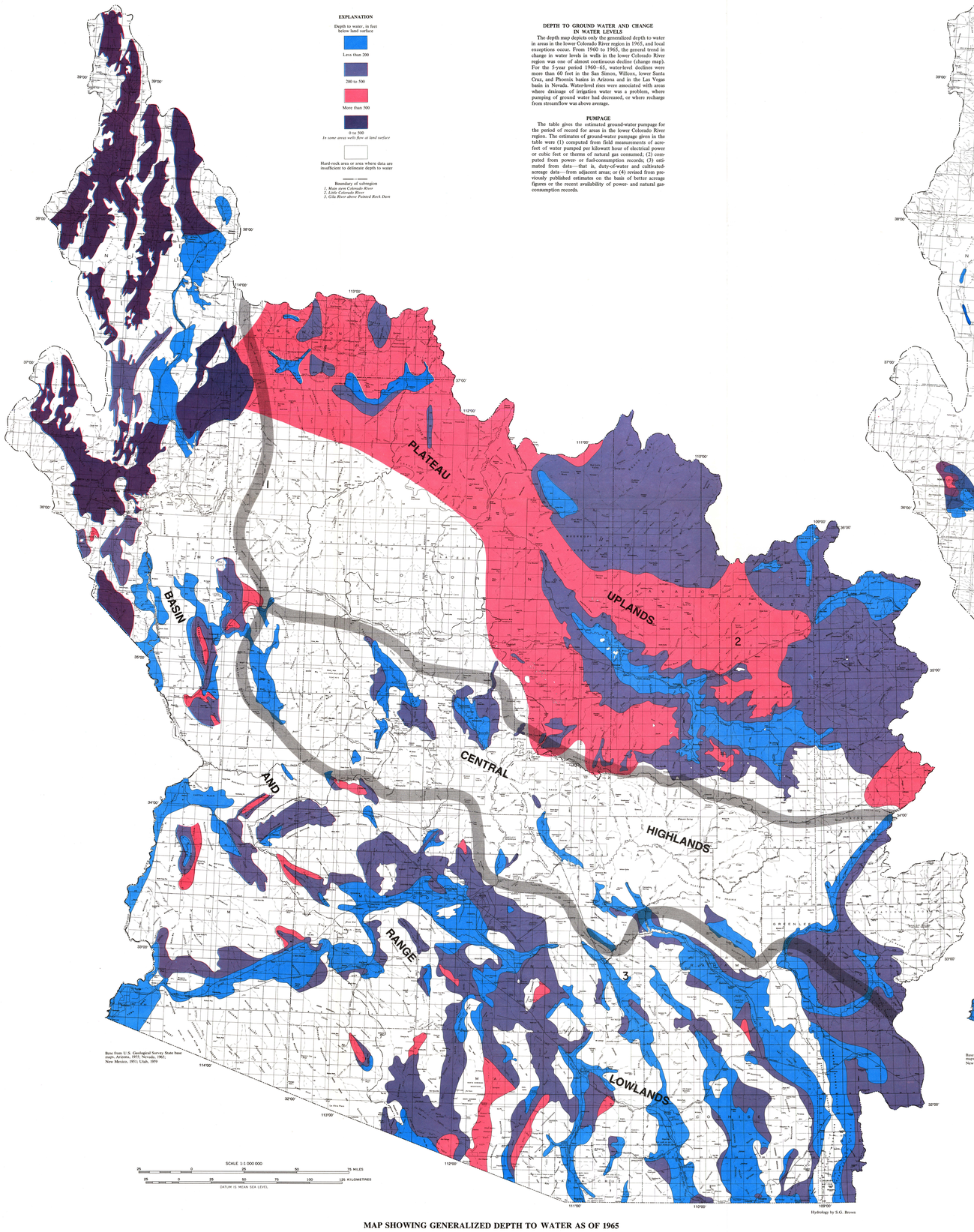
DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

Prepared in cooperation with the
U.S. BUREAU OF RECLAMATION

HYDROLOGIC INVESTIGATIONS
ATLAS HA – 542 (SHEET 2 OF 3)



