

# Charting the Future for NC-IPC: A Discussion

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and the NC-IPC Board

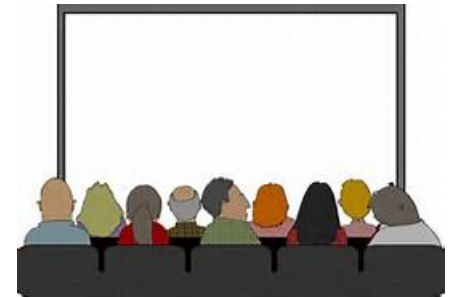
NC-IPC Annual Meeting  
March 10-11, 2016  
Salisbury, NC



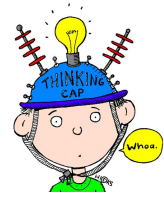
# NC-IPC History and Ongoing Activities

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- NC-EPPC founded in 1999
- Changed to NC-IPC in 2013
- Annual meetings since 2000
- Outreach (e.g., Green and Growing, Earth Day, Native Plant Society, and other)
- Public presentations
- Maintain a website
- Give awards & grants



# What else can we or should we be doing?



# What other groups are doing

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# Florida - EPPC

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- Bylaws
- Checklist
- CISMA Grant
- **Control & Evaluation**
- Editorial
- Education Grant
- Finance
- Legislative
- Membership
- Merchandise
- Nominations
- **Outreach**
- Plant Industry Liaison
- **Listserv**
- **Plant List**
- Research Grant
- Strategic Planning
- Symposium (3 comm.)
- Vendor
- Website (2 comm.)
- SE & NA-EPPC representatives
- Species Task Force



# List of Invasive Plant Species

- Category I and Category II species
- Unpublished Hold cat.
- Updated every 2 years
- Evaluation process
  - Vouchered specimens
  - County distribution
  - Description of impacts
  - Few other details
  - NOT score-based
  - Fieldtrips
  - Vote

## Florida Exotic Pest Plant Council's 2013 List of Invasive Plant Species

**Purpose of the List:** *To focus attention on —*

- ▶ the adverse effects of exotic pest plants on Florida's biodiversity and native plant communities,
- ▶ the habitat losses in natural areas from exotic pest plant infestations,
- ▶ the impacts on endangered species via habitat loss and alteration,
- ▶ the need for pest plant management,
- ▶ the socio-economic impacts of these plants (e.g., increased wildfires or flooding in certain areas),
- ▶ changes in the severity of different pest plant infestations over time,
- ▶ providing information to help managers set priorities for research and control programs.

### CATEGORY I

Invasive exotics that are altering native plant communities by displacing native species, changing community structures or ecological functions, or hybridizing with natives. *This definition does not rely on the economic severity or geographic range of the problem, but on the documented ecological damage caused.*

Scientific Name	Common Name	FLEPPC Category	Gov. List	Regional Distribution
<i>Abrus precatorius</i>	rosary pea	1	N	C, S
<i>Acacia auriculiformis</i>	earleaf acacia	1		C, S
<i>Albizia julibrissin</i>	mimosa, silk tree	1		N, C
<i>Albizia lebbekii</i>	woman's tongue	1		C, S
<i>Ardisia crenata</i> ( <i>A. crenulata</i> misapplied)	coral ardisia	1		N, C, S
<i>Ardisia elliptica</i> ( <i>A. humilis</i> misapplied)	shoebutton ardisia	1	N	C, S
<i>Asparagus aethiopicus</i> ( <i>A. sprengeri</i> ; <i>A. densiflorus</i> misapplied)	asparagus-fern	1		N, C, S
<i>Bauhinia variegata</i>	orchid tree	1		C, S
<i>Bischofia javanica</i>	bishopwood	1		C, S
<i>Calophyllum antillanum</i> ( <i>C. calaba</i> misapplied)	santa maria, mast wood, Antilles calophyllum	1		S
<i>Casuarina equisetifolia</i>	Australian-pine, beach sheoak	1	P, N	N, C, S
<i>Casuarina glauca</i>	suckering Australian-pine, gray sheoak	1	P, N	C, S
<i>Cinnamomum camphora</i>	camphor tree	1		N, C, S
<i>Colocasia esculenta</i>	wild taro	1		N, C, S
<i>Colubrina asiatica</i>	lather leaf	1	N	S
<i>Cupaniopsis anacardioides</i>	carrotwood	1	N	C, S
<i>Deparia petersenii</i>	Japanese false spleenwort	1		N, C
<i>Dioscorea alata</i>	winged yam	1	N	N, C, S
<i>Dioscorea bulbifera</i>	air-potato	1	N	N, C, S
<i>Eichhornia crassipes</i>	water-hyacinth	1	P	N, C, S
<i>Eugenia uniflora</i>	Surinam cherry	1		C, S
<i>Ficus microcarpa</i> ( <i>F. nitida</i> and ...)	laurel fig	1		C, S

