Guidelines

Part A. Recovery Standard

We recommend this standard 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 49 ha (120 ac) of good quality habitat as defined below. A specific exception to this area requirement is made for longleaf and shortleaf habitat types under group selection silviculture; see below for details.

b. In systems of low site productivity (site index below 60, for the dominant pine species), provide each group of woodpeckers 80 to 120 ha (200 to 300 ac) of good quality habitat as defined below. (We recognize that some aspects of the following definition of good quality habitat may not be achievable on extremely dry or wet sites. See discussions below on geographic variation in habitat for more information.)

2. Definition of Good Quality Foraging Habitat. Good quality foraging habitat has some large old pines, low densities of small and medium pines, sparse or no hardwood midstory, and a bunchgrass and forb groundcover. Based on results of studies described in 2E and Table 13, good quality habitat has all of the following characteristics:

a. There are 45 or more stems/ha (18 or more stems/ac) of pines that are $\geq$ 60 years in age *and* $\geq$ 35 cm (14 in) dbh. Minimum basal area for these pines is 4.6 m^2/ha (20 ft^2/ac). Recommended minimum rotation ages apply to all land managed as foraging habitat.

b. Basal area of pines 25.4 – 35 cm (10 – 14 in) dbh is between 0 and 9.2 m^2/ha (0 and 40 ft^2/ac).

c. Basal area of pines < 25.4 cm (< 10 in) dbh is below 2.3 m^2/ha (10 ft^2/ac) *and* below 50 stems/ha (20 stems/ac).

d. Basal area of all pines $\geq$ 25.4 cm (10 in) dbh is at least 9.2 m^2/ha (40 ft^2/ac). That is, the minimum basal area for pines in categories (a) and (b) above is 9.2 m^2/ha (40 ft^2/ac).

e. Groundcovers of native bunchgrass and/or other native, fire-tolerant, fire-dependent herbs total 40 percent 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 a 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 percent of the number of canopy trees in longleaf forests and less than 30 percent of the number of canopy trees in loblolly and shortleaf forests. Xeric and sub-xeric oak inclusions that are naturally existing and likely to have been present prior to fire suppression may be retained but are not counted in the total area dedicated to foraging habitat.

h. All of this habitat is within 0.8 km (0.5 mi) of the center of the cluster, and preferably, 50 percent or more is within 0.4 km (0.25 mi) of the cluster center.

i. Foraging habitat is not separated by more than 61 m (200 ft) of non-foraging areas. Non-foraging areas include (1) any predominantly hardwood forest, (2) pine stands less than 30 years in age, (3) cleared land such as agricultural lands or recently clearcut areas, (4) paved roadways, (5) utility rights of way, and (6) bodies of water.

3. Discussion of Foraging Habitat Types.

a. Longleaf Pine. Longleaf pine communities vary from highly xeric to mesic and seasonally wet (see 2E), and each of these can support red-cockaded woodpeckers if the habitat structure is suitable. Red-cockaded woodpeckers in some highly xeric sites, such as Eglin Air Force Base in Florida, have very large home ranges, sparse groundcovers, and low density of large old trees that may result from low productivity and past management practices. Thus, we recommend that between 80 to 120 ha (200 and 300 ac) of good quality foraging habitat be provided each group in such sites. Note that this number of hectares (acres) does not refer to home range size in this habitat type, but the recommended amount of good quality foraging habitat within the home range. The latter may be much larger, due to unsuitable areas and home range overlap.

Extremely dry and extremely wet longleaf habitats may be unable to support some of the characteristics identified for good quality habitat. Pine sizes, pine density, and groundcover density may be below those specified above. Failure to meet these three criteria in extremely dry and extremely wet sites is understandable, as long as habitats are burned frequently and conscientious restoration is underway. Further research will help determine the extent of the natural ability of these habitats to support longleaf pines, native groundcovers, and red-cockaded woodpeckers at higher densities.