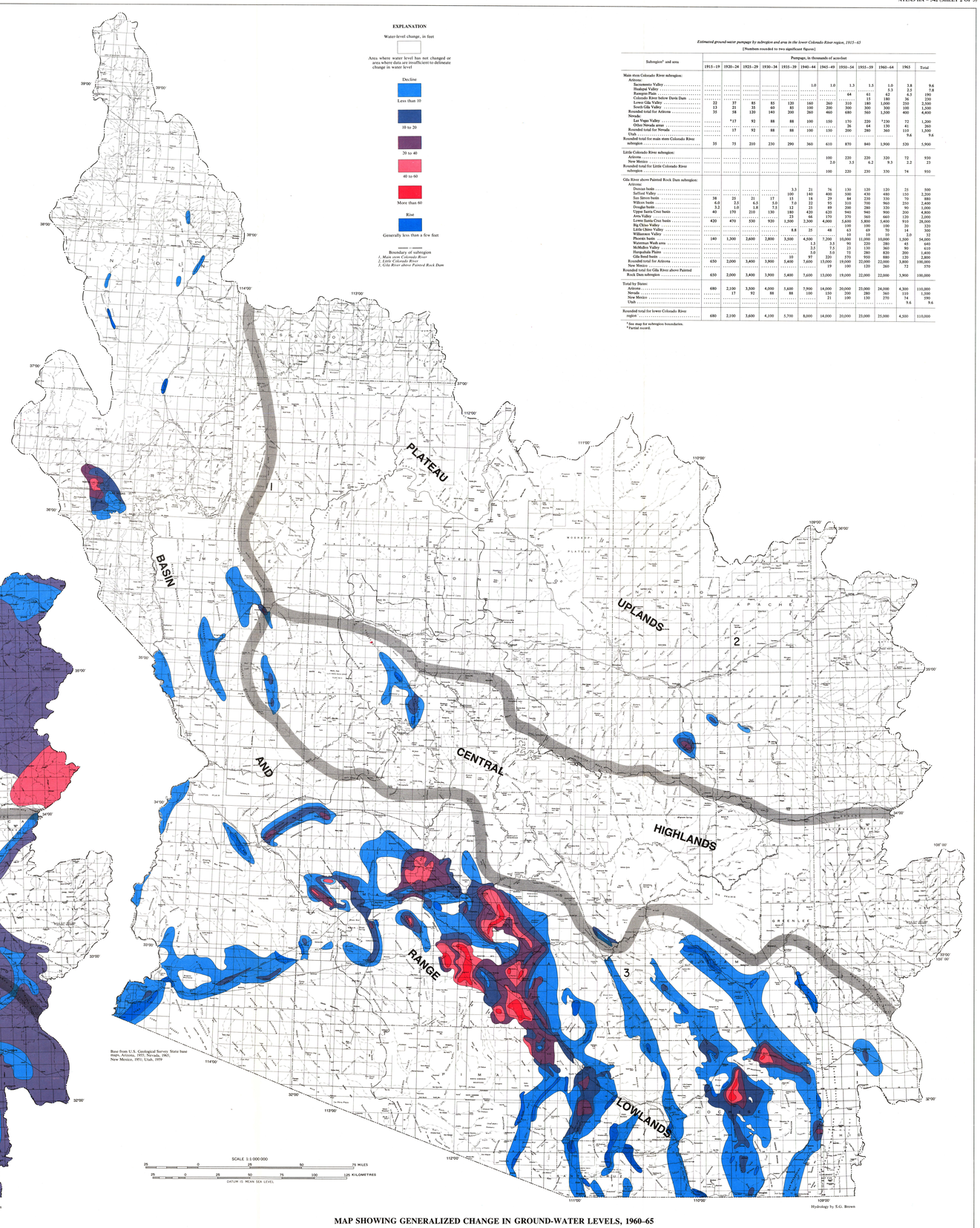
MAP SHOWING GENERALIZED DEPTH TO WATER AS OF 1965

DEPTH TO GROUND WATER AND CHANGE IN WATER LEVELS

The depth map depicts only the generalized depth to water in areas in the lower Colorado River region in 1965, and local exceptions occur. From 1960 to 1965, the general trend in change in water levels in wells in the lower Colorado River region was one of almost continuous decline (change map). For the 5-year period 1960–65, water-level declines were more than 60 feet in the San Simon, Willcox, lower Santa Cruz, and Phoenix basins in Arizona and in the Las Vegas basin in Nevada. Water-level rises were associated with areas where drainage of irrigation water was a problem, where pumping of ground water had decreased, or where recharge from streamflow was above average.

PUMPAGE

The table gives the estimated ground-water pumpage for the period of record for areas in the lower Colorado River region. The estimates of ground-water pumpage given in the table were (1) computed from field measurements of acre-feet of water pumped per kilowatt hour of electrical power or cubic feet or therms of natural gas consumed; (2) computed from power- or fuel-consumption records; (3) estimated from data—that is, duty-of-water and cultivated-acreage data—from adjacent areas; or (4) revised from previously published estimates on the basis of better acreage figures or the recent availability of power- and natural gas-consumption records.



