

USER NOTES: DEMING, NEW MEXICO, NATIONAL WETLANDS INVENTORY MAP

Map Preparation

The wetland classifications that appear on the Deming National Wetlands Inventory (NWI) Base Map area is in accordance with Cowardin et. al. (1977). The delineations were produced through stereoscopic interpretation of 1:80,000-scale black-and-white aerial photographs taken during the years of 1974-1976. The delineations were enlarged using a zoom transferscope to overlays of 1:24,000-scale and 1:62,500-scale. These overlays were then transferred to 1:100,000-scale to produce the Base Map.

Limited field checks of the delineated wetlands of the Deming NWI Base Map were conducted in June, 1981 to determine the accuracy of the aerial photointerpretation and to provide qualifying descriptions of mapped wetland designations.

The user of the map is cautioned that, due to the limitation of mapping primarily through aerial photointerpretation, a small percentage of wetlands may have gone unidentified. Changes in the landscape could have occurred since the time of photography, therefore some discrepancies between the map and current field conditions may exist. Any discrepancies that are encountered in the use of this map should be brought to the attention of Warren Hagenbuck, Regional Wetlands Coordinator, Region 2, U. S. Fish and Wildlife Service, P.O. Box 1306, Albuquerque, New Mexico, 87103.

Geography

The area covered by the Deming NWI Base Map lies within portions of Luna and Dona Ana counties in southcentral New Mexico. Bailey's Ecoregion Classification (1978) identifies the area as Chihuahuan Desert Province, Grama-Tobosa Section (3211).

Generally, the area is characterized by scattered mountain ranges, peaks, ridges and hills surrounded by belts of alluvial and eolian material that gently slope toward flat, internally drained basins. The elevation ranges from 3900 feet above mean sea level on basin floors to 8408 feet at Cooks Peak in the Cooks Range. The mountainous features typically have shallow to very shallow medium textured cobble soils and rock outcrops. The topography is undulating to very steep. Open stands of pinyon (Pinus edulis), one-seed juniper (Juniperus monosperma) and Rocky Mountain juniper (Juniperus osteosperma) occur in upland areas above 5,000 feet (Neher and Buchanan 1980).

The southern extent of the Mimbres Mountains, represented by the Cooks Range and Goat and Flouride Ridges, lies in the northwestern portion of the area covered by the Base Map and have elevations from 5000-8400 feet. At the base of these mountains the topography gently undulates on alluvial fans and extends south for about 10-15 miles to the Florida and Little Florida Mountains that range in elevation from 4600-7000 feet. To the east of the Cooks Range are the Good Sight Mountains curving their

way southeast around the southern portion of the Sierra De Las Uvas creating a small gently sloping basin between the two ranges known as the Uvas Valley. East of the Sierra De Las Uvas are the Rough and Ready and Sleepy Lady Hills that extend south across a nearly level lowland gap to the Aden Hills, a northern finger of the West Potrillo Mountains. Wetlands in these mountainous areas occur as drainage channels in the form of ravines, gullies, and arroyos. Surface runoff is ephemeral and flash floods are common during heavy rains.

The entire area is internally drained with the Rio Mimbres as the most important drainage channel. It runs southeast in the western half of the area covered by the Base Map and its flow is usually subsurface throughout this course.

The areas between the mountain ranges are generally level, gradually sloping toward the southeast. These lower areas have deep, moderately fine to coarse textured soils primarily on alluvial fans, basin floors, and on alkali flats east of the Florida Mountains (Neher and Buchanan 1980). Cattle grazing and irrigated farming of cotton, grain sorghum, alfalfa, chile, barley and vegetables account for the predominant use in the area. Stock tanks and playas are common on the rangeland and numerous irrigation farm ponds create important wetlands for wildlife species.

### Climate

The climate of the area covered by the Deming NWI Base Map is arid continental. There is a wide range in the annual temperatures with hot summers and mild winters. Spring and fall are warm and dry. Precipitation occurs primarily in the summer in the form of brief localized thunderstorms. The lowlands have a mean annual precipitation of 8 inches and the higher mountains, Cooks and Florida, have 12 inches (Neher and Buchanan 1980).

### Wetland Communities

The Rio Mimbres and arroyos constitute the Riverine Intermittent Streambed at low elevations. These drainages typically have Sand bottoms with saltcedar (Tamarix chinensis), seep willow (Baccharis glutinosa), mesquite (Prosopis juliflora) and patches of desert willow (Chilopsis linearis) in association. Surface water flows through these channels only during periods of heavy rain when flash floods often occur, but water availability is very brief. The Rio Mimbres has been reported to reach a crest of 10 to 15 feet. Occasionally it overflows into the areas adjoining its channel where most of the water percolates into the ground, recharging the ground water supply. Not since 1906 has the river flowed as far south as the Mexican border (Neher and Buchanan 1980).

