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## II. WILDLIFE INTERPRETATIONS

### INTRODUCTION

Fish and wildlife supported or produced on farms, ranches or other lands are related to and inseparable from soil, water, and plant resources management and are therefore integral components of all primary land and water use management systems.

### SOIL INTERPRETATIONS FOR SUITABILITY FOR WILDLIFE HABITAT

Soils influence wildlife populations primarily through the kinds of vegetation and other habitat components they support. Wildlife habitat soils ratings serve several purposes. First, such ratings aid in the selection of sites for habitat management by identifying sites with soils capable of supporting particular habitat elements. Second, they indicate the kinds and intensity of management activities that can be satisfactorily accomplished. Third, the ratings provide a means of considering and grouping known soil conditions during broad-scale wildlife land-use planning, wildlife land acquisition, and park and other recreation developments. Along with soil survey maps, the ratings aid in showing landowners where management practices are appropriate. They may also be useful in showing why certain objectives--for example, vernal pool habitat--may not be feasible.

Most wildlife habitats are created, improved, or maintained by planting suitable vegetation, manipulating existing vegetation, inducing natural establishment of desired plants, or combinations of these measures. The behavior of soils can be predicted from knowledge of their properties. The growth and characteristics of plant communities that constitute wildlife habitat are affected by soil properties. Soils can be interpreted for a variety of habitat elements. From the appraisal of a combination of elements, the potential of land for various kinds of wildlife, under specific soil conditions, can be evaluated.

### WILDLIFE HABITAT RELATIONSHIPS

A number of methods or processes for habitat inventory and evaluation have been developed. Any system used by NRCS must be objective, replicable, technologically defensible, and habitat-based. The inventory and evaluation process should be documented to provide a record of supporting data that can readily be reviewed.

Data collected during habitat inventories and evaluations can be used to help (1) identify and assess the status or baseline condition of fish and wildlife habitats in a planning area, (2) analyze habitat needs for featured species, (3) identify enhancement opportunities, (4) project future impacts on habitats with or without particular conservation activities, and (5) quantify mitigation or compensation needs, where applicable and appropriate. Habitat evaluation procedures can also be used to assess the impacts of various conservation practices on fish and wildlife. NRCS in California can utilize the California Wildlife Habitat Relationships database as a tool for predicting wildlife response to habitats and habitat management.

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### SOIL INTERPRETATIONS FOR SUITABILITY FOR WILDLIFE HABITAT

Land treatment alternatives will be based on the soils potential for supporting certain kinds of wildlife habitat after the land user has decided on the wildlife species they wish to encourage.

Kinds of wildlife habitat are the following:

Openland (Cropland) - These are deep soils generally occurring on alluvial bottoms of the valleys and fans, and on adjacent moderately sloping uplands. Areas used presently or in the past for the production of irrigated or dryland crops, and the associated land overgrown by grasses, and shrubs.

Woodland - These are upland soils of the foothill valleys. Areas where trees are a dominant part of the natural plant community.

Wetland - These are wet sedimentary and alluvial soils of the floodplains and basins in the foothill valleys. Areas are made up of swamps, marshes, sumps or open water areas.

Rangeland - Upland soils of the foothill, valleys and terraces. Areas used for grazing by livestock and wildlife on which the natural plant community is dominated by native grasses, grasslike plants, forbs and shrubs.

Wildlife habitat suitability will be expressed in terms of one of the following ratings:

Good - Habitats are easily improved, maintained, or created. There are few or no soil limitations in the habitat management and satisfactory results can be expected.

Fair - Habitats can be improved, maintained, or created on these soils but moderate soil limitations affect habitat management or development. A moderate intensity of management and fairly frequent attention may be required to insure satisfactory results.

Poor - Habitats can be improved, maintained, or created on these soils, but the soil limitations are severe. Habitat management may be difficult and expensive and require intensive effort with questionable results.

Very Poor - Under the prevailing soil conditions, it is impractical to attempt to improve, maintain, or create habitats. Unsatisfactory results are probable.

Unsuited – Due to soil limitations, there is no habitat value.

The Suitability of a specific soil for different kinds of habitat is expressed by use of a four numeral notation indicating suitability for Openland, Woodland, Wetland and Rangeland habitat. Values for the ratings are:

Good	1
Fair	2
Poor	3
Very Poor	4
Unsuited	0

An example notation would be 3014, which would indicate a soil with poor suitability for openland habitat, unsuitable for woodland habitat, good for wetland habitat, and very poor for rangeland habitat.

Reference: NRCS SOILS MEMORANDUM-74

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### **SOIL INTERPRETATIONS FOR SUITABILITY FOR WILDLIFE HABITAT**

See pages \_\_\_\_\_ of \_\_\_\_\_ County/Area Soil Survey and  
Section II – Wildlife Interpretations, of the Field Office Technical Guide.

## II. WILDLIFE INTERPRETATIONS

### WILDLIFE HABITAT RELATIONSHIPS

The California Wildlife Habitat Relationships (CWHR) program is a tool NRCS can utilize in planning wildlife habitat development and management. CWHR is a state-of-art information system for California's wildlife. CWHR contains life history, management, and habitat relationships information on 675 species of amphibians, reptiles, birds, and mammals known to occur in California. Because of the predictive nature of its models, CWHR has many applications for wildlife resource issues, including wildlife population, community, and habitat conservation and management, land use planning, impact assessment, education, and research.

CWHR is operated and maintained by the California Department of Fish and Game in cooperation with the California Interagency Wildlife Task Group (CIWTG). The CIWTG was created in 1985 to develop standards and guidelines for studying California's wildlife communities and habitats. NRCS is a member of the CIWTG and subscribes to CWHR. Copies of CWHR are provided to NRCS biologists in California.

The computerized database can produce several types of reports listing wildlife species that are predicted to occur in a given area and habitat type. Habitat suitability indices and habitat units can be calculated for the habitat types, and these values can be compared between two different habitat conditions for land use planning assessments. Geographic areas that can be used in CWHR queries include counties, 1-minute x 1-minute blocks of latitude and longitude, Calwater Hydrologic Regions, California Department of Fish and Game Regions, U.S. National Forests, U.S. Bureau of Land Management Field Offices, USDA Ecological Regions, and CERES Bioregions.

Fifty-nine habitat types can be used in queries including forest, woodland, grassland, shrubland, agricultural, and aquatic habitats. Each habitat type is further described using vegetation size, and vegetation classes. A total of 124 special habitat elements, such as, snags, logs, water, etc., can also be used in CWHR queries to describe habitat conditions and further refine the predicted species lists.

Each species has its own habitat relationships model. Within the model, habitat suitability values are given for all habitat types and vegetation size and cover classes used by the species for three life requisites: breeding, cover, and feeding. Suitability indices are also given for the same three life requisites for the special habitat elements. Other wildlife information in the database includes taxonomy, seasonality, and legal status. Furthermore, each species has its own published species note describing life history attributes.

Additional information on CWHR can be found at the following web site:

<http://www.dfg.ca.gov/whdab/cwhr/whrintro.html>