



# CENSUS OF DRAINAGE — KANSAS

201

STATE TABLE 1.—SUMMARY OF DRAINAGE FOR THE STATE: JAN. 1, 1940, 1930, AND 1920

ITEM (See definitions in Introduction)	CENSUS OF—			INCREASE OR DECREASE (—)			
	1940	1930	1920	1930-1940		1920-1930	
				Amount	Percent	Amount	Percent
Approximate land area of State.....acres.....	52,552,320	52,335,360	52,335,360	.....	.....	.....	.....
Land in drainage enterprises.....acres.....	258,113	257,169	93,856	944	0.4	163,313	174.0
Improved.....acres.....	253,983	248,241	87,449	5,742	2.3	160,792	183.9
Unimproved:							
Timber and cut-over.....acres.....	2,019	4,260	4,135	-2,241	-52.3	125	3.0
Other.....acres.....	2,111	4,668	2,372	-2,557	-54.8	2,395	105.1
Drainage sufficient for normal crop.....acres.....	257,347	242,213	(1)	15,131	6.2	.....	.....
Partly drained, for partial crop.....acres.....	230	11,351	(1)	-11,101	-97.7	.....	.....
Unfit to raise any crop for lack of drainage.....acres.....	506	3,592	2 3,704	-3,086	-85.9	-3,112	-46.1
In occupied farms.....acres.....	250,455	253,645	(1)	-3,390	-1.3	.....	.....
In planted crops.....acres.....	221,218	219,733	(1)	1,482	0.7	.....	.....
Idle.....acres.....	9,853	3,131	(1)	6,722	214.7	.....	.....
Available for settlement.....acres.....	.....	.....	(1)	.....	.....	.....	.....
Open ditches, completed.....miles.....	381.4	324.7	138.4	53.7	17.5	188.3	134.6
Tile drains, completed.....miles.....	210.5	212.1	213.0	-1.6	-0.8	-0.9	-0.4
Drainage pumping plants, capacity.....horsepower.....	420	120	65	300	250.0	55	84.6
gal. per min.....	24,000	12,000	4,000	12,000	100.0	8,000	200.0
Capital invested in enterprises.....dollars.....	3,733,919	2,701,082	933,508	1,032,837	38.2	1,704,574	188.4
Average per acre.....dollars.....	14.47	10.50	9.98	3.97	37.8	0.52	5.2

<sup>1</sup> Not available.

<sup>2</sup> Reported as "Swampy, subject to overflow, seeped, or alkali."

STATE TABLE 2.—AREA OF ENTERPRISES, BY SIZE: JAN. 1, 1940, 1930, AND 1920

[For intercounty enterprises the portion in each county is tabulated as a separate enterprise]

SIZE	AREA OF ENTERPRISES <sup>1</sup>			Land in enterprises <sup>2</sup> 1940	SIZE	AREA OF ENTERPRISES <sup>1</sup>			Land in enterprises <sup>2</sup> 1940
	1940	1930	1920			1940	1930	1920	
All enterprises.....	Acres 258,946	Acres 257,723	Acres 93,856	Acres 258,113	1,000 to 1,999 acres.....	Acres 34,216	Acres 78,425	Acres 39,086	Acres 33,383
100 to 199 acres.....	.....	172	575	.....	2,000 to 4,999 acres.....	48,729	.....	.....	46,729
200 to 499 acres.....	3,147	4,235	4,419	3,147	5,000 to 9,999 acres.....	73,351	74,962	22,792	73,351
500 to 999 acres.....	16,783	15,227	11,944	16,783	10,000 to 19,999 acres.....	84,710	84,705	21,040	84,710
					20,000 to 49,999 acres.....	.....	.....	.....	.....

<sup>1</sup> The sum of the areas in the individual enterprises, without deduction for overlapping.

<sup>2</sup> Overlapping eliminated by tabulating each enterprise according to its acreage not included in later enterprises.

STATE TABLE 3.—LAND AND CAPITAL INVESTED, BY CHARACTER OF ENTERPRISE, JAN. 1, 1940

CHARACTER OF ENTERPRISE	Land		Capital invested	
	Acres	Percent	Dollars	Percent
All enterprises.....	258,113	100.0	3,733,919	100.0
Drainage districts.....	206,981	80.2	2,958,148	79.5
County drains.....	40,218	15.6	836,091	17.0
Township drains.....	3,150	1.2	24,280	0.7
Commercial developments:				
Incorporated.....	.....	.....	.....	.....
Unincorporated.....	1,062	0.4	5,500	0.1
Individually owned projects.....	6,992	2.6	99,900	2.7

STATE TABLE 4.—LAND AND CAPITAL INVESTED, BY TYPE OF DRAINAGE: JAN. 1, 1940, 1930, AND 1920

TYPE OF DRAINAGE <sup>1</sup>	LAND IN ENTERPRISES						CAPITAL INVESTED IN ENTERPRISES					
	1940		1930		1920		1940		1930		1920	
	Acres	Percent	Acres	Percent	Acres	Percent	Dollars	Percent	Dollars	Percent	Dollars	Percent
All enterprises.....	258,113	100.0	257,169	100.0	93,856	100.0	3,733,919	100.0	2,701,082	100.0	936,508	100.0
Gravity drainage only by—												
Open ditches.....	247,113	95.7	249,742	97.1	2 93,856	100.0	2,672,419	71.3	2,385,046	88.3	2 936,508	100.0
Tile drains.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Open ditches and tile drains..	1,020	0.4	4,927	1.9	.....	.....	11,500	0.3	266,036	9.8	.....	.....
Part only by pumping by—												
Open ditches.....	6,500	2.5	.....	.....	.....	.....	1,000,000	26.8	50,000	1.9	.....	.....
Tile drains.....	.....	.....	2,500	1.0	.....	.....	.....	.....	.....	.....	.....	.....
Open ditches and tile drains..	3,480	1.4	.....	.....	.....	.....	50,000	1.3	.....	.....	.....	.....
Total area served by pumps.....	5,000	1.9	2,000	0.8	2,200	2.3	.....	.....	.....	.....	.....	.....

<sup>1</sup> Each item includes those enterprises that have provided levees in addition to the kind of drains specified.

<sup>2</sup> Includes 1 enterprise operating pumps in which 2,200 acres are served part of the time.

## CENSUS OF DRAINAGE—KANSAS

STATE TABLE 5.—PUMPING PLANTS AND LAND SERVED, BY KIND OF POWER: JAN. 1, 1940, 1930, AND 1920

KIND OF POWER	Enterprises	CAPACITY				Land served
		Engine or motor		Pump		
		Number	Hp.	Percent	G. p. m.	Acres
All pumping enterprises.....	1940..	2	420	100.0	24,000	5,000
	1930..	1	120	100.0	12,000	2,000
	1920..	1	95	100.0	4,000	2,200
Steam.....	1940..	.....	.....	.....	.....	.....
	1930..	.....	.....	.....	.....	.....
	1920..	1	95	100.0	4,000	2,200
Electric.....	1940..	2	420	100.0	24,000	5,000
	1930..	1	120	100.0	12,000	2,000
	1920..	.....	.....	.....	.....	.....

STATE TABLE 6.—PUMPING PLANTS AND LAND SERVED, BY KIND OF PUMP: JAN. 1, 1940 AND 1930

KIND OF PUMP	PUMPS				Engine or motor capacity	Land served
	Number	Capacity				
			G.p.m.	Percent	hp.	Acres
All pumping enterprises.....	1940..	4	24,000	100.0	420	5,000
	1930..	2	12,000	100.0	120	2,000
Centrifugal.....	1940..	4	24,000	100.0	420	5,000
	1930..	2	12,000	100.0	120	2,000

STATE TABLE 7.—LAND, CAPITAL INVESTED, AND AREA DELINQUENT IN DRAINAGE TAXES, BY ARREARAGE IN PAYMENT OF OBLIGATIONS: JAN. 1, 1940 AND 1930

FINANCIAL STATUS	LAND IN ENTERPRISES				CAPITAL INVESTED				AREA DELINQUENT <sup>1</sup>	
	1940		1930		1940		1930		1940	1930
	Acres	Percent	Acres	Percent	Dollars	Percent	Dollars	Percent	Acres	Acres
All enterprises.....	258,113	100.0	257,159	100.0	3,733,919	100.0	2,701,092	100.0	5,737	360
Enterprises in arrears.....	10,329	4.0	3,000	1.2	200,000	5.4	19,780	0.7	1,130	.....
With some delinquent land.....	10,329	4.0	.....	.....	200,000	5.4	.....	.....	1,130	.....
With no delinquent land.....	.....	.....	3,000	1.2	.....	.....	19,780	0.7	.....	.....
With no report on delinquency.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Enterprises not in arrears.....	247,784	95.0	254,159	98.8	3,533,919	94.6	2,681,302	99.3	4,577	360
With some delinquent land.....	51,027	19.8	8,320	3.2	998,334	26.7	65,621	2.4	4,577	360
With no delinquent land.....	187,857	72.8	245,839	95.3	2,470,875	63.2	2,615,681	96.9	.....	.....
With no report on delinquency.....	8,900	3.4	.....	.....	65,010	1.7	.....	.....	.....	.....

<sup>1</sup> If any land is delinquent in 2 or more overlapping enterprises, the acreage delinquent is too large by the amount of such duplication.

STATE TABLE 8.—LAND, CAPITAL INVESTED, INDEBTEDNESS, ARREARAGE IN PAYMENT OF BONDS, REDUCTION OF DEBT BY REFINANCING, AND ACREAGE DELINQUENT, 1940; DRAINAGE TAXES COLLECTED IN 1939; BY INDEBTEDNESS AND ARREARAGE, JAN. 1, 1940

FINANCIAL STATUS	Land in enterprises	Capital invested	Indebtedness	Arrearage in payment of bonds	Reduction of debt by refinancing	Delinquent in drainage taxes <sup>1</sup>	Drainage taxes collected in 1939
	Acres	Dollars	Dollars	Dollars	Dollars	Acres	Dollars
All enterprises.....	258,113	3,733,919	1,806,105	8,000	105	5,737	257,698
Enterprises in debt.....	91,128	2,247,511	1,806,105	8,000	.....	5,437	237,973
In arrears, amount of arrearage stated.....	10,329	200,000	57,000	8,000	.....	1,160	11,700
Collecting drainage taxes in 1939.....	10,329	200,000	57,000	8,000	.....	1,160	11,700
Not in arrears.....	80,799	2,047,511	1,748,105	.....	.....	4,277	226,273
Collecting drainage taxes in 1939.....	75,699	1,970,811	1,728,431	.....	.....	4,277	226,273
No collections reported.....	5,100	76,700	20,674	.....	.....	.....	.....
Enterprises not in debt.....	159,973	1,437,408	.....	.....	105	300	15,375
Collecting drainage taxes in 1939.....	52,777	700,881	.....	.....	105	300	15,375
No collections reported.....	107,196	736,527	.....	.....	.....	.....	.....
Enterprises not reporting as to debt.....	7,012	49,000	.....	.....	.....	.....	4,350
Collecting drainage taxes in 1939.....	7,012	49,000	.....	.....	.....	.....	4,350

<sup>1</sup> If any land is delinquent in 2 or more overlapping enterprises, the acreage delinquent is too large by the amount of such duplication.

STATE TABLE 9.—LAND AND CAPITAL INVESTED, BY PRINCIPAL PURPOSE OF DRAINAGE, JAN. 1, 1940

PURPOSE OF DRAINAGE	Land		Capital invested	
	Acres	Percent	Dollars	Percent
All enterprises.....	258,113	100.0	3,733,919	100.0
Improvement of land already in farms <sup>1</sup> .....	27,120	10.5	77,317	2.1
Protection against overflow.....	230,993	89.5	3,656,602	97.9

<sup>1</sup> Undoubtedly a large part of the drainage reported as for protection against overflow was undertaken for the protection of lands already included in farms.

# CENSUS OF DRAINAGE—KANSAS

203

STATE TABLE 10.—LAND AND CAPITAL INVESTED, BY DATE OF ORGANIZATION, JAN. 1, 1940

DATE OF ORGANIZATION	Land <sup>1</sup>		Area of enterprises		Capital invested	
	Acres	Percent	Total acres <sup>2</sup>	Overlapped acres	Dollars	Percent
All enterprises.....	258,113	100.0	258,943	830	3,733,919	100.0
1890-1899.....	18,726	7.3	18,559	833	358,679	9.6
1900-1904.....	8,543	3.3	8,543	.....	80,079	2.1
1905-1909.....	44,991	17.4	44,991	.....	1,387,440	37.1
1910-1914.....	44,399	17.2	44,399	.....	354,927	9.5
1915-1919.....	36,868	25.8	35,993	.....	783,557	21.0
1920-1924.....	22,778	8.8	22,778	.....	185,924	5.0
1925-1929.....	37,938	14.7	37,938	.....	475,953	12.7
1930-1934.....	5,178	2.0	5,178	.....	103,781	2.8
1935-1939.....	8,763	3.4	8,763	.....	5,979	0.2

<sup>1</sup> Land included in more than 1 enterprise is tabulated only in the last organized.

<sup>2</sup> The sum of the areas of the individual enterprises.

STATE TABLE 11.—DRAINAGE CONDITION, DEVELOPMENT, AND USE OF LAND IN ENTERPRISES, BY DATE OF ORGANIZATION, 1939

DATE OF ORGANIZATION	Land in all enterprises¹	DRAINAGE CONDITION			DEVELOPMENT				USE OF LAND					
		Drained		Partly drained	Undrained	Improved land		Timber and cut-over land	Other un-improved land	In occupied farms		In planted crops	Idle	Land available for settlement
All enterprises..	Acres 258,113	Acres 257,347	Per-cent 99.7	Acres 260	Acres 506	Acres 253,983	Per-cent 98.4	Acres 2,019	Acres 2,111	Acres 250,435	Per-cent 97.0	Acres 221,218	Acres 9,853	Acres .....
1890-1899.....	18,726	18,726	100.0	.....	.....	18,705	99.9	.....	20	18,723	100.0	17,805	.....	.....
1900-1904.....	8,543	8,543	100.0	.....	.....	8,543	100.0	.....	.....	8,543	100.0	8,098	.....	.....
1905-1909.....	44,991	44,691	99.3	.....	300	43,531	96.8	500	960	38,541	85.7	32,615	4,600	.....
1910-1914.....	44,399	44,399	100.0	.....	.....	43,248	97.4	635	465	44,144	99.4	37,298	1,261	.....
1915-1919.....	36,868	66,771	98.8	97	.....	65,071	98.6	590	307	36,868	100.0	58,208	3,416	.....
1920-1924.....	22,778	22,638	99.4	49	91	22,708	99.7	7	63	22,731	99.8	20,784	346	.....
1925-1929.....	37,839	37,868	100.0	.....	.....	37,473	99.0	220	175	36,983	97.7	33,589	210	.....
1930-1934.....	5,178	5,178	100.0	.....	.....	5,178	100.0	.....	.....	5,178	100.0	4,644	.....	.....
1935-1939.....	8,762	8,533	97.4	114	115	8,625	98.4	16	121	8,741	99.8	8,177	.....	.....

<sup>1</sup> Land included in more than 1 enterprise is tabulated only in the last organized.

STATE TABLE 12.—LAND AND CAPITAL INVESTED, BY METHOD OF MAINTENANCE AND BY WHETHER MAINTENANCE IS SYSTEMATIC, JAN. 1, 1940

MAINTENANCE	Land		Capital invested	
	Acres	Percent	Dollars	Percent
All enterprises.....	258,113	100.0	3,733,919	100.0
Method:				
By district forces.....	208,309	80.7	3,318,143	88.9
By contract.....	21,690	8.4	244,781	6.5
Work apportioned to landowners.....	26,413	10.2	180,195	4.8
"None," or not reporting.....	1,701	0.7	10,800	0.3
Whether systematic:				
Reporting "yes".....	182,608	70.7	3,032,532	81.2
Reporting "no".....	75,505	29.3	701,387	18.8

STATE TABLE 13.—COST OF OPERATION AND MAINTENANCE, BY TYPE OF DRAINAGE, 1939

TYPE OF DRAINAGE	Land in all enterprises	LAND REPORTING ON COST OF MAINTENANCE AND OPERATION			COST REPORTED		
		Total	Some cost	No cost	Total amount	Per acre on—	
						Total reporting	Area incurring
All enterprises.....	Acres 258,113	Acres 258,113	Acres 187,712	Acres 70,401	Dollars 42,038	Dollars 0.16	Dollars 0.22
Gravity drainage only.....	248,113	248,133	181,212	66,921	17,038	0.07	0.09
Open ditches only.....	72,708	72,708	39,745	32,963	2,449	0.03	0.06
Open ditches and levees.....	174,405	174,405	140,447	33,958	14,389	0.08	0.10
Open ditches, tile drains, and levees.....	1,020	1,020	1,020	.....	200	0.20	0.20
Part pumping and part gravity.....	9,980	9,980	6,500	3,480	25,000	2.50	3.85

## CENSUS OF DRAINAGE—KANSAS

STATE TABLE 14.—LAND, CAPITAL INVESTED, AND DRAINAGE WORKS, BY OWNERSHIP OF POWER EQUIPMENT FOR MAINTENANCE, 1940

ITEM	All enterprises	ENTERPRISES OWNING POWER EQUIPMENT	
		Amount	Percent
Land in enterprises.....acres....	258,113	21,060	8.2
Capital invested.....dollars..	3,733,919	1,292,500	34.6
Drainage works:			
Open ditches.....miles....	381.4	15.3	4.0
Tile drains.....miles....	210.5	210.0	90.8
Levees.....miles....	278.3	59.5	21.4

STATE TABLE 15.—LAND, CAPITAL INVESTED, AND DRAINAGE WORKS, BY FEDERAL AGENCY GIVING AID IN MAINTENANCE, 1940

AGENCY	Land in enterprises	Capital invested	DRAINAGE WORKS		
			Ditches	Tile	Levees
All enterprises reporting Federal aid received.....	Acres 27,403	Dollars 1,290,028	Miles 14.3	Miles .....	Miles 56.2
Work Projects Administration.....	27,403	1,290,028	14.3	.....	56.2

STATE TABLE 16.—LAND, CAPITAL INVESTED, AND DRAINAGE WORKS, BY FLOOD PROTECTION FROM LEVEES OF AN OUTSIDE AGENCY, 1940

ITEM	All enterprises	ENTERPRISES PROTECTED BY OUTSIDE AGENCY	
		Amount	Percent
Land in enterprises.....acres....	258,113	<sup>1</sup> 1,020	0.4
Capital invested.....dollars..	3,733,919	11,500	0.3
Drainage works:			
Open ditches.....miles....	381.4	2.0	0.5
Tile drains.....miles....	210.5	0.5	0.2
Levees.....miles....	278.3	2.0	0.7

<sup>1</sup>The land actually dependent upon outside agencies for protection is 1,020 acres, which is all land in the protected enterprises.

## CENSUS OF DRAINAGE - KANSAS

205

COUNTY TABLE I.—LAND IN DRAINAGE ENTERPRISES CLASSIFIED BY CONDITION AND BY USE, 1940, 1930, AND 1920; AND BY KIND OF WORKS, 1940

ITEM (See definitions in Introduction)		THE STATE	Chase <sup>1</sup>	Cherokee <sup>1</sup>	Clay <sup>1</sup>	Doniphan <sup>1</sup>	Douglas	Jackson	Jefferson
LAND AREA									
1	Approximate land area.....acres....1940..	52,552,330	495,360	375,680	421,120	250,240	299,520	419,840	351,360
2	Drainage enterprises.....number....1940..	292	1	1	1	2	6	3	13
3	Land in enterprises.....acres....1940..	258,113	1,376	360	1,400	6,500	18,731	6,377	18,587
4	.....1930..	257,109	(3)	.....	.....	(3)	48,570	(3)	24,486
5	.....1920..	93,856	(3)	.....	.....	(3)	(3)	(3)	14,147
6	Area of all enterprises, overlapping included.....acres....1940..	258,946	1,376	360	1,400	6,500	18,731	6,377	18,587
7	Amount of overlapping.....acres....1940..	833	.....	.....	.....	.....	.....	.....	.....
CONDITION AND USE OF LAND									
8	Land with drainage sufficient for normal crop.....acres....1940..	257,347	1,376	360	1,260	6,500	18,731	6,377	18,490
9	.....1930..	242,216	(3)	.....	.....	(3)	48,370	(3)	21,930
10	Increase or decrease (-), 1930-1940.....acres.....	15,131	.....	360	1,260	.....	-29,639	.....	-3,440
11	.....percent.....	6.2	.....	.....	.....	.....	-61.3	.....	-15.7
12	Land undrained, unfit for any crop.....acres....1940..	506	.....	.....	91	.....	.....	.....	.....
13	.....1930..	3,592	.....	.....	.....	.....	.....	.....	529
14	Increase or decrease (-), 1930-1940.....acres.....	-3,086	.....	.....	91	.....	.....	.....	-529
15	.....percent.....	-85.9	.....	.....	.....	.....	.....	.....	-100.0
16	Land partly drained, for partial crop.....acres....1940..	230	.....	.....	49	.....	.....	.....	97
17	.....1930..	11,361	.....	.....	.....	(3)	200	(3)	2,027
18	Increase or decrease (-), 1930-1940.....acres.....	-11,131	.....	.....	49	.....	-200	.....	-1,930
19	.....percent.....	-97.7	.....	.....	.....	.....	-100.0	.....	-95.2
20	Improved land.....acres....1940..	253,983	1,376	360	1,330	6,460	18,731	6,377	18,070
21	.....1930..	248,241	(3)	.....	.....	(3)	48,370	(3)	22,816
22	.....1920..	87,449	(3)	.....	.....	(3)	(3)	(3)	14,046
Unimproved land:									
23	Woodland and cut-over land.....acres....1940..	2,019	.....	.....	7	40	.....	.....	450
24	.....1930..	4,260	.....	.....	.....	.....	200	.....	1,180
25	.....1920..	4,105	(3)	.....	.....	(3)	(3)	(3)	26
26	Other unimproved land.....acres....1940..	2,111	.....	.....	63	.....	.....	.....	67
27	.....1930..	4,608	.....	.....	.....	.....	.....	.....	410
28	.....1920..	2,372	.....	.....	.....	.....	.....	.....	75
29	Land in occupied farms.....acres....1940..	250,455	1,376	360	1,365	6,500	18,711	6,377	18,587
30	.....1930..	253,845	(3)	.....	.....	(3)	48,570	(3)	24,486
31	Increase or decrease (-), 1930-1940.....acres.....	-3,390	.....	360	1,365	.....	-29,859	.....	-5,899
32	.....percent.....	-1.3	.....	.....	.....	.....	-61.5	.....	-24.1
33	Land in planted crops.....acres....1940..	221,218	1,348	360	1,190	5,868	16,762	5,540	16,526
34	.....1930..	219,736	(3)	.....	.....	(3)	43,600	(3)	22,403
35	Increase or decrease (-), 1930-1940.....acres.....	1,482	.....	360	1,190	.....	-26,838	.....	-5,877
36	.....percent.....	0.7	.....	.....	.....	.....	-61.6	.....	-26.2
37	Land idle.....acres....1940..	9,853	.....	.....	.....	26	220	200	297
38	.....1930..	3,131	(3)	.....	.....	.....	.....	.....	.....
39	Increase or decrease (-), 1930-1940.....acres.....	6,722	.....	.....	.....	26	220	200	297
40	.....percent.....	214.7	.....	.....	.....	.....	.....	.....	.....
41	Land available for settlement.....acres....1940..	.....	.....	.....	.....	.....	.....	.....	.....
42	.....1930..	.....	.....	.....	.....	.....	.....	.....	.....
43	Increase or decrease (-), 1930-1940.....acres.....	.....	.....	.....	.....	.....	.....	.....	.....
44	.....percent.....	.....	.....	.....	.....	.....	.....	.....	.....
LAND CLASSIFIED BY WORKS, 1940									
45	Land drained by open ditches only.....acres.....	72,708	.....	.....	1,400	4,600	9,060	5,117	3,399
46	Length of these ditches.....miles.....	121.3	.....	.....	3.6	7.5	6.5	10.5	10.8
47	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....	.....	.....
48	Land drained by open ditches and own levees.....acres.....	174,405	1,376	360	.....	1,900	8,651	1,280	15,188
49	Length of these ditches.....miles.....	253.3	2.2	0.5	.....	5.0	3.5	2.5	28.7
50	Length of these levees.....miles.....	246.8	4.5	1.0	.....	2.0	4.0	0.5	18.2
51	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....	.....	.....
52	Land drained by tile only.....acres.....	.....	.....	.....	.....	.....	.....	.....	.....
53	Length of these tile.....miles.....	.....	.....	.....	.....	.....	.....	.....	.....
54	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....	.....	.....
55	Land drained by tile and own levees.....acres.....	.....	.....	.....	.....	.....	.....	.....	.....
56	Length of these tile.....miles.....	.....	.....	.....	.....	.....	.....	.....	.....
57	Length of these levees.....miles.....	.....	.....	.....	.....	.....	.....	.....	.....
58	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....	.....	.....
59	Land drained by open ditches and tile.....acres.....	.....	.....	.....	.....	.....	.....	.....	.....
60	Length of these open ditches.....miles.....	.....	.....	.....	.....	.....	.....	.....	.....
61	Length of these tile.....miles.....	.....	.....	.....	.....	.....	.....	.....	.....
62	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....	.....	.....
63	Land drained by open ditches, tile, and levees.....acres.....	1,020	.....	.....	.....	.....	1,020	.....	.....
64	Length of these open ditches.....miles.....	2.0	.....	.....	.....	.....	2.0	.....	.....
65	Length of these tile.....miles.....	0.5	.....	.....	.....	.....	0.5	.....	.....
66	Length of these levees.....miles.....	2.0	.....	.....	.....	.....	2.0	.....	.....
67	Part protected by levees of an outside agency.....acres.....	1,020	.....	.....	.....	.....	1,020	.....	.....
68	Land in enterprises operating pumping plants <sup>4</sup> .....acres.....	9,980	.....	.....	.....	.....	.....	.....	.....
69	Length of open ditches owned by these enterprises.....miles.....	4.8	.....	.....	.....	.....	.....	.....	.....
70	Length of tile owned by these enterprises.....miles.....	210.0	.....	.....	.....	.....	.....	.....	.....
71	Length of levees owned by these enterprises.....miles.....	27.5	.....	.....	.....	.....	.....	.....	.....
72	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....	.....	.....

<sup>1</sup>For counties having less than 3 enterprises, statistics are shown only by written permission of each enterprise affected.<sup>2</sup>An intercounty enterprise is counted in each county in which a part is located. The number of separate enterprises in the State is 88.<sup>3</sup>Included in "Other counties."<sup>4</sup>Data included in lines 68 to 72 are not included in data in lines 45 to 67.

## CENSUS OF DRAINAGE—KANSAS

COUNTY TABLE I.—LAND IN DRAINAGE ENTERPRISES CLASSIFIED BY CONDITION AND BY USE, 1940, 1930, AND 1920; AND BY KIND OF WORKS, 1940—Continued

ITEM (See definitions in Introduction)	Johnson <sup>1</sup>	McPherson	Montgomery <sup>1</sup>	Neosho	Sedgwick	Shawnee	Wabaunsee <sup>1</sup>	Other counties <sup>2</sup>
<b>LAND AREA</b>								
1 Approximate land area.....acres....1940..	304,640	572,800	415,360	375,680	539,360	348,800	506,240	7,039,360
2 Drainage enterprises.....number....1940..	1	5	2	23	5	3	1	25
3 Land in enterprises.....acres....1940..	1,500	20,370	3,560	21,871	41,360	21,230	1,800	93,091
4 ....."1930..		16,400	( <sup>3</sup> )	22,434	31,700	22,510	( <sup>3</sup> )	91,059
5 ....."1920..		4,760		21,758	( <sup>3</sup> )	12,516		40,675
6 Area of all enterprises, overlapping included.....acres....1940..	1,500	20,370	3,560	22,704	41,360	21,230	1,800	93,091
7 Amount of overlapping.....acres....1940..				833				
<b>CONDITION AND USE OF LAND</b>								
8 Land with drainage sufficient for normal crop.....acres....1940..	1,500	20,370	3,560	21,871	41,360	20,930	1,800	92,862
9 ....."1930..		15,350	( <sup>3</sup> )	31,602	31,700	20,811	( <sup>3</sup> )	82,453
10 Increase or decrease (-), 1930-1940.....acres.....	1,500	5,020		269	9,660	119		10,409
11 ....."percent.....		32.7		1.2	30.5	0.6		12.6
12 Land undrained, unfit for any crop.....acres....1940..						300		115
13 ....."1930..		250	( <sup>3</sup> )	360		600	( <sup>3</sup> )	1,623
14 Increase or decrease (-), 1930-1940.....acres.....		-250		-360		-300		-1,708
15 ....."percent.....		-100.0		-100.0		-50.0		-93.7
16 Land partly drained, for partial crop.....acres....1940..						1,099	( <sup>3</sup> )	114
17 ....."1930..		800	( <sup>3</sup> )	442		1,099	( <sup>3</sup> )	6,703
18 Increase or decrease (-), 1930-1940.....acres.....		-800		-442		-1,099		-6,679
19 ....."percent.....		-100.0		-100.0		-100.0		-98.3
20 Improved land.....acres....1940..	1,500	20,110	2,900	21,871	40,840	20,430	1,800	91,828
21 ....."1930..		16,100	( <sup>3</sup> )	21,583	31,700	21,660	( <sup>3</sup> )	85,012
22 ....."1920..		4,760		17,556	( <sup>3</sup> )	11,281		39,806
<b>Unimproved land:</b>								
23 Woodland and cut-over land.....acres....1940..					520	500		502
24 ....."1930..			( <sup>3</sup> )	398		550		1,052
25 ....."1920..				2,005	( <sup>3</sup> )	1,235		899
26 Other unimproved land.....acres....1940..		250	600			300		761
27 ....."1930..		300	( <sup>3</sup> )	453		300		3,205
28 ....."1920..				2,197				
29 Land in occupied farms.....acres....1940..	1,500	20,370	2,900	21,871	40,760	18,960	1,800	89,018
30 ....."1930..		16,400	( <sup>3</sup> )	22,434	31,700	22,510	( <sup>3</sup> )	87,745
31 Increase or decrease (-), 1930-1940.....acres.....	1,500	3,970		-663	9,060	-3,550		1,273
32 ....."percent.....		24.2		-2.5	28.6	-15.8		1.4
33 Land in planted crops.....acres....1940..	1,331	17,377	2,860	19,246	37,387	14,368	1,679	79,576
34 ....."1930..		14,760	( <sup>3</sup> )	20,095	21,250	21,295	( <sup>3</sup> )	76,332
35 Increase or decrease (-), 1930-1940.....acres.....	1,331	2,617		-849	16,137	-6,928		3,244
36 ....."percent.....		17.7		-4.2	75.9	-32.5		4.2
37 Land idle.....acres....1940..		1,938				4,400	40	2,732
38 ....."1930..			( <sup>3</sup> )	738		1,150		1,243
39 Increase or decrease (-), 1930-1940.....acres.....		1,938		-738		3,250	40	1,489
40 ....."percent.....				-100.0		282.6		119.8
41 Land available for settlement.....acres....1940..								
42 ....."1930..								
43 Increase or decrease (-), 1930-1940.....acres.....								
44 ....."percent.....								
<b>LAND CLASSIFIED BY WORKS, 1940</b>								
45 Land drained by open ditches only.....acres.....				833			1,800	46,499
46 Length of these ditches.....miles.....				2.0			3.0	77.5
47 Part protected by levees of an outside agency.....acres.....								
48 Land drained by open ditches and own levees.....acres.....	1,500	20,370	3,560	21,038	41,360	21,230		36,612
49 Length of these ditches.....miles.....	2.4	43.0	9.3	56.9	31.5	17.5		50.3
50 Length of these levees.....miles.....	1.5	18.0	7.0	104.1	22.0	42.0		24.0
51 Part protected by levees of an outside agency.....acres.....								
52 Land drained by tile only.....acres.....								
53 Length of these tile.....miles.....								
54 Part protected by levees of an outside agency.....acres.....								
55 Land drained by tile and own levees.....acres.....								
56 Length of these tile.....miles.....								
57 Length of these levees.....miles.....								
58 Part protected by levees of an outside agency.....acres.....								
59 Land drained by open ditches and tile.....acres.....								
60 Length of these open ditches.....miles.....								
61 Length of these tile.....miles.....								
62 Part protected by levees of an outside agency.....acres.....								
63 Land drained by open ditches, tile, and levees.....acres.....								
64 Length of these open ditches.....miles.....								
65 Length of these tile.....miles.....								
66 Length of these levees.....miles.....								
67 Part protected by levees of an outside agency.....acres.....								
68 Land in enterprises operating pumping plants <sup>4</sup> .....acres.....								9,980
69 Length of open ditches owned by these enterprises.....miles.....								4.8
70 Length of tile owned by these enterprises.....miles.....								210.0
71 Length of levees owned by these enterprises.....miles.....								27.5
72 Part protected by levees of an outside agency.....acres.....								

<sup>1</sup> For counties having less than 3 enterprises, statistics are shown only by written permission of each enterprise affected.

<sup>2</sup> Includes Atchison, Brown, Cloud, Cowley, Franklin, Harvey, Labette, Leavenworth, Marion, Nemaha, Osage, Pottawatomie, Riley, Saline, Sumner, and Wyandotte Counties in 1940; Atchison, Chase, Cowley, Doniphan, Franklin, Harvey, Jackson, Labette, Leavenworth, Marion, Montgomery, Nemaha, Osage, Pottawatomie, Republic, Riley, Saline, Sumner, Wabaunsee, and Wyandotte Counties in 1930; and Atchison, Chase, Doniphan, Douglas, Jackson, Labette, Marion, Pottawatomie, Riley, Saline, and Sedgwick Counties in 1920.

<sup>3</sup> Included in "Other counties."

<sup>4</sup> Data included in lines 68 to 72 are not included in data in lines 45 to 67.

## CENSUS OF DRAINAGE — KANSAS

207

COUNTY TABLE II.—DRAINAGE ENTERPRISES—WORKS AND CAPITAL INVESTED, 1940, 1930, AND 1920; AND MAINTENANCE AND OPERATION, AND FINANCIAL CONDITION, 1939

ITEM (See definitions in Introduction)		THE STATE	Chase <sup>1</sup>	Cherokee <sup>1</sup>	Clay <sup>1</sup>	Doniphan <sup>1</sup>	Douglas	Jackson	Jefferson
DRAINAGE WORKS									
1	Drainage enterprises.....number.....1940..	2 92	1	1	1	2	6	3	13
2	Open ditches:								
3	Completed.....miles.....1940..	381.4	2.2	0.5	3.5	12.5	12.0	13.0	38.6
4	.....1930..	324.7	(3)			(3)	9.8	(3)	28.6
5	.....1920..	138.4	(3)			(3)	(3)	(3)	18.3
6	Additional length authorized.....miles.....1940..								
7	Title drains:								
8	Completed.....miles.....1940..	210.5					0.5		1.5
9	.....1930..	212.1	(3)			(3)	0.5	(3)	1.5
10	.....1920..	213.0	(3)			(3)	(3)	(3)	0.2
11	Additional length authorized.....miles.....1940..								
12	Levees and dikes:								
13	Completed.....miles.....1940..	278.3	4.5	1.0		2.0	6.0	0.5	18.2
14	.....1930..	227.0				(3)	5.3	(3)	6.0
15	.....1920..	165.1	(3)			(3)	(3)	(3)	
16	Additional length authorized.....miles.....1940..								
17	Pumping plants:								
18	Engine capacity.....horsepower.....1940..	420							
19	.....1930..	120							
20	.....1920..	65							
21	Pump capacity.....gal. per min.....1940..	24,000							
22	.....1930..	12,000							
23	.....1920..	4,000							
24	Land served by pumps.....acres.....1940..	5,000							
25	.....1930..	2,000							
26	.....1920..	2,200							
27	Wells pumped for drainage.....number.....1940..								
28	.....1930..								
CAPITAL INVESTED									
29	Capital invested to January 1.....dollars.....1940..	3,733,919	28,000	1,500	1,500	71,000	37,085	99,700	240,828
30	.....1930..	2,701,082	(3)			(3)	53,275	(3)	238,940
31	.....1920..	936,508	(3)			(3)	(3)	(3)	127,692
32	Estimated cost when completed.....dollars.....1940..	3,833,919	28,000	1,500	1,500	71,000	37,085	99,700	240,828
33	.....1930..	2,721,082	(3)			(3)	53,275	(3)	238,940
34	.....1920..	1,210,353	(3)			(3)	(3)	(3)	127,692
35	Average cost per acre when completed.....dollars.....1940..	14.85	20.35	4.17	1.07	10.92	1.88	15.63	12.86
36	.....1930..	10.58	(3)			(3)	1.10	(3)	9.76
37	.....1920..	12.90	(3)			(3)	(3)	(3)	9.03
38	Invested in and required for completion, 1940:								
39	Enterprises having open ditches only.....dollars..	558,839			1,500	41,000	7,135	81,700	26,200
40	Average amount per acre.....dollars..	7.69			1.07	8.91	0.79	15.87	7.71
41	Enterprises having open ditches and levees.....dollars..	2,113,550	28,000	1,500		30,000	18,450	18,000	214,628
42	Average amount per acre.....dollars..	12.12	20.35	4.17		15.79	2.13	14.28	14.13
43	Enterprises having tile only.....dollars..								
44	Average amount per acre.....dollars..								
45	Enterprises having tile and levees.....dollars..								
46	Average amount per acre.....dollars..								
47	Enterprises having open ditches and tile.....dollars..								
48	Average amount per acre.....dollars..								
49	Enterprises having ditches, tile, and levees.....dollars..	11,500					11,600		
50	Average amount per acre.....dollars..	11.27					11.27		
51	Enterprises operating pumping plants.....dollars..	1,150,000							
52	Average amount per acre.....dollars..	115.23							
MAINTENANCE AND OPERATION									
53	Cost of maintenance and operation in 1939:								
54	By enterprises operating pumping plants.....dollars..	25,000							
55	Enterprises reporting.....number.....	1							
56	Land in these enterprises.....acres.....	6,500							
57	Average cost per acre.....dollars..	3.85							
58	By enterprises not operating pumping plants.....dollars..	17,038				300	(7)	660	800
59	Enterprises reporting.....number.....	49				2	2	3	5
60	Land in these enterprises.....acres.....	181,212				6,500	(7)	5,377	14,398
61	Average cost per acre.....dollars..	0.09				0.05	(7)	0.10	0.08
62	Federal aid in maintenance:								
63	Enterprises reporting.....number.....	6							1
64	Land in these enterprises.....acres.....	27,403							(7)
FINANCIAL CONDITION									
65	Drainage taxes collected in 1939.....dollars..	257,698					(7)	(7)	(7)
66	Enterprises reporting.....number.....	94					2	1	2
67	Land in these enterprises.....acres.....	145,817					(7)	(7)	(7)
68	Average amount collected per acre.....dollars..	1.77					(7)	(7)	(7)
69	Area delinquent in drainage taxes, Dec. 31, 1939.....acres....	5,737					(7)	(7)	(7)
70	Enterprises reporting.....number.....	10					1	1	1
71	Land in these enterprises.....acres.....	61,356					(7)	(7)	(7)
72	Portion delinquent in these enterprises.....percent..	9.4							
73	Total indebtedness, Dec. 31, 1939.....dollars..	1,806,105				18,000	(7)	(7)	(7)
74	Enterprises reporting.....number.....	20				1	2	2	1
75	Land in these enterprises.....acres.....	91,128				1,900	(7)	(7)	(7)
76	Average indebtedness per acre.....dollars..	19.82				8.42			
77	Indebtedness in arrears, Dec. 31, 1939.....dollars..	8,000							
78	Enterprises reporting.....number.....	2							
79	Land in these enterprises.....acres.....	10,329							
80	Average arrearage per acre.....dollars..	0.77							
81	Reduction of debt by refinancing, prior to 1940.....dollars..	105							
82	Enterprises reporting.....number.....	1							
83	Land in these enterprises.....acres.....	7,000							
84	Average reduction per acre.....dollars..	0.02							

<sup>1</sup>For counties having less than 3 enterprises, statistics are shown only by written permission of each enterprise affected. <sup>2</sup>An intercounty enterprise is counted in each county in which a part is located. The number of separate enterprises in the State is 88. <sup>3</sup>Included in "Other counties." <sup>4</sup>Data included in lines 48 and 47 are not included in data in lines 34 to 45. <sup>5</sup>Includes cost assessed against nonagricultural lands in Kansas City. <sup>6</sup>Not distributed by counties. <sup>7</sup>Where there are less than 3 enterprises reporting, data are included only in State totals, except as stated in footnote 1.

