

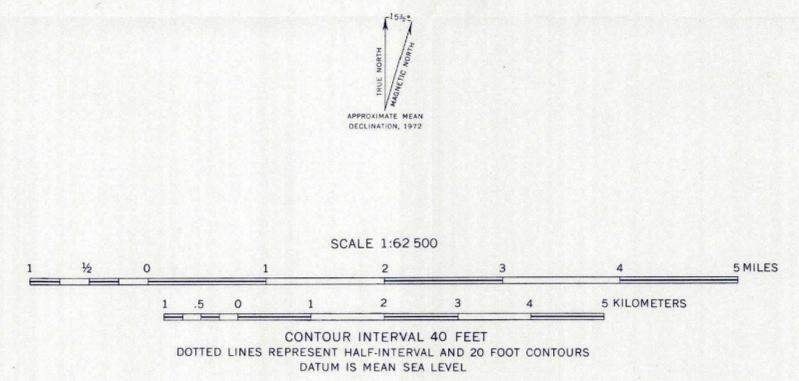
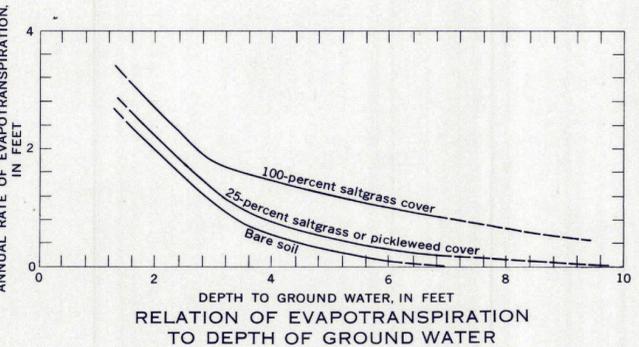
CLASSIFICATION OF MOIST LANDS IN AND AROUND CHINA LAKE,  
AND ESTIMATED EVAPOTRANSPIRATION FOR 1912 AND 1953

[From Kunkel and Chase (1969, p. 69)]

Unit	Location	Description	Area (acres)	Average depth to water (feet)		Estimated annual evapotranspiration (feet)		Estimated discharge (acre-feet)	
				1912	1953	1912	1953	1912	1953
Ia	Bottom of North Lake about 2 miles north of China Lake.	Bare clay with slight alkali film; surface wet and generally smooth.	540	3.5	2.5	0.7	1.5	380	810
Ib	Southwest margin of North Lake bottom.	Pickleweed <sup>1</sup> about 25-percent density; some alkali film; surface wet and generally puffy.	550	3.5	3	.9	1.3	500	720
Ic	North extension of China Lake.	Generally bare smooth clay with alkali film; surface wet.	110	3.5	3	.7	1.1	80	120
Id	Sump south of China Lake bottom.	Standing water in 1953.	6	0	0	5.6	5.6	35	35
IIa	China Lake bottom.	Bare hard clay with areas roughened by surface swelling; moist beneath thin surface crust; little or no surface alkali showing.	5,400	4.5	6	.5	.1	2,700	540
IIb	Small area about 1 mile west of North Lake.	Same as IIa.	60	4.5	3.5	.5	.7	30	40
IIIa	Border area north of China Lake.	Sparse growth of saltgrass and (or) pickleweed; alkali crust much broken and puffed up by swelling; moist beneath surface crust, locally moist at surface.	3,000	4.5	4.5	.7	.7	2,100	2,100
IIIb	Border area south of Id.	Same as IIIa, but in part may be caused by sewage effluent.	40	4.5	4.5	.7	.7	30	30
IV	Border area south of China Lake.	Bare soil, locally sparsely vegetated; gray alkali crust with white spots; hard, brittle, and puffed up; moist beneath surface crust.	470	4.5	4.5	.5	.5	240	240
Va	Areas bordering China Lake in narrow bands.	Sparse growth of saltgrass, alkali crust; transition zone from lake bottom to desert sand; surface moist to dry.	2,000	5.5	5.5	.4	.4	800	800
Vb	Northern transition zone area.	Sparse growth of pickleweed and (or) saltgrass or almost bare soil; generally overlying older lacustrine deposits which crop out to the north; locally spots of alkali and puffy ground; moist beneath surface crust.	1,800	5.5	7	.4	.2	720	360
VIa	Areas bordering China Lake and extending to the west.	Follows drainage lines; sparse growth of saltgrass; alkali crust.	4,800	5.5	6	.4	.3	1,900	1,400
VIIa	Dunes and interdune playas west of China Lake.	Small isolated playas (about 10 percent of area) surrounded by windblown sand and dunes generally less than 5 feet above playas; very sparse growth of saltgrass on sand; playas generally bare and flat with borders puffy; playas moist beneath surface crust; sand areas dry from 1.5 to 2 feet below surface. Effective area of evapotranspiration estimated at 25 percent of total area.	13,900	4.5	5	.5	.3	1,700	1,000
VIIb	Dunes and playas north of North Lake.	Small isolated playas surrounded by dunes rising 10 to 22 feet above playas; very sparse growth of saltgrass on dunes; playas generally puffy. Effective area of evapotranspiration estimated at 20 percent of total area.	490	5	5	.3	.3	30	30
<b>Total</b>			<b>33,000</b>					<b>11,000</b>	<b>8000</b>

<sup>1</sup>Except in the lowest and most brackish areas of the moist lands, various species of desert plants are common. However, all species except pickleweed (*Allenrolfea occidentalis*) and saltgrass (*Distichlis spicata*) are omitted in the description. The two species included are the only phreatophytes in Indian Wells Valley intimately associated with the occurrence of ground water.

<sup>2</sup>Estimated.  
<sup>3</sup>Evapotranspiration rate applied to only 25 percent of area.  
<sup>4</sup>Evapotranspiration rate applied to only 20 percent of area.  
<sup>5</sup>Rounded to nearest 1,000 acre-feet.



Areal extent of discharge units after Kunkel and Chase (1969, p. 68)

MAP SHOWING GROUND-WATER DISCHARGE UNITS AND TABLE SHOWING CLASSIFICATION OF MOIST LANDS AND ESTIMATED EVAPOTRANSPIRATION IN THE CHINA LAKE AREA, INDIAN WELLS VALLEY, CALIFORNIA