Tables

TABLE 1.--TEMPERATURE AND PRECIPITATION

(Recorded in the period 1961-90, at Wills Point, Texas)

Month	Temperature						Precipitation			
				2 years in 10 will have--			2 years in 10 will have--			
	Average daily maximum	Average daily minimum	Average daily	Maximum temperature higher than--	Minimum temperature lower than--	Average number of growing degree days*	Average	Less than--	More than--	Average number of days with 0.10 inch or more	Average snowfall
	°F	°F	°F	°F	°F	Units	In	In	In		In
January	52.9	31.9	42.4	77	9	50	2.72	0.92	4.20	5	1.4
February	57.8	36.0	46.9	81	15	82	3.24	1.81	4.51	5	1.5
March	66.8	44.2	55.5	85	23	225	3.60	1.80	5.16	5	0.2
April	75.4	52.9	64.2	90	33	429	4.74	1.79	7.20	5	0.0
May	82.0	61.0	71.5	92	46	666	5.40	2.60	7.83	6	0.0
June	89.6	68.2	78.9	100	55	858	4.22	1.74	6.31	5	0.0
July	95.1	72.0	83.5	106	63	1,039	2.15	0.55	3.42	3	0.0
August	95.6	71.4	83.5	106	61	1,038	1.90	0.53	3.11	3	0.0
September	88.0	65.5	76.7	102	48	798	3.86	1.83	5.60	5	0.0
October	78.2	54.4	66.3	93	37	501	4.15	1.29	6.49	4	0.0
November	66.8	44.3	55.5	84	25	221	3.63	1.69	5.30	5	0.1
December	56.6	35.5	46.0	77	13	71	3.33	1.48	4.92	4	0.6
Yearly:											
Average	75.4	53.1	64.2	---	---	---	---	---	---	---	---
Extreme	---	---	---	107	7	---	---	---	---	---	---
Total--	---	---	---	---	---	5,979	42.92	34.20	50.91	55	3.7

* A growing degree day is a unit of heat available for plant growth. It can be calculated by adding the maximum and minumum daily temperatures, dividing the sum by 2, and subtracting the temperature below which growth is minimal for the principal crops in the area (50 degrees F).

TABLE 2.--FREEZE DATES IN SPRING AND FALL

(Recorded in the period 1961-90, at Wills Point, Texas)

Probability	Temperature		
	24 °F or lower	28 °F or lower	32 °F or lower
Last freezing temperature in spring:			
1 year in 10 later than--	March 12	March 25	April 6
2 years in 10 later than--	March 3	March 17	March 30
5 years in 10 later than--	February 14	March 1	March 16
First freezing temperature in fall:			
1 yr in 10 earlier than--	November 24	November 13	October 31
2 yr in 10 earlier than--	December 3	November 20	November 6
5 yr in 10 earlier than--	December 19	December 5	November 19

TABLE 3.--GROWING SEASON

(Recorded in the period 1961-90, at Wills Point, Texas)

Probability	Daily minimum temperature during growing season		
	Higher than 24 °F	Higher than 28 °F	Higher than 32 °F
	Days	Days	Days
9 years in 10	272	243	218
8 years in 10	283	255	228
5 years in 10	306	277	246
2 years in 10	333	300	264
1 year in 10	365	311	274

TABLE 4.--ACREAGE AND PROPORTIONATE EXTENT OF THE SOILS

Map symbol	Soil name	Acres	Percent
Au	Aufco clay, frequently flooded	1,594	0.3
BaD	Bazette clay loam, 5 to 12 percent slopes	2,045	0.4
BeB	Bernaldo fine sandy loam, 1 to 3 percent slopes	17,930	3.3
BeD	Bernaldo fine sandy loam, 5 to 8 percent slopes	1,566	0.3
CrA	Crockett loam, 0 to 1 percent slopes	2,665	0.5
CrB	Crockett loam, 1 to 3 percent slopes	48,502	8.8
CrC	Crockett loam, 3 to 5 percent slopes	570	0.1
CrC2	Crockett loam, 2 to 5 percent slopes, eroded	18,029	3.3
CuE	Cuthbert fine sandy loam, 8 to 20 percent slopes	22,236	4.0
CvE	Cuthbert gravelly fine sandy loam, 8 to 20 percent slopes	716	0.1
CwF	Cuthbert fine sandy loam, 8 to 25 percent slopes, very stony	214	*
CxC	Cuthbert and Redsprings soils, graded, 3 to 8 percent slopes	338	0.1
DrA	Derly-Raino complex, 0 to 1 percent slopes	16,833	3.1
EdC	Edge fine sandy loam, 2 to 5 percent slopes	11,526	2.1
EdD	Edge fine sandy loam, 5 to 12 percent slopes	10,167	1.8
ErB	Elrose fine sandy loam, 1 to 3 percent slopes	1,461	0.3
ErE	Elrose fine sandy loam, 8 to 12 percent slopes	190	*
FrB	Freestone fine sandy loam, 1 to 3 percent slopes	68,511	12.5
GaB	Gallime fine sandy loam, 1 to 3 percent slopes	691	0.1
Gw	Gladewater clay, frequently flooded	9,635	1.8
KfC	Kirvin fine sandy loam, 2 to 5 percent slopes	5,781	1.1
KgC	Kirvin very gravelly fine sandy loam, 2 to 5 percent slopes	476	0.1
LgB	Leagueville loamy fine sand, 0 to 3 percent slopes	6,323	1.1
Lk	Lufkin loam, 0 to 1 percent slopes	2,709	0.5
Lu	Lufkin-Rader complex, 0 to 1 percent slopes	4,548	0.8
Ma	Manco loam, frequently flooded	19,790	3.6
Na	Nahatche loam, frequently flooded	37,059	6.7
Nh	Nahatche loam, saline, frequently flooded	2,174	0.4
NoC2	Normangee clay loam, 3 to 8 percent slopes, severely eroded	1,535	0.3
OkB	Oakwood fine sandy loam, 1 to 3 percent slopes	3,795	0.7
OkD	Oakwood fine sandy loam, 5 to 8 percent slopes	671	0.1
PkC	Pickton fine sand, 1 to 5 percent slopes	26,728	4.9
PkE	Pickton fine sand, 5 to 15 percent slopes	4,520	0.8
Pt	Pits	445	0.1
RdC	Redsprings very gravelly fine sandy loam, 2 to 5 percent slopes	426	0.1
RdE	Redsprings very gravelly fine sandy loam, 5 to 15 percent slopes	2,393	0.4
Sa	Salt flats	185	*
Sd	Sandow loam, occasionally flooded	1,936	0.4
Sf	Sandow loam, frequently flooded	9,451	1.7
TeE	Tenaha loamy fine sand, 8 to 20 percent slopes	1,931	0.4
ToB	Tonkawa fine sand, 1 to 3 percent slopes	1,883	0.3
Wh	Whitesboro loam, frequently flooded	2,430	0.4
Wn	Wilson silt loam, 0 to 1 percent slopes	7,417	1.3
WoC	Wolfpen loamy fine sand, 1 to 5 percent slopes	59,974	10.9
WoE	Wolfpen loamy fine sand, 5 to 15 percent slopes	2,793	0.5
WtC	Woodtell loam, 2 to 5 percent slopes	41,280	7.5
WtC2	Woodtell loam, 2 to 5 percent slopes, eroded	1,307	0.2
WtD	Woodtell loam, 5 to 12 percent slopes	56,491	10.3
WwC	Woodtell loam, 2 to 8 percent slopes, very bouldery	586	0.1
	Water areas 2 to 40 acres in size	4,239	0.8
	Water areas greater than 40 acres in size	3,299	0.6
	Total	549,964	100.0

* Less than 0.1 percent.

TABLE 5.--LAND CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE

(Yields are those that can be expected under a high level of management. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil)

Soil name and map symbol	Land capability	Water-melons	Sweet potatoes	Tomatoes	Common bermuda-grass	Bahiagrass	Improved bermuda-grass	Small grains grazeout
		Tons	Bu	Tons	AUM*	AUM*	AUM*	
Au Aufco	Vw	---	---	---	---	---	4.0	---
BaD Bazette	VIe	---	---	---	4.0	5.0	5.0	---
BeB Bernaldo	IIe	11	450	4	7.0	8.0	10.0	6.0
BeD Bernaldo	IVe	---	---	---	---	7.0	9.0	---
CrA Crockett	IIIs	---	---	---	4.0	---	6.5	4.0
CrB Crockett	IIIe	---	---	---	4.0	---	6.5	4.0
CrC Crockett	IVe	---	---	---	4.0	---	5.5	4.0
CrC2 Crockett	IVe	---	---	---	3.5	---	5.0	3.0
CuB Cuthbert	VIe	---	---	---	2.0	2.0	3.0	---
CvE Cuthbert	VIe	---	---	---	1.5	1.5	2.5	---
CwF Cuthbert	VIIs	---	---	---	---	---	---	---
CxC: Cuthbert	VIe	---	---	---	2.0	---	2.0	---
Redsprings	VIe	---	---	---	2.0	---	2.0	---
DrA: Derly	IVw	---	---	---	---	2.0	---	2.0
Raino	IIIs	---	---	---	6.0	8.0	10.0	---
EdC Edge	IVe	---	---	---	4.0	---	5.5	4.0
EdD Edge	VIe	---	---	---	3.0	---	4.0	---
ErB Elrose	IIe	10	---	---	5.0	6.0	8.0	6.0

See footnote at end of table.

TABLE 5.--LAND CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE--Continued

Soil name and map symbol	Land capability	Water-melons	Sweet potatoes	Tomatoes	Common bermuda-grass	Bahiagrass	Improved bermuda-grass	Small grains grazeout
		Tons	Bu	Tons	AUM*	AUM*	AUM*	
ErE--Elrose	VIe	---	---	---	4.0	4.0	6.0	---
FrB--Freestone	IIe	---	350	4	5.0	6.0	8.0	6.0
GaB--Gallime	IIe	11	450	4	5.0	6.0	8.0	4.0
Gw--Gladewater	Vw	---	---	---	1.0	1.0	1.0	---
KfC--Kirvin	IIIe	---	250	---	3.0	4.0	5.0	4.0
KgC--Kirvin	IVe	---	---	---	2.0	3.0	4.0	3.0
LgB--Leagueville	IVw	---	---	---	1.0	3.0	3.0	---
Lk--Lufkin	IIIw	---	---	---	4.0	---	5.0	---
Lu:								
Lufkin	IIIw	---	---	---	4.0	---	5.0	---
Rader	IIw	---	---	---	6.5	---	9.0	---
Ma--Manco	Vw	---	---	---	1.0	2.0	---	---
Na--Nahatche	Vw	---	---	---	3.0	3.0	3.0	4.0
Nh--Nahatche	Vw	---	---	---	5.0	6.0	7.0	---
NoC2--Normangee	VIe	---	---	---	---	---	5.0	3.0
OkB--Oakwood	IIe	11	450	---	5.0	6.0	8.0	6.0
OkD--Oakwood	IVe	---	---	---	3.0	4.0	6.0	3.0
PkC--Pickton	IIIs	10	250	---	---	---	5.0	---
PkE--Pickton	VIe	---	---	---	---	---	4.0	---
Pt**--Pits	---	---	---	---	---	---	---	---

See footnote at end of table.

TABLE 5.--LAND CAPABILITY AND YIELDS PER ACRE OF CROPS AND PASTURE--Continued

Soil name and map symbol	Land capability	Water-melons	Sweet potatoes	Tomatoes	Common bermuda-grass	Bahiagrass	Improved bermuda-grass	Small grains grazeout
		Tons	Bu	Tons	AUM*	AUM*	AUM*	
RdC---------- Redsprings	IIIe	---	---	---	1.0	1.0	3.0	3.0
RdE---------- Redsprings	VIe	---	---	---	2.0	2.0	3.0	2.0
Sa**. Salt flats	---	---	---	---	---	---	---	---
Sd---------- Sandow	IIw	---	---	---	7.0	7.0	8.0	6.0
Sf---------- Sandow	Vw	---	---	---	7.0	7.0	8.0	---
TeE---------- Tenaha	VIe	---	---	---	1.0	3.0	5.0	---
ToB---------- Tonkawa	IVs	8	---	---	---	---	1.0	1.0
Wh---------- Whitesboro	Vw	---	---	---	6.5	---	8.0	---
Wn---------- Wilson	IIIw	---	---	---	---	---	6.0	4.0
WoC---------- Wolfpen	IIIe	12	350	---	---	4.0	6.0	---
WoE---------- Wolfpen	VIe	---	---	---	---	3.0	5.0	---
WtC, WtC2-------- Woodtell	IVe	---	---	---	3.0	3.0	5.0	3.0
WtD---------- Woodtell	VIe	---	---	---	3.0	3.0	3.0	---
WvC---------- Woodtell	VIIs	---	---	---	---	---	---	---

* Animal-unit-month: The amount of forage or feed required to feed one animal unit (one cow, one horse, one mule, five sheep, or five goats) for 30 days.

** See description of the map unit for composition and behavior characteristics of the map unit.

TABLE 6.--RANGELAND PRODUCTIVITY

(Only the soils that support rangeland vegetation suitable for grazing are listed)

Soil name and map symbol	Range site	Potential annual production for kind of growing season		
		Favorable	Average	Unfavorable
		Lb/acre	Lb/acre	Lb/acre
Au Aufco	Clayey Bottomland	7,000	4,500	3,000
BaD Bazette	Claypan Savannah	5,500	4,500	2,000
CrA, CrB, CrC, CrC2 Crockett	Claypan Prairie	6,000	5,000	3,000
EdC, EdD Edge	Claypan Savannah	5,000	3,500	2,500
Lk Lufkin	Claypan Savannah	5,000	4,000	2,500
Lu*:				
Lufkin	Claypan Savannah	5,000	4,000	2,500
Rader	Sandy Loam	6,000	4,500	3,500
NoC2 Normangee	Claypan Prairie	5,500	4,000	3,000
Sd, Sf Sandow	Loamy Bottomland	7,500	6,500	4,000
Wh Whitesboro	Loamy Bottomland	9,000	8,000	6,500
Wn Wilson	Claypan Prairie	6,000	4,500	3,000

* See description of the map unit for composition and behavior characteristics of the map unit.

TABLE 7.--WOODLAND MANAGEMENT AND PRODUCTIVITY

(Only the soils suitable for production of commercial trees are listed. Absence of an entry indicates that information was not available)

Soil name and map symbol	Ordination symbol	Management concerns					Potential productivity			Trees to plant
		Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Plant competition	Common trees	Site index	Volume	
Au Aufco	4W	Slight	Moderate	Moderate	Slight	Moderate	Water oak Overcup oak	65 ---	--- ---	Water oak.
BeB, BeD Bernaldo	10A	Slight	Slight	Slight	Slight	Slight	Loblolly pine Shortleaf pine Sweetgum Southern red oak	94 84 --- ---	380 340 --- ---	Loblolly pine, sweetgum.
CuE, CvE Cuthbert	8C	Moderate	Moderate	Slight	Slight	Slight	Loblolly pine Shortleaf pine	84 72	280 170	Loblolly pine.
CwF Cuthbert	7X	Severe	Severe	Slight	Slight	Slight	Loblolly pine Shortleaf pine	76 68	180 170	Loblolly pine, shortleaf pine.
CxC**:										
Cuthbert	5C	Severe	Moderate	Moderate	Slight	Slight	Loblolly pine Shortleaf pine	60 ---	60 ---	Loblolly pine.
Redsprings	6C	Moderate	Moderate	Moderate	Slight	Slight	Loblolly pine Shortleaf pine	70 60	130 90	Loblolly pine.
DrA**:										
Derly	4W	Slight	Moderate	Moderate	Slight	Severe	Sweetgum Water oak Willow oak	80 70 72	120 --- ---	Water oak, willow oak sweetgum.
Raino	9W	Slight	Moderate	Slight	Slight	Moderate	Loblolly pine Shortleaf pine Water oak	80 70 90	230 170	Loblolly pine, shortleaf pine.
EdC, EdD Edge	6C	Moderate	Slight	Severe	Slight	Slight	Loblolly pine Post oak Blackjack oak Eastern redcedar	65 --- --- ---	95 --- --- ---	Loblolly pine.
ErB Elrose	10A	Slight	Slight	Slight	Slight	Slight	Loblolly pine Shortleaf pine Sweetgum Southern red oak	92 85 90 ---	330 340 210 ---	Loblolly pine, shortleaf pine.
ErE Elrose	9A	Moderate	Slight	Slight	Slight	Slight	Loblolly pine Shortleaf pine Sweetgum Southern red oak	87 80 88 ---	280 270 --- ---	

TABLE 7.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns					Potential productivity			Trees to plant
		Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Plant competition	Common trees	Site index	Volume	
FrB Freestone	8W	Slight	Slight	Slight	Slight	Moderate	Loblolly pine Shortleaf pine Sweetgum	80 70 80	230 170 120	Loblolly pine, slash pine, shortleaf pine.
GaB Gallime	9A	Slight	Slight	Slight	Slight	Slight	Loblolly pine Shortleaf pine Sweetgum Southern red oak	90 80 --- ---	330 270 -- --	Loblolly pine, sweetgum.
Gw Gladewater	6W	Slight	Severe	Severe	Slight	Moderate	Sweetgum Water oak Willow oak	80 85 85	120 --- ---	Water oak.
KfC Kirvin	8A	Slight	Slight	Slight	Slight	Slight	Loblolly pine Shortleaf pine	85 75	280 210	Loblolly pine.
KgC Kirvin	8F	Slight	Slight	Moderate	Slight	Slight	Loblolly pine Shortleaf pine	83 75	280 210	
LgB Leagueville	8W	Slight	Severe	Severe	Slight	Severe	Loblolly pine Sweetgum Water oak Southern red oak	80 80 80 70	230 120 5 80	Loblolly pine, sweetgum, southern red oak.
Ma Manco	8W	Slight	Severe	Moderate	Slight	Moderate	Sweetgum Water oak Willow oak	92 90 90	210 --- ---	Green ash, cherrybark oak.
Na Nahatche	6W	Slight	Moderate	Moderate	Slight	Moderate	Water oak Willow oak Eastern cottonwood	92 91 ---	--- --- ---	Eastern cottonwood, water oak.
Nh Nahatche	6W	Slight	Severe	Moderate	Slight	Slight	Water oak Willow oak Eastern cottonwood	92 91 ---	--- --- ---	Eastern cottonwood, water oak.
OkB, OkD Oakwood	9A	Slight	Slight	Slight	Slight	Slight	Loblolly pine Shortleaf pine Sweetgum Southern red oak	91 --- --- ---	330 --- --- ---	Loblolly pine, slash pine.
PkC, PkE Pickton	8S	Slight	Severe	Moderate	Slight	Moderate	Loblolly pine Shortleaf pine Southern red oak	80 70 70	230 170 80	Loblolly pine, slash pine, southern red oak.
RdC Redsprings	8F	Slight	Slight	Moderate	Slight	Slight	Loblolly pine Shortleaf pine	79 69	230 170	Loblolly pine.