## CENSUS OF DRAINAGE—KANSAS

COUNTY TABLE II.—DRAINAGE ENTERPRISES—WORKS AND CAPITAL INVESTED, 1940, 1930, AND 1920; AND MAINTENANCE AND OPERATION, AND FINANCIAL CONDITION, 1939—Continued

ITEM (See definitions in Introduction)	Johnson <sup>1</sup>	McPherson	Montgomery <sup>1</sup>	Neosho	Sedgwick	Shawnee	Wabaunsee <sup>1</sup>	Other counties <sup>2</sup>
<b>DRAINAGE WORKS</b>								
1 Drainage enterprises.....number.....1940..	1	5	2	23	5	3	1	25
Open ditches:								
2 Completed.....miles.....1940..	2.4	43.0	9.3	58.9	31.5	17.5	3.0	132.6
3 ....."1930..		30.9	( <sup>3</sup> )	55.9	36.0	18.0	( <sup>3</sup> )	144.5
4 ....."1920..		8.3		58.9	( <sup>3</sup> )	2.6		50.3
5 Additional length authorized.....miles.....1940..								
File drains:								
6 Completed.....miles.....1940..			( <sup>3</sup> )					210.0
7 ....."1930..								210.0
8 ....."1920..				2.5	( <sup>3</sup> )			210.3
9 Additional length authorized.....miles.....1940..								
Levees and dikes:								
10 Completed.....miles.....1940..	1.5	18.0	7.0	104.1	22.0	42.0		51.5
11 ....."1930..		6.0	( <sup>3</sup> )	111.6		35.5		32.6
12 ....."1920..		9.5		119.8	( <sup>3</sup> )	6.0		29.8
13 Additional length authorized.....miles.....1940..								
Pumping plants:								
14 Engine capacity.....horsepower.....1940..								420
15 ....."1930..								120
16 ....."1920..								65
17 Pump capacity.....gal. per min.....1940..								24,000
18 ....."1930..								12,000
19 ....."1920..								4,000
20 Land served by pumps.....acres.....1940..								5,000
21 ....."1930..								2,000
22 ....."1920..								2,200
23 Wells pumped for drainage.....number.....1940..								
24 ....."1930..								
<b>CAPITAL INVESTED</b>								
25 Capital invested to January 1.....dollars.....1940..	5,000	236,710	47,672	402,169	332,000	302,290	4,500	1,923,965
26 ....."1930..		175,200	( <sup>3</sup> )	383,915	70,627	310,541	( <sup>3</sup> )	1,488,584
27 ....."1920..		28,500		122,450	( <sup>3</sup> )	220,500		437,368
28 Estimated cost when completed.....dollars.....1940..	5,000	236,710	47,672	402,169	332,000	302,290	4,500	2,023,965
29 ....."1930..		175,200	( <sup>3</sup> )	383,915	70,627	310,541	( <sup>3</sup> )	1,488,584
30 ....."1920..		43,500		122,450	( <sup>3</sup> )	232,500		684,211
31 Average cost per acre when completed.....dollars.....1940..	3.33	11.62	13.39	18.39	8.03	14.24	2.50	21.74
32 ....."1930..		10.68	( <sup>3</sup> )	17.11	2.23	13.80	( <sup>3</sup> )	16.34
33 ....."1920..		9.14		5.63	( <sup>3</sup> )	18.58		16.82
Invested in and required for completion, 1940:								
34 Enterprises having open ditches only.....dollars.....				3,855			4,500	382,949
35 Average amount per acre.....dollars.....				4.63			2.50	8.45
36 Enterprises having open ditches and levees.....dollars.....	5,000	236,710	47,672	398,314	332,000	302,290		481,016
37 Average amount per acre.....dollars.....	3.33	11.62	13.39	18.93	8.03	14.24		13.14
38 Enterprises having tile only.....dollars.....								
39 Average amount per acre.....dollars.....								
40 Enterprises having tile and levees.....dollars.....								
41 Average amount per acre.....dollars.....								
42 Enterprises having open ditches and tile.....dollars.....								
43 Average amount per acre.....dollars.....								
44 Enterprises having ditches, tile, and levees.....dollars.....								
45 Average amount per acre.....dollars.....								
46 Enterprises operating pumping plants.....dollars.....								1,150,000
47 Average amount per acre.....dollars.....								115.23
<b>MAINTENANCE AND OPERATION</b>								
Cost of maintenance and operation in 1939:								
48 By enterprises operating pumping plants.....dollars.....								
49 Enterprises reporting.....number.....								
50 Land in these enterprises.....acres.....								
51 Average cost per acre.....dollars.....		( <sup>3</sup> )	70	2,147	2,009	5,495		3,152
52 By enterprises not operating pumping plants.....dollars.....		( <sup>3</sup> )	2	14	4	3		12
53 Enterprises reporting.....number.....		( <sup>3</sup> )	2	14	4	3		60,987
54 Land in these enterprises.....acres.....		( <sup>3</sup> )	3,560	16,029	34,320	21,230		0.05
55 Average cost per acre.....dollars.....		( <sup>3</sup> )	0.20	0.15	0.06	0.28		
Federal aid in maintenance:								
56 Enterprises reporting.....number.....					( <sup>3</sup> )	1		3
57 Land in these enterprises.....acres.....					( <sup>3</sup> )	1		7,916
<b>FINANCIAL CONDITION</b>								
58 Drainage taxes collected in 1939.....dollars.....		( <sup>3</sup> )	1,022	3,044	24,987	( <sup>3</sup> )		213,006
59 Enterprises reporting.....number.....		1	1	10	3	2		12
60 Land in these enterprises.....acres.....		( <sup>3</sup> )	1,160	9,825	25,220	( <sup>3</sup> )		62,614
61 Average amount collected per acre.....dollars.....		( <sup>3</sup> )	0.88	0.31	0.99	( <sup>3</sup> )		3.40
62 Area delinquent in drainage taxes, Dec. 31, 1939.....acres.....					( <sup>3</sup> )	( <sup>3</sup> )		2,317
63 Enterprises reporting.....number.....					2	1		4
64 Land in these enterprises.....acres.....					( <sup>3</sup> )	( <sup>3</sup> )		16,309
65 Portion delinquent in these enterprises.....percent.....					( <sup>3</sup> )	( <sup>3</sup> )		14.2
66 Total indebtedness, Dec. 31, 1939.....dollars.....				( <sup>3</sup> )	158,000			1,587,248
67 Enterprises reporting.....number.....				2	3			9
68 Land in these enterprises.....acres.....				( <sup>3</sup> )	25,220			48,849
69 Average indebtedness per acre.....dollars.....				( <sup>3</sup> )	6.26			32.49
70 Indebtedness in arrears, Dec. 31, 1939.....dollars.....								
71 Enterprises reporting.....number.....								
72 Land in these enterprises.....acres.....								
73 Average arrearage per acre.....dollars.....								
74 Reduction of debt by refinancing, prior to 1940.....dollars.....								
75 Enterprises reporting.....number.....								
76 Land in these enterprises.....acres.....								
77 Average reduction per acre.....dollars.....								

<sup>1</sup>For counties having less than 3 enterprises, statistics are shown only by written permission of each enterprise affected. <sup>2</sup>Includes Atchison, Brown, Cloud, Cowley, Franklin, Harvey, Labette, Leavenworth, Marion, Nemaha, Osage, Pottawatomie, Riley, Saline, Sumner, and Wyandotte Counties in 1940; Atchison, Chase, Cowley, Doniphan, Franklin, Harvey, Jackson, Labette, Leavenworth, Marion, Montgomery, Nemaha, Osage, Pottawatomie, Republic, Riley, Saline, Sumner, and Wyandotte Counties in 1930; and Atchison, Chase, Doniphan, Douglas, Jackson, Labette, Marion, Pottawatomie, Riley, Saline, and Sedgwick Counties in 1920. <sup>3</sup>Included in "other counties." <sup>4</sup>Data included in lines 46 and 47 are not included in data in lines 34 to 45. <sup>5</sup>Includes cost assessed against nonagricultural lands in Kansas City. <sup>6</sup>Where there are less than 3 enterprises reporting, data are included only in State totals, except as stated in footnote 1.



## CENSUS OF DRAINAGE—KENTUCKY

STATE TABLE 1.—SUMMARY OF DRAINAGE FOR THE STATE: JAN. 1, 1940, 1930, AND 1920

ITEM (See definitions in Introduction)	CENSUS OF—			INCREASE OR DECREASE (—)			
	1940	1930	1920	1930-1940		1920-1930	
				Amount	Percent	Amount	Percent
Approximate land area of State.....acres.....	25,689,760	25,715,840	25,715,840	.....	.....	.....	.....
Land in drainage enterprises.....acres.....	465,270	585,625	358,480	-120,355	-20.6	227,145	63.4
Improved.....acres.....	376,370	445,613	245,334	-69,243	-15.5	200,279	81.6
Unimproved:							
Timber and cut-over.....acres.....	57,876	101,709	92,495	-43,833	-43.1	9,214	10.0
Other.....acres.....	31,024	38,303	20,651	-7,279	-19.0	17,652	85.5
Drainage sufficient for normal crop.....acres.....	386,620	428,883	( <sup>1</sup> )	-42,263	-9.8	.....	.....
Partly drained, for partial crop.....acres.....	46,422	109,440	( <sup>1</sup> )	-63,018	-57.6	.....	.....
Unfit to raise any crop for lack of drainage.....acres.....	32,228	47,302	<sup>2</sup> 69,413	-15,074	-31.9	-22,111	-31.8
In occupied farms.....acres.....	464,963	515,101	( <sup>1</sup> )	-50,138	-9.7	.....	.....
In planted crops.....acres.....	295,757	320,084	( <sup>1</sup> )	-24,327	-7.6	.....	.....
Idle.....acres.....	132,591	223,064	( <sup>1</sup> )	-90,473	-40.6	.....	.....
Available for settlement.....acres.....	.....	8,274	( <sup>1</sup> )	-8,274	-100.0	.....	.....
Open ditches, completed.....miles.....	1,231.8	1,204.8	664.5	27.0	2.2	540.3	81.3
Tile drains, completed.....miles.....	2.0	71.0	86.2	-69.0	-97.2	-15.2	-17.6
Drainage pumping plants, capacity.....horsepower.....	.....	.....	.....	.....	.....	.....	.....
.....gal. per min.....	.....	.....	.....	.....	.....	.....	.....
Capital invested in enterprises.....dollars.....	4,947,994	5,357,633	1,521,725	-409,639	-7.6	3,835,908	252.1
Average per acre.....dollars.....	10.63	9.15	4.24	1.48	16.2	4.91	115.8

<sup>1</sup>Not available.<sup>2</sup>Reported as "Swampy, subject to overflow, seeped, or alkali."

STATE TABLE 2.—AREA OF ENTERPRISES, BY SIZE: JAN. 1, 1940, 1930, AND 1920

[For intercounty enterprises the portion in each county is tabulated as a separate enterprise]

SIZE	AREA OF ENTERPRISES <sup>1</sup>			Land in enterprises <sup>2</sup> 1940
	1940	1930	1920	
	Acres	Acres	Acres	
All enterprises.....	515,617	626,408	358,480	465,270
Less than 100 acres.....	300	.....	.....	300
100 to 199 acres.....	619	795	1,651	474
200 to 499 acres.....	14,808	7,536	16,537	9,858
500 to 999 acres.....	27,088	36,505	23,143	21,981
1,000 to 1,999 acres.....	56,748	202,322	130,176	50,118
2,000 to 4,999 acres.....	119,617	.....	.....	105,078
5,000 to 9,999 acres.....	130,760	122,746	79,592	121,078
10,000 to 19,999 acres.....	58,070	200,998	107,381	56,070
20,000 to 49,999 acres.....	.....	.....	.....	.....
50,000 to 99,999 acres.....	107,606	55,606	.....	97,313

<sup>1</sup>The sum of the areas in the individual enterprises, without deduction for overlapping.<sup>2</sup>Overlapping eliminated by tabulating each enterprise according to its acreage not included in later enterprises.

STATE TABLE 3.—LAND AND CAPITAL INVESTED, BY CHARACTER OF ENTERPRISE, JAN. 1, 1940

CHARACTER OF ENTERPRISE	Land		Capital invested	
	Acres	Percent	Dollars	Percent
All enterprises.....	465,270	100.0	4,947,994	100.0
County drains.....	462,120	99.3	4,940,899	99.8
Individually owned projects.....	3,150	0.7	7,095	0.2

STATE TABLE 4.—LAND AND CAPITAL INVESTED, BY TYPE OF DRAINAGE: JAN. 1, 1940, 1930, AND 1920

TYPE OF DRAINAGE <sup>1</sup>	LAND IN ENTERPRISES						CAPITAL INVESTED IN ENTERPRISES					
	1940		1930		1920		1940		1930		1920	
	Acres	Percent	Acres	Percent	Acres	Percent	Dollars	Percent	Dollars	Percent	Dollars	Percent
All enterprises.....	465,270	100.0	585,625	100.0	358,480	100.0	4,947,994	100.0	5,357,633	100.0	1,521,725	100.0
Gravity drainage only by—												
Open ditches.....	464,650	99.9	563,025	96.1	346,745	96.7	4,932,586	99.7	5,065,717	94.6	1,415,029	92.9
Tile drains.....	.....	.....	117	( <sup>2</sup> )	117	( <sup>2</sup> )	.....	.....	1,679	( <sup>2</sup> )	1,079	0.1
Open ditches and tile drains...	620	0.1	22,483	3.8	11,618	3.2	15,408	0.3	289,937	5.4	104,717	6.9

<sup>1</sup>Each item includes those enterprises that have provided levees in addition to the kind of drains specified.<sup>2</sup>Less than one-tenth of 1 percent.

# CENSUS OF DRAINAGE — KENTUCKY

211

STATE TABLE 5.—LAND, CAPITAL INVESTED, AND AREA DELINQUENT IN DRAINAGE TAXES, BY ARREARAGE  
IN PAYMENT OF OBLIGATIONS: JAN. 1, 1940 AND 1930

FINANCIAL STATUS	LAND IN ENTERPRISES				CAPITAL INVESTED				AREA DELINQUENT <sup>1</sup>	
	1940		1930		1940		1930		1940	1930
	Acres 465,270	Percent 100.0	Acres 585,625	Percent 100.0	Dollars 4,947,994	Percent 100.0	Dollars 5,357,633	Percent 100.0	Acres 28,674	Acres 54,219
All enterprises.....										
Enterprises in arrears.....	103,532	22.2	209,821	35.8	1,844,413	37.3	2,678,800	50.0	16,926	51,200
With some delinquent land.....	48,543	10.4	104,864	17.9	1,000,035	20.2	1,669,585	31.2	16,923	51,200
With no delinquent land.....	54,989	11.8	71,000	12.1	844,378	17.1	779,074	14.5		
With no report on delinquency.....			33,957	5.8			230,241	4.3		
Enterprises not in arrears.....	361,738	77.8	375,804	64.2	3,103,581	62.7	2,678,733	50.0	11,748	3,019
With some delinquent land.....	86,917	18.7	41,815	7.2	555,157	11.2	437,428	8.2	11,748	3,019
With no delinquent land.....	274,821	59.1	314,564	53.7	2,548,424	51.5	2,124,456	39.6		
With no report on delinquency.....			10,425	3.3			116,849	2.2		
Enterprises not reporting on arrearage.....										
With some delinquent land.....										
With no delinquent land.....										
With no report on delinquency.....										

<sup>1</sup> If any land is delinquent in 2 or more overlapping enterprises, the acreage delinquent is too large by the amount of such duplication.

STATE TABLE 6.—LAND, CAPITAL INVESTED, INDEBTEDNESS, ARREARAGE IN PAYMENT OF BONDS, REDUCTION OF  
DEBT BY REFINANCING, AND ACREAGE DELINQUENT, 1940; DRAINAGE TAXES COLLECTED IN 1939; BY  
INDEBTEDNESS AND ARREARAGE, JAN. 1, 1940

FINANCIAL STATUS	Land in enterprises	Capital invested	Indebtedness	Arrearage in payment of bonds	Reduction of debt by refinancing	Delinquent in drainage taxes <sup>1</sup>	Drainage taxes collected in 1939
	Acres 465,270	Dollars 4,947,994	Dollars 758,606	Dollars 625,666	Dollars 225,535	Acres 28,674	Dollars 60,877
All enterprises.....							
Enterprises in debt.....	114,261	2,000,027	758,606	625,666	225,535	18,361	13,543
In arrears, amount of arrearage stated <sup>2</sup> .....	103,532	1,844,413	724,359	625,666	146,759	16,926	9,572
Collecting drainage taxes in 1939.....	53,708	1,079,128	534,418	476,328	146,759	16,926	9,572
No collections reported.....	49,824	765,285	189,941	149,338			
Not in arrears.....	10,729	156,214	34,247		78,776	1,435	3,071
Collecting drainage taxes in 1939.....	10,729	156,214	34,247		78,776	1,435	3,071
No collections reported.....							
Enterprises not in debt.....	351,009	2,947,367				10,313	47,334
Collecting drainage taxes in 1939.....	218,031	1,426,678				10,133	47,334
No collections reported.....	132,978	1,520,689				180	
Enterprises not reporting as to debt.....							
Collecting drainage taxes in 1939.....							
No collections reported.....							

<sup>1</sup> If any land is delinquent in 2 or more overlapping enterprises, the acreage delinquent is too large by the amount of such duplication.

<sup>2</sup> Includes 1 enterprise reporting in arrears with amount of arrearage not stated.

STATE TABLE 7.—LAND AND CAPITAL INVESTED, BY PRINCIPAL PURPOSE OF DRAINAGE, JAN. 1, 1940

PURPOSE OF DRAINAGE	Land		Capital invested	
	Acres 465,270	Percent 100.0	Dollars 4,947,994	Percent 100.0
All enterprises.....				
Improvement of land already in farms.....	426,162	91.6	4,741,114	95.8
Reclamation of swamp land not previously in farms.....	39,108	8.4	206,880	4.2

STATE TABLE 8.—LAND AND CAPITAL INVESTED, BY DATE OF ORGANIZATION, JAN. 1, 1940

DATE OF ORGANIZATION	Land <sup>1</sup>		Area of enterprises		Capital invested	
	Acres	Percent	Total acres <sup>2</sup>	Overlapped acres	Dollars	Percent
	465,270	100.0	515,617	50,347	4,947,994	100.0
All enterprises.....						
1890-1899.....	3,976	0.9	10,067	6,081	42,744	0.9
1900-1904.....	78,572	16.9	83,181	4,609	637,888	12.9
1905-1909.....	10,612	2.3	12,087	1,474	18,543	0.4
1910-1914.....	39,238	8.4	52,822	13,584	170,001	3.4
1915-1919.....	136,455	29.3	141,920	5,465	1,750,273	35.4
1920-1924.....	145,802	31.3	164,826	19,024	2,031,191	41.0
1925-1929.....	32,030	6.9	32,030		240,350	4.8
1930-1934.....	18,131	3.9	18,131		55,175	1.1
1935-1939.....	453	0.1	453		1,829	0.1

<sup>1</sup> Land included in more than 1 enterprise is tabulated only in the last organized.

<sup>2</sup> The sum of the areas of the individual enterprises.

## CENSUS OF DRAINAGE—KENTUCKY

STATE TABLE 9.—DRAINAGE CONDITION, DEVELOPMENT, AND USE OF LAND IN ENTERPRISES, BY DATE OF ORGANIZATION, 1939

DATE OF ORGANIZATION	Land in all enterprises <sup>1</sup>	DRAINAGE CONDITION				DEVELOPMENT				USE OF LAND				
		Drained		Partly drained	Undrained	Improved land		Timber and cut-over land	Other unimproved land	In occupied farms		In planted crops	Idle	Land available for settlement
		Acres	Acres	Per-cent	Acres	Acres	Acres	Per-cent	Acres	Acres	Per-cent	Acres	Acres	Acres
All enterprises..	465,270	386,620	83.1	46,422	32,228	376,370	80.9	57,876	31,024	464,663	98.9	295,767	132,591	.....
1890-1899.....	3,976	3,826	96.2	.....	150	3,726	93.7	250	.....	3,976	100.0	2,800	426	.....
1900-1904.....	78,572	78,302	99.6	160	110	77,413	98.5	432	727	78,572	100.0	58,737	2,599	.....
1905-1909.....	10,613	8,768	82.6	715	1,130	8,406	79.2	545	1,662	10,608	99.9	6,108	4,105	.....
1910-1914.....	39,238	34,229	87.2	3,105	1,904	34,514	88.0	1,300	3,424	39,238	100.0	26,165	8,290	.....
1915-1919.....	136,455	114,017	83.6	14,682	7,766	107,265	78.6	21,385	7,825	136,455	100.0	85,157	44,668	.....
1920-1924.....	145,802	98,456	67.5	26,950	20,396	97,604	66.9	31,729	16,469	145,802	100.0	78,984	66,418	.....
1925-1929.....	32,030	30,595	95.5	705	730	29,215	91.2	1,905	910	31,730	99.1	23,181	4,948	.....
1930-1934.....	18,131	17,981	99.2	100	50	17,781	98.1	350	.....	18,131	100.0	14,279	1,030	.....
1935-1939.....	453	446	98.4	5	2	448	98.4	.....	7	453	100.0	346	107	.....

<sup>1</sup>Land included in more than 1 enterprise is tabulated only in the last organized.

STATE TABLE 10.—COST OF OPERATION AND MAINTENANCE, BY TYPE OF DRAINAGE, 1939

TYPE OF DRAINAGE	Land in all enterprises	LAND REPORTING ON COST OF MAINTENANCE AND OPERATION			COST REPORTED		
		Total	Some cost	No cost	Total amount	Per acre on—	
						Total reporting	Area incurring
All enterprises.....	Acres 465,270	Acres 457,023	Acres 353,586	Acres 103,437	Dollars 64,992	Dollars 0.14	Dollars 0.18
Gravity drainage only.....	465,270	457,023	353,586	103,437	64,992	0.14	0.18
Open ditches only.....	464,650	456,403	353,586	102,817	64,992	0.14	0.18
Open ditches and tile drains.....	620	620	.....	620	.....	.....	.....

STATE TABLE 11.—LAND AND CAPITAL INVESTED, BY METHOD OF MAINTENANCE AND BY WHETHER MAINTENANCE IS SYSTEMATIC, JAN. 1, 1940

MAINTENANCE		Land		Capital invested	
		Acres	Percent	Dollars	Percent
All enterprises.....		465,270	100.0	4,947,994	100.0
Method:					
By district forces.....		383,389	82.4	3,475,766	70.2
By contract.....		13,593	2.9	158,547	3.2
Work apportioned to landowners.....		16,025	3.5	270,447	5.5
"None," or not reporting.....		52,263	11.2	1,043,234	21.1
Whether systematic:					
Reporting "yes".....		355,403	76.4	3,306,019	66.6
Reporting "no".....		109,867	23.6	1,641,975	33.2

STATE TABLE 12.—LAND, CAPITAL INVESTED, AND DRAINAGE WORKS, BY OWNERSHIP OF POWER EQUIPMENT FOR MAINTENANCE, 1940

ITEM	All enterprises	ENTERPRISES OWNING POWER EQUIPMENT	
		Amount	Percent
Land in enterprises.....	465,270	114,313	24.6
Capital invested.....	4,947,994	1,275,000	25.8
Drainage works:			
Open ditches.....	1,231.8	112.0	9.1
Tile drains.....	2.0	.....	.....
Levees.....	.....	.....	.....

STATE TABLE 13.—LAND, CAPITAL INVESTED, AND DRAINAGE WORKS, BY FEDERAL AGENCY GIVING AID IN MAINTENANCE, 1940

AGENCY	Land in enterprises	Capital invested	DRAINAGE WORKS		
			Ditches	Tile	Levees
All enterprises reporting Federal aid received.....	Acres 288,516	Dollars 3,084,793	Miles 603.1	Miles .....	Miles .....
Work Projects Administration.....	90,087	1,107,328	112.2	.....	.....
Civilian Conservation Corps.....	198,449	1,977,465	490.9	.....	.....

## CENSUS OF DRAINAGE—KENTUCKY

213

COUNTY TABLE I.—LAND IN DRAINAGE ENTERPRISES CLASSIFIED BY CONDITION AND BY USE, 1940, 1930, AND 1920; AND BY KIND OF WORKS, 1940

ITEM (See definitions in Introduction)		THE STATE	Daviess	Fulton <sup>1</sup>	Graves	Hancock	Henderson	Hopkins <sup>1</sup>
LAND AREA								
1	Approximate land area.....acres....1940..	25,669,760	298,240	131,200	358,400	119,680	281,600	355,200
2	Drainage enterprises.....number...1940..	<sup>2</sup> 160	46	1	4	11	13	1
3	Land in enterprises.....acres....1940..	465,270	115,429	379	16,649	14,856	37,959	9,356
4	.....1930..	585,625	170,265	( <sup>3</sup> )	15,867	12,959	78,889	22,503
5	.....1920..	358,480	61,477	( <sup>3</sup> )	( <sup>3</sup> )	10,758	48,304	15,219
6	Area of all enterprises, overlapping included.....acres....1940..	515,617	165,168	379	16,649	14,856	37,959	9,356
7	Amount of overlapping.....acres....1940..	50,347	49,739					
CONDITION AND USE OF LAND								
8	Land with drainage sufficient for normal crop.....acres....1940..	386,620	101,725	334	10,549	12,456	37,524	8,106
9	.....1930..	428,683	123,333	( <sup>3</sup> )	13,729	11,326	49,700	14,695
10	Increase or decrease (-), 1930-1940.....acres.....	-42,063	-21,608		-3,180	1,130	-12,176	-6,589
11	.....percent.....	-9.8	-17.5		-23.2	10.0	-24.5	-44.8
12	Land undrained, unfit for any crop.....acres....1940..	32,228	2,831	15	2,656	677	360	500
13	.....1930..	47,302	13,831	( <sup>3</sup> )	1,086	100	1,350	500
14	Increase or decrease (-), 1930-1940.....acres.....	-15,074	-11,000		1,570	577	-900	
15	.....percent.....	-31.9	-79.5		144.6	577.0	-73.3	
16	Land partly drained, for partial crop.....acres....1940..	46,422	10,873	30	3,444	1,723	75	750
17	.....1930..	109,440	33,101	( <sup>3</sup> )	1,052	1,533	27,839	7,408
18	Increase or decrease (-), 1930-1940.....acres.....	-63,018	-22,228		2,392	190	-27,764	-6,658
19	.....percent.....	-57.6	-67.2		227.4	12.4	-89.7	-89.9
20	Improved land.....acres....1940..	376,370	102,234	199	8,913	12,770	35,334	5,856
21	.....1930..	445,613	119,627	( <sup>3</sup> )	9,412	11,244	69,052	16,848
22	.....1920..	245,334	58,004		( <sup>3</sup> )	3,987	33,463	6,888
Unimproved land:								
23	Woodland and cut-over land.....acres....1940..	57,876	8,571	180	5,115	1,057	2,315	3,000
24	.....1930..	101,709	30,964	( <sup>3</sup> )	3,926	1,595	8,537	3,630
25	.....1920..	92,495	4,877		( <sup>3</sup> )	2,257	7,349	7,109
26	Other unimproved land.....acres....1940..	31,024	4,624		2,621	1,029	310	500
27	.....1930..	38,303	19,674		2,529	130	1,300	2,155
28	.....1920..	20,651	796		( <sup>3</sup> )	4,514	7,492	1,222
29	Land in occupied farms.....acres....1940..	464,963	115,429	379	16,649	14,849	37,659	9,356
30	.....1930..	515,101	135,063	( <sup>3</sup> )	14,179	12,521	78,889	15,425
31	Increase or decrease (-), 1930-1940.....acres.....	-50,138	19,634		2,470	2,328	41,230	-6,069
32	.....percent.....	-9.7	14.5		17.4	18.6	52.3	-39.3
33	Land in planted crops.....acres....1940..	295,757	79,380	180	7,255	11,372	27,811	5,856
34	.....1930..	320,084	107,875	( <sup>3</sup> )	7,820	9,366	32,000	7,100
35	Increase or decrease (-), 1930-1940.....acres.....	-24,327	28,495		-565	2,004	-4,189	-1,244
36	.....percent.....	-7.6	26.4		-7.2	21.4	-13.1	-17.5
37	Land idle.....acres....1940..	132,591	38,049	199	8,393	3,484	3,826	3,500
38	.....1930..	223,064	43,463	( <sup>3</sup> )	7,765	3,560	46,889	13,603
39	Increase or decrease (-), 1930-1940.....acres.....	-90,473	-7,414		1,638	-76	-43,063	-10,103
40	.....percent.....	-40.6	-17.0		21.1	-2.1	-81.8	-74.3
41	Land available for settlement.....acres....1940..							
42	.....1930..	8,274	50	( <sup>3</sup> )	1,617			
43	Increase or decrease (-), 1930-1940.....acres.....	-8,274	-50		-1,617			
44	.....percent.....	-100.0	-100.0		-100.0			
LAND CLASSIFIED BY WORKS, 1940								
45	Land drained by open ditches only.....acres.....	464,650	114,809	379	16,649	14,856	37,959	9,356
46	Length of these ditches.....miles.....	1,228.6	493.9	3.0	32.3	59.3	73.2	12.0
47	Part protected by levees of an outside agency.....acres.....							
48	Land drained by open ditches and own levees.....acres.....							
49	Length of these ditches.....miles.....							
50	Length of these levees.....miles.....							
51	Part protected by levees of an outside agency.....acres.....							
52	Land drained by tile only.....acres.....							
53	Length of these tile.....miles.....							
54	Part protected by levees of an outside agency.....acres.....							
55	Land drained by tile and own levees.....acres.....							
56	Length of these tile.....miles.....							
57	Length of these levees.....miles.....							
58	Part protected by levees of an outside agency.....acres.....							
59	Land drained by open ditches and tile.....acres.....	620	620					
60	Length of these open ditches.....miles.....	3.2	3.2					
61	Length of these tile.....miles.....	2.0	2.0					
62	Part protected by levees of an outside agency.....acres.....							
63	Land drained by open ditches, tile, and levees.....acres.....							
64	Length of these open ditches.....miles.....							
65	Length of these tile.....miles.....							
66	Length of these levees.....miles.....							
67	Part protected by levees of an outside agency.....acres.....							
68	Land in enterprises operating pumping plants.....acres.....							
69	Length of open ditches owned by these enterprises.....miles.....							
70	Length of tile owned by these enterprises.....miles.....							
71	Length of levees owned by these enterprises.....miles.....							
72	Part protected by levees of an outside agency.....acres.....							

<sup>1</sup>For counties having less than 3 enterprises reporting, statistics are shown only by written permission of each enterprise affected.<sup>2</sup>An intercounty enterprise is counted in each county in which a part is located. The number of separate enterprises in the State is 144.<sup>3</sup>Included in "Other counties."

## CENSUS OF DRAINAGE—KENTUCKY

COUNTY TABLE I.—LAND IN DRAINAGE ENTERPRISES CLASSIFIED BY CONDITION AND BY USE, 1940, 1930, AND 1920; AND BY KIND OF WORKS, 1940—Continued

ITEM (See definitions in Introduction)		Jefferson	McLean	Muhlenberg	Ohio	Union	Webster	Other counties <sup>1</sup>
LAND AREA								
1	Approximate land area.....acres....1940..	240,000	164,480	308,480	381,440	219,520	216,960	1,424,000
2	Drainage enterprises.....number....1940..	3	10	5	13	16	27	10
3	Land in enterprises.....acres....1940..	69,000	32,759	18,715	21,673	49,664	43,458	35,373
4	.....1930..	63,000	40,000	( <sup>2</sup> )	22,164	50,250	36,250	73,288
5	.....1920..	90,000	18,485	( <sup>2</sup> )	10,320	32,722	42,391	28,904
6	Area of all enterprises, overlapping included.....acres....1940..	69,000	33,367	18,715	21,673	49,664	43,458	35,373
7	Amount of overlapping.....acres....1940..	.....	608	.....	.....	.....	.....	.....
CONDITION AND USE OF LAND								
8	Land with drainage sufficient for normal crop.....acres....1940..	69,000	17,828	13,015	13,685	48,655	29,877	23,868
9	.....1930..	60,000	21,098	( <sup>2</sup> )	22,164	35,050	29,350	48,438
10	Increase or decrease (-), 1930-1940.....acres.....	9,000	-3,272	.....	-8,479	13,605	527	-24,570
11	.....percent.....	15.0	-15.5	.....	-38.2	38.8	1.8	-50.7
12	Land undrained, unfit for any crop.....acres....1940..	.....	9,613	3,518	3,663	1,009	3,869	3,517
13	.....1930..	3,000	8,407	.....	.....	200	1,675	17,153
14	Increase or decrease (-), 1930-1940.....acres.....	-3,000	1,206	3,518	3,663	809	2,194	-13,636
15	.....percent.....	-100.0	14.3	.....	.....	404.5	131.0	-79.5
16	Land partly drained, for partial crop.....acres....1940..	.....	5,320	2,182	4,325	.....	9,712	7,088
17	.....1930..	.....	10,585	( <sup>2</sup> )	.....	15,000	5,225	7,697
18	Increase or decrease (-), 1930-1940.....acres.....	.....	-5,265	.....	4,325	-15,000	4,487	291
19	.....percent.....	.....	-49.7	.....	.....	-100.0	85.9	3.5
20	Improved land.....acres....1940..	69,000	15,306	13,115	13,795	48,263	28,561	22,524
21	.....1930..	56,000	26,898	( <sup>2</sup> )	14,217	44,200	31,525	46,590
22	.....1920..	45,000	13,708	( <sup>2</sup> )	7,657	29,294	32,984	16,348
Unimproved land:								
23	Woodland and cut-over land.....acres....1940..	.....	10,123	4,118	5,190	442	7,228	10,537
24	.....1930..	6,000	11,079	( <sup>2</sup> )	5,723	6,050	4,275	10,060
25	.....1920..	40,000	4,642	( <sup>2</sup> )	1,838	3,428	8,809	12,386
26	Other unimproved land.....acres....1940..	.....	6,890	1,482	2,688	959	7,069	2,312
27	.....1930..	1,000	2,113	( <sup>2</sup> )	2,224	.....	450	6,738
28	.....1920..	5,000	134	( <sup>2</sup> )	825	.....	498	170
29	Land in occupied farms.....acres....1940..	69,000	32,759	18,715	21,673	49,664	43,458	35,373
30	.....1930..	63,000	26,897	( <sup>2</sup> )	20,437	50,250	36,150	62,290
31	Increase or decrease (-), 1930-1940.....acres.....	6,000	5,862	.....	1,236	-586	7,308	-26,917
32	.....percent.....	9.5	21.8	.....	6.0	-1.2	20.2	-43.2
33	Land in planted crops.....acres....1940..	52,000	14,899	11,717	10,508	37,596	20,084	17,099
34	.....1930..	53,000	20,813	( <sup>2</sup> )	11,510	23,100	17,800	29,098
35	Increase or decrease (-), 1930-1940.....acres.....	-1,000	-5,914	.....	-1,002	14,496	2,284	-12,599
36	.....percent.....	-1.9	-28.4	.....	-8.7	62.8	12.8	-42.4
37	Land idle.....acres....1940..	.....	17,713	6,998	10,765	1,390	20,891	18,274
38	.....1930..	6,000	14,241	( <sup>2</sup> )	8,654	27,150	17,850	33,699
39	Increase or decrease (-), 1930-1940.....acres.....	-6,000	3,472	.....	2,111	-25,751	3,141	-15,625
40	.....percent.....	-100.0	24.4	.....	24.4	-84.8	17.6	-46.1
41	Land available for settlement.....acres....1940..	.....	.....	.....	.....	.....	.....	.....
42	.....1930..	.....	309	.....	.....	.....	.....	6,298
43	Increase or decrease (-), 1930-1940.....acres.....	.....	-309	.....	.....	.....	.....	-6,298
44	.....percent.....	.....	-100.0	.....	.....	.....	.....	-100.0
LAND CLASSIFIED BY WORKS, 1940								
45	Land drained by open ditches only.....acres.....	69,000	32,759	18,715	21,673	49,664	43,458	35,373
46	Length of these ditches.....miles.....	77.0	137.6	55.4	63.5	114.0	75.8	72.6
47	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....	.....
48	Land drained by open ditches and own levees.....acres.....	.....	.....	.....	.....	.....	.....	.....
49	Length of these ditches.....miles.....	.....	.....	.....	.....	.....	.....	.....
50	Length of these levees.....miles.....	.....	.....	.....	.....	.....	.....	.....
51	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....	.....
52	Land drained by tile only.....acres.....	.....	.....	.....	.....	.....	.....	.....
53	Length of these tile.....miles.....	.....	.....	.....	.....	.....	.....	.....
54	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....	.....
55	Land drained by tile and own levees.....acres.....	.....	.....	.....	.....	.....	.....	.....
56	Length of these tile.....miles.....	.....	.....	.....	.....	.....	.....	.....
57	Length of these levees.....miles.....	.....	.....	.....	.....	.....	.....	.....
58	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....	.....
59	Land drained by open ditches and tile.....acres.....	.....	.....	.....	.....	.....	.....	.....
60	Length of these open ditches.....miles.....	.....	.....	.....	.....	.....	.....	.....
61	Length of these tile.....miles.....	.....	.....	.....	.....	.....	.....	.....
62	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....	.....
63	Land drained by open ditches, tile, and levees.....acres.....	.....	.....	.....	.....	.....	.....	.....
64	Length of these open ditches.....miles.....	.....	.....	.....	.....	.....	.....	.....
65	Length of these tile.....miles.....	.....	.....	.....	.....	.....	.....	.....
66	Length of these levees.....miles.....	.....	.....	.....	.....	.....	.....	.....
67	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....	.....
68	Land in enterprises operating pumping plants.....acres.....	.....	.....	.....	.....	.....	.....	.....
69	Length of open ditches owned by these enterprises.....miles.....	.....	.....	.....	.....	.....	.....	.....
70	Length of tile owned by these enterprises.....miles.....	.....	.....	.....	.....	.....	.....	.....
71	Length of levees owned by these enterprises.....miles.....	.....	.....	.....	.....	.....	.....	.....
72	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....	.....

<sup>1</sup>Includes Ballard, Bullitt, Butler, Carlisle, Hickman, McCracken, Marshall, and Spencer Counties in 1940; Ballard, Bullitt, Carlisle, Fulton, Hickman, McCracken, Marshall, Muhlenberg, and Spencer Counties in 1930; and Ballard, Bullitt, Carlisle, Graves, Hickman, Lewis, McCracken, Marshall, Muhlenberg, and Spencer Counties in 1920.

<sup>2</sup>Included in "Other counties."

## CENSUS OF DRAINAGE—KENTUCKY

215

COUNTY TABLE II.—DRAINAGE ENTERPRISES—WORKS AND CAPITAL INVESTED, 1940, 1930, AND 1920; AND MAINTENANCE AND OPERATION, AND FINANCIAL CONDITION, 1939

ITEM (See definitions in Introduction)	THE STATE	Daviess	Fulton <sup>1</sup>	Graves	Hancock	Henderson	Hopkins <sup>1</sup>
<b>DRAINAGE WORKS</b>							
1 Drainage enterprises.....number.....1940..	2160	46	1	4	11	13	1
2 Open ditches:							
3 Completed.....miles.....1940..	1,231.8	457.1	3.0	32.3	58.3	73.2	12.0
4 ....."1930..	1,204.8	339.7	( <sup>3</sup> )	36.7	55.2	106.0	48.5
5 ....."1920..	664.5	205.1		( <sup>3</sup> )	19.1	79.1	13.2
6 Additional length authorized.....miles.....1940..							
7 Tile drains:							
8 Completed.....miles.....1940..	2.0	2.0					
9 ....."1930..	71.0	5.3					44.0
10 ....."1920..	86.2	3.1		( <sup>3</sup> )		10.0	44.0
11 Additional length authorized.....miles.....1940..							
12 Levees and dikes:							
13 Completed.....miles.....1940..							
14 ....."1930..							
15 ....."1920..	0.2						
16 Additional length authorized.....miles.....1940..							
17 Pumping plants:							
18 Engine capacity.....horsepower.....1940..							
19 ....."1930..							
20 ....."1920..							
21 Pump capacity.....gal. per min.....1940..							
22 ....."1930..							
23 ....."1920..							
24 Land served by pumps.....acres.....1940..							
25 ....."1930..							
26 ....."1920..							
27 Wells pumped for drainage.....number.....1940..							
28 ....."1930..							
29 ....."1920..							
<b>CAPITAL INVESTED</b>							
25 Capital invested to January 1.....dollars.....1940..	4,947,994	1,418,069	13,737	378,558	215,240	193,237	31,400
26 ....."1930..	5,357,633	1,339,874	( <sup>3</sup> )	304,537	238,537	389,465	142,728
27 ....."1920..	1,521,725	249,550		( <sup>3</sup> )	37,942	189,520	31,016
28 Estimated cost when completed.....dollars.....1940..	4,947,994	1,418,069	13,737	378,558	215,240	193,237	31,400
29 ....."1930..	5,357,633	1,339,874	( <sup>3</sup> )	304,537	238,537	389,465	142,728
30 ....."1920..	1,520,996	289,555		( <sup>3</sup> )	222,120	197,571	52,447
31 Average cost per acre when completed.....dollars.....1940..	10.63	12.28	36.24	22.74	14.49	5.09	3.36
32 ....."1930..	8.15	7.87	( <sup>3</sup> )	19.19	15.41	4.04	6.81
33 ....."1920..	5.08	4.71		( <sup>3</sup> )	20.55	4.09	3.45
34 Invested in and required for completion, 1940:							
35 Enterprises having open ditches only.....dollars..	4,932,586	1,402,061	13,737	378,558	215,240	193,237	31,400
36 Average amount per acre.....dollars.....	10.62	12.22	36.24	22.74	14.49	5.09	3.36
37 Enterprises having open ditches and levees.....dollars..							
38 Average amount per acre.....dollars.....							
39 Enterprises having tile only.....dollars.....							
40 Average amount per acre.....dollars.....							
41 Enterprises having tile and levees.....dollars.....							
42 Average amount per acre.....dollars.....							
43 Enterprises having open ditches and tile.....dollars..	15,408	15,408					
44 Average amount per acre.....dollars.....	24.85	24.85					
45 Enterprises having ditches, tile, and levees.....dollars..							
46 Average amount per acre.....dollars.....							
47 Enterprises operating pumping plants.....dollars.....							
48 Average amount per acre.....dollars.....							
<b>MAINTENANCE AND OPERATION</b>							
48 Cost of maintenance and operation in 1939:							
49 By enterprises operating pumping plants.....dollars..							
50 Enterprises reporting.....number.....							
51 Land in these enterprises.....acres.....							
52 Average cost per acre.....dollars.....							
53 By enterprises not operating pumping plants.....dollars..	64,992	10,597	26	879	( <sup>3</sup> )	4,559	3,665
54 Enterprises reporting.....number.....	90	3	1	4	2	11	1
55 Land in these enterprises.....acres.....	353,588	47,810	379	16,649	( <sup>3</sup> )	33,579	9,356
56 Average cost per acre.....dollars.....	0.18	0.22	0.07	0.05	( <sup>3</sup> )	0.14	0.39
57 Federal aid in maintenance:							
58 Enterprises reporting.....number.....	69	32		1	3	8	1
59 Land in these enterprises.....acres.....	288,515	90,248		( <sup>4</sup> )	2,468	28,938	9,356
<b>FINANCIAL CONDITION</b>							
58 Drainage taxes collected in 1939.....dollars..	60,877	2,585	265	4,953	1,797	5,041	2,738
59 Enterprises reporting.....number.....	87	4	1	4	3	10	1
60 Land in these enterprises.....acres.....	282,468	16,043	379	16,649	2,468	31,079	9,356
61 Average amount collected per acre.....dollars..	0.22	0.16	0.70	0.30	0.73	0.18	0.29
62 Area delinquent in drainage taxes, Dec. 31, 1939.....acres...	28,674	( <sup>4</sup> )	116	5,811		1,966	1,793
63 Enterprises reporting.....number.....	51	1	1	4		9	1
64 Land in these enterprises.....acres.....	135,469	( <sup>4</sup> )	379	16,649		29,934	9,356
65 Portion delinquent in these enterprises.....percent..	21.2	( <sup>4</sup> )	30.6	34.9		6.6	19.2
66 Total indebtedness, Dec. 31, 1939.....dollars..	758,606	2,545	3,087	157,950	( <sup>4</sup> )	( <sup>4</sup> )	
67 Enterprises reporting.....number.....	33	3	1	4	1	2	
68 Land in these enterprises.....acres.....	114,261	4,102	379	16,649	( <sup>4</sup> )	( <sup>4</sup> )	
69 Average indebtedness per acre.....dollars.....	6.64	0.62	8.14	9.49	( <sup>4</sup> )	( <sup>4</sup> )	
70 Indebtedness in arrears, Dec. 31, 1939.....dollars..	625,666	2,277		143,540	( <sup>3</sup> )		
71 Enterprises reporting.....number.....	25	3		3	1		
72 Land in these enterprises.....acres.....	103,532	4,102		15,783	( <sup>3</sup> )		
73 Average arrearage per acre.....dollars.....	( <sup>5</sup> )	0.56		9.11	( <sup>3</sup> )		
74 Reduction of debt by refinancing, prior to 1940.....dollars..	225,535		7,720	( <sup>3</sup> )	2		
75 Enterprises reporting.....number.....	6		1	( <sup>3</sup> )			
76 Land in these enterprises.....acres.....	21,029		379	( <sup>3</sup> )			
77 Average reduction per acre.....dollars.....	10.72		20.37	( <sup>3</sup> )			

<sup>1</sup>For counties having less than 3 enterprises reporting, statistics are shown only by written permission of each enterprise affected.<sup>2</sup>An intercounty enterprise is counted in each county in which a part is located. The number of separate enterprises in the State is 144.<sup>3</sup>Included in "Other counties."<sup>4</sup>Where there are less than 3 enterprises reporting, data are included only in State totals, except as stated in footnote 1.<sup>5</sup>Not computed because acreage of 1 enterprise is included for which amount of arrearage was not reported.

