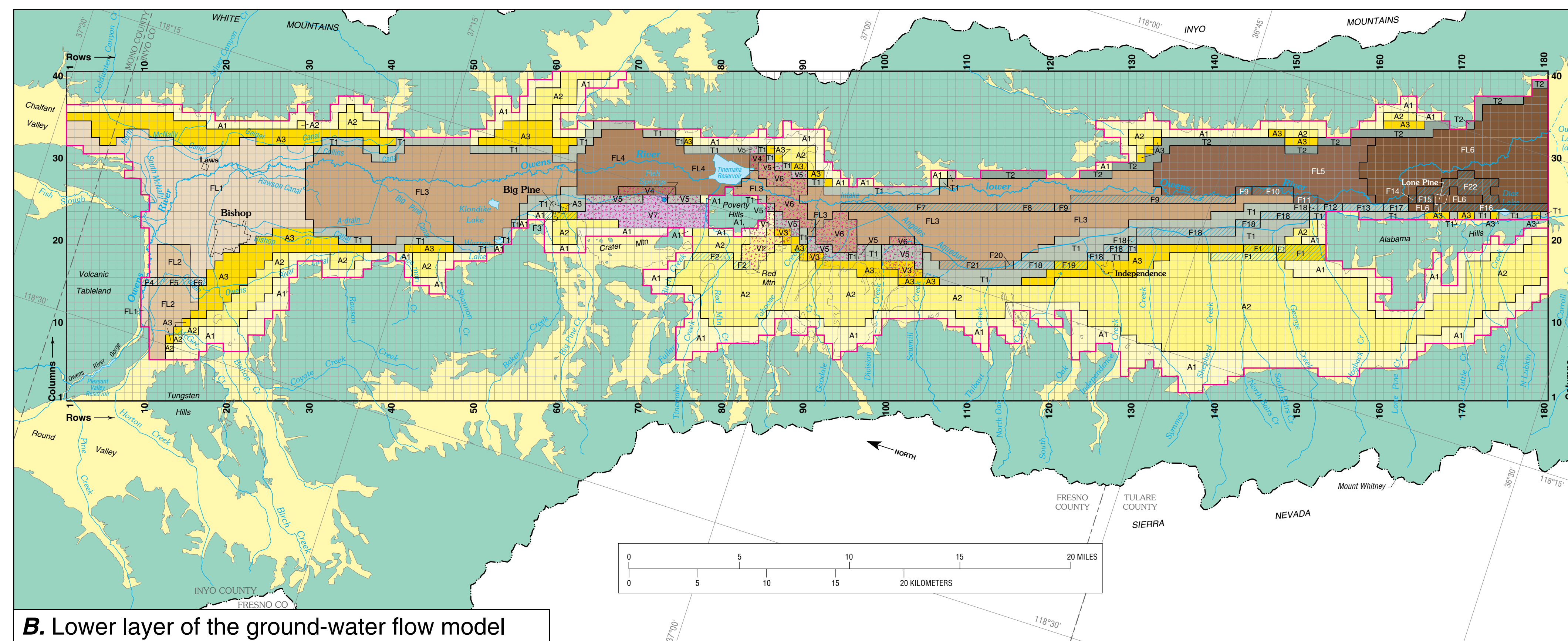
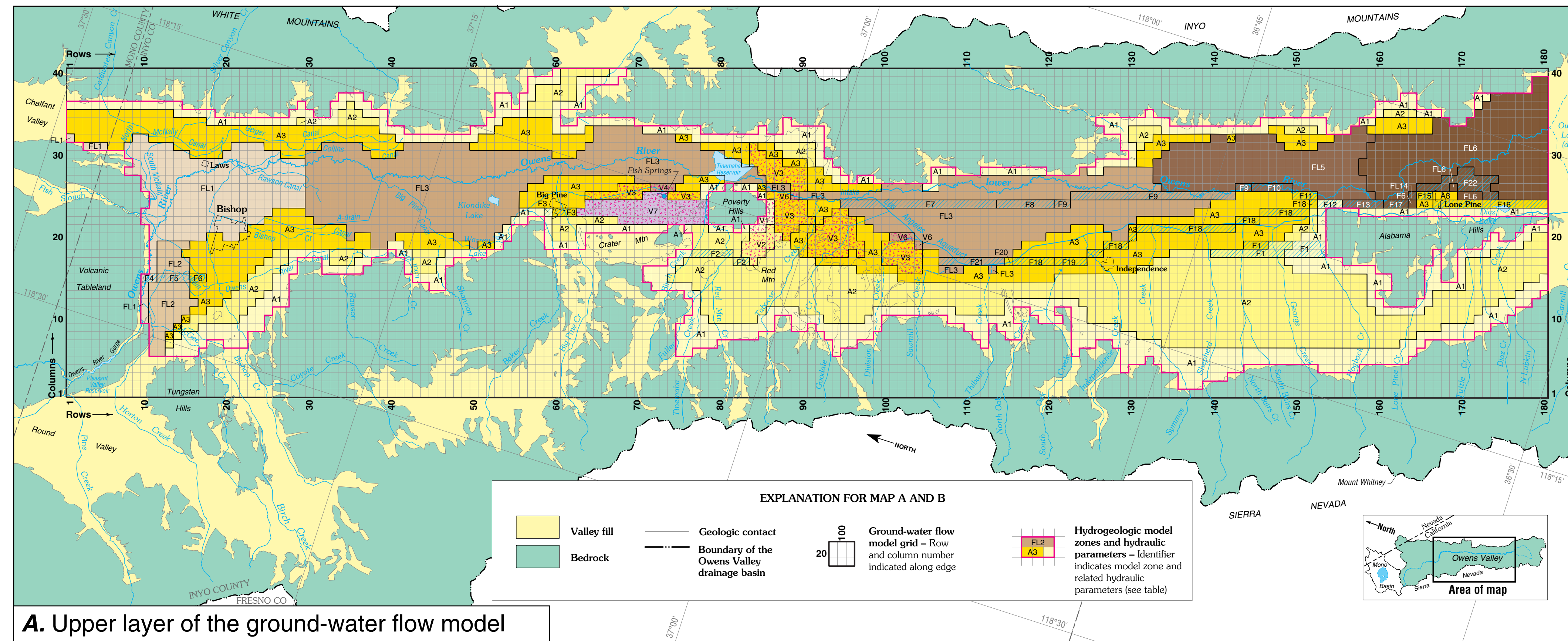


