

From: Margaret Wooster [mailto:mwooster@bnriverkeeper.org]

Sent: Thursday, March 04, 2010 1:36 PM

To: Stebbins, David; Cammarata, Peter; Kurtz, Brian

Cc: Gerlach, Jeff; Linda Logan; Neil Patterson; kathy mitchell; Joseph Galati; Scott Schlueter; Stephen Patch; Russ Biss; Mardell Sundown; Jill Jedlicka; Art Klein; Alkiewicz, Edward; Margaret Wooster; Rene Rickard; Schoenwiesner, Steve

Subject: native plants

Dear Dave, Peter and Brian,

In answer to your question about next steps, the Greenway Ecological Standing Committee will want to review and approve your planting plan for the Union Ship Canal site before finalizing this grant approval. We understand you may not have maintenance contracts, but the plan should include the basic terms of those contracts to assure plant survival to the greatest degree possible. We are interested in all the other details we listed in our letter as well. Meanwhile the committee has been compiling native plant information as guidance. Attached please find (1) a directory of sources for information and for plant material, and (2) a specific short list of possible trees and shrubs for the Union Ship Canal site, depending on specific soil and site conditions you will have.

Thanks,

Margaret

Sources on native plants and conservation landscaping (last revised 3/2010)

Regional information

- Buffalo Niagara Riverkeeper. *Buffalo and Niagara Rivers Habitat Assessment and Conservation Framework*. BNR, 2008. For information on habitat and species in the Buffalo and Niagara River Watersheds. See www.bnriverkeeper.org/programs/habitat/niagara-habitat-study/
- Eckel, P.M. For many publications on the flora of the Niagara River and Gorge area. See, for ex., <http://www.mobot.org/plantscience/ResBot/flor/WNY-Niag/WNYCheck.htm> and <http://www.mobot.org/plantscience/ResBot/Niag/Index.htm>
- Niagara Peninsula Conservation Authority. Niagara Peninsula Plant Guide. <http://www.npca.ca/water-management/documents/NPCAPlantGuide.pdf> Includes info on plant characteristics, growth conditions, wildlife and other ecological benefits.
- NYS Conservation Department. *Biological Survey of the Erie-Niagara System*, 1928. This document contains a list of the native aquatic plant species found in the Niagara River.
- Reschke, Carol. *Ecological Communities of New York State*. NYS DEC, second edition, 2002.
- Zenkert, Charles A. *Flora of the Niagara Frontier Region* (BMS, 1934) and supplements with Richard Zander, (BMS, 1975 and 1979). Other NYS botanical publications include *Floristics and Environmental Planning in Western New York and Adjacent Ontario* by Richard H. Zander (BMS, 1976) and *Revised Checklist of NYS Plants*, Richard S. Mitchell and Gordon C. Tucker. (NYS Museum, 1997).

Plant sources

- NYS DEC. Saratoga Tree Nursery, Saratoga Springs, NY. www.dec.ny.gov/animals/9396.html
- (from D. Spiering at Tifft) Prairie Moon Nursery in Winona, MN – “Not local, but many of the species they sell are native to WNY. This is the best native plant nursery I have ever encountered.” Also, Ernst Conservation Seed, Inc. in Meadville, PA. provided native plants used at restoration sites on the Buffalo River.
- Native Landscapes and Garden Center, Pawling, NY
- RPM Ecosystems. Dryden, NY. They carry Root Propagation Method-grown native trees and shrubs. <http://www.rpmecosystems.com/wholesale.php>
- Russel’s Tree & Shrub Farm in East Amherst & Akron Tree Farms in Pendleton – Both focus on the non-natives and cultivars, but also carry natives.

- Southern Tier Consulting for habitat restoration: <http://www.southerntierconsulting.com/index.html>
- The Plantsmen Nursery, Groton, NY
- USDA Plant Materials Center, Big Flats, NY. <http://plant-materials.nrcs.usda.gov/nypnc/staff.html>
- White Oak Nursery, Canandaigua--for native trees and shrubs. <http://www.whiteoaknursery.biz>

Other good references

- American Society of Landscape Architects has developed requirements for sustainable sites accreditation including guidance on native & non-native plants. www.sustainable-sites.org/report
- Donat, Martin. *Bioengineering Techniques for Streambank Restoration*, 1995. Looks at root to shoot volumes and other plant characteristics for specific riparian environments. http://www.for.gov.bc.ca/hfd/library/ffip/Donat_M1995.pdf
- Fischer, Richard A., *Design Recommendations for Riparian Corridors and Vegetated Buffer Strips*. Lots of good stuff on buffer types for different objectives--but not much on native plants.
- Hightshoe, Gary L. *Native Trees, Shrubs and Vines for Urban and Rural America: A Planting Design Manual for Environmental Designers*.
- Leopold, Donald J. *Native Plants of the Northeast: A Guide to Gardening and Conservation*. Timber Press, Portland, 2005.
- The Lady Bird Johnson Wildflower Center. <http://www.wildflower.org> A very informative and easy to use website for the gardener or restorationist. (D. Spiering)
- Maine Center for Invasive Aquatic Plants. *Maine Field Guide to Invasive Aquatic Plants and their Common Native Lookalikes*, 2007. <http://www.mainevolunteerlakemonitors.org/mciap/FieldGuide.pdf>
- USFWS, *Native Plants for Wildlife Habitat and Conservation Landscaping: Chesapeake Bay Watershed*. <http://www.nps.gov/plants/pubs/chesapeake/toc.htm>

From Greenway Ecological Standing Committee (GESC) March, 2010

A short list of native trees and shrubs for the Union Ship Canal site

These species represent some of the ecological values that the GESC wants to cultivate in the Niagara River Greenway, including remediating degraded sites, restoring native plant communities, and increasing food and habitat for native and migratory wildlife.

Most of these species naturally occurred together in what Carol Reschke (*Ecological Communities of NYS*, NYS DEC, 2002) classified as a "Maple-basswood rich mesic forest" characteristic of the Great Lakes Plain ecozone. Some, like Eastern cottonwood and shrub willows, represent early colonizers that can survive in highly disturbed areas.

These are not the only native species that may be appropriate for the site and site goals, and some may not thrive. The BUDC planting plan should select on the basis of soil and substrate characteristics and maintenance plans that include deer protection.

Trees:

- American Basswood *Tilia Americana* (recommended for its historical presence along the Buffalo River, whose native name meant "Place of the Basswood." Prefers partial sun or shade.)
- American Beech *Fagus grandifolia*
- American Sycamore *Plantanus occidentalis* (great sprouting characteristics for difficult sites)
- Black Cherry *Prunus serotina*
- Black Willow/other willow species *Salix spp.* (doing well there now – PAH remediation potential)
- Eastern Cottonwood *Populus deltoids*
- Red Maple *Acer rubrum*
- Red Oak *Quercus rubra*
- Tulip Tree *Liriodendron tulipifera*
- White Oak *Quercus alba*

Small trees/ shrubs:

- Choke cherry *Prunus virginiana*
- Crab apple *
- Elderberry *Sambucus Canadensis*
- Hawthorns * *Crataegus spp.*
- Red osier dogwood *Cornus stolonifera/sericea* (on site now - but will be cleared)
- Serviceberry *Amelachier spp.*
- Spicebush *Lindera benzoin* (not preferred by deer – shade)
- Staghorn Sumac *Rhus typhina* (on site now – but will be cleared)
- Witch hazel *Hamamelis virginiana*

* no specific species but choose one that holds fruit late into the fall / winter period