## CENSUS OF DRAINAGE—KENTUCKY

COUNTY TABLE II.—DRAINAGE ENTERPRISES—WORKS AND CAPITAL INVESTED, 1940, 1930, AND 1920; AND MAINTENANCE AND OPERATION, AND FINANCIAL CONDITION, 1939—Continued

ITEM (See definitions in Introduction)	Jefferson	McLean	Muhlenberg	Ohio	Union	Webster	Other counties <sup>1</sup>
<b>DRAINAGE WORKS</b>							
1 Drainage enterprises.....number.....1940..	3	10	5	13	16	27	10
Open ditches:							
2 Completed.....miles.....1940..	77.0	137.6	55.4	63.5	114.0	75.8	72.6
3 ....."1930..	85.0	120.6	( <sup>2</sup> )	81.3	73.5	132.2	126.1
4 ....."1920..	38.5	76.6	( <sup>2</sup> )	24.4	64.3	85.7	58.5
5 Additional length authorized.....miles.....1940..							
Tile drains:							
6 Completed.....miles.....1940..							
7 ....."1930..		2.8			18.9		
8 ....."1920..		0.2	( <sup>2</sup> )		18.9		10.0
9 Additional length authorized.....miles.....1940..							
Levees and dikes:							
10 Completed.....miles.....1940..							
11 ....."1930..							
12 ....."1920..					0.2		
13 Additional length authorized.....miles.....1940..							
Pumping plants:							
14 Engine capacity.....horsepower.....1940..							
15 ....."1930..							
16 ....."1920..							
17 Pump capacity.....gal. per min.....1940..							
18 ....."1930..							
19 ....."1920..							
20 Land served by pumps.....acres.....1940..							
21 ....."1930..							
22 ....."1920..							
23 Wells pumped for drainage.....number.....1940..							
24 ....."1930..							
<b>CAPITAL INVESTED</b>							
25 Capital invested to January 1.....dollars.....1940..	600,000	447,746	183,939	251,393	310,004	225,087	679,584
26 ....."1930..	753,000	542,601	( <sup>2</sup> )	230,286	311,801	151,476	953,198
27 ....."1920..	175,000	194,076	( <sup>2</sup> )	46,600	267,568	129,609	201,625
28 Estimated cost when completed.....dollars.....1940..	600,000	447,746	183,939	251,393	310,004	225,087	679,584
29 ....."1930..	753,000	542,601	( <sup>2</sup> )	230,286	311,801	151,476	953,198
30 ....."1920..	197,000	202,992	( <sup>2</sup> )	46,600	267,568	129,609	216,625
31 Average cost per acre when completed.....dollars.....1940..	8.70	13.67	9.83	11.60	6.24	5.18	19.21
32 ....."1930..	11.95	13.53	( <sup>2</sup> )	10.39	6.20	4.18	13.01
33 ....."1920..	2.19	10.98	( <sup>2</sup> )	4.41	8.18	3.06	7.49
Invested in and required for completion, 1940:							
34 Enterprises having open ditches only.....dollars..	600,000	447,746	183,939	251,393	310,004	225,087	679,584
35 Average amount per acre.....dollars.....	8.70	13.67	9.83	11.60	6.24	5.18	19.21
36 Enterprises having open ditches and levees.....dollars..							
37 Average amount per acre.....dollars.....							
38 Enterprises having tile only.....dollars.....							
39 Average amount per acre.....dollars.....							
40 Enterprises having tile and levees.....dollars.....							
41 Average amount per acre.....dollars.....							
42 Enterprises having open ditches and tile.....dollars.....							
43 Average amount per acre.....dollars.....							
44 Enterprises having ditches, tile, and levees.....dollars.....							
45 Average amount per acre.....dollars.....							
46 Enterprises operating pumping plants.....dollars.....							
47 Average amount per acre.....dollars.....							
<b>MAINTENANCE AND OPERATION</b>							
Cost of maintenance and operation in 1939:							
48 By enterprises operating pumping plants.....dollars..							
49 Enterprises reporting.....number.....							
50 Land in these enterprises.....acres.....							
51 Average cost per acre.....dollars.....							
52 By enterprises not operating pumping plants.....dollars..	25,000	1,634	534	2,711	6,948	5,528	3,015
53 Enterprises reporting.....number.....	3	10	5	8	16	19	7
54 Land in these enterprises.....acres.....	69,000	31,632	18,715	13,453	40,664	34,478	28,771
55 Average cost per acre.....dollars.....	0.36	0.05	0.03	0.20	0.14	0.16	0.10
Federal aid in maintenance:							
56 Enterprises reporting.....number.....	3	3	2	2	6	5	3
57 Land in these enterprises.....acres.....	69,000	15,629	( <sup>2</sup> )	( <sup>2</sup> )	14,532	25,995	14,706
<b>FINANCIAL CONDITION</b>							
58 Drainage taxes collected in 1939.....dollars.....	25,000	887		2,711	7,699	2,841	3,760
59 Enterprises reporting.....number.....	3	4		8	16	26	7
60 Land in these enterprises.....acres.....	69,000	5,453		13,453	40,664	42,558	26,363
61 Average amount collected per acre.....dollars.....	0.36	0.16		0.20	0.16	0.07	0.14
62 Area delinquent in drainage taxes, Dec. 31, 1939.....acres.....		( <sup>2</sup> )			( <sup>2</sup> )	8,524	8,792
63 Enterprises reporting.....number.....		2			1	25	7
64 Land in these enterprises.....acres.....		( <sup>2</sup> )			( <sup>2</sup> )	41,538	26,363
65 Portion delinquent in these enterprises.....percent.....		( <sup>2</sup> )			( <sup>2</sup> )	20.5	33.3
66 Total indebtedness, Dec. 31, 1939.....dollars.....		116,353	( <sup>2</sup> )	17,837	750	( <sup>2</sup> )	398,796
67 Enterprises reporting.....number.....		6	1	3	3	1	8
68 Land in these enterprises.....acres.....		23,294	( <sup>2</sup> )	7,781	2,400	( <sup>2</sup> )	32,873
69 Average indebtedness per acre.....dollars.....		4.99	( <sup>2</sup> )	2.29	0.31	( <sup>2</sup> )	12.13
70 Indebtedness in arrears, Dec. 31, 1939.....dollars.....		69,672	( <sup>2</sup> )	17,837		( <sup>2</sup> )	<sup>3</sup> 372,340
71 Enterprises reporting.....number.....		6	1	3		1	7
72 Land in these enterprises.....acres.....		23,294	( <sup>2</sup> )	7,781		( <sup>2</sup> )	<sup>3</sup> 52,592
73 Average arrearage per acre.....dollars.....		3.85	( <sup>2</sup> )	2.29		( <sup>2</sup> )	( <sup>2</sup> )
74 Reduction of debt by refinancing, prior to 1940.....dollars.....							217,815
75 Enterprises reporting.....number.....							3
76 Land in these enterprises.....acres.....							20,690
77 Average reduction per acre.....dollars.....							10.55

<sup>1</sup> Includes Ballard, Bullitt, Butler, Carlisle, Hickman, McCracken, Marshall, and Spencer Counties in 1940; Ballard, Bullitt, Carlisle, Fulton, Hickman, McCracken, Marshall, Muhlenberg, and Spencer Counties in 1930; and Ballard, Bullitt, Carlisle, Graves, Hickman, Lewis, McCracken, Marshall, Muhlenberg, and Spencer Counties in 1920.

<sup>2</sup> Included in "Other counties." <sup>3</sup> Where there are less than 3 enterprises reporting, data are included only in State totals, except as stated in footnote 1 on page 215.

<sup>4</sup> Amount not reported. <sup>5</sup> Includes data for Hancock, Muhlenberg, and Webster Counties with those named in footnote 1. <sup>6</sup> Not computed because acreage of 1 enterprise is included for which amount of arrearage was not reported.



## CENSUS OF DRAINAGE—LOUISIANA

STATE TABLE 1.—SUMMARY OF DRAINAGE FOR THE STATE: JAN. 1, 1940, 1930, AND 1920

ITEM (See definitions in Introduction)	CENSUS OF—			INCREASE OR DECREASE (—)			
	1940	1930	1920	1930-1940		1920-1930	
				Amount	Percent	Amount	Percent
Approximate land area of State.....acres.....	28,013,280	29,061,700	29,061,700	.....	.....	.....	.....
Land in drainage enterprises.....acres.....	4,219,624	3,655,483	2,266,328	564,141	15.4	1,389,155	61.3
Improved.....acres.....	2,597,311	2,207,737	1,269,391	329,574	14.5	998,346	78.6
Unimproved:							
Timber and cut-over.....acres.....	943,921	746,560	467,822	197,361	26.4	278,738	59.6
Other.....acres.....	678,389	641,186	529,115	37,203	5.8	112,071	21.2
Drainage sufficient for normal crop.....acres.....	3,172,725	2,486,972	( <sup>1</sup> )	685,753	27.0	.....	.....
Partly drained, for partial crop.....acres.....	317,411	381,622	( <sup>1</sup> )	-64,211	-16.8	.....	.....
Unfit to raise any crop for lack of drainage.....acres.....	729,488	786,889	<sup>2</sup> 569,189	-57,401	-7.3	217,700	38.2
In occupied farms.....acres.....	2,512,250	2,571,531	( <sup>1</sup> )	-59,281	-2.3	.....	.....
In planted crops.....acres.....	1,356,366	1,822,020	( <sup>1</sup> )	-466,254	-25.6	.....	.....
Idle.....acres.....	556,011	1,348,437	( <sup>1</sup> )	-692,426	-51.4	.....	.....
Available for settlement.....acres.....	160,269	338,867	( <sup>1</sup> )	-178,598	-52.7	.....	.....
Open ditches, completed.....miles.....	7,105.5	7,701.2	1,771.6	-595.7	-7.7	5,929.0	334.7
Tile drains, completed.....miles.....	6.0	2.0	0.2	4.0	200.0	1.8	900.0
Drainage pumping plants, capacity.....horsepower.....	11,041	6,495	7,665	4,546	70.0	-1,170	-15.3
gal. per min..	5,055,600	2,956,500	5,245,150	2,099,100	71.0	-2,288,650	-43.6
Capital invested in enterprises.....dollars.....	23,361,758	20,752,645	9,021,991	2,609,113	12.6	11,730,654	130.0
Average per acre.....dollars.....	5.54	5.68	3.98	-0.14	-2.5	1.70	42.7

<sup>1</sup>Not available.<sup>2</sup>Reported as "Swampy, subject to overflow, seeped, or alkali."

STATE TABLE 2.—AREA OF ENTERPRISES, BY SIZE: JAN. 1, 1940, 1930, AND 1920

[For interparish enterprises the portion in each parish is tabulated as a separate enterprise]

SIZE	AREA OF ENTERPRISES <sup>1</sup>			Land in enterprises <sup>2</sup> 1940	SIZE	AREA OF ENTERPRISES <sup>1</sup>			Land in enterprises <sup>2</sup> 1940
	1940	1930	1920			1940	1930	1920	
All enterprises.....	Acres 4,703,474	Acres 4,093,113	Acres 2,342,034	Acres 4,219,624	5,000 to 9,999 acres.....	Acres 291,257	Acres 259,148	Acres 159,161	Acres 285,000
200 to 499 acres.....	162	.....	.....	162	10,000 to 19,999 acres.....	729,869	.....	.....	600,211
500 to 999 acres.....	219,183	309,076	2,269	137,081	20,000 to 49,999 acres.....	1,530,263	2,044,093	1,037,195	1,406,490
1,000 to 1,999 acres.....	137,499	.....	64,063	115,520	50,000 to 99,999 acres.....	762,667	604,813	628,385	651,620
2,000 to 4,999 acres.....	210,703	259,698	.....	132,115	100,000 to 199,999 acres.....	399,216	556,985	150,960	348,780
					200,000 acres and over.....	422,345	.....	.....	422,345

<sup>1</sup>The sum of the areas in the individual enterprises, without deduction for overlapping.<sup>2</sup>Overlapping eliminated by tabulating each enterprise according to its acreage not included in later enterprises.

STATE TABLE 3.—LAND AND CAPITAL INVESTED, BY CHARACTER OF ENTERPRISE, JAN. 1, 1940

CHARACTER OF ENTERPRISE	Land		Capital invested	
	Acres	Percent	Dollars	Percent
All enterprises.....	4,219,624	100.0	23,361,758	100.0
Drainage districts.....	3,792,221	89.9	21,831,468	93.4
Parish drains.....	3,500	0.1	136,811	0.6
Irrigation enterprises—Non-Federal.....	11,000	0.3	67,832	0.3
Commercial developments:				
Incorporated.....	39,418	0.9	533,800	2.3
Unincorporated.....	11,126	0.3	24,800	0.1
Individually owned projects.....	361,769	8.5	766,947	3.3

STATE TABLE 4.—LAND AND CAPITAL INVESTED, BY TYPE OF DRAINAGE: JAN. 1, 1940, 1930, AND 1920

TYPE OF DRAINAGE <sup>1</sup>	LAND IN ENTERPRISES						CAPITAL INVESTED IN ENTERPRISES					
	1940		1930		1920		1940		1930		1920	
	Acres	Percent	Acres	Percent	Acres	Percent	Dollars	Percent	Dollars	Percent	Dollars	Percent
All enterprises.....	4,219,624	100.0	3,655,483	100.0	2,266,328	100.0	23,361,758	100.0	20,752,645	100.0	9,021,991	100.0
Gravity drainage only by—												
Open ditches.....	4,074,308	96.5	3,527,320	96.5	2,111,658	93.2	16,648,255	71.3	14,397,845	69.4	5,052,248	56.0
Tile drains.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Open ditches and tile drains.....	.....	.....	5,000	0.1	.....	.....	.....	.....	15,000	0.1	.....	.....
All drained by pumping by—												
Open ditches.....	91,018	2.2	.....	.....	137,250	6.0	4,073,503	17.4	6,339,800	30.5	3,836,743	42.5
Tile drains.....	.....	.....	123,163	3.4	.....	.....	.....	.....	.....	.....	.....	.....
Open ditches and tile drains.....	28,000	0.7	.....	.....	.....	.....	2,500,000	10.7	.....	.....	.....	.....
Part only by pumping by—												
Open ditches.....	25,000	0.6	.....	.....	17,220	0.8	130,000	0.6	.....	.....	133,000	1.5
Tile drains.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Open ditches and tile drains.....	1,300	( <sup>2</sup> )	.....	.....	.....	.....	10,000	( <sup>2</sup> )	.....	.....	.....	.....
Total area served by pumps.....	123,066	2.9	123,163	3.4	140,809	6.2	.....	.....	.....	.....	.....	.....

<sup>1</sup>Each item includes those enterprises that have provided levees in addition to the kind or drains specified.<sup>2</sup>Less than one-tenth of 1 percent.

# CENSUS OF DRAINAGE - LOUISIANA

219

STATE TABLE 5.—PUMPING PLANTS AND LAND SERVED, BY KIND OF POWER: JAN. 1, 1940, 1930, AND 1920

KIND OF POWER	Enter-prises	CAPACITY			Land served	KIND OF POWER	Enter-prises	CAPACITY			Land served			
		Engine or motor		Pump				Engine or motor		Pump				
		Number	Hp.					Percent	G.p.m.			Acres		
All pumping enterprises.....	1940..	22	11,041	100.0	5,055,600	123,066	Internal combustion.....	1940..	16	5,761	52.2	2,025,600	73,866	
	1930..	18	6,495	100.0	2,956,500	123,163		1930..	11	3,555	54.7	1,373,500	79,804	
	1920..	29	7,665	100.0	5,245,150	140,809		1920..	10	1,860	24.3	743,650	29,182	
Steam.....	1940..	1	120	1.1	50,000	2,000	Steam and electric.....	1940..	.....	.....	.....	.....	.....	
	1930..	5	1,590	24.5	920,000	29,962			1930..	.....	.....	.....	.....	.....
	1920..	18	5,105	66.6	4,281,300	104,684			1920..	1	700	9.1	220,200	6,943
Electric.....	1940..	3	2,150	19.5	1,030,000	21,000	Steam and internal combustion.....	1940..	.....	.....	.....	.....	.....	
	1930..	1	150	2.3	68,000	4,000			1930..	1	1,200	18.5	600,000	9,397
	1920..	.....	.....	.....	.....	.....			1920..	.....	.....	.....	.....	.....
							Steam, electric, and internal combustion.....	1940..	2	3,010	27.2	1,350,000	26,200	

STATE TABLE 6.—PUMPING PLANTS AND LAND SERVED, BY KIND OF PUMP: JAN. 1, 1940 AND 1930

KIND OF PUMP	PUMPS			Engine or motor capac- ity	Land served
	Number	Capacity			
		G. p. m.	Percent		
All pumping enterprises.....					
.....1940..	59	5,055,600	100.0	11,041	123,066
.....1930..	52	2,956,500	100.0	8,495	123,163
Centrifugal.....	27	1,835,600	36.3	3,841	55,850
.....1930..	31	1,710,000	57.8	3,635	79,087
Rotary.....					
.....1940..					
.....1930..	11	281,500	8.9	750	11,216
Screw.....	11	625,000	12.4	1,530	19,434
.....1940..					
.....1930..	3	140,000	4.7	330	3,796
Centrifugal and—					
Rotary.....					
.....1940..					
.....1930..	4	500,000	16.9	700	15,000
Screw.....	19	2,545,000	80.3	5,550	45,782
.....1940..					
.....1930..	3	345,000	11.7	1,080	14,054
Paddle wheel.....	2	60,000	1.0	120	2,000
.....1940..					
.....1930..					

STATE TABLE 7.—LAND, CAPITAL INVESTED, AND AREA DELINQUENT IN DRAINAGE TAXES, BY ARREARAGE IN PAYMENT OF OBLIGATIONS: JAN. 1, 1940 AND 1930

FINANCIAL STATUS	LAND IN ENTERPRISES				CAPITAL INVESTED				AREA DELINQUENT <sup>1</sup>	
	1940		1930		1940		1930		1940	1930
	Acres	Percent	Acres	Percent	Dollars	Percent	Dollars	Percent	Acres	Acres
All enterprises.....	4,219,624	100.0	3,655,483	100.0	23,361,758	100.0	20,752,645	100.0	78,108	147,008
Enterprises in arrears.....	517,040	12.3	351,576	9.6	2,885,992	12.3	1,445,000	7.0	17,385	110,000
With some delinquent land.....	349,878	8.3	225,000	6.1	2,111,592	9.0	975,000	4.7	17,385	110,000
With no delinquent land.....	167,162	4.0	126,576	3.5	774,400	3.3	470,000	2.3	.....	.....
Enterprises not in arrears.....	3,702,584	87.7	3,303,905	90.4	20,475,766	87.7	19,307,645	93.0	60,723	37,008
With some delinquent land.....	747,879	17.7	205,460	5.6	7,878,000	33.7	3,623,898	17.5	60,723	37,008
With no delinquent land.....	2,954,705	70.0	2,840,632	77.7	12,597,766	54.0	14,905,247	71.8	.....	.....
With no report on delinquency.....	.....	.....	257,813	7.1	.....	.....	778,500	3.7	.....	.....

<sup>1</sup> If any land is delinquent in 2 or more overlapping enterprises, the acreage delinquent is too large by the amount of such duplication.

STATE TABLE 8.—LAND, CAPITAL INVESTED, INDEBTEDNESS, ARREARAGE IN PAYMENT OF BONDS, REDUCTION OF DEBT BY REFINANCING, AND ACREAGE DELINQUENT, 1940; DRAINAGE TAXES COLLECTED IN 1939; BY INDEBTEDNESS AND ARREARAGE, JAN. 1, 1940

FINANCIAL STATUS	Land in enterprises	Capital invested	Indebtedness	Arrearage in payment of bonds	Reduction of debt by refinancing	Delinquent in drainage taxes <sup>1</sup>	Drainage taxes collected in 1939
	Acres	Dollars	Dollars	Dollars	Dollars	Acres	Dollars
All enterprises.....	4,219,624	23,361,758	10,797,537	666,198	2,162,706	78,168	1,117,208
Enterprises in debt.....	3,077,448	19,803,500	10,797,537	666,198	2,162,706	77,968	1,100,476
In arrears, amount of arrearage stated.....	517,040	2,885,992	2,124,794	666,198	.....	17,385	132,384
Collecting drainage taxes in 1939.....	517,040	2,885,992	2,124,794	666,198	.....	17,385	132,384
No collections reported.....	.....	.....	.....	.....	.....	.....	.....
Not in arrears.....	2,560,408	16,917,508	8,672,743	.....	2,162,706	60,583	968,091
Collecting drainage taxes in 1939.....	2,541,528	16,759,697	8,640,743	.....	2,162,706	60,583	968,091
No collections reported.....	18,880	157,811	32,000	.....	.....	.....	.....
Enterprises not in debt.....	1,142,176	3,558,258	.....	.....	.....	200	16,733
Collecting drainage taxes in 1939.....	78,614	541,550	.....	.....	.....	200	16,733
No collections reported.....	1,063,562	3,016,708	.....	.....	.....	.....	.....

<sup>1</sup> If any land is delinquent in 2 or more overlapping enterprises, the acreage delinquent is too large by the amount of such duplication.

## CENSUS OF DRAINAGE—LOUISIANA

STATE TABLE 9.—LAND AND CAPITAL INVESTED, BY PRINCIPAL PURPOSE OF DRAINAGE, JAN. 1, 1940

PURPOSE OF DRAINAGE	Land		Capital invested	
	Acres	Percent	Dollars	Percent
All enterprises.....	4,219,624	100.0	23,361,758	100.0
Improvement of land already in farms.....	3,202,427	75.9	13,289,133	56.9
Reclamation of swamp land not previously in farms.....	475,747	11.3	6,805,142	29.1
Protection against overflow.....	527,450	12.5	3,049,651	13.1
Removal of alkali or seepage from irrigation.....	14,000	0.3	217,832	0.9

STATE TABLE 10.—LAND AND CAPITAL INVESTED, BY DATE OF ORGANIZATION, JAN. 1, 1940

DATE OF ORGANIZATION	Land <sup>1</sup>		Area of enterprises		Capital invested	
	Acres	Percent	Total acres <sup>2</sup>	Overlapped acres	Dollars	Percent
All enterprises.....	4,219,624	100.0	4,703,474	483,850	23,361,758	100.0
Before 1870.....	30,456	0.7	53,936	23,480	47,395	0.2
1870-1879.....	12,874	0.3	20,115	7,241	11,345	0.1
1880-1889.....	50,024	1.2	89,364	39,340	128,680	0.6
1890-1899.....	276,034	6.5	303,096	27,062	2,335,556	10.0
1900-1904.....	155,168	3.7	230,979	75,811	708,582	3.0
1905-1909.....	257,714	6.1	352,488	94,754	673,460	2.9
1910-1914.....	859,208	20.4	967,058	108,180	4,933,237	21.1
1915-1919.....	707,024	16.8	787,021	79,997	3,137,591	13.4
1920-1924.....	812,944	19.3	819,724	6,780	7,149,167	30.6
1925-1929.....	502,676	11.9	529,681	21,205	2,661,950	11.4
1930-1934.....	258,083	6.1	258,083	.....	1,058,615	4.5
1935-1939.....	297,419	7.0	297,419	.....	516,171	2.2

<sup>1</sup>Land included in more than 1 enterprise is tabulated only in the last organized.<sup>2</sup>The sum of the areas of the individual enterprises.

STATE TABLE 11.—DRAINAGE CONDITION, DEVELOPMENT, AND USE OF LAND IN ENTERPRISES, BY DATE OF ORGANIZATION, 1939

DATE OF ORGANIZATION	Land in all enterprises <sup>1</sup>	DRAINAGE CONDITION			DEVELOPMENT			USE OF LAND						
		Drained		Partly drained	Undrained	Improved land		Timber and cut-over land	Other un-improved land	In occupied farms		In planted crops	Idle	Land available for settlement
All enterprises..	Acres 4,219,624	Acres 3,172,725	Per- cent 75.2	Acres 317,411	Acres 729,488	Acres 2,597,311	Per- cent 61.6	Acres 943,924	Acres 678,389	Acres 2,612,250	Per- cent 59.5	Acres 1,356,366	Acres 656,011	Acres 160,269
Before 1870.....	30,456	25,011	82.1	1,011	4,434	18,596	61.0	10,911	949	24,305	79.8	11,515	9,059	.....
1870-1879.....	12,874	9,747	75.7	287	2,840	7,802	60.6	4,772	300	10,198	79.2	4,635	4,703	.....
1880-1889.....	50,024	27,056	54.1	1,050	21,918	18,571	37.1	14,376	17,077	30,828	61.6	10,500	16,653	.....
1890-1899.....	276,034	208,731	75.6	31,355	35,948	109,935	39.8	164,078	2,021	142,905	51.8	56,467	17,537	3,000
1900-1904.....	155,168	115,235	74.3	24,615	15,318	116,310	75.0	22,434	16,424	108,728	70.1	67,038	29,208	1,600
1905-1909.....	257,714	190,135	73.8	21,401	46,178	178,280	69.2	20,374	59,060	159,539	61.9	90,828	30,893	2,000
1910-1914.....	859,208	495,802	57.7	27,306	336,100	396,498	46.1	136,727	325,983	436,019	50.7	207,968	67,626	17,845
1915-1919.....	707,024	597,655	84.5	54,688	54,681	567,305	80.2	70,308	69,411	515,892	73.0	274,267	82,075	4,500
1920-1924.....	812,944	667,430	82.1	67,651	77,863	566,162	69.6	200,801	45,981	505,594	62.2	313,156	168,943	54,330
1925-1929.....	502,676	405,420	80.6	26,651	70,605	363,633	72.3	69,994	69,049	330,350	65.7	191,289	71,610	23,294
1930-1934.....	258,083	216,461	83.9	12,255	29,367	130,535	50.6	101,554	25,934	128,099	49.6	60,504	42,325	.....
1935-1939.....	297,419	214,042	72.0	49,141	34,236	123,684	41.6	127,595	46,140	119,803	40.3	68,199	115,479	53,700

<sup>1</sup>Land included in more than 1 enterprise is tabulated only in the last organized.

STATE TABLE 12.—COST OF OPERATION AND MAINTENANCE, BY TYPE OF DRAINAGE, 1939

TYPE OF DRAINAGE	Land in all enterprises	LAND REPORTING ON COST OF MAINTENANCE AND OPERATION			COST REPORTED		
		Total	Some cost	No cost	Total amount	Per acre on—	
						Total reporting	Area incurring
	Acres	Acres	Acres	Acres	Dollars	Dollars	Dollars
All enterprises.....	4,219,624	4,219,039	3,305,042	913,997	374,903	0.09	0.11
Gravity drainage only.....	4,074,308	4,079,723	3,161,026	912,697	233,794	0.06	0.07
Open ditches only.....	3,411,021	3,410,436	2,757,139	653,297	131,605	0.04	0.05
Open ditches and levees.....	663,287	663,287	403,887	259,400	102,189	0.15	0.25
Pumping for all or part of drainage.....	145,316	145,316	144,016	1,300	141,109	0.97	0.98
All drainage by pumping.....	119,016	119,016	.....	.....	136,114	1.14	1.14
Part pumping and part gravity.....	26,300	26,300	25,000	1,300	4,995	0.19	0.20

# CENSUS OF DRAINAGE — LOUISIANA

221

STATE TABLE 13.—LAND AND CAPITAL INVESTED, BY METHOD OF MAINTENANCE AND BY WHETHER MAINTENANCE IS SYSTEMATIC, JAN. 1, 1940

MAINTENANCE	Land		Capital invested	
	Acres	Percent	Dollars	Percent
All enterprises.....	4,219,624	100.0	23,361,758	100.0
Method:				
By district forces.....	2,530,528	60.7	15,215,272	69.4
By contract.....	819,062	19.4	4,216,590	18.1
Work apportioned to landowners.....	595,695	13.4	1,798,871	7.7
"None," or not reporting.....	273,439	6.5	1,130,025	4.8
Whether systematic:				
Reporting "yes".....	2,847,160	67.5	18,951,150	81.1
Reporting "no".....	1,346,489	31.9	4,332,683	18.6
Not reporting.....	25,975	0.6	77,925	0.3

STATE TABLE 14.—LAND, CAPITAL INVESTED, AND DRAINAGE WORKS, BY OWNERSHIP OF POWER EQUIPMENT FOR MAINTENANCE, 1940

ITEM	All enterprises	ENTERPRISES OWNING POWER EQUIPMENT	
		Amount	Percent
Land in enterprises.....acres....	4,219,624	420,763	10.2
Capital invested.....dollars..	23,361,758	6,784,800	29.0
Drainage works:			
Open ditches.....miles....	7,105.5	1,022.7	14.4
Tile drains.....miles....	6.0	1.0	16.7
Levees.....miles....	624.4	149.0	23.9

STATE TABLE 15.—LAND, CAPITAL INVESTED, AND DRAINAGE WORKS, BY FEDERAL AGENCY GIVING AID IN MAINTENANCE, 1940

AGENCY	Land in enterprises	Capital invested	DRAINAGE WORKS		
			Ditches	Tile	Levees
All enterprises reporting Federal aid received.....	Acres 1,765,417	Dollars 14,103,172	Miles 2,546.8	Miles 1.0	Miles 375.1
Work Projects Administration.....	823,021	9,878,222	1,169.1	1.0	329.0
Civilian Conservation Corps.....	843,880	3,383,950	1,293.7	.....	27.1
Public Works Administration.....	98,530	900,000	114.0	.....	21.0

STATE TABLE 16.—LAND, CAPITAL INVESTED, AND DRAINAGE WORKS, BY FLOOD PROTECTION FROM LEVEES OF AN OUTSIDE AGENCY, 1940

ITEM	All enterprises	ENTERPRISES PROTECTED BY OUTSIDE AGENCY	
		Amount	Percent
Land in enterprises.....acres....	4,219,624	<sup>1</sup> 1,746,547	41.4
Capital invested.....dollars..	23,361,758	13,268,068	56.8
Drainage works:			
Open ditches.....miles....	7,105.5	3,078.2	43.3
Tile drains.....miles....	6.0	6.0	100.0
Levees.....miles....	624.4	375.8	60.2

<sup>1</sup>The land actually dependent upon outside agencies for protection is 1,587,166 acres, which is 90.9 percent of all land in these protected enterprises.





## CENSUS OF DRAINAGE—LOUISIANA

PARISH TABLE I.—LAND IN DRAINAGE ENTERPRISES CLASSIFIED BY CONDITION AND BY USE, 1940, 1930, AND 1920; AND BY KIND OF WORKS, 1940—Continued

ITEM (See definitions in Introduction)		Lafayette	Lafourche	La Salle <sup>1</sup>	Morehouse <sup>1</sup>	Plaquemines	Pointe Coupee	St. Landry
LAND AREA								
1	Approximate land area.....acres....1940..	181,120	740,480	408,320	514,560	629,760	300,960	595,200
2	Drainage enterprises.....number....1940..	6	13	1	1	5	115	96
3	Land in enterprises.....acres....1940..	93,827	118,724	12,470	18,462	25,678	190,519	304,818
4	.....1930..	103,673	62,842	12,000	17,000	14,793	184,642	294,801
5	.....1920..	77,990	51,147	5,000	18,075	21,839	173,880	.....
6	Area of all enterprises, overlapping included.....acres....1940..	93,827	143,300	12,470	18,462	25,678	231,615	383,547
7	Amount of overlapping.....acres....1940..	.....	24,576	.....	.....	.....	41,086	76,729
CONDITION AND USE OF LAND								
8	Land with drainage sufficient for normal crop.....acres....1940..	91,177	62,127	10,970	16,462	24,178	144,525	237,479
9	.....1930..	103,673	47,424	1,000	13,000	11,338	122,059	197,727
10	Increase or decrease (-), 1930-1940.....acres.....	-12,496	14,703	9,970	3,462	12,840	22,426	39,752
11	.....percent.....	-12.0	31.0	997.0	26.6	113.2	18.4	20.1
12	Land undrained, unfit for any crop.....acres....1940..	1,150	46,858	1,000	500	500	14,452	43,482
13	.....1930..	.....	13,558	3,000	2,000	1,880	22,750	31,332
14	Increase or decrease (-), 1930-1940.....acres.....	1,150	33,300	-2,000	-1,500	-1,380	-8,298	12,150
15	.....percent.....	.....	245.6	-66.7	-75.0	-73.4	-36.5	38.8
16	Land partly drained, for partial crop.....acres....1940..	1,600	9,739	500	1,500	1,000	31,542	23,857
17	.....1930..	.....	1,960	8,000	2,000	1,575	30,793	65,742
18	Increase or decrease (-), 1930-1940.....acres.....	1,600	7,779	-7,500	-500	-575	-8,251	-41,885
19	.....percent.....	.....	396.9	-93.8	-25.0	-36.5	-26.7	-63.7
20	Improved land.....acres....1940..	90,877	60,250	1,500	14,962	10,978	91,088	237,953
21	.....1930..	103,673	41,225	1,000	13,000	12,738	107,702	209,453
22	.....1920..	75,490	30,075	500	14,460	14,999	96,522	.....
Unimproved land:								
23	Woodland and cut-over land.....acres....1940..	1,100	29,375	10,970	3,500	12,200	83,817	61,370
24	.....1930..	.....	16,661	10,000	2,000	100	76,616	75,729
25	.....1920..	.....	6,867	4,500	3,615	5,985	77,358	.....
26	Other unimproved land.....acres....1940..	1,850	29,099	.....	.....	2,500	15,634	5,495
27	.....1930..	.....	5,056	1,000	2,000	1,955	324	9,619
28	.....1920..	2,500	14,205	.....	.....	855	.....	.....
29	Land in occupied farms.....acres....1940..	86,146	76,480	7,000	15,000	20,621	99,313	256,634
30	.....1930..	103,673	51,840	2,000	15,000	7,866	182,861	273,635
31	Increase or decrease (-), 1930-1940.....acres.....	-17,527	24,640	5,000	.....	12,755	-83,548	-17,001
32	.....percent.....	-16.9	47.5	250.0	.....	162.2	-45.7	-6.2
33	Land in planted crops.....acres....1940..	62,681	37,177	1,200	10,000	4,096	37,500	162,500
34	.....1930..	100,500	31,493	1,000	12,000	4,510	100,072	184,585
35	Increase or decrease (-), 1930-1940.....acres.....	-37,819	5,684	200	-2,000	-414	-62,572	-22,085
36	.....percent.....	-37.6	18.0	20.0	-16.7	-9.2	-62.5	-12.0
37	Land idle.....acres....1940..	1,800	18,625	.....	2,000	3,045	96,392	67,183
38	.....1930..	.....	26,359	10,500	.....	8,723	75,900	35,559
39	Increase or decrease (-), 1930-1940.....acres.....	1,800	-7,734	-10,500	2,000	-5,678	20,492	31,624
40	.....percent.....	.....	-29.3	-100.0	.....	-65.1	27.0	88.9
41	Land available for settlement.....acres....1940..	500	.....	.....	1,000	2,545	200	.....
42	.....1930..	.....	.....	7,000	.....	5,447	781	2,300
43	Increase or decrease (-), 1930-1940.....acres.....	500	.....	-7,000	1,000	-2,902	-581	-2,300
44	.....percent.....	.....	.....	-100.0	.....	-53.3	-74.4	-100.0
LAND CLASSIFIED BY WORKS, 1940								
45	Land drained by open ditches only.....acres.....	93,827	62,892	12,470	18,462	.....	190,519	304,818
46	Length of these ditches.....miles.....	208.0	60.4	7.0	17.5	.....	1,160.2	1,172.6
47	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	18,462	.....	156,403	168,712
48	Land drained by open ditches and own levees.....acres.....	.....	19,561	.....	.....	.....	.....	.....
49	Length of these ditches.....miles.....	.....	17.0	.....	.....	.....	.....	.....
50	Length of these levees.....miles.....	.....	5.0	.....	.....	.....	.....	.....
51	Part protected by levees of an outside agency.....acres.....	.....	19,561	.....	.....	.....	.....	.....
52	Land drained by tile only.....acres.....	.....	.....	.....	.....	.....	.....	.....
53	Length of these tile.....miles.....	.....	.....	.....	.....	.....	.....	.....
54	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....	.....
55	Land drained by tile and own levees.....acres.....	.....	.....	.....	.....	.....	.....	.....
56	Length of these tile.....miles.....	.....	.....	.....	.....	.....	.....	.....
57	Length of these levees.....miles.....	.....	.....	.....	.....	.....	.....	.....
58	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....	.....
59	Land drained by open ditches and tile.....acres.....	.....	.....	.....	.....	.....	.....	.....
60	Length of these open ditches.....miles.....	.....	.....	.....	.....	.....	.....	.....
61	Length of these tile.....miles.....	.....	.....	.....	.....	.....	.....	.....
62	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....	.....
63	Land drained by open ditches, tile, and levees.....acres.....	.....	.....	.....	.....	.....	.....	.....
64	Length of these open ditches.....miles.....	.....	.....	.....	.....	.....	.....	.....
65	Length of these tile.....miles.....	.....	.....	.....	.....	.....	.....	.....
66	Length of these levees.....miles.....	.....	.....	.....	.....	.....	.....	.....
67	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....	.....
68	Land in enterprises operating pumping plants <sup>2</sup> .....acres.....	.....	36,271	.....	.....	25,678	.....	.....
69	Length of open ditches owned by these enterprises.....miles.....	.....	252.9	.....	.....	83.0	.....	.....
70	Length of tile owned by these enterprises.....miles.....	.....	.....	.....	.....	5.0	.....	.....
71	Length of levees owned by these enterprises.....miles.....	.....	72.1	.....	.....	29.5	.....	.....
72	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	25,678	.....	.....

<sup>1</sup>For parishes having less than 3 enterprises reporting, statistics are shown only by written permission of each enterprise affected.

<sup>2</sup>Data in lines 68 to 72 are not included in lines 45 to 67.