Measured ground-water levels and simulated hydraulic heads in the Owens Valley, California

By
Wesley R. Danksin
1998

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Hydraulic parameters for model zones

Hydrogeologic model zone Name (related zone numbers shown in parentheses for upper, lower model layers)	Identifier on plate for upper, lower model layers	Transmissivity [(gal/d)/ft ²]		Vertical conductance between model layers [(gal/d)/ft]	Remarks and ratio of transmissivity compared to related zone for upper, lower model layers
		Upper model layer	Lower model layer		

Major zones

Alluvial fan deposits, head	A1	a, a	8,000	8,000	0.0100	
Alluvial fan deposits, middle	A2	a, a	16,000	24,000	0.0100	
Alluvial fan deposits, toe	A3	a, a	16,000	48,000	0.0080	
Transition zone deposits	T1	--, t	--	160,000	0.0010	
Transition zone deposits on southeast side of Owens Lake basin (--, T1)	T2	--, t	--	80,000	0.0010	(--, 1:2)
Fluvial deposits	FL1	c, c	40,000	110,000	0.0008	
Fluvial deposits and terrace gravels near Bishop (FL1, FL1)	FL2	c, c	20,000	110,000	0.0008	
Fluvial and lacustrine deposits	FL3	c, c	20,000	80,000	0.0004	Upper zone is more poorly sorted than FL1
Fluvial and lacustrine deposits with thick clay beds near Big Pine (--, FL3)	FL4	--, d	--	80,000	0.0002	Vertical conductance is one-half FL3 value
Fluvial and lacustrine deposits near Owens Lake, area 1 (FL3, FL3)	FL5	c, c	15,000	60,000	0.0004	(3:4, 3:4)
Fluvial and lacustrine deposits near Owens Lake, area 2 (FL3, FL3)	FL6	c, c	10,000	40,000	0.0003	(1:2, 1:2)

