

Grazing Opportunities on Lands Enrolled in the USDA Natural Resources Conservation Service Wetlands Reserve Program or Wetlands Reserve Easements

Setting, Overview, and Process

The Wetland Ecosystem of the Rainwater Basin Region

The Rainwater Basin wetland complex (RWB) encompasses 6,150 square miles, including parts of 21 counties in south-central Nebraska. This landscape is characterized by rolling loess plains formed by deep deposits of wind-blown silt with a high density of clay-lined playa wetlands. These wetlands are patchy in distribution, but historically the densest areas would have rivaled the Prairie Pothole Region in the number of wetland acres and wetland density. Precipitation from intense summer storms and runoff from winter snowfall fill these playa wetlands, providing critical fall and spring habitat for migratory waterfowl. During spring migration, approximately 90% of the mid-continent population of Greater White-fronted Geese, 50% of the mid-continent Mallard population, and 30% of the continental population of Northern Pintails depend on the Rainwater Basin. It is estimated that 200,000 to 300,000 shorebirds (34 species) use the RWB during migration. In recognition of this concentration of shorebirds the RWB was designated a “landscape of hemispheric importance” by the Western Hemisphere Shorebird Reserve Network. Federally endangered Whooping Cranes also regularly use RWB wetlands. Forty-two percent of confirmed Whooping Crane observations in Nebraska have been at Rainwater Basin wetlands, which provide more Whooping Crane use-days during fall migration than any other known migration habitat in the U.S. portion of the Central Flyway.

Recent research at the University of Nebraska-Lincoln documented that, in addition to providing critical wildlife habitat, Rainwater Basins contribute significantly to improving water quality and recharging the Ogallala Aquifer. These wetlands also provide flood protection and water quality benefits to surface and groundwater. Wetland vegetation extracts nutrients from runoff, traps and stores sediments and nutrients transported on sediment, and filters water that exits the wetland via surface flow or groundwater infiltration.

Prior to European settlement, more than 11,000 playa wetlands covered over 200,000 acres in the Rainwater Basin. Nearly 90% of the wetlands have been converted, primarily to irrigated cropland. The remaining wetlands are significantly altered by road ditches and irrigation reuse pits in their watersheds. The reduced wetland function resulting from these hydrologic modifications is compounded by the natural and agriculturally induced process of siltation. The accumulation of sediment in these basins reduces hydroperiod and ponded area and is believed to promote invasive plant species, including reed canary grass (*Phalaris arundinacea*), cattail (*Typha angustifolia*), and river bulrush (*Scirpus pungens*). These species grow in dense monocultures and degrade the quality of wetland habitat. The most notable result of these combined wetland degradations is the loss of wildlife habitat.

The Wetlands Reserve Program and Agricultural Conservation Easement Program

The Wetlands Reserve Program (WRP) was a voluntary program available from 1990 to 2013 through the USDA Natural Resources Conservation Service (NRCS). WRP provided technical and financial assistance to eligible landowners to address wetland, wildlife habitat, soil, water, and related natural

resource concerns on private lands in an environmentally beneficial and cost-effective manner. The program provided an opportunity for landowners to receive financial incentives to restore, protect, and enhance wetlands in exchange for placing land into a conservation easement. In the 2014 Farm Bill, WRP was replaced by Wetlands Reserve Easements, under the Agricultural Conservation Easement Program (ACEP-WRE).

On acres enrolled in Wetlands Reserve easements, either through WRP or ACEP-WRE, the landowner controls access to the land and may lease the land for hunting, fishing, and other undeveloped recreational activities. At any time, a landowner may request that activities initiated by the landowner be evaluated by NRCS to determine if they are compatible uses for the site. This request may include such items as permission to cut hay, graze livestock, or harvest wood products. Activities that are consistent with the long-term protection and enhancement of the wetland are allowed.

In the remainder of this document, lands enrolled in the former Wetlands Reserve Program and those in the new ACEP Wetlands Reserve Easement program are referred to collectively as “Wetlands Reserve tracts” or “Wetlands Reserve easements.”

Grazing as a Compatible Use and Management Tool

Providing desired habitat for waterfowl, shorebirds and other wetland-dependent species is one of the primary long-term objectives of Wetlands Reserve tracts in the RWB. A 2008 analysis by the Rainwater Basin Joint Venture (RWBJV) documented that nearly 20% of the foraging resources for migratory waterfowl were provided by wetlands enrolled in the Wetlands Reserve Program. The Rainwater Basin ecosystem was originally a grassland-dominated landscape that evolved under the influences of grazing by ungulates (bison, deer, pronghorn, and elk) as well as fire, drought and other climatic forces. Grazing by livestock in these prairie wetlands replicates a natural ecological process and can be prescribed to maximize wetland functions and values by maintaining a healthy mix of wetland and associated grassland habitats. Grazing conducted at the appropriate time, intensity, frequency, and duration can promote a diversity of vegetative structure and species, encourage desirable early successional wetland plants, help control invasive species, and create open water and mud flats.

Landowners who are interested in grazing their Wetlands Reserve easements to promote desired habitat conditions work directly with NRCS staff to develop a grazing plan that outlines the grazing strategies that will be implemented to promote desired habitat conditions. Each Wetlands Reserve tract and farm operation is different. Depending on the tract size and animals, temporary electric fences may be used to help keep the livestock in a specific area to achieve the desired habitat objectives.

