



U.S. Fish & Wildlife Service  
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## RECOMMENDED TIMBER MANAGEMENT PRACTICES FOR THE FLATWOODS SALAMANDER<sup>1</sup>

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Silviculture techniques which mirror the natural pine flatwoods ecosystem provide the most benefit to flatwoods salamander populations. Goals are to curtail activities during the breeding and dispersal season (October to April), avoid soil disruption and compaction, prevent hydrologic change, and maintain an open overstory and herbaceous ground cover. To achieve these goals, timber harvesting in pine flatwoods habitat within a 450 meter (1476 ft) radius buffer zone surrounding a known flatwoods salamander breeding pond should be conducted according to the following guidelines. Timber harvests using these guidelines would not likely adversely affect flatwoods salamanders.

1. For a primary zone of 164 m (538 ft) from the pond edge use selective harvest, harvest only during dry periods, and harvest at a minimum of 10-year intervals. Maintain a basal area of 4.2 to 4.7 m<sup>2</sup> per hectare (45-50 ft<sup>2</sup> per acre).
2. For a secondary zone from 164 to 450 m (538-1476 ft) from the pond edge: use a mix of clear-cutting and selective harvest, harvesting only during dry periods and at a minimum of 10-year intervals. Clear-cut up to 25 percent at any given time, while maintaining 75 percent of the pine flatwoods habitat. Basal area should be maintained at 4.2 to 4.7 m<sup>2</sup> per hectare (45-50 ft<sup>2</sup> per acre). The primary and secondary zones should not be separated by cleared or non-pine flatwoods habitat.
3. Skid trails and their effects should be minimized through the use of prescription planning. Skid trails should be carefully located so that the wetland hydrology is not altered. All log landings should be located outside the primary and secondary zones.
4. Minimize soil disturbance by eliminating intensive mechanical site preparation (root-raking, discing, stumping, bedding).
5. Use prescribed burning as the preferred method for site preparation and control of woody vegetation. Herbicide use should be limited to manual application according to best management practices (BMP) only when fire can not be used.
6. Avoid tying fire lines into known breeding ponds and other seasonal ponds. Plowing around these ponds should also be avoided.
7. During prescribed burning or fire fighting operations, avoid using foam or water from tanks containing foam residue in or around seasonal ponds. Amphibians in general are sensitive to the detergents and chemicals found in foam.

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<sup>1</sup> U.S. Fish & Wildlife Service. April 1, 1999. Endangered and Threatened Wildlife and Plants; Final Rule to List the Flatwoods Salamander as a Threatened Species. Federal Register 62(241): 15691-15704.