### FLEPPC List Definitions:

**Exotic** – a species introduced to Florida, purposefully or accidentally, from a natural range outside of Florida.

**Native** – a species whose natural range includes Florida.

**Naturalized exotic** – an exotic that sustains itself outside cultivation (it is still exotic; it has not "become" native).

**Invasive exotic** – an exotic that not only has naturalized, but is expanding on its own in Florida native plant communities.

### Abbreviations:

Government List (Gov. List):  
P = Prohibited aquatic plant by the Florida Department of Agriculture and Consumer Services;

N = Noxious weed listed by Florida Department of Agriculture & Consumer Services;

U = Noxious weed listed by U.S. Department of Agriculture.

Regional Distribution:

N = north, C = central, S = south, referring to each

## Assessment of non-natives in Florida Natural areas

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- Purpose: Decrease invasions by ensuring UF faculty don't recommend plants with invasive charac.
- Used by: Extension staff, Fl. Dept. of Ag.
- 3 tools
  - Predictive tool:
  - Status assessment:
  - Intraspecific taxon protocol:
- Evaluation committee, Inv Plant Working Group
- Review extension publications to ensure compliance

# Status Assessment

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- 5 sections
  - Where the plant is invading
  - Ecological impacts
  - Potential for expansion
  - Difficulty of Management
  - Economic Value
- Three geographic regions of Florida
- Requires 3 experts for each regions familiar with the species
- Assessment confined to species that invade natural areas that are minimally disturbed by people.

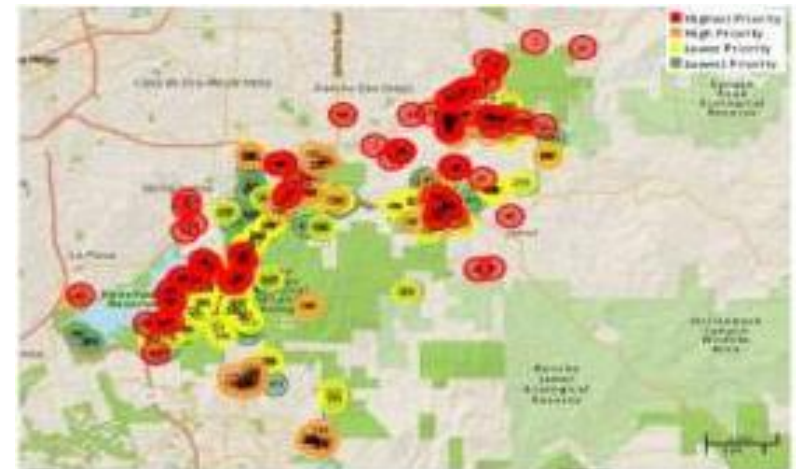




# California – Invasive Plant Council

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- ID cards for invasive species
- EDRR resources
- Weed management strategies
- Annual symposium
- CalWeedMapper
- Training
- Whippet
- CA Invasive Plant Inventory





# California Invasive Plant Inventory

- Evaluations use published lit and field reports
- Consider cumulative impacts
- Publically reviewed
- Ranked high, moderate, limited (Alert)
- Factors considered
  - Ecological impact
  - Invasive potential
  - Distribution
  - Documentation level

