

Tool 7: Guidelines for Site Restoration

This tool is intended to help land managers, contractors and landowners:

- ✓ Determine if site restoration is needed following invasive plant treatment work
- ✓ Identify resources that will help them learn what plant species are native to the area
- ✓ Identify resources where they can purchase native plants

When Site Restoration May be Necessary

In most cases, especially in the heart of the forest, sites that undergo a disturbance (natural or man-made) may be able to recover naturally. Sometimes, this is not possible, especially in areas that have experienced:

1. **Heavy herbicide use:** Replanting native seeds and/or trees/shrubs may be necessary in places where herbicides were used to kill invasive plant species. Many commonly used herbicides have active ingredients that have lengthy residual soil activity or are pre-emergent (kill seeds before they sprout). These herbicides will make it difficult for native seed to emerge following invasive plant treatment and thus the site may require the planting on native plant material.
2. **Dense Infestations of Invasive Plants:** Certain invasive plants tend to form dense infestations, such as Japanese knotweed and goutweed. In these situations, it is very likely that native vegetation (and seeds from native vegetation) may not be present. Following invasive plant treatment, bare soil will be left and may not have a sufficient native seed source to re-vegetate the area quickly. This situation is prone to re-invasion of invasive plant. Re-seeding or re-planting may be necessary.
3. **Slow natural regeneration:** In some areas, natural regeneration may be slow to establish due to repeated disturbance or a large area of disturbance.
4. In all of these situations, making the decision to re-vegetate must be balanced with the costs and practicality of doing so.

Determine which plants you should plant

1. **Most importantly, if you decide to plant, try to obtain plant material that is sourced from native seed.**
2. Look at the **overstory and understory vegetation** and identify the native plants that are already growing there. If there are very few native shrubs, trees, or herbaceous layer species in the exact spot that you are considering, look at nearby areas to find and study a “reference ecosystem”. Be sure that they have a similar community type, soil type and moisture regime.
3. Use “**Wetland, Woodland, Wildland: A Guide to the natural Communities of Vermont**” by Elizabeth Thompson and Eric Sorenson (2000) to determine what natural community type the area is in. Use the “Characteristic Plants” box to get ideas for what additional plants (trees, shrubs and herbs) you could plant. This will help ensure that you plant only species that naturally occur within this natural community type. *If you are uncertain what species should be there, consult an ecologist, local botanist, forester or other professional with more knowledge or experience. BE SURE BEFORE YOU PLANT.*

The Vermont Natural Heritage Information Program (NHIP) is part of the Vermont Fish and Wildlife Department's Wildlife Division. Its focus is to inventory, manage, and conserve Vermont's nongame wildlife (vertebrates and invertebrates), native plants, and natural communities. Go to http://www.vtfishandwildlife.com/wildlife_nongame.cfm for a description of natural communities in VT.

4. Plant species that you know will **thrive** well on this site. Quick colonization of a native species will help deter re-establishment of invasive species.
5. Consider planting plants that are known for their **hardiness, provide good benefits to wildlife** (such as good pollinators) or **are native alternatives** to attractive invasive ornamentals.

Dealers who Provide Native, Invasive-free Planting Material

- The Vermont **Agency of Natural Resources Division of Water Quality** publishes a *Guide to Native Plant Nurseries*, listing dozens of sources of native plants.
www.anr.state.vt.us/dec//waterq/cfm/ref/ref_wetlands.cfm
- **Natural Resource Conservation District Plant Sales:** Some districts have plant sales every spring. Go to <http://www.vacd.org/> for more information.
- **New England Wildflower Society** has two centers, one based out of Framingham, MA and the other based out of Whately, MA. NEWFS sells a wide variety of native plants. <http://www.newfs.org/>
- **Project Native** is an educational center and native tree nursery out of Housatonic, MA.
www.projectnative.org

Information about Planting with Alternatives and Natives

- **BePlantWise.** The Lady Bird Johnson Wildflower Center has lists of recommended native plants by region and state. www.beplantwise.org
- **Bringing Nature Home: How Native Plants Sustain Wildlife in our Gardens**, by Douglas W.Tallamy. Timber Press, 2007 provides a compelling case for why planting natives helps restore insect diversity and ecosystems. www.bringingnaturehome.net
- **Designing Gardens with Flora of the American East**, by C. Summers. Rutgers University Press, 3010. This is a great companion book to Doug Tallamy's *Bringing Nature Home*. Written by a landscape designer, it is informative and fun to read!
- **Growing and Propagating Wildflowers of the United States and Canada**, by W. Cullina, New England Wildflower Society, 2000. This book is a lively read with extensive descriptions of native plants to consider growing in the garden.
- **Native Alternatives to Invasive Plants**, Brooklyn Botanic Garden, 2006. This book offers a nice selection of alternatives to commonly planted invasives, including barberry, burning bush and Norway maple.
- **Native Plants of the Northeast: A Guide for Gardening and Conservation**, by Donald J. Leopold. Timber Press, 2005. This book provides a thorough overview of native perennials, trees and shrubs to consider planting in the Northeast.
- **Native Trees, Shrubs, and Vines: A Guide to Using, Growing, and Propagating North American Woody Plants**, by W. Cullina. New England Wildflower Society, 2002. This book is a lively read with extensive descriptions of native plants to consider growing in the garden
- **Trees, Shrubs, and Vines for Attracting Birds: A Manual for the Northeast**, by R. DeGraaf. University of Massachusetts Press, 2002. This book includes extensive information on species to plant for attracting birds.