TABLE 4.—*Estimates of soil properties*

[An asterisk in the first column indicates that at least one mapping unit in this series is made up of two or more kinds of soil. The soils in referring to other series that appear in the first column of this

Soil series and map symbols	Depth to bedrock	Hydrologic group	Depth from surface of typical profile	USDA texture	Classification	
					Unified	AASHO
	Inches		*Inches*			
Arno: Ar	50	D	0–41	Clay	CL or CH	A–6 or A–7
			41–60	Silty clay	CL or CH	A–6 or A–7
Courthouse. Mapped only in an association with Los Tanos soils.	10–20	B	0–12	Fine sandy loam	SM or SM–SC	A–2–4
			12–14	Strongly cemented sandstone.		
Delnorte: DE	6–10	C	0–8	Gravelly loam	GM–SC, or SM or SM–SC	A–2–4 or A–4
			8–12	Weakly to strongly cemented caliche.	GP–GM or SM	A–1
			12–20	Indurated caliche.		
			20–60	Weakly cemented caliche, gravelly fine sand.	SM or GP–GM	A–1
Dune land. Mapped only in an association with Kermit soils. Properties too variable to estimate.						
Gila: Gf	>44	B	0–44	Fine sandy loam	SM–SC or ML–CL	A–4
Harkey: Ha	>56	B	0–16	Loam	ML or CL	A–4 or A–6
			16–42	Silt loam	ML or CL	A–4 or A–6
			42–56	Clay	CL	A–6 or A–7
Hodgins: Ho	>60	C	0–41	Clay loam	SC or CL	A–4 or A–6
			41–60	Clay	SC or CL	A–6
Ima: Im	>60	B	0–10	Fine sandy loam	SM or SM–SC	A–2–4
			10–46	Fine sandy loam	SM–SC	A–2–4
			46–72	Fine sandy loam	SC	A–2–4 or A–6
*Kermit: KD. For Dune land part, see Dune land.	>60	A	0–75	Fine sand	SP or SP–SM	A–3
Kinco: Kc	>60	A	0–8	Fine sandy loam	SM or SM–SC	A–2–4
			8–32	Fine sandy loam	SM–SC or SC	A–2–4
			32–66	Loam	SM–SC or CL	A–2 or A–4
*Los Tanos: LT. For Courthouse part, see Courthouse series.	20–40	C	0–6	Fine sandy loam	SM–SC or SM	A–2–4
			6–28	Fine sandy loam	SM–SC or SM	A–2 or A–4
			28–35	Cemented platy sandstone.		
McCarran: MC	3–18	C	0–4	Loam	ML or CL	A–4 or A–6
			4–10	Silt loam	ML or CL	A–4 or A–6
			10–15	Gypsic earth of loam texture.		
Monahans: Mo	>60	B	0–8	Fine sandy loam	SM or SC or SM–SC	A–2 or A–4
			8–28	Sandy clay loam	SC or CL or SM–SC	A–4 or A–6
			28–60	Sandy clay loam	SC or CL or SM–SC	A–2 or A–4 or A–6

significant to engineering

such mapping units may have different properties and limitations, and for this reason it is necessary to follow carefully the instructions for table. The symbol > means more than; the symbol < means less than]

Percentage passing sieve—				Permeability	Available water capacity	Reaction	Salinity	Shrink-swell potential
No. 4 (4.7 mm.)	No. 10 (2.0 mm.)	No. 40 (0.42 mm.)	No. 200 (0.074 mm.)					
				Inches per hour	*Inches per inch of soil*	*pH*		
95–100	95–100	90–100	80–95	<0. 06	0. 03–0. 10	7. 9–8. 4	High to very high	High.
98–100	98–100	95–100	83–95	<0. 06	0. 00–0. 03	7. 9–8. 4	Very high	High.
75–90	65–80	60–75	20–35	0. 63–2. 00	0. 09–0. 11	7. 9–8. 4	None	Low.
57–76	50–75	50–70	15–40	0. 63–2. 00	0. 09–0. 11	7. 9–8. 4	None	Low.
45–75	35–65	25–50	10–25	0. 63–2. 00	0. 05–0. 09	7. 9–8. 4	None	Low.
40–75	35–65	25–50	5–25	2. 00–6. 30	0. 05–0. 08	7. 9–8. 4	None	Low.
----------	100	70–85	40–55	0. 63–2. 00	0. 06–0. 13	7. 9–8. 4	Moderate to high	Low.
----------	100	85–95	60–75	0. 63–2. 00	0. 13–0. 15	7. 9–8. 4	Moderate	Low.
----------	100	90–100	70–85	0. 63–2. 00	0. 05–0. 10	7. 9–8. 4	High	Low.
95–100	95–100	90–100	80–95	0. 63–2. 00	0. 00–0. 03	7. 9–8. 4	Very high	Moderate.
95–100	90–100	85–99	40–60	0. 63–2. 00	0. 05–0. 10	7. 9–8. 4	High	Low.
90–100	80–100	75–99	45–75	0. 63–2. 00	0. 00–0. 06	7. 9–8. 4	High to very high	Moderate.
95–100	90–100	75–90	20–35	2. 00–6. 30	0. 03–0. 07	7. 9–8. 4	High	Low.
95–100	90–100	75–90	25–35	2. 00–6. 30	0. 03–0. 07	7. 9–8. 4	High	Low.
85–100	75–90	60–80	25–40	2. 00–6. 30	0. 02–0. 05	7. 9–8. 4	High	Low.
100	100	85–100	0–10	>20. 0	0. 03–0. 05	6. 6–7. 3	None	Low.
100	100	95–100	20–35	2. 00–6. 30	0. 10–0. 12	7. 9–8. 4	None	Low.
95–100	90–100	75–90	25–35	2. 00–6. 30	0. 10–0. 12	7. 9–8. 4	Low	Low.
90–100	80–95	65–85	30–60	2. 00–6. 30	0. 13–0. 15	7. 9–8. 4	Low	Low.
85–95	80–90	70–95	20–30	6. 30–20. 0	0. 08–0. 10	7. 4–7. 8	None	Low.
85–100	75–90	60–80	25–40	6. 30–20. 0	0. 09–0. 11	7. 4–7. 8	None	Low.
100	100	80–95	55–75	0. 63–2. 00	0. 14–0. 16	7. 9–8. 4	Low	Low.
100	100	90–100	70–85	0. 63–2. 00	0. 15–0. 17	7. 9–8. 4	Moderate	Low.
95–100	90–100	75–90	20–50	2. 00–6. 30	0. 09–0. 11	7. 9. 8. 4	Moderate	Low.
90–100	90–100	80–97	40–65	0. 63–2. 00	0. 05–0. 10	7. 9–8. 4	High	Low.
75–100	69–95	59–85	23–56	0. 63–2. 00	0. 03–0. 10	7. 9–8. 4	High	Low.

