NUMBER

• IRVINE, CALIFORNIA
MBER 075AP

DRAWING NUMBER

PLAN HOLD CORPORATION • IRVINE, CALIFORNIA
REORDER BY NUMBER 075AP

DRAWING NUMBER
3695-231

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DRAWING

PLAN HOLD CORPORATION
REORDER BY NUM

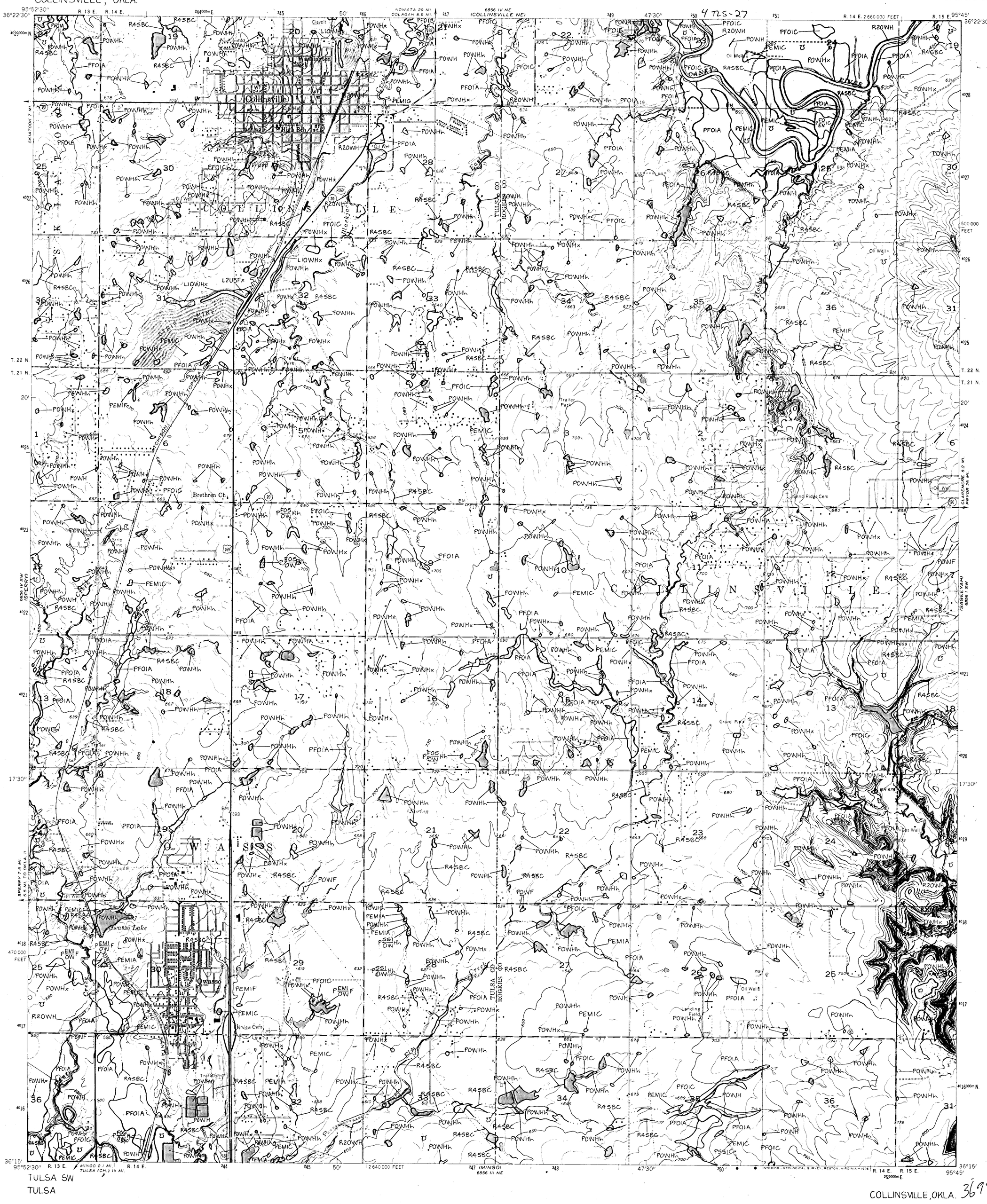
IMAGED

NATIONAL WETLANDS INVENTORY

UNITED STATES DEPARTMENT OF THE INTERIOR

COLLINSVILLE, OKLA.

