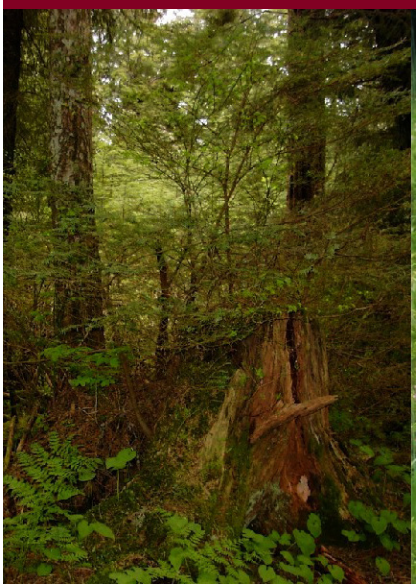
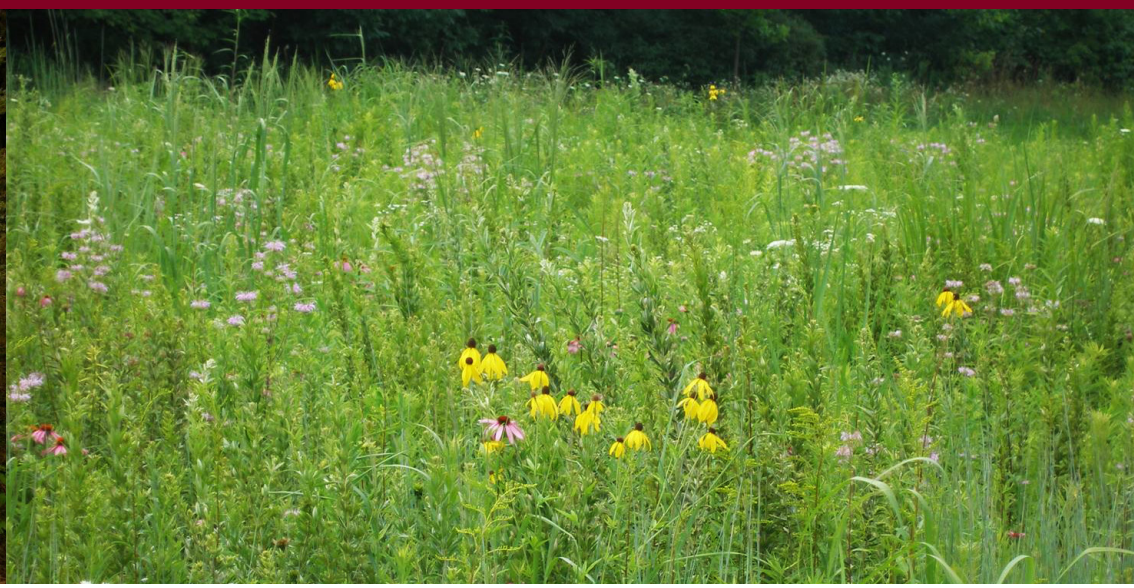
Chapter 8





Above: Mature Woodland (photo: Cleveland Metroparks)

Above Right: Forb Meadow (photo: Ohio Prairie Nursery)

NATURAL AREAS ESTABLISHMENT & MANAGEMENT

Background

Why is natural areas establishment important?

In many communities, regulations have been adopted which restrict the height of mowed lawns in private residential and commercial landscapes seen from the road. Known as "weed laws," these were implemented in recent decades in response to community concern about property owners who neglect their landscapes, which could reduce the property values of surrounding homes. Weed regulations typically set a maximum height for lawns, and outline procedures for notifying the delinquent property owner for permitting the community government to remedy a longstanding noncompliant situation, and for billing the property owner for any services involved.

These regulations typically evolved in communities with a number of standard postwar subdivisions, where the use of lawn was universal and lots were rather small. An unkempt lawn usually was the result of neglect, and could indeed have a negative effect on surrounding property. However, in recent years lots have enlarged, and many landowners have chosen to maintain part or all of their lots in natural meadow. Interest in native plants has expanded among homeowners, and there is a steadily increasing body of knowledge of native meadows and their culture and restoration. A parallel expansion in availability of

"Cost data show that conventional installation of sodded turf grasses may exceed $12,000 per acre. Planting turf grass seeds may cost in the range of $4,000 to $8,000 per acre. This contrasts with installation costs of $2,000 to $4,000 per acre for seeding native prairie grasses and forbs."

