

# HIGHWAYS as PATHWAYS

**We are the road-buildingest nation on earth. And inevitably highways affect the lives of the people, for better or for worse. Therein lies both the glory and the burden of road building.**

**Ladybird Johnson, 1993**

**I think of it as the opportunity and responsibility for 12 million acres of State, interstate, County, and municipal highway roadsides that crisscross our nation.**

# WORLD OF VEGETATION MANAGEMENT

## REGS

erosion control  
water quality  
endangered sp.  
native plants  
invasive species  
native wildflowers  
Beautification  
NEPA  
Wetld. mitigation



## USES

snow storage  
visibility  
recovery zone  
utility lines  
guardrails  
signage  
wildlife habitat  
scenic beauty  
context sensitive

# Roadsides CAUGHT IN THE MIDDLE OF

- \* Regulations

- \* Roadside uses

PLUS

- \* Public expectations

- \* Unwritten policy of nation's front yard

- \* Future of the environment.

## HOW DO WE SATISFY ALL OBJECTIVES?

# WHAT ABOUT THE VEGETATION???

## WHY NATIVE??

Hardy to local climate

Adds biodiversity

Returns natural heritage

Enhances habitat

Less maintenance

Natural beauty

## WHY NOT??

Availability

Establishment

Cost per pound

Not a quick fix

requires training

Public relations

# One MIX cannot suit all sites



- \*Takes new expertise to design.
- Requires site analysis during NEPA.
- Understanding of State's natural regions.
- New mixes are not in old specs.
- Contractors tend underbid & not order.
- Installers often do not have equipment.
- Inspectors are unfamiliar with methods.
- Site-specific mixes take more time.

# What about invasive plants/weeds?

A 60+ year study shows:

1. The weeds not removed before planting, will stay with you
2. They will compromise establishment
3. They will continue to spread

# WHAT ARE INVASIVE PLANTS???

Invasives are those introduced from another region. They have left behind their competition and become aggressive. An example is Canada Thistle, *Cirsium arvense*. It arrived in the 1600's as a contaminant in crop seed. It originated in Europe. It is now on most noxious weed lists.

# WHAT IS A NOXIOUS WEED?

A plant deemed by a State's Department of Agriculture and/or Natural Resources as HARMFUL to:

1. AGRICULTURE
2. HUMAN HEALTH
3. Or ENVIRONMENT

Most noxious weed lists are filled with invasive plants. Each State is different.



# NOXIOUS WEED LIST FACTOIDS

- 12 do not have lists.
- Many aren't enforced
- Some DOTs plant them
- MY TOP TEN INVASIVES

