

## Supplemental Map Report

1. *Project:* **San Juan Wetland/Riparian Project**, Completed 9/02

2. *Source Imagery:* 1:15,840 CIR 9x9 inch transparencies, flown 9/26/00 & 5/8/01

### San Juan River (NM)

Geounit	USGS Quad Name	Photo Date	Emulsion	Photo Scale	Photo Year	State
361810726	Tafoya Canyon	09/00	CIR	1:15.84K	2000	NM
361810733	Crow Mesa East	09/00	CIR	1:15.84K	2000	NM
361810741	Crow Mesa West	09/00	CIR	1:15.84K	2000	NM
362610726	Gonzales Mesa	09/00	CIR	1:15.84K	2000	NM
362610733	Smouse Mesa	09/00	CIR	1:15.84K	2000	NM
362610741	Thompson Mesa	09/00	CIR	1:15.84K	2000	NM
363310711	Pine Lake	09/00	CIR	1:15.84K	2000	NM
363310718	Vigas Canyon	09/00	CIR	1:15.84K	2000	NM
363310726	Santos Peak	09/00	CIR	1:15.84K	2000	NM
363310733	Gould Pass	09/00	CIR	1:15.84K	2000	NM
363310741	Fresno Canyon	09/00	CIR	1:15.84K	2000	NM
363310748	Huerfanito Peak	09/00	CIR	1:15.84K	2000	NM
363310756	East Fork Kutz Canyon	09/00	CIR	1:15.84K	2000	NM
364110711	Leandro Canyon	09/00	CIR	1:15.84K	2000	NM
364110718	Gobernador	09/00	CIR	1:15.84K	2000	NM
364110726	Fourmile Canyon	09/00	CIR	1:15.84K	2000	NM
364110733	Delgadito Mesa	09/00	CIR	1:15.84K	2000	NM
364110741	Cutter Canyon	09/00	CIR	1:15.84K	2000	NM
364110748	Blanco	09/00	CIR	1:15.84K	2000	NM
364110756	Bloomfield	09/00	CIR	1:15.84K	2000	NM
364110803	Horn Canyon	05/01	CIR	1:15.84K	2001	NM
364110811	Farmington South	05/01	CIR	1:15.84K	2001	NM
364110818	Kirtland	05/01	CIR	1:15.84K	2001	NM
364110826	Fruitland	05/01	CIR	1:15.84K	2001	NM
364110833	The Hogback North	05/01	CIR	1:15.84K	2001	NM
364810718	Espinosa Ranch	09/00	CIR	1:15.84K	2000	NM
364810726	Gomez Ranch	09/00	CIR	1:15.84K	2000	NM
364810733	Navajo Dam	09/00	CIR	1:15.84K	2000	NM
364810741	Archuleta	09/00	CIR	1:15.84K	2000	NM
364810748	Turley	09/00	CIR	1:15.84K	2000	NM
364810756	Aztec	09/00	CIR	1:15.84K	2000	NM
364810803	Flora Vista	05/01	CIR	1:15.84K	2001	NM
364810811	Farmington North	05/01	CIR	1:15.84K	2001	NM
364810818	Youngs Lake	05/01	CIR	1:15.84K	2001	NM
364810826	Waterflow	05/01	CIR	1:15.84K	2001	NM
364810833	Chimney Rock	05/01	CIR	1:15.84K	2001	NM
365610726	Bancos Mesa NW	09/00	CIR	1:15.84K	2000	CO,NM
365610733	Burnt Mesa	09/00	CIR	1:15.84K	2000	NM

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365610741	Anastacio Spring	09/00	CIR	1:15.84K	2000	CO,NM
365610748	Mount Nebo	09/00	CIR	1:15.84K	2000	CO,NM
365610756	Cedar Hill	09/00	CIR	1:15.84K	2000	CO,NM
365610811	La Plata	05/01	CIR	1:15.84K	2001	CO,NM

San Juan River (AZ)

Geounit	USGS Quad Name	Photo Date	Emulsion	Photo Scale	Photo Year	State
311811003	Stark	12/01	CIR	1:24K	2001	AZ
311811011	Bob Thompson Peak	12/01	CIR	1:24K	2001	AZ
312611003	Hereford	12/01	CIR	1:24K	2001	AZ
312611011	Nicksville	12/01	CIR	1:24K	2001	AZ
313311011	Lewis Springs	12/01	CIR	1:24K	2001	AZ
314111003	Tombstone	12/01	CIR	1:24K	2001	AZ
314111011	Fairbank	12/01	CIR	1:24K	2001	AZ
314811011	Land	12/01	CIR	1:24K	2001	AZ
315611011	Saint David	12/01	CIR	1:24K	2001	AZ
315611018	Benson	12/01	CIR	1:24K	2001	AZ
320311026	Galleta Flat West	12/01	CIR	1:24K	2001	AZ
321111018	Wildhorse Mountain	12/01	CIR	1:24K	2001	AZ
321811018	Soza Mesa	12/01	CIR	1:24K	2001	AZ
321811026	Soza Canyon	12/01	CIR	1:24K	2001	AZ
322611026	Redington	12/01	CIR	1:24K	2001	AZ
323311026	Kielberg Canyon	12/01	CIR	1:24K	2001	AZ
323311033	Peppersauce Wash	12/01	CIR	1:24K	2001	AZ
324111033	Clark Ranch	12/01	CIR	1:24K	2001	AZ
324111041	Mammoth	12/01	CIR	1:24K	2001	AZ
324811041	Lookout Mountain	12/01	CIR	1:24K	2001	AZ
325611041	Dudleyville	12/01	CIR	1:24K	2001	AZ
325611048	Winkelman	12/01	CIR	1:24K	2001	AZ