Zones with faults

Alluvial fan fault zone near Alabama Hills (A1-A3, A1-A3)	F1	a, a	800	1,200	0.0100	About (1:20, 1:20)
Alluvial fan fault near Red Mountain (A2, A2)	F2	a, a	800	1,200	0.0100	About (1:20, 1:20)
Alluvial fan fault near Big Pine (A1-A3, A1-A3)	F3	a, a	800	2,400	0.0100	About (1:20, 1:20)
Fault west of Bishop (FL1, FL1)	F4	c, c	4,000	11,000	0.0008	(1:10, 1:10)
Fault west of Bishop (FL2, FL2)	F5	c, c	2,000	11,000	0.0008	(1:10, 1:10)
Fault west of Bishop (A3, FL1)	F6	a, c	1,600	11,000	0.0008	(1:10, 1:10)
Owens Valley Fault (FL3, FL3)	F7	c, c	20,000	80,000	0.0004	(1:1, 1:1)
Owens Valley Fault (FL3, FL3)	F8	c, c	4,000	8,000	0.0004	(1:5, 1:10)
Owens Valley Fault (FL3 and FL5, FL3 and FL5)	F9	c, c	4,000	4,000	0.0004	About (1:5, 1:20)
Owens Valley Fault (FL5, FL5)	F10	c, c	10,000	20,000	0.0004	(2:3, 1:3)
Owens Valley Fault (A3, FL5)	F11	a, c	8,000	20,000	0.0004	(1:2, 1:3)
Owens Valley Fault (A1, T1)	F12	a, t	1,600	16,000	0.0010	(1:5, 1:10)
Owens Valley Fault (FL5, T1)	F13	c, t	2,000	8,000	0.0010	(1:8, 1:20)
Owens Valley Fault (FL6, FL6)	F14	c, c	2,000	2,000	0.0003	(1:10, 1:20)
Owens Valley Fault (A3, FL6)	F15	a, c	1,600	2,000	0.0003	(1:10, 1:20)
Owens Valley Fault (A3, FL6)	F16	a, c	1,600	2,000	0.0003	(1:10, 1:20)
Owens Valley Fault (FL6, T1)	F17	c, t	500	8,000	0.0010	(1:20, 1:20)
Springfield fault (A3, T1)	F18	a, t	4,000	20,000	0.0010	(1:4, 1:8)
Springfield fault (A3, A3)	F19	a, a	4,000	12,000	0.0100	(1:4, 1:4)
Springfield fault (A3, FL3)	F20	a, c	4,000	20,000	0.0004	(1:4, 1:4)
Springfield fault (FL3, FL3)	F21	c, c	10,000	40,000	0.0004	(1:2, 1:2)
Lone Pine silver faults (FL6, FL6)	F22	c, c	500	2,000	0.0003	(1:20, 1:20)

Zones with interbedded volcanic deposits

Alluvial fan deposits, head (A1, A1)	V1	a, a	200,000	300,000	0.0100	
Alluvial fan deposits, middle (A2, A2)	V2	a, a	200,000	300,000	0.0100	
Alluvial fan deposits, toe (A3, A3)	V3	a, a	200,000	300,000	0.0080	
Fluvial and lacustrine deposits near Big Pine (FL3, FL4)	V4	c, d	200,000	300,000	0.0002	
Transition-zone deposits (--, T1)	V5	--, t	--	300,000	0.0010	
Fluvial and lacustrine deposits (FL3, FL3)	V6	c, c	200,000	300,000	0.0004	
Fractured and highly transmissive volcanic deposits near Crater Mountain	V7	v, v	1,500,000	1,500,000	0.0100	