See footnote at end of table.

TABLE 7.--WOODLAND MANAGEMENT AND PRODUCTIVITY--Continued

Soil name and map symbol	Ordination symbol	Management concerns					Potential productivity			Trees to plant
		Erosion hazard	Equipment limitation	Seedling mortality	Windthrow hazard	Plant competition	Common trees	Site index	Volume	
RdE---------- Redsprings	8F	Moderate	Slight	Moderate	Slight	Slight	Loblolly pine-------	79	230	Loblolly pine.
							Shortleaf pine------	69	170	
TeE---------- Tenaha	9S	Moderate	Moderate	Moderate	Slight	Slight	Loblolly pine-------	87	280	Loblolly pine.
							Shortleaf pine------	77	210	
ToB---------- Tonkawa	6S	Slight	Severe	Severe	Slight	Severe	Loblolly pine-------	63	95	Loblolly pine.
							Shortleaf pine------	---	---	
							Longleaf pine-------	---	---	
WoC, WoE---------- Wolfpen	9S	Slight	Moderate	Moderate	Slight	Slight	Loblolly pine-------	90	230	Loblolly pine,
							Shortleaf pine------	78	270	shortleaf pine.
WtC, WtC2---------- Woodtell	8C	Slight	Moderate	Slight	Slight	Slight	Loblolly pine-------	80	230	Loblolly pine.
							Shortleaf pine------	70	170	
WtD---------- Woodtell	8C	Moderate	Moderate	Slight	Slight	Slight	Loblolly pine-------	78	230	Loblolly pine.
							Shortleaf pine------	70	170	
WwC---------- Woodtell	6C	Slight	Severe	Moderate	Slight	Moderate	Loblolly pine-------	70	130	Loblolly pine.
							Shortleaf pine------	60	90	

* Volume is the yield in board feet (Doyle Rule) per acre per year calculated over a 50 year period for fully stocked natural stands.

** See description of the map unit for composition and behavior characteristics of the map unit.

TABLE 8.--WOODLAND UNDERSTORY VEGETATION

(Only the soils suitable for production of commercial trees are listed)

Soil name and map symbol	Total production		Characteristic vegetation	Composition
	Kind of year	Dry weight		
		Lb/acre		Pct
BeB, BeD----------	Favorable	1,300	Pinehill bluestem----------	55
Bernaldo	Normal	1,050	Slender bluestem----------	5
	Unfavorable	800	Longleaf uniola----------	5
			Splitbeard bluestem----------	5
			Southern baybarry----------	5
			Carolina jessamine----------	5
			Yaupon----------	5
			American beautyberry----------	5
CuE, CvE----------	Favorable	2,300	Pinehill bluestem----------	50
Cuthbert	Normal	1,800	Big bluestem----------	10
	Unfavorable	1,300	Longleaf uniola----------	10
			Fineleaf bluestem----------	5
			Pineywoods dropseed----------	5
			Cutover muhly----------	5
CwF----------	Favorable	2,200	Pinehill bluestem----------	50
Cuthbert	Normal	1,700	Pineywoods dropseed----------	10
	Unfavorable	1,200	Longleaf uniola----------	10
			Big bluestem----------	5
			Fineleaf bluestem----------	5
CxC*:				
Cuthbert----------	Favorable	---		
	Normal	---		
	Unfavorable	---		
Redsprings--------	Favorable	2,300	Pinehill bluestem----------	50
	Normal	1,800	Longleaf uniola----------	10
	Unfavorable	1,200	Big bluestem----------	10
			Fineleaf bluestem----------	10
			Splitbeard bluestem----------	5
			Purpletop----------	5
DrA*:				
Derly----------	Favorable	4,500	Florida paspalum----------	15
	Normal	3,500	Virginia wildrye----------	15
	Unfavorable	2,000	Little bluestem----------	10
			Beaked panicum----------	10
			Giant cane----------	10
			Panicum----------	10
			Redtop panicum----------	10
			Carolina jointtail----------	5
DrA*:				
Raino----------	Favorable	2,000	Little bluestem----------	25
	Normal	1,600	Pinehill bluestem----------	25
	Unfavorable	1,250	Beaked panicum----------	10
			Longleaf uniola----------	10
			Spreading panicum----------	5
			Brownseed paspalum----------	5
			Cutover muhly----------	5

See footnote at end of table.

TABLE 8.--WOODLAND UNDERSTORY VEGETATION--Continued

Soil name and map symbol	Total production		Characteristic vegetation	Composition
	Kind of year	Dry weight		
		Lb/acre		Pct
EdC, EdD----------	Favorable	5,000	Little bluestem----------	40
Edge	Normal	3,500	Indiangrass----------	10
	Unfavorable	2,500	Beaked panicum----------	10
			Purpletop----------	5
			Florida paspalum----------	5
			Tall dropseed----------	5
			Fall witchgrass----------	5
ErB, ErE----------	Favorable	1,500	Longleaf uniola----------	10
Elrose	Normal	1,200	Pineywoods dropseed----------	10
	Unfavorable	900	Big bluestem----------	10
			Pinehill bluestem----------	10
FrB----------	Favorable	2,500	Little bluestem----------	15
Freestone	Normal	1,750	Beaked panicum----------	15
	Unfavorable	1,000	Longleaf uniola----------	15
			Purpletop----------	10
			Panicum----------	10
GaB----------	Favorable	3,000	Pinehill bluestem----------	20
Gallime	Normal	2,500	Beaked panicum----------	20
	Unfavorable	2,000	Longleaf uniola----------	20
			Purpletop----------	5
			Panicum----------	5
			American beautyberry----------	5
			Greenbrier----------	5
Gw----------	Favorable	3,500	Sedge----------	20
Gladewater	Normal	2,000	Paspalum----------	15
	Unfavorable	1,500	Virginia wildrye----------	10
			Panicum----------	10
			Beaked panicum----------	5
			Purpletop----------	5
			Pinehill bluestem----------	5
KfC----------	Favorable	2,000	Pinehill bluestem----------	50
Kirvin	Normal	1,300	Longleaf uniola----------	10
	Unfavorable	1,000	Pineywoods dropseed----------	5
			American beautyberry----------	5
			Purpletop----------	5
			Indiangrass----------	5
			Brownseed paspalum----------	5
KgC----------	Favorable	2,400	Pinehill bluestem----------	50
Kirvin	Normal	1,900	Longleaf uniola----------	10
	Unfavorable	1,500	American beautyberry----------	5
			Indiangrass----------	5
			Brownseed paspalum----------	5
			Fineleaf bluestem----------	5
LgB----------	Favorable	2,000	Longleaf uniola----------	15
Leagueville	Normal	1,500	Pinehill bluestem----------	10
	Unfavorable	1,000	Panicum----------	10
			Southern bayberry----------	10
			Broomsedge bluestem----------	5
			Sedge----------	5
			Common buttonbush----------	5
			Greenbrier----------	5

See footnote at end of table.

TABLE 8.--WOODLAND UNDERSTORY VEGETATION--Continued

Soil name and map symbol	Total production		Characteristic vegetation	Composition
	Kind of year	Dry weight		
		Lb/acre		Pct
Ma	Favorable	1,600	Longleaf uniola	15
Manco	Normal	1,200	Sedge	15
	Unfavorable	1,000	Panicum	5
			Beaked panicum	5
			Greenbrier	5
			Poison ivy	5
			Cedar elm	5
			Southern bayberry	5
Na	Favorable	3,000	Virginia wildrye	15
Nahatche	Normal	2,000	Beaked panicum	15
	Unfavorable	1,500	Longleaf uniola	15
			Sedge	10
			Eastern gamagrass	5
			Switchgrass	5
			Purpletop	5
			Indiangrass	5
			Knotroot bristlegrass	5
			Brownseed paspalum	5
Nh	Favorable	3,000	Longleaf uniola	20
Nahatche	Normal	2,000	Virginia wildrye	15
	Unfavorable	1,500	Rustyseed paspalum	15
			Purpletop	10
			Bentawn plumegrass	5
			Switchcane	5
OkB, OkD	Favorable	1,200	Pinehill bluestem	40
Oakwood	Normal	800	Longleaf uniola	10
	Unfavorable	500	Beaked panicum	5
			Purpletop	5
			Indiangrass	5
			Panicum	5
			Paspalum	5
			Sedge	5
			Yaupon	5
PkC, PkE	Favorable	3,000	Little bluestem	20
Pickton	Normal	2,500	Panicum	15
	Unfavorable	2,000	Purpletop	10
			Big bluestem	10
			Indiangrass	5
			Longleaf uniola	5
			Beaked panicum	5
RdC, RdE	Favorable	2,300	Pinehill bluestem	50
Redsprings	Normal	1,800	Fineleaf bluestem	10
	Unfavorable	1,200	Longleaf uniola	10
			Big bluestem	10
			Pineywoods dropseed	5
			Indiangrass	5
			Cutover muhly	5

See footnote at end of table.

TABLE 8.--WOODLAND UNDERSTORY VEGETATION--Continued

Soil name and map symbol	Total production		Characteristic vegetation	Composition
	Kind of year	Dry weight		
		Lb/acre		Pct
TeE----------	Favorable	2,500	Pinehill bluestem----------	50
Tenaha	Normal	2,000	Fineleaf bluestem----------	10
	Unfavorable	1,250	Longleaf uniola----------	10
			Indiangrass----------	5
			Slender bluestem----------	5
			Pineywoods dropseed----------	5
			Dogwood----------	5
			Yaupon----------	5
ToB----------	Favorable	2,000	Broomsedge bluestem----------	20
Tonkawa	Normal	1,200	Pinehill bluestem----------	20
	Unfavorable	800	Arrowfeather threeawn----------	15
			Panicum----------	10
			Indiangrass----------	10
WoC, WoE----------	Favorable	3,500	Little bluestem----------	20
Wolfpen	Normal	2,500	Purpletop----------	15
	Unfavorable	2,000	Panicum----------	15
			Longleaf uniola----------	10
			Beaked panicum----------	10
			Indiangrass----------	5
WtC, WtC2, WtD-----	Favorable	2,500	Pinehill bluestem----------	20
Woodtell	Normal	2,000	Panicum----------	10
	Unfavorable	1,500	Sedge----------	10
			Brownseed paspalum----------	10
			Indiangrass----------	5
			Longleaf uniola----------	5
			Purpletop----------	5
			Carolina jointtail----------	5
			Knotroot bristlegrass----------	5
			Splitbeard bluestem----------	5
WwC----------	Favorable	2,000	Pinehill bluestem----------	20
Woodtell	Normal	1,500	Brownseed paspalum----------	10
	Unfavorable	1,000	Sedge----------	10
			Indiangrass----------	5
			Longleaf uniola----------	5
			Purpletop----------	5
			Knotroot bristlegrass----------	5
			Carolina jointtail----------	5
			Splitbeard bluestem----------	5

* See description of the map unit for composition and behavior characteristics of the map unit.

TABLE 9.--RECREATIONAL DEVELOPMENT

(Some terms that describe restrictive soil features are defined in the "Glossary". See text for definitions of "slight," "moderate," and "severe." Absence of an entry indicates that the soil was not rated)

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
Au Aufco	Severe: flooding.	Moderate: flooding, wetness, too clayey.	Severe: flooding.	Moderate: too clayey, flooding.	Severe: flooding, too clayey.
BaD Bazette	Moderate: slope.	Moderate: slope.	Severe: slope.	Severe: erodes easily.	Moderate: slope.
BeB Bernaldo	Slight	Slight	Moderate: slope.	Slight	Slight.
BeD Bernaldo	Slight	Slight	Severe: slope.	Slight	Slight.
CrA Crockett	Moderate: percs slowly.	Moderate: percs slowly.	Moderate: percs slowly.	Severe: erodes easily.	Moderate: droughty.
CrB, CrC, CrC2 Crockett	Moderate: percs slowly.	Moderate: percs slowly.	Moderate: slope, percs slowly.	Severe: erodes easily.	Moderate: droughty.
CuE Cuthbert	Moderate: slope, percs slowly.	Moderate: slope, percs slowly.	Severe: slope.	Severe: erodes easily.	Moderate: droughty.
CvE Cuthbert	Moderate: slope, percs slowly.	Moderate: slope, percs slowly.	Severe: slope, small stones.	Slight	Moderate: small stones, droughty.
CwF Cuthbert	Severe: slope.	Severe: slope.	Severe: large stones, slope.	Moderate: slope.	Severe: slope.
CxC*: Cuthbert	Moderate: small stones, percs slowly.	Moderate: small stones, percs slowly.	Severe: slope, small stones.	Slight	Moderate: small stones, droughty.
Redsprings	Severe: too clayey.	Severe: too clayey.	Severe: too clayey.	Severe: too clayey.	Moderate: too clayey, small stones.
DrA*: Derly	Severe: ponding, percs slowly.	Severe: ponding, percs slowly.	Severe: ponding, percs slowly.	Severe: ponding.	Severe: ponding.
Raino	Severe: percs slowly.	Severe: percs slowly.	Severe: percs slowly.	Slight	Slight.
EdC Edge	Moderate: percs slowly.	Moderate: percs slowly.	Moderate: slope, percs slowly.	Severe: erodes easily.	Slight.

See footnote at end of table.

TABLE 9.--RECREATIONAL DEVELOPMENT--Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
EdD Edge	Moderate: slope, percs slowly.	Moderate: slope, percs slowly.	Severe: slope.	Severe: erodes easily.	Moderate: slope.
ErB Elrose	Slight	Slight	Moderate: slope, small stones.	Slight	Slight.
ErE Elrose	Moderate: slope.	Moderate: slope.	Severe: slope.	Slight	Moderate: slope.
FrB Freestone	Moderate: wetness, percs slowly.	Moderate: wetness, percs slowly.	Moderate: slope, wetness, percs slowly.	Slight	Slight.
GaB Gallime	Slight	Slight	Moderate: slope.	Slight	Slight.
Gw Gladewater	Severe: flooding, percs slowly, too clayey.	Severe: too clayey, percs slowly.	Severe: too clayey, flooding, percs slowly.	Severe: too clayey.	Severe: flooding, too clayey.
KfC Kirvin	Moderate: percs slowly.	Moderate: percs slowly.	Moderate: slope, percs slowly.	Severe: erodes easily.	Slight.
KgC Kirvin	Severe: small stones.	Severe: small stones.	Severe: small stones.	Slight	Severe: small stones.
LgB Leagueville	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.
Lk Lufkin	Moderate: percs slowly.	Moderate: percs slowly.	Moderate: percs slowly.	Slight	Moderate: droughty.
Lu*: Lufkin	Moderate: percs slowly.	Moderate: percs slowly.	Moderate: percs slowly.	Slight	Moderate: droughty.
Rader	Moderate: wetness, percs slowly.	Moderate: wetness, percs slowly.	Moderate: wetness, percs slowly.	Slight	Slight.
Ma Manco	Severe: flooding, wetness.	Moderate: flooding, wetness.	Severe: wetness, flooding.	Moderate: wetness, flooding.	Severe: flooding.
Na Nahatche	Severe: flooding, wetness.	Severe: wetness.	Severe: wetness, flooding.	Severe: wetness.	Severe: wetness, flooding.
Nh Nahatche	Severe: flooding, wetness, excess salt.	Severe: wetness, excess salt.	Severe: wetness, flooding, excess salt.	Severe: wetness.	Severe: excess salt, wetness, flooding.

See footnote at end of table.