29-thistles/knapweeds

28-leafy spurge, purple loosestrife

13-star thistle

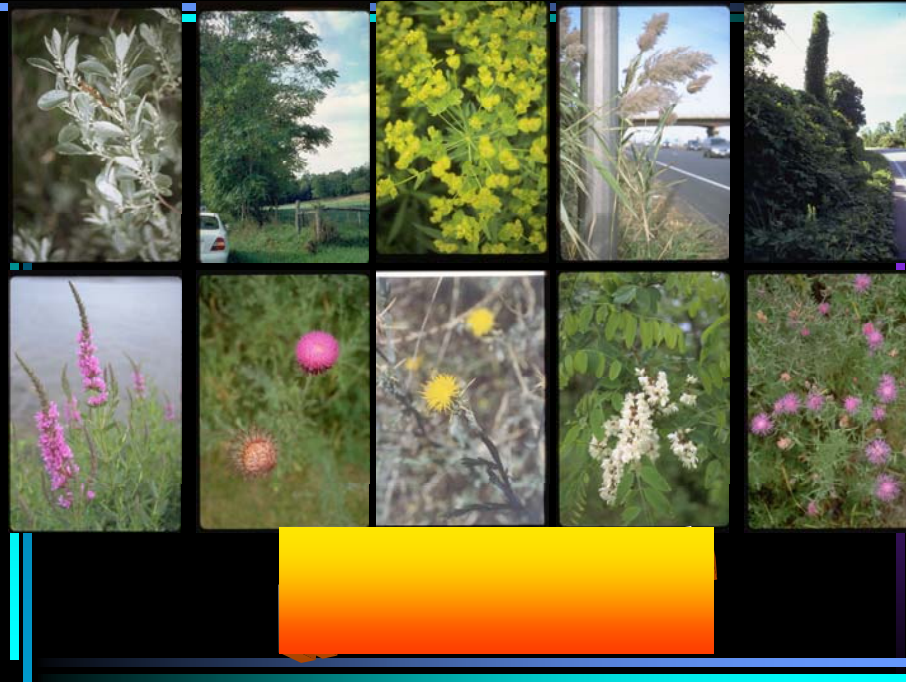
5-kudzu

2-Russian Olive, Phrag.

0-ailanthus & black locust



# MY TOP TEN



10-2002

BONNIE HARPER-LORE

# KUDZU\* , an invasive to remember:

\*Planted in the 1930's as erosion control solution on 3 M acres.

\*Grows 1' per day and tolerates range of soils and climates.

\*Found and eradicated on Portland roadside in 2002.

Invasives continue to  
adapt.

# HOW DO WE PREVENT?

- \* Minimal disturbance
- \* Specify weed-free....
- \* Clean equipment
- \* Avoid importing soils
- \* Control before construction begins
- \* Educate crews/public
- \* Partner w. neighbors



# HOW DO WE CONTROL EXISTING....

## ALL TOOLS in TOOLBOX



- \*Prescribed Burning
- \*Monitored Biocontrols
- \*Recorded Spraying
- \*Well-timed Mowings
- \*Herded Goats/Sheep
- \*Planted native grasses
- \*Hand-cutting/pulling

# AND DO NOT PLANT INVASIVES.....

Intentionally planted invasives are used for ornamental purposes, erosion control, some habitat plantings, & some mitigation efforts.

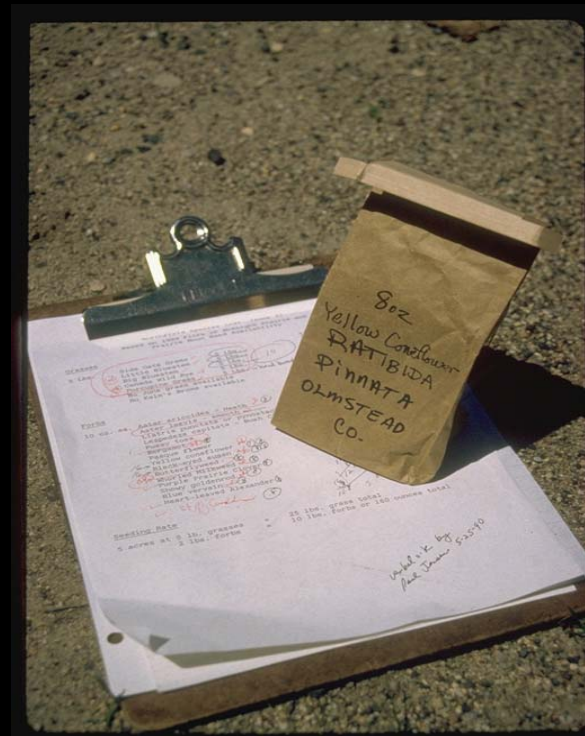
**FOR EXAMPLE:** sweet clover, Russian Olive, smooth brome, crownvetch, reed canary grass, oxeye daisy, bush honeysuckles, etc.