4 TLS-27



TULSA SW
TULSA

COLLINSVILLE, OKLA. 3695-231

SCALE 1:24 000

1 MILE — 1000 0 1000 2000 3000 4000 5000 6000 7000 FEET — 1 KILOMETER

Other information concerning the wetland resources depicted on this document may be available. For information, contact:

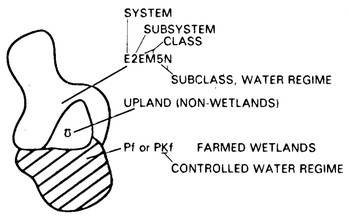
Regional Director (ARDE) Region II
U.S. Fish and Wildlife Service
P.O. Box 1306
Albuquerque, New Mexico 87103

SPECIAL NOTE

This document was prepared primarily by stereoscopic analysis of high altitude aerial photographs. Wetlands were identified on the photographs based on vegetation, visible hydrology, and geography in accordance with **Classification of Wetlands and Deep Water Habitats of the United States** (An Operational Draft), Cowardin, et al, 1977. The aerial photographs typically reflect conditions during the specific year and season when they were taken. In addition, there is a margin of error inherent in the use of the aerial photographs. Thus, a detailed on the ground and historical analysis of a single site may result in a revision of the wetland boundaries established through photographic interpretation. In addition, some small wetlands and those obscured by dense forest cover may not be included on this document.

Federal, State and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, State or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, State or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

SYMBOLOGY EXAMPLE



NOTES TO THE USER

- Wetlands which have been field examined are indicated on the map by an asterisk (*).
- Dominance type (either vegetative or sedentary animal) can be added to the map by the interested user.
- Additions or corrections to the wetlands information displayed on this map are solicited. Please forward such information to the address indicated.
- Some areas designated R4SB, R4SBW, or R4SBJ (intermittent streams) may not meet the definition of wetlands.

AERIAL PHOTOGRAPHY

DATE: 4 / 1 / 80
SCALE: 1:58 000
TYPE: CIR

DATE: / /
SCALE:
TYPE:

U.S. DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE

Prepared by Office of Biological Services for the National Wetlands Inventory

WETLAND LEGEND

U – Primarily represents **upland** areas, but may include unclassified wetlands such as man-modified areas, non photo-identifiable areas and/or unintentional omissions.

ECOLOGICAL SYSTEM — E – ESTUARINE

Ecological Subsystem	1 – Subtidal					2 – Intertidal							
CLASS	RB – ROCK BOTTOM	UB – UNCONSOLIDATED BOTTOM	AB – AQUATIC BED	RF – REEF	OW – OPEN WATER/ Unknown Bottom	AB – AQUATIC BED	RF – REEF	FL – FLAT	SB – STREAMBED	RS – ROCKY SHORE	BB – BEACH/BAR	EM – EMERGENT	SS – SCRUB/SHRUB	FO – FORESTED
Subclass	1 Bedrock 2 Boulder	1 Cobble/Gravel 2 Sand 3 Mud 4 Organic	1 Submergent Algal 2 Submergent Vascular 3 Floating-leaved 5 Floating 6 Unknown Submergent 7 Unknown Surface	2 Mollusc 3 Worm		1 Submergent Algal 2 Submergent Vascular 6 Unknown Submergent 7 Unknown Surface	2 Mollusc 3 Worm	1 Cobble/Gravel 2 Sand 3 Mud 4 Organic 5 Vegetated Pioneer 6 Vegetated Non-pioneer	1 Cobble/Gravel 2 Sand 3 Mud 4 Organic	1 Bedrock 2 Boulder 6 Vegetated Non-pioneer	1 Cobble/Gravel 2 Sand*	1 Persistent 2 Nonpersistent 3 Narrow leaved Nonpersistent 4 Broad-leaved Nonpersistent 5 Narrow leaved Persistent 6 Broad-leaved Persistent	1 Broad-leaved Deciduous 3 Broad-leaved Evergreen 4 Needle leaved Evergreen 5 Dead 6 Deciduous 7 Evergreen	1 Broad-leaved Deciduous 3 Broad-leaved Evergreen 4 Needle leaved Evergreen 5 Dead 6 Deciduous 7 Evergreen