TABLE 9.--RECREATIONAL DEVELOPMENT--Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
NoC2--Normangee	Moderate: percs slowly.	Moderate: percs slowly.	Moderate: slope, percs slowly.	Slight	Slight.
OkB--Oakwood	Moderate: percs slowly.	Moderate: percs slowly.	Moderate: slope, percs slowly.	Slight	Slight.
OkD--Oakwood	Moderate: percs slowly.	Moderate: percs slowly.	Severe: slope.	Slight	Slight.
PkC--Pickton	Severe: too sandy.	Severe: too sandy.	Severe: too sandy.	Severe: too sandy.	Moderate: droughty.
PkE--Pickton	Severe: too sandy.	Severe: too sandy.	Severe: slope, too sandy.	Severe: too sandy.	Moderate: droughty, slope.
Pt*--Pits					
RdC--Redsprings	Severe: small stones.	Severe: small stones.	Severe: small stones.	Slight	Severe: small stones.
RdE--Redsprings	Severe: small stones.	Severe: small stones.	Severe: slope, small stones.	Slight	Severe: small stones.
Sa*. Salt flats					
Sd--Sandow	Severe: flooding.	Slight	Moderate: flooding.	Slight	Moderate: flooding.
Sf--Sandow	Severe: flooding.	Moderate: flooding.	Severe: flooding.	Moderate: flooding.	Severe: flooding.
TeE--Tenaha	Moderate: slope, too sandy.	Moderate: slope, too sandy.	Severe: slope.	Moderate: too sandy.	Moderate: droughty, slope.
ToB--Tonkawa	Severe: too sandy.	Severe: too sandy.	Severe: too sandy.	Severe: too sandy.	Severe: droughty.
Wh--Whitesboro	Severe: flooding.	Moderate: flooding, wetness.	Severe: flooding.	Moderate: flooding.	Severe: flooding.
Wn--Wilson	Moderate: percs slowly.	Moderate: percs slowly.	Moderate: percs slowly.	Slight	Slight.
WoC--Wolfpen	Moderate: too sandy.	Moderate: too sandy.	Moderate: too sandy.	Moderate: too sandy.	Moderate: droughty.

See footnote at end of table.

TABLE 9.--RECREATIONAL DEVELOPMENT--Continued

Soil name and map symbol	Camp areas	Picnic areas	Playgrounds	Paths and trails	Golf fairways
WoE Wolfpen	Moderate: slope, too sandy.	Moderate: slope, too sandy.	Severe: slope.	Moderate: too sandy.	Moderate: droughty, slope.
WtC, WtC2 Woodtell	Severe: percs slowly.	Severe: percs slowly.	Severe: percs slowly.	Severe: erodes easily.	Slight.
WtD Woodtell	Severe: percs slowly.	Severe: percs slowly.	Severe: slope, percs slowly.	Severe: erodes easily.	Moderate: slope.
WwC Woodtell	Severe: percs slowly.	Severe: percs slowly.	Severe: large stones, percs slowly.	Moderate: large stones.	Severe: large stones.

* See description of the map unit for composition and behavior characteristics of the map unit.

TABLE 10.--WILDLIFE HABITAT

(See text for definitions of "good," "fair," "poor," and "very poor." Absence of an entry indicates that the soil was not rated)

Soil name and map symbol	Potential for habitat elements								Potential as habitat for--			
	Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife	Rangeland wildlife
Au Aufco	Poor	Fair	Fair	Good	---	---	Poor	Fair	Fair	Good	Poor	---
BaD Barette	Poor	Fair	Fair	Good	Good	Fair	Poor	Very poor.	Fair	Good	Very poor.	Fair.
BeB Bernaldo	Good	Good	Good	Good	Good	---	Poor	Very poor.	Good	Good	Very poor.	---
BeD Bernaldo	Fair	Good	Good	Good	Good	---	Poor	Very poor.	Good	Good	Very poor.	---
CrA, CrB, CrC, CrC2 Crockett	Fair	Good	Good	Good	---	Good	Poor	Poor	Good	---	Poor	Good.
CuE, CvE Cuthbert	Fair	Good	Good	Good	Good	---	Very poor.	Very poor.	Good	Good	Very poor.	---
CwF Cuthbert	Poor	Fair	Good	Good	Good	---	Very poor.	Very poor.	Fair	Good	Very poor.	---
CxC*: Cuthbert	Poor	Fair	Good	Good	Good	---	Very poor.	Very poor.	Fair	Good	Very poor.	---
Redsprings	Fair	Fair	Good	Good	Good	---	Very poor.	Very poor.	Fair	Good	Very poor.	---
DrA*: Derly	Fair	Fair	Good	Fair	Fair	---	Good	Good	Fair	Fair	Good	---
Raino	Good	Good	Good	Good	Good	---	Poor	Poor	Good	Good	Poor	---
EdC Edge	Fair	Fair	Good	Good	---	Good	Very poor.	Very poor.	Fair	Good	Very poor.	Good.
EdD Edge	Poor	Fair	Good	Good	---	Good	Very poor.	Very poor.	Fair	Good	Very poor.	Good.
ErB Elrose	Good	Good	Good	Good	Good	---	Poor	Poor	Good	Good	Poor	---
ErE Elrose	Fair	Good	Good	Good	Good	---	Poor	Very poor.	Good	Good	Very poor.	---
FrB Freestone	Good	Good	Good	Good	Good	Good	Poor	Poor	Good	Good	Poor	---
GaB Gallime	Good	Good	Good	Good	Good	---	Poor	Very poor.	Good	Good	Very poor.	---
Gw Gladewater	Poor	Fair	Fair	Fair	---	---	Poor	Good	Fair	Fair	Fair	---

See footnote at end of table.

TABLE 10.--WILDLIFE HABITAT--Continued

Soil name and map symbol	Potential for habitat elements								Potential as habitat for--			
	Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife	Rangeland wildlife
KfC---Kirvin	Good	Good	Good	Good	Good	---	Poor	Very poor.	Good	Good	Very poor.	---
KgC---Kirvin	Fair	Good	Good	Good	Good	---	Poor	Very poor.	Good	Good	Very poor.	---
LgB---Leaqueville	Poor	Fair	Fair	Fair	Fair	---	Fair	Poor	Fair	Fair	Fair	---
Lk---Lufkin	Fair	Good	Fair	Good	Good	---	Fair	Fair	Fair	Good	Fair	---
Lu*:												
Lufkin	Fair	Good	Fair	Good	Good	---	Fair	Fair	Fair	Good	Fair	---
Rader	Fair	Good	Good	Good	---	Good	Poor	Poor	Good	---	Poor	Good.
Ma---Manco	Poor	Fair	Fair	Good	Good	---	Fair	Fair	Fair	Good	Fair	---
Na, Nh---Nahatche	Fair	Fair	Fair	Good	Fair	---	Poor	Fair	Fair	Good	Poor	---
NoC2---Normangee	Fair	Fair	Fair	---	---	Fair	Poor	Poor	Fair	---	Poor	Fair.
OkB, OkD---Oakwood	Good	Good	Good	Good	Good	---	Poor	Very poor.	Good	Good	Very poor.	---
PkC, PkE---Pickton	Poor	Fair	Good	Fair	Fair	---	Poor	Very poor.	Fair	Fair	Very poor.	---
Pt*---Pits												
RdC---Redsprings	Fair	Good	Good	Good	Good	---	Poor	Very poor.	Good	Good	Very poor.	---
RdE---Redsprings	Poor	Fair	Good	Good	Good	---	Very poor.	Very poor.	Fair	Good	Very poor.	---
Sa*. Salt flats												
Sd---Sandow	Good	Good	Good	Good	Good	Good	Fair	Fair	Good	Good	Fair	Good.
Sf---Sandow	Very poor.	Poor	Good	Good	Good	Good	Fair	Fair	Poor	Fair	Fair	Good.
TeE---Tenaha	Poor	Fair	Good	Good	Good	---	Very poor.	Very poor.	Fair	Good	Very poor.	---
ToB---Tonkawa	Poor	Poor	Fair	Poor	---	---	Very poor.	Very poor.	Poor	Poor	Very poor.	---
Wh---Whitesboro	Very poor.	Poor	Fair	---	---	Fair	Poor	Poor	Poor	---	Poor	Fair.

See footnote at end of table.

TABLE 10.--WILDLIFE HABITAT--Continued

Soil name and map symbol	Potential for habitat elements								Potential as habitat for--			
	Grain and seed crops	Grasses and legumes	Wild herbaceous plants	Hardwood trees	Coniferous plants	Shrubs	Wetland plants	Shallow water areas	Openland wildlife	Woodland wildlife	Wetland wildlife	Rangeland wildlife
Wn---------- Wilson	Fair	Fair	Good	---	---	Fair	Fair	Fair	Fair	---	Fair	Fair.
WoC, WoE---------- Wolfpen	Poor	Fair	Good	Good	Good	---	Poor	Very poor.	Fair	Good	Very poor.	---
WtC, WtC2---------- Woodtell	Good	Good	Good	Good	Good	---	Poor	Very poor.	Good	Good	Poor	---
WtD---------- Woodtell	Fair	Good	Good	Good	Good	---	Very poor.	Very poor.	Good	Good	Very poor.	---
WvC---------- Woodtell	Very poor.	Poor	Good	Good	Good	---	Poor	Very poor.	Poor	Good	Very poor.	---

* See description of the map unit for composition and behavior characteristics of the map unit.

TABLE 11.--BUILDING SITE DEVELOPMENT

(Some terms that describe restrictive soil features are defined in the "Glossary." See text for definitions of "slight," "moderate," and "severe." Absence of an entry indicates that the soil was not rated. The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Au---------- Aufco	Severe: wetness.	Severe: flooding, shrink-swell.	Severe: flooding, wetness, shrink-swell.	Severe: flooding, shrink-swell.	Severe: shrink-swell, low strength, flooding.	Severe: flooding, too clayey.
BaD---------- Bazette	Moderate: too clayey, slope.	Severe: shrink-swell.	Severe: shrink-swell.	Severe: shrink-swell, slope.	Severe: shrink-swell, low strength.	Moderate: slope.
BeB---------- Bernaldo	Moderate: wetness.	Moderate: shrink-swell.	Moderate: wetness, shrink-swell.	Moderate: shrink-swell.	Severe: low strength.	Slight.
BeD---------- Bernaldo	Moderate: wetness.	Moderate: shrink-swell.	Moderate: wetness, shrink-swell.	Moderate: shrink-swell, slope.	Severe: low strength.	Slight.
CrA, CrB, CrC, CrC2---------- Crockett	Moderate: too clayey.	Severe: shrink-swell.	Severe: shrink-swell.	Severe: shrink-swell.	Severe: shrink-swell, low strength.	Moderate: droughty.
CuE---------- Cuthbert	Moderate: too clayey, slope.	Moderate: shrink-swell, slope.	Moderate: slope, shrink-swell.	Severe: slope.	Severe: low strength.	Moderate: droughty.
CvE---------- Cuthbert	Moderate: too clayey, slope.	Moderate: shrink-swell, slope.	Moderate: slope, shrink-swell.	Severe: slope.	Severe: low strength.	Moderate: small stones, droughty.
CwF---------- Cuthbert	Severe: slope.	Severe: slope.	Severe: slope.	Severe: slope.	Severe: low strength, slope.	Severe: slope.
CxC*: Cuthbert----------	Moderate: too clayey.	Moderate: shrink-swell.	Moderate: shrink-swell.	Moderate: shrink-swell, slope.	Severe: low strength.	Moderate: small stones, droughty.
Redsprings--------	Moderate: too clayey.	Moderate: shrink-swell.	Moderate: shrink-swell.	Moderate: shrink-swell, slope.	Moderate: shrink-swell, low strength.	Moderate: too clayey, small stones.
DrA*: Derly----------	Severe: ponding.	Severe: ponding, shrink-swell.	Severe: ponding, shrink-swell.	Severe: ponding, shrink-swell.	Severe: shrink-swell, low strength, ponding.	Severe: ponding.
Raino----------	Severe: wetness.	Moderate: wetness.	Severe: wetness, shrink-swell.	Moderate: wetness.	Moderate: wetness.	Slight.

See footnote at end of table.

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
EdC--- Edge	Moderate: too clayey.	Severe: shrink-swell.	Severe: shrink-swell.	Severe: shrink-swell.	Severe: shrink-swell, low strength.	Slight.
EdD--- Edge	Moderate: too clayey, slope.	Severe: shrink-swell.	Severe: shrink-swell.	Severe: shrink-swell, slope.	Severe: shrink-swell, low strength.	Moderate: slope.
ErB--- Elrose	Moderate: too clayey.	Slight---	Slight---	Slight---	Severe: low strength.	Slight.
ErE--- Elrose	Moderate: too clayey, slope.	Moderate: slope.	Moderate: slope.	Severe: slope.	Severe: low strength.	Moderate: slope.
FrB--- Freestone	Severe: wetness.	Moderate: wetness, shrink-swell.	Severe: wetness, shrink-swell.	Moderate: wetness, shrink-swell.	Severe: low strength.	Slight.
GaB--- Gallime	Moderate: wetness.	Slight---	Moderate: wetness, shrink-swell.	Slight---	Slight---	Slight.
Gw--- Gladewater	Severe: cutbanks cave, wetness.	Severe: flooding, shrink-swell.	Severe: flooding, wetness, shrink-swell.	Severe: flooding, shrink-swell.	Severe: shrink-swell, low strength, flooding.	Severe: flooding, too clayey.
KfC--- Kirvin	Moderate: too clayey.	Moderate: shrink-swell.	Moderate: shrink-swell.	Moderate: shrink-swell.	Severe: low strength.	Slight.
KgC--- Kirvin	Moderate: too clayey.	Moderate: shrink-swell.	Moderate: shrink-swell.	Moderate: shrink-swell.	Severe: low strength.	Severe: small stones.
LgB--- Leagueville	Severe: cutbanks cave, wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.	Severe: wetness.
Lk--- Lufkin	Moderate: too clayey.	Severe: shrink-swell.	Severe: shrink-swell.	Severe: shrink-swell.	Severe: shrink-swell, low strength.	Moderate: droughty.
Lu*:						
Lufkin---	Moderate: too clayey.	Severe: shrink-swell.	Severe: shrink-swell.	Severe: shrink-swell.	Severe: shrink-swell, low strength.	Moderate: droughty.
Rader---	Severe: wetness.	Moderate: wetness.	Severe: wetness, shrink-swell.	Moderate: wetness.	Moderate: wetness.	Slight.
Ma--- Manco	Severe: wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: low strength, flooding.	Severe: flooding.
Na--- Nahatche	Severe: wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: low strength, wetness, flooding.	Severe: wetness, flooding.

See footnote at end of table.

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
Nh Nahatche	Severe: wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: low strength, wetness, flooding.	Severe: excess salt, wetness, flooding.
NoC2 Normangee	Moderate: too clayey.	Severe: shrink-swell.	Severe: shrink-swell.	Severe: shrink-swell.	Severe: shrink-swell, low strength.	Slight.
OkB Oakwood	Moderate: wetness.	Slight	Moderate: wetness.	Slight	Moderate: low strength.	Slight.
OkD Oakwood	Moderate: wetness.	Slight	Moderate: wetness.	Moderate: slope.	Moderate: low strength.	Slight.
PkC Pickton	Severe: cutbanks cave.	Slight	Moderate: wetness.	Slight	Slight	Moderate: droughty.
PkE Pickton	Severe: cutbanks cave.	Moderate: slope.	Moderate: wetness, slope.	Severe: slope.	Moderate: slope.	Moderate: droughty, slope.
Pt* Pits						
RdC Redsprings	Moderate: too clayey.	Moderate: shrink-swell.	Moderate: shrink-swell.	Moderate: shrink-swell.	Moderate: shrink-swell, low strength.	Severe: small stones.
RdE Redsprings	Moderate: too clayey, slope.	Moderate: shrink-swell, slope.	Moderate: slope, shrink-swell.	Severe: slope.	Moderate: shrink-swell, low strength, slope.	Severe: small stones.
Sa*. Salt flats						
Sd Sandow	Moderate: wetness, flooding.	Severe: flooding.	Severe: flooding.	Severe: flooding.	Severe: low strength, flooding.	Moderate: flooding.
Sf Sandow	Moderate: wetness, flooding.	Severe: flooding.	Severe: flooding.	Severe: flooding.	Severe: low strength, flooding.	Severe: flooding.
TeE Tenaha	Severe: cutbanks cave.	Moderate: slope.	Moderate: slope.	Severe: slope.	Moderate: slope.	Moderate: droughty, slope.
ToB Tonkawa	Severe: cutbanks cave.	Slight	Slight	Slight	Slight	Severe: droughty.
Wh Whitesboro	Severe: wetness.	Severe: flooding.	Severe: flooding, wetness.	Severe: flooding.	Severe: low strength, flooding.	Severe: flooding.
Wn Wilson	Moderate: too clayey.	Severe: shrink-swell.	Severe: shrink-swell.	Severe: shrink-swell.	Severe: shrink-swell, low strength.	Slight.

See footnote at end of table.