Wetland Grazing

The majority of the acres enrolled in Wetlands Reserve easements are wetlands (hydric soils). Resource Conservationists with NRCS have observed desirable plant responses to grazing. Grazing programs with the right timing, frequency, and grazing intensity can keep undesirable plant species such as reed canary grass, river bulrush, and cattails in check while maintaining desired vegetation communities. More intensive grazing regimes are required to achieve a transition from dense stands of invasive species (reed canary grass, river bulrush, and cattails) to more desired plant communities. To set back invasive species, grazing is started as soon as the vegetation community greens up, and is continued as long and intensively as possible. If the property is too large for the owner's herd, cross fencing is used to reduce the size of the paddock and increase grazing pressure. High intensity, short-duration grazing creates bare ground and thereby allows desired species such as smartweed, bur-reed, barnyard grass, and

spikerush to germinate and flourish. If regrowth of undesired species and germination of desired species are limited, the wetland will provide open water and mud flats during spring and fall migration.

From a habitat perspective, wetland grazing is conducted either to maintain desired communities or to manage invasive species. Maintenance grazing is often implemented with stocking rates around 1.5 AUMs/acre, with the animals confined primarily to the wetland (hydric soil). Grazing to control invasive plant species has been done with stocking rates as high as 6.0 AUMs/acre and has been conducted with the animals rotating through areas multiple times within a single growing season. An AUM equals the amount of forage a 1,100-pound animal consumes in a 30-day period. NRCS works directly with owners to develop grazing plans that outline the desired grazing intensity, frequency, and duration.

Upland Grazing

In upland grasslands, grazing is an effective management tool that promotes diverse native vegetation communities, including warm-season grasses, forbs, and legumes. These diverse native vegetation communities, with a dominant warm-season grass component, are favored by upland grassland birds, including upland game birds. Diverse grasslands not only support birds, but also a great variety of insects and invertebrates. They also attract other wildlife species such as rodents, which in turn attract predator species (mammals, reptiles, birds).

Warm-season grasses are noted for having stronger stems which remain erect during winter storms. Cool-season grasses collapse after the first snow, forming a mat layer that offers little protection to game birds and other animals that depend on these habitats. Cool-season grasses are the first to emerge from dormancy and green up. As a result, livestock select for these species during early spring. NRCS and landowners take advantage of this forage selection and graze uplands during early spring. Grazing during this period reduces the vigorous growth of cool-season grasses, like smooth brome and Kentucky bluegrass, during early spring. Early spring grazing also removes detrital litter from the previous growing season, allowing more sunlight to reach the newly growing warm-season plants, and thereby promoting faster growth. Stocking rate on uplands is about 0.75 AUMs/acre.

Grazing duration and intensity are critical to achieving the desired management response. Uplands dominated by undesirable grasses are grazed longer, so each plant is foraged on more than once. Plants subjected to repeated foraging must invest stored nutrients into regenerating new foliage, thus weakening the plant. Areas dominated by preferred grasses are grazed just long enough for each plant to be foraged approximately once. The area is then allowed to rest from grazing. It is during the period of rest that grasses respond to grazing. The single forage event causes the plant to respond by building a larger root system, which allows the plant to capture more soil moisture and nutrients, resulting in healthier plants and vegetation community.

Process to Integrate Grazing on a Wetlands Reserve Tract

The successful integration of grazing as a compatible management practice is best achieved when it is approached in a collaborative manner between the NRCS and the landowner. At the foundation is the recognition that grazing of the easement area is a management tool necessary to achieve the desired wetland functions and values. The landowner agrees to conduct grazing activity in accordance with the terms and conditions identified within the Compatible Use Authorization (CUA) and grazing management plan. The grazing management plan will identify the different wetland and upland habitats that are to be restored and maintained on the easement area, and thus guide the grazing management requirements necessary to manage these habitats.

The following steps are necessary to integrate grazing on Wetlands Reserve tracts.

1. Landowner contacts NRCS to request a CUA to graze the Wetlands Reserve tract, or NRCS encourages the landowner to consider grazing in an effort to promote desired habitat conditions on the Wetlands Reserve easement.
2. Landowner and NRCS (with input from partner biologists) develop a CUA that lays out a grazing plan. It is good to start this process in late September or early October, so that the CUA can be completed for the landowner by January.
3. A grazing plan is drafted as part of the CUA process. This plan outlines paddocks, stocking rates, grazing intensity, frequency, and duration.
4. Compatible use authorization requests and recommendations are completed and submitted to the NRCS state office for approval (two-week review window) by mid-October.
5. NRCS State Conservationist authorizes request to graze the Wetlands Reserve easement.
6. Landowners are able to graze with their own herd or can lease their property to operators with appropriate herds to achieve the desired grazing action. Having the Compatible Use Authorization and grazing plan completed and back to the landowner by January ensures that the landowner will be able to integrate the property into their grazing operation or find a willing lessee.
7. NRCS will conduct site visits annually to evaluate site conditions and work with the landowner to refine upcoming grazing activities if necessary.
8. **Reserved Grazing Rights:** ACEP-WRE offers a Reserved Grazing Rights enrollment option. Under this option, a participant accepts 75% of the authorized easement compensation value in order to retain the right to manage the easement through grazing uses. A grazing plan is still required, but a CUA is not.