## CENSUS OF DRAINAGE—LOUISIANA

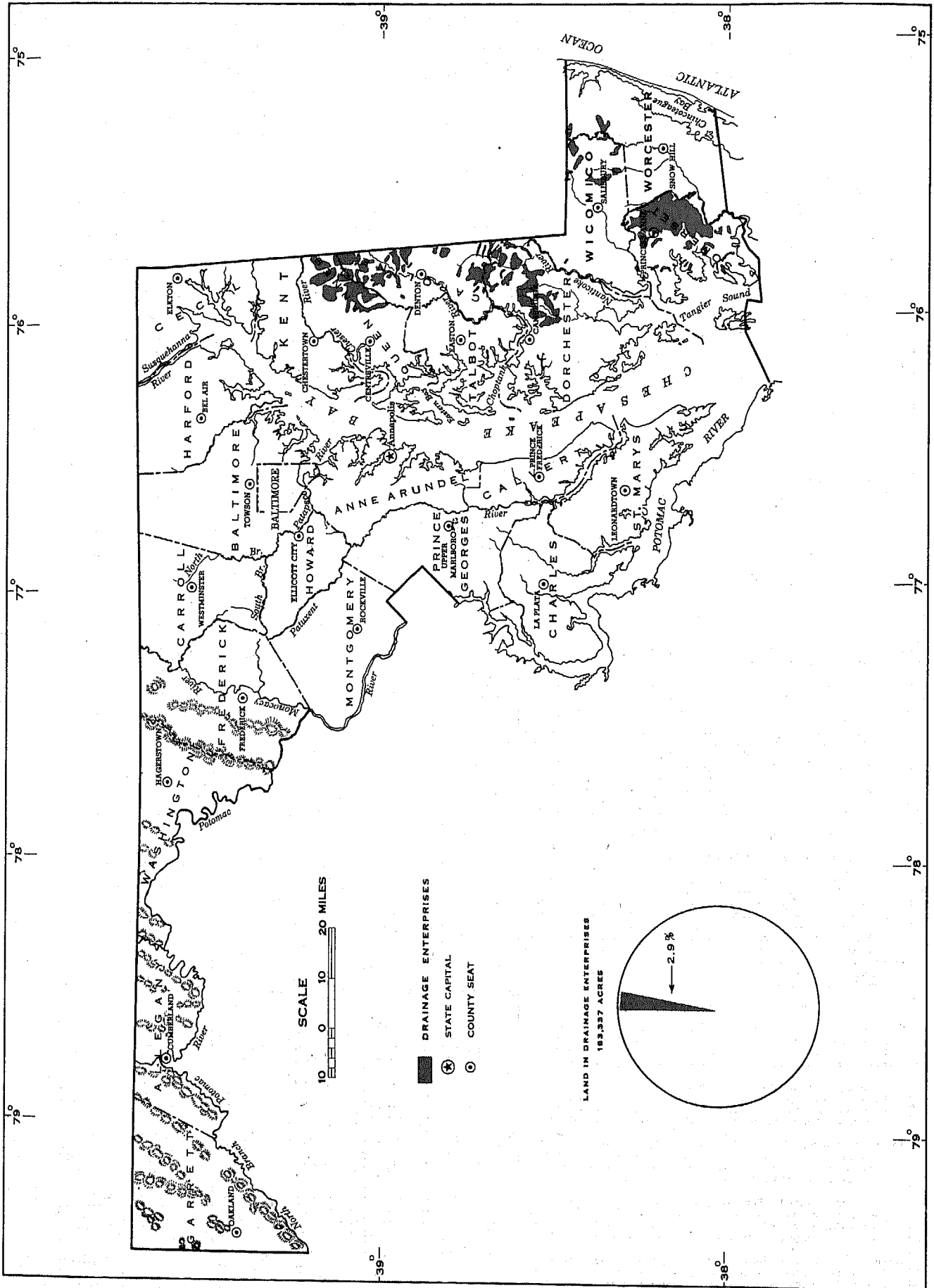
229

PARISH TABLE II.—DRAINAGE ENTERPRISES—WORKS AND CAPITAL INVESTED, 1940, 1930, AND 1920; AND MAINTENANCE AND OPERATION, AND FINANCIAL CONDITION, 1939—Continued

ITEM (See definitions in Introduction)		St. Martin	St. Mary	Tangipahoa <sup>1</sup>	Terrebonne	Vermilion	West Baton Rouge	Other parishes <sup>2</sup>
<b>DRAINAGE WORKS</b>								
1	Drainage enterprises.....number.....1940..	5	7	2	5	18	6	15
2	Open ditches:							
3	Completed.....miles.....1940..	147.5	72.5	205.0	55.5	480.5	53.0	587.6
4	.....1930..	103.0	63.5	110.0	71.0	466.0	63.5	422.5
5	.....1920..		71.0		35.0	313.5	45.2	256.0
6	Additional length authorized.....miles.....1940..					2.0		
7	Tile drains:							
8	Completed.....miles.....1940..							
9	.....1930..							
10	.....1920..							
11	Additional length authorized.....miles.....1940..							
12	Levees and dikes:							
13	Completed.....miles.....1940..		9.0		6.0	9.0		374.0
14	.....1930..		19.0		6.0	12.0		284.7
15	.....1920..		30.0		7.6	101.0		145.4
16	Additional length authorized.....miles.....1940..							
17	Pumping plants:							
18	Engine capacity.....horsepower.....1940..		190					3,250
19	.....1930..		1,100			185		1,290
20	.....1920..		860		125	525		1,625
21	Pump capacity.....gal. per min.....1940..		66,600					1,235,000
22	.....1930..		690,000			90,000		463,000
23	.....1920..		1,230,000		84,000	272,500		801,000
24	Land served by pumps.....acres.....1940..		4,439					34,228
25	.....1930..		22,000			4,000		20,794
26	.....1920..		20,725		4,200	11,564		37,363
27	Wells pumped for drainage.....number.....1940..							
28	.....1930..							
<b>CAPITAL INVESTED</b>								
29	Capital invested to January 1.....dollars.....1940..	514,875	418,000	890,000	191,000	1,311,600	257,160	4,971,743
30	.....1930..	710,000	883,500	550,000	188,000	1,478,500	322,672	3,983,734
31	.....1920..		766,625		192,225	958,082	213,750	2,393,627
32	Estimated cost when completed.....dollars.....1940..	514,875	418,000	890,000	191,000	1,312,700	257,160	4,975,743
33	.....1930..	710,000	888,000	660,000	188,000	1,478,500	322,672	4,083,734
34	.....1920..		766,625		205,000	1,158,600	226,750	2,625,977
35	Average cost per acre when completed.....dollars.....1940..	6.22	6.61	11.43	2.03	2.99	4.85	5.81
36	.....1930..	9.22	15.95	10.48	2.49	3.45	3.61	
37	.....1920..		12.91		5.79	3.42	1.66	
38	Invested in and required for completion, 1940:							
39	Enterprises having open ditches only.....dollars..	514,875	288,000	890,000	103,500	1,137,700	257,160	1,059,000
40	Average amount per acre.....dollars..	6.22	4.80	11.43	1.44	2.67	4.85	3.39
41	Enterprises having open ditches and levees.....dollars..				87,500	175,000		2,719,651
42	Average amount per acre.....dollars..				3.94	14.58		5.38
43	Enterprises having tile only.....dollars..							
44	Average amount per acre.....dollars..							
45	Enterprises having tile and levees.....dollars..							
46	Average amount per acre.....dollars..							
47	Enterprises having open ditches and tile.....dollars..							
48	Average amount per acre.....dollars..							
49	Enterprises having open ditches, tile, and levees.....dollars..							
50	Average amount per acre.....dollars..							
51	Enterprises operating pumping plants.....dollars..		130,000					1,198,092
52	Average amount per acre.....dollars..		29.28					35.00
<b>MAINTENANCE AND OPERATION</b>								
53	Cost of maintenance and operation in 1939:							
54	By enterprises operating pumping plants.....dollars..		( <sup>4</sup> )					<sup>4</sup> 19,560
55	Enterprises reporting.....number..		1					4
56	Land in these enterprises.....acres..		( <sup>4</sup> )					<sup>4</sup> 39,567
57	Average cost per acre.....dollars..		( <sup>4</sup> )					0.49
58	By enterprises not operating pumping plants.....dollars..	4,623	11,098	2,769	1,560	9,556	3,361	87,661
59	Enterprises reporting.....number..	4	5	2	4	12	4	10
60	Land in these enterprises.....acres..	82,803	62,877	77,855	79,233	272,733	49,170	637,201
61	Average cost per acre.....dollars..	0.06	0.21	0.04	0.02	0.04	0.08	0.14
62	Federal aid in maintenance:							
63	Enterprises reporting.....number..	2	4	2	( <sup>5</sup> ) 2	9	2	6
64	Land in these enterprises.....acres..	( <sup>5</sup> )	39,055	77,855	( <sup>5</sup> )	223,163	( <sup>5</sup> )	275,325
<b>FINANCIAL CONDITION</b>								
65	Drainage taxes collected in 1939.....dollars..	22,047	31,379	61,451	( <sup>5</sup> )	40,433	16,762	256,818
66	Enterprises reporting.....number..	5	5	2	2	13	4	13
67	Land in these enterprises.....acres..	82,803	35,236	77,855	( <sup>5</sup> )	274,983	49,170	824,549
68	Average amount collected per acre.....dollars..	0.27	0.89	0.79	( <sup>5</sup> )	0.15	0.39	0.31
69	Area delinquent in drainage taxes, Dec. 31, 1939.....acres..	4,810		500		( <sup>5</sup> )		24,403
70	Enterprises reporting.....number..	3		1		1		5
71	Land in these enterprises.....acres..	69,765		63,680		( <sup>5</sup> )		398,273
72	Portion delinquent in these enterprises.....percent..	6.9		0.8		( <sup>5</sup> )		6.1
73	Total indebtedness, Dec. 31, 1939.....dollars..	331,800	120,737	783,000	( <sup>5</sup> )	329,884	84,500	1,836,530
74	Enterprises reporting.....number..	5	5	2	2	13	3	12
75	Land in these enterprises.....acres..	82,803	35,236	77,855	( <sup>5</sup> )	265,788	34,784	810,549
76	Average indebtedness per acre.....dollars..	4.01	3.43	10.06	( <sup>5</sup> )	1.24	2.43	2.26
77	Indebtedness in arrears, Dec. 31, 1939.....dollars..					8,362		484,132
78	Enterprises reporting.....number..					3		4
79	Land in these enterprises.....acres..					26,580		263,285
80	Average arrearage per acre.....dollars..					0.31		1.84
81	Reduction of debt by refinancing, prior to 1940.....dollars..	143,500		<sup>6</sup> 10,000		( <sup>5</sup> )		( <sup>5</sup> )
82	Enterprises reporting.....number..	5		2		1		1
83	Land in these enterprises.....acres..	82,803		<sup>6</sup> 14,175		( <sup>5</sup> )		( <sup>5</sup> )
84	Average reduction per acre.....dollars..	1.73		<sup>6</sup> 0.71		( <sup>5</sup> )		( <sup>5</sup> )

<sup>1</sup> For parishes having less than 3 enterprises reporting, statistics are shown only by written permission of such enterprise affected. <sup>2</sup> Includes Caddo, De Soto, Madison, Natchitoches, Orleans, Ouachita, Rapides, Red River, St. Bernard, St. Charles, St. Tammany, and Tensas Parishes in 1940; Caddo, Madison, Orleans, Rapides, St. Bernard, St. Charles, St. Tammany, and Tensas Parishes in 1930; and Caddo, Madison, Orleans, Rapides, St. Bernard, St. Charles, and St. Tammany Parishes in 1920. <sup>3</sup> Data in lines 46 and 47 are not included in lines 34 to 45. <sup>4</sup> Data for Cameron and St. Mary Parishes included with those for "Other parishes" named in footnote 2. <sup>5</sup> Where there are less than 3 enterprises reporting, data are included only in State totals, except as stated in footnote 1. <sup>6</sup> Data for 1 enterprise; other did not report amount of reduction.

# MARYLAND Location of Land in Drainage Enterprises



# CENSUS OF DRAINAGE—MARYLAND

231

STATE TABLE 1.—SUMMARY OF DRAINAGE FOR THE STATE: JAN. 1, 1940<sup>1</sup>

ITEM (See definitions in Introduction)	Amount	Percent of land in enterprises	ITEM (See definitions in Introduction)	Amount	Percent of land in enterprises
Approximate land area of State.....acres..	6,327,680		Land in drainage enterprises—Continued		
Land in drainage enterprises.....acres..	183,337	100.0	In occupied farms.....acres....	181,891	99.2
Improved.....acres..	133,632	72.9	In planted crops.....acres....	118,871	64.8
Unimproved:			Idle.....acres....	63,067	34.4
Timber and cut-over.....acres..	48,250	26.3	Available for settlement.....acres..		
Other.....acres..	1,465	0.8	Open ditches, completed.....miles....	461.3	
Drainage sufficient for normal crop.....acres..	172,747	94.3	Tile drains, completed.....miles....		
Partly drained, for partial crop.....acres..	7,600	4.1	Capital invested in enterprises.....dollars..	43,914	
Unfit to raise any crop for lack of drainage.....acres..	2,990	1.6	Average per acre.....dollars..	0.24	

<sup>1</sup> Maryland was not included in prior censuses of drainage enterprises.

STATE TABLE 2.—AREA OF ENTERPRISES, BY SIZE: JAN. 1, 1940

SIZE	Area of enterprises <sup>1</sup>		Land in enterprises <sup>2</sup> 1940	SIZE	Area of enterprises <sup>1</sup>		Land in enterprises <sup>2</sup> 1940
	Acres	Percent	Acres		Acres	Percent	Acres
All enterprises.....	180,922	100.0	183,337	500 to 999 acres.....	25,675	13.4	24,679
Less than 100 acres.....	99	0.1	99	1,000 to 1,999 acres.....	40,662	21.3	36,370
100 to 199 acres.....	1,102	0.6	1,102	2,000 to 4,999 acres.....	87,745	46.0	85,448
200 to 499 acres.....	10,003	5.2	10,003	5,000 to 9,999 acres.....	25,636	13.4	25,636

<sup>1</sup> The sum of the areas in the individual enterprises, without deduction for overlapping.

<sup>2</sup> Overlapping eliminated by tabulating each enterprise according to its acreage not included in later enterprises.

STATE TABLE 3.—LAND AND CAPITAL INVESTED, BY CHARACTER OF ENTERPRISE, JAN. 1, 1940

CHARACTER OF ENTERPRISE	Land		Capital invested	
	Acres	Percent	Dollars	Percent
All enterprises.....	183,337	100.0	43,914	100.0
Drainage districts.....	183,337	100.0	43,914	100.0
Other, or not reported.....				

STATE TABLE 4.—LAND AND CAPITAL INVESTED, BY TYPE OF DRAINAGE: JAN. 1, 1940

TYPE OF DRAINAGE	Land in enterprises		Capital invested in enterprises	
	Acres	Percent	Dollars	Percent
All enterprises.....	183,337	100.0	43,914	100.0
Gravity drainage only by—				
Open ditches.....	183,337	100.0	43,914	100.0
All or part by pumping.....				

STATE TABLE 5.—LAND, CAPITAL INVESTED, AND AREA DELINQUENT IN DRAINAGE TAXES, BY ARREARAGE IN PAYMENT OF OBLIGATIONS: JAN. 1, 1940

FINANCIAL STATUS	Land in enterprises		Capital invested		Area delinquent
	Acres	Percent	Dollars	Percent	Acres <sup>(1)</sup>
All enterprises.....	183,337	100.0	43,914	100.0	(1)
Enterprises in arrears.....					
Enterprises not in arrears.....	183,337	100.0	43,914	100.0	(1)
With some delinquent land.....	(2)	(2)	(2)	(2)	(1)
With no delinquent land.....	(2)	(2)	(2)	(2)	
Enterprises not reporting on arrearage.....					

<sup>1</sup> Where there are less than 3 enterprises reporting in the State, data are not shown.

<sup>2</sup> Where there are less than 3 enterprises reporting, data are included in totals only.

STATE TABLE 6.—LAND, CAPITAL INVESTED, INDEBTEDNESS, ARREARAGE IN PAYMENT OF BONDS, REDUCTION OF DEBT BY REFINANCING, AND ACREAGE DELINQUENT, 1940; DRAINAGE TAXES COLLECTED IN 1939; BY INDEBTEDNESS AND ARREARAGE, JAN. 1, 1940

FINANCIAL STATUS	Land in enterprises	Capital invested	Indebtedness	Arrearage in payment of bonds	Reduction of debt by refinancing	Delinquent in drainage taxes	Drainage taxes collected in 1939
	Acres	Dollars	Dollars	Dollars	Dollars	Acres <sup>(1)</sup>	Dollars
All enterprises.....	183,337	43,914				(1)	1,601
Enterprises in debt.....							
Enterprises not in debt.....	183,337	43,914				(1)	1,601
Collecting drainage taxes in 1939.....	15,975	2,681				(1)	1,601
No collections reported.....	167,362	41,023					
Enterprises not reporting as to debt.....							

<sup>1</sup> Where there are less than 3 enterprises reporting in the State, data are not shown.

## CENSUS OF DRAINAGE—MARYLAND

STATE TABLE 7.—LAND AND CAPITAL INVESTED, BY PRINCIPAL PURPOSE OF DRAINAGE, JAN. 1, 1940

PURPOSE OF DRAINAGE	Land		Capital invested	
	Acres	Percent	Dollars	Percent
All enterprises.....	183,337	100.0	43,914	100.0
Improvement of land already in farms.....	183,337	100.0	43,914	100.0
Removal of alkali or seepage from irrigation.....				

STATE TABLE 8.—LAND AND CAPITAL INVESTED, BY DATE OF ORGANIZATION, JAN. 1, 1940

DATE OF ORGANIZATION	Land <sup>1</sup>		Area of enterprises		Capital invested	
	Acres	Percent	Total acres <sup>2</sup>	Overlapped acres	Dollars	Percent
All enterprises.....	183,337	100.0	190,922	7,585	43,914	100.0
1880-1889.....	980	0.5	1,976	996	1,125	2.6
1890-1899.....	204	0.1	1,822	1,618	363	0.8
1900-1904.....	158	0.1	158		152	0.3
1905-1909.....	2,913	1.6	5,210	2,297	2,141	4.9
1910-1914.....	2,877	1.6	5,651	2,674	1,995	4.5
1915-1919.....	18,037	9.8	18,037		6,276	14.3
1920-1924.....	19,429	10.6	19,429		10,861	24.7
1925-1929.....	12,774	7.0	12,774		4,431	10.1
1935-1939.....	125,865	68.7	125,865		18,570	37.8

<sup>1</sup> Land included in more than 1 enterprise is tabulated only in the last organized.<sup>2</sup> The sum of the areas of the individual enterprises.

STATE TABLE 9.—DRAINAGE CONDITION, DEVELOPMENT, AND USE OF LAND IN ENTERPRISES, BY DATE OF ORGANIZATION, 1939

DATE OF ORGANIZATION	Land in all enterprises <sup>1</sup>	DRAINAGE CONDITION			DEVELOPMENT			USE OF LAND						
		Drained		Partly drained	Undrained	Improved land		Timber and cut-over land	Other unimproved land	In occupied farms		In planted crops	Idle	Land available for settlement
All enterprises..	Acres 183,337	Acres 172,747	Per-cent 94.2	Acres 7,600	Acres 2,990	Acres 133,622	Per-cent 72.9	Acres 48,250	Acres 1,465	Acres 181,891	Per-cent 99.2	Acres 118,871	Acres 63,067	Acres .....
1880-1889.....	980	980	100.0	.....	.....	686	70.0	294	.....	980	100.0	500	480	.....
1890-1899.....	204	204	100.0	.....	.....	150	73.5	54	.....	204	100.0	150	54	.....
1900-1904.....	158	158	100.0	.....	.....	158	100.0	.....	.....	158	100.0	158	.....	.....
1905-1909.....	2,913	2,190	75.2	423	300	2,133	73.2	780	.....	2,913	100.0	1,963	1,550	.....
1910-1914.....	2,977	2,727	91.6	250	.....	2,081	69.9	896	.....	2,977	100.0	1,373	1,601	.....
1915-1919.....	18,037	17,637	97.8	.....	400	14,635	81.1	3,402	100	18,037	100.0	13,011	5,026	.....
1920-1924.....	19,429	19,185	98.7	.....	244	14,972	77.1	4,458	309	19,374	99.7	13,346	4,714	.....
1925-1929.....	12,774	12,011	94.0	.....	763	9,491	74.3	2,520	763	12,752	99.8	8,541	4,233	.....
1935-1939.....	125,865	117,655	93.5	6,927	1,283	89,316	71.0	36,256	293	124,496	99.9	80,429	45,406	.....

<sup>1</sup> Land included in more than 1 enterprise is tabulated only in the last organized.

STATE TABLE 10.—COST OF OPERATION AND MAINTENANCE, BY TYPE OF DRAINAGE, 1939

TYPE OF DRAINAGE	Land in all enterprises	LAND REPORTING ON COST OF MAINTENANCE AND OPERATION			COST REPORTED		
		Total	Some cost	No cost	Total amount	Per acre on—	
						Total reporting	Area incurring
All enterprises.....	Acres 183,337	Acres 183,337	Acres 15,199	Acres 168,138	Dollars 1,540	Dollars 0.01	Dollars 0.01
Gravity drainage only:							
Open ditches only.....		183,337	183,337	15,199	1,540	0.01	0.01
Pumping for all or part of drainage.....							

STATE TABLE 11.—LAND AND CAPITAL INVESTED, BY METHOD OF MAINTENANCE AND BY WHETHER MAINTENANCE IS SYSTEMATIC, JAN. 1, 1940

MAINTENANCE	Land		Capital invested	
	Acres	Percent	Dollars	Percent
All enterprises.....	183,337	100.0	43,914	100.0
Method:				
By district forces.....				
"None," or not reporting.....	17,794	9.7	3,396	7.7
Whether systematic:				
Reporting "yes".....	165,543	90.3	40,518	92.3
Reporting "no".....	17,794	9.7	3,396	7.7
Not reporting.....	160,807	87.7	40,098	91.3
	4,736	2.6	420	1.0

STATE TABLE 12.—LAND, CAPITAL INVESTED, AND DRAINAGE WORKS, BY FEDERAL AGENCY GIVING AID IN MAINTENANCE, 1940

AGENCY	Land in enterprises	Capital invested	DRAINAGE WORKS		
			Ditches	Tile	Levees
All enterprises reporting Federal aid received.....	Acres 178,106	Dollars 39,978	Miles 443.0	Miles	Miles
Civilian Conservation Corps.....					
Other kind or combination.....	178,106	39,978	443.0		

## CENSUS OF DRAINAGE—MARYLAND

233

COUNTY TABLE I.—LAND IN DRAINAGE ENTERPRISES CLASSIFIED BY CONDITION AND BY USE,  
AND BY KIND OF WORKS, 1940

ITEM (See definitions in Introduction)		THE STATE	Caroline	Dorchester	Queen Annes	Somerset	Other counties <sup>1</sup>
LAND AREA							
1	Approximate land area.....acres.....1940..	6,327,680	204,800	371,200	238,720	212,480	552,320
2	Drainage enterprises.....number.....1940..	2 126	33	26	17	40	10
3	Land in enterprises.....acres.....1940..	183,337	37,709	36,420	34,003	61,757	13,448
4	Area of all enterprises, overlapping included.....acres.....1940..	190,822	40,006	36,420	34,003	61,757	18,736
5	Amount of overlapping.....acres.....1940..	7,585	2,297	.....	.....	.....	5,288
CONDITION AND USE OF LAND							
6	Land with drainage sufficient for normal crop.....acres.....1940..	172,747	34,739	33,247	33,547	60,057	11,157
7	Land undrained, unfit for any crop.....acres.....1940..	2,690	700	.....	190	1,700	400
8	Land partly drained, for partial crop.....acres.....1940..	7,600	2,270	3,173	266	.....	1,891
9	Improved land.....acres.....1940..	133,622	26,579	20,848	29,526	46,971	9,698
10	Unimproved land:						
11	Woodland and cut-over land.....acres.....1940..	48,250	11,130	15,572	4,477	13,321	3,750
12	Other unimproved land.....acres.....1940..	1,465	.....	.....	.....	1,465	.....
13	Land in occupied farms.....acres.....1940..	181,891	37,709	35,051	34,003	61,680	13,448
14	Land in planted crops.....acres.....1940..	118,871	23,845	18,186	27,708	42,015	7,119
15	Land idle.....acres.....1940..	63,067	13,864	16,855	6,277	19,742	6,329
16	Land available for settlement.....acres.....1940..	.....	.....	.....	.....	.....	.....
LAND CLASSIFIED BY WORKS, 1940							
16	Land drained by open ditches only.....acres.....	183,337	37,709	36,420	34,003	61,757	13,448
17	Length of these ditches.....miles.....	461.3	124.2	109.1	72.7	117.2	38.1
18	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....
19	Land drained by open ditches and own levees.....acres.....	.....	.....	.....	.....	.....	.....
20	Land drained by tile only.....acres.....	.....	.....	.....	.....	.....	.....
21	Land drained by tile and own levees.....acres.....	.....	.....	.....	.....	.....	.....
22	Land drained by open ditches and tile.....acres.....	.....	.....	.....	.....	.....	.....
23	Land drained by open ditches, tile, and levees.....acres.....	.....	.....	.....	.....	.....	.....
24	Land in enterprises operating pumping plants.....acres.....	.....	.....	.....	.....	.....	.....

<sup>1</sup>Includes Wicomico and Worcester Counties.<sup>2</sup>No intercounty enterprises reported. The number of schedules tabulated is 131.COUNTY TABLE II.—DRAINAGE ENTERPRISES—WORKS AND CAPITAL INVESTED, 1940, AND MAINTENANCE  
AND OPERATION, AND FINANCIAL CONDITION, 1939

ITEM (See definitions in Introduction)		THE STATE	Caroline	Dorchester	Queen Annes	Somerset	Other counties <sup>1</sup>
DRAINAGE WORKS							
1	Drainage enterprises.....number.....1940..	2 126	33	26	17	40	10
2	Open ditches:						
3	Completed.....miles.....1940..	461.3	124.2	109.1	72.7	117.2	38.1
4	Additional length authorized.....miles.....1940..	.....	.....	.....	.....	.....	.....
5	Tile drains:						
6	Completed.....miles.....1940..	.....	.....	.....	.....	.....	.....
7	Additional length authorized.....miles.....1940..	.....	.....	.....	.....	.....	.....
8	Levees and dikes:						
9	Completed.....miles.....1940..	.....	.....	.....	.....	.....	.....
10	Additional length authorized.....miles.....1940..	.....	.....	.....	.....	.....	.....
11	Pumping plants:						
12	Engine capacity.....horsepower.....1940..	.....	.....	.....	.....	.....	.....
13	Pump capacity.....gal. per min.....1940..	.....	.....	.....	.....	.....	.....
14	Land served by pumps.....acres.....1940..	.....	.....	.....	.....	.....	.....
15	Wells pumped for drainage.....number.....1940..	.....	.....	.....	.....	.....	.....
CAPITAL INVESTED							
12	Capital invested to January 1.....dollars.....1940..	43,914	5,808	2,345	5,817	24,115	5,829
13	Estimated cost when completed.....dollars.....1940..	43,914	5,808	2,345	5,817	24,115	5,829
14	Average cost per acre when completed.....dollars.....1940..	0.24	0.15	0.06	0.17	0.39	0.43
15	Invested in and required for completion, 1940:						
16	Enterprises having open ditches only.....dollars.....	43,914	5,808	2,345	5,817	24,115	5,829
17	Average amount per acre.....dollars.....	0.24	0.15	0.06	0.17	0.39	0.43
18	Enterprises having open ditches and levees.....dollars.....	.....	.....	.....	.....	.....	.....
19	Enterprises having tile only.....dollars.....	.....	.....	.....	.....	.....	.....
20	Enterprises having tile and levees.....dollars.....	.....	.....	.....	.....	.....	.....
21	Enterprises having open ditches and tile.....dollars.....	.....	.....	.....	.....	.....	.....
22	Enterprises having ditches, tile, and levees.....dollars.....	.....	.....	.....	.....	.....	.....
23	Enterprises operating pumping plants.....dollars.....	.....	.....	.....	.....	.....	.....
MAINTENANCE AND OPERATION							
23	Cost of maintenance and operation in 1939:						
24	By enterprises operating pumping plants.....dollars.....	.....	.....	.....	.....	.....	.....
25	Enterprises reporting.....number.....	.....	.....	.....	.....	.....	.....
26	Land in these enterprises.....acres.....	.....	.....	.....	.....	.....	.....
27	Average cost per acre.....dollars.....	.....	.....	.....	.....	.....	.....
28	By enterprises not operating pumping plants.....dollars.....	1,540	( <sup>3</sup> )	.....	( <sup>4</sup> )	.....	.....
29	Enterprises reporting.....number.....	5	1	.....	4	.....	.....
30	Land in these enterprises.....acres.....	15,199	( <sup>3</sup> )	.....	( <sup>4</sup> )	.....	.....
31	Average cost per acre.....dollars.....	0.10	( <sup>3</sup> )	.....	( <sup>4</sup> )	.....	.....
32	Federal aid in maintenance:						
33	Enterprises reporting.....number.....	121	32	25	17	40	7
34	Land in these enterprises.....acres.....	178,106	37,605	35,440	34,003	61,757	9,401
FINANCIAL CONDITION							
33	Drainage taxes collected in 1939.....dollars.....	1,601	( <sup>3</sup> )	.....	( <sup>4</sup> )	.....	.....
34	Enterprises reporting.....number.....	6	2	.....	4	.....	.....
35	Land in these enterprises.....acres.....	15,975	( <sup>3</sup> )	.....	( <sup>4</sup> )	.....	.....
36	Average amount collected per acre.....dollars.....	0.10	( <sup>3</sup> )	.....	( <sup>4</sup> )	.....	.....
37	Area delinquent in drainage taxes, Dec. 31, 1939.....acres.....	( <sup>3</sup> )	.....	.....	( <sup>3</sup> )	.....	.....
38	Enterprises reporting.....number.....	1	.....	.....	1	.....	.....
39	Land in these enterprises.....acres.....	( <sup>3</sup> )	.....	.....	( <sup>3</sup> )	.....	.....
40	Portion delinquent in these enterprises.....percent.....	( <sup>3</sup> )	.....	.....	( <sup>3</sup> )	.....	.....
41	Total indebtedness, Dec. 31, 1939.....dollars.....	.....	.....	.....	.....	.....	.....
42	Indebtedness in arrears, Dec. 31, 1939.....dollars.....	.....	.....	.....	.....	.....	.....
43	Reduction of debt by refinancing, prior to 1940.....dollars.....	.....	.....	.....	.....	.....	.....

<sup>1</sup>See footnote 1, County table I.<sup>2</sup>See footnote 2, County table I.<sup>3</sup>Where there are less than 3 enterprises reporting in a county, data are shown in State totals only.<sup>4</sup>Data included in State totals only.<sup>5</sup>Where there are less than 3 enterprises reporting in the State, data are not shown.



# CENSUS OF DRAINAGE — MICHIGAN

235

STATE TABLE 1.—SUMMARY OF DRAINAGE FOR THE STATE: JAN. 1, 1940, 1930, AND 1920

ITEM (See definitions in Introduction)	CENSUS OF—			INCREASE OR DECREASE (—)			
	1940	1930	1920	1930-1940		1920-1930	
				Amount	Percent	Amount	Percent
Approximate land area of State.....acres.....	36,494,080	36,787,200	36,787,200	.....	.....	.....	.....
Land in drainage enterprises.....acres.....	8,978,386	9,180,851	9,729,171	-202,465	-2.2	-548,320	-5.6
Improved.....acres.....	7,921,202	7,603,256	7,182,352	257,946	3.4	450,904	6.7
Unimproved:							
Timber and cut-over.....acres.....	681,044	980,846	2,195,502	-299,802	-30.6	-1,214,716	-55.3
Other.....acres.....	376,140	536,749	351,257	-160,609	-29.9	185,492	52.8
Drainage sufficient for normal crop.....acres.....	8,456,953	7,581,151	( <sup>1</sup> )	875,802	11.6	.....	.....
Partly drained, for partial crop.....acres.....	273,237	1,068,246	( <sup>1</sup> )	-795,009	-74.4	.....	.....
Unfit to raise any crop for lack of drainage.....acres.....	248,186	531,454	<sup>2</sup> 1,020,207	-283,258	-53.3	-468,753	-47.9
In occupied farms.....acres.....	7,796,979	8,826,265	( <sup>1</sup> )	-1,029,286	-11.7	.....	.....
In planted crops.....acres.....	4,317,989	6,462,836	( <sup>1</sup> )	-2,144,847	-33.2	.....	.....
Idle.....acres.....	1,082,024	1,041,450	( <sup>1</sup> )	40,568	3.9	.....	.....
Available for settlement.....acres.....	5,883	50,237	( <sup>1</sup> )	-44,355	-88.3	.....	.....
Open ditches, completed.....miles.....	19,608.6	17,188.5	16,023.8	2,420.1	14.1	1,164.7	7.3
Tile drains, completed.....miles.....	3,229.5	3,400.2	2,173.9	-200.7	-7.5	1,316.3	60.6
Drainage pumping plants, capacity.....horsepower.....	17	275	1,065	-258	-93.8	-790	-74.2
gal. per min.....	6,000	36,340	62,000	-30,340	-83.5	-25,660	-41.4
Capital invested in enterprises.....dollars.....	40,412,251	37,677,084	24,683,715	2,735,167	7.2	12,983,369	52.6
Average per acre.....dollars.....	4.50	4.10	2.54	0.40	9.8	1.56	61.4

<sup>1</sup>Not available.

<sup>2</sup>Reported as "Swampy or subject to overflow".

STATE TABLE 2.—AREA OF ENTERPRISES, BY SIZE: JAN. 1, 1940, 1930, AND 1920

[For intercounty enterprises the portion in each county is tabulated as a separate enterprise]

SIZE	AREA OF ENTERPRISES <sup>1</sup>			Land in enterprises <sup>2</sup> 1940
	1940	1930	1920	
	Acres	Acres	Acres	Acres
All enterprises.....	16,070,279	15,032,692	15,766,478	8,978,386
Less than 100 acres.....	46,784	38,562	.....	32,125
100 to 199 acres.....	189,401	159,023	155,080	141,453
200 to 499 acres.....	1,208,251	1,076,140	967,221	792,330
500 to 999 acres.....	2,079,240	1,866,876	1,849,136	1,324,952
1,000 to 1,999 acres.....	2,601,894	.....	.....	1,551,002
2,000 to 4,999 acres.....	3,221,981	5,193,743	7,002,624	1,863,220
5,000 to 9,999 acres.....	1,851,253	1,743,097	3,251,318	976,868
10,000 to 19,999 acres.....	1,698,807	.....	.....	766,139
20,000 to 49,999 acres.....	1,511,306	3,281,204	1,072,885	726,227
50,000 to 99,999 acres.....	739,674	445,530	569,205	422,641
100,000 to 199,999 acres.....	687,042	1,229,497	.....	269,393
200,000 to 499,999 acres.....	200,640	.....	.....	112,046

<sup>1</sup>The sum of the areas in the individual enterprises, without deduction for overlapping.

<sup>2</sup>Overlapping eliminated by tabulating each enterprise according to its acreage not included in later enterprises.

STATE TABLE 3.—LAND AND CAPITAL INVESTED, BY CHARACTER OF ENTERPRISE, JAN. 1, 1940

CHARACTER OF ENTERPRISE	Land		Capital invested	
	Acres	Percent	Dollars	Percent
All enterprises.....	8,978,386	100.0	40,412,251	100.0
County drains.....	8,970,826	99.9	40,402,851	99.9
Individually owned projects.....	7,560	0.1	9,400	0.1

STATE TABLE 4.—LAND AND CAPITAL INVESTED, BY TYPE OF DRAINAGE: JAN. 1, 1940, 1930, AND 1920

TYPE OF DRAINAGE <sup>1</sup>	LAND IN ENTERPRISES						CAPITAL INVESTED IN ENTERPRISES					
	1940		1930		1920		1940		1930		1920	
	Acres	Percent	Acres	Percent	Acres	Percent	Dollars	Percent	Dollars	Percent	Dollars	Percent
All enterprises.....	8,978,386	100.0	9,180,851	100.0	9,729,171	100.0	40,412,251	100.0	37,677,084	100.0	24,683,715	100.0
Gravity drainage only by—												
Open ditches.....	7,624,801	84.9	7,552,846	82.3	.....	.....	28,213,061	72.3	25,970,317	68.9	.....	.....
Tile drains.....	503,806	5.6	586,050	6.4	9,718,471	99.0	5,780,401	14.3	1,408,439	11.7	24,513,276	99.3
Open ditches and tile drains...	848,979	9.5	1,032,185	11.2	.....	.....	5,408,048	13.4	6,898,828	18.3	.....	.....
All drained by pumping ly—												
Open ditches.....	800	( <sup>2</sup> )	.....	.....	.....	.....	10,741	( <sup>2</sup> )	.....	.....	.....	.....
Tile drains.....	.....	.....	770	( <sup>2</sup> )	1,100	( <sup>2</sup> )	.....	.....	40,500	0.2	22,139	0.1
Open ditches and tile drains...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Part only by pumping ly—												
Open ditches.....	.....	.....	9,000	0.1	9,600	0.1	.....	.....	350,000	0.9	148,300	0.6
Tile drains.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Open ditches and tile drains...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total area served by pumps.....	800	( <sup>2</sup> )	8,270	0.1	10,100	0.1	.....	.....	.....	.....	.....	.....

<sup>1</sup>Each item includes those enterprises that have provided levees in addition to the kind of drains specified.

<sup>2</sup>Less than one-tenth of 1 percent.

## CENSUS OF DRAINAGE—MICHIGAN

STATE TABLE 5.—PUMPING PLANTS AND LAND SERVED, BY KIND OF POWER: JAN. 1, 1940, 1930, AND 1920

KIND OF POWER	Enter- prises	CAPACITY			Land served	KIND OF POWER	Enter- prises	CAPACITY			Land served		
		Engine or motor		Pump				Engine or motor		Pump			
		Number	Hp.					Percent	G. p. m.			Acres	
All pumping enterprises.....	1940..	2	17	100.0	6,000	800	Electric.....	1940..	1	7	41.2	1,000	450
	1930..	2	275	100.0	36,340	8,270		1930..	1	25	9.1	3,000	770
	1920..	3	1,065	100.0	62,000	10,100		1920..	.....	.....	.....	.....	.....
Steam.....	1940..	.....	.....	.....	.....	.....	Internal combustion.....	1940..	1	10	58.8	5,000	350
	1930..	.....	.....	.....	.....	.....		1930..	1	250	90.9	33,340	7,500
	1920..	3	1,065	100.0	62,000	10,100		1920..	.....	.....	.....	.....	.....

STATE TABLE 6.—PUMPING PLANTS AND LAND SERVED, BY KIND OF PUMP: JAN. 1, 1940 AND 1930

KIND OF PUMP	PUMPS			Engine or motor capac- ity	Land served
	Number	Capacity			
All pumping enterprises.....1940..	2	G. p. m.	Percent	Hp.	Acres
1930..	3	6,000	100.0	17	800
		36,340	100.0	275	8,270
Centrifugal.....1940..	2	6,000	100.0	17	800
1930..	3	36,340	100.0	275	8,270

STATE TABLE 7.—LAND, CAPITAL INVESTED, AND AREA DELINQUENT IN DRAINAGE TAXES, BY ARREARAGE IN PAYMENT OF OBLIGATIONS: JAN. 1, 1940 AND 1930

FINANCIAL STATUS	LAND IN ENTERPRISES				CAPITAL INVESTED				AREA DELINQUENT <sup>1</sup>	
	1940		1930		1940		1930		1940	1930
	Acres	Percent	Acres	Percent	Dollars	Percent	Dollars	Percent	Acres	Acres
All enterprises.....	8,978,386	100.0	9,130,851	100.0	40,412,251	100.0	37,677,084	100.0	37,026	324,945
Enterprises in arrears.....	64,770	0.7	630,055	6.9	892,102	2.2	1,499,121	4.0	10,574	292,814
With some delinquent land.....	47,327	0.6	590,703	6.5	738,023	1.8	1,260,440	3.4	10,574	292,814
With no delinquent land.....	15,703	0.2	2,000	( <sup>2</sup> )	108,329	0.3	13,660	( <sup>2</sup> )	.....	.....
With no report on delinquency.....	1,740	( <sup>2</sup> )	37,392	0.4	35,750	0.1	224,721	0.6	.....	.....
Enterprises not in arrears.....	8,805,361	98.7	8,550,756	93.1	39,393,323	97.5	36,177,963	96.0	26,452	32,131
With some delinquent land.....	187,232	2.1	75,155	0.8	862,452	2.4	1,113,608	2.9	26,452	32,131
With no delinquent land.....	8,575,340	95.5	8,391,430	91.4	38,103,502	94.3	34,687,174	92.1	.....	.....
With no report on delinquency.....	101,789	1.1	81,161	0.9	327,369	0.8	367,181	1.0	.....	.....
Enterprises not reporting on arrearage.....	48,255	0.5	.....	.....	136,626	0.3	.....	.....	.....	.....
With some delinquent land.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
With no delinquent land.....	11,449	0.1	.....	.....	59,279	0.1	.....	.....	.....	.....
With no report on delinquency.....	36,606	0.4	.....	.....	77,547	0.2	.....	.....	.....	.....

<sup>1</sup> If any land is delinquent in 2 or more overlapping enterprises, the acreage delinquent is too large by the amount of such duplication.<sup>2</sup> Less than one-tenth of 1 percent.

STATE TABLE 8.—LAND, CAPITAL INVESTED, INDEBTEDNESS, ARREARAGE IN PAYMENT OF BONDS, REDUCTION OF DEBT BY REFINANCING, AND ACREAGE DELINQUENT, 1940; DRAINAGE TAXES COLLECTED IN 1939; BY INDEBTEDNESS AND ARREARAGE, JAN. 1, 1940

FINANCIAL STATUS	Land in enterprises	Capital invested	Indebtedness	Arrearage in payment of bonds	Reduction of debt by refinancing	Delinquent in drainage taxes <sup>1</sup>	Drainage taxes collected in 1939
	Acres	Dollars	Dollars	Dollars	Dollars	Acres	Dollars
All enterprises.....	8,978,386	40,412,251	809,379	156,741	1,250	37,026	233,665
Enterprises in debt.....	574,776	4,192,760	809,379	156,741	1,250	18,834	116,059
In arrears, amount of arrearage stated.....	64,770	883,142	173,788	156,741	1,250	10,574	39,409
Collecting drainage taxes in 1939.....	28,836	512,151	91,632	77,536	1,250	4,867	39,409
No collections reported.....	36,934	370,991	82,126	79,205	.....	5,707	.....
Not in arrears.....	510,006	3,309,618	635,791	.....	.....	8,260	76,650
Collecting drainage taxes in 1939.....	118,716	888,492	123,074	.....	.....	4,909	76,650
No collections reported.....	391,290	2,421,126	512,717	.....	.....	3,351	.....
Enterprises not in debt.....	8,347,884	36,010,385	.....	.....	.....	18,112	116,454
Collecting drainage taxes in 1939.....	679,774	2,640,758	.....	.....	.....	12,696	116,454
No collections reported.....	7,668,110	33,369,627	.....	.....	.....	5,416	.....
Enterprises not reporting as to debt.....	55,726	209,106	.....	.....	.....	80	1,152
Collecting drainage taxes in 1939.....	996	4,975	.....	.....	.....	90	1,152
No collections reported.....	54,730	204,131	.....	.....	.....	.....	.....

<sup>1</sup> If any land is delinquent in 2 or more overlapping enterprises, the acreage delinquent is too large by the amount of such duplication.

