



Building Better Buffers

Buffer Maintenance

Maintaining Buffers for Longevity

Performing maintenance on buffers helps ensure successful establishment of desired vegetation and keeps buffers functioning as intended. A maintenance plan should take into account the landowner's desired outcome, time, resources, and parameters of any conservation-related contracts. If a landowner is receiving a payment for a conservation benefit, some maintenance options may be prohibited.

Buffer Maintenance Options



Mowing and Haying: Mowing can be an important step in establishing buffers. Mowing at least twice the first season and at least once the second season with a flail mower or stalk chopper is recommended to decrease competition and provide enough sunlight for seedlings. Prior

to weeds producing seed, mow to the height of 5 to 8 inches tall. Mowing height should be raised as the desired vegetation establishes. Mowing weeds is important for species such as Giant Ragweed, Barnyard Grass, and Canada Thistle. If trees or shrubs are not desired, mowing helps manage that woody vegetation.

Once established, buffers can continue to be mowed at least once a year, or they can be hayed. Haying can be used to collect biomass for bioenergy or livestock and can help maintain plant diversity, encourage plant regrowth, and take up excess nutrients. Haying can also set back grasses and promote forbs to enhance habitat.



Conservation Grazing: Buffers can be used for grazing, with livestock used to control non-native species and woody vegetation. Cattle are used to control unwanted cool-season grasses in the spring, and goats are used to manage buckthorn, non-native honeysuckles, and other

woody species. Conservation grazing is used to replicate natural grazing regimes and promote nutrient cycling and species diversity. Grazing plans are recommended to determine timing, potential disturbance, herd size, water sources, and grazing objectives. Nutrients removed by grazing will be returned to the system. Avoid excessive grazing and allowing livestock to enter a waterbody, as both can contribute to erosion along waterbodies.

Buffer Law Requirements

- ◆ **Public Waters:** 50-ft average, 30-ft minimum width buffer
- ◆ **Public Ditches:** 16.5-width buffer
- ◆ **Alternative Practices:** Practices that provide water quality benefits comparable to full-width buffers may apply in some situations, along with reduced width buffers.
- ◆ **Buffers must consist of perennial vegetation, not row crops or noxious or invasive weeds**



ABOUT THE SERIES: Building Better Buffers is a series of guides offering voluntary options to landowners who want to improve their existing buffers. They provide information about improving buffers for increased water quality, enhanced habitat, and forestry, plus ideas for buffer maintenance and alternative practice options.



Managing Erosion, Sediment Removal and Flooding:

Buffers that protect waterbodies may form gullies, erode, flood, or be overwhelmed by sediment. The field adjacent to the buffer may form berms, gullies, or low spots that concentrate

sediment deposits into the buffer. In-field conservation practices that slow the flow and control erosion are often the cheapest and best solution to protect the buffer and water quality. These practices include contour farming, no-till and reduced tillage,

cover crops, smart irrigation, and planting perennial vegetation on highly erodible soils and slopes.

When sediment accumulates in or near the buffer, it can be removed mechanically, the soil put back on the field, and the buffer reseeded. Gullies and sloughing in buffers can be repaired by filling, seeding, and providing temporary cover. If buffers are flooded for long durations, these same practices can be applied. Routine inspections and maintenance are important to prevent future larger issues.



Controlling Weeds: Problematic perennial weeds that cannot be managed effectively with other methods may require treatment with herbicide. Examples include Quack Grass, Purple Loosestrife, Canada Thistle, Kentucky Bluegrass, Wild Parsnip, Common Tansy, Crown

Vetch, Birds-Foot Trefoil and, in some cases, Reed Canary Grass and Smooth Brome. Herbicide treatment is not typically done during the first or second year of buffer establishment to avoid impacts to desired vegetation, but it is important to control some weeds before they have a chance to spread.

Hand weeding can be an effective method of controlling small populations of weeds, or as an alternative to herbicides. Hand weeding should be done when soils are moist. Avoid disturbing the root systems of desirable plants. If weeds are not producing seeds, they can sometimes be left in place to act as mulch. Tools such as weed wrenches and weed talons can be used to pull woody plants such as buckthorn and non-native honeysuckles.

Always follow Best Management Practices when applying pesticides that are required by law to protect water quality and wildlife:

- ◆ Apply when winds are light to avoid chemical drift and conditions are dry to avoid water runoff.
- ◆ Use aquatic-safe herbicides when applying near open water.
- ◆ Apply in the spring or fall to avoid harming pollinators and other beneficial insects
- ◆ Use the appropriate herbicide for the given weed species. Use selective herbicides (grass or forb specific) whenever possible.
- ◆ Spot spray small patches of weeds instead of broadcast applications.
- ◆ Always follow the chemical label.



Additional Buffer Maintenance Practices

- ◆ Prescribed burning
- ◆ Enabling management by controlling water levels
- ◆ Biocontrols (releasing insects to manage problematic species such as Leafy Spurge, Purple Loosestrife, and Knapweeds)

Need help? Contact your local SWCD office or visit BWSR's [Buffer Establishment and Management Toolbox](#).