3. *Collateral Data:* Older, available NWI maps/photography, USGS Digital Raster Graphs. Handbook of Wetland Vegetation Communities of New Mexico, Vol. 1 (Muldavin, Durkin, Bradley, Stuever, Mehlhop) 2000.

4. *Inventory method:* Project considered original/new mapping. Interpretation and transfer done using OPTeM, Inc. Digital Transfer Scope.

5. *Classification:* Cowardin Wetlands, USFWS Riparian

6. *Data Limitations:* National Wetlands Inventory digital data were derived from stereoscopic analysis of high altitude aerial photographs. Wetlands and riparian areas were identified based on vegetation, visible hydrology and geography in accordance with **Classification of Wetlands and Deepwater Habitats of the United States** (FWS/OBS – 79/31 December 1979) & **A System for Mapping Riparian Areas in the Western United States** (FWS 1998). There is a margin of error inherent in the use of aerial photos. Age, scale and emulsion of the aerial photos, as well as seasonal and climatic variations at the time of aerial photo acquisition may affect the way in which wetlands and riparian areas are identified.

7. *General Description of Project area:* The San River and its associated drainages sit atop the Colorado Plateau, in the NW corner of New Mexico. This is a high semi-arid plateau receiving an average of 7 inches of rainfall a year, mostly from summer thunderstorms, and 9-20 inches of snowfall a year from Nov. to April. The project area runs from Navajo Dam and Reservoir, in the east, to the Navajo Nation border near Ship Rock, NM in the west. Only the San Juan, Animus and La Plata Rivers have perennial flow, mostly from snowmelt and runoff from the high San Juan Mountains to the north and east. The remainder of the watershed is dominated by dry arroyos (river beds), though a few have significant spring outflows. The vegetation is typical of most western rivers, dominated by cottonwood, salt cedar, russian olive, and some willow. Irrigation agriculture dominates the San Juan, Animus and La Plata valleys. The remainder of the work area is semi-arid scrub (mostly sagebrush and rabbitbrush). Farmington, NM is the largest city in the work area.

8. *Description of wetlands:* Since this is a semi-arid area and the San Juan River is a controlled system, there are few natural wetland systems in the project area. Most of the wetlands occur within the floodplains of the San Juan, Animus and La Plata Rivers. Most are relic features (oxbows, sloughs, etc...) from pre-damming river dynamics. There are also some spring-fed wetlands in some of the dry arroyos and the backwaters of Navajo Reservoir. Common vegetated wetland communities observed are as follows;

PFO1A/C- Plains Cottonwood, *Populus deltoides*  
Narrowleaf Cottonwood, *Populus angustifolia*  
*Salix, sp.*

PSS1A/C- Coyote Willow, *Salix exigua*  
Bluestem Willow, *Salix irrorita*  
Russian Olive, *Elaeagnus angustifolia*

PSS2A- Salt Cedar, *Tamarix, sp.*

PEM1C/F- *Carex, sp.*  
Spikerush, *Eleocharis, sp.*  
Bullrush, *Scirpus, sp.*  
Cattail, *Typha latifolia*

PEM1A/C- Saltgrass, *Distichlis, sp.*  
Rushes, *Juncus, sp.*  
*Phragmites, sp.*

9. *Description of Riparian Habitats:* Most of the vegetation mapped for this project fell into the USFWS Riparian Classification System. The riparian vegetation for this project is associated with the rivers and drainages, but not flooded by them. Rarely did the mapped riparian vegetation go higher than the first terrace above the river/drainage.

Riparian habitats were identified to the Dominance Type, whenever possible. Listed below are some of the more common classifications used;

Rp1FO6CW- Cottonwood dominated.

Rp1FO6MD- Undetermined deciduous, or more than two evenly mixed species.

Rp1SS6SC- Slat Cedar dominated.

Rp1SS6RO- Russian Olive dominated.

Rp1SS6WI- Willow (usually Coyote Willow) dominated.

Rp1SS7SB- Usually sagebrush/rabbitbrush scrublands.

Rp1SS8- Herbaceous/scrub mixes on arroyo sand bars and deciduous mixing with juniper/pine in higher elevation canyons.

10. *Other discussion of mapping issues:* Image quality for both eras of photos was good. Spring and fall are good times to fly for riparian mapping. The four main species (cottonwood, russian olive, salt cedar, willow) all had distinctive signatures (though they varied from spring to fall), aiding in identification. Water levels, due to the controlled nature of the system, were similar to the two eras of photography used.

11. *Other data:* See attached PDF files for field forms and plant lists.