Table 2. Criteria, Section, and Overall Scores

	Overall Score ? <b>Moderate</b>	Alert Status ? <b>No Alert</b>	Documentation ? <b>1.8 out of 5</b>
	Score	Documentation	
1.1 Impact on abiotic ecosystem processes ?	B. Moderate	Other Published Material	<b>Impact ?</b>
1.2 Impact on plant community ?	A. Severe	Reviewed Scientific Publication	Four-part score <b>BABD</b>
1.3 Impact on higher trophic levels ?	B. Moderate	Reviewed Scientific Publication	Total Score <b>B</b>
1.4 Impact on genetic integrity ?	D. None	Reviewed Scientific Publication	
2.1 Role of anthropogenic and natural disturbance in establishment ?	A. Severe	Reviewed Scientific Publication	<b>Invasiveness ?</b>
2.2 Local rate of spread with no management ?	A. Increases rapidly	Reviewed Scientific Publication	Total Points <b>18</b>
2.3 Recent trend in total area infested within state ?	B. Increasing less rapidly		Total Score <b>A</b>



Goal: Promote non-invasive plants in partnership with the horticultural industry to protect California's natural beauty, wildlife and communities.

- Plant Risk Evaluation (PRE model)
- Retail nursery partnerships
- Suggested alternatives for invasive plants
- Nursery survey program

### Suggested Alternatives for Invasive Garden Plants

PlantRight's 2015 list of horticultural invasive plants identifies the 10 highest priority invasive plants available for sale in California. If one of these ten plants (in red) is invasive in your climate zone, consider the beautiful, non-invasive alternatives below that can fill the same role in your garden or landscape.

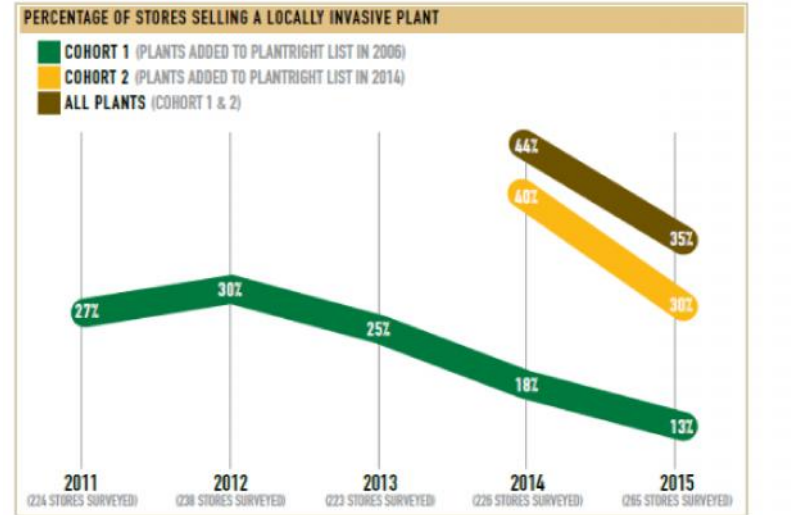
Thank you for joining us to protect California's environment by Planting Right!