ECOLOGICAL SYSTEM — M – MARINE

Ecological Subsystem	1 – Subtidal					2 – Intertidal					
CLASS	RB – ROCK BOTTOM	UB – UNCONSOLIDATED BOTTOM	AB – AQUATIC BED	RF – REEF	OW – OPEN WATER/ Unknown Bottom	AB – AQUATIC BED	RF – REEF	FL – FLAT	RS – ROCKY SHORE	BB – BEACH/BAR	
Subclass	1 Bedrock 2 Boulder	1 Cobble/Gravel 2 Sand 3 Mud 4 Organic	1 Submergent Algal 2 Submergent Vascular 6 Unknown Submergent	1 Coral 3 Worm		1 Submergent Algal 2 Submergent Vascular 6 Unknown Submergent	1 Coral 3 Worm	1 Cobble/Gravel 2 Sand 3 Mud 6 Vegetated Non-pioneer	1 Bedrock 2 Boulder 6 Vegetated Non-pioneer	1 Cobble/Gravel 2 Sand	

ECOLOGICAL SYSTEM — P – PALUSTRINE

No Subsystem									
CLASS	RB – ROCK BOTTOM	UB – UNCONSOLIDATED BOTTOM	AB – AQUATIC BED	FL – FLAT	ML – MOSS/ LICHEN	EM – EMERGENT	SS – SCRUB/SHRUB	FO – FORESTED	OW – OPEN WATER/ Unknown Bottom
Subclass	1 Bedrock 2 Boulder	1 Cobble/Gravel 2 Sand 3 Mud 4 Organic	1 Submergent Algal 2 Submergent Vascular 3 Submergent Moss 4 Floating-leaved 5 Floating 6 Unknown Submergent 7 Unknown Surface	1 Cobble/Gravel 2 Sand 3 Mud 4 Organic 5 Vegetated Pioneer 6 Vegetated Non-pioneer	1 Moss 2 Lichen	1 Persistent 2 Nonpersistent 3 Narrow leaved Nonpersistent 4 Broad-leaved Nonpersistent 5 Narrow leaved Persistent 6 Broad-leaved Persistent	1 Broad-leaved Deciduous 2 Needle leaved Deciduous 3 Broad-leaved Evergreen 4 Needle leaved Evergreen 5 Dead 6 Deciduous 7 Evergreen	1 Broad-leaved Deciduous 2 Needle leaved Deciduous 3 Broad-leaved Evergreen 4 Needle leaved Evergreen 5 Dead 6 Deciduous 7 Evergreen	