TABLE 11.--BUILDING SITE DEVELOPMENT--Continued

Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets	Lawns and landscaping
WoC---------- Wolfpen	Severe: cutbanks cave.	Slight---------	Moderate: wetness.	Slight---------	Slight---------	Moderate: droughty.
WoE---------- Wolfpen	Severe: cutbanks cave.	Moderate: slope.	Moderate: wetness, slope.	Severe: slope.	Moderate: slope.	Moderate: droughty, slope.
WtC, WtC2--------- Woodtell	Moderate: too clayey.	Severe: shrink-swell.	Severe: shrink-swell.	Severe: shrink-swell.	Severe: shrink-swell, low strength.	Slight.
WtD---------- Woodtell	Moderate: too clayey, slope.	Severe: shrink-swell.	Severe: shrink-swell.	Severe: shrink-swell, slope.	Severe: shrink-swell, low strength.	Moderate: slope.
WwC---------- Woodtell	Moderate: too clayey.	Severe: shrink-swell.	Severe: shrink-swell.	Severe: shrink-swell.	Severe: shrink-swell, low strength.	Severe: large stones.

* See description of the map unit for composition and behavior characteristics of the map unit.

TABLE 12.--SANITARY FACILITIES

(Some terms that describe restrictive soil features are defined in the "Glossary." See text for definitions of "slight," "good," and other terms. Absence of an entry indicates that the soil was not rated. The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
Au Aufco	Severe: flooding, wetness, percs slowly.	Severe: flooding.	Severe: flooding, too clayey.	Severe: flooding.	Poor: too clayey, hard to pack.
BaD Bazette	Severe: percs slowly.	Severe: slope.	Severe: too clayey.	Moderate: slope.	Poor: too clayey, hard to pack.
BeB, BeD Bernaldo	Moderate: wetness, percs slowly.	Severe: seepage.	Moderate: too clayey.	Slight	Fair: too clayey.
CrA Crockett	Severe: percs slowly.	Slight	Severe: too clayey.	Slight	Poor: too clayey, hard to pack.
CrB, CrC, CrC2 Crockett	Severe: percs slowly.	Moderate: slope.	Severe: too clayey.	Slight	Poor: too clayey, hard to pack.
CuE, CvE Cuthbert	Severe: percs slowly.	Severe: slope.	Severe: too clayey.	Moderate: slope.	Poor: too clayey.
CwF Cuthbert	Severe: percs slowly, slope.	Severe: slope.	Severe: slope, too clayey.	Severe: slope.	Poor: too clayey, slope.
CxC*: Cuthbert	Severe: percs slowly.	Moderate: slope.	Severe: too clayey.	Slight	Poor: too clayey.
Redsprings	Severe: percs slowly.	Moderate: slope.	Moderate: too clayey.	Slight	Fair: too clayey, hard to pack.
DrA*: Derly	Severe: ponding, percs slowly.	Severe: ponding.	Severe: ponding, too clayey.	Severe: ponding.	Poor: too clayey, hard to pack, ponding.
Raino	Severe: wetness, percs slowly.	Severe: wetness.	Severe: too clayey.	Moderate: wetness.	Poor: too clayey, hard to pack.
EdC Edge	Severe: percs slowly.	Moderate: slope.	Severe: too clayey.	Slight	Poor: too clayey, hard to pack.

See footnote at end of table.

TABLE 12.--SANITARY FACILITIES--Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
EdD Edge	Severe: percs slowly.	Severe: slope.	Severe: too clayey.	Moderate: slope.	Poor: too clayey, hard to pack.
ErB Elrose	Moderate: percs slowly.	Moderate: seepage.	Moderate: too clayey.	Slight	Poor: too clayey.
ErE Elrose	Moderate: percs slowly, slope.	Severe: slope.	Moderate: too clayey.	Moderate: slope.	Poor: too clayey.
FrB Freestone	Severe: wetness, percs slowly.	Moderate: slope.	Severe: too clayey.	Moderate: wetness.	Poor: too clayey, hard to pack.
GaB Gallime	Moderate: wetness, percs slowly.	Severe: seepage.	Severe: wetness.	Severe: seepage.	Fair: too clayey.
Gw Gladewater	Severe: flooding, wetness, percs slowly.	Severe: flooding.	Severe: flooding, wetness, too clayey.	Severe: flooding.	Poor: too clayey, hard to pack.
KfC, KgC Kirvin	Severe: percs slowly.	Moderate: slope.	Severe: too clayey.	Slight	Poor: too clayey, hard to pack.
LgB Leagueville	Severe: wetness, poor filter.	Severe: seepage, wetness.	Severe: seepage, wetness, too acid.	Severe: seepage, wetness.	Poor: wetness, too acid.
Lk Lufkin	Severe: percs slowly.	Slight	Severe: too clayey.	Slight	Poor: too clayey, hard to pack.
Lu*: Lufkin	Severe: percs slowly.	Slight	Severe: too clayey.	Slight	Poor: too clayey, hard to pack.
Rader	Severe: wetness, percs slowly.	Severe: seepage.	Severe: too clayey.	Severe: seepage.	Poor: too clayey, hard to pack.
Ma Manco	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Poor: wetness.
Na, Nh Nahatche	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Poor: wetness.
NoC2 Normangee	Severe: percs slowly.	Moderate: slope.	Severe: too clayey.	Slight	Poor: too clayey, hard to pack.

See footnote at end of table.

TABLE 12.--SANITARY FACILITIES--Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
OkB, OkD---------- Oakwood	Severe: wetness, percs slowly.	Moderate: seepage, slope, wetness.	Severe: wetness.	Moderate: wetness.	Fair: too clayey.
PkC---------- Pickton	Severe: poor filter.	Severe: seepage.	Severe: wetness, too sandy.	Severe: seepage.	Poor: too sandy.
PkE---------- Pickton	Severe: poor filter.	Severe: seepage, slope.	Severe: wetness, too sandy.	Severe: seepage.	Poor: too sandy.
Pt*---------- Pits					
RdC---------- Redsprings	Severe: percs slowly.	Moderate: slope.	Moderate: too clayey.	Slight----------	Fair: too clayey, hard to pack.
RdE---------- Redsprings	Severe: percs slowly.	Severe: slope.	Moderate: slope, too clayey.	Moderate: slope.	Fair: too clayey, hard to pack, slope.
Sa*. Salt flats					
Sd, Sf---------- Sandow	Severe: flooding, wetness, percs slowly.	Severe: flooding.	Severe: flooding, wetness.	Severe: flooding.	Fair: too clayey.
TeE---------- Tenaha	Severe: percs slowly, poor filter.	Severe: seepage, slope.	Moderate: slope, too sandy.	Severe: seepage.	Fair: too sandy, slope, thin layer.
ToB---------- Tonkawa	Severe: poor filter.	Severe: seepage.	Severe: seepage, too sandy.	Severe: seepage.	Poor: seepage, too sandy.
Wh---------- Whitesboro	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Severe: flooding, wetness.	Fair: too clayey, wetness.
Wn---------- Wilson	Severe: percs slowly.	Slight----------	Severe: too clayey.	Slight----------	Poor: too clayey, hard to pack.
WoC---------- Wolfpen	Severe: poor filter.	Severe: seepage.	Severe: wetness.	Severe: seepage.	Fair: too clayey.
WoE---------- Wolfpen	Severe: poor filter.	Severe: seepage, slope.	Severe: wetness.	Severe: seepage.	Fair: too clayey, slope.
WtC, WtC2---------- Woodtell	Severe: percs slowly.	Moderate: slope.	Severe: too clayey.	Slight----------	Poor: too clayey, hard to pack.

See footnote at end of table.

TABLE 12.--SANITARY FACILITIES--Continued

Soil name and map symbol	Septic tank absorption fields	Sewage lagoon areas	Trench sanitary landfill	Area sanitary landfill	Daily cover for landfill
WtD Woodtell	Severe: percs slowly.	Severe: slope.	Severe: too clayey.	Moderate: slope.	Poor: too clayey, hard to pack.
WwC Woodtell	Severe: percs slowly.	Moderate: slope.	Severe: too clayey.	Slight	Poor: too clayey, hard to pack.

* See description of the map unit for composition and behavior characteristics of the map unit.

TABLE 13.--CONSTRUCTION MATERIALS

(Some terms that describe restrictive soil features are defined in the "Glossary." See text for definitions of "good," "fair," and other terms. Absence of an entry indicates that the soil was not rated. The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
Au Aufco	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey.
BaD Bazette	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey.
BeB, BeD Bernaldo	Good	Improbable: excess fines.	Improbable: excess fines.	Fair: too clayey.
CrA, CrB, CrC, CrC2 Crockett	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey.
CuE Cuthbert	Fair: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey.
CvE Cuthbert	Fair: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, small stones.
CwF Cuthbert	Fair: shrink-swell, low strength, slope.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, small stones, slope.
CxC*: Cuthbert	Fair: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, small stones.
Redsprings	Fair: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey.
DrA*: Derly	Poor: shrink-swell, low strength, wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, wetness.
Raino	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Fair: thin layer.
EdC, EdD Edge	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey.

See footnote at end of table.

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
ErB, ErE Elrose	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey.
FrB Freestone	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Fair: too clayey.
GaB Gallime	Fair: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Good.
Gw Gladewater	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey.
KfC Kirvin	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey.
KgC Kirvin	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, small stones.
LgB Leagueville	Poor: wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: too sandy, wetness.
Lk Lufkin	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey.
Lu*: Lufkin	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey.
Rader	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Fair: thin layer.
Ma Manco	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Fair: too clayey.
Na Nahatche	Poor: low strength, wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: wetness.
Nh Nahatche	Poor: low strength, wetness.	Improbable: excess fines.	Improbable: excess fines.	Poor: excess salt, wetness.
NoC2 Normangee	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey.
OkB, OkD Oakwood	Good	Improbable: excess fines.	Improbable: excess fines.	Fair: too clayey, small stones.

See footnote at end of table.

TABLE 13.--CONSTRUCTION MATERIALS--Continued

Soil name and map symbol	Roadfill	Sand	Gravel	Topsoil
PkC, PkE---------- Pickton	Good----------	Improbable: excess fines.	Improbable: excess fines.	Poor: too sandy.
Pt*---------- Pits				
RdC, RdE---------- Redsprings	Fair: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey, small stones.
Sa*. Salt flats				
Sd, Sf---------- Sandow	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Fair: too clayey.
TeE---------- Tenaha	Good----------	Improbable: excess fines.	Improbable: excess fines.	Fair: too sandy, small stones, slope.
ToB---------- Tonkawa	Good----------	Probable----------	Improbable: too sandy.	Poor: too sandy.
Wh---------- Whitesboro	Poor: low strength.	Improbable: excess fines.	Improbable: excess fines.	Good.
Wn---------- Wilson	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey.
WoC, WoE---------- Wolfpen	Good----------	Improbable: excess fines.	Improbable: excess fines.	Poor: too sandy.
WtC, WtC2, WtD, WwC--- Woodtell	Poor: shrink-swell, low strength.	Improbable: excess fines.	Improbable: excess fines.	Poor: too clayey.

* See description of the map unit for composition and behavior characteristics of the map unit.

TABLE 14.--WATER MANAGEMENT

(Some terms that describe restrictive soil features are defined in the "Glossary." See text for definitions of "slight," "moderate," and "severe." Absence of an entry indicates that the soil was not evaluated. The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation)

Soil name and map symbol	Limitations for--		Features affecting--			
	Pond reservoir areas	Embankments, dikes, and levees	Drainage	Irrigation	Terraces and diversions	Grassed waterways
Au Aufco	Slight	Moderate: hard to pack, wetness.	Percs slowly, flooding.	Wetness, slow intake, percs slowly.	Wetness	Percs slowly.
BaD Bazette	Slight	Moderate: hard to pack.	Deep to water	Slope, percs slowly, erodes easily.	Slope, erodes easily, percs slowly.	Slope, erodes easily, percs slowly.
BeB Bernaldo	Moderate: seepage.	Moderate: piping.	Deep to water	Favorable	Favorable	Favorable.
BeD Bernaldo	Moderate: seepage.	Moderate: piping.	Deep to water	Slope	Favorable	Favorable.
CrA, CrB Crockett	Slight	Severe: hard to pack.	Deep to water	Droughty, percs slowly.	Erodes easily, percs slowly.	Erodes easily, droughty.
CrC, CrC2 Crockett	Slight	Severe: hard to pack.	Deep to water	Slope, droughty, percs slowly.	Erodes easily, percs slowly.	Erodes easily, droughty.
CuE Cuthbert	Moderate: seepage.	Moderate: piping.	Deep to water	Slope, droughty, soil blowing.	Slope, erodes easily, percs slowly.	Slope, erodes easily, droughty.
CvE Cuthbert	Moderate: seepage.	Moderate: piping.	Deep to water	Slope, droughty.	Slope, percs slowly.	Slope, droughty.
CwF Cuthbert	Severe: slope.	Moderate: piping.	Deep to water	Slope, droughty, percs slowly.	Slope, percs slowly.	Slope, droughty, percs slowly.
CxC*: Cuthbert	Slight	Moderate: piping.	Deep to water	Slope, droughty, percs slowly.	Percs slowly	Droughty, percs slowly.
Redsprings	Slight	Moderate: hard to pack.	Deep to water	Slope, slow intake, percs slowly.	Favorable	Favorable.
DrA*: Derly	Slight	Severe: wetness.	Ponding, percs slowly.	Ponding, percs slowly, erodes easily.	Erodes easily, ponding, percs slowly.	Wetness, erodes easily, percs slowly.
Raino	Slight	Severe: hard to pack.	Percs slowly	Wetness, soil blowing, percs slowly.	Erodes easily, wetness, soil blowing.	Erodes easily, percs slowly.

See footnote at end of table.

TABLE 14.--WATER MANAGEMENT--Continued

Soil name and map symbol	Limitations for--		Features affecting--			
	Pond reservoir areas	Embankments, dikes, and levees	Drainage	Irrigation	Terraces and diversions	Grassed waterways
EdC---------- Edge	Slight---------	Severe: hard to pack.	Deep to water	Slope, soil blowing, percs slowly.	Erodes easily, soil blowing.	Erodes easily, percs slowly.
EdD---------- Edge	Slight---------	Severe: hard to pack.	Deep to water	Slope, soil blowing, percs slowly.	Slope, erodes easily, soil blowing.	Slope, erodes easily, percs slowly.
ErB---------- Elrose	Moderate: seepage.	Moderate: hard to pack.	Deep to water	Favorable------	Soil blowing---	Favorable.
ErE---------- Elrose	Moderate: seepage.	Moderate: hard to pack.	Deep to water	Slope----------	Slope, soil blowing.	Slope.
FrB---------- Freestone	Slight---------	Severe: hard to pack.	Percs slowly---	Wetness--------	Wetness, percs slowly.	Percs slowly.
GaB---------- Gallime	Severe: seepage.	Moderate: piping.	Deep to water	Soil blowing---	Soil blowing---	Favorable.
Gw---------- Gladewater	Slight---------	Severe: hard to pack.	Percs slowly, flooding.	Wetness, slow intake, percs slowly.	Wetness, percs slowly.	Percs slowly.
KfC---------- Kirvin	Slight---------	Severe: hard to pack.	Deep to water	Slope----------	Erodes easily	Erodes easily.
KgC---------- Kirvin	Slight---------	Severe: hard to pack.	Deep to water	Slope, droughty.	Favorable------	Favorable.
LgB---------- Leagueville	Severe: seepage.	Severe: piping, wetness.	Too acid-------	Wetness, droughty.	Wetness--------	Wetness, droughty.
Lk---------- Lufkin	Slight---------	Severe: hard to pack.	Deep to water--	Droughty, soil blowing, percs slowly.	Erodes easily, soil blowing, percs slowly.	Erodes easily, droughty, percs slowly.
Lu*: Lufkin----------	Slight---------	Severe: hard to pack.	Deep to water--	Droughty, soil blowing, percs slowly.	Erodes easily, soil blowing, percs slowly.	Erodes easily, droughty, percs slowly.
Rader----------	Slight---------	Moderate: hard to pack, wetness.	Percs slowly---	Wetness, soil blowing.	Erodes easily, wetness, soil blowing.	Erodes easily, percs slowly.
Ma---------- Manco	Moderate: seepage.	Severe: wetness.	Flooding-------	Wetness, erodes easily, flooding.	Erodes easily, wetness.	Wetness, erodes easily
Na---------- Nahatche	Moderate: seepage.	Severe: wetness.	Flooding-------	Wetness, flooding.	Wetness--------	Wetness.
Nh---------- Nahatche	Moderate: seepage.	Severe: wetness.	Flooding, excess salt.	Wetness, droughty.	Wetness--------	Wetness, excess salt, droughty.

See footnote at end of table.