✓ = non-invasive    Ⓐ = drought tolerant    🌻 = California native plant

Invasive Photos	Suggested Alternatives	Featured Information	Climate Zones	
	<b>Invasive Plant: Green Fountain Grass (<i>Pennisetum setosum</i>)</b> Oriental fountaingrass ( <i>Pennisetum orientale</i> ) Pennisetum setosum 'Rubrum', 'Skyscraper', 'Fireworks & Fairy Tale' Purple fountaingrass ( <i>Pennisetum macrostachyum</i> 'Rubrum') California fescue ( <i>Festuca californica</i> ) Pink Muhly ( <i>Muhlenbergia caudata</i> 'Royal Muse')		Compact, floriferous, cold hardy, very similar aesthetic and habit, drought tolerant Sterile cultivars, very similar aesthetic and habit, drought tolerant Sterile cultivar with stunning burgundy leaves, trim in winter for bright red new foliage Native, drought and shade tolerant grass, needs good drainage, tolerates mowing Fluffy pink cloud-like blooms, most tolerant, needs drainage, good in masses	
	<b>Invasive Plant: Mexican Feathergrass (<i>Stipa leucostachya</i>)</b> Blue grass ( <i>Stipa leucostachya</i> 'Blonde Ambler') Alkali sacaton ( <i>Sporobolus airoides</i> ) Mexican deer grass ( <i>Muhlenbergia dubia</i> ) White seen muhly ( <i>Muhlenbergia capillaris</i> 'White Cloud') Autumn moor grass ( <i>Scaligeria autumnalis</i> )		Attractive flowerheads, native, best when cut back in winter Robust yet slower growing, native, does well in a range of soils, drought tolerant Semi-evergreen mounder, likes well-drained soils, good on masses, drought tolerant Fluffy white cloud-like flower heads, easy care, drought tolerant Neat clumper, good en masse, drought tolerant, tough	
	<b>Invasive Plant: Pampas Grass (<i>Cortaderia selloana</i>)</b> Pampas reed grass ( <i>Cortaderia selloana</i> 'Australia King Fernier') Deer grass ( <i>Muhlenbergia rigens</i> ) Lomandra hybrid 'Katie Belle' and 'Tropicbelle' Giant sacaton grass ( <i>Sporobolus airoides</i> ) Lindheimer's muhly grass ( <i>Muhlenbergia lindheimeri</i> )		Stately white plumes from summer until frost, drought tolerant, durable and showy Native, drought tolerant, smaller form with simple, clean plumes, easy to grow Tidy, tough, drought tolerant, 4 ft. with low spring/summer flowers, not for salty soils Graceful plumes to 7 ft., 3-4 ft. foliage, tough, evergreen, drought tolerant Deciduous 4 ft. foliage, 5 ft. with plumes, drought tolerant but appreciates extra water	
	<b>Invasive Plant: Water Hyacinth (<i>Eichhornia crassipes</i>)</b> King of Siam water lily ( <i>Nymphaea 'King of Siam'</i> ) Pickering weed ( <i>Polemonium cordatum</i> ) Cape pondweed ( <i>Sparganium distachyoides</i> )		Large, double purple flowers, floating leaves, roots in bottom soil Similar flowers, not free-floating, good in ponds, winter dormant, spreads vegetatively Bright fragrant flowers, foliage floats on water, dormant in winter	
	<b>Invasive Plant: Yellow Water Iris (<i>Iris pseudacorus</i>)</b> Camia species ( <i>Camia hybrid</i> ) Japanese iris ( <i>Iris ensata</i> and cultivars) Laevigata iris ( <i>Iris laevigata</i> and cultivars)		Many colors and sizes available, robust in ponds, needs to be wintered indoors Best on pond margins, not to be submerged, showy flowers Grows in shallow water, available flower colors are purple, red or white, poisonous	

Photos: (1) John Randall - The Nature Conservancy, (2) Peter Coombes - ARS, (3) Eric Coombes - Arthur Chapman, (4) Ted Carter - USDA, (5) Bob Welch, (6) Peter Coombes - ARS, (7) Brian A. Hill - The Nature Conservancy, (8) Chris Frank - Wood WARR Action Plan





# Maryland Dept. of Agriculture

- 2011: The Invasive Plants Advisory Committee:
- Advise the Sec. of Ag. on regulating invasive plants and preventing their introduction
- Ag, DNR, DOT officials, industry, academia, & other experts
- They use the PPQ WRA + MD filter
- Tier 1 Plants: Prohibited
- Tier 2 Plants: Require signage

## Weed Risk Assessments

- *Euonymus alatus* (burning bush)
- *Ficaria verna* (fig buttercup)
- *Geranium lucidum* (shining cranesbill)
- *Iris pseudacorus* (yellow flag iris)
- *Ligustrum obtusifolium* (blunt-leaved or border privet)
- *Wisteria* spp. (Chinese wisteria, Japanese wisteria, floribundaX sinensis hybrids)

