

Cause of predominant ecological effect from military use(s) of land

Attributes of military uses of land can influence the ecological effects of those land uses significantly. As examples, the type of traffic (tracked, wheeled, or foot) and frequency of use may make the biggest differences in ecological impact. Therefore, it is important to consider these attributes in conjunction with the military uses, themselves, to understand ecological conditions and support land management decision making.

- ***TRACKED VEHICLES*** occur both on and off roads. Down-slope impacts of sedimentation from tracked vehicles can occur.
- ***WHEELED VEHICLES*** can occur on road or other areas. In many areas, impacts from other tracked vehicles are more intensive than from wheeled vehicles.
- ***FOOT TRAFFIC*** can occur throughout much of the installation but in some areas impacts from other military uses are more intensive than from foot traffic.
- ***DESIGNATED BIVOUAC AREAS*** occur anywhere assigned for soldiers to stay overnight. These areas are prepared and may or may not be placed located in conjunction with ranges. Bivouac areas are affected by wheeled vehicle and foot traffic on a regular basis and include such other activities as digging, tenting, etc. With regard to frequency, all designated bivouac areas are used on a regular basis; this category does not include undesignated areas where soldiers may stay occasionally. Although bivouac areas generally are heavily impacted, they tend not to be subject to directed land management actions.
- ***FIRING RANGES*** generally are kept either clear of vegetation or covered by low-growing vegetation. Thus, the two main management activities at ranges are maintenance (grading, putting up targeting, etc.) and vegetation control (fires—maybe naturally occurring, mowing, herbicides). Frequency also is an attribute of firing ranges, for some ranges are used almost daily whereas others are not used as much (it is possible to obtain data on frequency of use of each range). Ranges are managed differently depending on whether or not they are used heavily (for example, frequently used ranges have firebreaks to reduce the potential of fire to spread).
- ***IMPACT AREAS*** are places in which unexploded ordnance is found. Therefore, essentially no management occurs in these areas, although resource managers may enter them for such activities as woodpecker work. The intensity and/or frequency of

munitions within different portions of impact areas are highly variable. Hence, the attribute of frequency is useful for understanding and assessing impact areas. Impact areas with frequent use are the dud areas, and those with infrequent use are the buffers. In any case, people cannot enter an impact area without special permission.

- ***DROP OR LANDING ZONES*** are open fields created for parachutists to land. These areas are affected by wheeled vehicle and foot traffic. Infrequently used drop zones support wildlife openings, and are thus also affected by mowing, disking, planting and other activities associated with wildlife openings. Landing Zones for helicopters are slightly different from drop zones. Landing zones are used less frequently and are impacted by aircraft weight and heat. Some landing zones are planted wildlife openings, but all of the drop zones are mowed fields.
- ***AREAS WITH NO MILITARY TRAINING*** may be within impact areas or outside of them.
- ***ADMINISTRATIVE AREAS*** that represent the cantonment.

Land management goals

“Land management goals” provide a long-term orientation for the integration effort. These goals tend to be more stable than either specific management practices undertaken in particular areas (e.g., thinning or logging) or land cover types. Therefore, categorizing land areas within Fort Benning according to land management goals is efficacious. Designated “unique ecological areas” can occur in several categories.

Different goals can involve a range of land management activity, ranging from minimal to intensive. Much of the military reservation is managed minimally. Land management practices at Fort Benning vary according to their focus on:

1. MINIMALLY MANAGED AREAS — include places where no active management occurs (in contrast with intensive, active management), and where the management goal is simply to minimize disturbance and keep the area ecologically intact.

- ***1.1 Wetlands*** — include floodplains and bottomland hardwood forests where no timber is harvested
- ***1.2 Vegetation on steep slopes*** — where abrupt topography limits management

- **1.3 Forests in impact zones** — where no management occurs because access is restricted

MANAGED TO RESTORE AND PRESERVE UPLAND FOREST — currently the most common land management type for upland pine forests at Fort Benning. These areas are managed with the goal of restoring and maintaining uneven-aged longleaf pine forests and mixed longleaf pine-scrub oak woodlands. This goal is achieved via a combination of management practices, including timber harvesting, reforestation and prescribed fire. Most of the acreage in upland forested areas are designated as “Typical management areas.” However, “RCW clusters” and “Sensitive area signed areas” are separated here because management practices in these areas may be slightly different. For example, cut-to-length forestry may be used over conventional forestry in RCW clusters because it is less destructive to the understory plant community.

- **2.1 Upland forest areas** — includes all of the upland forested areas that are not designated as RCW clusters or sensitive areas. These areas include stands dominated by long leaf pine, mixed pine stands, and scrub oak and pine mix.
- **2.2 RCW (red-cockaded woodpecker) management clusters** — Signed areas that contain RCW cavity trees
- **2.3 Sensitive areas designated by signs** — those sites designated by signs as being sensitive to human disturbance and include areas with gopher tortoise, archeological ruins, and sensitive plants.

MANAGED TO MAINTAIN AN ALTERED ECOLOGICAL STATE — includes areas where the land management goal is to maintain an altered ecological state, either for the purpose of military training or for some other stated purpose such as enhancing wildlife or wild-game populations. Erosion control areas are also included here, and the goal for these areas is simply to stabilize the erosion. Erosion control projects are generally short-term. Management to maintain an altered ecological state includes several subcategories:

- **3.1 Intensive maneuver areas** support intensive military use and often are associated with mechanized operations. These areas are sometimes referred to as “sandbox” or sacrifice areas, for they have only limited management.
- **3.2 Wildlife openings** can be cultivated with crops of special value to wildlife for either cover or forage. Sometimes these areas are mowed.

- **3.3 Mowed fields** are cut regularly to maintain grasses and other low-growing vegetation.
- **3.4 Roads** are both paved and unpaved and include a small buffer area around them.
- **3.5 Built environment** refers to buildings and open areas associated with the cantonment.