



Introduction

Landscaping and restoration projects can generate large amounts of waste plant and soil material that contains viable invasive plant propagules. This material must be appropriately managed or it could contribute to the re-establishment and spread of the invasive pest at the work site, disposal site – or anywhere in between or beyond.

This information focuses on the disposal of invasive plant material after control takes place. The guidelines are to help you use safe, expedient and legal methods to dispose of invasive terrestrial plants and plant materials specific to Florida, as part of your maintenance and control activities. For information on invasive plant control techniques, visit the website of the Florida Exotic Pest Plant Council (www.fleppc.org) or your

County Cooperative Extension Service (solutionsforyourlife.ufl.edu/map/index.html). Remember that each situation is unique and this document is intended only as a basic guide.

Plants are likely to become established in more than one way. Plants that are “thrown away” may still grow. Many fruits and seeds can continue to mature even on plants that have been uprooted. Pieces of those plants types that propagate from cuttings (such as wedelia or taro) may take root without appropriate precautions. You are encouraged to learn about the plants you have. It is best to control plants before they begin to flower or produce seed, so check plants for flowers, fruits and seeds before deciding on a disposal option.

Never assume that “Once Does It.” The only way to stay ahead in the struggle against plant invasion is through repeated treatment. It is very important to continue to monitor work sites and disposal sites. It may take several years of repeated treatment and removal to get rid of a plant invasion.

Legal Notes

Federal, state, county and municipal regulations determine what you may legally do. Be sure to do your own investigation for your area.

Most state laws regarding waste removal are found in Florida Statutes Title XXIX Chapter 403 and Administrative Codes 35-581, Rule Ch.5B. In Florida, the main state agencies that regulate invasive plant removal are the Department of Agriculture and Consumer Services (DACS), and the Department of Environmental Protection (DEP).

◆ DACS Division of Plant Industry (DPI) administers plant industry related issues, including plant movement, noxious weed controls, and the different certification programs for many yard maintenance-related activities. DPI requires a permit to multiply, possess, move, or release any arthropod, plant pest, biological control agent, noxious weed, or invasive plant, except when the possession of such has resulted from natural dispersion and there is neither danger of nor intent to further disperse the organism.

Regarding plants, DPI recommends double bagging, enclosing in a sealable container, and transporting in a closed or tightly covered vehicle.

◆ DACS Florida Forest Service (FFS) regulates burning, including brush pile fires. Local regulations have to work within FFS rules.

◆ DEP Division of Waste Management oversees landfill regulations.

Note that there is no central resource from which to navigate this issue. See the back page for a few resource suggestions.



Woody Materials, Branches, Stems and Most Whole Plants — No Flowers or Fruits or Viable Parts

Some large stumps and branches may require special disposal. Contact your town for more information about appropriate options.

Method	Description
Air dry	Small tree and shrub seedlings can be pulled and left with roots exposed to dry out. This material can be left on site or it may be composted once it is fully dead and dried. Do not use this method on plants that can re-grow from vegetative parts.
Chip and compost	Chip and use as mulch on site as much as possible, or add to compost once fully dead and dried. Do not send to a commercial or municipal compost site. Composting at 131°F for three continuous days kills most plant propagules, but note that this is not 100% effective. If seeds or flowers are present , chip woody material, but do not compost; see page 3. For instructions on composting see publications on the www.dep.state.fl.us/waste/quick_topics/ site.
Construct brush piles	Collect materials into single or multiple piles. Make sure all material is dead and dried; if this is not the case, or if flowers or seeds are present, cover the piles to prevent spread by birds and other means. Check myfwc.com for information about building brush piles for wildlife from the Florida Fish and Wildlife Conservation Commission. Note: brush piles may create ideal habitat for mice, rats and ticks. Do not construct brush piles near areas of human habitation. Also, consider laying a liner under the brush pile if there are any concerns about regrowth.
Gather material and burn in place	Burn only in accordance with all federal, state, and local laws and ordinances and permits. Monitor weather conditions prior to ignition to avoid hazardous fires. Remember that smoke from some plants, such as Brazilian pepper (<i>Schinus terebinthifolia</i>), contains toxic irritants.
Use as firewood	Use as firewood locally. Moving firewood long distances may spread invasive insects. Visit www.dontmovefirewood.org for more information. For regulatory information, see 5B-65, FAC (www.flrules.org/gateway/ChapterHome.asp?Chapter=5b-65). See earlier note about smoke.
Special note for vines	It is generally not necessary, and sometimes not possible, to remove vines that are caught high in trees or wrapped tightly around tree trunks. For vines without aerial roots, cut the vine thoroughly at the base; when it dies, the plant above the cut will gradually break apart and fall out of the tree. Dead and dried fallen fragments may be composted, if appropriate, or gathered for other disposal methods. Vines with aerial roots can receive foliar herbicide treatment and be left in place.