MAP SHOWING GENERALIZED CHANGE IN GROUND-WATER LEVELS, 1960–65

Estimated ground-water pumpage by subregion and area in the lower Colorado River region, 1915–65

[Numbers rounded to two significant figures]

Subregion* and area	Pumpage, in thousands of acre-feet										
	1915–19	1920–24	1925–29	1930–34	1935–39	1940–44	1945–49	1950–54	1955–59	1960–64	1965	Total
Main stem Colorado River subregion:												
Arizona:												
Sacramento Valley	.....	.....	.....	.....	.....	1.0	1.0	1.3	1.5	1.0	3.8	9.6
Hualapai Valley	.....	.....	.....	.....	.....	.....	.....	.....	.....	3.3	2.5	7.8
Ranegras Plain	.....	.....	.....	.....	.....	.....	.....	64	.....	61	6.5	190
Colorado River below Davis Dam	.....	.....	.....	.....	.....	.....	.....	.....	.....	62	.....	230
Lower Gila Valley	33	37	85	85	120	160	260	310	180	15	180	36
Yuma area	0	21	35	55	180	500	400	300	300	1,000	350	2,500
Rounded total for Arizona	33	58	120	140	300	660	660	680	560	1,100	600	4,000
Nevada:												
Las Vegas Valley	.....	*17	92	88	88	100	150	170	220	*130	72	1,200
Other Nevada areas	.....	.....	.....	.....	.....	.....	.....	26	64	130	41	260
Rounded total for Nevada	.....	17	92	88	88	100	150	200	280	360	110	1,500
Utah	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9.6	9.6
Rounded total for main stem Colorado River subregion	33	75	210	230	290	360	610	870	840	1,900	520	5,900
Little Colorado River subregion:												
Arizona	.....	.....	.....	.....	.....	.....	100	220	220	320	72	930
New Mexico	.....	.....	.....	.....	.....	.....	2.0	3.3	6.2	9.3	2.2	23
Rounded total for Little Colorado River subregion	.....	.....	.....	.....	.....	.....	100	220	230	330	74	950
Gila River above Painted Rock Dam subregion:												
Arizona:												
Duncan basin	.....	.....	.....	.....	3.3	21	76	130	120	120	25	500
Safford Valley	.....	.....	.....	.....	100	140	400	500	430	680	150	2,200
San Simon basin	38	25	21	17	11	18	29	84	230	330	70	880
Willcox basin	6.0	2.5	6.3	5.0	7.0	22	95	310	700	960	250	2,400
Douglas basin	3.2	1.0	1.8	7.5	12	25	89	200	280	320	90	1,000
Upper Santa Cruz basin	40	170	210	130	190	430	620	940	960	900	200	4,800
Avra Valley	.....	.....	.....	.....	10	66	170	370	360	660	110	2,000
Lower Santa Cruz basin	420	470	330	920	1,500	2,300	4,400	3,800	5,200	5,400	1,500	26,000
Big Chino Valley	.....	.....	.....	.....	.....	.....	.....	100	100	100	30	320
Little Chino Valley	.....	.....	.....	.....	8.8	25	48	63	69	70	14	300
Williamson Valley	.....	.....	.....	.....	.....	.....	.....	10	10	2.0	2.2	32
Phoenix basin	140	1,300	2,600	2,800	3,500	4,500	7,200	10,000	11,000	10,000	1,000	54,000
Hassayampa area	.....	.....	.....	.....	.....	.....	1.5	3.5	90	220	45	640
Wickenburg Valley	.....	.....	.....	.....	.....	.....	2.0	7.0	23	130	30	410
Harquahala Plain	.....	.....	.....	.....	.....	.....	5.0	13	72	360	90	1,000
Gila bend basin	.....	.....	.....	.....	10	97	220	570	930	880	120	2,800
Rounded total for Arizona	650	2,000	3,400	3,900	5,400	7,600	13,000	19,000	22,000	22,000	3,800	100,000
New Mexico	.....	.....	.....	.....	.....	.....	19	100	120	360	72	570
Rounded total for Gila River above Painted Rock Dam subregion	650	2,000	3,400	3,900	5,400	7,600	13,000	19,000	22,000	22,000	3,900	100,000
Total by States:												
Arizona	680	2,100	3,200	4,000	5,600	7,900	14,000	20,000	23,000	24,000	4,300	110,000
Nevada	.....	17	92	88	88	100	150	200	280	360	110	1,500
New Mexico	.....	.....	.....	.....	.....	.....	21	100	130	370	74	590
Utah	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	9.6	9.6
Rounded total for lower Colorado River region	680	2,100	3,600	4,100	5,700	8,000	14,000	20,000	23,000	25,000	4,500	110,000

*See map for subregion boundaries.
*Partial record.

PRELIMINARY MAPS SHOWING GROUND-WATER RESOURCES IN THE LOWER COLORADO RIVER REGION, ARIZONA, NEVADA, NEW MEXICO, AND UTAH

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