



September 2006

Meeting the Challenge: *Invasive Plants in Pacific Northwest Ecosystems*

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Organization of Presentation

- **The Threat**
- **Forest Service Strategy**
- **Agency Actions & Partnerships**
- **Opportunities for Action**



Invasive Species Threat

- **Ecological**
 - *Invasive plants cover 133 million acres*
 - *50 -85% loss of biodiversity*
- **Economic**
 - *\$138 Billion in United States*
- **Social**
 - *Magnitude of loss of cultural resources and quality of life is unknown*



Pacific Northwest Invasive Plant Threat

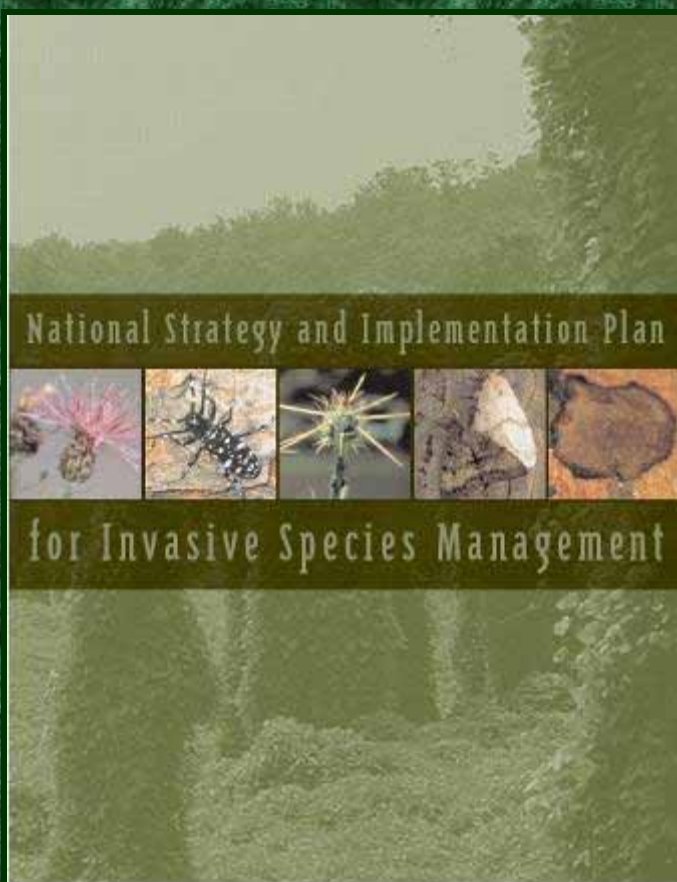
Expanding across upland and wetland ecosystems

- Degrading ecosystem health & productivity
- Increasing threat to sensitive species & associated habitats
- Increasing resource management costs
- Increasing cultural & economic losses





Forest Service Strategy



In 2004, the Forest Service released the

***“National Strategy & Implementation Plan
for
Invasive Species
Management”***



Forest Service Strategy

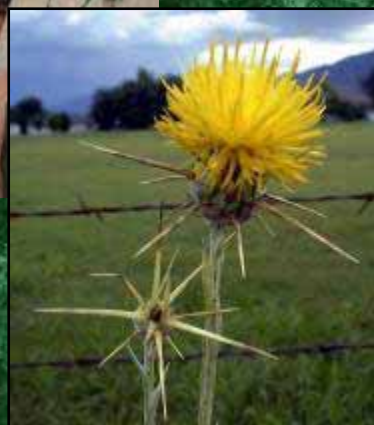
The Goal:

“To reduce, minimize, or eliminate the potential for introduction, establishment, spread, and impact of invasive species across all landscapes and ownerships.”