**READ:** *Invasive Plants, Weeds of the Global Garden*, 1996. Brooklyn Botanic Garden, NY

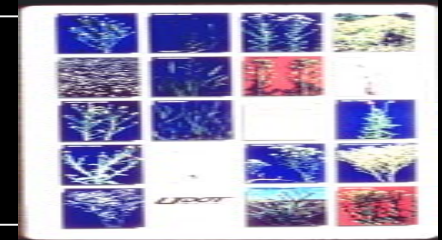


# HOW TO PLANT NATIVE GRASSES

1. ANALYZE SITE
2. FIND A MODEL
3. DESIGN MIX
4. WRITE SPECS
5. MONITOR  
INSTALLATION
6. KEEP RECORDS
7. SPOT SPRAY  
WEEDs, mow/burn



# EDUCATION NEEDS:



## CREWS/CONTRACTOR

- Identification
- Understand benefits
- Reduce maintenance
- Recognize efforts
- Demonstration plots
- State agencies
- The Nature Conservancy

## THE PUBLIC

- \* Brochures
- \* Posters for schools
- \* Adopt-a-spot
- \* Rest area gardens
- \* Local media
- \* Earth Day event
- \* Presentations to Orgs



## HOW FHWA CAN HELP:

- [WWW.FHWA.DOT.GOV/ROADSIDES](http://WWW.FHWA.DOT.GOV/ROADSIDES)
- *Greener Roadsides*, a newsletter
- Native and Invasive Plant Handbooks, Invasive and Native field guides, Earth Day planners. Veg.Mgt. Brochure
- \* Funding field demonstrations/research

[WWW.FHWA.DOT.GOV/roadsides](http://WWW.FHWA.DOT.GOV/roadsides)

## Roadside Vegetation Management

What was once the FHWA Wildflower Program has evolved to a holistic roadside program. If it is green and growing on Interstate or State highway rights-of-way, we are interested.

Roadside rights-of-way account for more than 10 million acres of land in the United States. This land requires care that: assures water quality, improves erosion control, increases wildlife habitat, reduces mowing and spraying, enhances natural beauty, controls noxious weeds, and protects natural heritage - all objectives of vegetation management.

The FHWA Roadside Vegetation Program serves as a technical resource for this care of the land, or vegetation management.

10-2002

BONNIE HARPER-LORE

# WHAT ARE WILDFLOWERS?

*Native* wildflowers include forbs and grasses that occurred in a region before European settlement.

Do not include naturalized or garden flowers (introduced or hybrids).

## *Wildflowers & the Federal-Aid Highway Program*

Native wildflowers (forbs and grasses) and other native plants provide a sense of place, and enjoyment of our Nation's landscape. The growing concern for our natural heritage has generated an increasing interest in their preservation and restoration in highway corridors. Some 12 million acres of roadside rights-of-way offer conservation opportunity. Existing programs support them

# Operation Wildflower

Under this program a garden club may pay for or furnish native wildflower seeds or seedlings to a State Highway agency for planting. The agency provides land, labor, expertise and care.

# STURAA

**The Surface Transportation and uniform Relocation Assistance Act became effective on April 1987. It contains a mandatory requirement that native wildflower seeds or seedlings or both be planted as part of landscaping projects undertaken on the Federal-aid highway system. At least one-quarter of one percent of the funds expended for a landscaping project must be used to plant native wildflowers on that project. A landscaping project involves any action taken as part of a highway construction project or as a separate action to enhance the esthetics of a highway, including erosion control, revegetation, etc.**

# OTHER PROGRAM EFFORTS

Native wildflowers are being grown and preserved along the highway rights-of-way under other program initiatives instituted by the States. Such programs include: Roadsides for Wildlife, Wildflower Routes, Botanical Areas, wetland creation, follow-up to invasive plant control, and more. Additionally, native plants are part of beautification efforts of Adopt-A-Highway and Adopt-A-Spot. Six central States have combined efforts to restore and protect their cultural and natural heritage through the Prairie Passage project. This kind of flexibility in conservation efforts is encouraged as our natural heritage declines and wildlife habitats diminish.



# For more Roadside Wildflower Info:

Subscribe to:

## *Greener Roadsides*

A FHWA quarterly newsletter for roadside decision-makers, corridor neighbors and highway users.

Email address to:

[bonnie.harper-lore@fhwa.dot.gov](mailto:bonnie.harper-lore@fhwa.dot.gov)



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