed for NNIS control (All)
9. Host NNIS conference as part of the southern region forestry congress (Region).
10. Incorporate NNIS information into new employee training sessions and other appropriate sessions such as the Southern Natural Resource Leadership Group (Region, Forests).
11. Work with state agricultural extension agents to develop NNIS seminars for local citizens to include information on identification, need for rapid treatment, and control measures (to include safe use of herbicides) for NNIS (State & Private, Research, Region).

R8 NNIS Strategy Committee & Working Group

Acknowledgements

Steering Committee Members

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Marsha Kearney – Forest Supervisor, NFs in Florida, Co-Chairperson
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References

Environmental Law Institute. 2002. Halting the Invasion: State Tools for Invasive Species Management. Environmental Law Institute, Washington DC. 112 pp plus cd rom.

Executive Order 11312 of February 3, 1999 - Invasive Species. 1999.

National Invasive Species Council. 2001. Meeting the Invasive Species Challenge: National Invasive Species Management Plan. 80 pp.

USDA Forest Service. 2004. National Strategy and Implementation Plan for Invasive Species Management.

USDA Forest Service. 1995. National Forest Resource Management Amendment 2000-95-5, Zero Code 2080 Noxious Weed Management.

USDA Forest Service. 1998. Stemming the Invasive Tide: Forest Service Strategy for Noxious and Noninvasive Plant Management. Washington DC. 31 pp.

Appendix A: Region 8 NNIS Web Site (Knowledge Pages) suggested content

Critical to this strategy will be the creation and maintenance of an R8 Invasive Species Management Website that will contain directives, early detection rapid response reporting system, invasive lists and identification aids and links, templates for NEPA documents, eradication and control prescriptions, restoration and rehabilitation procedures including native plant sources, and linkages to pertinent federal, state, NGO, and partner websites. Specific web pages may include:

1. Share relevant NEPA Documents and pesticide risk assessment results
2. List of educational resources available for internal and public distribution, including brochures highlighting NNIS control and identification. Include the “Woodsy Owl Invasive Weeds Activity Kit”
3. List of general NNIS web site links.
4. Web links of resources for identification of NNIS.
5. List of internal contacts – WO, RO, Forest Coordinators
6. List of external partners and contacts
7. Examples of Memorandum of Understanding and Cooperative agreements
8. Examples of cooperative and participating agreements for working with partners under the authority of the Wyden amendment.
9. Grants/other funding sources possibilities
10. Early Detection Rapid Response procedures
11. Tools available
12. Treatment schedules
13. Examples of existing clauses, contract info, direction
14. Success stories and demonstration projects in the Region
15. Sessions/ Dialogues for major items
16. Guidelines for implementation
17. Ongoing restoration sites
18. Predictive models (samples – rates of spread, etc)
19. Risk Assessments Completed or Ongoing to Date
20. Regional Invasive Species list (suggest including as an appendix to this document)
21. FS National Invasive Species Strategy
22. Forest Service Policy related to NNIS

SAMPLE:

WEBSITES ON INVASIVE SPECIES

National Program for Invasive Species -- National Invasive Species Council

National Management Plan: Meeting the Invasive Species Challenge

<http://www.invasivespecies.gov/>

NATIONAL

USGS National Center for Invasive Species Science

<http://kiowa.colostate.edu/cwis438/niiss/index.html>

Developing All-partner Central Reporting and Retrieval System

USGS Invasive Species Information Node

<http://invasivespecies.nbii.gov/>

Plant Identification Uniformity USDA NRCS PLANTS Database

<http://plants.usda.gov/plants/>>

State Laws on Invasive Species

<http://www.nemw.org/ANSstatelaws.htm#flo>

Weeds Gone Wild: Alien Plant Invaders of Natural Areas

<http://www.nps.gov/plants/alien/>

USDA ARS Invaders Database System

http://invader.dbs.umn.edu/noxious_weeds/

USDA NRCS and USGS BRD Noxious Weeds of North America

<http://dogwood.itc.nrcs.usda.gov:90/Weeds/index.html>

The Nature Conservancy's Invasive Species Team

<http://tncweeds.ucdavis.edu/>

Linking Ecology and Horticulture to Prevent Plant Invasions

<http://www.mobot.org/iss/welcome.html>

Aquatic Nuisance Species Task Force: <http://www.anstaskforce.gov/>

SOUTHEAST

Southeast Exotic Pest Plant Council and links to State Exotic and Invasive Plant Councils