Forest Service Strategy



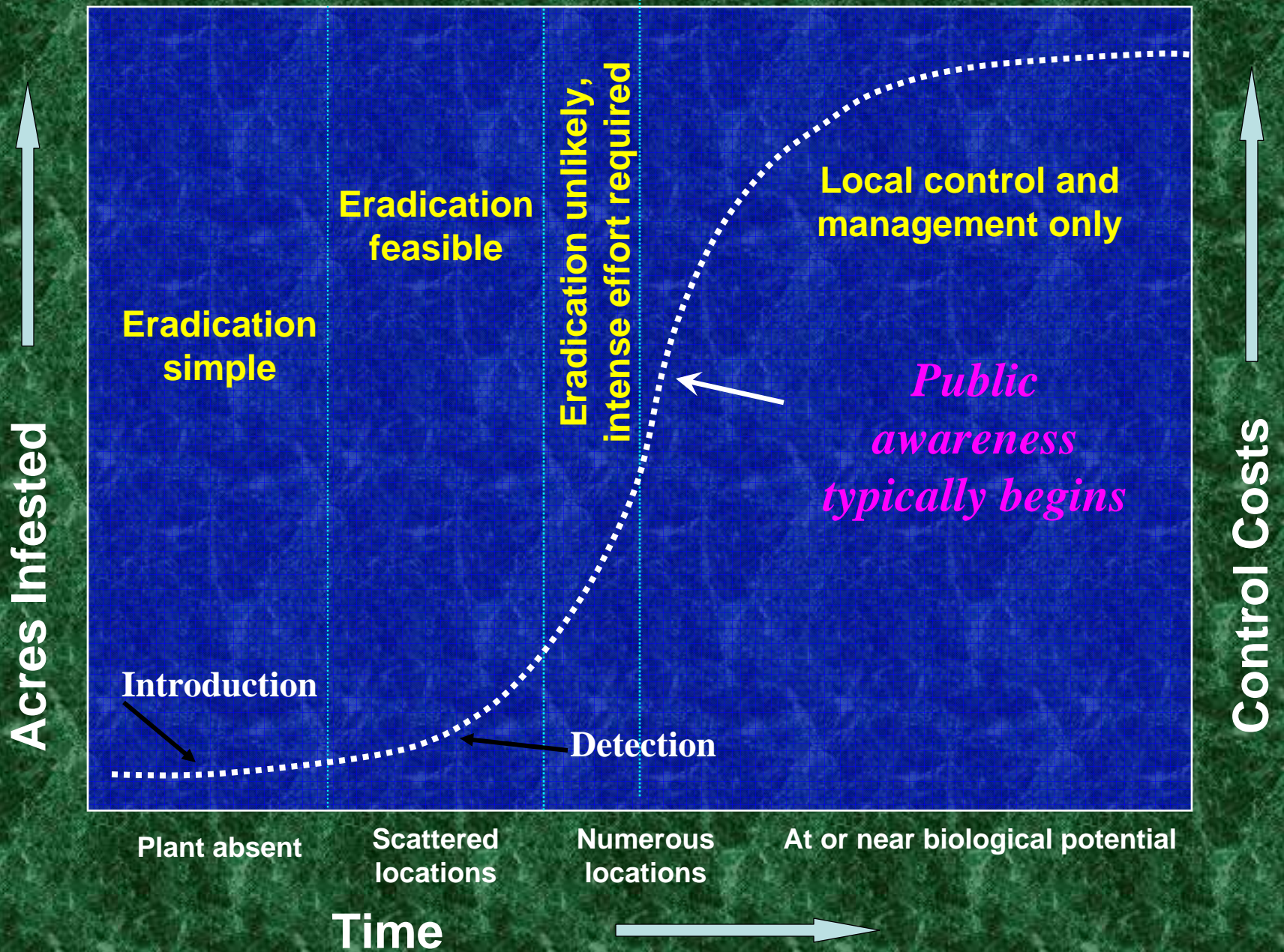
- *Partnerships and Collaboration*
- *Scientific Basis*
- *Communication and Education*
- *Organizing for Success*



Forest Service Strategy Elements

- 1. Prevention**
- 2. Early Detection and Rapid Response**
- 3. Control and Management**
- 4. Rehabilitation and Restoration**