ECOLOGICAL SYSTEM — L – LACUSTRINE

Ecological Subsystem	1 – Limnetic				2 – Littoral							
CLASS	RB – ROCK BOTTOM	UB – UNCONSOLIDATED BOTTOM	AB – AQUATIC BED	OW – OPEN WATER/ Unknown Bottom	RB – ROCK BOTTOM	UB – UNCONSOLIDATED BOTTOM	AB – AQUATIC BED	FL – FLAT	RS – ROCKY SHORE	BB – BEACH/BAR	EM – EMERGENT	OW – OPEN WATER/ Unknown Bottom
Subclass	1 Bedrock 2 Boulder	1 Cobble/Gravel 2 Sand 3 Mud 4 Organic	1 Submergent Algal 2 Submergent Vascular 3 Submergent Moss 4 Floating-leaved 5 Floating 6 Unknown Submergent 7 Unknown Surface		1 Bedrock 2 Boulder	1 Cobble/Gravel 2 Sand 3 Mud 4 Organic	1 Submergent Algal 2 Submergent Vascular 3 Submergent Moss 4 Floating-leaved 5 Floating 6 Unknown Submergent 7 Unknown Surface	1 Cobble/Gravel 2 Sand 3 Mud 4 Organic 5 Vegetated Pioneer 6 Vegetated Non-pioneer	1 Bedrock 2 Boulder	1 Cobble/Gravel 2 Sand	1 Nonpersistent 3 Narrow leaved Nonpersistent 4 Broad-leaved Nonpersistent	

ECOLOGICAL SYSTEM — R – RIVERINE

Ecological Subsystem	1 – Tidal			2 – Lower Perennial		3 – Upper Perennial		4 – Intermittent		5 – Unknown Perennial		
CLASS	EM – EMERGENT(1)	RB – ROCK BOTTOM	UB – UNCONSOLIDATED BOTTOM	AB – AQUATIC BED	FL – FLAT	AB – AQUATIC BED	FL – FLAT	SB – STREAMBED	RS – ROCKY SHORE	BB – BEACH/BAR	OW – OPEN WATER/ Unknown Bottom
Subclass	2 Nonpersistent 3 Narrow leaved Nonpersistent 4 Broad-leaved Nonpersistent	1 Bedrock 2 Boulder	1 Cobble/Gravel 2 Sand 3 Mud 4 Organic	1 Submergent Algal 2 Submergent Vascular 3 Submergent Moss 4 Floating-leaved 5 Floating 6 Unknown Submergent 7 Unknown Surface	1 Cobble/Gravel 2 Sand 3 Mud 4 Organic 6 Vegetated Pioneer 6 Vegetated Non-pioneer			1 Cobble/Gravel 2 Sand 3 Mud 4 Organic	1 Bedrock 2 Boulder	1 Cobble/Gravel 2 Sand	

(1) EM – EMERGENTS are only found in the **Riverine Tidal** and **Riverine Lower Perennial** Ecological Subsystem. All other classes are found in all Riverine Ecological Subsystems.

MODIFYING TERMS

In order to more adequately describe wetland and aquatic habitats one or more of the water regime, water chemistry, soil, or special modifiers may be applied at the class or lower level in the hierarchy. The farmed modifier may also be applied to the ecological system.

WATER REGIME(1)								WATER CHEMISTRY			SOIL	SPECIAL MODIFIERS	
Non-Tidal				Tidal				Coastal Salinity	Inland Salinity	pH Modifiers for all Fresh Water			
A Temporary B Saturated C Seasonal D Seasonal Well-drained E Seasonal Saturated F Semipermanent G Intermittently Exposed	H Permanent J Intermittently Flooded K Artificial Z Intermittently Exposed/Permanent W Intermittently Flooded/Temporary Y Saturated/Semipermanent/Seasonals U Unknown			K Artificial L Subtidal M Irregularly Exposed N Regular P Irregular	R Seasonal Tidal S Temporary Tidal T Semipermanent Tidal V Permanent Tidal U Unknown			1 Hyperhaline 2 Euhaline 3 Mixohaline (Brackish) 4 Polyhaline 5 Mesohaline 6 Oligohaline 0 Fresh	7 Hypersaline 8 Eusaline 9 Mixosaline 0 Fresh	a Acid t Circumneutral i Alkaline	g Organic n Mineral	b Beaver d Partially Drained/Ditched f Farmed	h Diked/Impounded r Artificial s Spoil x Excavated

(1) Information on the water regime modifiers found on this legend, but not found in the classification system, may be obtained from the above listed source.