



Smithsonian
National Zoological Park
Conservation Biology Institute



Piedmont
Environmental
Council



Best Management Practices for Grassland Birds

Virginia Grassland Bird Initiative



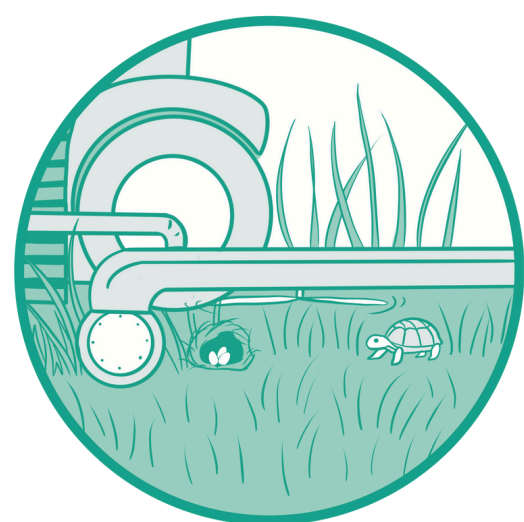
Delay your first cutting of hay

Local research has shown that delaying the first spring cutting of hay on select fields until July 1 allows more than 80% of nesting grassland birds to be successful. Higher fiber, more mature hay is suitable for feeding dry cows, horses, and retired animals, as well as for mushroom hay and bedding.



Summer pasture stockpiling

Local research has also shown that stockpiling forage in the Spring to be grazed in the late Summer provides critical nesting habitat for grassland birds. Stockpiling bridges the summer dormancy gap by providing standing forage in late summer without the risk and cost of planting summer annuals. It also provides the opportunity to rest and prepare other fields for Fall/Winter stockpiling with the goal of reducing hay feeding days and annual feed cost.



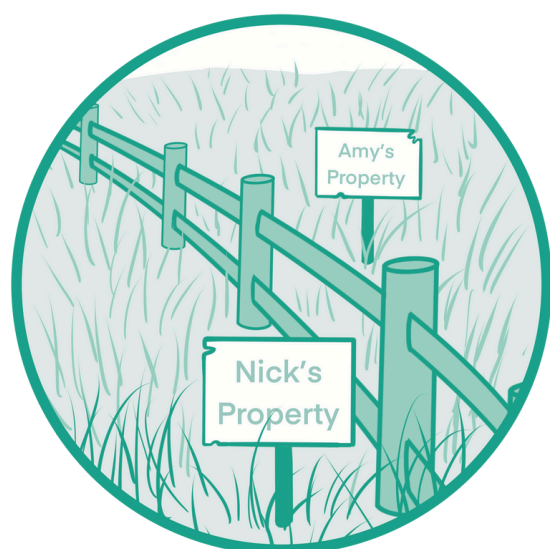
Raise your blades

Raise machinery cutting blades to 8 inches, or as high as possible, when cutting/clipping fields to avoid destroying grassland bird nests and injuring turtles. This practice is best intended for landowners and producers clipping livestock pastures or bush-hogging fields to maintain grassland habitat.



Plant native warm season grasses (NWSGs) & wildflowers

NWSGs can be used for livestock forage, hay, or as a field buffer or riparian buffer. These grasses are deep-rooted, resulting in higher drought resistance, more carbon sequestered deeper into the ground, and more organic material added into the soil. Meanwhile, native wildflowers should be integrated into any available habitats, including working fields, buffers, riparian areas, etc. to provide critical resources for pollinators wherever possible.



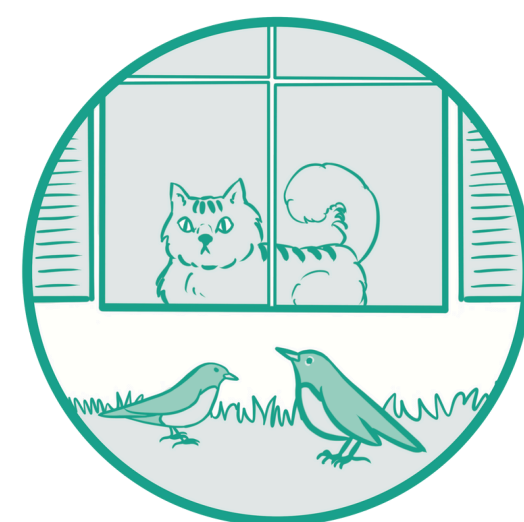
Work with neighbors on shared management

Some of the biggest conservation impact comes from working with neighbors to align management practices across property lines. Cooperative management builds out much larger tracts of functional habitat, while also fostering a greater sense of local community pride and stewardship.



Remove non-native species

Invasive (non-native) species outcompete our native plants, removing critical food resources and habitat from our landscapes. There are many ways to combat non-natives, including mechanical and chemical removal, and sometimes using more aggressive native plants to overtake the non-natives.



Keep all cats indoors

Free-roaming cats are one of the most significant threats to wildlife, killing millions of birds in the United States every year. This is easily preventable – no cat should freely roam the landscape. This includes house cats and barn cats. Barn cats are not an effective tool for rodent control on farms. Instead, build back a diverse ecosystem that will attract birds of prey to your landscape, especially owls, that can effectively keep small rodent populations in check.



Add a flushing bar

Flushing bars (a horizontal bar with dangling chains) can be added to tractors if you hay/mow/clip during the nesting season to reduce adult and juvenile grassland bird mortality.