Riverine Intermittent Streambeds in the mountainous uplands occur as dry drainages of Bedrock and Boulders forming steep-sided gullies and ravines. The vegetation associated with these upland drainages is composed of juniper (Juniperus sp.), gray oak (Quercus grisea), mesquite

(Prosopis glandulosa), ash (Fraxinus sp.), skunkbush sumac (Rhus trilobata) Apache plume (Fallugia paradoxa), catclaw acacia (Acacia gregii), Mormon tea (Ephedra trifurca), blue grama (Boutelous gracilis), and alkali sacaton (Sporobolus airoides). Surface water flow through these channels occurs only during heavy rains. Standing water, labeled as Riverine Intermittent Open Water, may occur in small pockets in the streambed and may support filamentous algae and Chara, but most of the course remains essentially dry throughout the year.

Palustrine Flats occur either as small playas or livestock watering tanks in the lowlands. They are usually unvegetated and are only intermittently flooded with water of temporary duration, and represent Type 9 wetlands - Inland Saline Flats, according to Circular 39 (Shaw and Fredine 1971). Their bottoms are unconsolidated, composed primarily of Mud and Sand. Some of these may have been designated as Palustrine Open Water but unless the surface water is maintained by a windmill or other pumping device, they should be classified as Palustrine Flat.

Lacustrine Littoral Flats are larger playas occurring mainly in the central and eastern areas covered by the Base Map. These rarely hold water except during exceptional rains, and may be vegetated by alkali sacaton or other grasses.

The level lowland areas east and especially south of Deming have many scattered irrigation farm ponds that are maintained by pumps that tap groundwater basin supplies. They are labeled as Palustrine Open Water, but could also be labeled as Palustrine Emergent wetlands. They represent Type 10 wetlands - Inland Saline Marshes according to Circular 39 (Shaw and Fredine 1971). They are readily located since they usually support a few large cottonwoods (Populus fremontii) in this otherwise shrub and grass dominated landscape. The ponds with water throughout the year usually have emergent vegetation growing along the margins: cattails (Iypha sp.), softstem bulrush (Scirpus americanis), and rushes (Juncus sp.) are most common. If the cottonwood canopy has not completely shaded the small pond's surface, Aquatic Beds of filamentous algae, Chara, and pondweed (Potamogeton sp.) may occur. Cottonwoods around these ponds provide nesting or roosting sites for sparrow hawks (Falco sparverius), mourning doves (Zenaidura macroura), and various other common species passerines such as the western kingbird (Tyrannus verticalis) and Bullock's oriole (Icterus bullockii). Red-winged blackbirds use the emergent vegetation and a variety of migratory waterfowl winter on these ponds.

Springs are found in the mountains usually as seeps and sometimes producing small rivulets, their permanence dependent on the level of the water table. Around these springs and along their flow are cottonwoods, coyote willows (Salix exigua), and rushes of various species. These springs support aquatic invertebrate fauna of Coleoptera (beetles), Ephemeroptera (mayflies), Tricoptera (caddis flies), Gastropoda (snails), and Nematoda (roundworms). The springs are not mapped on the Deming NWI Base Map unless the trees, shrubs or emergents associated with them were noticeable through aerial photointerpretation. Usually they would be obscured by the more common vegetation of the drainages, however USGS Quadrangle maps have many springs denoted and these should be recognized

as important wetland sites for their value as watering sites for livestock and wildlife.

Loss and Vulnerability

The most important wetlands in the area covered by the Deming NWI Base Map are artificial impoundments used for irrigation water storage or for stock tanks. As long as the water table is maintained, storing water in earthen impoundments can continue and will provide important wetland habitats for waterfowl and other wildlife species.

<u>NWI CODE</u>	<u>DESCRIPTION</u>	<u>COMMON NAME</u>	<u>CIRCULAR TYPE</u>	<u>REPRESENTATIVE PLANT SPECIES OR Physiographic characteristics</u>
PFL	Palustrine Flat	stock tank, playa	9	Unvegetated - Sand to Mud bottom
POW	Palustrine Openwater	stock tank, irrigation pond	9, 10	Unvegetated - Sand to Mud bottom: cattail ( <u>Typha sp.</u> ) soft stem bulrush ( <u>Scirpus validus</u> ), common three-square ( <u>Scirpus americana</u> ), rushes ( <u>Juncus sp.</u> )
L2FL	Lacustrine Littoral Flat	drylake, playa	9	Unvegetated - Sand to Mud bottom: alkali sacaton ( <u>Sporobolus aeroides</u> ), other grasses
R4SB	Riverine Intermit- tent Streambed	arroyo, wash, river	--	Bedrock, Boulders, Sand
R4OW	Riverine Intermit- tent Openwater	river, tenaja	--	Bedrock, Boulders, Sand Filamentous algae, <u>Chara</u>

## BIBLIOGRAPHY

The purpose of this report is to provide general information about wetland classifications found within the area covered by the Base Map. There has been no attempt to describe all wetlands occurring in the area nor provide complete faunal and floral lists of those wetlands discussed. The references listed below refer to literature cited in the text of this report as well as sources of additional information.

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