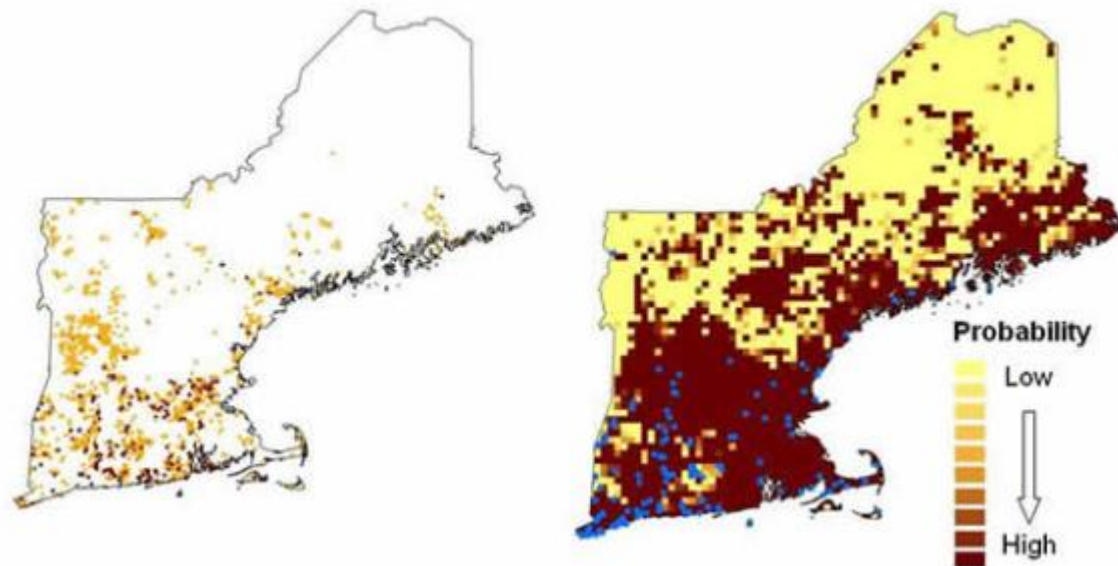




# Invasive Plant Atlas of New England

- Volunteer-based project to map and monitor invasive sp.
- Hundreds of trained volunteers = presence & absence data
- Used for EDRR, management decisions, predictive models
- Smartphone app → EDDMaps

*Celastrus orbiculatus*





# Tennessee - EPPC

- Host a variety of seminars
- Developed canned PPT presentations
- Gravel & sand pit certification
- Other resources
- Landscaping alternatives

## Exotic Pest Plant

## Native Plant Alternative(s)

SCIENTIFIC NAME	COMMON NAME (ORIGIN)	SCIENTIFIC NAME	COMMON NAME	CULTIVAR	WILDLIFE VALUE
<b>TREES</b>					
1 <i>Allanhus altissima</i>	<b>Tree-of-heaven</b> (China): fast growth, compound foliage, showy seed clusters, poor soil	<i>Juglans nigra</i> <i>Rhus</i> spp.	<b>Black Walnut:</b> compound foliage, nuts, poor soil <b>Sumac:</b> fast growth, compound foliage, fall color, showy fruit clusters, poor soil	yes yes	mammals, birds, butterflies/moths bees, birds, butterflies
		<i>Ptelea trifoliata</i> <i>Fraxinus americana</i> & <i>F. quadrangulata</i>	<b>Hoptree, Wafer Ash:</b> compound foliage, seed clusters <b>White Ash &amp; Blue Ash:</b> compound foliage, seed clusters, fall color, seedless white ash cultivar 'Autumn Purple'	yes yes	birds, butterflies birds, butterflies
1 <i>Albizia julibrissin</i>	<b>Mimosa</b> (Asia, Mid East): fast growth, compound foliage, fragrant pink flower clusters, umbrella shape	<i>Robinia hispida</i> <i>Cercis canadensis</i> <i>Cornus florida</i> <i>Chionanthus virginicus</i>	<b>Rose-acacia Locust:</b> compound foliage, shrubby habit, pink flower clusters, poor soil <b>Redbud:</b> fast growth, showy pink flowers, umbrella shape <b>'Appalachian Spring' - Flowering Dogwood:</b> showy flowers, fruit, fall color, form, anthracnose resistant <b>Fringe Tree:</b> showy fragrant flowers, fruit (female)	yes yes yes	bees, butterflies bees, butterflies birds, bees, butterflies birds