<http://se-eppc.org/>

Nonnative Invasive Plants of Southern Forests: A Field Guide for Identification and Control

Adobe Acrobat version: http://www.srs.fs.usda.gov/fia/manual/exotic_pest_plants.htm

HTML version: <http://www.invasive.org/weeds/>

Order hardcopy: <http://www.srs.fs.usda.gov/pubs/viewpub.jsp?index=5424>

Invasive Species, Control Recommendations, and Images:

<http://www.bugwood.org/>, <http://www.invasive.org/>, and <http://www.forestryimages.org/>

Compilation of Invasive Plants in the Southeast

<http://www.invasive.org/seweeds.cfm>

Global Invasive Species Database :<http://www.issg.org/database/welcome/>

Appendix B: NNIS Risk Assessment sample

(USFS Region 1 plant example; a similar approach can be used for animals.)

FACTOR 1: Likelihood of Undesirable Plant Species, Including Noxious Weeds Species, Spreading to Project Area:

Ranking	Value	Definitions
NONE	0	Undesirable plants, including non-native invasive plant species not located within or immediately adjacent to the project area. Project activity is not likely to result in the establishment of undesirable weed species on the project area.
LOW	1	Undesirable plant species present in areas adjacent to, but not within, project area. Project activities can be implemented and prevent the spread of undesirable plants into the project area.
MODERATE	5	Undesirable plant species located immediately adjacent to or within project area. Project activities are likely to result in some areas becoming infested with undesirable plant species even when preventative management actions are followed. Control measures may be essential to prevent the spread of undesirable plants or noxious weeds within the project area.
HIGH	10	Heavy infestations of undesirable plants are located within or immediately adjacent to the project area. Project activities, even with preventative management actions, are likely to result in the establishment and spread of undesirable plants on disturbed sites throughout much of the project area.

FACTOR 2: Consequence of Undesirable Plant Establishment in Project Area

Ranking	Value	Definitions
LOW	1	None. No cumulative effects expected.
MODERATE	5	Possible adverse effects on site and possible expansion of infestation within project area. Cumulative effects on native plant community are likely, but limited.
HIGH	10	Obvious adverse effects within the project area and probable expansion of undesirable plants, including noxious weed infestations to areas outside the project area. Adverse cumulative effects on native plant community are probable. Likelihood that NNIS may enter an area where treatment options may be severely limited or logistically difficult.

Risk Rating Procedure

Step 1. Identify level of likelihood and consequence of adverse effects (Factors 1 and 2, previous page) and assign values.

Step 2. Multiply level of likelihood times consequences (Factor 1 x Factor 2).

Step 3. Use the value resulting in step 2 to determine Risk Rating and action as follows:

Risk Rating	Value	Action
NONE	0	Proceed as planned
LOW	1-10	Proceed as planned. Initiate control treatments on undesirable plant populations that get established in the area.
MODERATE	25	Develop preventative management measures for the proposed project to reduce the risk of introduction or spread of undesirable plants into the area. Monitor the area for at least 3 consecutive years and provide for control of new infestations.
HIGH	50-100	Modify project design and implement preventative management measures for the proposed project to reduce the risk of introduction or spread of undesirable plants into the area. Monitor the area for at least 5 consecutive years and provide for control of new infestations. Consider moving or dropping project to avoid impacts.