

The restructured Montana Noxious Weed List has been developed so that management objectives will more closely align with the invasion stage of each species. The documented history of plant invasions recognizes four major stages in the geographic spread of weeds (Figure 1). The “exclusion stage” is the first stage, and it occurs when introduction of a weed to a new area can be prevented. The management goals of this stage are prevention, education, and awareness. This stage is the most cost-effective stage in which to manage weeds, and therefore species in this stage often receive priority.

After a weed becomes established, there is typically a lag phase before the weed begins to rapidly increase its range. During this phase eradication is the most effective management strategy; populations may occur in isolated areas throughout the state and are still small. Aggressive and persistent efforts may eliminate the weed or at least contain or reduce the population.

The third stage of invasion is the “suppression stage.” Populations may be expanding rapidly during this stage. Emphasis is placed on suppressing infestations from further growth, especially through control of satellite infestations, which are small infestations that occur beyond the existing perimeter of a core infestation. Populations may be abundant and widespread in many counties, therefore integrated management that delivers cost-effective, long-term suppression of weeds is critical during this stage.

The final stage of invasion occurs when the geographic breadth of the invasion reaches its maximum. Most suitable habitat has already been invaded, and further expansion of the weed may not occur. Effective control is unlikely without massive resource inputs. Often management is directed towards the use of biocontrol and other low input methods that will suppress weed abundance.

Priority 1A weeds in the restructured Montana Noxious Weed List correspond to the “exclusion stage” of the invasion process. The “eradication stage” corresponds to Priority 1B to 2A in the restructured Montana Noxious Weed List, depending on the weed species and area in Montana. The “suppression stage” corresponds to Priority 2A to 2B weeds in the restructured Montana Noxious Weed List, again depending on the species and area in Montana. Management of Priority 1A species (i.e. yellow starthistle) and Priority 1B species shall be a priority across the state. Management of 2A and 2B species shall be prioritized by local weed districts because the status of each weed in its invasion stage will vary from county to county.

Priority 3 was created to accommodate species that are known to be invasive in Montana or in nearby states, but statewide mandated control of existing populations would cause undue harm to many Montana citizens. Management criteria include limiting the intentional sale of these species and implementation of research, education, prevention, and control programs where appropriate.

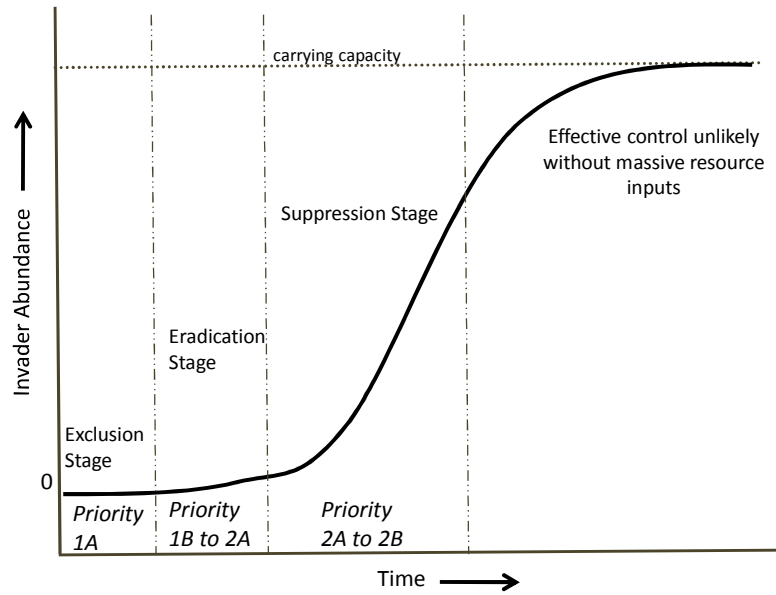


Figure 1. Four stages of invasion for a typical weed as related to management criteria and Montana noxious weed priority listing.