# Tennessee - EPPC

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- Ranked Invasive Plant List
  - Severe Threat = invasive traits, spread easily, displace natives
  - Significant Threat = invasive traits; don't spread as easily
  - Lesser Threat = spread in or near disturbed areas
  - Watch list
- Watch list:
  - *Elaeagnus multiflora* – Cherry Silverberry
  - *Ficaria verna* – Lesser Celandine, Fig Buttercup
  - *Youngia japonica* – Oriental False Hawkweed
  - *Paederia foetida* – Skunkvine

# A Group Discussion

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- Goal: Better understand the interests of NC-IPC members, especially which additional activities are most important
  - Your needs and ideas
  - How can NC-IPC make a stronger impact
- Goal: Get members' ideas and support for *implementing* the most important activities
  - Evaluate which projects are more feasible
  - Where are you willing to help out?
- An online survey
  - Sent it out to 200, 18 responded
  - Posted some ideas, and organized them into 3 groups



# Summary of Online Survey

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Project types were ranked from 1 to 3, where 1 was the most important

Category	Avg. Rank
Education & outreach	1.6
Plant lists and related actions	1.8
Networking & other services	2.7

# Summary of Online Survey: Education & Outreach

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Projects were ranked from 1 to 4, where 1 was the most important.

Project	Avg. Rank
Develop standard presentations & other materials for outreach & education	2.36
Develop specific fact sheets (status, biology, control strategies) for web and print	2.43
Organize public demonstrations of invasive plant control	2.79
Conduct educational field trips demonstrating impact of invaders on the NC environment	2.43

# Education & Outreach Discussion

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Develop standard presentations & other materials  
for outreach & education

- What kinds of educational materials?
- To whom should these materials be directed (i.e., is there a specific audience)?

# Summary of Online Survey: Plant Lists

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Projects were ranked from 1 to 4, where 1 was the most important.

Category	Avg. Rank
Develop and maintain a categorized list of NC invasive plant species	1.9
Identify potential NC invaders not yet here for early detection	3.0
Work with NC growers to identify invaders for phasing out of cultivation	2.3
Identify non-invasive options for invasive plants commonly cultivated in NC	2.9

# Plant Lists Discussion

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Develop and maintain a categorized list of NC invasive plant species

- What should be the goal of the list?
- What kinds of categories would be most useful for you and other users of this list?

# Summary of Online Survey: Networking & Other Services

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Projects were ranked from 1 to 4, where 1 was the most important.

Category	Avg. Rank
Create an email listserv and/or forum for invasive species discussions	2.2
Organize statewide volunteer surveys for invasive plant detection and mapping	2.4
Develop an Early Detection and Rapid Response (EDRR) system	3.0
Organize volunteer invasive plant removal workdays on conservation lands	2.4

# Other Services Discussion

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Create an email listserv and/or forum for  
invasive species discussions

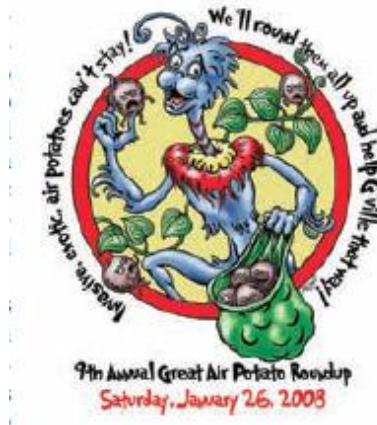
- What would you want to get out of it?

# Other Services Discussion

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## Organize volunteer invasive plant removal workdays on conservation lands

- If we were to organize such a program, what should we try to achieve and how can we get the most out of it?





# Moving Forward

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- Diversifying NC-IPC programs, activities, and services
- Board hasn't met to discuss the survey results
- NC-IPC is a volunteer-based organization
  
- Creating a listserv (Networking & Other Services)
- Develop materials for outreach (Ed. & Outreach)
- Maintaining a categorized NC Invasive Plant List (Plant Lists)