The Virginia Grassland Bird Initiative—a partnership between Smithsonian's Virginia Working Landscapes, The Piedmont Environmental Council, American Farmland Trust, and Quail Forever—is innovating new ways to reverse the declines of grassland birds on working lands in the Virginia Piedmont, Blue Ridge, and Shenandoah Valley. Together, VGBI partners work with landowners and producers in 16 counties to restore grassland habitat for the benefit of birds, farms, and farmers.



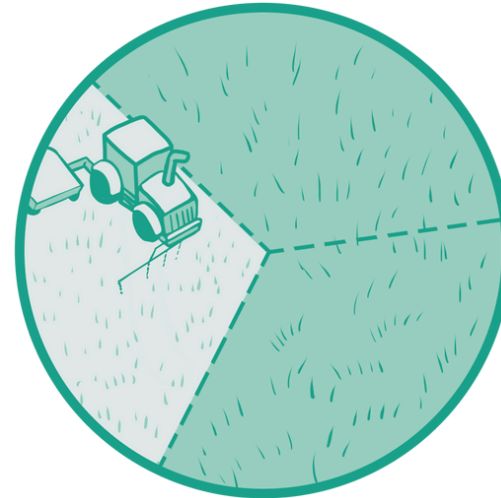
To learn more about these BMPs and grassland birds
scan this code or visit
www.vagrasslandbirds.org

Illustrations by Nick Garnhart, VWL



Set aside unmowed areas adjacent to mowed areas

This practice allows for grassland birds, pollinators, and other grassland wildlife to still have habitat available when mowing needs to occur. In the case of smaller landscapes, coordinate the staggering of mow dates with neighbors (see BMP above) to achieve the same impact.



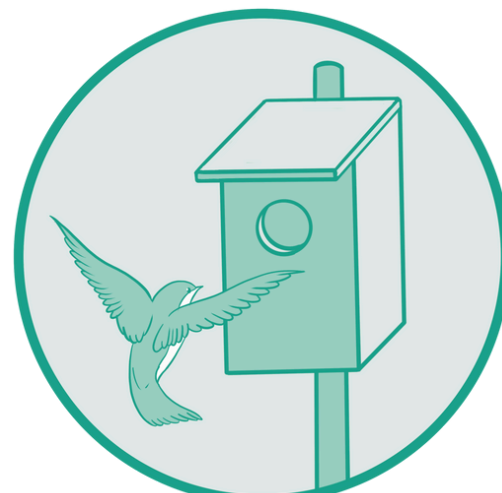
Manage fields in patches

Cutting/clipping/mowing/burning only sections of a field at a time create a more natural “disturbance”, creating wanted heterogeneity in plant structure while always leaving some available habitat on the landscape. It is common to divide fields into thirds and only manage one-third each year.



Avoid mowing at night

Wildlife using your fields is less capable of responding to disturbances at night, resulting in higher mortality. It's best to manage fields (mowing, clipping, burning, etc.) during daylight hours.



Install nest-boxes

Cavity-nesting birds are often cavity-limited. Most importantly, leave dead trees (snags) standing whenever they don't pose a safety risk, as snags are targeted by woodpeckers that create cavities for other birds to use. Additionally, artificial nest-boxes can be added to your landscape to create safe nesting opportunities for dozens of species.



Provide overwintering habitat

We often focus on providing quality habitat during the nesting season, but winter is an equally important time to provide habitat and food. Time any Fall cuttings to allow for some plant regrowth before the dormant winter season sets in. Plant trees and shrubs that produce nuts, berries, and seeds later in the season that can provide food during the colder months.



Eliminate the use of pesticides, including insecticides & rodenticides

There are very few, if any, pesticides that solely target a single species without causing wider-spread damage. Note that birds rely heavily on insects for their diet, especially when raising young, and so killing or poisoning insects negatively impacts birds. And keep in mind that bait blocks (poisons targeting mice and rats) should never be used – not in or around your home, or outside around a barn.



Upgrade all outdoor lighting to be Dark Sky compliant

All outdoor lighting, whether around the home, barn, or roadside, should be down-shielded. This actually increases the amount of light down low where it is needed, while reducing (ideally eliminating) light that is unnecessarily cast upwards. Doing so preserves the darkness of our night skies, a benefit to everyone from stargazers to migrating birds. For additional impact, switch “white” lights out for amber lights, which further reduces light pollution while also protects our beneficial native insects.



Transition to non-lead ammunition

Lead ammunition often fragments/shatters inside of a carcass and is toxic to both humans and wildlife, setting the stage for unknowing consumption and poisoning. Non-lead ammunition (copper and copper alloys) is now readily available and as effective as or more effective than lead bullets. The ballistics of copper bullets are nearly identical to lead bullets but, unlike lead, they leave no residue behind, reducing wear on the gun itself. Many major ammunition manufacturers now offer non-lead alternatives for most commonly used hunting calibers. Additionally, the cost for non-lead ammunition is dropping as demand increases.



Stream exclusion and buffer plantings

Streams and rivers are critical ecosystems for wildlife, and the health of those waterways is intertwined with the health of the adjacent landscape or farm. Removing livestock from a waterway and subsequently installing exclusion fencing and water troughs at key locations results in healthier livestock, more capacity for rotational grazing, and the opportunity to buffer that waterway with native grasses, shrubs, and trees. Those riparian buffers are unique habitats that produce food, shelter, and nesting structure for many bird species, and act as safe travel corridors across private lands for an even more diverse suite of wildlife.