TABLE 4.—*Estimates of soil properties*

Soil series and map symbols	Depth to bedrock	Hydrologic group	Depth from surface of typical profile	USDA texture	Classification	
					Unified	AASHO
	Inches		*Inches*			
Patrole: Pa	>49	C	0–12	Very fine sandy loam	ML or ML–CL	A–4
			12–30	Silt loam	ML or CL	A–4 or A–6
			30–49	Clay	CL or CH	A–6 or A–7
Pecos: Pe	>56	D	0–24	Silty clay	CH	A–7
			24–36	Clay	CL or CH	A–6 or A–7
			36–42	Silty clay	CH	A–7
			42–56	Clay	CL or CH	A–6 or A–7
Pyote: PY	>60	A	0–34	Loamy fine sand	SP–SM	A–2–4
			34–76	Fine sandy loam	SM	A–2–4
Sharvana: SH	12–20	C	0–10	Fine sandy loam	SM or SM–SC	A–2–4
			10–26	Cemented or indurated caliche.		
Toyah: To	>44	B	0–18	Clay loam	CL	A–6
			18–44	Loam	ML or CL	A–4 or A–6
Upton: UP	7–20	C	0–18	Gravelly loam	CL or SC or SM or ML	A–4 or A–6
			18–46	Cemented and weakly cemented caliche.		
Verhalen: VC	>41	D	0–41	Clay	CH or CL	A–7
*Wickett: WS, WT. For Sharvana part of WS, WT, see the Sharvana series.	20–40	C	0–14	Loamy fine sand	SM	A–2–4
			14–30	Fine sandy loam	SM	A–2–4
			30–38	Indurated caliche.		

significant to engineering—Continued

Percentage passing sieve—				Permeability	Available water capacity	Reaction	Salinity	Shrink-swell potential
No. 4 (4.7 mm.)	No. 10 (2.0 mm.)	No. 40 (0.42 mm.)	No. 200 (0.074 mm.)					
				Inches per hour	*Inches per inch of soil*	*pH*		
100	100	85–95	50–65	0. 63–2. 00	0. 06–0. 10	7. 9–8. 4	High	Low.
100	100	90–100	70–85	0. 63–2. 00	0. 06–0. 11	7. 9–8. 4	High	Low.
95–100	95–100	90–100	80–95	0. 20–0. 63	0. 00–0. 06	7. 9–8. 4	Very high	High.
100	100	95–100	90–95	0. 06–0. 20	0. 05–0. 10	7. 9–8. 4	High	High.
95–100	95–100	90–100	80–95	<0. 06	0. 00–0. 05	7. 9–8. 4	Very high	High.
100	100	95–100	80–95	0. 06–0. 20	0. 00–0. 03	7. 9–8. 4	Very high	High.
95–100	95–100	90–100	80–95	<0. 06	0. 00–0. 03	7. 9–8. 4	Very high	High.
100	100	95–100	5–10	6. 30–20. 0	0. 07–0. 09	7. 4–7. 8	None	Low.
100	100	95–100	15–25	2. 00–6. 30	0. 09–0. 13	7. 4–8. 4	None	Low.
100	100	95–99	30–35	0. 63–2. 00	0. 11–0. 15	7. 4–7. 8	None	Low.
100	100	90–100	70–85	0. 63–2. 00	0. 08–0. 12	7. 9–8. 4	High	Low.
100	100	80–95	55–75	0. 63–2. 00	0. 06–0. 10	7. 9–8. 4	High	Low.
65–85	60–75	55–70	35–55	0. 63–2. 00	0. 09–0. 11	7. 9–8. 4	None	Low.
100	100	90–100	70–95	0. 06–0. 20	0. 14–0. 17	7. 4–8. 4	None	High.
100	100	85–97	14–25	2. 00–6. 30	0. 08–0. 10	7. 4–7. 8	None	Low.
100	95–100	90–98	16–40	2. 00–6. 30	0. 10–0. 14	7. 4–7. 8	None	Low.