NNIS Increase Over Time and Control Potential



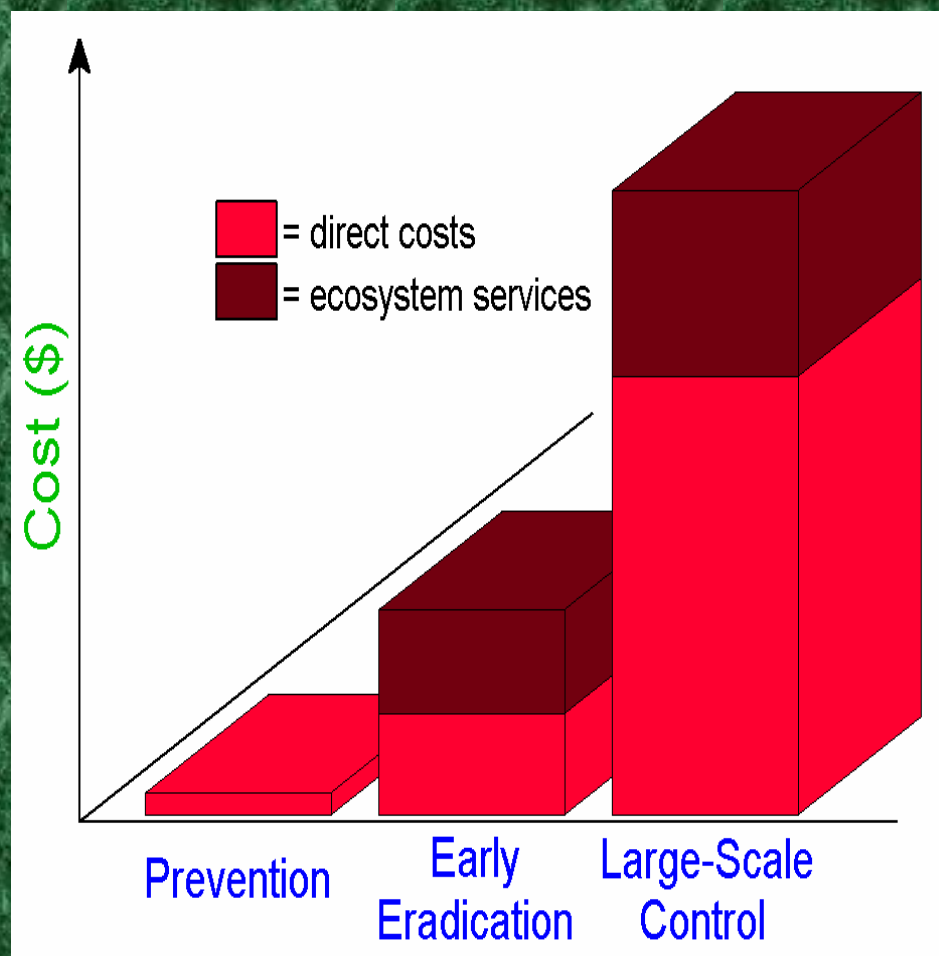


Establishing Priorities for Action

Focus resources on

- *prevention,*
- *early detection*
- *rapid response*
/eradication

At all scales
(national to local)





Prevention & Partnering

- **Pathway analyses**
- **Risk Profiles before arrival.**
- **Sharing with international partners**
- **Forest Environmental Threat Assessment**
- **Policy & Environmental Impact Statements**
- **Communication / Outreach**



Horticulture

**Roads
&
Trails**

*Prevention - the key is
understanding pathways!*

**Transportation
Systems**

**Seed
Trade**



International Partnerships

Invasive Plant Study Group within the North American Forestry Commission (Mexico, Canada and the United States) shares information on invasive plants.