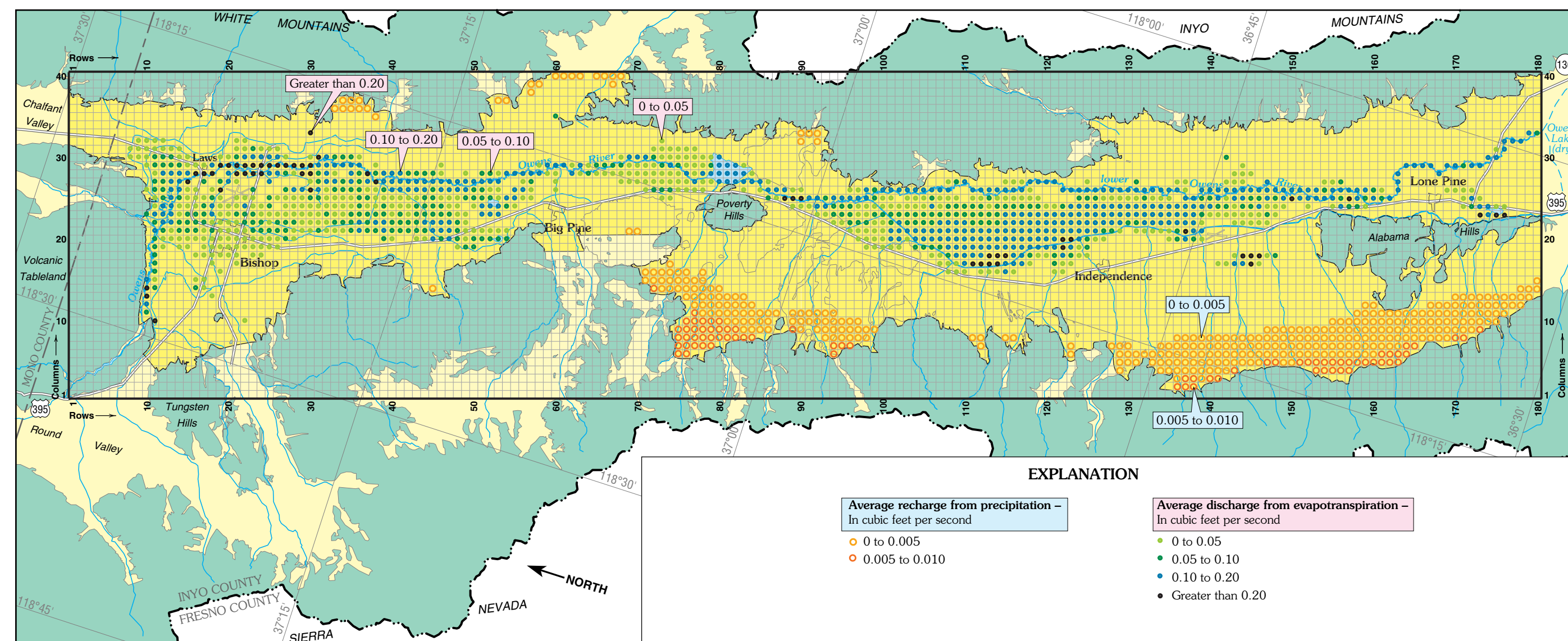
TABLE EXPLANATION

(gal/d)/ft² Gallons per day per square foot --, not applicable
(gal/d)/ft³ Gallons per day per cubic foot

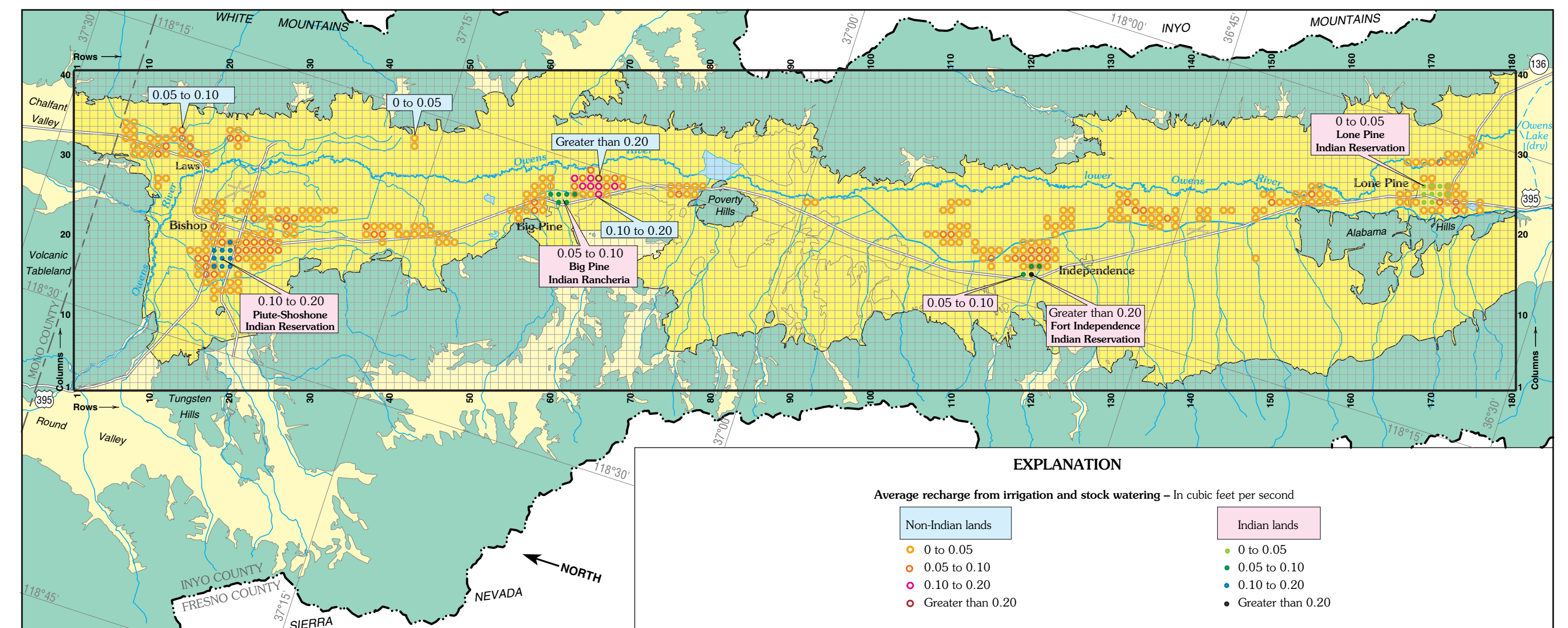
Related hydrogeologic subunits are described in detail by Hollett and others, 1991 (U.S. Geological Survey Water-Supply Paper 2370-B, plate 2)

Hydrogeologic model zones and hydraulic parameters for each layer of the ground-water flow model in the Owens Valley, California