TABLE 14.--WATER MANAGEMENT--Continued

Soil name and map symbol	Limitations for--		Features affecting--			
	Pond reservoir areas	Embankments, dikes, and levees	Drainage	Irrigation	Terraces and diversions	Grassed waterways
NoC2--------- Normangee	Slight---------	Severe: hard to pack.	Deep to water	Slope, percs slowly, erodes easily.	Erodes easily, percs slowly.	Erodes easily, percs slowly.
OkB--------- Oakwood	Moderate: seepage.	Moderate: piping, wetness.	Deep to water	Soil blowing---	Soil blowing---	Favorable.
OkD--------- Oakwood	Moderate: seepage.	Moderate: piping, wetness.	Deep to water	Slope, soil blowing.	Soil blowing---	Favorable.
PkC--------- Pickton	Severe: seepage.	Severe: seepage, piping.	Deep to water	Droughty, fast intake, slope.	Too sandy, soil blowing.	Droughty.
PkE--------- Pickton	Severe: seepage.	Severe: seepage, piping.	Deep to water	Droughty, fast intake, slope.	Slope, too sandy, soil blowing.	Slope, droughty.
Pt*--------- Pits						
RdC--------- Redsprings	Slight---------	Moderate: hard to pack.	Deep to water	Slope, percs slowly.	Favorable------	Favorable.
RdE--------- Redsprings	Slight---------	Moderate: hard to pack.	Deep to water	Slope, percs slowly.	Slope----------	Slope.
Sa*. Salt flats						
Sd, Sf--------- Sandow	Slight---------	Severe: piping.	Deep to water	Erodes easily, flooding.	Erodes easily	Erodes easily.
TeE--------- Tenaha	Severe: seepage.	Severe: seepage, piping.	Deep to water	Slope, droughty, fast intake.	Slope, soil blowing.	Slope, droughty.
ToB--------- Tonkawa	Severe: seepage.	Severe: seepage.	Deep to water	Droughty, fast intake.	Too sandy, soil blowing.	Droughty.
Wh--------- Whitesboro	Moderate: seepage.	Moderate: piping, wetness.	Flooding-------	Wetness, flooding.	Wetness--------	Favorable.
Wn--------- Wilson	Slight---------	Severe: hard to pack.	Deep to water--	Percs slowly---	Erodes easily, percs slowly.	Erodes easily, percs slowly.
WoC--------- Wolfpen	Severe: seepage.	Severe: thin layer.	Deep to water	Slope, droughty, fast intake.	Soil blowing---	Droughty.
WoE--------- Wolfpen	Severe: seepage.	Severe: thin layer.	Deep to water	Slope, droughty, fast intake.	Slope, soil blowing.	Slope, droughty.

See footnote at and of table.

TABLE 14.--WATER MANAGEMENT--Continued

Soil name and map symbol	Limitations for--		Features affecting--			
	Pond reservoir areas	Embankments, dikes, and levees	Drainage	Irrigation	Terraces and diversions	Grassed waterways
WtD---------- Woodtell	Slight---------	Severe: hard to pack.	Deep to water	Slope, percs slowly.	Slope, erodes easily.	Slope, erodes easily.
WwC---------- Woodtell	Slight---------	Severe: hard to pack.	Deep to water	Slope, percs slowly.	Percs slowly---	Percs slowly.

* See description of the map unit for composition and behavior characteristics of the map unit.

TABLE 15.--ENGINEERING INDEX PROPERTIES

(The symbol < means less than; > means more than. Absence of an entry indicates that data were not estimated)

Soil name and map symbol	Depth	USDA texture	Classification		Fragments 3-10 inches	Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
Au	0-5	Clay	CH, CL	A-7-6	0	100	100	90-100	75-95	45-60	25-40
Aufco	5-20	Clay loam, silty clay loam, silty clay.	CL, CH	A-7-6	0	100	100	90-100	70-80	40-60	20-35
	20-80	Clay, silty clay	CH, CL	A-7-6	0	100	100	90-100	75-95	45-60	25-40
BaD	0-6	Clay loam	CL	A-6, A-7	0	95-100	95-100	85-100	60-90	30-49	11-24
Bazette	6-38	Silty clay loam, clay loam, clay.	CL, CH	A-7	0	95-100	95-100	90-100	80-95	48-66	27-40
	38-60	Clay, clay loam.	CL, CH	A-7	0	95-100	95-100	90-100	70-95	41-60	20-35
BeB	0-7	Fine sandy loam	SM, ML	A-4	0	100	95-100	90-100	40-60	<25	NP-4
Bernaldo	7-16	Fine sandy loam, very fine sandy loam, loam.	ML, SM, CL-ML	A-4	0	100	95-100	90-100	40-70	<25	NP-5
	16-52	Loam, sandy clay loam, clay loam.	CL	A-6	0	99-100	98-100	90-100	51-75	26-40	12-24
	52-80	Fine sandy loam, loam, sandy clay loam.	CL, SC, ML, SM	A-4, A-6, A-2-4	0	100	95-100	90-100	28-65	20-40	3-22
BeD	0-6	Fine sandy loam	SM, ML	A-4	0	100	95-100	90-100	40-60	<25	NP-4
Bernaldo	6-13	Fine sandy loam, very fine sandy loam, loam.	ML, SM, CL-ML	A-4	0	100	95-100	90-100	40-70	<25	NP-5
	13-52	Loam, sandy clay loam, clay loam.	CL	A-6	0	99-100	98-100	90-100	51-75	26-40	12-24
	52-80	Fine sandy loam, loam, sandy clay loam.	CL, SC, ML, SM	A-4, A-6, A-2-4	0	100	95-100	90-100	28-65	20-40	3-22
CrA, CrB	0-6	Loam	SM, ML, CL, SC	A-4, A-6	0-2	98-100	94-100	89-100	40-96	15-35	3-15
Crockett	6-15	Clay, sandy clay	CH, CL	A-7, A-6	0	89-100	75-100	75-100	60-98	35-59	23-42
	15-40	Clay, clay loam, sandy clay.	CH, CL	A-7, A-6	0	89-100	75-100	75-100	65-98	35-59	23-42
	40-56	Clay loam, sandy clay loam, clay.	CL, CH	A-6, A-7	0-5	90-100	85-100	75-100	50-90	30-60	15-40
	56-80	Stratified loam clay loam, and clay.	CH, CL	A-7	0-5	90-100	90-100	90-100	70-99	45-71	27-52
CrC	0-5	Loam	SM, ML, CL, SC	A-4, A-6	0-2	98-100	94-100	89-100	40-96	15-35	3-15
Crockett	5-13	Clay, clay loam, sandy clay.	CH, CL	A-7, A-6	0	89-100	75-100	75-100	60-98	35-59	23-42
	13-38	Clay, clay loam, sandy clay.	CH, CL	A-7, A-6	0	89-100	75-100	75-100	65-98	35-59	23-42
	38-54	Clay loam, sandy clay loam, clay.	CL, CH	A-6, A-7	0-5	90-100	85-100	75-100	50-90	30-60	15-40
	54-80	Stratified loam, clay loam, and clay.	CH, CL	A-7	0-5	90-100	90-100	90-100	70-99	45-71	27-52

See footnote at end of table.

TABLE 15.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Fragments	Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	3-10 inches	4	10	40	200		
	In				Pct					Pct	
CrC2---------- Crockett	0-3	Loam----------	SM, ML, CL, SC	A-4, A-6	0-2	98-100	94-100	89-100	40-96	15-35	3-15
	3-12	Clay, sandy clay	CH, CL	A-7, A-6	0	89-100	75-100	75-100	60-98	35-59	23-42
	12-37	Clay, clay loam, sandy clay.	CH, CL	A-7, A-6	0	89-100	75-100	75-100	65-98	35-59	23-42
	37-53	Clay loam, sandy clay loam, clay.	CL, CH	A-6, A-7	0-5	90-100	85-100	75-100	50-90	30-60	15-40
	53-80	Stratified loam, clay loam, and clay.	CH, CL	A-7	0-5	90-100	90-100	90-100	70-99	45-71	27-52
CuE---------- Cuthbert	0-10	Fine sandy loam	SM, ML, SC-SM, CL-ML	A-2-4, A-4	0-1	85-100	78-100	75-98	20-55	<32	NP-7
	10-28	Sandy clay loam, sandy clay, clay.	SC, CL, CH	A-6, A-7-6	0-1	85-100	75-100	65-100	45-98	37-64	19-40
	28-36	Fine sandy loam, sandy clay loam, clay loam.	SC, CL	A-6, A-7, A-2-6	0-1	85-100	80-100	75-100	28-84	29-45	11-26
	36-60	Stratified fine sandy loam to clay.	SC, CL	A-6, A-7, A-2-6	0-3	85-100	80-100	75-100	28-84	21-45	7-26
CvE---------- Cuthbert	0-9	Gravelly fine sandy loam.	SM, GM, GM-GC, SC-SM	A-1-B, A-2-4, A-4	0-5	60-88	50-80	35-75	20-49	<32	NP-7
	9-30	Sandy clay loam, sandy clay, clay.	SC, CL, CH	A-6, A-7-6	0-1	85-100	75-100	65-100	45-98	37-64	19-40
	30-65	Stratified fine sandy loam to clay.	SC, CL	A-6, A-7, A-2-6	0-3	85-100	80-100	75-100	28-84	21-45	7-26
CwF---------- Cuthbert	0-6	Very stony fine sandy loam.	SM, SC-SM, CL-ML, ML	A-4	5-15	90-100	85-100	75-98	36-60	<30	NP-6
	6-32	Sandy clay loam, clay.	CH, CL, SC	A-7, A-6	0-5	90-100	90-100	80-100	45-98	37-63	20-40
	32-60	Stratified fine sandy loam to clay.	SC, CL	A-6, A-7, A-2-6	0-5	89-100	85-100	80-100	28-84	29-45	11-26
CxC*: Cuthbert--------	0-2	Gravelly clay loam.	SC, CL, GC	A-6	0-5	60-78	50-78	35-70	35-55	30-40	10-18
	2-20	Sandy clay loam, sandy clay, clay.	SC, CL, CH	A-6, A-7-6	0-1	85-100	75-100	65-100	45-98	37-64	20-40
	20-60	Stratified fine sandy loam to clay.	SC, CL	A-6, A-7, A-2-6	0-3	85-100	80-100	75-100	28-84	21-45	7-26

See footnote at end of table.

TABLE 15.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Fragments	Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	3-10 inches	4	10	40	200		
	In				Pct					Pct	
Redsprings------	0-2	Gravelly fine sandy loam.	SC, CL-ML, CL, SC-SM	A-2-4, A-4, A-2-7	0-3	80-95	65-80	60-80	25-55	20-42	4-20
	2-40	Clay loam, clay	CL, CH	A-7-6	0-7	70-100	70-98	65-85	51-75	41-60	18-30
	40-50	Sandy clay loam, clay loam, clay.	CL, CH	A-6, A-7-6	0-7	95-100	90-100	75-100	51-90	32-52	16-30
	50-60	Stratified sandy clay loam to clay.	SC, CL, CH	A-4, A-6, A-7-6	0-7	90-100	75-100	50-90	36-80	25-57	9-31
DrA*:											
Derly----------	0-9	Silt loam--------	ML, CL, CL-ML	A-4	0	100	100	85-100	55-90	<30	NP-10
	9-16	Clay loam, silty clay loam.	CL, CH	A-7, A-6	0	100	100	90-100	70-95	35-60	20-36
	16-50	Clay loam, silty clay loam, clay.	CH, CL	A-7, A-6	0	100	100	90-100	75-95	39-60	26-36
	50-80	Loam, clay loam, clay.	CH, CL	A-7, A-6	0	100	100	90-100	56-95	34-60	20-36
Raino----------	0-6	Loam----------	ML, CL, CL-ML	A-4	0	95-100	95-100	80-100	51-80	<30	NP-10
	6-26	Loam, fine sandy loam, very fine sandy loam.	ML, CL, CL-ML	A-4	0	95-100	95-100	80-100	51-80	<30	NP-10
	26-36	Loam, sandy clay loam, clay loam.	CL, SC, SC-SM, CL-ML	A-6, A-4	0	95-100	95-100	80-100	40-72	20-40	5-20
	36-72	Clay, sandy clay, clay loam.	CH, CL	A-7	0	95-100	95-100	80-100	55-90	46-74	24-45
	72-84	Sandy clay loam, clay loam, clay.	CL, CH	A-7	0	95-100	80-100	80-100	55-90	41-60	18-35
EdC----------	0-8	Fine sandy loam	ML, SM	A-4	0	98-100	96-100	80-100	45-75	<30	NP-7
Edge	8-18	Sandy clay, clay	CH, CL	A-7-6	0	98-100	97-100	90-100	70-98	48-65	29-42
	18-34	Clay loam, sandy clay.	CL	A-6, A-7-6	0	98-100	96-100	90-100	65-96	30-49	14-30
	34-60	Fine sandy loam, sandy clay loam, clay loam.	SC, CL, SC-SM, CL-ML	A-4, A-6, A-7-6	0	95-100	90-100	72-100	48-78	18-45	4-25
	60-80	Stratified fine sandy loam to clay.	SC, CL, CH	A-2-6, A-2-7, A-6	0	95-100	90-100	72-100	29-80	25-51	11-34
EdD----------	0-6	Fine sandy loam	ML, SM	A-4	0	98-100	96-100	80-100	45-75	<30	NP-7
Edge	6-17	Sandy clay, clay	CH, CL	A-7-6	0	98-100	97-100	90-100	70-98	48-65	29-42
	17-31	Clay loam, sandy clay.	CL	A-6, A-7-6	0	98-100	96-100	90-100	65-96	30-49	14-30
	31-50	Fine sandy loam, sandy clay loam, clay loam.	SC, CL, SC-SM, CL-ML	A-4, A-6, A-7-6	0	95-100	90-100	72-100	48-78	18-45	4-25
	50-76	Stratified fine sandy loam to clay.	SC, CL, CH	A-2-6, A-2-7, A-6	0	95-100	90-100	72-100	29-80	25-51	11-34

See footnote at end of table.

TABLE 15.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Fragments 3-10 inches	Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
ErB---------- Elrose	0-12	Fine sandy loam	SM, SC-SM	A-2-4, A-4	0	85-100	78-100	70-99	30-47	16-25	NP-7
	12-80	Sandy clay loam, clay loam, loam.	SC, CL	A-4, A-6	0	90-100	85-100	80-99	36-65	20-39	9-23
ErE---------- Elrose	0-10	Fine sandy loam	SM, SC-SM	A-2-4, A-4	0	85-100	78-100	70-99	30-47	16-25	NP-7
	10-80	Sandy clay loam, clay loam, loam.	SC, CL	A-4, A-6	0	90-100	85-100	80-99	36-65	20-39	9-23
FrB---------- Freestone	0-16	Fine sandy loam	SM, SC-SM, CL-ML, ML	A-4	0	95-100	95-100	90-100	36-62	15-26	NP-7
	16-32	Sandy clay loam, loam, clay loam.	CL, CL-ML	A-6, A-7, A-4	0	95-100	95-100	90-100	55-85	24-46	7-23
	32-84	Clay, clay loam	CL, CH	A-7	0	95-100	95-100	90-100	65-95	42-70	21-44
GaB---------- Gallime	0-8	Fine sandy loam	SM, SC, CL, ML	A-4	0	95-100	95-100	90-100	45-65	15-28	3-10
	8-26	Fine sandy loam, very fine sandy loam, loam.	SM, SC, CL, ML	A-4	0	95-100	95-100	90-100	45-65	15-28	3-10
	26-80	Sandy clay loam, clay loam, loam.	CL, SC	A-6, A-4	0	95-100	95-100	90-100	45-80	25-40	8-20
Gw---------- Gladewater	0-8	Clay----------	CH, CL	A-7	0	100	100	90-100	80-95	48-75	25-50
	8-63	Clay----------	CH	A-7	0	100	100	95-100	90-100	51-75	30-50
KfC---------- Kirvin	0-11	Fine sandy loam	SM, ML, CL, SC	A-4	0-2	95-100	95-98	90-95	36-70	<30	NP-8
	11-34	Clay loam, sandy clay, clay.	CL, CH	A-7	0-1	95-100	90-100	85-100	53-95	42-67	24-43
	34-55	Sandy clay loam, clay loam, clay.	CL, CH	A-6, A-7	0-1	95-100	90-100	75-100	51-90	32-59	16-32
	55-70	Stratified fine sandy loam to clay.	SC, CL, CH	A-4, A-6, A-7	0-1	95-100	90-100	50-90	36-80	25-52	9-32
KgC---------- Kirvin	0-11	Very gravelly fine sandy loam.	GM, GC, GM-GC	A-1-B, A-2-4, A-4	0-5	40-60	35-50	20-45	16-40	<30	NP-8
	11-42	Clay loam, sandy clay, clay.	CL, CH	A-7	0-1	95-100	90-100	85-100	53-95	42-67	24-43
	42-50	Sandy clay loam, clay loam, clay.	CL, CH	A-6, A-7	0-1	95-100	90-100	75-100	51-90	32-59	16-32
	50-72	Stratified fine sandy loam to clay.	SC, CL, CH	A-4, A-6, A-7	0-1	95-100	90-100	50-90	36-80	25-52	9-32
LgB---------- Leagueville	0-14	Loamy fine sand	SM	A-2, A-1-B	0	100	100	90-100	20-30	<20	NP-4
	14-30	Fine sand, loamy fine sand.	SM	A-2	0	100	100	85-100	15-30	<20	NP-4
	30-50	Sandy clay loam, fine sandy loam, sandy loam.	SC, CL, SC-SM, CL-ML	A-4, A-6	0	100	95-100	85-100	36-60	20-35	5-15
	50-80	Fine sand, sandy clay loam, fine sandy loam.	SM, SC, SC-SM	A-2, A-4	0	100	95-100	85-100	15-50	<20	NP-10

See footnote at end of table.