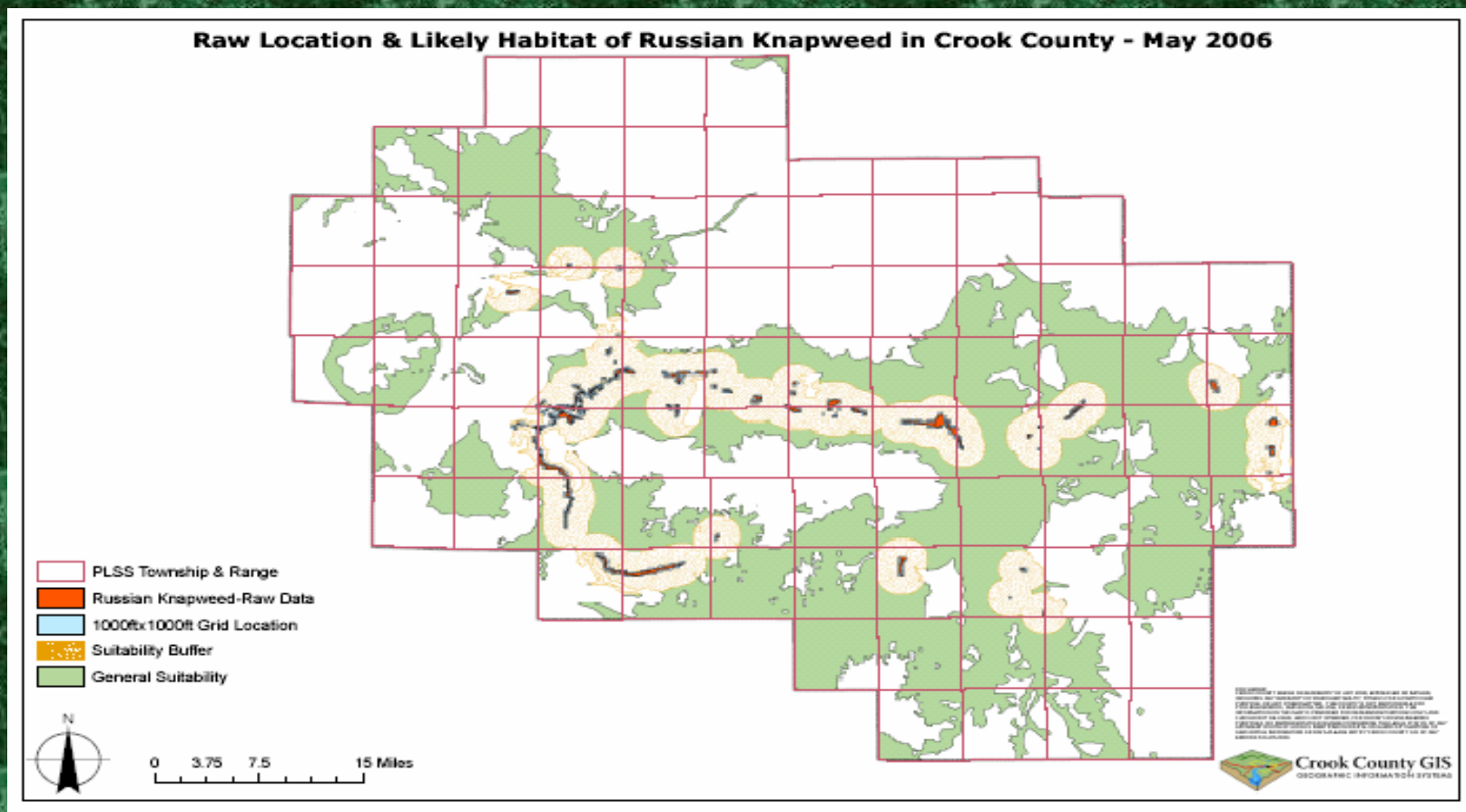
Western Wildland Environmental Threat Assessment Center (WWETAC)

Objectives:

- Multiple interacting risk assessment tool (fire tool)
- Riparian vegetation risk assessment
- Western wildland values assessment
- Pilot west-wide risk map
- Threat Assessment Techniques



Spread Predictions for Invasive Weeds in Central Oregon





Current WWETAC Activities

- Tamarisk occurrence and risk assessment for the Pacific Northwest.
- Risk models on displacement of native vegetation in sagebrush ecosystems.
- Integrated “riskshed” assessment
- Western riparian threat assessment





Policy & Environmental Impact

- *Native Plant Policy* completed & published in the Federal Register.
- Completion of *Pacific Northwest Region programmatic NEPA for the management of invasive plants (EIS)*.
- Updating the *National Forest site-specific NEPA documentation throughout the Pacific Northwest Region* over the next two years.





Communication & Outreach

- ***Free Prevention best management practices videos (DVD's)***

DVD target

Road maintenance & equipment operators

Forestry personnel

Recreation managers, biologists/hunters & anglers

Wildland firefighters

Right-of-way maintenance personnel

Status

completed

planned

planned

planned

planned

Also available at: <http://www.fs.fed.us/invasivespecies/>

- Preventing invasive plant infestation during fire activities.
- Support for education/outreach activities.





Detection & Response

- **Early detection and rapid response on National Forests**
- **National Forest Inventory & Analysis indicator**
- **Forest Health Monitoring invasive plant risk map**
- **Science based approach to detection & response**
- **Communication / outreach**





Early Detection & Rapid Response Strategy on National Forest Lands

- **Detection and reporting**
- **Identification & vouchering of specimens**
- **Rapid Assessment**
- **Planning**
- **Rapid Response**





White Clover Detection in Alaska



UGA1196184



Communication & Outreach

- **Train staff and volunteers to investigate and respond to new invaders.**
- **Coordinate cross jurisdictional treatments of invaders.**
- **Organize symposia for information exchange.**





Manage & Mitigate

- Improved herbicide management of spotted knapweed invasions.
- Biological control of tansy ragwort, leafy spurge and other invasive plants.



Biological Control of Tansy Ragwort



- Integrated cooperated effort
- Received > \$700,000 in grants
- USDA Forest Service's Center for Biological Control distributes cinnabar moth at field days.