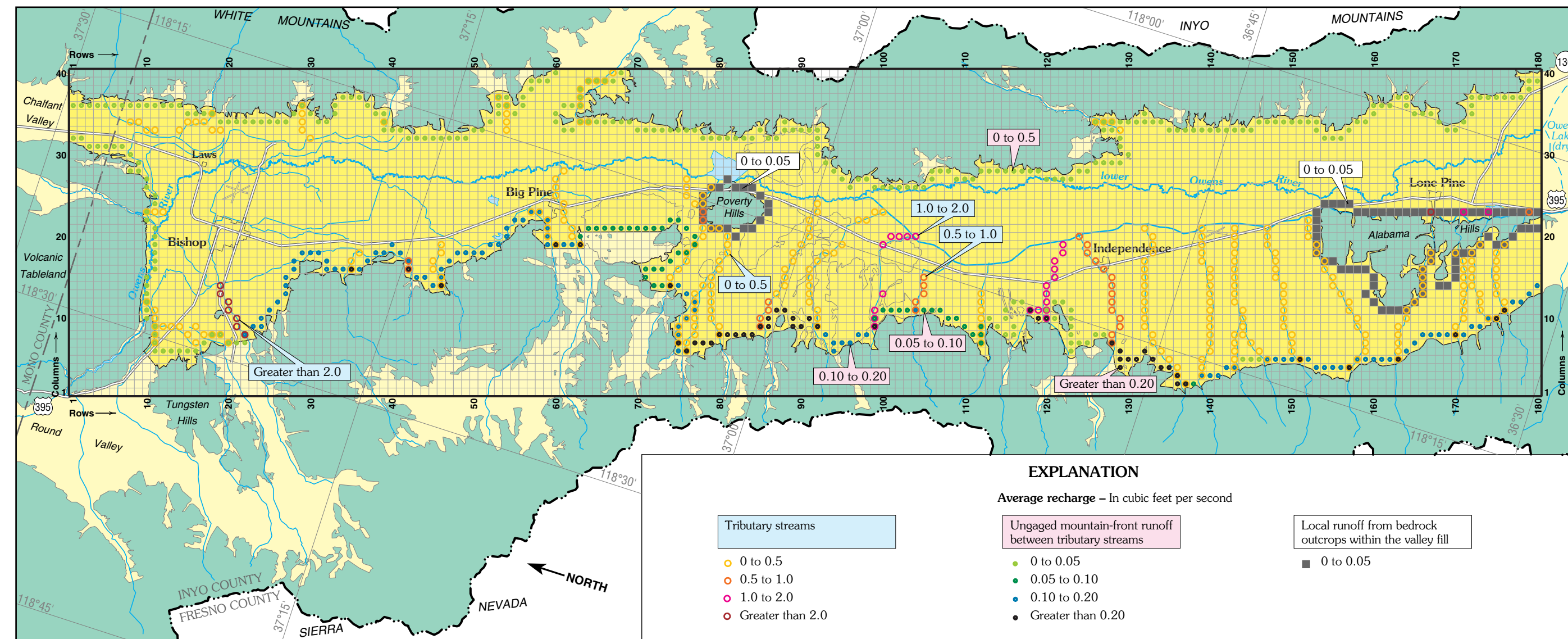
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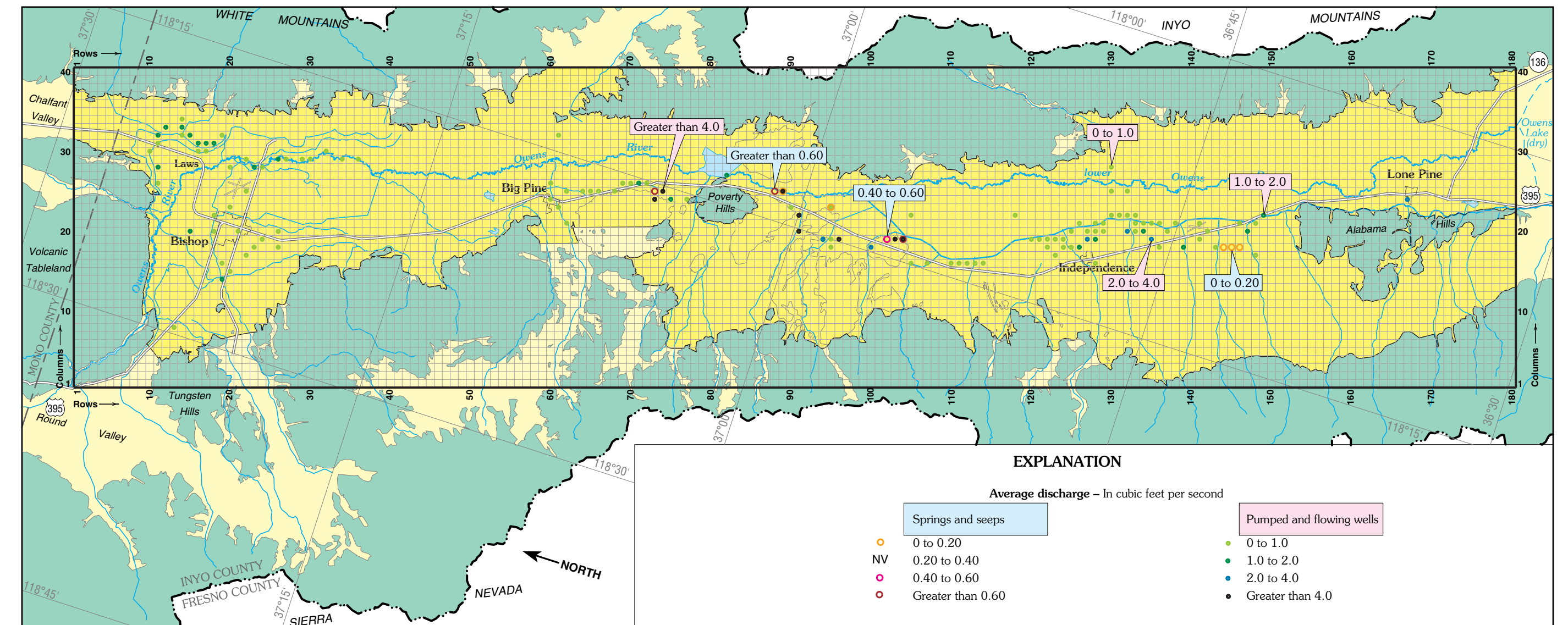
A. Precipitation and evapotranspiration