Punktree
Melaleuca quinquenervia

About Bags

Many municipalities offer yard waste composting. The use of these facilities is encouraged where possible, but do not assume that you have “conventional yard waste.” When bagging yard waste, choose the right bags for disposal.

◆ For composting, use biodegradable or compostable bags, which come in paper and in plastic forms.

Paper: The paper in compostable yard debris bags is made by the kraft process, which produces stronger paper. A kraft paper yard waste bag usually has two layers (2-ply), is usually flat-bottomed

and free-standing, can hold up to 30 gallons or to about 50 pounds of material when dry, but is not fully moisture or tear resistant.

Plastic: The Biodegradable Products Institute (BPI), provides an independent certification program for products. The word “compostable” should be on the package. Compostable plastic bags are usually clear or tinted a translucent shade. Check the ratings for decomposition time.



◆ For bagging non-compostable waste, such as air potatoes or ardisia seeds, polyethylene-based plastic bags are probably best, as they are not biodegradable and cannot be composted with the yard waste or burned. When tied off securely and left in the sun, these bags can be used to sterilize or decompose waste materials over time (a “bag & bake” disposal method).



Antigonon leptopus
CORAL VINE; QUEEN'S JEWELS
Keith Bradley/USF



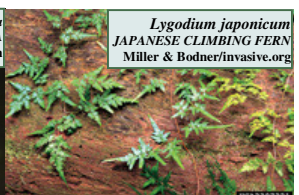
Colocasia esculenta
WILD TARO
FWC



Asparagus aethiopicus
SPRENGER'S ASPARAGUS-FERN
RRowe



Begonia cucullata
WAX BEGONIA
Shirley Denton



Lygodium japonicum
JAPANESE CLIMBING FERN
Miller & Bodner/invasive.org

Plants with Flowers, Fruits, Seeds, Spores or Bulbils, and Plants Whose Fragments Stay Viable

While plant removal is best done before a plant has the opportunity to reproduce, don't underestimate the value of removing flowers, seeds and other reproductive material. Collect flowers, seed pods, tubers, and loose seeds when possible. Incinerate if you can, or "bag & bake."

Method	Description
Leave on site	When there are flowers or fruit, minimize movement of the plants to prevent the unnecessary dispersal of seeds. Leave or pile treated plants on site if possible. Do not compost on site and do not bring to a transfer station, compost site, or brush processing site that may compost or mulch the material.
Incinerate	Incineration of material may be a viable option if it can be transported securely to an incinerator. Contact your local authorities to find out if your solid waste or trash is incinerated, and if so, how it is to be bagged for transport.
Bag and dispose	Do not compost. Bag all material in polyethylene plastic or in long-term compostable bags, allow to rot in a sunny location for several weeks, ("bag & bake"), and then dispose of in trash. <i>If volume of material is too large to bag</i> , pile on a plastic or clay liner and cover securely. Alternatively, collect flowering heads, secure in plastic bags and "bag & bake" before disposing in trash; wait until the following year to attempt a broader control and disposal effort before flowering starts again.
Special note for grasses and sedges	Even with a thorough check, it may be difficult to tell if a grass is flowering or producing seed. Treat all invasive grasses as if they have already begun to produce viable seeds and as if they can spread by rhizomes. Bag all material and allow to rot in a sunny location for several weeks, then dispose of in regular trash or have it incinerated. Leave grass clippings from lawn-mowing in the yard. <i>Do not forget that grass clippings created from lawn-mowing may not be disposed of in solid waste streams or go to landfills; this would be a violation of regulations found in</i>



Air-potato
Dioscorea bulbifera

Composting Exceptions

Many invasive plants can be composted once dead and dried, but some species should **not** be composted at all because they have parts, such as stems, roots, or spores, that may survive in compost and spread to new locations when the compost is distributed.