(US EPA, 2012)

many plants and seed mixes has added to this increasing sophistication. Many soil and water districts and park districts have active education programs to promote the use of native landscaping, including natural meadows. While problems with neglectful landowners will probably always exist, it is critical that weed laws be designed and applied so that they do not prohibit the use of true, tended, natural meadows.

Furthermore, a new pattern of subdivision design (conservation development) has resulted in an increase of large open space areas held in common by homeowners' associations. Many of these open spaces were specifically designed to be natural meadows. And yet, in many cases weed laws are still applied by the local community, resulting in the mowing of often carefully planned and tended native meadow areas. The expansion of natural meadow use in conservation development subdivisions and large private lots is generally seen as an improvement to environmental quality, especially water quality.

How does natural areas establishment relate to Balanced Growth?

The Balanced Growth Program's dual goals for environmental quality and economic prosperity are supported with the encouragement of natural landscaping. While mowed lawn is often thought of as "soft space," absorbent and natural, it is in fact a surface treatment that has many detrimental effects on watersheds and environmental quality. As it often covers an area that was compacted during construction or through traffic over time, its runoff coefficient is similar to that of many types of paved areas. It also is often over tended with fertilizers, herbicides and pesticides. The result is an impact to local waterways, with increased runoff quantity and increased pollutants in that runoff. Lawn has habitat impacts, as it creates a monoculture that supports large populations of plant pests and diseases, while providing no genetic diversity, and no cover, shelter or food for wildlife. In contrast, natural meadow area absorbs a large percentage of the water that falls on it and filters it before it hits local waterways, both key components of effective storm water management. It is very low maintenance, and the use of polluting substances is limited. Furthermore, natural meadows support huge diversity of wildlife, and can be managed to encourage wildlife habitat enhancement.

In the years since the initial development of these recommendations, many conservation development subdivisions have been built in the State of Ohio. Many of these have contained natural woodland areas in addition to natural meadow areas. As these areas have been established and managed, it has become apparent that many of the issues surrounding natural meadow management are similar in the management of natural woodland areas in subdivision common open space. Some developers and their designers have chosen to allow a part of the open area, once grassland or farmland, to develop through

Continued on page 4

Natural Succession

Natural Succession is the process by which, under the resilient condition of nature, open land area in our Ohio bioregions gradually transitions from grassland to woodland, with woodland as the final state of land left alone. Our Metroparks have become experts at managing this process to ensure that native species predominate and are able to take hold under controlled conditions. They have established protocols for keeping a particular area of meadow at one of the stages indefinitely, through management systems involving prescribed periodic mowing and/or clearing. Metroparks staff have also developed a variety of approaches to managing the transition in natural succession to maximize educational and aesthetic effect.

Most of the general public is unaware of the very high environmental quality of many areas going through natural succession. The high diversity of plant life during the transition creates a diversity of habitat opportunities that can contribute to significant populations of birds and other wildlife. These photographs illustrate the most common stages of natural succession that are prevalent in various bioregions of Ohio. It is highly recommended that every natural succession project include an education component to help the public understand the value of these landscapes, whether it is through community meetings, signage, or organized education opportunities. The Metroparks and Soil and Water Conservation Districts would be good partners in such an effort.

Left from top to bottom; Stage 1 Grass Meadow, Stage 2 Forb Meadow, Stage 3: Shrub Meadow (background) with forb meadow (foreground), Stage 4: Young Woodland, Stage 5: Mature Woodland (photos 1,2 & 3: Ohio Prairie Nursery), photos 4 & 5 Cleveland Metroparks)

Above: Successional Landscape with grass meadow, forb meadow, some shrubs, and woodland in the background (photo Cleveland Metroparks)

Tudor Arms Hotel Mural, University Circle, Cleveland, Ohio
(photo: Gregory SJ Soltis)

natural succession back into young woodland. This practice is to be commended, as woodland present on properties has been shown to enhance the individual lot values, as well as the overall value of the community through improved aesthetics and enhancement of rural or natural character. Woodland also provides superior watershed characteristics as a land cover, absorbing water and mitigating storm effects. However, during the establishment of natural woodland, and in management of it over the long run, the potential exists for noxious or invasive weeds to become established. The public may also not understand the process of succession and may react adversely to the aesthetics of a true forb or shrub meadow undergoing transformation to woodland. For these reasons, our recommendations include establishment of all natural areas, including both meadow and woodland, and include example regulations that address both design opportunities.