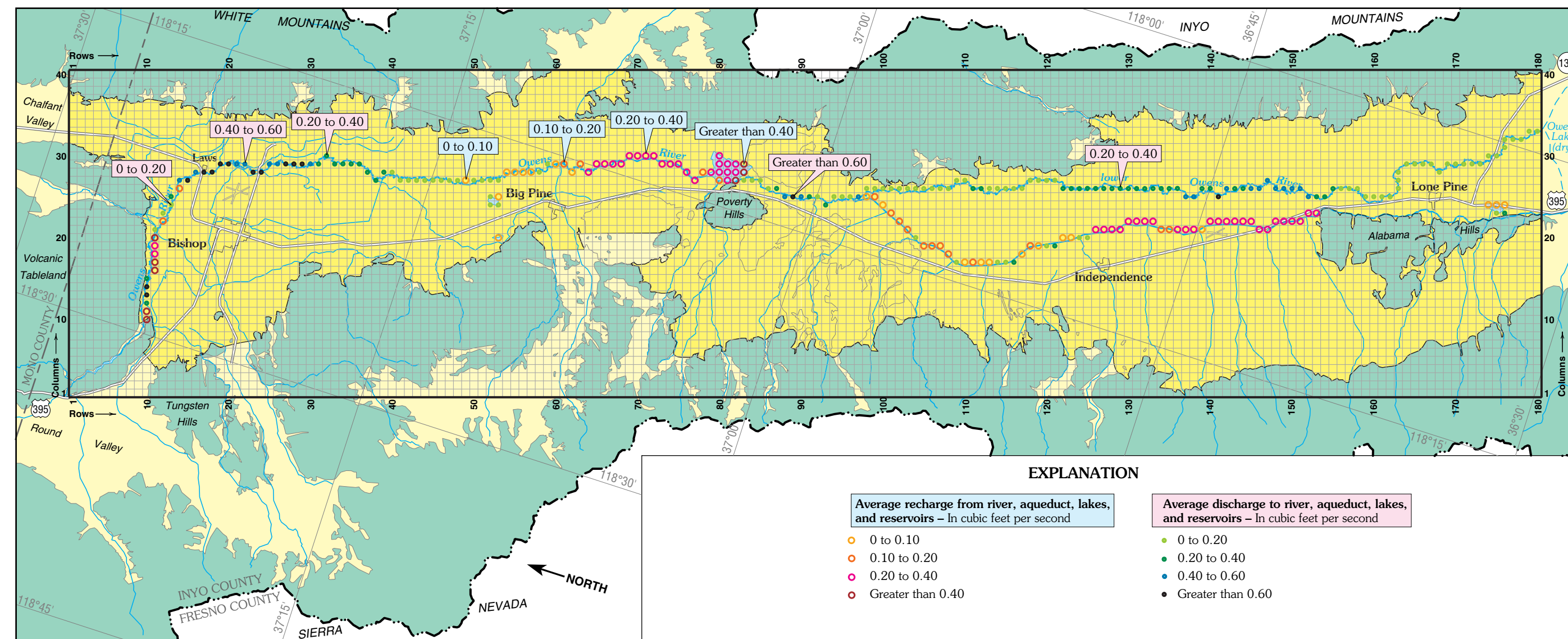
E. Irrigation and watering of livestock



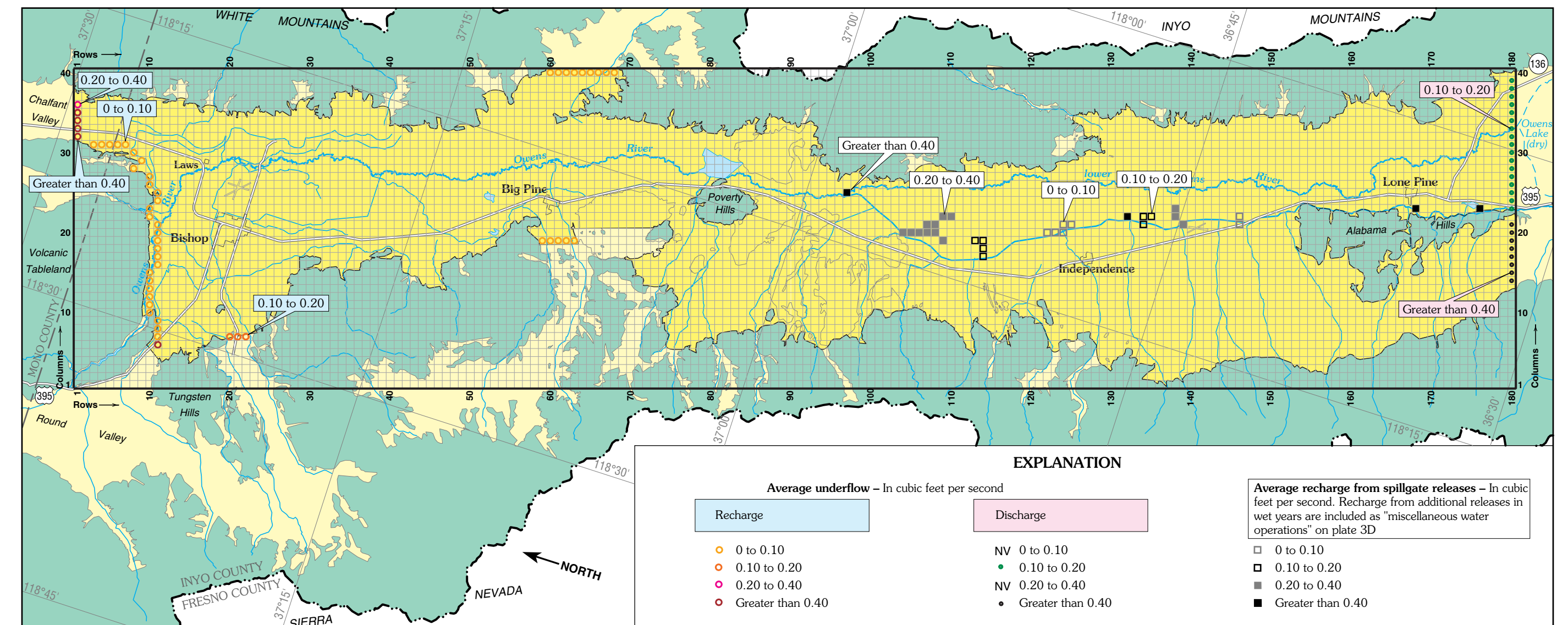
B. Tributary streams, ungauged mountain-front runoff