# CENSUS OF DRAINAGE — MICHIGAN

237

STATE TABLE 9.—LAND AND CAPITAL INVESTED, BY PRINCIPAL PURPOSE OF DRAINAGE, JAN. 1, 1940

PURPOSE OF DRAINAGE	Land		Capital invested		PURPOSE OF DRAINAGE	Land		Capital invested	
	Acres	Percent	Dollars	Percent		Acres	Percent	Dollars	Percent
All enterprises.....	8,978,386	100.0	40,412,251	100.0	Reclamation of swamp land not previously in farms.....	97,469	1.1	246,711	0.6
Improvement of land already in farms....	8,872,732	98.8	40,115,649	99.3	Protection against overflow.....	8,185	0.1	49,891	0.1

STATE TABLE 10.—LAND AND CAPITAL INVESTED, BY DATE OF ORGANIZATION, JAN. 1, 1940

DATE OF ORGANIZATION	Land <sup>1</sup>		Area of enterprises		Capital invested	
	Acres	Percent	Total acres <sup>2</sup>	Overlapped acres	Dollars	Percent
All enterprises.....	8,978,386	100.0	16,070,273	7,091,887	40,412,251	100.0
Before 1870.....	2,225	0.1	6,602	4,377	21,226	0.1
1870-1879.....	380	( <sup>3</sup> )	1,434	1,054	1,889	( <sup>3</sup> )
1880-1889.....	11,565	0.1	27,396	15,831	59,734	0.1
1890-1899.....	398,889	4.4	1,175,296	776,407	1,968,647	4.9
1900-1904.....	1,375,416	15.3	3,822,142	2,448,726	6,264,488	15.5
1905-1909.....	1,204,860	13.4	2,594,916	1,390,056	5,358,641	13.2
1910-1914.....	1,288,142	14.3	2,215,369	927,227	5,334,384	13.2
1915-1919.....	1,865,166	20.8	2,773,859	968,693	8,973,550	22.2
1920-1924.....	994,702	11.1	1,308,982	314,280	5,024,864	12.4
1925-1929.....	1,135,169	12.7	1,334,678	199,509	5,079,557	12.6
1930-1934.....	281,162	3.1	357,281	76,119	1,245,258	3.1
1935-1939.....	420,710	4.7	482,318	31,608	1,090,013	2.7

<sup>1</sup>Land included in more than 1 enterprise is tabulated only in the last organized.

<sup>2</sup>The sum of the areas of the individual enterprises.

<sup>3</sup>Less than one-tenth of 1 percent.

STATE TABLE 11.—DRAINAGE CONDITION, DEVELOPMENT, AND USE OF LAND IN ENTERPRISES, BY DATE OF ORGANIZATION, 1939

DATE OF ORGANIZATION	Land in all enterprises <sup>1</sup>	DRAINAGE CONDITION				DEVELOPMENT				USE OF LAND				
		Drained		Partly drained	Undrained	Improved land		Timber and cut-over land	Other un-improved land	In occupied farms		In planted crops	Idle	Land available for settlement
All enterprises..	Acres 8,978,386	Acres 8,456,953	Per- cent 94.2	Acres 273,237	Acres 248,196	Acres 7,021,202	Per- cent 88.2	Acres 681,044	Acres 376,140	Acres 7,796,970	Per- cent 86.8	Acres 4,317,989	Acres 1,082,024	Acres 5,883,945
Before 1870.....	2,225	2,225	100.0	.....	.....	2,042	91.8	182	1	2,037	91.1	1,218	1	.....
1870-1879.....	380	375	98.7	.....	5	340	89.5	35	5	343	90.3	208	.....	.....
1880-1889.....	11,565	11,367	98.3	80	118	11,200	96.8	340	25	10,448	90.3	6,687	560	.....
1890-1899.....	398,889	379,647	95.2	11,469	7,773	360,444	90.4	26,942	11,503	352,010	88.2	201,457	35,223	40
1900-1904.....	1,375,416	1,293,758	94.1	49,307	32,351	1,216,029	88.4	116,220	43,167	1,210,052	88.0	667,739	155,479	1,188
1905-1909.....	1,204,860	1,135,993	94.3	39,018	29,849	1,066,554	88.5	91,431	46,875	1,054,853	87.6	566,904	131,040	260
1910-1914.....	1,288,142	1,215,895	94.4	36,497	35,750	1,124,880	87.0	117,353	45,939	1,114,305	86.5	611,309	156,431	1,482
1915-1919.....	1,865,166	1,729,556	92.7	74,517	61,093	1,632,060	87.5	143,138	89,968	1,600,276	85.8	872,067	244,195	180
1920-1924.....	994,702	919,745	92.5	32,299	42,658	863,510	86.8	64,591	66,601	832,717	83.7	459,533	144,208	68
1925-1929.....	1,135,169	1,104,026	97.2	16,815	14,328	1,025,522	90.3	82,706	26,941	1,003,284	88.4	567,127	124,719	2,183
1930-1934.....	281,162	269,776	96.0	2,581	8,805	255,872	91.0	10,275	15,015	248,084	88.2	142,728	27,647	.....
1935-1939.....	420,710	394,590	93.8	10,654	15,466	362,779	86.2	27,931	30,100	368,571	87.6	200,832	62,521	480

<sup>1</sup>Land included in more than 1 enterprise is tabulated only in the last organized.

STATE TABLE 12.—COST OF OPERATION AND MAINTENANCE, BY TYPE OF DRAINAGE, 1939

TYPE OF DRAINAGE	Land in all enterprises	LAND REPORTING ON COST OF MAINTENANCE AND OPERATION			COST REPORTED		
		Total	Some cost	No cost	Total amount	Per acre on—	
						Total reporting	Area incurring
	Acres	Acres	Acres	Acres	Dollars	Dollars	Dollars
All enterprises.....	8,978,386	8,900,800	753,859	8,146,941	179,318	0.02	0.24
Gravity drainage only.....	8,977,586	8,900,000	753,409	8,146,591	178,778	0.02	0.24
Open ditches only.....	7,620,741	7,549,378	608,938	6,940,441	125,472	0.02	0.21
Open ditches and levees.....	4,060	2,730	.....	2,730	.....	.....	.....
Tile drains only.....	503,303	501,002	56,887	444,115	31,506	0.06	0.55
Tile drains and levees.....	503	503	.....	503	.....	.....	.....
Open ditches and tile drains.....	848,539	845,946	87,584	758,362	21,740	0.02	0.25
Open ditches, tile drains, and levees.....	440	440	.....	440	.....	.....	.....
Pumping for all or part of drainage:							
All drainage by pumping.....	800	800	450	350	540	0.68	1.20

## CENSUS OF DRAINAGE — MICHIGAN

STATE TABLE 13.—LAND AND CAPITAL INVESTED, BY METHOD OF MAINTENANCE AND BY WHETHER MAINTENANCE IS SYSTEMATIC, JAN. 1, 1940

MAINTENANCE	Land		Capital invested	
	Acres	Percent	Dollars	Percent
All enterprises.....	8,978,336	100.0	40,412,251	100.0
Method:				
By district forces.....	2,056,227	22.9	9,819,675	24.5
By contract.....	6,430,482	71.6	29,045,256	71.9
Work apportioned to landowners.....	102,940	1.1	211,711	0.5
"None," or not reporting.....	388,737	4.4	1,295,609	3.1
Whether systematic:				
Reporting "yes".....	6,333,246	70.5	29,877,578	73.9
Reporting "no".....	2,578,264	28.7	10,210,770	25.3
Not reporting.....	66,876	0.8	323,903	0.8

STATE TABLE 14.—LAND, CAPITAL INVESTED, AND DRAINAGE WORKS, BY OWNERSHIP OF POWER EQUIPMENT FOR MAINTENANCE, 1940

ITEM	All enterprises	ENTERPRISES OWNING POWER EQUIPMENT	
		Amount	Percent
Land in enterprises.....acres....	8,978,336	49,289	0.5
Capital invested.....dollars..	40,412,251	194,199	0.5
Drainage works:			
Open ditches.....miles....	19,609.6	98.9	0.5
Tile drains.....miles....	3,229.5	11.8	0.4
Levees.....miles....	13.6	.....	.....

STATE TABLE 15.—LAND, CAPITAL INVESTED, AND DRAINAGE WORKS, BY FEDERAL AGENCY GIVING AID IN MAINTENANCE, 1940

AGENCY	Land in enterprises	Capital invested	DRAINAGE WORKS		
			Ditches	Tile	Levees
All enterprises reporting Federal aid received.....	Acres 2,256,968	Dollars 9,356,645	Miles 5,907.1	Miles 481.8	Miles 1.2
Work Projects Administration.....	2,152,911	9,004,694	5,138.9	480.7	1.2
W.P.A. and C.C.C.....	290	6,850	4.1	.....	.....
Other kind or combination <sup>1</sup> .....	103,797	345,101	164.1	1.1	.....

<sup>1</sup>Includes 17 enterprises reporting Federal aid received but not the agency giving it.

## CENSUS OF DRAINAGE—MICHIGAN

239

COUNTY TABLE I.—LAND IN DRAINAGE ENTERPRISES CLASSIFIED BY CONDITION AND BY USE, 1940, 1930, AND 1920; AND BY KIND OF WORKS, 1940

ITEM (See definitions in introduction)		THE STATE	Allegan	Alpena	Arenac	Barry
LAND AREA						
1	Approximate land area.....acres.....1940..	36,494,080	530,560	363,520	235,520	351,360
2	Drainage enterprises.....number.....1940..	18,130	382	5	117	97
3	Land in enterprises.....acres.....1940..	8,978,386	286,951	6,960	145,399	115,767
4	.....1930..	9,180,851	278,454	5,460	132,343	154,722
5	.....1920..	9,729,171	312,915	( <sup>2</sup> )	143,734	143,508
6	Area of all enterprises, overlapping included.....acres.....1940..	16,070,273	405,077	6,960	197,875	198,798
7	Amount of overlapping.....acres.....1940..	7,091,687	118,126	.....	51,876	83,031
CONDITION AND USE OF LAND						
8	Land with sufficient drainage for normal crop.....acres.....1940..	8,456,953	283,026	6,860	125,475	106,900
9	.....1930..	7,581,151	276,511	3,980	122,050	133,476
10	Increase or decrease (-), 1930-1940.....acres.....	875,802	6,515	2,880	3,395	-26,576
11	.....percent.....	11.6	2.4	72.4	2.8	-19.0
12	Land unimproved, unfit for any crop.....acres.....1940..	248,196	1,250	100	7,414	4,768
13	.....1930..	531,454	1,143	1,080	2,611	10,678
14	Increase or decrease (-), 1930-1940.....acres.....	-283,258	107	-980	4,803	-5,890
15	.....percent.....	-53.3	9.4	-90.7	184.0	-55.2
16	Land partly drained, for partial crop.....acres.....1940..	273,237	2,675	.....	12,510	4,079
17	.....1930..	1,068,246	800	400	7,652	10,568
18	Increase or decrease (-), 1930-1940.....acres.....	-795,009	1,875	-400	4,898	-6,489
19	.....percent.....	-74.4	234.4	-100.0	63.5	-61.4
20	Improved land.....acres.....1940..	7,921,202	243,676	6,860	91,414	100,372
21	.....1930..	7,663,256	273,000	2,980	95,306	133,780
22	.....1920..	7,182,352	298,843	( <sup>2</sup> )	58,386	116,347
Unimproved land:						
23	Woodland and cut-over land.....acres.....1940..	681,044	42,325	.....	40,478	11,881
24	.....1930..	980,846	3,270	1,680	34,265	20,192
25	.....1920..	2,195,562	14,072	( <sup>2</sup> )	85,348	16,729
26	Other unimproved land.....acres.....1940..	376,140	950	100	13,507	4,014
27	.....1930..	536,749	2,184	800	2,771	750
28	.....1920..	351,257	.....	( <sup>2</sup> )	.....	10,432
29	Land in occupied farms.....acres.....1940..	7,796,879	226,000	6,960	97,400	109,600
30	.....1930..	8,626,265	277,773	2,980	105,472	153,520
31	Increase or decrease (-), 1930-1940.....acres.....	-1,029,286	-51,773	3,990	-8,072	-43,920
32	.....percent.....	-11.7	-18.6	133.6	-7.6	-28.6
33	Land in planted crops.....acres.....1940..	4,317,989	109,100	6,174	38,700	53,400
34	.....1930..	6,462,936	250,374	1,460	59,225	99,172
35	Increase or decrease (-), 1930-1940.....acres.....	-2,144,947	-141,274	4,714	-20,525	-45,772
36	.....percent.....	-33.2	-56.4	322.9	-34.6	-46.2
37	Land idle.....acres.....1940..	1,082,024	102,828	.....	71,663	17,440
38	.....1930..	1,041,456	14,776	2,560	33,802	26,637
39	Increase or decrease (-), 1930-1940.....acres.....	40,568	88,052	-2,560	37,861	-7,197
40	.....percent.....	3.9	595.9	-100.0	112.0	-26.2
41	Land available for settlement.....acres.....1940..	5,882	.....	.....	.....	.....
42	.....1930..	50,237	400	1,000	10,640	.....
43	Increase or decrease (-), 1930-1940.....acres.....	-44,355	-400	-1,000	-10,640	.....
44	.....percent.....	-86.3	-100.0	-100.0	-100.0	.....
LAND CLASSIFIED BY WORKS, 1940						
45	Land drained by open ditches only.....acres.....	7,620,741	272,425	6,960	143,829	85,424
46	Length of these ditches.....miles.....	18,015.9	575.0	13.0	289.1	107.7
47	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....
48	Land drained by open ditches and own levees.....acres.....	4,060	.....	.....	560	985
49	Length of these ditches.....miles.....	21.2	.....	.....	2.0	0.2
50	Length of these levees.....miles.....	10.5	.....	.....	0.1	2.8
51	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....
52	Land drained by tile only.....acres.....	503,303	4,989	.....	.....	9,728
53	Length of these tile.....miles.....	2,128.0	12.4	.....	.....	34.1
54	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....
55	Land drained by tile and own levees.....acres.....	503	.....	.....	.....	.....
56	Length of these tile.....miles.....	1.1	.....	.....	.....	.....
57	Length of these levees.....miles.....	2.1	.....	.....	.....	.....
58	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....
59	Land drained by open ditches and tile.....acres.....	848,539	9,537	.....	1,010	19,600
60	Length of these open ditches.....miles.....	1,689.4	17.4	.....	2.5	33.9
61	Length of these tile.....miles.....	1,099.6	13.0	.....	0.7	34.6
62	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....
63	Land drained by open ditches, tile, and levees.....acres.....	440	.....	.....	.....	.....
64	Length of these open ditches.....miles.....	1.1	.....	.....	.....	.....
65	Length of these tile.....miles.....	0.6	.....	.....	.....	.....
66	Length of these levees.....miles.....	0.8	.....	.....	.....	.....
67	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....
68	Land in enterprises operating pumping plants <sup>1</sup> .....acres.....	5,800	.....	.....	.....	.....
69	Length of open ditches owned by these enterprises.....miles.....	1.0	.....	.....	.....	.....
70	Length of tile owned by these enterprises.....miles.....	.....	.....	.....	.....	.....
71	Length of levees owned by these enterprises.....miles.....	0.2	.....	.....	.....	.....
72	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....

<sup>1</sup> An intercounty enterprise is counted in each county in which a part is located. The number of separate enterprises in the State is 7,692.<sup>2</sup> Included in "Other counties."<sup>3</sup> Office estimate; reported figures exceed acreage in all farms as determined by the Census of Agriculture.<sup>4</sup> Data in lines 68 to 72 are not included in lines 45 to 67.<sup>5</sup> Includes data not distributed by counties.

## CENSUS OF DRAINAGE - MICHIGAN

COUNTY TABLE I--LAND IN DRAINAGE ENTERPRISES CLASSIFIED BY CONDITION AND BY USE, 1940, 1930, AND 1920; AND BY KIND OF WORKS, 1940--Continued

ITEM (See definitions in Introduction)		Bay	Berrien	Branch	Calhoun	Cass	Clare
LAND AREA							
1	Approximate land area.....acres....1940..	285,440	371,200	323,840	453,760	312,320	366,080
2	Drainage enterprises.....number....1940..	175	302	187	118	44	41
3	Land in enterprises.....acres....1940..	225,775	156,795	143,160	217,610	50,565	22,364
4	.....1930..	214,257	151,691	153,713	217,903	41,592	27,930
5	.....1920..	241,501	122,877	148,460	252,397	64,027	21,164
6	Area of all enterprises, overlapping included.....acres....1940..	353,782	259,822	181,872	396,458	79,322	24,364
7	Amount of overlapping.....acres....1940..	128,007	103,027	38,712	178,848	28,937	2,000
CONDITION AND USE OF LAND							
8	Land with drainage sufficient for normal crop.....acres....1940..	225,670	155,386	142,769	190,297	49,557	20,181
9	.....1930..	160,649	124,356	134,032	163,667	24,704	19,303
10	Increase or decrease (-), 1930-1940.....acres.....	65,021	31,040	8,737	26,640	24,853	878
11	.....percent.....	40.5	25.0	6.5	16.3	100.6	4.5
12	Land undrained, unfit for any crop.....acres....1940..	65	132	.....	9,599	872	481
13	.....1930..	220	8,155	590	26,835	8,831	3,000
14	Increase or decrease (-), 1930-1940.....acres.....	-155	-8,023	-590	-17,236	-7,959	-2,509
15	.....percent.....	-70.4	-98.4	-100.0	-64.2	-90.1	-83.6
16	Land partly drained, for partial crop.....acres....1940..	40	1,267	381	17,714	156	1,692
17	.....1930..	53,388	19,180	19,091	27,311	8,057	5,627
18	Increase or decrease (-), 1930-1940.....acres.....	-53,348	-17,913	-18,700	-9,597	-7,901	-3,935
19	.....percent.....	-99.9	-93.4	-98.0	-35.1	-98.1	-68.9
20	Improved land.....acres....1940..	206,227	132,801	105,831	176,140	49,365	20,173
21	.....1930..	194,946	137,002	150,899	144,893	27,096	19,103
22	.....1920..	180,748	97,743	77,102	191,570	44,870	13,215
Unimproved land:							
23	Woodland and cut-over land.....acres....1940..	19,089	16,685	29,840	19,583	750	1,205
24	.....1930..	26,877	7,201	376	21,650	6,315	5,216
25	.....1920..	79,740	1,693	7,449	36,550	5,074	7,949
26	Other unimproved land.....acres....1940..	459	7,209	7,689	21,887	470	986
27	.....1930..	2,334	7,488	2,438	51,260	8,181	3,611
28	.....1920..	1,013	24,041	63,909	24,277	14,083	.....
29	Land in occupied farms.....acres....1940..	205,415	132,500	135,100	200,200	49,000	19,508
30	.....1930..	210,467	151,016	153,376	209,698	41,592	21,977
31	Increase or decrease (-), 1930-1940.....acres.....	-5,052	-18,516	-18,276	-9,498	1,408	-2,469
32	.....percent.....	-2.4	-12.3	-11.9	-4.6	3.4	-11.2
33	Land in planted crops.....acres....1940..	120,300	80,600	69,000	94,900	19,300	16,488
34	.....1930..	179,722	128,709	138,030	95,330	12,859	17,488
35	Increase or decrease (-), 1930-1940.....acres.....	-59,422	-48,109	-69,030	-10,430	6,441	-1,000
36	.....percent.....	-33.1	-37.4	-50.0	-10.9	50.1	-5.7
37	Land idle.....acres....1940..	513	29,214	15,605	22,675	2,367	4,833
38	.....1930..	5,625	10,097	3,298	79,637	9,622	8,043
39	Increase or decrease (-), 1930-1940.....acres.....	-5,112	19,117	12,307	-56,962	-7,255	-3,210
40	.....percent.....	-90.9	189.3	373.2	-71.5	-75.4	-39.9
41	Land available for settlement.....acres....1940..	.....	.....	.....	.....	.....	.....
42	.....1930..	125	435	.....	844	.....	4,204
43	Increase or decrease (-), 1930-1940.....acres.....	-125	-435	.....	-844	.....	-4,204
44	.....percent.....	-100.0	-100.0	.....	-100.0	.....	-100.0
LAND CLASSIFIED BY WORKS, 1940							
45	Land drained by open ditches only.....acres.....	225,010	103,205	110,617	183,712	47,654	15,986
46	Length of these ditches.....miles.....	627.8	234.4	262.9	291.2	94.2	29.9
47	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....
48	Land drained by open ditches and own levees.....acres.....	.....	.....	1,185	.....	.....	.....
49	Length of these ditches.....miles.....	.....	.....	10.3	.....	.....	.....
50	Length of these levees.....miles.....	.....	.....	0.1	.....	.....	.....
51	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....
52	Land drained by tile only.....acres.....	560	26,115	14,179	11,239	240	.....
53	Length of these tile.....miles.....	3.0	102.4	57.8	42.7	0.7	.....
54	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....
55	Land drained by tile and own levees.....acres.....	.....	.....	.....	.....	.....	.....
56	Length of these tile.....miles.....	.....	.....	.....	.....	.....	.....
57	Length of these levees.....miles.....	.....	.....	.....	.....	.....	.....
58	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....
59	Land drained by open ditches and tile.....acres.....	205	27,475	17,179	22,859	2,491	6,978
60	Length of these open ditches.....miles.....	3.1	48.6	22.7	36.9	7.5	18.8
61	Length of these tile.....miles.....	0.8	36.8	35.5	26.9	2.6	10.4
62	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....
63	Land drained by open ditches, tile, and levees.....acres.....	.....	.....	.....	.....	.....	.....
64	Length of these open ditches.....miles.....	.....	.....	.....	.....	.....	.....
65	Length of these tile.....miles.....	.....	.....	.....	.....	.....	.....
66	Length of these levees.....miles.....	.....	.....	.....	.....	.....	.....
67	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....
68	Land in enterprises operating pumping plants.....acres.....	.....	.....	.....	.....	.....	.....
69	Length of open ditches owned by these enterprises.....miles.....	.....	.....	.....	.....	.....	.....
70	Length of tile owned by these enterprises.....miles.....	.....	.....	.....	.....	.....	.....
71	Length of levees owned by these enterprises.....miles.....	.....	.....	.....	.....	.....	.....
72	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....

# CENSUS OF DRAINAGE - MICHIGAN

241

COUNTY TABLE I.—LAND IN DRAINAGE ENTERPRISES CLASSIFIED BY CONDITION AND BY USE, 1940, 1930, AND 1920; AND BY KIND OF WORKS, 1940—Continued

ITEM (See definitions in Introduction)		Clinton	Eaton	Genesee	Gladwin	Gratiot	Hillsdale
LAND AREA							
1	Approximate land area.....acres....1940..	365,440	362,880	412,160	321,820	362,240	384,640
2	Drainage enterprises.....number....1940..	226	249	316	127	478	196
3	Land in enterprises.....acres....1940..	309,676	280,191	216,856	102,698	338,828	178,599
4	.....1930..	263,358	321,576	231,171	96,008	315,491	188,410
5	.....1920..	272,709	347,032	188,943	124,029	324,969	197,949
6	Area of all enterprises, overlapping included.....acres....1940..	540,757	911,262	287,229	106,428	553,099	248,618
7	Amount of overlapping.....acres....1940..	231,081	631,071	70,373	3,730	214,271	70,019
CONDITION AND USE OF LAND							
8	Land with drainage sufficient for normal crop.....acres....1940..	285,837	249,330	216,441	71,540	290,903	171,312
9	.....1930..	224,494	277,129	170,502	97,903	182,739	100,652
10	Increase or decrease (-), 1930-1940.....acres.....	61,343	-27,799	45,939	-26,363	108,164	70,660
11	.....percent.....	27.3	-10.0	26.9	-26.9	59.2	68.9
12	Land undrained, unfit for any crop.....acres....1940..	10,308	8,250	250	29,358	9,433	2,399
13	.....1930..	12,866	12,968	23,191	.....	20,202	23,112
14	Increase or decrease (-), 1930-1940.....acres.....	-2,558	-4,738	-22,941	29,358	-10,769	-20,713
15	.....percent.....	-19.9	-36.5	.....	.....	-53.3	-89.6
16	Land partly drained, for partial crop.....acres....1940..	13,531	22,611	165	1,800	38,492	4,888
17	.....1930..	25,998	31,459	37,478	105	112,550	64,446
18	Increase or decrease (-), 1930-1940.....acres.....	-12,467	-8,848	-37,313	1,695	-74,058	-59,558
19	.....percent.....	-48.0	-28.1	-99.6	(1)	-65.8	-92.4
20	Improved land.....acres....1940..	286,001	247,177	211,174	68,740	280,865	162,672
21	.....1930..	224,501	270,022	196,129	79,993	263,400	129,635
22	.....1920..	187,269	261,989	136,149	68,182	249,338	185,366
Unimproved land:							
23	Woodland and cut-over land.....acres....1940..	11,549	16,736	3,750	8,660	52,274	11,909
24	.....1930..	26,006	51,442	20,436	18,015	42,404	21,594
25	.....1920..	85,440	85,043	52,443	55,847	76,631	6,889
26	Other unimproved land.....acres....1940..	11,626	16,276	1,932	25,298	5,688	4,118
27	.....1930..	12,851	112	14,606	.....	9,687	37,181
28	.....1920..	.....	.....	351	.....	.....	5,594
29	Land in occupied farms.....acres....1940..	300,400	269,500	184,400	59,200	315,200	178,146
30	.....1930..	263,332	318,683	231,063	82,853	286,588	170,991
31	Increase or decrease (-), 1930-1940.....acres.....	37,068	-49,183	-46,663	-23,653	28,612	7,156
32	.....percent.....	14.1	-15.4	-20.2	-28.5	10.0	4.2
33	Land in planted crops.....acres....1940..	169,200	141,600	101,800	20,400	184,200	105,519
34	.....1930..	104,832	215,202	184,996	74,247	257,395	102,412
35	Increase or decrease (-), 1930-1940.....acres.....	64,368	-73,602	-83,196	-53,847	-73,195	3,107
36	.....percent.....	61.4	-51.2	-47.8	-72.5	-28.4	3.0
37	Land idle.....acres....1940..	16,745	15,835	1,705	33,958	2,699	21,095
38	.....1930..	29,284	37,493	336	14,450	35,006	25,255
39	Increase or decrease (-), 1930-1940.....acres.....	-12,539	-21,658	1,369	19,508	-32,307	-4,160
40	.....percent.....	-42.8	-57.8	407.4	135.0	-92.3	-16.5
41	Land available for settlement.....acres....1940..	.....	.....	.....	.....	.....	.....
42	.....1930..	.....	.....	.....	14,615	9,461	.....
43	Increase or decrease (-), 1930-1940.....acres.....	.....	.....	.....	-14,615	-9,461	.....
44	.....percent.....	.....	.....	.....	-100.0	-100.0	.....
LAND CLASSIFIED BY WORKS, 1940							
45	Land drained by open ditches only.....acres.....	254,872	156,197	137,452	102,048	185,578	87,399
46	Length of these ditches.....miles.....	449.2	325.8	340.0	269.5	581.2	117.3
47	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....
48	Land drained by open ditches and own levees.....acres.....	.....	.....	.....	.....	.....	.....
49	Length of these ditches.....miles.....	.....	.....	.....	.....	.....	.....
50	Length of these levees.....miles.....	.....	.....	.....	.....	.....	.....
51	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....
52	Land drained by tile only.....acres.....	16,835	39,366	30,502	350	58,255	35,172
53	Length of these tile.....miles.....	80.8	223.2	108.5	1.5	229.9	140.8
54	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....
55	Land drained by tile and own levees.....acres.....	.....	.....	503	.....	.....	.....
56	Length of these tile.....miles.....	.....	.....	1.1	.....	.....	.....
57	Length of these levees.....miles.....	.....	.....	2.1	.....	.....	.....
58	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....
59	Land drained by open ditches and tile.....acres.....	37,969	84,628	48,399	.....	84,645	55,028
60	Length of these open ditches.....miles.....	78.7	194.4	81.3	.....	164.0	59.2
61	Length of these tile.....miles.....	60.1	135.6	68.0	.....	90.0	69.6
62	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....
63	Land drained by open ditches, tile, and levees.....acres.....	.....	.....	.....	.....	.....	.....
64	Length of these open ditches.....miles.....	.....	.....	.....	.....	.....	.....
65	Length of these tile.....miles.....	.....	.....	.....	.....	.....	.....
66	Length of these levees.....miles.....	.....	.....	.....	.....	.....	.....
67	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....
68	Land in enterprises operating pumping plants.....acres.....	.....	.....	.....	.....	.....	.....
69	Length of open ditches owned by these enterprises.....miles.....	.....	.....	.....	.....	.....	.....
70	Length of tile owned by these enterprises.....miles.....	.....	.....	.....	.....	.....	.....
71	Length of levees owned by these enterprises.....miles.....	.....	.....	.....	.....	.....	.....
72	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....

<sup>1</sup>Percent not shown when more than 1,000.

## CENSUS OF DRAINAGE—MICHIGAN

## COUNTY TABLE I.—LAND IN DRAINAGE ENTERPRISES CLASSIFIED BY CONDITION

ITEM (See definitions in Introduction)		Thuron	Ingham	Ionia	Iosco	Isabella	Jackson
LAND AREA							
1	Approximate land area.....acres....1940..	526,080	357,760	308,000	350,080	366,080	451,200
2	Drainage enterprises.....number....1940..	178	237	137	19	281	65
3	Land in enterprises.....acres....1940..	309,524	263,960	106,479	91,468	216,902	253,462
4	1930..	330,544	306,856	155,890	39,988	247,472	280,909
5	1920..	430,219	222,114	286,153	31,974	307,024	76,139
6	Area of all enterprises, overlapping included.....acres....1940..	613,293	403,377	284,382	95,618	390,121	430,955
7	Amount of overlapping.....acres....1940..	303,769	139,397	117,803	4,160	171,129	177,493
CONDITION AND USE OF LAND							
8	Land with drainage sufficient for normal crop.....acres....1940..	309,524	214,060	148,840	65,063	203,384	241,614
9	1930..	289,439	235,070	133,347	33,783	220,581	231,879
10	Increase or decrease (-), 1930-1940.....acres.....	20,085	-21,001	15,493	28,283	-17,197	9,735
11	percent.....	6.9	-8.9	11.6	76.9	-7.8	4.2
12	Land undrained, unfit for any crop.....acres....1940..	.....	24,485	13,208	26,083	1,865	6,433
13	1930..	8,849	26,450	8,998	811	1,015	11,814
14	Increase or decrease (-), 1930-1940.....acres.....	-8,849	-1,965	4,270	25,272	890	-5,381
15	percent.....	-100.0	-7.4	47.4	(1)	83.7	-45.5
16	Land partly drained, for partial crop.....acres....1940..	.....	25,426	4,371	309	13,743	5,415
17	1930..	41,256	47,336	13,545	2,394	25,876	47,216
18	Increase or decrease (-), 1930-1940.....acres.....	-41,256	-21,910	-9,174	-2,085	-12,133	-41,804
19	percent.....	-100.0	-46.3	-67.7	-87.1	-46.9	-88.5
20	Improved land.....acres....1940..	309,524	217,659	146,529	63,628	206,956	237,135
21	1930..	283,861	239,030	136,714	28,792	220,437	231,935
22	1920..	237,924	177,928	228,713	14,318	201,061	31,747
Unimproved land:							
23	Woodland and cut-over land.....acres....1940..	.....	27,109	5,894	4,151	3,220	3,620
24	1930..	38,953	30,040	11,602	10,390	27,035	45,690
25	1920..	72,205	9,905	43,188	14,731	105,963	4,273
26	Other unimproved land.....acres....1940..	.....	19,215	13,066	23,679	8,816	12,707
27	1930..	16,730	39,780	7,544	806	.....	13,284
28	1920..	.....	34,281	14,222	2,895	.....	10,119
29	Land in occupied farms.....acres....1940..	286,100	199,324	161,485	30,700	185,249	229,372
30	1930..	336,273	308,260	155,890	31,990	247,302	290,909
31	Increase or decrease (-), 1930-1940.....acres.....	-50,173	-108,936	5,595	-1,290	-62,053	-61,537
32	percent.....	-14.9	-35.3	3.6	-4.0	-25.1	-21.2
33	Land in planted crops.....acres....1940..	174,200	111,000	91,397	9,330	97,000	87,900
34	1930..	197,473	175,075	132,054	19,994	204,243	219,334
35	Increase or decrease (-), 1930-1940.....acres.....	-23,273	-64,075	-41,657	-10,664	-107,243	-131,434
36	percent.....	-11.8	-36.6	-31.2	-53.3	-52.5	-59.9
37	Land idle.....acres....1940..	.....	22,142	49,504	26,285	69,918	28,382
38	1930..	43,056	6,900	101	9,996	15	34,042
39	Increase or decrease (-), 1930-1940.....acres.....	-43,056	15,242	49,403	16,289	69,903	-5,660
40	percent.....	-100.0	220.9	(1)	163.0	(1)	-16.6
41	Land available for settlement.....acres....1940..	.....	.....	2,222	.....	.....	.....
42	1930..	.....	430	.....	.....	.....	.....
43	Increase or decrease (-), 1930-1940.....acres.....	.....	-430	2,222	.....	.....	.....
44	percent.....	.....	-100.0	.....	.....	.....	.....
LAND CLASSIFIED BY WORKS, 1940							
45	Land drained by open ditches only.....acres.....	302,484	203,165	78,347	91,468	108,431	241,938
46	Length of these ditches.....miles.....	976.1	379.4	138.6	46.9	243.4	153.2
47	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....
48	Land drained by open ditches and own levees.....acres.....	.....	.....	.....	.....	.....	.....
49	Length of these ditches.....miles.....	.....	.....	.....	.....	.....	.....
50	Length of these levees.....miles.....	.....	.....	.....	.....	.....	.....
51	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....
52	Land drained by tile only.....acres.....	6,220	39,235	20,911	.....	45,863	3,540
53	Length of these tile.....miles.....	8.4	142.0	92.3	.....	211.4	14.7
54	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....
55	Land drained by tile and own levees.....acres.....	.....	.....	.....	.....	.....	.....
56	Length of these tile.....miles.....	.....	.....	.....	.....	.....	.....
57	Length of these levees.....miles.....	.....	.....	.....	.....	.....	.....
58	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....
59	Land drained by open ditches and tile.....acres.....	820	21,580	67,221	.....	64,698	7,984
60	Length of these open ditches.....miles.....	5.3	44.7	88.2	.....	130.2	14.5
61	Length of these tile.....miles.....	4.0	26.6	56.6	.....	152.2	9.1
62	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....
63	Land drained by open ditches, tile, and levees.....acres.....	.....	.....	.....	.....	.....	.....
64	Length of these open ditches.....miles.....	.....	.....	.....	.....	.....	.....
65	Length of these tile.....miles.....	.....	.....	.....	.....	.....	.....
66	Length of these levees.....miles.....	.....	.....	.....	.....	.....	.....
67	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....
68	Land in enterprises operating pumping plants.....acres.....	.....	.....	.....	.....	.....	.....
69	Length of open ditches owned by these enterprises.....miles.....	.....	.....	.....	.....	.....	.....
70	Length of tile owned by these enterprises.....miles.....	.....	.....	.....	.....	.....	.....
71	Length of levees owned by these enterprises.....miles.....	.....	.....	.....	.....	.....	.....
72	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....

<sup>1</sup>Percent not shown when more than 1,000.<sup>2</sup>Office estimate; reported figures exceed acreage in all farms as determined by the Census of Agriculture.







## CENSUS OF DRAINAGE—MICHIGAN

COUNTY TABLE II.—DRAINAGE ENTERPRISES—WORKS AND CAPITAL INVESTED, 1940, 1930,

ITEM (See definitions in Introduction)		THE STATE	Allegan	Alpena	Arenac	Barry	Bay
DRAINAGE WORKS							
1	Drainage enterprises.....number.....1940..	1 8,130	382	5	117	97	175
2	Open ditches:						
3	Completed.....miles.....1940..	19,608.6	592.4	13.0	287.6	141.8	630.9
4	.....1930..	17,188.5	489.9	8.4	258.5	148.0	484.8
5	.....1920..	16,023.8	465.6	( <sup>2</sup> )	203.2	116.4	426.9
6	Additional length authorized.....miles.....1940..	26.5			2.0		
7	Tile drains:						
8	Completed.....miles.....1940..	3,229.5	25.4		0.7	68.7	3.8
9	.....1930..	3,490.2	16.7			50.1	6.6
10	.....1920..	2,173.9	13.2	( <sup>2</sup> )	0.3	44.3	1.1
11	Additional length authorized.....miles.....1940..	2.4					
12	Levees and dikes:						
13	Completed.....miles.....1940..	13.6			0.1	2.8	
14	.....1930..	34.6					
15	.....1920..	33.1					
16	Additional length authorized.....miles.....1940..						
17	Pumping plants:						
18	Engine capacity.....horsepower.....1940..	3 17					
19	.....1930..	275					
20	.....1920..	1,065					
21	Pump capacity.....gal. per min.....1940..	3 6,000					
22	.....1930..	36,340					
23	.....1920..	62,000					
24	Land served by pumps.....acres.....1940..	8 800					
25	.....1930..	8,270					
26	.....1920..	10,100					
27	Wells pumped for drainage.....number.....1940..						
28	.....1930..						
CAPITAL INVESTED							
29	Capital invested to January 1.....dollars.....1940..	40,412,251	722,361	6,800	791,832	276,433	961,807
30	.....1930..	37,677,084	579,751	4,629	775,693	253,916	1,102,068
31	.....1920..	24,683,715	414,461	( <sup>2</sup> )	473,012	197,771	500,010
32	Estimated cost when completed.....dollars.....1940..	40,479,614	722,361	6,800	793,332	276,433	981,807
33	.....1930..	37,778,560	580,182	4,629	775,693	253,916	1,102,068
34	.....1920..	25,048,980	416,121	( <sup>2</sup> )	475,212	188,350	500,010
35	Average cost per acre when completed.....dollars.....1940..	4.51	2.52	0.98	5.46	2.39	4.35
36	.....1930..	4.11	2.08	0.85	5.80	1.64	5.15
37	.....1920..	2.57	1.33	( <sup>2</sup> )	3.31	1.38	2.07
38	Invested in and required for completion, 1940:						
39	Enterprises having open ditches only.....dollars..	29,203,880	659,589	6,800	787,277	141,851	970,637
40	Average amount per acre.....dollars..	3.83	2.42	0.98	5.47	1.66	4.31
41	Enterprises having open ditches and levees.....dollars..	43,787			1,770	6,240	
42	Average amount per acre.....dollars..	10.78			3.17	6.34	
43	Enterprises having tile only.....dollars..	5,806,536	19,083			55,697	2,010
44	Average amount per acre.....dollars..	11.54	3.82			5.72	3.59
45	Enterprises having tile and levees.....dollars..	1,455					
46	Average amount per acre.....dollars..	2.89					
47	Enterprises having open ditches and tile.....dollars..	5,409,465	43,689		4,279	72,645	9,160
48	Average amount per acre.....dollars..	6.38	4.58		4.24	3.70	44.68
49	Enterprises having ditches, tile, and levees.....dollars..	3,760					
50	Average amount per acre.....dollars..	8.59					
51	Enterprises operating pumping plants.....dollars..	3 10,741					
52	Average amount per acre.....dollars..	3 13.43					
MAINTENANCE AND OPERATION							
53	Cost of maintenance and operation in 1939:						
54	By enterprises operating pumping plants.....dollars..	540					
55	Enterprises reporting.....number..	1					
56	Land in these enterprises.....acres..	450					
57	Average cost per acre.....dollars..	1.20					
58	By enterprises not operating pumping plants.....dollars..	178,778	5,727			1,702	
59	Enterprises reporting.....number..	613	26			15	
60	Land in these enterprises.....acres..	753,409	26,775			35,186	
61	Average cost per acre.....dollars..	0.21	0.21			0.05	
62	Federal aid in maintenance:						
63	Enterprises reporting.....number..	2,596			62		109
64	Land in these enterprises.....acres..	2,256,968			97,379		114,743
FINANCIAL CONDITION							
65	Drainage taxes collected in 1939.....dollars..	233,665	( <sup>2</sup> )		( <sup>2</sup> )	2,314	6,826
66	Enterprises reporting.....number..	534	1		1	3	12
67	Land in these enterprises.....acres..	828,322	( <sup>2</sup> )		( <sup>2</sup> )	2,085	9,008
68	Average amount collected per acre.....dollars..	0.28	( <sup>2</sup> )		( <sup>2</sup> )	1.11	0.76
69	Area delinquent in drainage taxes, Dec. 31, 1939.....acres..	37,026	850		3,600		3,895
70	Enterprises reporting.....number..	198	8		4		11
71	Land in these enterprises.....acres..	234,559	4,460		17,717		9,008
72	Portion delinquent in these enterprises.....percent..	15.8	19.0		20.3		43.2
73	Total indebtedness, Dec. 31, 1939.....dollars..	809,579	802		53,625	9,140	12,941
74	Enterprises reporting.....number..	673	8		21	9	7
75	Land in these enterprises.....acres..	574,776	4,460		26,102	7,029	2,985
76	Average indebtedness per acre.....dollars..	1.41	0.18		2.05	1.30	4.32
77	Indebtedness in arrears, Dec. 31, 1939.....dollars..	156,741	708		51,900		
78	Enterprises reporting.....number..	59	8		6		
79	Land in these enterprises.....acres..	64,770	4,460		19,144		
80	Average arrearage per acre.....dollars..	2.42	0.16		2.71		
81	Reduction of debt by refinancing, prior to 1940.....dollars..	3 1,250					
82	Enterprises reporting.....number..	3 1					
83	Land in these enterprises.....acres..	3 1,000					
84	Average reduction per acre.....dollars..	3 1.25					

<sup>1</sup> An intercounty enterprise is counted in each county in which a part is located. The number of separate enterprises in the State is 7,692.

<sup>2</sup> Included in "Other counties."

<sup>3</sup> Includes data not distributed by counties.