TABLE 15.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Fragments 3-10 inches	Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
Lk	0-12	Loam	SM, CL, ML, SC	A-4	0-5	90-100	80-100	80-100	40-85	<30	NP-10
Lufkin	12-44	Clay, clay loam, silty clay loam.	CH, CL	A-7-6	0	90-100	90-100	90-100	65-95	45-67	30-45
	44-72	Loam, clay loam, sandy clay loam.	CH, CL, SC	A-7	0	85-100	85-100	80-100	48-90	40-86	25-55
Lu*:											
Lufkin	0-8	Loam	SM, CL, ML, SC	A-4	0-5	90-100	80-100	80-100	40-85	<30	NP-10
	8-42	Clay, clay loam, silty clay loam.	CH, CL	A-7-6	0	90-100	90-100	90-100	65-95	45-67	30-45
	42-80	Loam, clay loam, sandy clay loam.	CH, CL, SC	A-7	0	85-100	85-100	80-100	48-90	40-86	25-55
Lu*:											
Rader	0-5	Fine sandy loam	ML, CL-ML, SM, SC	A-4, A-2	0	98-100	98-100	90-100	34-75	18-28	3-10
	5-24	Fine sandy loam, very fine sandy loam, loam.	ML, CL-ML, SM, SC	A-2, A-4	0	98-100	95-100	90-100	34-75	18-28	3-10
	24-30	Loam, sandy clay loam, clay loam.	SC, CL	A-6	0	95-100	95-100	90-100	36-75	26-40	11-22
	30-50	Clay loam, sandy clay, clay.	CL, CH	A-6, A-7	0	95-100	95-100	90-100	51-90	36-60	18-38
	50-80	Sandy clay loam, sandy clay, clay.	SC, CL, CH	A-6, A-7	0	95-100	95-100	90-100	36-75	25-52	11-36
Ma	0-12	Loam	CL-ML, CL	A-4, A-6	0	100	100	85-95	60-75	20-30	4-11
Manco	12-64	Loam, silt loam, clay loam.	CL	A-4, A-6	0	100	100	90-100	85-90	28-39	9-18
Na	0-8	Loam	CL	A-6, A-7, A-4	0	100	100	90-100	54-92	25-47	8-25
Nahatche	8-30	Loam, clay loam, sandy clay loam.	CL	A-6, A-4	0	100	100	85-100	60-90	25-40	8-20
	30-66	Stratified loam to silty clay loam.	CL	A-6, A-7	0	100	100	90-100	60-90	30-45	11-25
Nh	0-7	Loam	CL	A-6, A-7, A-4	0	100	100	90-100	54-92	25-47	8-25
Nahatche	7-35	Loam, clay loam, sandy clay loam.	CL	A-6, A-4	0	100	100	85-100	60-90	25-40	8-20
	35-63	Stratified loam to silty clay loam.	CL	A-6, A-7	0	100	100	90-100	60-90	30-45	11-25
NoC2	0-4	Clay loam	CL	A-6, A-7	0	98-100	96-100	90-100	65-95	30-48	11-27
Normangee	4-41	Clay, clay loam	CL, CH	A-7	0	98-100	98-100	90-100	65-96	44-80	22-58
	41-72	Stratified clay and shale.	CL, CH	A-7	0	95-100	90-100	90-100	65-90	41-60	20-35

See footnote at end of table.

TABLE 15.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag-ments	Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO	3-10 inches	4	10	40	200		
	In				Pct					Pct	
OkB Oakwood	0-15	Fine sandy loam	SM, ML, SC-SM, CL-ML	A-4	0	95-100	95-100	85-100	36-55	<25	NP-7
	15-39	Fine sandy loam, sandy clay loam, clay loam.	SC, CL	A-4, A-6	0	95-100	95-100	85-100	40-75	20-40	8-22
	39-72	Fine sandy loam, sandy clay loam, clay loam.	SC, CL	A-4, A-6	0	95-100	90-100	80-95	40-75	20-40	8-22
	72-80	Fine sandy loam, sandy clay loam, clay loam.	SC, CL	A-4, A-6	0	95-100	90-100	75-90	35-75	20-40	8-20
OkD Oakwood	0-10	Fine sandy loam	SM, ML, SC-SM, CL-ML	A-4	0	95-100	95-100	85-100	36-55	<25	NP-7
	10-26	Fine sandy loam, sandy clay loam, clay loam.	SC, CL	A-4, A-6	0	95-100	95-100	85-100	40-75	20-40	8-22
	26-80	Fine sandy loam, sandy clay loam, clay loam.	SC, CL	A-4, A-6	0	95-100	90-100	80-95	40-75	20-40	8-22
PkC Pickton	0-7	Fine sand	SM, SC-SM	A-2-4	0	100	95-100	85-100	13-30	<28	NP-7
	7-60	Loamy fine sand, fine sand.	SM, SC-SM	A-2-4	0	100	95-100	85-100	15-30	<28	NP-7
	60-80	Sandy clay loam, clay loam, fine sandy loam.	SC, CL, CL-ML, SC-SM	A-4, A-6, A-2-6, A-2-4	0	100	95-100	85-100	25-75	23-35	5-14
PkE Pickton	0-6	Fine sand	SM, SC-SM	A-2-4	0	100	95-100	85-100	13-30	<28	NP-7
	6-42	Loamy fine sand, fine sand.	SM, SC-SM	A-2-4	0	100	95-100	85-100	15-30	<28	NP-7
	42-80	Sandy clay loam, clay loam, fine sandy loam.	SC, CL, CL-ML, SC-SM	A-4, A-6, A-2-6, A-2-4	0	100	95-100	85-100	25-75	23-35	5-14
Pt* Pits	0-80	Variable	---	---	---	---	---	---	---	---	---
RdC Redsprings	0-7	Very gravelly fine sandy loam.	SC, SC-SM, GM, GM-GC	A-2-4, A-4, A-2-7	0-7	49-80	40-65	30-65	18-45	20-42	3-20
	7-42	Clay loam, clay	CL, CH	A-7-6	0-2	70-100	70-98	65-90	51-75	41-60	18-35
	42-50	Sandy clay loam, clay loam, clay.	CL, CH	A-6, A-7-6	0-7	95-100	90-100	75-100	51-90	32-56	16-30
	50-70	Stratified sandy clay loam to clay.	SC, CL, CH	A-4, A-6, A-7-6	0-7	90-100	75-100	50-90	36-80	25-57	9-31

See footnote at end of table.

TABLE 15.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag-ments 3-10 inches	Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
RdB---------- Redsprings	0-6	Very gravelly fine sandy loam.	SC, SC-SM, GM, GM-GC	A-2-4, A-4, A-2-7	0-7	49-80	40-65	30-65	18-45	20-42	3-20
	6-36	Clay loam, clay	CL, CH	A-7-6	0-2	70-100	70-98	65-90	51-75	41-60	18-35
	36-48	Sandy clay loam, clay loam, clay.	CL, CH	A-6, A-7-6	0-7	95-100	90-100	75-100	51-90	32-56	16-30
	48-66	Stratified sandy clay loam to clay.	SC, CL, CH	A-4, A-6, A-7-6	0-7	90-100	75-100	50-90	36-80	25-57	9-31
Sa*. Salt flats											
Sd---------- Sandow	0-10	Loam----------	SC, CL, CL-ML	A-4, A-6	0	100	100	80-95	45-80	25-40	6-20
	10-63	Stratified fine sandy loam to clay loam.	SC, CL, CL-ML	A-4, A-6, A-7-6	0	100	100	80-100	40-90	25-47	7-28
Sf---------- Sandow	0-8	Loam----------	SC, CL, CL-ML	A-4, A-6	0	100	100	80-95	45-80	25-40	6-20
	8-63	Stratified fine sandy loam to clay loam.	SC, CL, CL-ML	A-4, A-6, A-7-6	0	100	100	80-100	40-90	25-47	7-28
TeE---------- Tenaha	0-5	Loamy fine sand	SM	A-2-4, A-4	0	95-100	95-100	70-95	15-40	16-20	NP-3
	5-32	Loamy fine sand	SM	A-2-4, A-4	0	95-100	78-100	70-95	15-40	16-20	NP-3
	32-50	Fine sandy loam, sandy clay loam, clay loam.	SC, CL	A-6, A-4, A-7-6	0	95-100	95-100	80-100	36-66	25-46	8-26
	50-68	Stratified fine sandy loam to clay.	SC, CL	A-6, A-7, A-2-6	0-3	89-100	85-100	80-100	28-84	25-45	11-26
ToB---------- Tonkawa	0-7	Fine sand--------	SP-SM	A-3, A-2	0	100	97-100	90-100	6-12	<25	NP-3
	7-80	Fine sand, sand	SP-SM	A-3, A-2	0	100	95-100	90-100	6-12	<25	NP-3
Wh---------- Whitesboro	0-12	Loam----------	CL	A-4, A-6, A-7-6	0	100	98-100	85-100	70-90	25-43	8-24
	12-38	Loam, clay loam, sandy clay loam.	CL	A-6, A-7-6	0	100	98-100	85-100	65-91	30-47	11-27
	38-80	Loam, clay loam, sandy clay loam.	CL	A-6, A-7-6	0	100	98-100	85-100	60-85	30-47	11-27
Wn---------- Wilson	0-6	Silt loam--------	CL	A-6	0	95-100	85-100	80-100	60-96	26-38	11-20
	6-32	Silty clay, clay, clay loam.	CL, CH	A-7-6	0	90-100	80-100	80-100	65-96	43-56	26-37
	32-80	Silty clay, clay, silty clay loam.	CL, CH	A-7-6, A-6	0	95-100	90-100	85-100	70-96	38-65	24-48

See footnote at end of table.

TABLE 15.--ENGINEERING INDEX PROPERTIES--Continued

Soil name and map symbol	Depth	USDA texture	Classification		Frag-ments 3-10 inches	Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO		4	10	40	200		
	In				Pct					Pct	
WoC---------- Wolfpen	0-5	Loamy fine sand	SM, SC-SM	A-2-4	0	95-100	95-100	85-100	15-35	<25	NP-7
	5-28	Loamy fine sand, fine sand.	SM, SC-SM	A-2-4	0	95-100	95-100	85-100	15-35	<25	NP-7
	28-42	Fine sandy loam, sandy clay loam, clay loam.	SC, CL	A-6, A-4, A-2	0	95-100	95-100	85-100	26-55	25-40	8-20
	42-80	Fine sandy loam, sandy clay loam, clay loam.	SC, SM, CL, ML	A-4, A-6, A-2, A-7	0	95-100	95-100	85-100	25-55	15-45	2-27
WoE---------- Wolfpen	0-5	Loamy fine sand	SM, SC-SM	A-2-4	0	95-100	95-100	85-100	15-35	<25	NP-7
	5-24	Loamy fine sand, fine sand.	SM, SC-SM	A-2-4	0	95-100	95-100	85-100	15-35	<25	NP-7
	24-44	Fine sandy loam, sandy clay loam, clay loam.	SC, CL	A-6, A-4, A-2	0	95-100	95-100	85-100	26-55	25-40	8-20
	44-80	Fine sandy loam, sandy clay loam, clay loam.	SC, SM, CL, ML	A-4, A-6, A-2, A-7	0	95-100	95-100	85-100	25-55	15-45	2-27
WtC---------- Woodtell	0-8	Loam----------	CL, SC-SM, CL-ML, ML	A-4, A-6	0-2	95-100	90-100	75-100	40-75	20-33	3-13
	8-30	Clay, silty clay	CL, CH	A-7-6	0	100	90-100	80-100	60-98	40-75	25-46
	30-54	Sandy clay loam, clay loam, clay.	CL, CH	A-6, A-7-6	0	100	80-100	75-100	51-98	35-65	15-45
	54-80	Stratified sandy clay loam to clay.	CL, CH, SC	A-6, A-7-5, A-7-6	0	85-100	80-100	60-100	36-95	32-76	13-45
WtC2---------- Woodtell	0-4	Loam----------	CL, SC-SM, CL-ML, ML	A-4, A-6	0-2	95-100	90-100	75-100	40-75	20-33	3-13
	4-32	Clay, silty clay	CL, CH	A-7-6	0	100	90-100	80-100	60-98	40-75	25-46
	32-50	Sandy clay loam, clay loam, clay.	CL, CH	A-6, A-7-6	0	100	80-100	75-100	51-98	35-65	15-45
	50-80	Stratified sandy clay loam to clay.	CL, CH, SC	A-6, A-7-5, A-7-6	0	85-100	80-100	60-100	36-95	32-76	13-45
WtD---------- Woodtell	0-7	Loam----------	CL, SC-SM, CL-ML, ML	A-4, A-6	0-2	95-100	90-100	75-100	40-75	20-33	3-13
	7-28	Clay, silty clay	CL, CH	A-7-6	0	100	90-100	80-100	60-98	40-75	25-46
	28-54	Sandy clay loam, clay loam, clay.	CL, CH	A-6, A-7-6	0	100	80-100	75-100	51-98	35-65	15-45
	54-80	Stratified sandy clay loam to clay.	CL, CH, SC	A-6, A-7-5, A-7-6	0	85-100	80-100	60-100	36-95	32-76	13-45
WvC---------- Woodtell	0-7	Very bouldery loam.	SM, SC-SM, CL-ML	A-2-4, A-4	15-35	90-100	85-100	75-95	30-60	<28	NP-7
	7-32	Clay, silty clay	CL, CH	A-7-6	0-2	100	95-100	80-100	60-98	51-75	28-50
	32-54	Clay, clay loam, sandy clay loam.	CH, CL, SC	A-6, A-7-6	0-2	100	80-100	75-100	36-98	35-65	15-45
	54-80	Stratified sandy clay loam to clay.	CL, CH, SC	A-6, A-7-5, A-7-6	0	85-100	80-100	60-100	36-95	32-76	13-45

* See description of the map unit for composition and behavior characteristics of the map unit.

TABLE 16.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS

(The symbol < means less than; > means more than. Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Organic matter" apply only to the surface layer. Absence of an entry indicates that data were not available or were not estimated)

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Salinity	Shrink-swell potential	Erosion factors		Wind erodibility group	Organic matter
									K	T		
	In	Pct	G/cc	In/hr	In/in	pH	mmhos/cm					Pct
Au	0-5	40-50	1.35-1.50	<0.06	0.12-0.18	5.1-6.5	0-2	High	0.32	5	4	1-4
Aufco	5-20	35-50	1.35-1.50	0.2-0.6	0.14-0.20	4.5-5.5	0-2	High	0.32			
	20-76	40-50	1.35-1.50	<0.2	0.12-0.18	4.5-6.5	0-2	High	0.32			
BaD	0-6	27-35	1.40-1.60	0.06-2.0	0.15-0.20	5.6-7.3	0-2	Low	0.37	3	6	1-3
Bazette	6-38	35-55	1.50-1.65	0.06-0.2	0.14-0.18	5.6-8.4	0-2	High	0.37			
	38-60	30-55	1.50-1.65	0.06-0.2	0.14-0.18	6.1-8.4	0-2	High	0.37			
BeB	0-7	3-15	1.30-1.50	2.0-6.0	0.11-0.16	5.1-6.5	0-2	Low	0.28	5	3	.5-2
Bernaldo	7-16	3-15	1.30-1.50	2.0-6.0	0.11-0.16	5.1-6.5	0-2	Low	0.32			
	16-52	15-30	1.40-1.65	0.6-2.0	0.13-0.18	4.5-6.5	0-2	Moderate	0.32			
	52-80	10-30	1.45-1.65	0.6-2.0	0.13-0.18	4.5-6.5	0-2	Low	0.32			
BeD	0-6	3-15	1.30-1.50	2.0-6.0	0.11-0.16	5.1-6.5	0-2	Low	0.28	5	3	.5-2
Bernaldo	6-13	3-15	1.30-1.50	2.0-6.0	0.11-0.16	5.1-6.5	0-2	Low	0.32			
	13-52	15-30	1.40-1.65	0.6-2.0	0.13-0.18	4.5-6.5	0-2	Moderate	0.32			
	52-80	10-30	1.45-1.65	0.6-2.0	0.13-0.18	4.5-6.5	0-2	Low	0.32			
CrA, CrB	0-6	5-20	1.50-1.60	0.6-2.0	0.11-0.20	5.6-7.8	0-2	Low	0.43	5	5	.5-2
Crockett	6-15	40-55	1.35-1.60	<0.06	0.08-0.14	5.6-7.3	0-4	High	0.32			
	15-40	35-55	1.40-1.65	<0.06	0.08-0.14	6.1-8.4	0-4	High	0.32			
	40-56	20-50	1.50-1.70	<0.06	0.11-0.15	6.1-8.4	0-4	Moderate	0.32			
	56-80	30-60	1.50-1.70	<0.06	0.11-0.15	7.4-8.4	0-4	High	0.32			
CrC	0-5	5-20	1.50-1.60	0.6-2.0	0.11-0.20	5.6-7.8	0-2	Low	0.43	5	5	.5-2
Crockett	5-13	40-55	1.35-1.60	<0.06	0.08-0.14	5.6-7.3	0-4	High	0.32			
	13-38	35-55	1.40-1.65	<0.06	0.08-0.14	6.1-8.4	0-4	High	0.32			
	38-54	20-50	1.50-1.70	<0.06	0.11-0.15	6.1-8.4	0-4	Moderate	0.32			
	54-80	30-60	1.50-1.70	<0.06	0.11-0.15	7.4-8.4	0-4	High	0.32			
CrC2	0-3	5-20	1.50-1.60	0.6-2.0	0.11-0.20	5.6-7.8	0-2	Low	0.43	5	5	.5-2
Crockett	3-12	40-55	1.35-1.60	<0.06	0.08-0.14	5.6-7.3	0-4	High	0.32			
	12-37	35-55	1.40-1.65	<0.06	0.08-0.14	6.1-8.4	0-4	High	0.32			
	37-53	20-50	1.50-1.70	<0.06	0.11-0.15	6.1-8.4	0-4	Moderate	0.32			
	53-80	30-60	1.50-1.70	<0.06	0.11-0.15	7.4-8.4	0-4	High	0.32			
CuE	0-10	2-15	1.20-1.40	2.0-6.0	0.09-0.12	4.5-6.5	0-2	Low	0.37	3	3	.5-2
Cuthbert	10-28	35-60	1.24-1.45	0.2-0.6	0.10-0.15	3.6-5.5	0-2	Moderate	0.32			
	28-36	20-50	1.35-1.60	0.2-0.6	0.08-0.14	3.6-5.5	0-2	Moderate	0.32			
	36-60	20-45	1.40-1.65	0.06-0.6	0.08-0.14	3.6-5.0	0-2	Moderate	0.32			
CvE	0-9	2-15	1.20-1.40	2.0-6.0	0.07-0.11	4.5-6.5	0-2	Low	0.20	3	8	.5-2
Cuthbert	9-30	35-60	1.24-1.45	0.2-0.6	0.10-0.15	3.6-5.5	0-2	Moderate	0.32			
	30-65	20-45	1.40-1.65	0.06-0.6	0.08-0.14	3.6-5.0	0-2	Moderate	0.32			
CvF	0-6	2-15	1.45-1.60	2.0-6.0	0.07-0.11	4.5-6.5	0-2	Low	0.24	3	8	.5-2
Cuthbert	6-32	35-60	1.25-1.45	0.2-0.6	0.10-0.15	3.6-5.5	0-2	Moderate	0.32			
	32-60	20-45	1.40-1.65	0.06-0.6	0.08-0.14	3.6-5.0	0-2	Moderate	0.32			

See footnote at end of table.