It is also worth mentioning that natural meadows and landscapes are an important element in urban areas. The increase in vacant urban lands is an opportunity to introduce natural areas that will improve stormwater characteristics and neighborhood aesthetics, while reducing the cost of maintenance.

Finally, the opportunity exists for communities to use natural areas in tandem with other protection programs such as stream setbacks and conservation development, to increase the footprint of natural areas in the community. Large blocks of natural areas contribute positively to community and ecological health, and climate change resiliency.

A well-written regulation will permit both natural meadows and lawn in appropriate applications, and will also permit establishment of new woodland through the process of controlled natural succession.

Issues

• **Noxious, Invasive, and Undesirable Weeds.** Natural areas laws are not intended to permit noxious or invasive species to proliferate. State law requires communities, including townships, to control noxious weeds. In addition, there are many species not on the noxious weed list which are invasive and locally undesirable. A well-written regulation will be no less restrictive than state law and will prohibit additional species that are considered to be of local concern.

Continued on page 95

Queen Anne's Lace
(Photo: Rangeley@ Wikipedia)

Musk Thistle
(Photo: Elaine Haug @ USDA-NRCS PLANTS Database)

Oxeye Daisies
(Photo: Brother Alfred Brousseau @ USDA-NRCS PLANTS Database)

Canada Thistle
(Photo: Robert H. Mohlenbrock @ USDA-NRCS PLANTS Database / USDA NRCS. 1992)

Grapevines
(Photo: Clarence A. Rechenthin @ USDA-NRCS PLANTS Database)

Sorghum
(Photo: Steve Hurst @ USDA-NRCS PLANTS Database)

Noxious and Invasive Weeds

Noxious

Apple of Peru, Canadian Thistle, Cressleaf groundsel, Giant Hogweed, Grapevines, Japanese knotweed, Johnsongrass, Kochia, Kudzu, Marestail (Horse weed), Mile-a-Minute weed, Musk thistle, Oxeye daisy, Palmer amaranth, Poison hemlock, Purple loosestrife, Russian thistle, Shattercane, Wild carrot, Wild mustard, Wild parsnip
See OAC 901: 5-7 for the official listing. This list changes from time to time.

Invasive weeds

Refer to your local SWCD (www.dnr.state.oh.us/tabid/9093/default.aspx) for a list of invasive species and weeds of local concern. The ODNR Division of Natural Areas and Preserves (www.ohiodnr.com/Default.aspx?alias=www.ohiodnr.com/dnap) can also provide a list of invasive species.

• **Options for Regulation.** Natural areas laws fall into three general groups:

1. Permit laws – require an applicant to submit for approval a management plan, and require compliance with the plan.

2. Exclusion laws – simply exempt native grass, meadow or woodland areas (species specified) from application of the law.

3. Proactive laws – actually require a certain percentage or amount of native grass, meadow and woodland areas in new landscapes.

• **Permit and Proactive Laws:** Permit and proactive laws are generally seen as more regulatory, requiring a review board qualified and authorized to review, condition, approve, and enforce a design and/or management plan submitted by the applicant. Both types are seen as more difficult and expensive to carry out by the government because of the need for an educated review board and a monitoring program which applies to every applicant. However some communities may feel more comfortable requiring a management plan.

• **Exclusion Laws:** Exclusion laws are less regulatory, relying on the occurrence of a problem before the regulation applies. Exclusion laws typically rely on the designation of a "weed expert" – a person who is qualified and authorized to distinguish on a case-by-case basis between neglected sites and bona fide meadows and establishing woodlands.

• **Landscape Setbacks:** Some laws are set up as setback laws, establishing a setback line (which varies depending on lot size) beyond which natural meadows must be located.

• **Enforcement:** All laws enacted must address a means for enforcement of the requirements.

• **Communities without Mowing Regulations:** Many communities, especially townships, have no restrictions at all concerning the landowners' choice and maintenance of landscaping, beyond their obligation to comply with state laws controlling noxious weeds. Where there is a lack of regulation, it is not necessary to enact a meadow-friendly weed law. No laws provide the maximum flexibility to the property owner, as long as property values will not be affected by lack of attention to land areas.

"Though it is difficult to quantify, beautification is an important reason, sometimes the fundamental reason, for natural landscaping. Many people living or working in natural landscapes appreciate the variety of textures, colors and shapes of native plants and the dramatic progression of hues throughout the seasons. The wildlife, especially the birds and butterflies attracted to the plants, also enhance the aesthetic appeal of natural landscaping."

