Quick guide to restoration practices: Timeframes and general methods

The timing of most mechanical and chemical treatments to control unwanted plants is most effectively performed when taking into consideration plant anatomy and physiology, phenology, and the physical conditions of the site. For example, knowing where the cells that translocate materials are located (i.e., anatomy), along with how and when this translocation is occurring (i.e., physiology) are critical. For herbicide treatments, translocation from the point of application to area of action needs to be considered. Many mechanical treatments focus on depleting energy stores and therefore timing to disrupt the translocation is key. There are also weather conditions within seasons to consider, such as rain forecasts prior to herbicide application or hot conditions that slow the translocation process.

Below are some recommendations for seasonal, priority management actions. This information is intended to serve as a starting point for planning the timing of work to have maximum desired impact and not to provide all details related to various methods. Please search for additional information about management techniques as needed.

Fall

Search for invasives such as honeysuckle and buckthorn that still hold green leaves after others have changed color or fallen.

Cutting and treating woody non-clonal invaders (note exceptions below).

- Avoid times when things are wet or there is more than 3-4" of snow cover.
- Do not apply herbicide, especially water-based herbicides, prior to a precipitation event (> 4 hours).
- Do not use oil-based ester herbicides (e.g., Garlon 4) during the growing season in high-quality remnants if temperature is above 60-65 degrees because of volatilization transfer.
- Follow good practices such as cutting and treating all stems of the plant, apply water-based herbicide immediately after cut and oil-based soon after, use water-based herbicide in wet areas, and use a water-base or oil-base herbicide if above freezing (concentrated Glyphosate mix, 20% active ingredient, works well on species sensitive to glyphosate down to 20 degrees) or oil-based herbicide if below freezing. Many details on herbicide selection and use can be found in currently available resources, especially herbicide labels.

Cutting and treating clonal species such as sumac and aspen

- Requires that the entire clone be treated in most cases. Consider non-herbicide methods during other seasons (see below).
- NEVER cut any clonal species without herbicide treatment during fall or winter.
- May need follow-up on some species in following year.

Basal bark spraying

Brush piling after plants have died back.

Cutting coniferous trees (late fall to avoid trampling desirable plants during seed production)

Firebreak work (for winter and spring burns). In addition to other break work, mowing grass breaks for spring burns best in fall

Prescribed burning (consider timing of these and if prior management needs to be done first; topic too large for here)

Seed collecting
Seed dispersal

Winter (some of these activities are easier and more effective with little or no snow cover)
Brush piling
Brush pile burning when snow is on the ground (add to burning piles to reduce the number of piles).
Cutting and treating woody invaders (note exceptions listed under Fall and below)

- Avoid times with extreme low temperatures

Basal bark spraying
Cutting coniferous trees
Prescribed burning when prairies are snow-free and snow in surrounding woods (consider timing of these and if prior management needs to be done first; topic too large for here).
Firebreak work (for winter and spring burns)
Seed dispersal (earlier is better)
Plant plugs while conditions are still moist.

Spring

Prescribed burning (consider timing of these and if prior management needs to be done first; topic too large for here)
Pulling woody species of small size when soil is wet.
Search for invasives with green leaves (e.g., garlic mustard) before others have leafed out. (Although shrubs like honeysuckle and buckthorn can be found at this time, do not cut and treat if the sap is flowing at a high rate).
Flame weed garlic mustard seedlings in May (where leaf litter or grassy fuels are present, do this when conditions are wet).
Pull garlic mustard and dame's rocket before seeds start to develop.
Seeding can be done in early spring, especially if preparation for seeding includes a burn prior to seeding.

Late Spring

Girdling without herbicide treatment of trees such as aspen (some other species, but not all)

- Must do all trees for clonal species
- Do not use this method on black locust.

Seed collecting (disperse after collected for some species; topic too large for here)

Summer

Double-cutting clonal woody vegetation, including sumac and young aspen (~July 1 and August 1 for multiple years; no herbicide; not black locust)
Cutting and treating woody invaders (note exceptions listed under Fall and below)

- See comment regarding high temperatures under the "good practices" in the Fall section

Mowing invasive species (consider timing; topic too large for here)

Firebreak work (for fall burns)
Foliar spraying (consider timing based on species herbicides; topic too large for here)
Root-severing of monocarpic species (e.g., wild parsnip, biennial thistles)
Seed collecting
Dispersal of fresh seed from early flowering species whose seeds ripen early.
Assess community health / progress towards restoration goals.