## CENSUS OF DRAINAGE — MICHIGAN

COUNTY TABLE II.—DRAINAGE ENTERPRISES—WORKS AND CAPITAL INVESTED, 1940, 1930, AND

ITEM (See definitions in Introduction)		Huron	Ingham	Ionia	Iosco	Isabella	Jackson
<b>DRAINAGE WORKS</b>							
1	Drainage enterprises.....number.....1940..	178	237	137	19	281	65
2	Open ditches:						
3	Completed.....miles.....1940..	981.4	424.1	226.8	46.9	373.6	167.7
4	.....1930..	666.2	398.1	273.0	49.9	476.8	149.9
5	.....1920..	651.1	322.1	243.4	32.1	289.5	112.6
6	Additional length authorized.....miles.....1940..						
7	Title drains:						
8	Completed.....miles.....1940..	12.4	168.6	148.9		363.6	23.8
9	.....1930..	2.0	200.3	127.5		364.0	24.5
10	.....1920..		154.6	98.8	0.2	277.3	10.5
11	Additional length authorized.....miles.....1940..	0.3					
12	Levees and dikes:						
13	Completed.....miles.....1940..						
14	.....1930..						
15	.....1920..						
16	Additional length authorized.....miles.....1940..						
17	Pumping plants:						
18	Engine capacity.....horsepower.....1940..						
19	.....1930..						
20	.....1920..						
21	Pump capacity.....gal. per min. 1940..						
22	.....1930..						
23	.....1920..						
24	Land served by pumps.....acres.....1940..						
25	.....1930..						
26	.....1920..						
27	Wells pumped for drainage.....number.....1940..						
28	.....1930..						
29	.....1920..						
<b>CAPITAL INVESTED</b>							
30	Capital invested to January 1.....dollars.....1940..	2,380,994	1,303,090	652,057	116,400	1,169,434	799,793
31	.....1930..	1,393,836	1,446,968	551,063	125,450	1,236,945	760,650
32	.....1920..	1,180,024	875,515	539,859	65,428	785,943	115,938
33	Estimated cost when completed.....dollars.....1940..	2,405,994	1,303,090	652,057	116,400	1,169,434	799,793
34	.....1930..	1,393,836	1,446,968	551,063	125,450	1,236,280	760,650
35	.....1920..	1,211,974	875,515	539,859	65,428	785,943	115,938
36	Average cost per acre when completed.....dollars.....1940..	7.77	4.94	3.92	1.27	8.54	3.16
37	.....1930..	4.11	4.68	3.53	3.14	5.00	2.61
38	.....1920..	2.82	3.94	1.89	2.05	2.56	1.51
39	Invested in and required for completion, 1940:						
40	Enterprises having open ditches only.....dollars..	2,257,059	727,466	193,993	116,400	355,657	722,320
41	Average amount per acre.....dollars..	7.46	3.58	2.48	1.27	3.28	2.98
42	Enterprises having open ditches and levees.....dollars..						
43	Average amount per acre.....dollars..						
44	Enterprises having tile only.....dollars..	136,641	479,594	180,637		372,167	29,229
45	Average amount per acre.....dollars..	21.97	12.22	8.64		8.11	8.26
46	Enterprises having tile and levees.....dollars..						
47	Average amount per acre.....dollars..						
48	Enterprises having open ditches and tile.....dollars..	11,694	96,030	277,427		441,610	48,244
49	Average amount per acre.....dollars..	14.26	4.45	4.13		6.82	6.04
50	Enterprises having ditches, tile, and levees.....dollars..						
51	Average amount per acre.....dollars..						
52	Enterprises operating pumping plants.....dollars..						
53	Average amount per acre.....dollars..						
<b>MAINTENANCE AND OPERATION</b>							
54	Cost of maintenance and operation in 1939:						
55	By enterprises operating pumping plants.....dollars..						
56	Enterprises reporting.....number.....						
57	Land in these enterprises.....acres.....						
58	Average cost per acre.....dollars.....						
59	By enterprises not operating pumping plants.....dollars..	23,417		248		1,194	1,310
60	Enterprises reporting.....number.....	14		3		43	3
61	Land in these enterprises.....acres.....	42,456		432		18,038	1,230
62	Average cost per acre.....dollars.....	0.55		0.57		0.07	1.06
63	Federal aid in maintenance:						
64	Enterprises reporting.....number.....	36	5	36	11	33	4
65	Land in these enterprises.....acres.....	77,380	10,944	24,740	75,938	27,710	2,800
<b>FINANCIAL CONDITION</b>							
66	Drainage taxes collected in 1939.....dollars..	(1)		13,774		3,474	
67	Enterprises reporting.....number.....	2		31		24	
68	Land in these enterprises.....acres.....	(1)		28,053		15,658	
69	Average amount collected per acre.....dollars..	(1)		0.48		0.22	
70	Area delinquent in drainage taxes, Dec. 31, 1939.....acres....	(1)		2,139		2,360	
71	Enterprises reporting.....number.....	1		18		21	
72	Land in these enterprises.....acres.....	(1)		15,336		42,700	
73	Portion delinquent in these enterprises.....percent..	(1)		13.9		5.5	
74	Total indebtedness, Dec. 31, 1939.....dollars..	(1)		41,759		4,559	
75	Enterprises reporting.....number.....	2		21		92	
76	Land in these enterprises.....acres.....	(1)		12,707		47,893	
77	Average indebtedness per acre.....dollars..	(1)		3.29		0.10	
78	Indebtedness in arrears, Dec. 31, 1939.....dollars..	(1)		1,420			
79	Enterprises reporting.....number.....	1		17			
80	Land in these enterprises.....acres.....	(1)		15,514			
81	Average arrearage per acre.....dollars.....	(1)		0.09			
82	Reduction of debt by refinancing, prior to 1940.....dollars..						
83	Enterprises reporting.....number.....						
84	Land in these enterprises.....acres.....						
85	Average reduction per acre.....dollars.....						

1Where there are less than 3 enterprises reporting, data are included only in the State totals.

# CENSUS OF DRAINAGE — MICHIGAN

249

1920; AND MAINTENANCE AND OPERATION, AND FINANCIAL CONDITION, 1939—Continued

Kalamazoo	Kent	Lapeer	Lenawee	Livingston	Macomb	Manistee	Mason	Mecosta	Midland	Missaukee	
79	180	182	302	141	191	16	66	27	179	21	1
171.3	280.3	489.4	664.2	182.4	509.1	32.5	105.9	47.6	614.5	60.9	2
160.1	235.8	485.5	453.3	211.8	309.8	27.2	92.3	34.3	674.0	67.2	3
145.5	206.2	372.2	465.6	245.2	348.2	28.6	94.3	41.4	608.1	60.7	4
.....	14.1	.....	.....	.....	.....	.....	.....	.....	.....	.....	5
2.0	18.8	17.9	334.2	42.1	12.2	0.7	0.5	8.4	36.5	0.2	6
3.9	12.9	6.8	253.7	75.3	.....	0.5	.....	6.2	50.3	2.8	7
4.0	14.1	20.2	233.3	65.2	12.1	0.3	0.4	1.7	56.0	0.2	8
.....	0.2	.....	.....	.....	.....	.....	.....	.....	.....	.....	9
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10
.....	.....	.....	.....	.....	.....	.....	.....	1.0	.....	.....	11
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	12
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	13
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	14
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	15
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	16
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	17
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	18
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	19
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	20
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	21
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	22
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	23
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	24
192,194	494,272	764,961	1,340,722	329,458	1,047,021	38,978	161,379	107,834	767,638	58,680	25
205,045	459,392	681,201	880,157	498,860	675,127	43,791	117,762	78,704	1,469,236	64,973	26
167,351	241,543	566,317	923,653	487,860	396,849	23,610	88,803	54,863	994,187	61,698	27
192,194	520,646	764,961	1,340,722	329,458	1,047,021	38,978	161,379	107,834	767,638	58,680	28
205,045	459,392	681,201	880,157	498,860	675,127	43,791	117,762	78,704	1,469,236	64,973	29
176,098	271,543	573,742	946,798	487,860	396,849	31,610	88,803	54,863	1,029,181	64,498	30
2.53	2.87	2.63	4.56	3.22	5.66	3.89	3.58	3.79	3.57	1.89	31
3.15	30.3	2.25	2.67	3.57	3.69	4.83	2.34	2.76	5.53	1.97	32
2.24	1.87	2.41	3.44	2.29	1.55	2.61	3.37	2.83	3.15	2.41	33
182,368	400,148	694,296	700,731	207,553	807,557	30,313	159,376	66,331	535,150	57,789	34
2.46	2.53	2.54	3.06	2.58	4.06	2.80	3.60	2.02	3.24	1.88	35
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	36
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	37
589	15,005	15,392	428,708	77,418	51,060	3,665	.....	11,341	27,716	.....	38
2.10	5.90	14.33	11.84	5.00	56.36	73.90	.....	6.83	3.77	.....	39
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	40
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	41
9,237	105,493	55,279	211,283	44,467	98,404	5,000	2,008	30,182	204,772	900	42
5.72	5.15	8.27	7.26	5.20	32.07	7.81	2.50	7.46	4.83	2.04	43
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	44
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	45
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	46
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	47
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	48
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.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	53
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	54
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	55
61	88	39	.....	61	145	.....	1	4	87	.....	56
58,897	103,216	30,453	.....	55,916	96,173	.....	(2)	4,280	76,920	.....	57
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	58
.....	1,956	.....	(1)	.....	.....	.....	(1)	(1)	2,540	.....	59
.....	56	.....	(1)	.....	.....	.....	(1)	(1)	33	.....	60
.....	74,100	.....	(1)	.....	.....	.....	(1)	(1)	44,620	.....	61
.....	0.03	.....	(1)	.....	.....	.....	(1)	(1)	0.06	.....	62
.....	1,120	.....	.....	.....	.....	.....	.....	.....	.....	.....	63
.....	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	64
.....	19,656	.....	.....	.....	.....	.....	.....	.....	.....	.....	65
.....	5.7	.....	.....	.....	.....	.....	.....	.....	.....	.....	66
.....	5,031	.....	13,775	3,134	15,862	.....	.....	.....	.....	.....	67
.....	29	.....	8	14	9	.....	.....	.....	.....	.....	68
.....	27,358	.....	10,426	13,177	3,043	.....	.....	.....	.....	.....	69
.....	0.18	.....	1.32	0.24	5.15	.....	.....	.....	.....	.....	70
.....	(1)	.....	.....	.....	(1)	.....	.....	.....	.....	.....	71
.....	(1)	.....	.....	.....	(1)	.....	.....	.....	.....	.....	72
.....	(1)	.....	.....	.....	(1)	.....	.....	.....	.....	.....	73
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	74
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	75
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	76
.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	77

<sup>2</sup> Acreage of 1 enterprise in Mason County included in amount shown for 26 enterprises in Nowaygo County.



# CENSUS OF DRAINAGE — MISSOURI

301

COUNTY TABLE I.—LAND IN DRAINAGE ENTERPRISES CLASSIFIED BY CONDITION AND BY USE, 1940, 1930, AND 1920; AND BY KIND OF WORKS, 1940—Continued

ITEM (See definitions in Introduction)		Pemiscot	Perry <sup>1</sup>	Platte <sup>1</sup>	Ray	Ripley	St. Charles	Saline
<b>LAND AREA</b>								
1	Approximate land area.....acres....1940..	312,320	304,640	264,950	367,360	408,960	359,040	485,760
2	Drainage enterprises.....number....1940..	13	1	1	4	3	5	7
3	Land in enterprises.....acres....1940..	268,635	18,480	6,213	15,483	24,233	21,082	27,498
4	.....1930..	270,682	25,000	6,500	14,162	30,753	26,453	33,372
5	.....1920..	270,118	25,000	4,914	7,448	29,576	18,275	7,184
6	Area of all enterprises, overlapping included.....acres....1940..	603,324	18,480	6,213	15,483	30,786	21,082	27,498
7	Amount of overlapping.....acres....1940..	334,689				6,553		
<b>CONDITION AND USE OF LAND</b>								
8	Land with drainage sufficient for normal crop.....acres....1940..	237,335	17,688	6,213	15,483	16,959	18,272	20,488
9	.....1930..	263,233	20,000	6,500	9,212	27,422	24,358	23,204
10	Increase or decrease (-), 1930-1940.....acres.....	4,102	-2,312	-387	6,271	-10,463	-6,086	-1,706
11	.....percent.....	1.6	-11.6	-5.9	68.1	-38.2	-25.0	-7.7
12	Land undrained, unfit for any crop.....acres....1940..	1,300	393				2,010	5,000
13	.....1930..		5,000		600	900	2,100	2,321
14	Increase or decrease (-), 1930-1940.....acres.....	1,300	-4,604		-600	-900	-90	2,679
15	.....percent.....		-92.1		-100.0	-100.0	-4.3	115.4
16	Land partly drained, for partial crop.....acres....1940..		396			7,274	800	2,000
17	.....1930..	7,449			4,350	2,434		8,847
18	Increase or decrease (-), 1930-1940.....acres.....	-7,449	396		-4,350	4,840	800	-6,847
19	.....percent.....	-100.0			-100.0	198.8		-77.4
20	Improved land.....acres....1940..	242,773	17,688	6,213	14,983	16,959	18,362	18,120
21	.....1930..	223,713	20,000	6,000	13,582	15,500	24,153	28,139
22	.....1920..	81,641	22,000	4,914	6,897	17,745	17,070	6,713
<b>Unimproved land:</b>								
23	Woodland and cut-over land.....acres....1940..	25,357	395		500	7,274	1,710	5,983
24	.....1930..	45,139	3,000	600	80	13,500	205	1,140
25	.....1920..	188,477	3,000			11,831	1,138	471
26	Other unimproved land.....acres....1940..	505	396				1,010	3,395
27	.....1930..	1,830	2,000		500	1,756	2,100	4,093
28	.....1920..				551		67	
29	Land in occupied farms.....acres....1940..	251,000	18,480	6,213	15,483	24,233	21,082	27,198
30	.....1930..	223,963	25,000	6,000	13,662	15,500	25,758	31,389
31	Increase or decrease (-), 1930-1940.....acres.....	27,037	-6,520	213	1,821	8,733	-4,676	-4,191
32	.....percent.....	12.1	-26.1	3.6	13.3	56.3	-18.2	-13.4
33	Land in planted crops.....acres....1940..	181,500	10,560	5,800	14,733	16,959	16,090	17,920
34	.....1930..	217,622	20,000	6,000	12,382	13,500	19,350	23,339
35	Increase or decrease (-), 1930-1940.....acres.....	-36,122	-9,440	-200	2,371	3,459	-3,260	-5,419
36	.....percent.....	-16.6	-47.2	-3.3	19.0	25.6	-16.8	-23.2
37	Land idle.....acres....1940..	20,631	7,920		750		4,680	9,578
38	.....1930..	48,381	3,000	600	1,100	16,000	6,805	8,950
39	Increase or decrease (-), 1930-1940.....acres.....	-27,750	4,920	-600	-350	-16,000	-2,125	628
40	.....percent.....	-57.4	164.0	-100.0	-31.8	-100.0	-31.2	7.0
41	Land available for settlement.....acres....1940..							
42	.....1930..	41,139				7,922		
43	Increase or decrease (-), 1930-1940.....acres.....	-41,139				-7,922		
44	.....percent.....	-100.0				-100.0		
<b>LAND CLASSIFIED BY WORKS, 1940</b>								
45	Land drained by open ditches only.....acres.....	191,146	18,480	6,213		24,233	14,640	16,590
46	Length of these ditches.....miles.....	421.4	40.0	4.0		28.0	13.9	35.0
47	Part protected by levees of an outside agency.....acres.....	184,775	18,480				4,630	
48	Land drained by open ditches and own levees.....acres.....	77,489			5,022		3,142	10,908
49	Length of these ditches.....miles.....	179.2			13.0		8.0	21.5
50	Length of these levees.....miles.....	15.0			2.2		4.0	17.5
51	Part protected by levees of an outside agency.....acres.....	71,866						
52	Land drained by tile only.....acres.....							
53	Length of these tile.....miles.....							
54	Part protected by levees of an outside agency.....acres.....							
55	Land drained by tile and own levees.....acres.....				4,061			
56	Length of these tile.....miles.....				9.0			
57	Length of these levees.....miles.....				9.0			
58	Part protected by levees of an outside agency.....acres.....							
59	Land drained by open ditches and tile.....acres.....						3,300	
60	Length of these open ditches.....miles.....						1.6	
61	Length of these tile.....miles.....						0.1	
62	Part protected by levees of an outside agency.....acres.....							
63	Land drained by open ditches, tile, and levees.....acres.....				5,500			
64	Length of these open ditches.....miles.....				25.0			
65	Length of these tile.....miles.....				0.5			
66	Length of these levees.....miles.....				1.0			
67	Part protected by levees of an outside agency.....acres.....							
68	Land in enterprises operating pumping plants.....acres.....							
69	Length of open ditches owned by these enterprises.....miles.....							
70	Length of tile owned by these enterprises.....miles.....							
71	Length of levees owned by these enterprises.....miles.....							
72	Part protected by levees of an outside agency.....acres.....							

<sup>1</sup>For counties having less than 3 enterprises reporting, statistics are shown only by written permission of each enterprise affected.

## CENSUS OF DRAINAGE—MISSOURI

COUNTY TABLE I.—LAND IN DRAINAGE ENTERPRISES CLASSIFIED BY CONDITION AND BY USE, 1940, 1930, AND 1920; AND BY KIND OF WORKS, 1940—Continued

ITEM (See definitions in Introduction)	Schuyler	Scotland	Scott	Shelby	Stoddard	Worth	Other counties <sup>1</sup>
LAND AREA							
1 Approximate land area.....acres....1940..	185,840	282,240	267,520	321,280	535,680	170,880	5,610,680
2 Drainage enterprises.....number....1940..	3	9	11	3	29	3	20
3 Land in enterprises.....acres....1940..	6,800	21,396	159,359	9,632	335,154	11,082	128,241
4 ....."1930..	6,003	89,027	111,028	13,800	341,524	( <sup>2</sup> )	189,208
5 ....."1920..	( <sup>2</sup> )	15,110	154,335	9,687	375,037	7,013	129,414
6 Area of all enterprises, overlapping included.....acres....1940..	6,800	21,515	293,431	9,632	398,736	11,082	131,441
7 Amount of overlapping.....acres....1940..	.....	120	134,072	.....	63,582	.....	3,200
CONDITION AND USE OF LAND							
8 Land with drainage sufficient for normal crop.....acres....1940..	5,910	18,309	149,417	9,632	335,154	11,082	125,732
9 ....."1930..	5,303	86,827	72,950	5,900	332,794	( <sup>2</sup> )	121,005
10 Increase or decrease (-), 1930-1940.....acres.....	807	-68,518	76,497	3,732	2,360	.....	4,727
11 ....."percent.....	11.4	-78.9	104.9	63.2	0.7	.....	3.9
12 Land undrained, unfit for any crop.....acres....1940..	100	317	9,444	.....	.....	.....	2,009
13 ....."1930..	500	40	9,500	3,000	( <sup>2</sup> )	.....	23,496
14 Increase or decrease (-), 1930-1940.....acres.....	-400	277	-56	-3,000	.....	.....	-21,487
15 ....."percent.....	-80.0	692.5	-0.6	-100.0	.....	.....	-91.4
16 Land partly drained, for partial crop.....acres....1940..	790	2,770	468	.....	.....	.....	500
17 ....."1930..	200	2,160	28,578	4,900	8,730	( <sup>2</sup> )	38,767
18 Increase or decrease (-), 1930-1940.....acres.....	590	610	-28,110	-4,900	-8,730	.....	-38,267
19 ....."percent.....	295.0	28.2	-98.4	-100.0	-100.0	.....	-98.7
20 Improved land.....acres....1940..	5,710	18,348	134,285	9,632	257,180	9,347	108,552
21 ....."1930..	5,003	86,827	90,605	10,650	286,938	( <sup>2</sup> )	124,643
22 ....."1920..	( <sup>2</sup> )	6,857	116,441	7,453	194,315	3,156	75,707
Unimproved land:							
23 Woodland and cut-over land.....acres....1940..	690	1,112	16,957	.....	77,974	1,076	16,295
24 ....."1930..	800	910	7,578	1,950	54,586	( <sup>2</sup> )	34,011
25 ....."1920..	( <sup>2</sup> )	3,445	37,894	2,244	180,722	351	34,531
26 Other unimproved land.....acres....1940..	400	1,336	8,117	.....	.....	1,250	5,394
27 ....."1930..	200	1,190	12,545	1,800	.....	( <sup>2</sup> )	24,314
28 ....."1920..	( <sup>2</sup> )	4,798	.....	.....	.....	3,506	16,086
29 Land in occupied farms.....acres....1940..	6,900	20,642	132,300	9,632	271,500	11,082	127,163
30 ....."1930..	5,503	88,427	98,420	13,800	297,914	( <sup>2</sup> )	140,798
31 Increase or decrease (-), 1930-1940.....acres.....	1,097	-67,785	33,880	-4,168	-26,414	.....	-13,635
32 ....."percent.....	19.9	-76.6	34.4	-30.2	-8.9	.....	-9.7
33 Land in planted crops.....acres....1940..	3,850	17,597	86,000	8,856	142,900	8,383	98,826
34 ....."1930..	2,300	53,970	77,580	7,450	264,857	( <sup>2</sup> )	105,204
35 Increase or decrease (-), 1930-1940.....acres.....	1,550	-42,373	8,420	1,406	-121,957	.....	-6,378
36 ....."percent.....	67.8	-70.6	10.8	18.9	-46.0	.....	-6.1
37 Land idle.....acres....1940..	2,050	2,199	30,659	557	77,974	2,415	18,310
38 ....."1930..	2,463	27,263	18,313	5,300	54,045	( <sup>2</sup> )	97,356
39 Increase or decrease (-), 1930-1940.....acres.....	-413	-25,064	12,346	-4,743	23,929	.....	-49,046
40 ....."percent.....	-16.8	-91.9	67.4	-89.5	42.7	.....	-72.8
41 Land available for settlement.....acres....1940..	.....	600	.....	.....	.....	.....	109
42 ....."1930..	.....	600	12,080	.....	49,610	.....	3,227
43 Increase or decrease (-), 1930-1940.....acres.....	.....	.....	-12,080	.....	-49,610	.....	-3,029
44 ....."percent.....	.....	.....	-100.0	.....	-100.0	.....	-93.8
LAND CLASSIFIED BY WORKS, 1940							
45 Land drained by open ditches only.....acres.....	4,200	21,396	112,105	9,632	182,411	11,082	101,704
46 Length of these ditches.....miles.....	12.2	96.9	153.2	17.1	326.4	27.5	159.9
47 Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....	.....
48 Land drained by open ditches and own levees.....acres.....	.....	.....	38,718	.....	152,743	.....	14,590
49 Length of these ditches.....miles.....	.....	.....	63.0	.....	267.2	.....	23.5
50 Length of these levees.....miles.....	.....	.....	13.3	.....	54.2	.....	11.0
51 Part protected by levees of an outside agency.....acres.....	.....	.....	38,718	.....	126,175	.....	.....
52 Land drained by tile only.....acres.....	.....	.....	.....	.....	.....	.....	.....
53 Length of these tile.....miles.....	.....	.....	.....	.....	.....	.....	.....
54 Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....	.....
55 Land drained by tile and own levees.....acres.....	.....	.....	.....	.....	.....	.....	2,048
56 Length of these tile.....miles.....	.....	.....	.....	.....	.....	.....	0.4
57 Length of these levees.....miles.....	.....	.....	.....	.....	.....	.....	6.1
58 Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....	.....
59 Land drained by open ditches and tile.....acres.....	.....	.....	8,536	.....	.....	.....	.....
60 Length of these open ditches.....miles.....	.....	.....	16.0	.....	.....	.....	.....
61 Length of these tile.....miles.....	.....	.....	1.2	.....	.....	.....	.....
62 Part protected by levees of an outside agency.....acres.....	.....	.....	8,536	.....	.....	.....	.....
63 Land drained by open ditches, tile, and levees.....acres.....	.....	.....	.....	.....	.....	.....	.....
64 Length of these open ditches.....miles.....	.....	.....	.....	.....	.....	.....	.....
65 Length of these tile.....miles.....	.....	.....	.....	.....	.....	.....	.....
66 Length of these levees.....miles.....	.....	.....	.....	.....	.....	.....	.....
67 Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....	.....
68 Land in enterprises operating pumping plants <sup>3</sup> .....acres.....	2,600	.....	.....	.....	.....	.....	9,890
69 Length of open ditches owned by these enterprises.....miles.....	4.0	.....	.....	.....	.....	.....	12.0
70 Length of tile owned by these enterprises.....miles.....	15.0	.....	.....	.....	.....	.....	.....
71 Length of levees owned by these enterprises.....miles.....	3.0	.....	.....	.....	.....	.....	20.0
72 Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....	.....

<sup>1</sup> Includes Bates, Boone, Cass, Clay, Cole, Henry, Jackson, Moniteau, Osage, Pettis, Pike, Putnam, St. Louis, Sullivan, and Wayne Counties in 1940; Bates, Boone, Caldwell, Callaway, Cass, Clay, Cole, Franklin, Henry, Jackson, Macon, Moniteau, Osage, Pettis, Pike, Putnam, St. Louis, Sullivan, Wayne, and Worth Counties in 1930; and Andrew, Bates, Buchanan, Caldwell, Callaway, Cass, Clay, Grundy, Henry, Howard, Jackson, Linn, Osage, Pike, Putnam, St. Louis, Schuyler, and Wayne Counties in 1920.

<sup>2</sup> Included in "Other counties."

<sup>3</sup> Data in lines 68 to 72 are not included in lines 45 to 67.









## CENSUS OF DRAINAGE — MISSOURI

307

COUNTY TABLE II.—DRAINAGE ENTERPRISES—WORKS AND CAPITAL INVESTED, 1940, 1930, AND 1920; AND MAINTENANCE AND OPERATION, AND FINANCIAL CONDITION, 1939—Continued

ITEM (See definitions in Introduction)		Pemiscot	Perry <sup>1</sup>	Platte <sup>1</sup>	Ray	Ripley	St. Charles	Saline
<b>DRAINAGE WORKS</b>								
1	Drainage enterprises.....number.....1940..	13	1	1	4	3	5	7
2	Open ditches:							
3	Completed.....miles.....1940..	600.6	40.0	4.0	38.0	28.0	23.5	56.5
4	.....1930..	580.2	30.0	5.0	30.7	20.5	40.5	69.3
5	.....1920..	246.8	20.0	3.2	17.8	31.2	18.7	21.3
6	Additional length authorized.....miles.....1940..							
7	Tile drains:							
8	Completed.....miles.....1940..				9.5		0.1	
9	.....1930..				0.5			
10	.....1920..							
11	Additional length authorized.....miles.....1940..							
12	Levees and dikes:							
13	Completed.....miles.....1940..	15.0			12.2		4.0	17.5
14	.....1930..	47.0		10.0	7.8		3.0	19.0
15	.....1920..	20.0	10.0		1.3			9.4
16	Additional length authorized.....miles.....1940..							
17	Pumping plants:							
18	Engine capacity.....horsepower.....1940..							
19	.....1930..							75
20	.....1920..							60
21	Pump capacity.....gal. per min.....1940..							7000
22	.....1930..							7000
23	.....1920..							
24	Land served by pumps.....acres.....1940..							575
25	.....1930..							1000
26	.....1920..							
27	Wells pumped for drainage.....number.....1940..							
28	.....1930..							
29	.....1920..							
<b>CAPITAL INVESTED</b>								
30	Capital invested to January 1.....dollars.....1940..	6,441,893	94,000	12,480	229,500	171,760	183,285	486,155
31	.....1930..	5,650,231	135,880	37,500	238,500	99,015	204,182	453,535
32	.....1920..	2,359,988	122,000	15,000	77,175	90,260	79,339	82,542
33	Estimated cost when completed.....dollars.....1940..	6,441,893	94,000	12,480	229,500	171,760	183,285	486,155
34	.....1930..	5,650,231	135,880	37,500	238,500	99,015	204,182	453,535
35	.....1920..	3,624,505	122,000	15,000	77,175	90,260	80,339	82,542
36	Average cost per acre when completed.....dollars.....1940..	23.98	5.09	2.01	14.82	7.09	8.69	17.68
37	.....1930..	20.87	6.64	5.68	16.84	3.22	7.72	15.72
38	.....1920..	13.42	4.88	3.05	10.36	3.05	4.40	11.49
39	Invested in and required for completion, 1940:							
40	Enterprises having open ditches only.....dollars.....	4,366,354	94,000	12,480		171,760	105,361	250,000
41	Average amount per acre.....dollars.....	22.84	5.09	2.01		7.09	7.20	16.88
42	Enterprises having open ditches and levees.....dollars.....	2,076,529			54,500		65,900	206,155
43	Average amount per acre.....dollars.....	26.78			9.20		21.29	16.90
44	Enterprises having tile only.....dollars.....							
45	Average amount per acre.....dollars.....							
46	Enterprises having tile and levees.....dollars.....				35,000			
47	Average amount per acre.....dollars.....				8.62			
48	Enterprises having open ditches and tile.....dollars.....						11,024	
49	Average amount per acre.....dollars.....						3.34	
50	Enterprises having ditches, tile, and levees.....dollars.....				140,000			
51	Average amount per acre.....dollars.....				25.45			
52	Enterprises operating pumping plants.....dollars.....							
53	Average amount per acre.....dollars.....							
<b>MAINTENANCE AND OPERATION</b>								
54	Cost of maintenance and operation in 1939:							
55	By enterprises operating pumping plants.....dollars.....							
56	Enterprises reporting.....number.....							
57	Land in these enterprises.....acres.....							
58	Average cost per acre.....dollars.....							
59	By enterprises not operating pumping plants.....dollars.....	71,135	1,600	64	640		( <sup>2</sup> )	794
60	Enterprises reporting.....number.....	8	1	1	3		2	4
61	Land in these enterprises.....acres.....	258,561	18,480	6,213	11,422		( <sup>2</sup> )	17,530
62	Average cost per acre.....dollars.....	0.28	0.08	0.01	0.07		( <sup>2</sup> )	0.04
63	Federal aid in maintenance:							
64	Enterprises reporting.....number.....	8			( <sup>2</sup> )	2		1
65	Land in these enterprises.....acres.....	250,574			( <sup>2</sup> )		( <sup>2</sup> )	( <sup>2</sup> )
<b>FINANCIAL CONDITION</b>								
66	Drainage taxes collected in 1939.....dollars.....	135,014	1,650	1,000	8,730		( <sup>2</sup> )	( <sup>2</sup> )
67	Enterprises reporting.....number.....	9	1	1	3		2	2
68	Land in these enterprises.....acres.....	258,561	18,480	6,213	11,422		( <sup>2</sup> )	( <sup>2</sup> )
69	Average amount collected per acre.....dollars.....	0.52	0.09	0.16	0.75		( <sup>2</sup> )	( <sup>2</sup> )
70	Area delinquent in drainage taxes, Dec. 31, 1939.....acres.....	26,152		900	( <sup>2</sup> )		( <sup>2</sup> )	( <sup>2</sup> )
71	Enterprises reporting.....number.....	8		1	2		2	2
72	Land in these enterprises.....acres.....	182,512		6,213	( <sup>2</sup> )		( <sup>2</sup> )	( <sup>2</sup> )
73	Portion delinquent in these enterprises.....percent.....	14.3		14.5	( <sup>2</sup> )		( <sup>2</sup> )	( <sup>2</sup> )
74	Total indebtedness, Dec. 31, 1939.....dollars.....	630,142			18,096		( <sup>2</sup> )	160,600
75	Enterprises reporting.....number.....	6			3		1	4
76	Land in these enterprises.....acres.....	187,408			10,273		( <sup>2</sup> )	20,515
77	Average indebtedness per acre.....dollars.....	3.76			1.76		( <sup>2</sup> )	7.83
78	Indebtedness in arrears, Dec. 31, 1939.....dollars.....	( <sup>2</sup> )			( <sup>2</sup> )			( <sup>2</sup> )
79	Enterprises reporting.....number.....	( <sup>2</sup> )	1		( <sup>2</sup> )	1		( <sup>2</sup> )
80	Land in these enterprises.....acres.....	( <sup>2</sup> )			( <sup>2</sup> )			( <sup>2</sup> )
81	Average arrearage per acre.....dollars.....	( <sup>2</sup> )			( <sup>2</sup> )			( <sup>2</sup> )
82	Reduction of debt by refinancing, prior to 1940.....dollars.....	1,790,060						( <sup>2</sup> )
83	Enterprises reporting.....number.....	7						1
84	Land in these enterprises.....acres.....	234,060						( <sup>2</sup> )
85	Average reduction per acre.....dollars.....	7.65						( <sup>2</sup> )

<sup>1</sup> For counties having less than 3 enterprises reporting, statistics are shown only by written permission of each enterprise affected.<sup>2</sup> Where there are less than 3 enterprises reporting, data are included only in State totals, except as stated in footnote 1.

## CENSUS OF DRAINAGE—MISSOURI

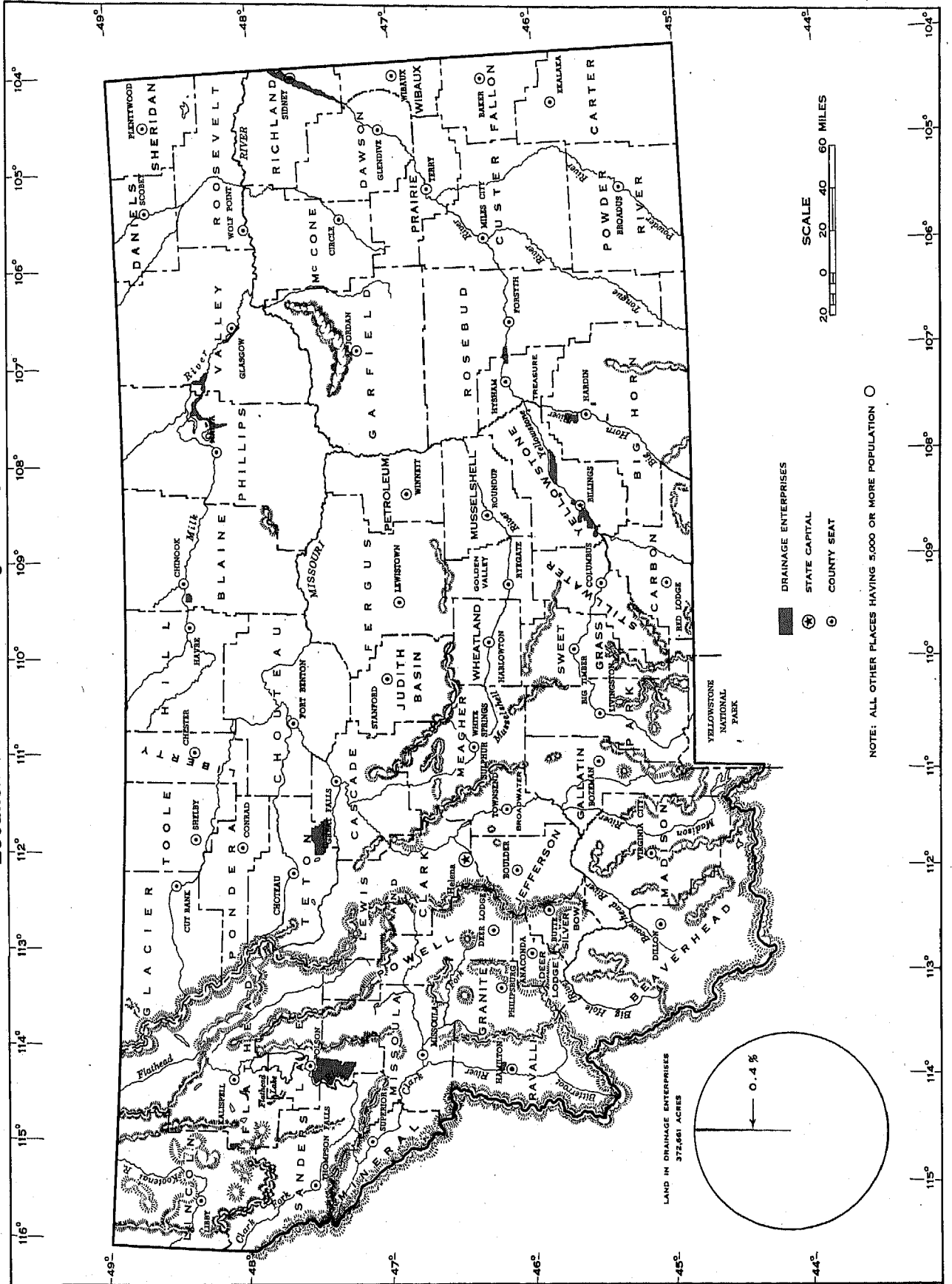
COUNTY TABLE II.—DRAINAGE ENTERPRISES—WORKS AND CAPITAL INVESTED, 1940, 1930, AND 1920; AND MAINTENANCE AND OPERATION, AND FINANCIAL CONDITION, 1939—Continued

ITEM (See definitions in Introduction)		Schuyler	Scotland	Scott	Shelby	Stoddard	Worth	Other counties <sup>1</sup>
DRAINAGE WORKS								
1	Drainage enterprises.....number.....1940..	3	9	11	3	29	3	20
2	Open ditches:							
3	Completed.....miles.....1940..	16.2	98.9	232.2	17.1	593.6	27.5	195.4
4	.....1930..	15.8	96.4	192.3	14.7	570.0	( <sup>2</sup> )	250.2
5	.....1920..	( <sup>2</sup> )	37.5	245.2	12.7	459.5	2.3	158.5
6	Additional length authorized.....miles.....1940..							
7	Tile drains:							
8	Completed.....miles.....1940..	15.0		1.2				0.4
9	.....1930..			1.2				
10	.....1920..	( <sup>2</sup> )		1.2				0.4
11	Additional length authorized.....miles.....1940..							
12	Levees and dikes:							
13	Completed.....miles.....1940..	3.0		13.3		54.2		37.1
14	.....1930..			16.0	10.2	52.0		81.8
15	.....1920..	( <sup>2</sup> )		25.0	10.2	0.5		41.5
16	Additional length authorized.....miles.....1940..	2.0						
17	Pumping plants:							
18	Engine capacity.....horsepower.....1940..	60						60
19	.....1930..							333
20	.....1920..							550
21	Pump capacity.....gal. per min.....1940..	10,000						20,000
22	.....1930..							60,430
23	.....1920..							190,000
24	Land served by pumps.....acres.....1940..	2,200						9,890
25	.....1930..							22,575
26	.....1920..							14,430
27	Wells pumped for drainage.....number.....1940..	1						
28	.....1930..							
CAPITAL INVESTED								
29	Capital invested to January 1.....dollars.....1940..	119,500	445,689	2,520,494	124,796	5,434,445	242,000	2,754,428
30	.....1930..	87,571	491,893	1,635,057	104,000	5,125,588	( <sup>2</sup> )	3,573,514
31	.....1920..	( <sup>2</sup> )	144,324	989,981	90,588	2,659,540	16,000	1,680,857
32	Estimated cost when completed.....dollars.....1940..	119,500	445,689	2,520,494	124,796	5,434,445	242,000	2,754,428
33	.....1930..	87,571	491,893	1,746,057	104,000	5,125,588	( <sup>2</sup> )	3,588,614
34	.....1920..	( <sup>2</sup> )	144,324	1,008,981	90,588	2,998,940	170,000	2,111,182
35	Average cost per acre when completed.....dollars.....1940..	17.57	20.83	15.82	12.96	16.21	20.72	21.45
36	.....1930..	14.59	5.53	15.73	7.54	15.01	( <sup>2</sup> )	19.58
37	.....1920..	( <sup>2</sup> )	9.55	6.54	9.34	7.99	24.24	13.40
38	Invested in and required for completion, 1940:							
39	Enterprises having open ditches only.....dollars..	64,500	445,689	1,473,696	124,796	909,221	242,000	1,644,416
40	Average amount per acre.....dollars..	15.36	20.83	13.14	12.06	4.98	20.72	16.17
41	Enterprises having open ditches and levees.....dollars..			949,244		4,525,224		485,956
42	Average amount per acre.....dollars..			24.52		29.63		33.29
43	Enterprises having tile only.....dollars..							
44	Average amount per acre.....dollars..							
45	Enterprises having tile and levees.....dollars..							72,000
46	Average amount per acre.....dollars..							35.16
47	Enterprises having open ditches and tile.....dollars..			97,552				
48	Average amount per acre.....dollars..			11.43				
49	Enterprises having ditches, tile, and levees.....dollars..							
50	Average amount per acre.....dollars..							
51	Enterprises operating pumping plants.....dollars..	55,000						552,056
52	Average amount per acre.....dollars..	21.15						55.82
MAINTENANCE AND OPERATION								
53	Cost of maintenance and operation in 1939:							
54	By enterprises operating pumping plants.....dollars..	( <sup>4</sup> )						( <sup>4</sup> )
55	Enterprises reporting.....number..	1						2
56	Land in these enterprises.....acres..	( <sup>4</sup> )						( <sup>4</sup> )
57	Average cost per acre.....dollars..	( <sup>4</sup> )						( <sup>4</sup> )
58	By enterprises not operating pumping plants.....dollars..	( <sup>4</sup> )	1,779	15,653		( <sup>4</sup> )	( <sup>4</sup> )	11,587
59	Enterprises reporting.....number..	2	4	10		1	1	11
60	Land in these enterprises.....acres..	( <sup>4</sup> )	6,913	135,871		( <sup>4</sup> )	( <sup>4</sup> )	41,901
61	Average cost per acre.....dollars..	( <sup>4</sup> )	0.26	0.12		( <sup>4</sup> )	( <sup>4</sup> )	0.20
62	Federal aid in maintenance:							
63	Enterprises reporting.....number..			1		1		2
64	Land in these enterprises.....acres..			( <sup>4</sup> )		( <sup>4</sup> )		( <sup>4</sup> )
FINANCIAL CONDITION								
65	Drainage taxes collected in 1939.....dollars..	( <sup>4</sup> )	4,695	54,305		( <sup>4</sup> )	( <sup>4</sup> )	87,750
66	Enterprises reporting.....number..	2	3	9		2	1	12
67	Land in these enterprises.....acres..	( <sup>4</sup> )	4,452	141,856		( <sup>4</sup> )	( <sup>4</sup> )	49,391
68	Average amount collected per acre.....dollars..	( <sup>4</sup> )	1.05	0.38		( <sup>4</sup> )	( <sup>4</sup> )	1.78
69	Area delinquent in drainage taxes, Dec. 31, 1939.....acres..	( <sup>4</sup> )	1,214	10,159	( <sup>4</sup> )		( <sup>4</sup> )	18,084
70	Enterprises reporting.....number..	1	3	6	1		1	10
71	Land in these enterprises.....acres..	( <sup>4</sup> )	4,558	73,611	( <sup>4</sup> )		( <sup>4</sup> )	57,690
72	Portion delinquent in these enterprises.....percent..	( <sup>4</sup> )	26.6	13.8	( <sup>4</sup> )		( <sup>4</sup> )	31.4
73	Total indebtedness, Dec. 31, 1939.....dollars..	( <sup>4</sup> )	29,500	265,064	( <sup>4</sup> )	1,026,979	( <sup>4</sup> )	463,405
74	Enterprises reporting.....number..	1	3	5	1	11	1	11
75	Land in these enterprises.....acres..	( <sup>4</sup> )	2,720	76,651	( <sup>4</sup> )	208,245	( <sup>4</sup> )	61,380
76	Average indebtedness per acre.....dollars..	( <sup>4</sup> )	10.84	3.45	( <sup>4</sup> )	4.93	( <sup>4</sup> )	7.55
77	Indebtedness in arrears, Dec. 31, 1939.....dollars..	( <sup>4</sup> )			( <sup>4</sup> )	282,500		200,600
78	Enterprises reporting.....number..		2		1	10		4
79	Land in these enterprises.....acres..	( <sup>4</sup> )			( <sup>4</sup> )	77,902		20,378
80	Average arrearage per acre.....dollars..	( <sup>4</sup> )			( <sup>4</sup> )	3.63		9.84
81	Reduction of debt by refinancing, prior to 1940.....dollars..	( <sup>4</sup> )						
82	Enterprises reporting.....number..	1	1	1		1	2	176,064
83	Land in these enterprises.....acres..	( <sup>4</sup> )						4
84	Average reduction per acre.....dollars..	( <sup>4</sup> )						32,749
85		( <sup>4</sup> )						5.36

<sup>1</sup>Includes Bates, Boone, Cass, Clay, Cole, Henry, Jackson, Moniteau, Osage, Pettis, Pike, Putnam, St. Louis, Sullivan, and Wayne Counties in 1940; Bates, Boone, Caldwell, Callaway, Cass, Clay, Cole, Franklin, Henry, Jackson, Macon, Moniteau, Osage, Pettis, Pike, Putnam, St. Louis, Sullivan, Wayne, and Worth Counties in 1930; and Andrew, Bates, Buchanan, Caldwell, Callaway, Cass, Clay, Grundy, Henry, Howard, Jackson, Linn, Osage, Pike, Putnam, St. Louis, Schuyler, and Wayne Counties in 1920. <sup>2</sup>Included in "Other counties." <sup>3</sup>Data in lines 46 and 47 are not included in lines 34 to 45. <sup>4</sup>Where there are less than 3 enterprises reporting, data are included only in State totals.