between tributary streams, and local runoff from bedrock outcrops within the valley fill



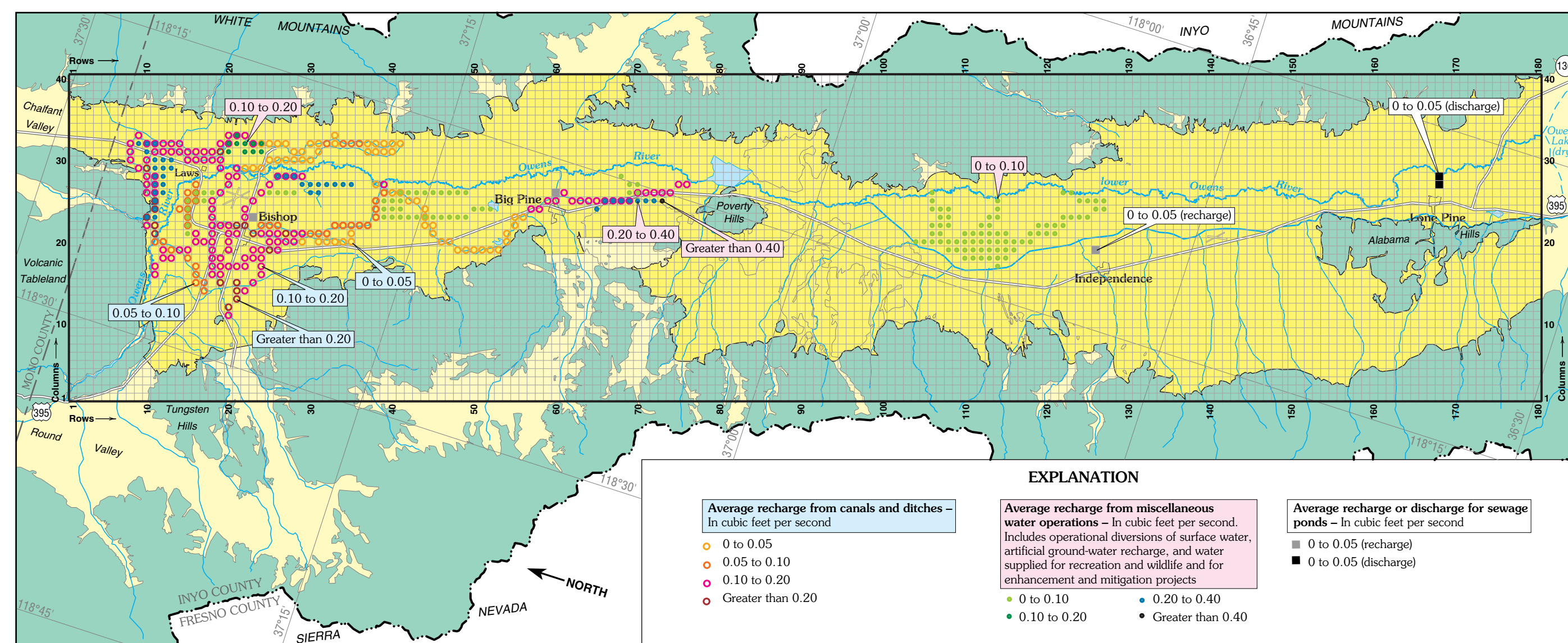
F. Springs, seeps, and pumped and flowing wells



