Red-cockaded Woodpecker, Listed as Endangered:

Red-cockaded woodpeckers live in mature pine forests—specifically those with longleaf pines averaging 80 to 120 years old. From the late 1800s to the mid 1900s, red-cockaded woodpeckers declined rapidly as their mature pine forest habitat was altered for a variety of uses, primarily timber harvest and agriculture. Pine savannahs and open woodlands once dominated the southeastern United States and may have totaled more than 200 million acres at the time of European colonization. Longleaf pine communities may have covered 60 to 92 million of those acres. Today, fewer than 3 million acres remain. Red-cockaded woodpeckers once ranged from Florida to Maryland and New Jersey, as far west as Texas and Oklahoma, and inland to Missouri, Kentucky, and Tennessee. About 1 percent of their original range remains.

The red-cockaded woodpecker was listed as endangered in 1970, https://www.federalregister.gov/citation/35-FR-16047 and has been proposed reclassification in 2020, https://www.govinfo.gov/content/pkg/FR-2020-10-08/pdf/2020-21510.pdf.

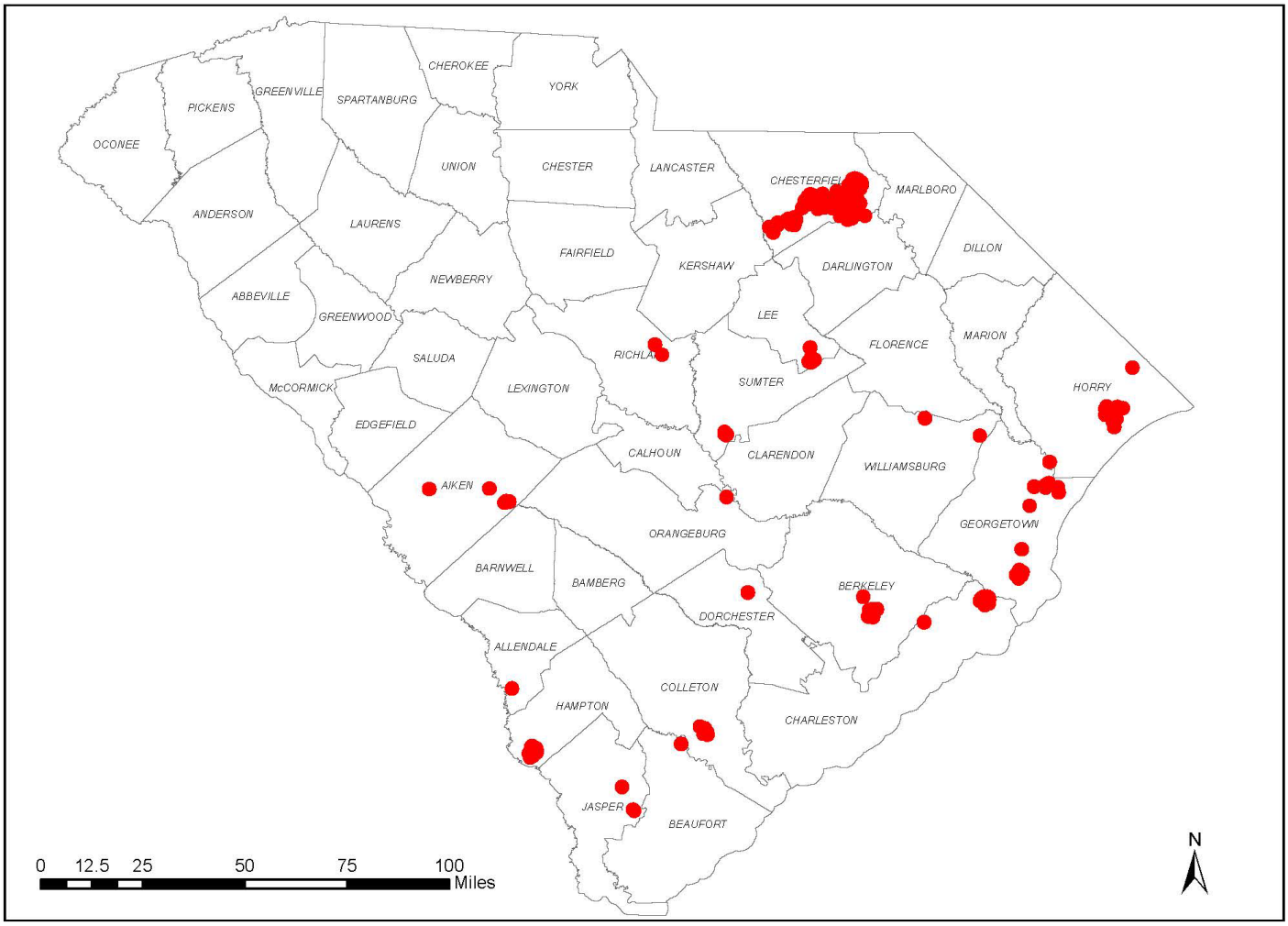
Red-cockaded Woodpecker Range in North America:

This map shows the red-cockaded woodpecker (RCWO) range in North America.
https://www.allaboutbirds.org/guide/Red-cockaded_Woodpecker/maps-range

Red-cockaded Woodpecker Colonies in South Carolina:

This map shows the RCWO colonies recorded by the South Carolina Department of Natural Resources (SCDNR).

Distribution of Red-cockaded Woodpecker Colonies in South Carolina, 2020



Primary Conservation Provision, Avoid Disturbance within Red-cockaded Woodpecker Colonies:

Red-cockaded woodpeckers depend on open, park-like mature pine woodlands and savannahs with large old pines for nesting and foraging habitat. Large old pines are required because these birds excavate roost and nest cavities in living pine trees. The cavities are excavated completely within the heartwood; therefore, the trees must be old and large enough to have room for the cavity chamber. Additionally, old trees are more likely to have heartwood decay, which greatly facilitates cavity excavation. The cavity trees must be in open stands with little or no hardwood midstory and little or no hardwood in the canopy. Once the hardwood midstory reaches cavity height, red-cockaded woodpeckers typically abandon the cluster due to increased access to the cavities by predators. Red-cockaded woodpeckers will use nearly all of the southern yellow pines for cavity trees, including loblolly pine (*Pinus taeda*), shortleaf pine (*Pinus echinata*), pond pine (*Pinus serotina*), slash pine (*Pinus elliottii*) and longleaf pine (*Pinus palustris*), but prefer longleaf pine (SCDNR). Longleaf pine is adapted to frequent prescribed fire that in turn reduces hardwood growth and stimulates herbaceous vegetation. Mature, open, burned pine stands harbor high plant diversity within the ground cover, including grasses, wildflowers, legumes, and sub-shrubs that attract many species of insects. Red-cockaded woodpeckers forage on these insects and are more successful in highly diverse plant communities. When burned every 2-3 years, habitat better supports red-cockaded woodpeckers. Therefore, some disturbance such as prescribed fire and careful timber thinning can be beneficial.

Therefore, if RCWO cavity tree or cluster is documented or possible on or near a project area within the above range:

- **Protect existing cavity trees.**
  - Reduce risk of accidental damage or removal. Mark cavity trees for easy identification.
  - Protect against fire damage. Rake leaf litter away from cavity trees (and using low intensity backing fire within cavity clusters). Apply regular, frequent fire in clusters.
  - Protect cavity tree roots. Prohibit use of machinery within 50 ft and no plow lines within 200 ft of cavity trees.
  - Protect against southern pine beetle infestations. Thin loblolly or shortleaf pine forests to basal area of 50-80 ft^2/ac.
  - Reduce risk of damage from high winds. Retain a 200 ft buffer of continuous forest around each cluster of cavity trees.
- **Reduce human disturbance within clusters as much as possible, especially during nesting season.**
  - Restrict vehicle use to existing roads. Avoid construction of new roads and trails within clusters.
  - Limit silvicultural and cultural operations to daylight hours; avoid within 1-2 hours of dawn and dusk.
  - Mechanized equipment in a cluster is permitted during non-breeding season for red-cockaded woodpecker management activities only.
  - Habitat management activities other than prescribed burning are prohibited during breeding season (April – July).