# MONTANA

## Location of Land in Drainage Enterprises



# CENSUS OF DRAINAGE—MONTANA

311

STATE TABLE 1.—SUMMARY OF DRAINAGE FOR THE STATE: JAN. 1, 1940, 1930, AND 1920

ITEM (See definitions in Introduction)	CENSUS OF—			INCREASE OR DECREASE (—)			
	1940	1930	1920	1930-1940		1920-1930	
				Amount	Percent	Amount	Percent
Approximate land area of State.....acres.....	63,642,240	63,523,840	63,523,840	.....	.....	.....	.....
Land in drainage enterprises.....acres.....	372,661	167,629	168,682	205,032	123.3	-1,053	-0.6
Improved.....acres.....	330,694	148,768	141,252	181,926	122.3	7,516	5.3
Unimproved:							
Timber and cut-over.....acres.....	7,903	.....	.....	7,903	.....	.....	.....
Other.....acres.....	34,064	18,861	27,430	15,203	80.6	-8,569	-31.2
Drainage sufficient for normal crop.....acres.....	351,531	152,871	( <sup>1</sup> )	198,660	130.0	.....	.....
Partly drained, for partial crop.....acres.....	4,167	8,370	( <sup>1</sup> )	-4,203	-50.2	.....	.....
Unfit to raise any crop for lack of drainage.....acres.....	16,963	6,388	<sup>2</sup> 19,630	10,575	165.5	-13,242	-67.4
In occupied farms.....acres.....	362,711	150,844	( <sup>1</sup> )	211,867	140.4	.....	.....
In planted crops.....acres.....	291,952	114,266	( <sup>1</sup> )	177,686	155.5	.....	.....
Idle.....acres.....	24,401	18,170	( <sup>1</sup> )	6,231	34.3	.....	.....
Available for settlement.....acres.....	.....	7,243	( <sup>1</sup> )	-7,243	-100.0	.....	.....
Open ditches, completed.....miles.....	420.9	284.2	102.1	136.7	48.1	182.1	178.4
Tile drains, completed.....miles.....	73.8	76.7	50.7	-2.9	-3.8	26.0	51.3
Capital invested in enterprises.....dollars.....	2,827,839	1,879,296	664,990	948,543	50.5	1,214,306	182.6
Average per acre.....dollars.....	7.59	11.21	3.91	-3.62	-32.3	7.27	181.5

<sup>1</sup>Not available.

<sup>2</sup>Reported as "Swampy, subject to overflow, seeped, or alkali."

STATE TABLE 2.—AREA OF ENTERPRISES, BY SIZE: JAN. 1, 1940, 1930, AND 1920

SIZE	AREA OF ENTERPRISES <sup>1</sup>			Land in enterprises <sup>2</sup> 1940
	1940	1930	1920	
	Acres	Acres	Acres	Acres
All enterprises.....	374,189	167,629	168,682	372,661
100 to 199 acres.....	.....	120	.....	.....
200 to 499 acres.....	1,275	387	.....	1,275
500 to 999 acres.....	5,336	4,093	1,307	5,336
1,000 to 1,999 acres.....	17,267	34,157	23,711	15,739
2,000 to 4,999 acres.....	22,145			22,145
5,000 to 9,999 acres.....	20,059			20,059
10,000 to 19,999 acres.....	44,775	117,080	24,000	44,775
20,000 to 49,999 acres.....	143,853			143,853
100,000 acres and over.....	119,479			119,479

<sup>1</sup>The sum of the areas in the individual enterprises, without deduction for overlapping.

<sup>2</sup>Overlapping eliminated by tabulating each enterprise according to its acreage not included in later enterprises.

STATE TABLE 3.—LAND AND CAPITAL INVESTED, BY CHARACTER OF ENTERPRISE, JAN. 1, 1940

CHARACTER OF ENTERPRISE	Land		Capital invested	
	Acres	Percent	Dollars	Percent
All enterprises.....	372,661	100.0	2,827,839	100.0
Drainage districts.....	47,418	12.7	1,140,558	40.3
County drains.....	6,000	1.6	16,000	0.6
Irrigation enterprises:				
Federal <sup>1</sup> .....	298,291	80.0	1,503,581	53.2
Other.....	13,952	3.7	55,000	1.9
Individually owned projects..... <sup>2</sup>	7,000	1.9	112,700	4.0

<sup>1</sup>Including projects or divisions of projects of United States Bureau of Reclamation operated by water users.

STATE TABLE 4.—LAND AND CAPITAL INVESTED, BY TYPE OF DRAINAGE: JAN. 1, 1940, 1930, AND 1920

TYPE OF DRAINAGE <sup>1</sup>	LAND IN ENTERPRISES						CAPITAL INVESTED IN ENTERPRISES					
	1940		1930		1920		1940		1930		1920	
	Acres	Percent	Acres	Percent	Acres	Percent	Dollars	Percent	Dollars	Percent	Dollars	Percent
All enterprises.....	372,661	100.0	167,629	100.0	168,682	100.0	2,827,839	100.0	1,879,296	100.0	664,990	100.0
Gravity drainage only by—												
Open ditches.....	150,568	40.4	73,095	43.6	168,682	100.0	1,727,397	61.1	689,541	35.6	664,990	100.0
Tile drains.....	5,016	1.3	3,817	2.3			370,000	13.1	59,904	3.2		
Open ditches and tile drains..	217,077	58.3	90,717	54.1			730,442	25.8	1,149,851	61.2		

<sup>1</sup>Each item includes those enterprises that have provided levees in addition to the kind of drains specified.

## CENSUS OF DRAINAGE—MONTANA

STATE TABLE 5.—LAND, CAPITAL INVESTED, AND AREA DELINQUENT IN DRAINAGE TAXES, BY ARREARAGE IN PAYMENT OF OBLIGATIONS: JAN. 1, 1940 AND 1930

FINANCIAL STATUS	LAND IN ENTERPRISES				CAPITAL INVESTED				AREA DELINQUENT <sup>1</sup>	
	1940		1930		1940		1930		1940	1930
	Acres	Percent	Acres	Percent	Dollars	Percent	Dollars	Percent	Acres	Acres
All enterprises.....	372,661	100.0	167,629	100.0	2,827,839	100.0	1,879,296	100.0	1,851	6,720
Enterprises in arrears.....	47,945	12.8	7,070	4.2	942,576	33.3	28,000	1.5	1,057	.....
With some delinquent land.....	32,806	8.8	.....	.....	654,072	23.1	.....	.....	1,057	.....
With no delinquent land.....	3,140	0.9	.....	.....	78,504	2.8	.....	.....	.....	.....
With no report on delinquency.....	12,000	3.2	7,070	4.2	210,000	7.4	28,000	1.5	.....	.....
Enterprises not in arrears.....	324,716	87.1	160,559	95.8	1,885,263	66.7	1,851,296	98.5	794	6,720
With some delinquent land.....	5,209	1.4	70,500	42.1	191,431	6.8	929,616	49.5	794	6,720
With no delinquent land.....	319,009	85.6	90,059	53.7	1,693,832	59.5	921,680	49.0	.....	.....
With no report on delinquency.....	498	0.1	.....	.....	10,000	0.4	.....	.....	.....	.....

<sup>1</sup> If any land is delinquent in 2 or more overlapping enterprises, the acreage delinquent is too large by the amount of such duplication.

STATE TABLE 6.—LAND, CAPITAL INVESTED, INDEBTEDNESS, ARREARAGE IN PAYMENT OF BONDS, REDUCTION OF DEBT BY REFINANCING, AND ACREAGE DELINQUENT, 1940; DRAINAGE TAXES COLLECTED IN 1939; BY INDEBTEDNESS AND ARREARAGE, JAN. 1, 1940

FINANCIAL STATUS	Land in enterprises	Capital invested	Indebtedness	Arrearage in payment of bonds	Reduction of debt by refinancing	Delinquent in drainage taxes <sup>1</sup>	Drainage taxes collected in 1939
	Acres	Dollars	Dollars	Dollars	Dollars	Acres	Dollars
All enterprises.....	372,661	2,827,839	1,503,091	3,640	125,232	1,851	48,707
Enterprises in debt.....	275,204	2,114,788	1,503,091	3,640	125,232	1,401	30,412
In arrears, amount of arrearage stated.....	47,945	942,576	559,681	3,640	117,700	1,057	21,714
Collecting drainage taxes in 1939.....	47,945	942,576	559,681	3,640	117,700	1,057	21,714
Not in arrears.....	227,259	1,172,213	943,210	.....	7,532	344	8,698
Collecting drainage taxes in 1939.....	187,957	737,559	594,471	.....	7,532	44	8,698
No collections reported.....	39,302	434,654	348,739	.....	.....	300	.....
Enterprises not in debt.....	96,573	696,550	.....	.....	.....	450	16,697
Collecting drainage taxes in 1939.....	19,385	478,383	.....	.....	.....	450	16,697
No collections reported.....	77,188	218,167	.....	.....	.....	.....	.....
Enterprises not reporting as to debt.....	884	16,500	.....	.....	.....	.....	1,598
Collecting drainage taxes in 1939.....	884	16,500	.....	.....	.....	.....	1,598

<sup>1</sup> If any land is delinquent in 2 or more overlapping enterprises, the acreage delinquent is too large by the amount of such duplication.

STATE TABLE 7.—LAND AND CAPITAL INVESTED, BY PRINCIPAL PURPOSE OF DRAINAGE, JAN. 1, 1940

PURPOSE OF DRAINAGE	Land		Capital invested	
	Acres	Percent	Dollars	Percent
All enterprises.....	372,661	100.0	2,827,839	100.0
Improvement of land already in farms.....	54,227	14.6	1,157,258	40.9
Reclamation of swamp land not previously in farms.....	6,100	1.6	109,500	3.9
Protection against overflow.....	6,000	1.6	16,000	0.6
Removal of alkali or seepage from irrigation.....	306,334	82.2	1,545,081	54.6

STATE TABLE 8.—LAND AND CAPITAL INVESTED, BY DATE OF ORGANIZATION, JAN. 1, 1940

DATE OF ORGANIZATION	Land <sup>1</sup>		Area of enterprises		Capital invested	
	Acres	Percent	Total acres <sup>2</sup>	Overlapped acres	Dollars	Percent
All enterprises.....	372,661	100.0	374,189	1,528	2,827,839	100.0
1900-1904.....	4,450	1.2	4,450	.....	66,000	2.3
1905-1909.....	15,794	4.2	15,794	.....	208,500	7.4
1910-1914.....	3,007	0.8	3,007	.....	48,000	1.7
1915-1919.....	125,479	33.7	125,479	.....	71,263	2.5
1920-1924.....	107,176	28.8	108,704	1,528	1,532,598	54.2
1925-1929.....	99,583	26.7	99,583	.....	697,682	24.7
1930-1934.....	8,811	2.4	8,811	.....	97,160	3.4
1935-1939.....	8,361	2.2	8,361	.....	106,626	3.8

<sup>1</sup> Land included in more than 1 enterprise is tabulated only in the last organized.<sup>2</sup> The sum of the areas of the individual enterprises.

## CENSUS OF DRAINAGE—MONTANA

313

STATE TABLE 9.—DRAINAGE CONDITION, DEVELOPMENT, AND USE OF LAND IN ENTERPRISES, BY DATE OF ORGANIZATION, 1939

DATE OF ORGANIZATION	Land in all enterprises <sup>1</sup>	DRAINAGE CONDITION			DEVELOPMENT			USE OF LAND					
		Drained		Partly drained	Undrained	Improved land	Timber and cut-over land	Other unimproved land	In occupied farms		In planted crops	Idle	Land available for settlement
	Acres	Acres	Per-cent	Acres	Acres	Acres	Per-cent	Acres	Acres	Acres	Per-cent	Acres	Acres
All enterprises..	372,661	351,531	94.3	4,167	16,963	330,694	88.7	7,903	34,064	362,711	97.3	231,952	24,401
1900-1904.....	4,450	4,450	100.0	.....	.....	4,450	100.0	.....	.....	4,450	100.0	.....	.....
1905-1909.....	15,794	14,384	91.1	300	1,100	15,194	96.2	.....	600	15,794	100.0	12,943	880
1910-1914.....	3,007	3,007	100.0	.....	.....	3,007	100.0	.....	.....	3,007	100.0	2,507	.....
1915-1919.....	125,479	124,279	99.0	500	700	94,676	75.4	7,453	23,348	125,727	97.8	72,439	8,937
1920-1924.....	107,176	96,941	90.4	453	9,782	102,354	95.5	.....	4,822	100,775	94.0	92,152	8,063
1925-1929.....	99,589	92,050	92.4	2,914	4,610	94,479	94.9	450	4,534	99,533	99.8	93,284	4,845
1930-1934.....	8,811	8,611	97.7	.....	200	8,611	97.7	.....	200	8,811	100.0	7,500	820
1935-1939.....	8,361	7,790	93.2	.....	571	7,921	94.7	.....	440	7,014	91.1	6,077	837

<sup>1</sup>Land included in more than 1 enterprise is tabulated only in the last organized.

STATE TABLE 10.—LAND AND CAPITAL INVESTED, BY METHOD OF MAINTENANCE AND BY WHETHER MAINTENANCE IS SYSTEMATIC, JAN. 1, 1940

MAINTENANCE	Land		Capital invested	
	Acres	Percent	Dollars	Percent
All enterprises.....	372,661	100.0	2,827,839	100.0
Method:				
By district forces.....	331,431	89.0	2,235,920	79.1
By contract.....	20,541	5.5	248,428	8.8
Work apportioned to landowners.....	13,899	3.7	243,585	8.6
"None," or not reporting.....	6,790	1.8	99,906	3.5
Whether systematic:				
Reporting "yes".....	206,840	55.5	2,161,172	76.4
Reporting "no".....	165,821	44.5	666,667	23.6

STATE TABLE 11.—COST OF OPERATION AND MAINTENANCE, BY TYPE OF DRAINAGE, 1939

TYPE OF DRAINAGE	Land in all enterprises	LAND REPORTING ON COST OF MAINTENANCE AND OPERATION			COST REPORTED		
		Total	Some cost	No cost	Total amount	Per acre on—	
						Total reporting	Area incurring
	Acres	Acres	Acres	Acres	Dollars	Dollars	Dollars
All enterprises.....	372,661	372,661	285,151	77,510	32,713	0.09	0.11
Gravity drainage only.....	372,661	372,661	285,151	77,510	32,713	0.09	0.11
Open ditches only.....	150,588	150,588	129,358	21,210	22,739	0.15	0.18
Open ditches and levees.....	.....	.....	.....	.....	.....	.....	.....
Tile drains only.....	5,016	5,016	4,016	1,000	1,835	0.32	0.41
Tile drains and levees.....	.....	.....	.....	.....	.....	.....	.....
Open ditches and tile drains.....	187,577	187,577	132,277	55,300	1,832	0.01	0.01
Open ditches, tile drains, and levees.....	29,500	29,500	29,500	.....	6,507	0.22	0.22

STATE TABLE 12.—LAND, CAPITAL INVESTED, AND DRAINAGE WORKS, BY OWNERSHIP OF POWER EQUIPMENT FOR MAINTENANCE, 1940

ITEM	All enterprises	ENTERPRISES OWNING POWER EQUIPMENT	
		Amount	Percent
Land in enterprises.....acres....	372,661	200,203	53.7
Capital invested.....dollars..	2,827,839	1,043,243	36.9
Drainage works:			
Open ditches.....miles....	420.0	102.0	38.5
Tile drains.....miles....	73.8	58.0	78.6
Levees.....miles....	0.8	0.8	100.0

STATE TABLE 13.—LAND, CAPITAL INVESTED, AND DRAINAGE WORKS, BY FEDERAL AGENCY GIVING AID IN MAINTENANCE, 1940

AGENCY	Land in enterprises	Capital invested	DRAINAGE WORKS.		
			Ditches	Tile	Levees
	Acres	Dollars	Miles	Miles	Miles
All enterprises reporting Federal aid received.....	7,221	243,889	11.5	3.6	.....
Work Projects Administration.....	3,759	178,889	7.0	2.2	.....
Other kind or combination.....	3,462	65,000	4.5	1.4	.....

## CENSUS OF DRAINAGE—MONTANA

## COUNTY TABLE I.—LAND IN DRAINAGE ENTERPRISES CLASSIFIED BY CONDITION

ITEM (See definitions in Introduction)		THE STATE	Big Horn	Blaine <sup>1</sup>	Cascade <sup>1</sup>	Dawson <sup>1</sup>	Deer Lodge <sup>1</sup>
LAND AREA							
1	Approximate land area.....acres....1940..	93,642,240	3,221,120	2,730,880	1,701,120	1,509,120	472,320
2	Drainage enterprises.....number....1940..	<sup>2</sup> 39	3	1	1	1	1
3	Land in enterprises.....acres....1940..	372,661	14,184	7,159	13,335	884	1,000
4	.....1930..	167,629	12,100	.....	6,592	903	3,000
5	.....1920..	168,682	.....	.....	.....	.....	1,000
6	Area of all enterprises, overlapping included.....acres....1940..	374,189	14,184	7,159	13,335	884	1,000
7	Amount of overlapping.....acres....1940..	1,528	.....	.....	.....	.....	.....
CONDITION AND USE OF LAND							
8	Land with drainage sufficient for normal crop.....acres....1940..	351,531	14,184	7,014	12,395	734	1,000
9	.....1930..	152,871	12,100	.....	6,400	753	2,000
10	Increase or decrease (-), 1930-1940.....acres.....	198,660	2,084	7,014	5,995	-10	-1,000
11	.....percent.....	180.0	17.2	.....	93.7	-2.5	-50.0
12	Land undrained, unfit for any crop.....acres....1940..	16,963	.....	145	940	100	.....
13	.....1930..	6,388	.....	.....	192	.....	.....
14	Increase or decrease (-), 1930-1940.....acres.....	10,575	.....	145	748	100	.....
15	.....percent.....	165.5	.....	.....	389.6	.....	.....
16	Land partly drained, for partial crop.....acres....1940..	4,167	.....	.....	.....	50	.....
17	.....1930..	8,370	.....	.....	.....	150	1,000
18	Increase or decrease (-), 1930-1940.....acres.....	-4,203	.....	.....	.....	-100	-1,000
19	.....percent.....	-50.2	.....	.....	.....	-66.7	-100.0
20	Improved land.....acres....1940..	330,694	14,184	7,014	12,320	734	1,000
21	.....1930..	148,768	11,100	.....	6,000	853	1,200
22	.....1920..	141,282	.....	.....	.....	.....	1,000
Unimproved land:							
23	Woodland and cut-over land.....acres....1940..	7,903	.....	.....	.....	50	.....
24	.....1930..	.....	.....	.....	.....	.....	.....
25	.....1920..	.....	.....	.....	.....	.....	.....
26	Other unimproved land.....acres....1940..	34,064	.....	145	415	100	.....
27	.....1930..	18,861	1,000	.....	592	50	1,800
28	.....1920..	27,430	.....	.....	.....	.....	( <sup>3</sup> )
29	Land in occupied farms.....acres....1940..	362,711	14,184	7,159	13,335	884	1,000
30	.....1930..	150,894	12,100	.....	6,040	903	1,200
31	Increase or decrease (-), 1930-1940.....acres.....	211,867	2,084	7,159	7,295	-19	-200
32	.....percent.....	140.4	17.2	.....	120.8	-2.1	-16.7
33	Land in planted crops.....acres....1940..	291,962	12,950	5,918	11,560	734	500
34	.....1930..	114,266	.....	.....	4,500	800	1,200
35	Increase or decrease (-), 1930-1940.....acres.....	177,696	12,950	5,918	7,060	-66	-700
36	.....percent.....	155.5	.....	.....	156.9	-8.2	-58.3
37	Land idle.....acres....1940..	24,401	234	180	1,000	150	.....
38	.....1930..	18,170	.....	.....	1,692	50	1,800
39	Increase or decrease (-), 1930-1940.....acres.....	6,231	234	180	-692	100	-1,800
40	.....percent.....	34.3	.....	.....	-40.9	200.0	-100.0
41	Land available for settlement.....acres....1940..	.....	.....	.....	.....	.....	.....
42	.....1930..	7,243	.....	.....	400	.....	1,800
43	Increase or decrease (-), 1930-1940.....acres.....	-7,243	.....	.....	-400	.....	-1,800
44	.....percent.....	-100.0	.....	.....	-100.0	.....	-100.0
LAND CLASSIFIED BY WORKS, 1940							
45	Land drained by open ditches only.....acres.....	150,568	12,884	.....	13,335	884	.....
46	Length of these ditches.....miles.....	315.7	51.5	.....	21.0	2.0	.....
47	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....
48	Land drained by open ditches and own levees.....acres.....	.....	.....	.....	.....	.....	.....
49	Length of these ditches.....miles.....	.....	.....	.....	.....	.....	.....
50	Length of these levees.....miles.....	.....	.....	.....	.....	.....	.....
51	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....
52	Land drained by tile only.....acres.....	5,016	.....	.....	.....	.....	1,000
53	Length of these tile.....miles.....	13.2	.....	.....	.....	.....	5.0
54	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....
55	Land drained by tile and own levees.....acres.....	.....	.....	.....	.....	.....	.....
56	Length of these tile.....miles.....	.....	.....	.....	.....	.....	.....
57	Length of these levees.....miles.....	.....	.....	.....	.....	.....	.....
58	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....
59	Land drained by open ditches and tile.....acres.....	187,577	1,300	7,159	.....	.....	.....
60	Length of these open ditches.....miles.....	58.2	0.5	15.0	.....	.....	.....
61	Length of these tile.....miles.....	6.6	0.4	1.5	.....	.....	.....
62	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....
63	Land drained by open ditches, tile, and levees.....acres.....	29,500	.....	.....	.....	.....	.....
64	Length of these open ditches.....miles.....	47.0	.....	.....	.....	.....	.....
65	Length of these tile.....miles.....	54.0	.....	.....	.....	.....	.....
66	Length of these levees.....miles.....	0.8	.....	.....	.....	.....	.....
67	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....
68	Land in enterprises operating pumping plants.....acres.....	.....	.....	.....	.....	.....	.....
69	Length of open ditches owned by these enterprises.....miles.....	.....	.....	.....	.....	.....	.....
70	Length of tile owned by these enterprises.....miles.....	.....	.....	.....	.....	.....	.....
71	Length of levees owned by these enterprises.....miles.....	.....	.....	.....	.....	.....	.....
72	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....

<sup>1</sup>For counties having less than 3 enterprises, statistics are shown only by written permission of each enterprise affected.

<sup>2</sup>An intercounty enterprise is counted in each county in which a part is located. The number of separate enterprises in the State is 34.



## CENSUS OF DRAINAGE—MONTANA

COUNTY TABLE II.—DRAINAGE ENTERPRISES—WORKS AND CAPITAL INVESTED, 1940, 1930,

ITEM (See definitions in Introduction)	THE STATE	Big Horn	Blaine <sup>1</sup>	Cascade <sup>1</sup>	Dawson <sup>1</sup>	Deer Lodge <sup>1</sup>
<b>DRAINAGE WORKS</b>						
1 Drainage enterprises.....number.....1940..	2 39	3	1	1	1	1
Open ditches:						
2 Completed.....miles.....1940..	420.9	52.0	15.0	21.0	2.0	.....
3 .....1930..	254.2	50.0	.....	3.0	2.0	.....
4 .....1920..	102.1	.....	.....	.....	.....	( <sup>3</sup> ) 3.0
5 Additional length authorized.....miles.....1940..	63.6	1.6	.....	1.0	.....	.....
Tile drains:						
6 Completed.....miles.....1940..	73.8	0.4	1.5	.....	.....	5.0
7 .....1930..	76.7	.....	.....	.....	.....	8.0
8 .....1920..	50.7	.....	.....	.....	.....	( <sup>3</sup> )
9 Additional length authorized.....miles.....1940..	.....	.....	.....	.....	.....	.....
Levees and dikes:						
10 Completed.....miles.....1940..	0.8	.....	.....	.....	.....	.....
11 .....1930..	.....	.....	.....	.....	.....	.....
12 .....1920..	.....	.....	.....	.....	.....	.....
13 Additional length authorized.....miles.....1940..	.....	.....	.....	.....	.....	.....
Pumping plants:						
14 Engine capacity.....horsepower.....1940..	.....	.....	.....	.....	.....	.....
15 .....1930..	.....	.....	.....	.....	.....	.....
16 .....1920..	.....	.....	.....	.....	.....	.....
17 Pump capacity.....gal. per min.....1940..	.....	.....	.....	.....	.....	.....
18 .....1930..	.....	.....	.....	.....	.....	.....
19 .....1920..	.....	.....	.....	.....	.....	.....
20 Land served by pumps.....acres.....1940..	.....	.....	.....	.....	.....	.....
21 .....1930..	.....	.....	.....	.....	.....	.....
22 .....1920..	.....	.....	.....	.....	.....	.....
23 Wells pumped for drainage.....number.....1940..	.....	.....	.....	.....	.....	.....
24 .....1930..	.....	.....	.....	.....	.....	.....
<b>CAPITAL INVESTED</b>						
25 Capital invested to January 1.....dollars.....1940..	2,827,839	232,160	25,000	80,319	7,756	40,000
26 .....1930..	1,879,236	225,000	.....	20,746	12,545	120,000
27 .....1920..	664,990	.....	.....	.....	.....	3,000
28 Estimated cost when completed.....dollars.....1940..	2,928,579	237,160	25,000	84,339	7,756	40,000
29 .....1930..	1,989,427	225,000	.....	20,746	12,545	120,000
30 .....1920..	846,466	.....	.....	.....	.....	3,000
31 Average cost per acre when completed.....dollars.....1940..	7.86	16.72	3.49	6.32	8.77	40.00
32 .....1930..	11.87	18.60	.....	3.15	13.89	40.00
33 .....1920..	5.02	.....	.....	.....	.....	3.00
Invested in and required for completion, 1940:						
34 Enterprises having open ditches only.....dollars..	1,780,637	231,500	.....	84,339	7,756	.....
35 Average amount per acre.....dollars..	11.83	17.97	.....	6.32	8.77	.....
36 Enterprises having open ditches and levees.....dollars..	.....	.....	.....	.....	.....	.....
37 Average amount per acre.....dollars..	.....	.....	.....	.....	.....	.....
38 Enterprises having tile only.....dollars..	370,000	.....	.....	.....	.....	40,000
39 Average amount per acre.....dollars..	73.76	.....	.....	.....	.....	40.00
40 Enterprises having tile and levees.....dollars..	.....	.....	.....	.....	.....	.....
41 Average amount per acre.....dollars..	.....	.....	.....	.....	.....	.....
42 Enterprises having open ditches and tile.....dollars..	252,670	5,000	25,000	.....	.....	.....
43 Average amount per acre.....dollars..	1.35	4.05	3.49	.....	.....	.....
44 Enterprises having ditches, tile, and levees.....dollars..	525,372	.....	.....	.....	.....	.....
45 Average amount per acre.....dollars..	17.61	.....	.....	.....	.....	.....
46 Enterprises operating pumping plants.....dollars..	.....	.....	.....	.....	.....	.....
47 Average amount per acre.....dollars..	.....	.....	.....	.....	.....	.....
<b>MAINTENANCE AND OPERATION</b>						
Cost of maintenance and operation in 1939:						
48 By enterprises operating pumping plants.....dollars..	.....	.....	.....	.....	.....	.....
49 Enterprises reporting.....number..	.....	.....	.....	.....	.....	.....
50 Land in these enterprises.....acres..	.....	.....	.....	.....	.....	.....
51 Average cost per acre.....dollars..	.....	.....	.....	.....	.....	.....
52 By enterprises not operating pumping plants.....dollars..	32,713	( <sup>4</sup> )	300	500	222	.....
53 Enterprises reporting.....number..	25	2	1	1	1	.....
54 Land in these enterprises.....acres..	295,151	( <sup>4</sup> )	7,159	13,335	894	.....
55 Average cost per acre.....dollars..	0.11	( <sup>4</sup> )	0.04	0.04	0.25	.....
Federal aid in maintenance:						
56 Enterprises reporting.....number..	4	.....	.....	.....	.....	.....
57 Land in these enterprises.....acres..	7,221	.....	.....	.....	.....	.....
<b>FINANCIAL CONDITION</b>						
58 Drainage taxes collected in 1939.....dollars..	46,707	10,174	1,250	232	.....	.....
59 Enterprises reporting.....number..	1 22	3	1	1	.....	.....
60 Land in these enterprises.....acres..	256,171	14,184	7,159	13,335	.....	.....
61 Average amount collected per acre.....dollars..	0.19	0.72	0.17	0.02	.....	.....
62 Area delinquent in drainage taxes, Dec. 31, 1939.....acres..	1,851	.....	.....	.....	.....	.....
63 Enterprises reporting.....number..	7	.....	.....	.....	.....	.....
64 Land in these enterprises.....acres..	38,014	.....	.....	.....	.....	.....
65 Portion delinquent in these enterprises.....percent..	4.9	.....	.....	.....	.....	.....
66 Total indebtedness, Dec. 31, 1939.....dollars..	1,503,081	( <sup>4</sup> )	6,449	80,319	7,756	.....
67 Enterprises reporting.....number..	17	1	1	1	1	.....
68 Land in these enterprises.....acres..	275,204	( <sup>4</sup> )	7,159	13,335	894	.....
69 Average indebtedness per acre.....dollars..	5.46	( <sup>4</sup> )	0.90	6.02	8.77	.....
70 Indebtedness in arrears, Dec. 31, 1939.....dollars..	3,640	( <sup>4</sup> )	.....	.....	.....	.....
71 Enterprises reporting.....number..	5	1	.....	.....	.....	.....
72 Land in these enterprises.....acres..	47,945	( <sup>4</sup> )	.....	.....	.....	.....
73 Average arrearage per acre.....dollars..	0.08	( <sup>4</sup> )	.....	.....	.....	.....
74 Reduction of debt by refinancing, prior to 1940.....dollars..	6 125,232	.....	7,532	.....	.....	.....
75 Enterprises reporting.....number..	2	.....	1	.....	.....	.....
76 Land in these enterprises.....acres..	6 8,610	.....	7,159	.....	.....	.....
77 Average reduction per acre.....dollars..	6 14.54	.....	1.05	.....	.....	.....

<sup>1</sup> For counties having less than 3 enterprises, statistics are shown only by written permission of each enterprise affected.<sup>2</sup> An intercounty enterprise is counted in each county in which a part is located. The number of separate enterprises in the State is 34.<sup>3</sup> Data are not available, included only in State totals.

# CENSUS OF DRAINAGE—MONTANA

317

AND 1920; AND MAINTENANCE AND OPERATION, AND FINANCIAL CONDITION, 1939

Flathead	Lake <sup>1</sup>	Lincoln <sup>1</sup>	Phillips <sup>1</sup>	Ravalli <sup>1</sup>	Richland <sup>1</sup>	Rosebud <sup>1</sup>	Sheridan <sup>1</sup>	Teton <sup>1</sup>	Treasure <sup>1</sup>	Valley <sup>1</sup>	Yellowstone		
4	1	1	1	1	1	1	1	1	1	1	18	1	
22.5	30.0	1.0	6.0	2.0	63.0	2.0	2.0	99.0	3.0	1.2	99.2	2	
( <sup>3</sup> ) 11.1		( <sup>3</sup> ) 7.5		( <sup>3</sup> ) 8.0	( <sup>3</sup> ) 39.3		1.8	24.8	1.0		132.7	3	
	50.0							11.0			41.2	4	
												5	
	2.5		0.1							0.5	63.8	6	
( <sup>3</sup> ) 3.0		( <sup>3</sup> )		( <sup>3</sup> )	( <sup>3</sup> ) 1.1				2.0		62.6	7	
											48.8	8	
												9	
											0.8	10	
												11	
												12	
												13	
												14	
												15	
												16	
												17	
												18	
												19	
												20	
												21	
												22	
												23	
												24	
73,400	55,263	4,800	23,324	16,000	399,852	10,000	3,700	401,592	20,000	4,443	1,430,230	25	
( <sup>3</sup> ) 30,600		( <sup>3</sup> ) 36,000		( <sup>3</sup> ) 10,000	270,771	14,100	3,700	169,250	13,900		952,684	26	
					76,569						409,382	27	
73,400	102,763	4,800	23,324	16,000	399,852	10,000	3,700	445,812	20,000	4,443	1,430,230	28	
( <sup>3</sup> ) 50,600		( <sup>3</sup> ) 36,000		( <sup>3</sup> ) 10,000	300,902	14,100	3,700	169,250	13,900		952,684	29	
					76,569						483,815	30	
11.18	0.86	12.31	0.67	2.67	10.00	3.18	9.56	10.27	5.47	0.23	22.81	31	
( <sup>3</sup> ) 12.28		( <sup>3</sup> ) 12.00		( <sup>3</sup> ) 10.00	9.73	3.98	9.56	4.78	3.94		16.72	32	
					47.96						10.20	33	
73,400		4,800		16,000	399,852	10,000	3,700	445,812	20,000		483,478	34	
11.18		12.31		2.67	10.99	3.18	9.56	10.27	5.47		20.54	35	
												36	
												37	
											330,000	38	
											82.17	39	
												40	
												41	
	102,763		23,324								4,443	91,360	42
	0.86		0.67								0.23	16.20	43
												525,372	44
												17.81	45
													46
													47
													48
													49
													50
( <sup>3</sup> )	260				7,180			3,485			18,838	51	
( <sup>3</sup> ) 1	1				1			1			16	52	
( <sup>3</sup> )	119,479				36,388			43,405			56,763	53	
	( <sup>3</sup> )				0.20			0.08			0.32	54	
												55	
												4	56
											7,221	57	
( <sup>3</sup> )	757							1,165			34,229	58	
( <sup>3</sup> ) 1	1							1			14	59	
( <sup>3</sup> )	119,479							43,405			56,765	60	
( <sup>3</sup> )	0.01							0.03			0.60	61	
( <sup>3</sup> )											1,851	62	
( <sup>3</sup> ) 1											6	63	
( <sup>3</sup> )											36,100	64	
( <sup>3</sup> )											4.6	65	
( <sup>3</sup> )	61,894				327,205			401,592			560,876	66	
( <sup>3</sup> ) 1	1				1			1			9	67	
( <sup>3</sup> )	119,479				36,388			43,405			40,700	68	
( <sup>3</sup> )	0.52				8.99			8.25			13.78	69	
( <sup>3</sup> )											2,026	70	
( <sup>3</sup> ) 1											3	71	
( <sup>3</sup> )											34,091	72	
( <sup>3</sup> )											0.06	73	
												74	
												75	
												76	
												77	

<sup>1</sup>Where there are less than 3 enterprises reporting, data are shown only in State totals, except as stated in footnote 1.

<sup>2</sup>Less than 1 cent per acre.

<sup>3</sup>Not distributed by counties.

# LOCATION OF LAND IN DRAINAGE ENTERPRISES



# CENSUS OF DRAINAGE - NEBRASKA

319

STATE TABLE 1.—SUMMARY OF DRAINAGE FOR THE STATE: JAN. 1, 1940, 1930, AND 1920

ITEM (See definitions in Introduction)	CENSUS OF—			INCREASE OR DECREASE (—)			
	1940	1930	1920	1930-1940		1920-1930	
				Amount	Percent	Amount	Percent
Approximate land area of State.....acres.....	49,057,920	49,157,120	49,157,120	.....	.....	.....	.....
Land in drainage enterprises.....acres.....	916,181	879,459	607,730	36,722	4.2	271,729	44.7
Improved.....acres.....	855,205	833,511	551,517	21,694	2.6	281,994	51.1
Unimproved:							
Timber and cut-over.....acres.....	17,993	8,031	6,342	9,962	124.0	1,689	26.6
Other.....acres.....	42,983	37,917	49,871	5,066	13.4	-11,954	-24.0
Drainage sufficient for normal crop.....acres.....	878,741	829,681	( <sup>1</sup> )	49,060	5.9	.....	.....
Partly drained, for partial crop.....acres.....	20,812	39,639	( <sup>1</sup> )	-18,827	-47.5	.....	.....
Unfit to raise any crop for lack of drainage.....acres.....	16,628	10,139	<sup>2</sup> 14,019	6,489	64.0	-3,880	-27.7
In occupied farms.....acres.....	849,948	864,159	( <sup>1</sup> )	-14,211	-1.6	.....	.....
In planted crops.....acres.....	688,976	743,178	( <sup>1</sup> )	-54,202	-7.3	.....	.....
Idle.....acres.....	114,606	45,765	( <sup>1</sup> )	68,841	150.7	.....	.....
Available for settlement.....acres.....	2,000	5,320	( <sup>1</sup> )	-3,320	-62.4	.....	.....
Open ditches, completed.....miles.....	1,406.7	1,202.3	734.5	204.4	17.0	497.8	63.7
Tile drains, completed.....miles.....	26.3	93.4	359.4	-87.1	-71.8	-266.0	-74.0
Drainage pumping plants, capacity.....horsepower.....	70	70	.....	.....	.....	70	.....
.....gal. per min..	2,200	2,200	.....	.....	.....	2,200	.....
Capital invested in enterprises.....dollars.....	7,578,999	6,847,070	4,588,578	731,929	10.7	2,258,492	49.2
Average per acre.....dollars.....	8.27	7.79	7.55	0.48	6.2	0.24	3.2

<sup>1</sup> Not available.

<sup>2</sup> Reported as "Swampy, subject to overflow, seeped, or alkali."

STATE TABLE 2.—AREA OF ENTERPRISES, BY SIZE: JAN. 1, 1940, 1930, AND 1920

[For intercounty enterprises the portion in each county is tabulated as a separate enterprise]

SIZE	AREA OF ENTERPRISES <sup>1</sup>			Land in enterprises <sup>2</sup> 1940	SIZE	AREA OF ENTERPRISES <sup>1</sup>			Land in enterprises <sup>2</sup> 1940
	1940	1930	1920			1940	1930	1920	
	Acres	Acres	Acres	Acres		Acres	Acres	Acres	Acres
All enterprises.....	1,005,541	893,899	708,450	916,181	1,000 to 1,999 acres.....	42,039	139,039	173,192	38,919
Less than 100 acres.....	80	80	320	80	2,000 to 4,999 acres.....	146,617	149,998	115,106	136,917
100 to 199 acres.....	160	160	2,900	2,900	5,000 to 9,999 acres.....	168,646	149,998	115,106	160,464
200 to 499 acres.....	2,900	2,464	1,200	1,200	10,000 to 19,999 acres.....	225,381	413,263	275,502	191,808
500 to 999 acres.....	12,894	15,649	14,570	11,229	20,000 to 49,999 acres.....	233,213	172,646	128,500	203,433
					50,000 to 99,999 acres.....	173,771	172,646	128,500	170,431

<sup>1</sup> The sum of the areas in the individual enterprises, without deduction for overlapping.

<sup>2</sup> Overlapping eliminated by tabulating each enterprise according to its acreage not included in later enterprises.

STATE TABLE 3.—LAND AND CAPITAL INVESTED, BY CHARACTER OF ENTERPRISE, JAN. 1, 1940

CHARACTER OF ENTERPRISE	Land		Capital invested	
	Acres	Percent	Dollars	Percent
All enterprises.....	916,181	100.0	7,578,999	100.0
Drainage districts.....	457,843	50.0	4,741,288	62.6
County drains.....	264,143	28.8	1,583,672	21.0
Irrigation enterprises:				
Federal <sup>1</sup> .....	194,185	21.2	1,242,039	16.4
Other.....	( <sup>2</sup> )	.....	2,000	( <sup>3</sup> )
Individually owned projects.....	( <sup>2</sup> )	.....	2,000	( <sup>3</sup> )

<sup>1</sup> Includes projects or divisions of projects of United States Bureau of Reclamation operated by water users.

<sup>2</sup> Entirely included in an enterprise organized under a drainage law.

<sup>3</sup> Less than one-tenth of 1 percent.

STATE TABLE 4.—LAND AND CAPITAL INVESTED, BY TYPE OF DRAINAGE: JAN. 1, 1940, 1930, AND 1920

TYPE OF DRAINAGE <sup>1</sup>	LAND IN ENTERPRISES						CAPITAL INVESTED IN ENTERPRISES					
	1940		1930		1920		1940		1930		1920	
	Acres	Percent	Acres	Percent	Acres	Percent	Dollars	Percent	Dollars	Percent	Dollars	Percent
All enterprises.....	916,181	100.0	879,459	100.0	607,730	100.0	7,578,999	100.0	6,847,070	100.0	4,588,578	100.0
Gravity drainage only by—												
Open ditches.....	785,411	85.7	710,607	80.8	583,862	96.1	6,447,266	85.1	5,355,402	78.2	3,988,180	87.0
Tile drains.....	.....	.....	2,900	0.3	6,020	1.0	.....	.....	70,500	1.0	143,000	3.1
Open ditches and tile drains..	98,632	10.8	133,683	15.2	17,728	2.9	938,262	12.4	1,278,134	18.7	457,398	10.0
Part only by pumping by—												
Open ditches.....	.....	.....	32,269	3.7	.....	.....	.....	.....	143,034	2.1	.....	.....
Tile drains.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Open ditches and tile drains..	32,138	3.5	.....	.....	.....	.....	193,471	2.6	.....	.....	.....	.....
Total area served by pumps.....	300	( <sup>2</sup> )	300	( <sup>2</sup> )	.....	.....	.....	.....	.....	.....	.....	.....

