Black Rail Conservation Recommendations

March 7, 2019

From the Species Status Assessment Report (2018):

> **Eastern black rails occupy relatively high elevations along heavily vegetated wetland gradients, with soils moist or flooded to a shallow depth (Eddleman et al. 1988, p. 463; Nadeau and Conway 2015, p. 292).** Occupied habitats are reflective of the subspecies' movement habits. Eastern black rails fly little during the breeding and wintering seasons, and will typically flush only for a short distance when pursued (Bent 1926, pp. 329-330). Instead, the birds will remain on the ground, running quickly through dense vegetation likely using the runways of rodents and rabbits (e.g., *Microtus* spp.) (Armistead 2001, p. 247; Taylor and van Perlo 1998, p. 223), and are considered secretive because of this behavior. Because black rails require dense vegetative cover that allows movement underneath the canopy (Table 2-2), and because birds are found in a variety of salt, brackish, and freshwater marsh habitats that can be tidally or non-tidally influenced, plant structure is considered more important than plant species composition in predicting habitat suitability (Flores and Eddleman 1995, pp. 357, 362). Occupied habitat tends to be primarily composed of fine-stemmed emergent plants (rushes, grasses, and sedges) with high stem densities and dense canopy cover (Flores and Eddleman 1995, p. 362; Legare and Eddleman 2001, pp. 173-174). Vegetation height is generally ≤1 meter (m) in coastal habitats, but taller in occupied cattail and bulrush marshes (Davidson 1992a, pp. 120, 126-127; Legare and Eddleman 2001, p. 170; Culver and Lemly 2013, pp. 316-318). However, when shrub densities become too high, the habitat becomes less suitable for eastern black rails. Soils are moist to saturated (occasionally dry) and interspersed with or adjacent to very shallow water (1-6 cm; Table 2-2) (Legare and Eddleman 2001, pp. 173, 175).
>
> Also on the Gulf Coast, in Texas coastal salt marshes, eastern black rails occupy high elevation zones dominated by gulf cordgrass (S. spartinae) and salt meadow cordgrass which may be accompanied by shrub species such as eastern baccharis (B. halimifolia) or Jesuit's bark (Figuree-5; Tolliver 2017, pp. 27-28). Impounded intermediate marshes of the Gulf Coast Chenier Plain of Louisiana and Texas are typified by dominance of salt meadow cordgrass (Gabrey et al. 2001, p. 220), while unimpounded intermediate marshes include both salt meadow cordgrass and gulf cordgrass. Unimpounded intermediate marshes occur in the Texas Mid-Coast, with salt meadow cordgrass and gulf cordgrass again appearing as dominants (Enwright et al. 2014, p. 2).

Ongoing surveys in Louisiana have documented the eastern black rail during the breeding and non-breeding seasons in Cameron and Vermilion Parishes. As more information becomes available these parameters and recommended measures may be more refined.

Fire management

Benefits –
Prescribed fire can be used to reinitiate succession (including suppression of woody vegetation) and seral sequencing on public and private lands, which is important to ensure suitable habitat for the eastern black rail.

Proposed Conservation Regulation [4(d) rule] –
The following proposed regulation is deemed necessary to provide for the conservation of the eastern black rail.

Prescribed fire should avoid burning during the nesting, brood rearing, and flightless molt periods ("sensitive time period", mid-March through September 30) where eastern black rail is present.

For Prescribed fire outside of the "sensitive time period" the following BMPs can minimize take of eastern black rails:

1) The application of prescribed fire should avoid perimeter fires, ring fires, or fires that have long, unbroken boundaries that prevent species dependent on dense cover from escaping a fire.

2) Prescribed fire should be employed to move slowly across a tract. Fast fires can cause significant mortality for eastern black rails.

3) Prescribed fire should be applied in a patchy manner or with small patches to allow eastern black rails a place of refuge. Patches can be small but numerous enough to support multiple eastern black rails.

Haying, Mowing, and Other Mechanical Treatment Activities

Benefits –
Haying and mowing can maintain grasslands by reducing woody vegetation encroachment and also for the production of forage for livestock. Mechanical treatment activities include disking (using a disk harrow or other tool) and brush clearing (using a variety of tools that may be attached to a tractor or a stand-alone device).

Proposed Conservation Regulation -
Haying, mowing, and mechanical treatment activities in emergent wetlands should be avoided during the nesting, brood rearing, and flightless molt periods (mid-March through September 30) where eastern black rail are present. While these practices are used to enhance eastern black rail habitat, when done at the wrong time, they can impact recruitment and survival.

Proposed Exception to this Regulation -
Mowing or mechanical treatment activities for maintenance requirements to ensure safety and operational needs for existing infrastructure. These include maintenance of existing fire breaks, roads, transmission corridors rights-of-way, and fence lines.

Voluntary BMPs -
Voluntary BMPs are proposed for activities outside of these time periods, and include:
1) avoidance of emergent wetlands;
2) providing untreated (*i.e.,* unmown or avoided) areas that provide refugia for species dependent on dense cover, such as the eastern black rail; and
3) using temporary markers to identify where birds occur, for example wetland areas, so that these areas may be avoided.

Grazing Activities

Benefits –
This provision of the proposed 4(d) rule for grazing activities would promote conservation of the eastern black rail by encouraging land managers to continue managing the landscape in ways that meet their needs while simultaneously providing suitable habitat for the eastern black rail.

Proposed Conservation Regulation –
Intensive or heavy grazing during the sensitive time period will lead to disturbance of nesting birds, as well as possible destruction of nests and mortality of eggs and chicks due to trampling. Therefore, intensive or heavy grazing should be avoided during the sensitive time period in emergent wetlands where eastern black rail are present.

This 4(d) rule is currently proposed only on public lands, but if implemented voluntarily would also offer benefits on private lands where black rails are present.

Voluntary BMPs-
Grazing densities should allow for the maintenance of the dense vegetative cover required by the eastern black rail.

The Species Status Assessment (SSA) Report for Eastern Black Rail, Version 1.2, references that when emergent marsh vegetation such as *Spartina Spartinae* (gulf cordgrass) is managed to maintain heights of 10-20 centimeter height category rail occupancy increased steadily (cited in Butler et. Al 2015, page 28). If light to moderate grazing is implemented, this management goal may be suitable for rotational grazing practices.

Heavy grazing during the winter would negatively impact habitat quality for the following nesting season.

Install fencing to exclude grazing from emergent wetland areas during the breeding and flightless molt periods.

Implement rotational grazing practices so that a mosaic pattern of cover density is present across fenced tracts of land.

Additional conservation measures not addressed in the proposed listing rule:

Flooding rice fields – impoundment management to support vegetation and water levels suitable for eastern black rail (Adobe document page 62 of the SSA).

Invasive species management to benefit habitat – feral pig control, nutria control, *phragmites* control

ACJV Priority actions proposed:

- the use of water control structures to maintain appropriate vegetation and water depth in impounded wetlands;
- prescribed fire to set back woody vegetation;
- creation of freshwater sloped wetlands or wet meadows;
- use of dredge spoil or other materials that provide higher nesting areas in tidal marshes; and
- control of invasive plants in high marsh habitat.