
An Overview of Prairie Restoration

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GETTING STARTED

Prairie restoration and other types of ecological restoration typically follow a series of steps: site analysis, site preparation, species selection, and then planting. Management begins once the site has been planted. Each of these steps is discussed in detail below.

SITE ANALYSIS

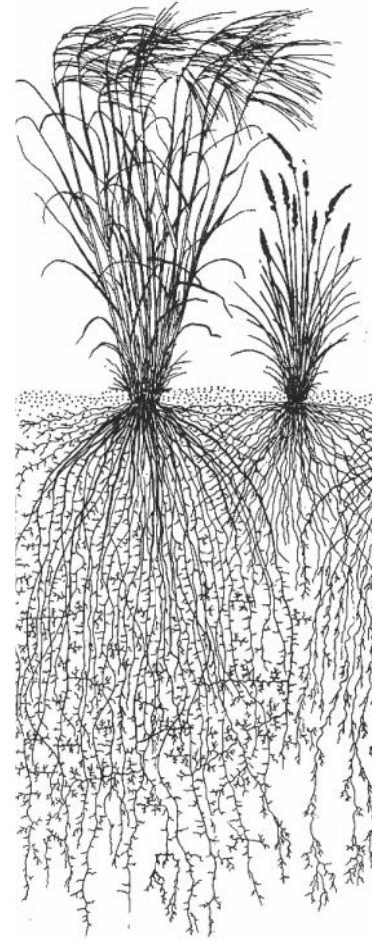
A thorough site analysis is the first step of the restoration process because the information it provides guides the activities that follow. More specifically, the gathered information is used to determine which species are most suitable for the site, the best site preparation method, the best planting technique, and also to suggest which management activities will be needed.

A thorough site analysis evaluates:

- presettlement vegetation
- existing vegetation
- light conditions
- soil fertility and moisture
- slope (steepness of the land) and aspect (which direction the land faces)
- adjacent land use
- potential path and fire break locations
- views to be screened or preserved
- and personal factors such as your goal(s) for the site, your budget, the amount of time you have available, and your skills

SITE PREPARATION

- extremely important—most plantings fail because of inadequate site preparation
- two goals: 1) removing undesirable vegetation that will compete with the seeds or plants you plant and 2) preparing a suitable seed bed to maximize seed germination and seedling survival
- the seed bed is the condition of the soil as experienced by a seed
- most site prep involves a combo of herbicide and tillage, but only one or the other may be used
- smothering with black plastic, newspaper, or carpeting can be used for small sites



SPECIES SELECTION

Four rules of thumb:

- don't use "meadow in a can" because it contains nonnative species and possibly even weeds
- plant as many species as you can afford. The more species you plant the more color you'll have, the more wildlife you'll attract, and the more likely it is your planting will function as an ecosystem
- buy your seeds or plants from a local nursery specializing in native plants
- use the results of the site analysis to select appropriate species, don't forget to include your favorites

PLANTING

- two methods for planting—mechanically and by hand, each has advantages and disadvantages
- mechanical choices include seeders, which scatter the seeds on the soil surface, and drills, which place the seeds below the soil surface
- mechanical advantages—can reduce the seeding rate (saves \$), provides better control of planting depth thereby increasing germination, faster than hand planting
- mechanical disadvantages—most people don't have the necessary equipment, may produce a row-effect, tends to plant the entire site uniformly, not practical for small areas
- hand planting advantages—low tech, inexpensive, good for small sites, allows planting of select species into select areas to take advantage of wet or dry spots, for example
- hand planting disadvantages—slower, need to seed at a higher rate (increased \$), may be less effective on no-till prepared sites because the seeds are left on the soil surface
- need to incorporate the seeds and firm the soil after planting to ensure good seed-soil contact
- incorporation can be done with a cultipacker, a drag, a piece of chain link fence, or a rake
- mulching with clean straw is beneficial because it helps the soil stay moist, but is usually too expensive for large sites

EVALUATION AND MANAGEMENT

- keep your first year expectations low—most native plants are slow growers because they establish an extensive root system before beginning upward growth. Also, many native plants won't bloom until they are three or more years old (but they may live 50 years or longer)
- the most important management need during the first year is to control the weeds so they don't crowd or shade the native plant seedlings and so they don't produce seeds
- mowing is typically the best method for controlling weeds during the first year
- *careful* hand pulling of weeds may be done if soil disturbance is minimized
- long term maintenance depends on the type of native landscape—prairies, savannas, and wetlands will likely need periodic burning

CONCLUSION

- do a thorough site analysis to learn as much as you can about your site and then use this information to make wise choices
- prepare your site thoroughly—remember most planting fail because of inadequate site preparation
- plant species appropriate for the conditions present at your site, buy from a local source
- have minimal first year expectations: remember some plants will live for 50 years or longer and they need a year or two to get established
- enjoy the flowers, the butterflies, the birds, pick a bouquet for your dining room table, share with a friend, enjoy!