Practices That Can Help:

Guidelines for Cluster and Cavity Trees

1) Develop sufficient large and old pines to serve as cavity trees.
   a) Retain all potential cavity trees (pines > 60 years) within clusters, unless pine basal area is above 50 ft^2/ac.
   b) Supply trees for future cavity trees and clusters in abundance. Grow large, old pines throughout the landscape.
   c) If potential cavity trees are rare, consider protecting from fire, root damage, and other potential risks as above.
2) Restore and maintain appropriate habitat structure.
   a) Control hardwood/pine midstory. Apply prescribed fire to entire cluster every 1-5 years, during growing season.
   b) Foster native grasses and forbs. Apply frequent growing season fire and avoid soil disturbance.
   c) Reduce excessive overstory hardwoods within cluster. These trees should not total > 10 ft^2/ac in basal area.
   d) Locate recruitment clusters away from stream drainages whenever possible.
   e) Retain dead and dying cavity trees and all other snags unless they present a safety hazard.

Guidelines for Foraging Habitat; The Recovery Standard

This standard is recommended for all populations on federal lands, state lands, and those populations on private lands being managed for increasing population size.

1) Area Provided by Site Productivity.
   a) In systems of medium to high site productivity (site index 60 or more, for the dominant pine species), provide each group of woodpeckers 120 ac of good quality habitat.
   b) In systems of low site productivity (site index below 60, for the dominant pine species), provide each group of woodpeckers 200 to 300 ac of good quality habitat.
2) 'Good Quality Foraging Habitat' has all of the following characteristics:
   a) 18 or more stems/ac of pines that are > 60 years in age and > 14 in dbh. Minimum basal area is 20 ft^2/ac.
   b) Basal area of pines 10 – 14 in dbh is between 0 and 40 ft^2/ac.
   c) Basal area of pines < 10 in dbh is below 10 ft^2/ac and below 20 stems/ac.
   d) Basal area of pines > 10 in dbh is at least 40 ft^2/ac. Minimum basal area in (a) and (b) above is 40 ft^2/ac.
   e) Groundcovers of native bunchgrass and/or other native, fire-tolerant, fire-dependent herbs total 40% or more of ground and midstory plants and are dense enough to carry growing season fire at least once every 5 years.
   f) No hardwood midstory exists, or if hardwood midstory is present it is sparse and less than 2.1 m (7 ft) in height.
   g) Canopy hardwoods are absent or less than 10% of the number of canopy trees in longleaf forests (xeric oak inclusions not counted).

h) All of this habitat is within 0.5 mi of the cluster center and 50% or more is within 0.25 mi of the cluster center.
i) Foraging habitat is not separated by more than 200 ft of non-foraging areas (hardwood forest, pine stands < 30 years in age, cleared land such as agricultural lands or recently clearcut areas, paved roadways, utility ROW).

Guidelines for Foraging Habitat; The Standard for Managed Stability

Private landowners are strongly encouraged to manage at or toward the recovery standard and should provide at least the standard for managed stability.

1) This standard should be used for instances in which a landowner cannot manage to the recovery standard.
2) This standard is presented in Appendix 5 of the Recovery Plan, the Private Lands Guidelines.
3) This standard is not designed to increase population size.

Adapted from https://www.fws.gov/rcwrecovery/recovery_plan.html.

Safe Harbor Program

1) Program Area.
   a) Any non-federal or state property in South Carolina that falls within the historic range is eligible for enrollment.
2) Program Goals.
   a) To maintain and enhance RCWO populations on private properties through voluntary land management commitments by landowners.
   b) To help South Carolina landowners by removing some of the regulatory restrictions imposed by the ESA.
   c) To provide benefits to other plants and animals that inhabit pine uplands.
3) Eligibility Requirements.
   a) The South Carolina Red-cockaded Woodpecker Safe Harbor Program will consider any property within the historic range. However, all enrolled properties and the habitat management performed on those properties must provide an overall conservation benefit to red-cockaded woodpeckers. The South Carolina Red-cockaded Woodpecker Safe Harbor Program is interested in properties that meet one or more of the following situations:
      i) The property is currently occupied by RCWO (partially or entirely) for nesting and/or foraging.
      ii) The property contains historical records of RCWO occupation, or
      iii) A property contains longleaf, loblolly, and/or pond pine stands that are at least 30 years old.
4) Landowner Responsibilities.
   a) Enhance and maintain currently existing RCWO nesting/foraging habitat (if present).
   b) Perform additional habitat enhancement activities on the property.
   c) Coordinate and cooperate with SCDNR and any other authorized biologists or consultants.

Excerpted from https://www.dnr.sc.gov/birds/pubs/SCSHProgramOverview.pdf.

Photos from Lisa Lord (Longleaf Alliance)