

SW  
**WETLAND USER NOTES -- Nogales SW QUADRANGLE**

1. Map Preparation

Wetland classification for the National Wetlands Inventory (NWI) wetland map overlay to the Nogales SW 1:100,000 scale map are in accordance with L. M. Cowardin et al (1979). Wetland delineations and classifications were produced through the interpretation of black and white aerial photographs at a scale of 1:120,000 taken during June 1973. The photographs were viewed stereoscopically at a 6X magnification. Delineations were enlarged using a zoom-transferscope to overlays of 1:24,000 and 1:62,500. Overlays were then transferred to 1:100,000 scale base maps. Limited field checks were performed during February 1979.

The Project Officer for production of the wetland map was Warren Hagerbuck, Regional Wetlands Coordinator, (U.S. Fish and Wildlife Service, Region 2, P.O. Box 1306, Albuquerque, New Mexico 87103, (505) 766-2914). Aerial photo interpretations were completed by the School of Renewable Natural Resources, University of Arizona, Tucson 85721, Project Director: Dr. Jon Rodiek (602) 626-2313.

The user of the map is cautioned that due to mapping, primarily through photo interpretation, a small percentage of wetlands may have gone unidentified. Landscape changes could have taken place since the time of photo acquisition; therefore, discrepancies or land use changes should be provided to the Regional Wetlands Coordinator, Region 2, U.S. Fish and Wildlife Service.

2. Collateral Data

A. General Location

The area is within Santa Cruz and Pima Counties County, Arizona.

Northern boundary	31° 30' N Latitude
Southern boundary	U. S. - Mexico Border
Eastern boundary	111° W Longitude
Western boundary	U. S. - Mexico Border

B. Land Ownership

There are two (2) major land holdings within the Nogales SW quadrangle. These are:

BLM Lands  
Coronado National Forest

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### C. Soils

There are two (2) major soil associations found on the Nogales SW according to J. E. Jay et al (1975). These are:

Thermic semi-arid soils -- mean annual soil temperatures of 59° to 72° F (15-22° C) and 10-16 in (25-41 cm) mean annual precipitation.

TS 5	Caralampi-Hathaway Association
TS 6	Lithic Torriorthents-Lithic Haplustolls-Rock Outcrop Association

Detailed soil information may be found in USDA Soil Conservation Service (1977) and M. L. Richardson and M. L. Miller 1974.

### D. Biotic Communities

The descriptions of the biotic communities are summarized from C. H. Lowe (1977) and Brown, Lowe and Pase (1977). The community types are listed here in descending order of their relative dominance in the Nogales SW quadrangle.

The Madrean Evergreen Woodland type covers 3% of Arizona's total land area. It is dominated by species of evergreen oak including silverleaf oak, Arizona oak, and Emory oak which occur primarily in the southeastern quarter of the state. They occur in hills and mountain slopes between 4,000 and 6,500 feet, reaching their greatest development in the foothills of the larger mountain ranges. The shrubs which center their distribution in these oak woodland types, range upward into the pine forests or downward into the desert grasslands. Characteristic species include mountain yucca, agave, and woodland sumac. Other dry-tropic shrubs and succulents occur in varying degrees in these interior southwestern woodlands. A few cacti and grasses such as bullgrass, little blue stem and woody bunchgrass are found with blue gramma being the most common. Mean annual precipitation ranges between 12 and 22 inches.

The Semidesert Grassland, accounting for 8.0% of Arizona's total land area, is a transitional type of grass dominated landscape positioned between desert below and evergreen woodland or chaparral above. Its lower limit is about 3,500 feet in elevation and its best development is between 4,000 and 5,000 feet. In Arizona it occurs largely in the southeastern quarter of the state. A small area also occurs in the northwestern quarter near Kingman. The grasses are often bunch-growth perennials in which the bases of clumps are separated by bare ground. Where the soil is deep black gramma, blue gramma, slender gramma and others may be the dominant cover over large areas. A wider variety of shrubs, trees and cacti life forms occur on shallow-soiled rocky and gravelly hills and slopes. Mesquite trees have invaded large areas of former grassland. Mean annual precipitation ranges between 10 and 15 inches.

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3. SUPPLEMENTAL DATA (N.W.I.)

A. Hydrologic Units

Major hydrologic units found within the Nogales SW quadrangle are defined by the U.S. Geologic Survey (1974). For example, the coding designates region (15) Lower Colorado, subregion (01), accounting unit (00), and cataloging unit (05).

15050301  
15080200  
15050304

There are two (2) groundwater areas designated within the quadrangle by the U.S. Geological Survey (1979). These are:

Upper Santa Cruz Basin  
Altar Valley

B. Geography

Landforms

Physical subdivisions and land surface forms are classified according to E. H. Hammond (1965). There is one (1) landform major type:

(V-4) B5a -- Intermontane; Basin and Range Area; Plains with low mountains.

Bailey's Ecoregions

Bailey's Ecoregion Classification, R. G. Bailey (1975), identifies the area as within the following province(s):

3222L Dry Domain; Arid Desert Division; Creosote Bush-Bur Sage Section.

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### 4. Wetland Communities

The wetland and deepwater habitats displayed on the Nogales SW map are dominated by those types occurring along the dry washes and arroyos where runoff from monsoon storms accumulates. There are two live stream segments found here. They are found in Sycamore Canyon and Peck Canyon.

- R<sub>4</sub>SB Riverine, Intermittent, Streambed
- L<sub>1</sub>OW Lacustrine, Limnetic, Open Water/Unknown Bottom (artificial; Pena Blanca Lake)
- POW Palustrine, Open Water/Unknown Bottom
- PEM Palustrine, Emergent (nonpersistent)
- PSS Palustrine, Scrub Shrub

### 5. Field checks

No data.

### 6. Wetland Loss and Vulnerability

The high elevation (4000-6000 ft.) and moderate amounts of precipitation (10-20 inches annually) provide this area with a modest amount of wetland types. Most notable are the live stream segments in Peck Canyon and the upper reaches of Arivaca Wash. Pena Blanca Lake is the largest man-made impoundment in the area. High evapotranspiration rates are typical in this region. There are several general threats to wetland types here. Grazing is by far the biggest threat to all wetland habitats. Little if any restraint is applied to this land use practice. Groundwater and surface water are scarce so available supplies come under heavy multiple-use demands. Tree canopy is also very scarce. Surface water then does not remain on the landscape for long periods of time after initial precipitation occurs.