Use of these plants in brush piles is also not advisable unless a barrier is added to prevent the plants from contacting the ground and re-rooting.

Note: This is not a complete list! Check plant information before composting.

Scientific Name	Common Name	Vegetative spread method
<i>Antigonon leptopus</i>	Coral vine	plant body fragments
<i>Aparagus aethiopicus</i>	Aparagus fern	root tuber fragments
<i>Ardisia crenata</i>	Coral ardisia	stem fragments
<i>Arundo donax</i>	Giant reed	rhizomes
<i>Begonia cucullata</i>	Wax begonia	plant body fragments
<i>Bischofia javanica</i>	Bishopwood	plant body fragments
<i>Broussonetia papyrifera</i>	Paper mulberry	green wood fragments
<i>Colocasia esculenta</i>	Taro	plant body fragments
<i>Dioscorea</i> spp.	Air potato, white yam	bulbils ("potatoes") at leaf nodes
<i>Macfadyena unguis-cati</i>	Cat's-claw vine	rooting stem nodes
<i>Nephrolepis cordifolia</i> *	Tuberous sword fern	stolons, tubers, rhizomes
<i>Paedera</i> spp.	Skunkvine, sewervine	rooting stem nodes
<i>Pueraria montana</i>	Kudzu	rooting stem nodes
<i>Ruellia blechum</i>	Browne's blechum	stem cuttings
<i>Sphagneticola trilobata</i>	Creeping ox-eye daisy	plant body fragments
<i>Syngonium podophyllum</i>	Arrowhead vine	stolons, tubers, rhizomes
<i>Tradescantia fluminensis</i>	Small-leaf spiderwort	stolons, stem nodes

* It is best to not compost any fern unless you are certain it is native to Florida.



Sapium sebiferum
CHINESE TALLOW
floridinvasives.org



Imperata cylindrica
COGONGRASS
RD.Wallace/Bugwood.org



Ardisia crenata
SCRATCHTHROAT
sydneyweeds.org.au



Dioscorea bulbifera
AIR POTATO
Ed Weislo/floridasnature.com



Schinus terebinthifolia
BRAZILIAN PEPPER
Ed Weislo/wildflorida.net

Florida's *DOs* and *DON'Ts*

- Do** use biodegradable bags for compostable materials.
- Do** use designated deposit and burial sites provided by your local government.
- Do** take advantage of your local “Toxic Roundup“ program for waste pickup.
- Do** contact your county or city waste management utility or extension agent and learn your local regulations and the disposal sites designated for plant waste.
- Do** use caution if depositing waste on your own property. Remember to keep such deposits away from all property edges.
- Do** learn which of your plants can be safely composted and place in containers or bags designated by local authorities.

- Don't** deposit waste into any water body.
- Don't** deposit waste on land that is not yours, or near the borders of land that is not yours.
- Don't** bury waste, unless you have confirmed and can follow your local guidelines.
- Don't** transport any portions of plants prohibited by Florida Rule Ch.5B-57, unless you can do so within the guidelines.
- Don't** burn waste unless you can follow your city or county guidelines. If you may burn, don't start the fire before checking your local fire danger status and the Air Quality Index.
- Don't** include invasive plants in your city or county local yard waste pickup program.

Resources

Class III landfill sites

Class III landfill sites accept non-compostable plant materials, including yard waste, tree remains, trees, and other vegetative matter that normally results from land clearing. To find the Class III landfill nearest you, go to www.dep.state.fl.us/waste. This also will give the contact information for local regulations.

About invasive plants

There are many ways to learn more about invasive plants, including how to identify them, and how to manage them. These include:
 Florida Exotic Pest Plant Council: www.fleppc.org/list/list.htm
 Florida Invasive Species Partnership: www.floridainvasives.org
 UF Center for Aquatic and Invasive Plants: plants.ifas.ufl.edu

Learning the laws

Here are two Internet sites about laws related to invasives waste disposal:
 United States Department of Agriculture: www.invasivespeciesinfo.gov
 Florida Statutes: www.leg.state.fl.us/Statutes/index.cfm



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