Manage & Mitigate

- Improved herbicide management of spotted knapweed invasions.
- Biological control of tansy ragwort, leafy spurge and other invasive plants.
- Impacts of management on invasive plant distribution
- Integration of invasive plant management across a landscape... *Idaho County*
- Expansion of Cooperative Weed Management Areas





Communication / Education

- **Expansion of Cooperative Weed Management Areas (CWMA).**
 - Training and mentoring programs.
 - National Symposium on CWMA Establishment.
- **Provided > \$450,000 to develop weed management networks & biological control specialists for treating > 21,000 S&PF acres.**





Restoration & Recovery





Restoration & Recovery

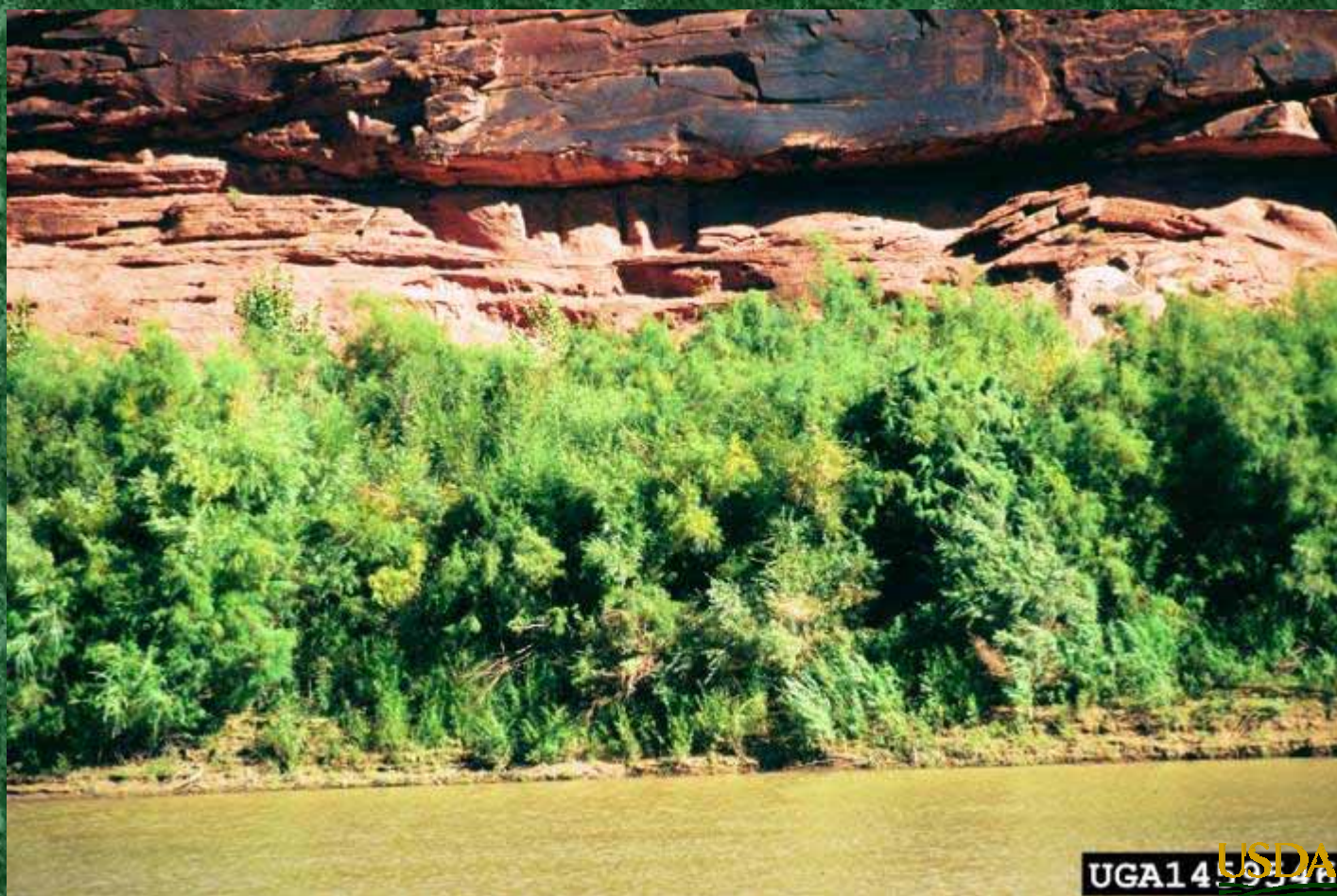
Native Plant Restoration after Disturbance