<sup>1</sup> Each item includes those enterprises that have provided levees in addition to the kind of drains specified.

<sup>2</sup> Less than one-tenth of 1 percent.

## CENSUS OF DRAINAGE—NEBRASKA

STATE TABLE 5.—PUMPING PLANTS AND LAND SERVED, BY KIND OF POWER: JAN. 1, 1940, 1930, AND 1920

KIND OF POWER	Enter- prises <sup>1</sup>	CAPACITY			Land served
		Engine or motor		Pump	
	Number	Hp.	Percent	G. p. m.	Acres
All pumping enterprises.....	1940.. 1	70	100.0	2,200	300
	1930.. 1	70	100.0	2,200	300
	1920.. .....	.....	.....	.....	.....
Electric.....	1940.. 1	70	100.0	2,200	300
	1930.. 1	70	100.0	2,200	300
	1920.. .....	.....	.....	.....	.....

<sup>1</sup>Where there are less than 3 enterprises reporting, statistics are shown only by written permission of each enterprise affected.

STATE TABLE 6.—PUMPING PLANTS AND LAND SERVED, BY KIND OF PUMP: JAN. 1, 1940 AND 1930

KIND OF PUMP	PUMPS			Engine or motor capac- ity	Land served	
	Number	Capacity				
		<i>G. p. m.</i>	<i>Percent</i>	<i>Hp.</i>	<i>Acres</i>	
All pumping enterprises.....	1940..	3	2,200	100.0	70	300
	1930..	3	2,200	100.0	70	300
Centrifugal.....	1940..	3	2,200	100.0	70	300
	1930..	3	2,200	100.0	70	300

STATE TABLE 7.—LAND, CAPITAL INVESTED, AND AREA DELINQUENT IN DRAINAGE TAXES, BY ARREARAGE IN PAYMENT OF OBLIGATIONS: JAN. 1, 1940 AND 1930

FINANCIAL STATUS	LAND IN ENTERPRISES				CAPITAL INVESTED				AREA DELINQUENT <sup>1</sup>	
	1940		1930		1940		1930		1940	1930
	Acres	Percent	Acres	Percent	Dollars	Percent	Dollars	Percent	Acres	Acres
All enterprises.....	916,181	100.0	879,459	100.0	7,578,999	100.0	6,847,070	100.0	31,960	12,960
Enterprises in arrears.....	27,653	3.0	31,024	3.5	160,318	2.1	468,669	6.8	9,280	5,000
With some delinquent land.....	27,653	3.0	11,233	1.3	160,318	2.1	50,000	0.7	8,280	5,000
With no delinquent land.....	.....	.....	9,291	1.0	.....	.....	155,000	2.3	.....	.....
With no report on delinquency.....	.....	.....	10,500	1.2	.....	.....	263,669	3.8	.....	.....
Enterprises not in arrears.....	885,228	96.6	848,435	96.5	7,373,681	97.3	6,378,401	93.2	22,680	7,960
With some delinquent land.....	264,205	28.8	81,340	9.3	2,917,001	38.5	582,547	8.5	22,680	7,960
With no delinquent land.....	620,993	67.8	725,718	82.5	4,456,680	58.8	5,215,603	76.2	.....	.....
With no report on delinquency.....	.....	.....	41,377	4.7	.....	.....	580,251	8.5	.....	.....
Enterprises not reporting on arrearage.....	3,300	0.4	.....	.....	45,000	0.6	.....	.....	.....	.....
With some delinquent land.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
With no delinquent land.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
With no report on delinquency.....	3,300	0.4	.....	.....	45,000	0.6	.....	.....	.....	.....

<sup>1</sup>If any land is delinquent in 2 or more overlapping enterprises, the acreage delinquent is too large by the amount of such duplication.

STATE TABLE 8.—LAND, CAPITAL INVESTED, INDEBTEDNESS, ARREARAGE IN PAYMENT OF BONDS, REDUCTION OF DEBT BY REFINANCING, AND ACREAGE DELINQUENT, 1940; DRAINAGE TAXES COLLECTED IN 1939; BY INDEBTEDNESS AND ARREARAGE, JAN. 1, 1940

FINANCIAL STATUS	Land in enterprises	Capital invested	Indebtedness	Arrearage in payment of bonds	Reduction of debt by refinancing	Delinquent in drainage taxes <sup>1</sup>	Drainage taxes collected in 1939
	Acres	Dollars	Dollars	Dollars	Dollars	Acres	Dollars
All enterprises.....	916,181	7,578,999	1,278,621	40,250	119,000	31,960	130,173
Enterprises in debt.....	431,905	3,826,612	1,278,621	40,250	119,000	29,970	107,873
In arrears, amount of arrearage stated.....	27,653	160,318	87,828	40,250	.....	9,280	2,581
Collecting drainage taxes in 1939.....	11,483	101,500	31,203	8,250	.....	1,280	2,581
No collections reported.....	16,170	58,818	56,625	32,000	.....	8,000	.....
Not in arrears.....	403,452	3,646,294	1,190,747	.....	119,000	20,690	105,168
Collecting drainage taxes in 1939.....	387,823	3,386,794	1,045,747	.....	35,000	16,813	105,168
No collections reported.....	15,629	259,500	145,000	.....	84,000	3,877	.....
Not reporting as to arrears.....	800	20,000	46	.....	.....	.....	124
Collecting drainage taxes in 1939.....	800	20,000	46	.....	.....	.....	124
No collections reported.....	.....	.....	.....	.....	.....	.....	.....
Enterprises not in debt.....	481,776	3,727,387	.....	.....	.....	1,990	22,300
Collecting drainage taxes in 1939.....	44,684	433,626	.....	.....	.....	730	22,300
No collections reported.....	437,092	3,293,761	.....	.....	.....	1,260	.....
Enterprises not reporting as to debt.....	2,500	25,000	.....	.....	.....	.....	.....
Collecting drainage taxes in 1939.....	.....	.....	.....	.....	.....	.....	.....
No collections reported.....	2,500	25,000	.....	.....	.....	.....	.....

<sup>1</sup>If any land is delinquent in 2 or more overlapping enterprises, the acreage delinquent is too large by the amount of such duplication.

# CENSUS OF DRAINAGE—NEBRASKA

321

STATE TABLE 9.—LAND AND CAPITAL INVESTED, BY PRINCIPAL PURPOSE OF DRAINAGE, JAN. 1, 1940

PURPOSE OF DRAINAGE	Land		Capital invested	
	Acres	Percent	Dollars	Percent
All enterprises.....	916,181	100.0	7,578,999	100.0
Improvement of land already in farms.....	304,421	33.2	2,024,442	26.7
Reclamation of swamp land not previously in farms.....	20,807	2.3	167,798	2.2
Protection against overflow.....	384,795	42.0	3,714,208	49.0
Removal of alkali or seepage from irrigation.....	206,158	22.5	1,672,551	22.1

STATE TABLE 10.—LAND AND CAPITAL INVESTED, BY DATE OF ORGANIZATION, JAN. 1, 1940

DATE OF ORGANIZATION	Land <sup>1</sup>		Area of enterprises		Capital invested	
	Acres	Percent	Total acres <sup>2</sup>	Overlapped acres	Dollars	Percent
All enterprises.....	916,181	100.0	1,005,541	89,360	7,578,999	100.0
1880-1889.....	.....	.....	680	680	6,000	0.1
1890-1899.....	57,465	6.3	87,645	30,380	621,284	8.2
1900-1904.....	3,890	0.4	3,890	.....	8,800	0.1
1905-1909.....	235,671	25.7	264,376	28,705	1,913,992	25.3
1910-1914.....	134,146	14.6	153,559	19,413	1,110,125	14.6
1915-1919.....	192,288	21.0	196,028	3,740	1,545,440	20.4
1920-1924.....	100,052	10.9	105,214	5,162	1,049,555	13.8
1925-1929.....	161,425	17.6	162,703	1,280	1,159,515	15.3
1930-1934.....	19,755	2.2	19,755	.....	136,648	1.8
1935-1939.....	11,489	1.3	11,489	.....	27,940	0.4

<sup>1</sup> Land included in more than 1 enterprise is tabulated only in the last organized.

<sup>2</sup> The sum of the areas of the individual enterprises.

STATE TABLE 11.—DRAINAGE CONDITION, DEVELOPMENT, AND USE OF LAND IN ENTERPRISES, BY DATE OF ORGANIZATION, 1939

DATE OF ORGANIZATION	Land in all enter-prises <sup>1</sup>	DRAINAGE CONDITION			DEVELOPMENT			USE OF LAND						
		Drained		Partly drained	Undrained	Improved land		Timber and cut-over land	Other un-improved land	In occupied farms		In planted crops	Idle	Land available for settlement
All enterprises..	Acres 916,181	Acres 878,741	Per- cent 95.9	Acres 20,812	Acres 16,628	Acres 855,205	Per- cent 93.3	Acres 17,993	Acres 42,983	Acres 849,948	Per- cent 92.8	Acres 688,976	Acres 114,696	Acres 2,000
1880-1889 <sup>2</sup> .....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1890-1899.....	57,465	54,440	94.7	3,025	.....	55,350	96.3	1,600	515	32,345	56.3	28,580	25,160	1,000
1900-1904.....	3,890	1,270	32.6	1,310	1,310	2,580	66.3	.....	1,310	2,580	66.3	2,066	1,110	.....
1905-1909.....	235,671	225,063	95.5	6,885	3,723	221,319	93.9	6,345	8,007	232,345	98.6	180,375	20,089	.....
1910-1914.....	134,146	127,978	95.4	4,701	1,467	128,931	96.1	2,125	3,080	132,720	98.9	115,363	4,232	.....
1915-1919.....	192,288	189,013	98.3	1,976	1,299	185,857	96.6	2,063	4,368	185,177	96.3	152,473	19,012	.....
1920-1924.....	100,052	94,607	94.6	1,295	4,150	85,869	85.9	3,729	10,354	87,816	87.8	72,532	7,150	.....
1925-1929.....	161,425	158,280	98.0	280	2,865	147,598	91.4	442	13,385	146,466	92.0	112,846	33,879	.....
1930-1934.....	19,755	18,741	94.9	200	814	18,591	94.1	350	814	19,405	98.2	16,454	864	.....
1935-1939.....	11,489	9,349	81.4	1,140	1,000	9,010	78.4	1,339	1,140	9,094	79.2	7,987	.....	1,000

<sup>1</sup> Land included in more than 1 enterprise is tabulated only in the last organized.

<sup>2</sup> Entire acreage overlapped by a later enterprise.

STATE TABLE 12.—COST OF OPERATION AND MAINTENANCE, BY TYPE OF DRAINAGE, 1939

TYPE OF DRAINAGE	Land in all enterprises	LAND REPORTING ON COST OF MAINTENANCE AND OPERATION			COST REPORTED		
		Total	Some cost	No cost	Total amount	Per acre on—	
						Total reporting	Area incurring
All enterprises.....	Acres 916,181	Acres 913,681	Acres 452,079	Acres 461,602	Dollars 61,999	Dollars 0.07	Dollars 0.14
Gravity drainage only.....	884,043	881,543	419,941	461,602	59,539	0.07	0.14
Open ditches only.....	425,979	423,479	147,695	275,784	19,797	0.05	0.13
Open ditches and levees.....	359,432	359,432	181,709	177,723	32,709	0.09	0.18
Open ditches and tile drains.....	95,632	95,632	87,537	8,095	7,133	0.07	0.08
Open ditches, tile drains, and levees.....	3,000	3,000	3,000	.....	200	0.07	0.07
Part pumping and part gravity.....	32,138	32,138	32,138	.....	2,160	0.07	0.07

## CENSUS OF DRAINAGE—NEBRASKA

STATE TABLE 13.—LAND AND CAPITAL INVESTED, BY METHOD OF MAINTENANCE AND BY WHETHER MAINTENANCE IS SYSTEMATIC, JAN. 1, 1940

MAINTENANCE	Land		Capital invested	
	Acres	Percent	Dollars	Percent
All enterprises.....	916,181	100.0	7,578,999	100.0
Method:				
By district forces.....	710,052	77.5	6,152,841	81.2
By contract.....	8,364	0.9	192,000	2.5
Work apportioned to landowners.....	24,955	2.7	124,082	1.7
"None," or not reporting.....	172,800	18.9	1,109,476	14.6
Whether systematic:				
Reporting "yes".....	589,519	64.3	5,139,270	68.2
Reporting "no".....	248,145	27.1	1,789,446	23.6
Not reporting.....	78,517	8.6	531,283	6.2

STATE TABLE 14.—LAND, CAPITAL INVESTED, AND DRAINAGE WORKS, BY OWNERSHIP OF POWER EQUIPMENT FOR MAINTENANCE, 1940

ITEM	All enterprises	ENTERPRISES OWNING POWER EQUIPMENT	
		Amount	Percent
Land in enterprises.....acres....	916,181	248,695	27.1
Capital invested.....dollars..	7,578,999	1,798,221	23.7
Drainage works:			
Open ditches.....miles....	1,406.7	325.0	23.1
Tile drains.....miles....	26.3	15.0	57.0
Levees.....miles....	230.3	45.0	19.5

STATE TABLE 15.—LAND, CAPITAL INVESTED, AND DRAINAGE WORKS, BY FEDERAL AGENCY GIVING AID IN MAINTENANCE, 1940

AGENCY	Land in enterprises	Capital invested	DRAINAGE WORKS		
			Ditches	Tile	Levees
All enterprises reporting Federal aid received.....	Acres 30,459	Dollars 451,818	Miles 43.0	Miles 7.5	Miles 2.0
Work Projects Administration.....	9,489	279,000	28.0	7.5	.....
Civilian Conservation Corps.....	19,170	59,818	10.0	.....	.....
Other.....	4,800	114,000	5.0	.....	2.0





## CENSUS OF DRAINAGE—NEBRASKA

325

COUNTY TABLE I.—LAND IN DRAINAGE ENTERPRISES CLASSIFIED BY CONDITION AND BY USE, 1940, 1930, AND 1920; AND BY KIND OF WORKS, 1940—Continued

ITEM (See definitions in Introduction)		Nemaha	Platte	Polk	Richardson	Sarpy	Saupe
LAND AREA							
1	Approximate land area.....acres....1940..	255,960	430,080	277,120	350,720	147,200	463,840
2	Drainage enterprises.....number....1940..	5	3	3	7	9	8
3	Land in enterprises.....acres....1940..	30,688	17,094	3,060	56,264	27,000	38,288
4	.....1930..	19,916	9,040	3,800	35,673	30,000	32,020
5	.....1920..	20,134	( <sup>1</sup> )	( <sup>1</sup> )	35,838	32,850	30,830
6	Area of all enterprises, overlapping included.....acres....1940..	31,108	17,094	3,080	56,584	34,980	40,268
7	Amount of overlapping.....acres....1940..	420	.....	.....	320	7,980	1,980
CONDITION AND USE OF LAND							
8	Land with drainage sufficient for normal crop.....acres....1940..	29,088	17,094	3,080	55,307	24,100	29,593
9	.....1930..	18,965	7,520	3,800	32,173	29,560	25,774
10	Increase or decrease (-), 1930-1940.....acres.....	10,723	9,574	-720	23,134	-5,460	3,819
11	.....percent.....	58.4	127.3	-18.9	71.9	-18.5	14.8
12	Land undrained, unfit for any crop.....acres....1940..	.....	.....	.....	.....	1,550	3,507
13	.....1930..	160	100	.....	2,500	.....	1,496
14	Increase or decrease (-), 1930-1940.....acres.....	-160	-100	.....	-2,500	1,550	2,011
15	.....percent.....	-100.0	-100.0	.....	-100.0	.....	134.4
16	Land partly drained, for partial crop.....acres....1940..	1,600	.....	.....	957	1,350	5,188
17	.....1930..	1,391	1,420	.....	1,000	440	4,750
18	Increase or decrease (-), 1930-1940.....acres.....	209	-1,420	.....	-43	910	438
19	.....percent.....	15.0	-100.0	.....	-4.3	206.8	9.2
20	Improved land.....acres....1940..	29,088	16,000	2,940	54,547	24,500	29,593
21	.....1930..	18,525	8,040	3,800	33,473	23,730	25,774
22	.....1920..	18,121	( <sup>1</sup> )	( <sup>1</sup> )	27,561	32,050	29,040
Unimproved land:							
23	Woodland and cut-over land.....acres....1940..	1,600	1,094	140	1,717	1,150	718
24	.....1930..	1,391	.....	.....	2,200	880	280
25	.....1920..	2,013	( <sup>1</sup> )	( <sup>1</sup> )	2,269	200	280
26	Other unimproved land.....acres....1940..	.....	.....	.....	.....	1,350	7,877
27	.....1930..	.....	1,000	.....	.....	5,340	5,893
28	.....1920..	.....	( <sup>1</sup> )	( <sup>1</sup> )	5,988	600	1,640
29	Land in occupied farms.....acres....1940..	30,688	16,000	2,940	56,264	24,860	38,268
30	.....1930..	19,916	9,040	3,800	35,173	24,980	32,020
31	Increase or decrease (-), 1930-1940.....acres.....	10,772	6,960	-860	21,091	180	6,248
32	.....percent.....	54.1	77.0	-22.6	60.0	0.7	19.5
33	Land in planted crops.....acres....1940..	24,526	13,968	2,670	46,956	11,490	26,587
34	.....1930..	18,125	6,300	3,470	33,160	21,300	22,504
35	Increase or decrease (-), 1930-1940.....acres.....	6,401	7,668	-800	13,796	-9,870	4,083
36	.....percent.....	35.3	121.7	-23.0	41.6	-46.2	18.1
37	Land idle.....acres....1940..	1,600	839	140	397	13,010	3,087
38	.....1930..	900	.....	.....	900	5,900	1,400
39	Increase or decrease (-), 1930-1940.....acres.....	700	-839	140	-503	7,110	1,687
40	.....percent.....	77.8	.....	.....	-55.9	120.5	120.5
41	Land available for settlement.....acres....1940..	.....	.....	.....	.....	1,000	.....
42	.....1930..	.....	.....	.....	.....	5,320	.....
43	Increase or decrease (-), 1930-1940.....acres.....	.....	.....	.....	.....	-4,320	.....
44	.....percent.....	.....	.....	.....	.....	-81.2	.....
LAND CLASSIFIED BY WORKS, 1940							
45	Land drained by open ditches only.....acres.....	5,880	17,094	3,080	20,089	15,250	7,230
46	Length of these ditches.....miles.....	9.5	35.0	6.0	37.5	33.3	13.0
47	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....
48	Land drained by open ditches and own levees.....acres.....	24,808	.....	.....	36,175	11,750	31,058
49	Length of these ditches.....miles.....	32.0	.....	.....	48.0	28.5	71.5
50	Length of these levees.....miles.....	16.5	.....	.....	19.0	5.0	19.5
51	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....
52	Land drained by tile only.....acres.....	.....	.....	.....	.....	.....	.....
53	Length of these tile.....miles.....	.....	.....	.....	.....	.....	.....
54	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....
55	Land drained by tile and own levees.....acres.....	.....	.....	.....	.....	.....	.....
56	Length of these tile.....miles.....	.....	.....	.....	.....	.....	.....
57	Length of these levees.....miles.....	.....	.....	.....	.....	.....	.....
58	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....
59	Land drained by open ditches and tile.....acres.....	.....	.....	.....	.....	.....	.....
60	Length of these open ditches.....miles.....	.....	.....	.....	.....	.....	.....
61	Length of these tile.....miles.....	.....	.....	.....	.....	.....	.....
62	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....
63	Land drained by open ditches, tile, and levees.....acres.....	.....	.....	.....	.....	.....	.....
64	Length of these open ditches.....miles.....	.....	.....	.....	.....	.....	.....
65	Length of these tile.....miles.....	.....	.....	.....	.....	.....	.....
66	Length of these levees.....miles.....	.....	.....	.....	.....	.....	.....
67	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....
68	Land in enterprises operating pumping plants.....acres.....	.....	.....	.....	.....	.....	.....
69	Length of open ditches owned by these enterprises.....miles.....	.....	.....	.....	.....	.....	.....
70	Length of tile owned by these enterprises.....miles.....	.....	.....	.....	.....	.....	.....
71	Length of levees owned by these enterprises.....miles.....	.....	.....	.....	.....	.....	.....
72	Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....

<sup>1</sup>Included in "Other counties."

## CENSUS OF DRAINAGE - NEBRASKA

COUNTY TABLE I.—LAND IN DRAINAGE ENTERPRISES CLASSIFIED BY CONDITION AND BY USE, 1940, 1930, AND 1920; AND BY KIND OF WORKS, 1940—Continued

ITEM (See definitions in Introduction)	Scotts Bluff	Sioux <sup>1</sup>	Stanton	Thayer <sup>1</sup>	Washington	Other counties <sup>2</sup>
<b>LAND AREA</b>						
1 Approximate land area.....acres....1940..	434,640	1,320,320	275,840	369,280	246,400	4,778,880
2 Drainage enterprises.....number....1940..	5	1	3	2	5	21
3 Land in enterprises.....acres....1940..	134,451	32,138	4,640	4,520	23,620	97,262
4 ....."1930..	142,377	32,269	4,680	(3)	37,745	121,721
5 ....."1920..	10,124	4,344	.....	(3)	25,840	114,358
6 Area of all enterprises, overlapping included.....acres....1940..	154,324	32,138	4,640	4,520	25,220	100,304
7 Amount of overlapping.....acres....1940..	19,873	.....	.....	.....	1,600	3,042
<b>CONDITION AND USE OF LAND</b>						
8 Land with drainage sufficient for normal crop.....acres....1940..	131,855	31,369	4,640	1,900	21,406	96,527
9 ....."1930..	133,236	30,439	4,680	(3)	37,745	112,031
10 Increase or decrease (-), 1930-1940.....acres.....	-1,381	930	-40	(3)	-16,339	-15,504
11 ....."percent.....	-1.0	3.0	-0.8	.....	-43.3	-13.8
12 Land undrained, unfit for any crop.....acres....1940..	2,396	769	.....	1,310	.....	100
13 ....."1930..	2,043	345	.....	(3)	.....	1,270
14 Increase or decrease (-), 1930-1940.....acres.....	353	424	.....	(3)	.....	-1,080
15 ....."percent.....	17.3	122.9	.....	.....	.....	-85.0
16 Land partly drained, for partial crop.....acres....1940..	200	.....	.....	1,310	2,214	545
17 ....."1930..	7,098	1,485	.....	(3)	.....	8,420
18 Increase or decrease (-), 1930-1940.....acres.....	-6,898	-1,485	.....	(3)	2,214	-7,875
19 ....."percent.....	-97.2	-100.0	.....	.....	.....	-93.5
20 Improved land.....acres....1940..	127,929	27,567	4,180	3,210	22,368	92,792
21 ....."1930..	140,394	31,029	4,080	(3)	37,745	111,781
22 ....."1920..	14,110	3,904	.....	(3)	22,760	105,200
<b>Unimproved land:</b>						
23 Woodland and cut-over land.....acres....1940..	.....	.....	260	.....	481	3,051
24 ....."1930..	.....	.....	.....	.....	.....	280
25 ....."1920..	.....	.....	.....	(3)	80	280
26 Other unimproved land.....acres....1940..	6,522	4,571	200	1,310	771	1,419
27 ....."1930..	1,383	1,240	.....	(3)	.....	9,650
28 ....."1920..	2,014	440	.....	(3)	3,000	8,878
29 Land in occupied farms.....acres....1940..	127,423	27,567	4,180	3,210	23,620	93,638
30 ....."1930..	142,377	31,209	4,680	(3)	37,745	114,571
31 Increase or decrease (-), 1930-1940.....acres.....	-14,954	-3,642	-500	(3)	-14,125	-20,903
32 ....."percent.....	-10.5	-11.7	-10.7	.....	-37.4	-18.2
33 Land in planted crops.....acres....1940..	111,114	22,386	3,411	2,853	18,977	69,592
34 ....."1930..	114,098	22,354	3,280	(3)	34,266	92,450
35 Increase or decrease (-), 1930-1940.....acres.....	-3,984	32	151	(3)	-15,289	-25,866
36 ....."percent.....	-3.1	0.1	4.6	.....	-44.6	-29.3
37 Land idle.....acres....1940..	23,137	9,752	460	1,310	289	4,460
38 ....."1930..	11,365	2,715	1,000	(3)	.....	7,030
39 Increase or decrease (-), 1930-1940.....acres.....	11,772	7,037	-540	(3)	289	-2,570
40 ....."percent.....	103.6	259.2	-54.0	.....	.....	-36.6
41 Land available for settlement.....acres....1940..	.....	.....	.....	.....	.....	.....
42 ....."1930..	.....	.....	.....	.....	.....	.....
43 Increase or decrease (-), 1930-1940.....acres.....	.....	.....	.....	.....	.....	.....
44 ....."percent.....	.....	.....	.....	.....	.....	.....
<b>LAND CLASSIFIED BY WORKS, 1940</b>						
45 Land drained by open ditches only.....acres.....	70,285	.....	4,640	1,900	7,160	56,562
46 Length of these ditches.....miles.....	141.0	.....	12.0	3.0	13.5	101.2
47 Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....
48 Land drained by open ditches and own levees.....acres.....	.....	.....	.....	.....	10,460	38,725
49 Length of these ditches.....miles.....	.....	.....	.....	.....	31.5	58.2
50 Length of these levees.....miles.....	.....	.....	.....	.....	21.0	17.5
51 Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....
52 Land drained by tile only.....acres.....	.....	.....	.....	.....	.....	.....
53 Length of these tile.....miles.....	.....	.....	.....	.....	.....	.....
54 Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....
55 Land drained by tile and own levees.....acres.....	.....	.....	.....	.....	.....	.....
56 Length of these tile.....miles.....	.....	.....	.....	.....	.....	.....
57 Length of these levees.....miles.....	.....	.....	.....	.....	.....	.....
58 Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....
59 Land drained by open ditches and tile.....acres.....	61,165	.....	.....	2,620	.....	1,075
60 Length of these open ditches.....miles.....	60.0	.....	.....	3.0	.....	1.7
61 Length of these tile.....miles.....	8.9	.....	.....	0.5	.....	2.0
62 Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....
63 Land drained by open ditches, tile, and levees.....acres.....	3,000	.....	.....	.....	.....	.....
64 Length of these open ditches.....miles.....	4.0	.....	.....	.....	.....	.....
65 Length of these tile.....miles.....	0.8	.....	.....	.....	.....	.....
66 Length of these levees.....miles.....	4.0	.....	.....	.....	.....	.....
67 Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....
68 Land in enterprises operating pumping plants <sup>4</sup> .....acres.....	.....	32,138	.....	.....	.....	.....
69 Length of open ditches owned by these enterprises.....miles.....	.....	29.0	.....	.....	.....	.....
70 Length of tile owned by these enterprises.....miles.....	.....	4.4	.....	.....	.....	.....
71 Length of levees owned by these enterprises.....miles.....	.....	.....	.....	.....	.....	.....
72 Part protected by levees of an outside agency.....acres.....	.....	.....	.....	.....	.....	.....

<sup>1</sup>For counties having less than 3 enterprises, statistics are shown only by written permission of each enterprise affected.

<sup>2</sup>Includes Cedar, Dakota, Franklin, Frontier, Hamilton, Johnson, Kearney, Merrick, Otoe, Pawnee, Seward, Thurston, Wayne, and York Counties in 1940; Antelope, Cass, Cedar, Dakota, Fillmore, Franklin, Frontier, Hamilton, Seward, Thayer, Wayne, and York Counties in 1930; and Antelope, Cass, Cherry, Dakota, Dixon, Fillmore, Knox, Madison, Morrill, Nance, Platte, Polk, Seward, Thayer, Wayne, and York Counties in 1920.

<sup>3</sup>Included in "Other counties."

<sup>4</sup>Data included in lines 68 to 72 are not included in data in lines 45 to 67.





## CENSUS OF DRAINAGE—NEBRASKA

329

COUNTY TABLE II.—DRAINAGE ENTERPRISES—WORKS AND CAPITAL INVESTED, 1940, 1930, AND 1920; AND MAINTENANCE AND OPERATION, AND FINANCIAL CONDITION, 1939—Continued

ITEM (See definitions in Introduction)		Nemaha	Platte	Polk	Richardson	Sarpy	Saunders
DRAINAGE WORKS							
1	Drainage enterprises.....number.....1940..	5	3	3	7	9	8
2	Open ditches:						
3	Completed.....miles.....1940..	41.5	35.0	6.0	85.5	61.8	84.5
4	.....1930..	56.6	7.2	7.5	68.5	65.8	20.4
5	.....1920..	55.0	( <sup>1</sup> )	( <sup>1</sup> )	50.5	54.6	15.9
6	Additional length authorized.....miles.....1940..						
7	Tile drains:						
8	Completed.....miles.....1940..		1.2	0.2			0.3
9	.....1930..		( <sup>1</sup> )	( <sup>1</sup> )			
10	.....1920..						
11	Additional length authorized.....miles.....1940..						
12	Levees and dikes:						
13	Completed.....miles.....1940..	16.5			19.0	5.0	19.5
14	.....1930..					5.0	6.3
15	.....1920..				1.3	2.0	9.8
16	Additional length authorized.....miles.....1940..						
17	Pumping plants:						
18	Engine capacity.....horsepower.....1940..						
19	.....1930..						
20	.....1920..						
21	Pump capacity.....gal. per min.....1940..						
22	.....1930..						
23	.....1920..						
24	Land served by pumps.....acres.....1940..						
25	.....1930..						
26	.....1920..						
27	Wells pumped for drainage.....number.....1940..						
28	.....1930..						
29	.....1920..						
30	CAPITAL INVESTED						
31	Capital invested to January 1.....dollars.....1940..	181,468	71,963	17,425	724,716	464,840	234,951
32	.....1930..	375,000	47,259	9,712	698,150	393,253	95,059
33	.....1920..	346,000	( <sup>1</sup> )	( <sup>1</sup> )	339,124	262,177	57,403
34	Estimated cost when completed.....dollars.....1940..	181,468	71,963	17,425	724,716	464,840	234,951
35	.....1930..	375,000	47,259	9,712	698,150	393,253	95,059
36	.....1920..	346,000	( <sup>1</sup> )	( <sup>1</sup> )	339,124	262,177	57,403
37	Average cost per acre when completed.....dollars.....1940..	5.91	4.21	5.66	12.88	17.22	6.14
38	.....1930..	18.83	5.23	2.56	19.57	13.11	3.00
39	.....1920..	17.18	( <sup>1</sup> )	( <sup>1</sup> )	9.46	8.10	1.90
40	Invested in and required for completion, 1940:						
41	Enterprises having open ditches only.....dollars..	30,000	71,963	17,425	192,216	294,840	31,000
42	Average amount per acre.....dollars..	5.10	4.21	5.66	9.57	19.33	4.29
43	Enterprises having open ditches and levees.....dollars..	151,468			532,500	170,000	203,951
44	Average amount per acre.....dollars..	6.10			14.72	14.47	6.57
45	Enterprises having tile only.....dollars..						
46	Average amount per acre.....dollars..						
47	Enterprises having tile and levees.....dollars..						
48	Average amount per acre.....dollars..						
49	Enterprises having open ditches and tile.....dollars..						
50	Average amount per acre.....dollars..						
51	Enterprises having ditches, tile, and levees.....dollars..						
52	Average amount per acre.....dollars..						
53	Enterprises operating pumping plants.....dollars..						
54	Average amount per acre.....dollars..						
55	MAINTENANCE AND OPERATION						
56	Cost of maintenance and operation in 1939:						
57	By enterprises operating pumping plants.....dollars..						
58	Enterprises reporting.....number..						
59	Land in these enterprises.....acres..						
60	Average cost per acre.....dollars..				800	3,300	3,849
61	By enterprises not operating pumping plants.....dollars..	( <sup>2</sup> )	1		3	3	5
62	Enterprises reporting.....number..	( <sup>2</sup> )			39,015	9,030	31,058
63	Land in these enterprises.....acres..	( <sup>2</sup> )			0.02	0.36	0.12
64	Average cost per acre.....dollars..						
65	Federal aid in maintenance:						
66	Enterprises reporting.....number..						
67	Land in these enterprises.....acres..						
68	FINANCIAL CONDITION						
69	Drainage taxes collected in 1939.....dollars..	( <sup>2</sup> )	( <sup>2</sup> )		( <sup>2</sup> )	6,868	5,455
70	Enterprises reporting.....number..	( <sup>2</sup> )	2	1	( <sup>2</sup> )	3	5
71	Land in these enterprises.....acres..	( <sup>2</sup> )	( <sup>2</sup> )		( <sup>2</sup> )	9,030	31,058
72	Average amount collected per acre.....dollars..	( <sup>2</sup> )	( <sup>2</sup> )		( <sup>2</sup> )	0.78	0.18
73	Area delinquent in drainage taxes, Dec. 31, 1939.....acres..	( <sup>2</sup> )	( <sup>2</sup> )			( <sup>2</sup> )	( <sup>2</sup> )
74	Enterprises reporting.....number..	( <sup>2</sup> )	1	1		1	1
75	Land in these enterprises.....acres..	( <sup>2</sup> )	( <sup>2</sup> )			( <sup>2</sup> )	( <sup>2</sup> )
76	Portion delinquent in these enterprises.....percent..	( <sup>2</sup> )	( <sup>2</sup> )			( <sup>2</sup> )	( <sup>2</sup> )
77	Total indebtedness, Dec. 31, 1939.....dollars..	( <sup>2</sup> )	( <sup>2</sup> )		( <sup>2</sup> )	8,546	( <sup>2</sup> )
78	Enterprises reporting.....number..	( <sup>2</sup> )	2	1	( <sup>2</sup> )	4	2
79	Land in these enterprises.....acres..	( <sup>2</sup> )	( <sup>2</sup> )		( <sup>2</sup> )	15,170	( <sup>2</sup> )
80	Average indebtedness per acre.....dollars..	( <sup>2</sup> )	( <sup>2</sup> )		( <sup>2</sup> )	0.56	( <sup>2</sup> )
81	Indebtedness in arrears, Dec. 31, 1939.....dollars..		( <sup>2</sup> )				
82	Enterprises reporting.....number..		( <sup>2</sup> )	1			
83	Land in these enterprises.....acres..		( <sup>2</sup> )				
84	Average arrearage per acre.....dollars..		( <sup>2</sup> )				
85	Reduction of debt by refinancing, prior to 1940.....dollars..						
86	Enterprises reporting.....number..						
87	Land in these enterprises.....acres..						
88	Average reduction per acre.....dollars..						

<sup>1</sup>Included in "Other counties."<sup>2</sup>Where there are less than 3 enterprises reporting, data are included only in State totals.

## CENSUS OF DRAINAGE — NEBRASKA

COUNTY TABLE II.—DRAINAGE ENTERPRISES—WORKS AND CAPITAL INVESTED, 1940, 1930, AND 1920; AND MAINTENANCE AND OPERATION, AND FINANCIAL CONDITION, 1939—Continued

ITEM (See definitions in Introduction)		Scotts Bluff	Sioux <sup>1</sup>	Stanton	Thayer <sup>1</sup>	Washington	Other counties <sup>2</sup>
DRAINAGE WORKS							
1	Drainage enterprises.....number.....1940..	5	1	3	2	5	21
2	Open ditches:						
3	Completed.....miles.....1940..	205.0	29.0	12.0	6 0	45.0	161.1
4	.....1930..	143.0	19.0	5.3	( <sup>3</sup> )	76.1	169.1
5	.....1920..	49.3	5.9		( <sup>3</sup> )	32.6	176.8
6	Additional length authorized.....miles.....1940..						
7	Tile drains:						
8	Completed.....miles.....1940..	9.7	4.4		0.5		2.0
9	.....1930..	10.5	5.0		( <sup>3</sup> )		5.7
10	.....1920..	0.5			( <sup>3</sup> )		0.7
11	Additional length authorized.....miles.....1940..						
12	Levees and dikes:						
13	Completed.....miles.....1940..	4.0		0.5		21.0	17.5
14	.....1930..					11.0	21.0
15	.....1920..					1.5	2.2
16	Additional length authorized.....miles.....1940..						
17	Pumping plants:						
18	Engine capacity.....horsepower.....1940..		70				
19	.....1930..		70				
20	.....1920..						
21	Pump capacity.....gal. per min.....1940..		2,200				
22	.....1930..		2,200				
23	.....1920..						
24	Land served by pumps.....acres.....1940..		300				
25	.....1930..		300				
26	.....1920..						
27	Wells pumped for drainage.....number.....1940..		3				
28	.....1930..		3				
29	.....1920..						
CAPITAL INVESTED							
30	Capital invested to January 1.....dollars.....1940..	1,106,182	193,471	65,647	7,400	266,500	881,153
31	.....1930..	911,060	143,034	127,323	( <sup>3</sup> )	150,630	1,205,883
32	.....1920..	380,000	118,048		( <sup>3</sup> )	203,874	1,071,310
33	Estimated cost when completed.....dollars.....1940..	1,106,182	193,471	65,647	7,400	266,500	881,153
34	.....1930..	921,080	143,034	127,323	( <sup>3</sup> )	150,630	1,222,933
35	.....1920..	560,800	198,058		( <sup>3</sup> )	203,874	1,078,310
36	Average cost per acre when completed.....dollars.....1940..	8.23	6.02	14.15	1.64	11.28	9.06
37	.....1930..	6.47	4.43	27.20	( <sup>3</sup> )	3.99	10.05
38	.....1920..	34.78	45.69		( <sup>3</sup> )	7.89	9.43
39	Invested in and required for completion, 1940:						
40	Enterprises having open ditches only.....dollars..	619,679		65,647	2,400	37,000	486,977
41	Average amount per acre.....dollars..	8.82		14.15	1.26	5.17	8.81
42	Enterprises having open ditches and levees.....dollars..					229,500	335,376
43	Average amount per acre.....dollars..					13.94	8.66
44	Enterprises having tile only.....dollars..						
45	Average amount per acre.....dollars..						
46	Enterprises having tile and levees.....dollars..						
47	Average amount per acre.....dollars..						
48	Enterprises having open ditches and tile.....dollars..	393,503			5,000		58,800
49	Average amount per acre.....dollars..	8.43			1.91		20.77
50	Enterprises having ditches, tile, and levees.....dollars..	99,000					
51	Average amount per acre.....dollars..	31.00					
52	Enterprises operating pumping plants.....dollars..		193,471				
53	Average amount per acre.....dollars..		6.02				
MAINTENANCE AND OPERATION							
54	Cost of maintenance and operation in 1939:						
55	By enterprises operating pumping plants.....dollars..		2,160				
56	Enterprises reporting.....number..		1				
57	Land in these enterprises.....acres..		32,138				
58	Average cost per acre.....dollars..		0.07				
59	By enterprises not operating pumping plants.....dollars..	14,795				( <sup>3</sup> )	5,996
60	Enterprises reporting.....number..	8					3
61	Land in these enterprises.....acres..	134,451				( <sup>3</sup> )	14,150
62	Average cost per acre.....dollars..	0.11				( <sup>3</sup> )	0.42
63	Federal aid in maintenance:						
64	Enterprises reporting.....number..	1					
65	Land in these enterprises.....acres..	( <sup>3</sup> )					
FINANCIAL CONDITION							
66	Drainage taxes collected in 1939.....dollars..	13,492	784	( <sup>3</sup> )		( <sup>3</sup> )	22,575
67	Enterprises reporting.....number..	5	1		1		7
68	Land in these enterprises.....acres..	134,451	32,138	( <sup>3</sup> )		( <sup>3</sup> )	27,387
69	Average amount collected per acre.....dollars..	0.10	0.02	( <sup>3</sup> )		( <sup>3</sup> )	0.82
70	Area delinquent in drainage taxes, Dec. 31, 1939.....acres..	2,940		( <sup>3</sup> )		( <sup>3</sup> )	1,108
71	Enterprises reporting.....number..	4			1		4
72	Land in these enterprises.....acres..	56,045		( <sup>3</sup> )		( <sup>3</sup> )	17,702
73	Portion delinquent in these enterprises.....percent..	5.2		( <sup>3</sup> )		( <sup>3</sup> )	6.2
74	Total indebtedness, Dec. 31, 1939.....dollars..	584,656	130,927	( <sup>3</sup> )		( <sup>3</sup> )	50,000
75	Enterprises reporting.....number..	5	1		1		3
76	Land in these enterprises.....acres..	134,451	32,138	( <sup>3</sup> )		( <sup>3</sup> )	15,307
77	Average indebtedness per acre.....dollars..	4.35	4.07	( <sup>3</sup> )		( <sup>3</sup> )	3.25
78	Indebtedness in arrears, Dec. 31, 1939.....dollars..	( <sup>3</sup> )					
79	Enterprises reporting.....number..	1					
80	Land in these enterprises.....acres..	( <sup>3</sup> )					
81	Average arrearage per acre.....dollars..	( <sup>3</sup> )					
82	Reduction of debt by refinancing, prior to 1940.....dollars..						
83	Enterprises reporting.....number..						
84	Land in these enterprises.....acres..						
85	Average reduction per acre.....dollars..						

<sup>1</sup>For counties having less than 3 enterprises, statistics are shown only by written permission of each enterprise affected. <sup>2</sup>Includes Cedar, Dakota, Franklin, Frontier, Hamilton, Johnson, Kearney, Merrick, Otoe, Pawnee, Seward, Thurston, Wayne, and York Counties in 1940; Antelope, Cass, Cedar, Dakota, Fillmore, Franklin, Frontier, Hamilton, Seward, Thayer, Wayne, and York Counties in 1930; and Antelope, Cass, Cherry, Dakota, Dixon, Fillmore, Knox, Madison, Morrill, Nance, Platte, Polk, Seward, Thayer, Wayne, and York Counties in 1920. <sup>3</sup>Included in "Other counties." <sup>4</sup>Data included in lines 46 and 47 are not included in data in lines 34 to 45. <sup>5</sup>Where there are less than 3 enterprises reporting, data are included only in State totals, except as stated in footnote 1.