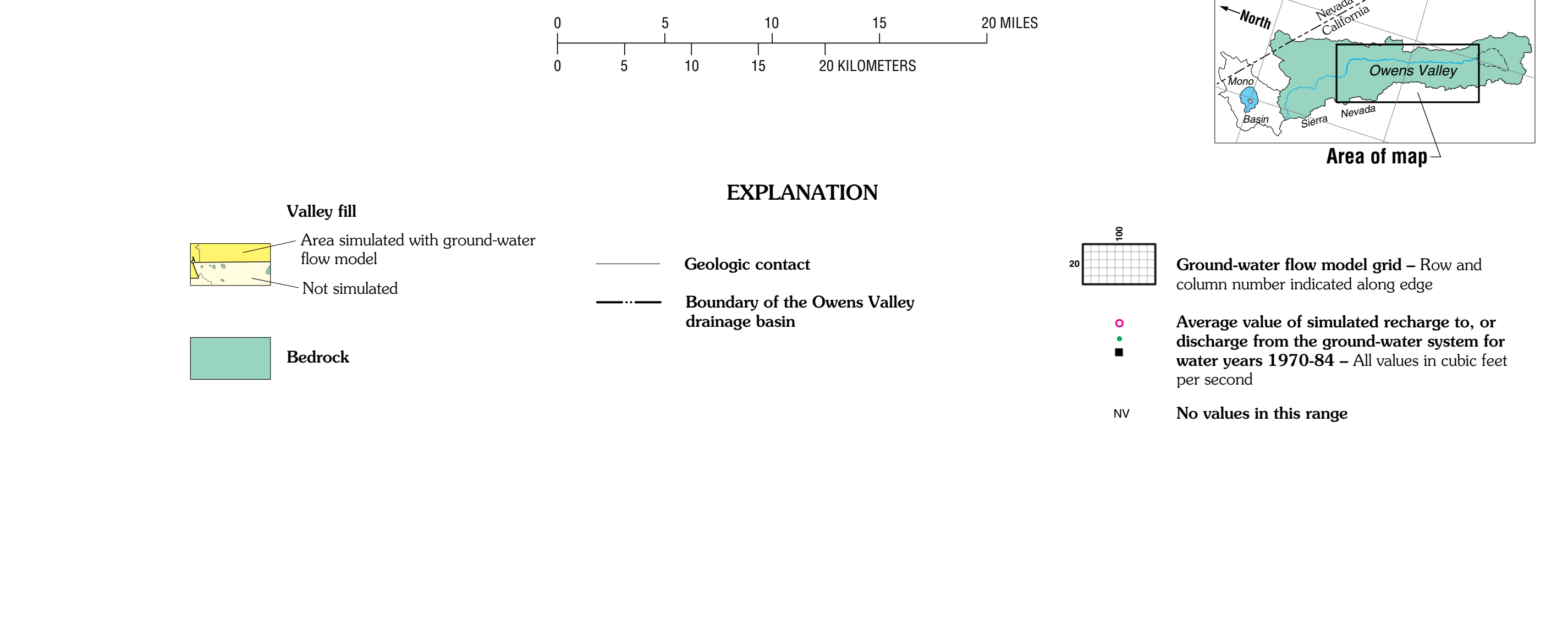
C. Owens River-Los Angeles Aqueduct, Lower Owens River, lakes, and reservoirs



G. Spillgate releases and underflow



D. Canals, ditches, ponds, and miscellaneous water operations



Locations and average values of simulated ground-water recharge and discharge in the Owens Valley, California, for water years 1970-84

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