Restoration & Recovery

Invasive Plants in Southwest Riparian Systems



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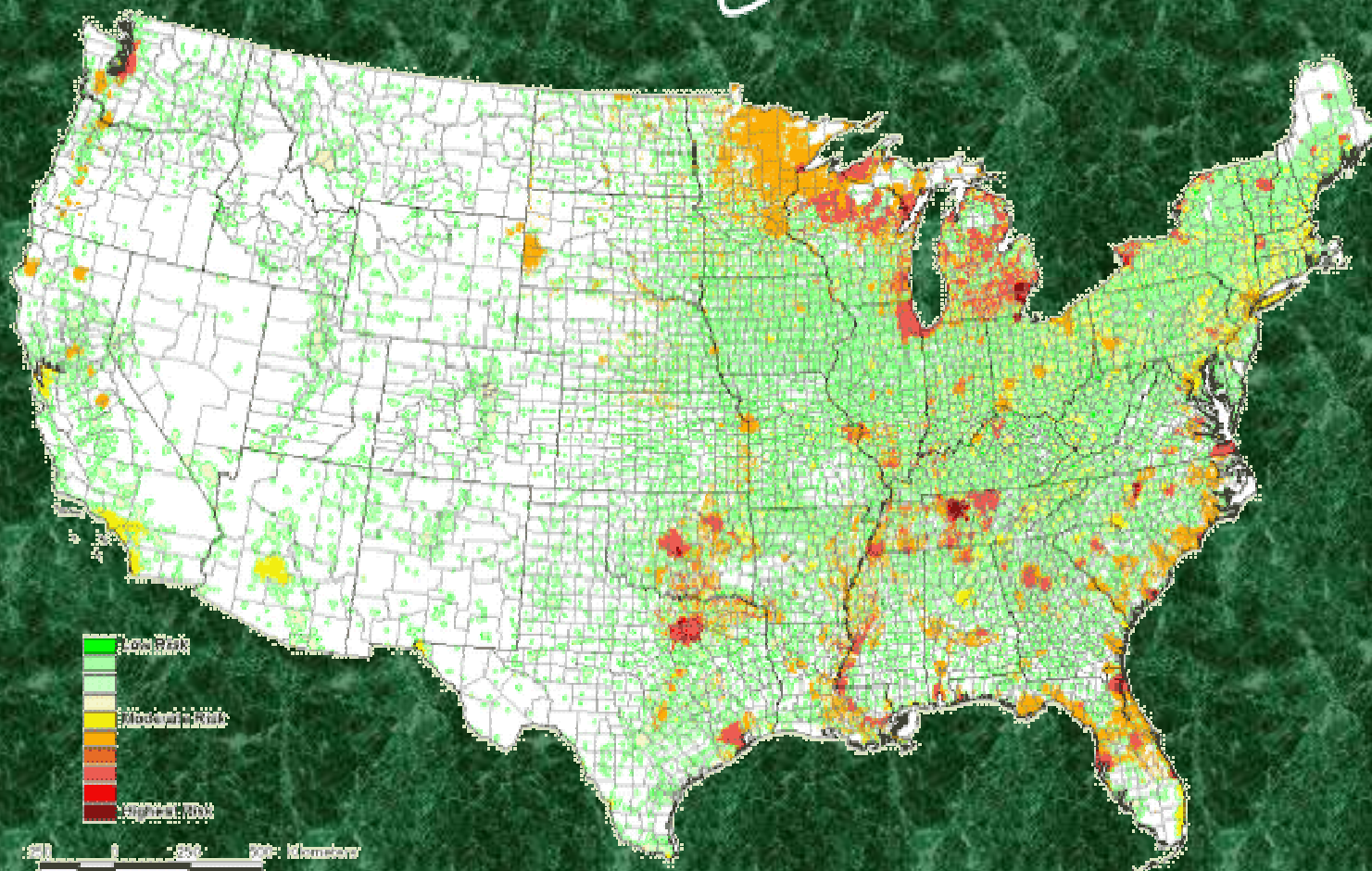
Opportunities for Action

- Expand Partnerships
- Strengthen Prevention Policies through Science
- Expand Early Detection and Expedite Responses
- Improve Prioritization Processes for Management and Restoration... *beyond species*
- Enhance Communication and Outreach





Science You Can Use



USDA





Science You Can Use

- Communicate and support our science findings and management for on-the-ground use & public knowledge





Science You Can Use

Questions?