TABLE 16.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Salinity	Shrink-swell potential	Erosion factors		Wind erodibility group	Organic matter
									K	T		
	In	Pct	G/cc	In/hr	In/in	pH	mmhos/cm					Pct
CxC*:												
Cuthbert	0-2	27-40	1.20-1.40	0.2-0.6	0.09-0.12	3.6-5.5	0-2	Moderate	0.28	3	8	.1-1
	2-20	35-60	1.20-1.45	0.2-0.6	0.10-0.15	3.6-5.5	0-2	Moderate	0.32			
	20-60	20-45	1.40-1.65	0.06-0.6	0.08-0.15	3.6-5.0	0-2	Moderate	0.32			
CxC*:												
Redsprings	0-2	5-20	1.35-1.55	0.6-2.0	0.11-0.15	5.6-7.3	0-2	Low	0.24	4	8	.3-1
	2-40	35-60	1.30-1.45	0.2-0.6	0.11-0.15	4.5-6.5	0-2	Moderate	0.32			
	40-50	25-50	1.30-1.50	0.2-0.6	0.11-0.15	4.5-6.0	0-2	Moderate	0.32			
	50-60	20-55	1.40-1.60	0.06-0.2	0.08-0.14	4.5-6.0	0-2	Moderate	0.32			
DrA*:												
Derly	0-9	8-20	1.40-1.60	0.6-2.0	0.11-0.16	4.5-6.5	0-2	Low	0.37	5	5	.5-2
	9-16	27-40	1.35-1.55	0.06-0.2	0.13-0.18	4.5-6.0	0-2	Moderate	0.37			
	16-50	35-50	1.25-1.50	<0.06	0.13-0.18	4.5-6.0	0-4	High	0.32			
	50-80	20-45	1.30-1.55	<0.06	0.13-0.18	5.1-7.3	0-4	High	0.32			
Raino	0-6	5-18	1.30-1.40	0.6-2.0	0.11-0.20	4.5-6.5	0-2	Low	0.43	5	5	<2
	6-26	5-18	1.35-1.55	0.6-2.0	0.11-0.20	4.5-6.5	0-2	Low	0.43			
	26-36	18-30	1.45-1.65	0.6-2.0	0.15-0.20	4.5-5.5	0-2	Moderate	0.43			
	36-72	35-60	1.45-1.65	<0.06	0.12-0.18	4.5-6.5	0-2	High	0.32			
	72-84	25-50	1.50-1.70	0.06-0.2	0.12-0.18	4.5-6.5	0-2	High	0.32			
EdC	0-8	5-12	1.25-1.55	0.6-2.0	0.14-0.18	4.5-7.3	0-2	Low	0.43	4	3	<1
Edge	8-18	40-55	1.36-1.55	<0.06	0.11-0.19	4.5-6.5	0-2	High	0.32			
	18-34	27-45	1.45-1.65	0.06-0.2	0.10-0.16	4.5-6.5	0-2	Moderate	0.32			
	34-60	10-40	1.40-1.69	0.2-0.6	0.10-0.16	4.5-7.8	0-2	Moderate	0.37			
	60-80	10-45	1.50-1.75	0.06-0.2	0.11-0.18	5.1-8.4	0-2	Moderate	0.37			
EdD	0-6	5-12	1.25-1.55	0.6-2.0	0.14-0.18	4.5-7.3	0-2	Low	0.43	4	3	<1
Edge	6-17	40-55	1.36-1.55	<0.06	0.11-0.19	4.5-6.5	0-2	High	0.32			
	17-31	27-45	1.45-1.65	0.06-0.2	0.10-0.16	4.5-6.5	0-2	Moderate	0.32			
	31-50	10-40	1.40-1.69	0.2-0.6	0.10-0.16	4.5-7.8	0-2	Moderate	0.37			
	50-76	10-45	1.50-1.75	0.06-0.2	0.11-0.18	5.1-8.4	0-2	Moderate	0.37			
ErB	0-12	2-15	1.25-1.40	2.0-6.0	0.11-0.15	5.1-7.3	0-2	Low	0.28	5	3	.5-2
Elrose	12-80	15-31	1.30-1.55	0.6-2.0	0.13-0.17	4.5-7.3	0-2	Low	0.32			
ErE	0-10	2-15	1.25-1.40	2.0-6.0	0.11-0.15	5.1-7.3	0-2	Low	0.28	5	3	.5-2
Elrose	10-80	15-31	1.30-1.55	0.6-2.0	0.13-0.17	4.5-7.3	0-2	Low	0.32			
FrB	0-16	5-15	1.35-1.56	2.0-6.0	0.11-0.15	5.1-7.3	0-2	Low	0.32	5	3	.5-2
Freestone	16-32	20-35	1.35-1.55	0.2-0.6	0.12-0.17	4.5-6.5	0-2	Moderate	0.32			
	32-84	30-50	1.29-1.60	0.06-0.2	0.12-0.18	4.5-6.5	0-2	High	0.32			
GaB	0-8	10-20	1.30-1.40	2.0-6.0	0.11-0.16	5.1-6.5	0-2	Low	0.32	5	3	<2
Gallime	8-26	10-20	1.35-1.50	2.0-6.0	0.11-0.16	5.1-6.5	0-2	Low	0.32			
	26-80	18-35	1.40-1.65	0.6-2.0	0.13-0.18	4.5-6.0	0-2	Moderate	0.32			
Gw	0-8	50-75	1.20-1.40	0.06-0.2	0.15-0.20	5.6-7.3	0-2	High	0.32	5	4	1-3
Gladewater	8-63	60-75	1.20-1.40	<0.06	0.15-0.18	4.5-6.5	0-2	High	0.32			
KfC	0-11	2-15	1.20-1.40	2.0-6.0	0.09-0.12	5.1-7.3	0-2	Low	0.37	4	3	.5-2
Kirvin	11-34	35-60	1.24-1.45	0.2-0.6	0.11-0.15	3.6-5.5	0-2	Moderate	0.32			
	34-55	25-50	1.35-1.60	0.2-0.6	0.11-0.15	3.6-5.0	0-2	Moderate	0.32			
	55-70	20-45	1.40-1.65	0.2-0.6	0.08-0.14	3.6-5.0	0-2	Moderate	0.32			

See footnote at end of table.

TABLE 16.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Salinity	Shrink-swell potential	Erosion factors		Wind erodibility group	Organic matter
									K	T		
	In	Pct	G/cc	In/hr	In/in	pH	mmhos/cm					Pct
KgC	0-11	2-15	1.20-1.40	2.0-6.0	0.07-0.11	5.1-7.3	0-2	Low	0.15	4	8	.5-2
Kirvin	11-42	35-60	1.24-1.45	0.2-0.6	0.11-0.15	3.6-5.5	0-2	Moderate	0.32			
	42-50	25-50	1.35-1.60	0.2-0.6	0.11-0.15	3.6-5.0	0-2	Moderate	0.32			
	50-72	20-45	1.40-1.65	0.2-0.6	0.08-0.14	3.6-5.0	0-2	Moderate	0.32			
LgB	0-14	2-12	1.20-1.50	6.0-20	0.07-0.11	4.5-6.0	0-2	Low	0.20	5	2	.5-2
Leagueville	14-30	2-10	1.20-1.50	6.0-20	0.07-0.11	4.5-6.5	0-2	Low	0.20			
	30-50	10-25	1.30-1.60	0.6-2.0	0.12-0.17	3.5-5.5	0-2	Low	0.32			
	50-80	5-25	1.30-1.60	2.0-6.0	0.07-0.15	3.5-5.5	0-2	Low	0.28			
Lk	0-12	5-10	1.35-1.65	0.6-2.0	0.11-0.18	5.1-6.5	0-2	Low	0.43	5	5	.5-2
Lufkin	12-44	35-45	1.40-1.60	<0.06	0.12-0.18	4.5-7.8	0-4	Very high	0.32			
	44-72	20-40	1.40-1.68	<0.06	0.10-0.14	6.1-8.4	0-4	High	0.37			
Lu*:												
Lufkin	0-8	5-18	1.35-1.65	0.6-2.0	0.11-0.18	5.1-6.5	0-2	Low	0.43	5	5	.5-2
	8-42	35-45	1.40-1.60	<0.06	0.12-0.18	4.5-7.8	0-4	Very high	0.32			
	42-80	20-40	1.40-1.68	<0.06	0.10-0.14	6.1-8.4	0-4	High	0.37			
Rader	0-5	4-15	1.30-1.50	2.0-6.0	0.10-0.18	4.5-6.5	0-2	Low	0.37	5	3	.5-2
	5-24	4-15	1.35-1.55	2.0-6.0	0.10-0.18	4.5-6.5	0-2	Low	0.37			
	24-30	18-30	1.40-1.60	0.2-0.6	0.12-0.18	4.5-5.5	0-2	Moderate	0.32			
	30-50	35-50	1.45-1.70	<0.06	0.12-0.18	4.5-6.5	0-2	High	0.32			
	50-80	24-45	1.45-1.70	0.06-0.2	0.12-0.18	4.5-8.4	0-4	Moderate	0.32			
Ma	0-12	9-20	1.25-1.45	0.6-2.0	0.15-0.20	3.6-5.0	0-2	Low	0.37	5	5	1-4
Manco	12-64	18-30	1.25-1.45	0.6-2.0	0.11-0.24	3.6-5.0	0-2	Low	0.37			
Na	0-8	18-27	1.10-1.30	0.6-2.0	0.13-0.20	5.6-7.8	0-2	Moderate	0.28	5	6	1-3
Nahatche	8-30	18-35	1.20-1.50	0.6-2.0	0.12-0.20	5.6-7.8	0-2	Moderate	0.28			
	30-66	18-35	1.30-1.60	0.6-2.0	0.12-0.18	5.6-7.8	0-2	Moderate	0.28			
Nh	0-7	18-27	1.10-1.30	0.6-2.0	0.08-0.14	5.6-7.8	8-16	Moderate	0.28	5	6	1-3
Nahatche	7-35	18-35	1.20-1.50	0.6-2.0	0.08-0.14	5.6-7.8	8-16	Moderate	0.28			
	35-63	18-35	1.30-1.60	0.6-2.0	0.08-0.14	5.6-7.8	8-16	Moderate	0.28			
NoC2	0-4	28-35	1.50-1.60	0.06-0.2	0.15-0.20	5.6-7.3	<2	Moderate	0.37	4	6	.5-2
Normangee	4-41	35-55	1.55-1.65	<0.06	0.12-0.18	5.6-8.4	2-8	High	0.32			
	41-72	35-55	1.60-1.70	<0.06	0.12-0.18	6.1-8.4	2-8	High	0.32			
OkB	0-15	5-15	1.30-1.50	2.0-6.0	0.10-0.15	5.6-7.3	0-2	Low	0.32	5	3	<1
Oakwood	15-39	18-30	1.38-1.65	0.6-2.0	0.12-0.16	4.5-6.5	0-2	Low	0.32			
	39-72	18-30	1.38-1.70	0.2-0.6	0.12-0.16	4.5-6.0	0-2	Low	0.28			
	72-80	15-40	1.40-1.70	0.2-0.6	0.10-0.15	4.5-6.0	0-2	Low	0.28			
OkD	0-10	5-15	1.30-1.50	2.0-6.0	0.10-0.15	5.6-7.3	0-2	Low	0.32	5	3	<1
Oakwood	10-26	18-30	1.38-1.65	0.6-2.0	0.12-0.16	4.5-6.5	0-2	Low	0.32			
	26-80	18-30	1.38-1.70	0.2-0.6	0.12-0.16	3.6-6.5	0-2	Low	0.28			
PkC	0-7	3-8	1.30-1.60	6.0-20	0.07-0.10	5.6-7.3	0-2	Low	0.15	5	1	.5-2
Pickton	7-60	3-12	1.30-1.60	6.0-20	0.07-0.11	5.1-7.3	0-2	Low	0.17			
	60-80	18-30	1.30-1.65	0.6-2.0	0.12-0.17	4.5-6.5	0-2	Low	0.24			
PkE	0-6	3-8	1.30-1.60	6.0-20	0.07-0.10	5.6-7.3	0-2	Low	0.15	5	1	.5-2
Pickton	6-42	3-12	1.30-1.60	6.0-20	0.07-0.11	5.1-7.3	0-2	Low	0.17			
	42-80	18-30	1.30-1.65	0.6-2.0	0.12-0.17	4.5-6.5	0-2	Low	0.24			

See footnote at end of table.