(US EPA, 2012)

• **Application to Built Communities:** Natural meadows are much more desirable than abandoned parking areas, run-down buildings, etc. and thus could be a major tool when dealing with "shrinking cities". However there is currently little incentive within existing regulations to revert these properties back to their natural conditions.

• **Public Education:** Most of the general public are not aware of the value of natural meadow or successional areas and often interpret these areas, particularly those in the stages of succession from lawn to meadow to woodland, as unkempt, neglected sites. Education is critical to help people understand the water quality, habitat and rural-character value of natural meadow in the appropriate applications, and the process of natural succession. Your metro park district and county soil and water district are good sources of speakers who can help you with public education.

• **Technical Expertise.** Communities need technical resources to determine if an unmowed area is actually a meadow, and to make recommendations for controlling noxious or invasive species. In most counties SWCDs or Metroparks representatives can provide this service.

• **Ongoing Management.** Regulations should address on-going maintenance of the meadow area.

Recommendations

1. Communities wishing to enact new mowing regulations should ensure that natural areas are protected and that lawn is required only in appropriate, limited situations.

2. Those with weed laws should revisit them and insert language that permits and encourages natural meadows.

3. Communities without existing requirements are best left as is, unless there are compelling reasons to restrict the landscaping choices of the homeowner.

4. Communities with local concerns about natural meadows and weed control should work with local experts such as soil and water districts and park districts to educate the public about the benefits of natural areas and the process of natural succession. They should provide technical assistance to those who would like to implement natural meadow areas.

5. Communities should consider incentives such as appropriate density bonuses, reduced sidewalk requirements, etc. as an incentive for establishing a native plant or prairie restoration plan that returns a site back to a condition consistent with pre-settlement conditions.

6. New Natural Areas Establishment regulations must protect against both noxious and invasive weeds; provide a method for discerning natural meadows from neglected landscape, and allow for hearing/appeal procedure. They should include a list of unacceptable plants, with a reference to the appropriate sources (see below) for up to date lists.

Example Regulations

Following are three example regulations addressing natural areas establishment that have been used elsewhere. The code from South Russell Village, Ohio, is an example of a permit law. The Amberley Village, Ohio, model is an example of an exclusion code, while the model from Long Grove, Illinois, is a proactive code. Finally, a fourth example is included that addresses natural succession as well as natural meadows, as developed by the Community Planning Program at Cleveland State University.

Amberley Village, Ohio http://www.egovlink.com/public_documents300/amberley/published_documents/Ordinances%20and%20Resolutions/2011/Ord%202011-11%20Providing%20Exception%20to%20Allow%20Designation%20of%20Meadowlands.pdf

South Russell Village, Ohio http://www.conwaygreene.com/SouthRussell/lpext.dll?f=templates&fn=main-h.htm&2.0

Long Grove, Illinois
http://www.sterlingcodifiers.com/codebook/index.php?book_id=363
Wild Ones organization model http://www.for-wild.org/weedlaws/weedlaw.html

CSU Model, Natural Landscaping

Refer to the Example Regulations Matrix for a comparison of the example codes. (link)

Glen Helen Natural Area - Yellow Springs, Ohio
(photo: UGArdener)

Use of the Guidance and Example Regulations

This example guidance and/or regulations **should never be adopted without careful legal review** to assure that they are adapted to fit the authority and needs of the specific governmental body. They may need to be adapted for use by the specific type of local government and must be independently evaluated against potentially applicable federal or state law. **The law director/ solicitor, county prosecutor or other appropriate qualified legal counsel should always be consulted prior to adoption of any enforceable measures** based upon this guidance document to insure compliance and consistency with any applicable state and federal law, and to consider potential legal ramifications and liability in the implementation of the laws or rules to be adopted. Questions about the models and guidance can be directed to the Ohio Balanced Growth Program.

Resources

The Community Planning Program, Maxine Goodman Levin College of Urban Affairs, Cleveland State University; Tel. 216-687-5477, Website: http://urban.csuohio.edu/cpp

Holden Arboretum; Tel: 440-946-4400; Web: http://holdenarb.org

Wild Ones Natural Landscapers, Ltd.; Tel (920) 730-3986 Toll-free (877) FYI-WILD; Web: http://www.for-wild.org/

Society for Ecological Restoration International; Tel: 520.622.5485, Web: http://ser.org/

Your Local County Soil and Water Conservation District

Your Local Metroparks Staff