TABLE 16.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Salinity	Shrink-swell potential	Erosion factors K	Erosion factors T	Wind erodibility group	Organic matter
	In	Pct	G/cc	In/hr	In/in	pH	mmhos/cm					Pct
Pt* Pits	---	---	---	---	---	---	---	---	---	---	---	---
RdC Redsprings	0-7	2-15	1.35-1.55	0.6-2.0	0.07-0.11	5.6-7.3	0-2	Low	0.20	4	8	<2
	7-42	35-60	1.30-1.45	0.2-0.6	0.11-0.15	4.5-6.5	0-2	Moderate	0.32			
	42-50	25-55	1.30-1.50	0.2-0.6	0.11-0.15	4.5-6.0	0-2	Moderate	0.32			
	50-70	20-55	1.40-1.60	0.06-0.2	0.08-0.14	4.5-6.0	0-2	Moderate	0.32			
RdE Redsprings	0-6	2-15	1.35-1.55	0.6-2.0	0.07-0.11	5.6-7.3	0-2	Low	0.20	4	8	<2
	6-36	35-60	1.30-1.45	0.2-0.6	0.11-0.15	4.5-6.5	0-2	Moderate	0.32			
	36-48	25-55	1.30-1.50	0.2-0.6	0.11-0.15	4.5-6.0	0-2	Moderate	0.32			
	48-66	20-55	1.40-1.60	0.06-0.2	0.08-0.14	4.5-6.0	0-2	Moderate	0.32			
Sa*. Salt flats												
Sd Sandow	0-10	15-25	1.25-1.35	0.6-2.0	0.12-0.18	5.6-7.3	0-2	Low	0.37	5	5	1-4
	10-63	15-35	1.30-1.60	0.2-0.6	0.12-0.17	5.6-7.8	0-4	Moderate	0.32			
Sf Sandow	0-8	15-25	1.25-1.35	0.6-2.0	0.12-0.18	5.6-7.3	0-2	Low	0.37	5	5	1-4
	8-63	15-35	1.30-1.60	0.2-0.6	0.12-0.17	5.6-7.8	0-4	Moderate	0.32			
TeE Tenaha	0-5	3-15	1.50-1.65	6.0-20	0.05-0.10	4.5-6.0	0-2	Low	0.17	3	2	.5-1
	5-32	3-15	1.50-1.65	6.0-20	0.05-0.10	4.5-6.0	0-2	Low	0.24			
	32-50	20-35	1.50-1.65	0.6-2.0	0.10-0.15	3.6-5.5	0-2	Low	0.24			
	50-68	20-40	1.60-1.75	0.2-0.6	0.08-0.14	3.6-5.5	0-2	Low	0.24			
ToE Tonkawa	0-7	2-8	1.30-1.55	6.0-20	0.04-0.07	5.1-6.0	0-2	Low	0.15	5	1	<2
	7-80	2-8	1.30-1.55	6.0-20	0.04-0.07	4.5-5.5	0-2	Low	0.15			
Wh Whitesboro	0-12	22-27	1.25-1.40	0.6-2.0	0.15-0.20	6.1-7.8	0-2	Moderate	0.28	5	5	1-3
	12-38	22-35	1.30-1.45	0.6-2.0	0.15-0.20	6.1-8.4	0-2	Moderate	0.28			
	38-80	22-35	1.30-1.55	0.6-2.0	0.15-0.20	6.1-8.4	0-2	Moderate	0.28			
Wn Wilson	0-6	18-27	1.35-1.45	0.2-0.6	0.10-0.17	5.6-7.3	0-2	Low	0.43	5	5	.5-2
	6-32	35-50	1.50-1.60	<0.06	0.12-0.15	5.6-8.4	0-4	High	0.37			
	32-80	35-60	1.50-1.60	<0.06	0.12-0.15	6.6-8.4	2-8	High	0.37			
WoC Wolfpen	0-5	3-12	1.30-1.60	6.0-20	0.07-0.11	4.5-6.5	0-2	Low	0.17	5	2	.5-2
	5-28	3-12	1.30-1.65	6.0-20	0.07-0.11	4.5-6.5	0-2	Low	0.17			
	28-42	18-30	1.30-1.65	0.6-2.0	0.12-0.17	4.5-6.5	0-2	Low	0.24			
	42-80	15-35	1.30-1.65	0.6-2.0	0.12-0.17	4.5-6.5	0-2	Low	0.24			
WoE Wolfpen	0-5	3-12	1.30-1.60	6.0-20	0.07-0.11	4.5-6.5	0-2	Low	0.17	5	2	.5-2
	5-24	3-12	1.30-1.65	6.0-20	0.07-0.11	4.5-6.5	0-2	Low	0.17			
	24-44	18-30	1.30-1.65	0.6-2.0	0.12-0.17	4.5-6.5	0-2	Low	0.24			
	44-80	15-35	1.30-1.65	0.6-2.0	0.12-0.17	4.5-6.5	0-2	Low	0.24			
WtC Woodtell	0-8	5-20	1.30-1.55	0.6-2.0	0.11-0.15	4.5-6.5	0-2	Low	0.43	4	5	1-2
	8-30	40-60	1.25-1.40	<0.06	0.12-0.17	4.5-5.5	0-2	High	0.32			
	30-54	30-50	1.25-1.50	0.06-0.2	0.12-0.17	4.5-6.0	0-2	High	0.32			
	54-80	15-50	1.25-1.50	0.06-0.2	0.08-0.14	4.5-7.3	0-2	High	0.32			
WtC2 Woodtell	0-4	5-20	1.30-1.55	0.6-2.0	0.11-0.15	4.5-6.5	0-2	Low	0.43	4	5	1-2
	4-32	40-60	1.25-1.40	<0.06	0.12-0.17	4.5-5.5	0-2	High	0.32			
	32-50	30-50	1.25-1.50	0.06-0.2	0.12-0.17	4.5-6.0	0-2	High	0.32			
	50-80	15-50	1.25-1.50	0.06-0.2	0.08-0.14	4.5-7.3	0-2	High	0.32			

See footnote at end of table.

TABLE 16.--PHYSICAL AND CHEMICAL PROPERTIES OF THE SOILS--Continued

Soil name and map symbol	Depth	Clay	Moist bulk density	Permeability	Available water capacity	Soil reaction	Salinity	Shrink-swell potential	Erosion factors		Wind erodibility group	Organic matter
									K	T		
	In	Pct	G/cc	In/hr	In/in	pH	mmhos/cm					Pct
WtD----------	0-7	5-20	1.30-1.55	0.6-2.0	0.11-0.15	4.5-6.5	0-2	Low-------	0.43	4	5	1-2
Woodtell	7-28	40-60	1.25-1.40	<0.06	0.12-0.17	4.5-5.5	0-2	High------	0.32			
	28-54	30-50	1.25-1.50	0.06-0.2	0.12-0.17	4.5-6.0	0-2	High------	0.32			
	54-80	15-50	1.25-1.50	0.06-0.2	0.08-0.14	4.5-7.3	0-2	High------	0.32			
WwC----------	0-7	7-25	1.30-1.50	0.6-2.0	0.10-0.15	4.5-6.5	0-2	Low-------	0.20	4	8	1-2
Woodtell	7-32	40-60	1.25-1.40	<0.06	0.12-0.18	4.5-5.5	0-2	High------	0.32			
	32-54	30-55	1.25-1.40	0.06-0.2	0.11-0.20	4.5-6.0	0-2	High------	0.32			
	54-80	15-50	1.25-1.50	0.06-0.2	0.10-0.15	4.5-7.3	0-2	High------	0.32			

* See description of the map unit for composition and behavior characteristics of the map unit.

TABLE 17.--SOIL AND WATER FEATURES

("Flooding" and "water table" and terms such as "rare," "brief," "apparent," and "perched" are explained in the text. The symbol < means less than; > means more than. Absence of an entry indicates that the feature is not a concern or that data were not estimated)

Soil name and map symbol	Hydrologic group	Flooding			High water table			Risk of corrosion	
		Frequency	Duration	Months	Depth	Kind	Months	Uncoated steel	Concrete
					Ft				
Au Aufco	D	Frequent	Brief	Nov-May	2.0-3.5	Perched	Dec-Apr	High	High.
BaD Bazette	C	None	---	---	>6.0	---	---	High	Low.
BeB, BeD Bernaldo	B	None	---	---	4.0-6.0	Perched	Nov-May	Moderate	Moderate.
CrA, CrB, CrC, CrC2 Crockett	D	None	---	---	>6.0	---	---	High	Low.
CuE, CvE, CwF Cuthbert	C	None	---	---	>6.0	---	---	High	High.
CxC*:									
Cuthbert	D	None	---	---	>6.0	---	---	High	High.
Redsprings	D	None	---	---	>6.0	---	---	High	High.
DrA*:									
Derly	D	None	---	---	+.5-1.0	Perched	Nov-May	High	High.
Raino	D	None	---	---	2.0-3.5	Perched	Dec-May	High	Moderate.
EdC, EdD Edge	D	None	---	---	>6.0	---	---	Moderate	Moderate.
ErB, ErE Elrose	B	None	---	---	>6.0	---	---	Moderate	Moderate.
FrB Freestone	C	None	---	---	2.0-3.5	Perched	Dec-May	High	Moderate.
GaB Gallime	B	None	---	---	4.0-6.0	Apparent	Dec-Mar	Moderate	Moderate.
Gw Gladewater	D	Frequent	Long to very long.	Nov-May	1.5-3.5	Perched	Nov-May	High	Moderate.
KfC, KgC Kirvin	C	None	---	---	>6.0	---	---	High	High.
LgB Leagueville	B/D	None	---	---	0.5-1.5	Apparent	Nov-May	High	High.
Lk Lufkin	D	None	---	---	>6.0	---	---	High	Moderate.
Lu*:									
Lufkin	D	None	---	---	>6.0	---	---	High	Moderate.
Rader	D	None	---	---	2.0-4.0	Perched	Dec-Mar	High	Moderate.

See footnote at end of table.

TABLE 17.--SOIL AND WATER FEATURES--Continued

Soil name and map symbol	Hydrologic group	Flooding			High water table			Risk of corrosion	
		Frequency	Duration	Months	Depth	Kind	Months	Uncoated steel	Concrete
					Ft				
Ma---------- Manco	C	Frequent----	Long------	Nov-May	1.0-1.5	Apparent	Dec-May	High-----	High.
Na---------- Nahatche	C	Frequent----	Very brief to brief.	Nov-May	0.5-1.5	Apparent	Nov-May	High-----	Moderate.
Nh---------- Nahatche	C	Frequent----	Brief-----	Nov-May	0.5-1.5	Apparent	Nov-May	High-----	Moderate.
NoC2---------- Normangee	D	None--------	---	---	>6.0	---	---	High-----	Low.
OkB, OkD---------- Oakwood	B	None--------	---	---	3.5-5.0	Apparent	Jan-Apr	High-----	Moderate.
PkC, PkE---------- Pickton	A	None--------	---	---	4.0-6.0	Perched	Jan-Apr	Moderate	High.
Pt*---------- Pits									
RdC, RdE---------- Redsprings	B	None--------	---	---	>6.0	---	---	High-----	High.
Sa*. Salt flats									
Sd---------- Sandow	C	Occasional	Brief-----	Dec-May	3.5-6.0	Apparent	Dec-Apr	High-----	Low.
Sf---------- Sandow	C	Frequent----	Brief-----	Dec-May	3.5-6.0	Apparent	Dec-Apr	High-----	Low.
TeE---------- Tenaha	B	None--------	---	---	>6.0	---	---	Moderate	Moderate.
ToB---------- Tonkawa	A	None--------	---	---	>6.0	---	---	Low------	Moderate.
Wh---------- Whitesboro	C	Frequent----	Brief-----	Nov-May	2.0-4.0	Apparent	Oct-May	High-----	Low.
Wn---------- Wilson	D	None--------	---	---	>6.0	---	---	High-----	High.
WoC, WoE---------- Wolfpen	A	None--------	---	---	4.0-6.0	Apparent	Dec-May	Moderate	High.
WtC, WtC2, WtD, WwC---------- Woodtell	D	None--------	---	---	>6.0	---	---	High-----	High.

* See description of the map unit for composition and behavior characteristics of the map unit.

TABLE 18.--ENGINEERING INDEX TEST DATA

Soil name, report number, horizon, and depth in inches		Classification		Grain-size distribution: Percentage passing sieve-- 3/8 inch	No. 4	No. 10	No. 40	No. 200	Liquid limit[3]	Plasticity index[3]	Specific gravity	Shrinkage: Limit	Linear	Ratio
		AASHTO	Unified											
									Pct			Pct	Pct	
Bazette:[1]														
(S85TX467-5)														
A	0-5	A-6(19)	CL	100	100	100	100	92	40	20	2.58	21	8.6	1.67
Bt2	10-24	A-7-6(44)	CH	100	100	100	100	98	62	40	2.68	11	20.9	2.02
C	38-60	A-7-6(49)	CH	100	99	98	98	96	65	46	2.63	14	20.5	1.93
Derly:[2]														
(S85TX-467-8)														
Eg	3-9	A-4(2)	CL-ML	100	100	100	100	72	22	6	2.63	17	2.8	1.78
Btg/E	9-16	A-6(20)	CL	100	100	100	100	81	40	27	2.63	14	12.5	1.91
Btg1	16-32	A-6(18)	CL	100	100	100	100	76	39	26	2.65	14	12.2	1.93
Btg4	50-68	A-7-6(22)	CL	100	100	100	100	76	44	31	2.68	14	14.2	1.93
Freestone:[2]														
(S85TX-467-6)														
E	5-16	A-4(0)	ML	100	100	100	99	58	18	1	2.64	19	0.0	1.64
Bt	16-24	A-6(12)	CL	100	100	100	99	73	34	20	2.63	15	9.8	1.89
Btg/E	32-46	A-7-6(24)	CL	100	100	100	100	78	46	33	2.63	12	15.8	1.99
Btg1	46-60	A-7-6(23)	CL	100	100	100	99	75	47	33	2.65	13	15.7	1.98
BCtg	72-84	A-7-6(31)	CL	100	100	100	100	89	48	34	2.63	11	17.1	2.06
Pickton:[2]														
(S85TX-467-10)														
E	7-60	A-2-4(0)	SM	100	100	100	100	9	20	3	2.64	17	0.0	1.68
Bt1	60-72	A-2-4(1)	SC	100	100	100	100	48	22	8	2.69	16	3.8	1.81
Raino:[2]														
(S85TX-467-9)														
EB	6-26	A-4(0)	CL	100	100	100	99	59	16	1	2.65	17	0.0	1.76
Bt/E1	26-36	A-4(0)	CL-ML	100	99	99	98	59	19	5	2.67	14	2.6	1.88
Btg	44-60	A-7-6(31)	CH	100	100	100	100	77	58	41	2.65	13	19.4	2.00
BCg	72-84	A-6(4)	SM	100	100	100	100	44	30	18	2.61	17	7.3	1.81

See footnote at end of table.

TABLE 18.--ENGINEERING INDEX TEST DATA--continued

Soil name, report number, horizon, and depth in inches	Classification		Grain-size distribution: Percentage passing sieve--					Liquid limit[3]	Plasticity index[3]	Specific gravity	Shrinkage: Limit	Shrinkage: Linear	Shrinkage: Ratio
	AASHTO	Unified	3/8 inch	No. 4	No. 10	No. 40	No. 200						
								Pct			Pct	Pct	
Whitesboro:[2]													
(S85TX-467-7)													
A1 0-12	A-4(4)	ML	100	100	100	100	82	33	4	2.57	18	7.4	1.75
A2 12-38	A-6(13)	CL	100	100	100	100	89	33	15	2.57	19	6.7	1.72
A3 38-56	A-6(11)	CL	100	100	100	100	84	30	15	2.67	18	5.9	1.76
Bw 56-80	A-6(15)	CL	100	100	100	100	83	35	20	2.63	15	10.1	1.91
Wolfpen:[2]													
(S85TX-467-11)													
E 5-28	A-2-4(0)	SM	100	100	100	99	33	15	1	2.66	15	0.0	1.73
Bt1 28-35	A-6(2)	SC	100	99	98	97	42	26	13	2.59	15	5.8	1.86
B't 65-80	A-6(14)	CL	100	100	100	100	70	38	24	2.69	14	12.2	1.92
Woodtell:[2]													
(S85TX-467-12)													
A 0-5	A-4(0)	SM	100	100	99	99	41	20	2	2.64	18	1.3	1.69
Bt 8-14	A-7-6(22)	CH	100	100	100	100	72	52	32	2.67	15	15.9	1.88
Btss1 14-30	A-7-6(25)	CL	100	100	100	100	84	49	29	2.67	15	14.8	1.87
C 54-80	A-7-6(31)	CL	100	100	100	100	99	49	28	2.68	22	11.4	1.65

[1] Location of the pedon sample: from the intersection of Interstate Highway 20 and Farm Road 47, 0.2 mile north on Farm Road 47 and 100 feet west of road.

[2] Location of pedon sample is the same as that of the typical pedon described in the section "Soil Series and Their Morphology."

[3] Liquid limit and plasticity index values were determined by AASHTO-T89 and AASHTO-T90 methods, except that soil was added to water.

TABLE 19.--CLASSIFICATION OF THE SOILS

Soil name	Family or higher taxonomic class
Aufco	Fine, montmorillonitic, thermic Aquic Ustochrepts
Bazette	Fine, montmorillonitic, thermic Udic Haplustalfs
Bernaldo	Fine-loamy, siliceous, thermic Glossic Paleudalfs
Crockett	Fine, montmorillonitic, thermic Udertic Paleustalfs
Cuthbert	Clayey, mixed, thermic Typic Hapludults
Derly	Fine, montmorillonitic, thermic Typic Glossaqualfs
Edge	Fine, mixed, thermic Udic Paleustalfs
Elrose	Fine-loamy, siliceous, thermic Typic Paleudalfs
Freestone	Fine-loamy, siliceous, thermic Glossaquic Paleudalfs
Gallime	Fine-loamy, siliceous, thermic Glossic Paleudalfs
Gladewater	Very-fine, montmorillonitic, thermic Chromic Endoaquerts
Kirvin	Clayey, mixed, thermic Typic Hapludults
Leagueville	Loamy, siliceous, thermic Arenic Paleaquults
Lufkin	Fine, montmorillonitic, thermic Oxyaquic Vertic Paleustalfs
Manco	Fine-silty, siliceous, acid, thermic Aeric Fluvaquents
Nahatche	Fine-loamy, siliceous, nonacid, thermic Aeric Fluvaquents
Normangee	Fine, montmorillonitic, thermic Udertic Haplustalfs
Oakwood	Fine-loamy, siliceous, thermic Fragic Glossudalfs
Pickton	Loamy, siliceous, thermic Grossarenic Paleudalfs
Rader	Fine-loamy, mixed, thermic Aquic Paleustalfs
Raino	Fine-loamy over clayey, siliceous, thermic Aquic Glossudalfs
Redsprings	Fine, kaolinitic, thermic Ultic Hapludalfs
Sandow	Fine-loamy, siliceous, thermic Udifluventic Ustochrepts
Tenaha	Loamy, siliceous, thermic Arenic Hapludults
Tonkawa	Thermic, coated Typic Quartzipsamments
Whitesboro	Fine-loamy, mixed, thermic Cumulic Haplustolls
Wilson	Fine, montmorillonitic, thermic Oxyaquic Vertic Haplustalfs
Wolfpen	Loamy, siliceous, thermic Arenic Paleudalfs
Woodtell	Fine, montmorillonitic, thermic Vertic Hapludalfs

☆ U.S. GOVERNMENT PRINTING OFFICE : 1997—417-265/60533/NRCS