

South Dakota State University

Open PRAIRIE: Open Public Research Access Institutional Repository and Information Exchange

SDSU Extension Circulars

SDSU Extension

1-1940

Rural Water Supplies in South Dakota : Kingsbury County

Walter V. Searigh

Cooperative Extension Service, South Dakota State College

Elmer E. Meleen

Cooperative Extension Service, South Dakota State College

Follow this and additional works at: https://openprairie.sdstate.edu/extension_circ

Recommended Citation

Searigh, Walter V. and Meleen, Elmer E., "Rural Water Supplies in South Dakota : Kingsbury County" (1940). *SDSU Extension Circulars*. 820.

https://openprairie.sdstate.edu/extension_circ/820

This Article is brought to you for free and open access by the SDSU Extension at Open PRAIRIE: Open Public Research Access Institutional Repository and Information Exchange. It has been accepted for inclusion in SDSU Extension Circulars by an authorized administrator of Open PRAIRIE: Open Public Research Access Institutional Repository and Information Exchange. For more information, please contact michael.biondo@sdstate.edu.

Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.



For current policies and practices, contact SDSU Extension

Website: extension.sdstate.edu

Phone: 605-688-4792

Email: sdsu.extension@sdstate.edu

SDSU Extension is an equal opportunity provider and employer in accordance with the nondiscrimination policies of South Dakota State University, the South Dakota Board of Regents and the United States Department of Agriculture.

LIBRARY OF THE
OFFICE OF EXPERIMENT STATIONS
OCT 20 1941
EXTENSION SERVICE FILE

Rural Water Supplies in South Dakota

Kingsbury County

January, 1940
Special Extension Circular
Number 47

Extension Service
South Dakota State College
Brookings, S. D.

630.732
So 87.18
No. 47
pt. 38

OCT 7 1941

RURAL WATER SUPPLIES
IN
SOUTH DAKOTA
KINGSBURY COUNTY

BY
WALTER V. SEARIGHT
AND
ELMER E. MELEEN

PREPARED BY THE WORK PROJECTS ADMINISTRATION
AS A REPORT ON THE WELL SURVEY CONDUCTED
AS WORK PROJECTS ADMINISTRATION OFFICIAL PROJ-
ECT 665-74-3-126; SPONSORED BY THE EXTENSION
SERVICE AND THE EXPERIMENT STATION SOUTH DAK-
OTA STATE COLLEGE, IN COOPERATION WITH THE
STATE GEOLOGICAL SURVEY.

JANUARY 1940

FOREWORD

This study was first proposed as a project of the Mineral Resources Committee of the State Planning Board under the direction of the State Geological survey and undertaken as a Work Projects Administration project sponsored by the State Planning Board, and was continued under the Planning Board until that body was abolished July 1, 1939 by the State Legislature. At that time sponsorship was transferred to the South Dakota Agricultural Experiment Station and the State College Extension Service, South Dakota State College. Field work was begun October 1, 1938 and was practically completed by February 15, 1939. Workers were assigned in the several counties under the supervision and direction of the County Agricultural Agents and Field Supervisors who were employed by the Work Projects Administration. Questionnaires were mailed out from the offices of the County Agents and were checked and tabulated in these offices. The material was then forwarded to the central office for final tabulation and analysis under the direction of Elmer E. Meleen and Walter V. Searight.

Particular credit should be given to the individual County Agricultural Agents in the various counties of the state who arranged the contacts with the individuals from whom these data were collected, furnished a large portion of the necessary supplies for field work, and directed the workers engaged in collecting field data. Without this assistance in gathering basic data, this study could not have been conducted. The value of the report is therefore in direct proportion to the accuracy and adequacy of these basic data.

INTRODUCTION

PURPOSE

This report on rural water supplies of South Dakota has been prepared to present data recently made available on the types and the sources of water supply, exclusive of stream, lake and dam waters. The information presented is of importance to evaluate present supplies. It should also prove useful as a basis for further development of supplies where they are needed or become necessary. Further, it is hoped that the facts presented may prove of value in any program of water conservation.

SOURCES OF INFORMATION

Questionnaires were sent to all, or essentially all of the farmers of the state, asking for complete data on farm wells and supplementary supplies, with the exception of the supplies above noted. A most gratifying number returned questionnaires, actually 60.1% average for the entire state. The coverage is probably more than 60.1% since it is likely that many unanswered inquiries were those to farmers who were without wells, the type of supply emphasized in the questionnaires. The data thus obtained were supplemented with information contained in the files of the State Geological Survey, the office of the State Engineer, and reports of the United States Geological Survey. This supplementary information, together with that contained in questionnaires was used in making the well location maps included in this report.

PROCEDURE

All data from the questionnaires were tabulated and analyzed statistically by counties, which were made the areal units of study. Within the county,

Acknowledgments - The authors wish especially to acknowledge and commend the conscientious assistance of Mr. E. L. Woodburn, Supervisor, for careful and painstaking supervision of statistical work. The authors also desire to express appreciation for the constant interest and support of this project by Mr. Bob Butts, Director of Research and Records Projects, South Dakota Work Projects Administration.

supplies were allocated as to kind on county maps. Since shallow waters are the most important source of rural supply in South Dakota, wells 200 feet deep and less were plotted on county maps from which maps indicating depths of wells by 50 foot intervals were made. Springs, shown on the well location map, and cisterns were also tabulated as important supplementary supplies, although the latter do not appear on maps or in the tables in this report.

PRESENTATION OF DATA

For convenience and utility, this report has been divided into sections each covering one county, and each county section bound separately. Each county report contains the following material wherever possible.

1. Well Location Map: This map shows the location of all wells and springs within the county, so far as information is now available. These have been plotted in such a manner that artesian and shallow wells can be differentiated readily by the reader. Artesian wells, where they occur, are divided into flowing and pumped. Artesian wells showing decreased flow and those reported as controlled are also indicated by symbols. Shallow wells are differentiated as adequate and inadequate, and dry holes as of 1938 are located. Wells from other sources of information other than questionnaires collected by this survey are shown in blue.

2. Shallow Well Map: This map shows, as accurately as possible, in 50 foot intervals, the depths at which shallow supplies are commonly obtained. Where shallow wells are abundant, as indicated by the well location map, the map is as accurate as the information on which it is based, but where such wells are sparsely distributed errors are likely to occur. In many places reports of shallow wells are absent in which case the area has been left blank.

3. Table of Pumped Wells, from 0 to 200 feet (inclusive) in depth: This table shows minimum, maximum, and average depths of wells within the county, as reported in the questionnaires. Tabulations are by townships. The general character of the water, hard, medium, and soft, as reported by farm-

ers, and the number of wells suitable or unsuitable for drinking are shown in this table. Further, the adequacy of supply, as indicated on the questionnaires, and use for irrigation are shown here.

4. Table of Wells greater in depth than 200 feet: Minimum, maximum, and average depths are indicated. Character, reported as hard, medium or soft is tabulated. Adequacy and use for irrigation are shown as in the preceding table.

5. Table of Flowing Wells: Minimum, maximum, and average depths are shown together with general character and use for irrigation. The volume of flow as reported, and the number of flowing wells reported as equipped with control valves is also included in this table.

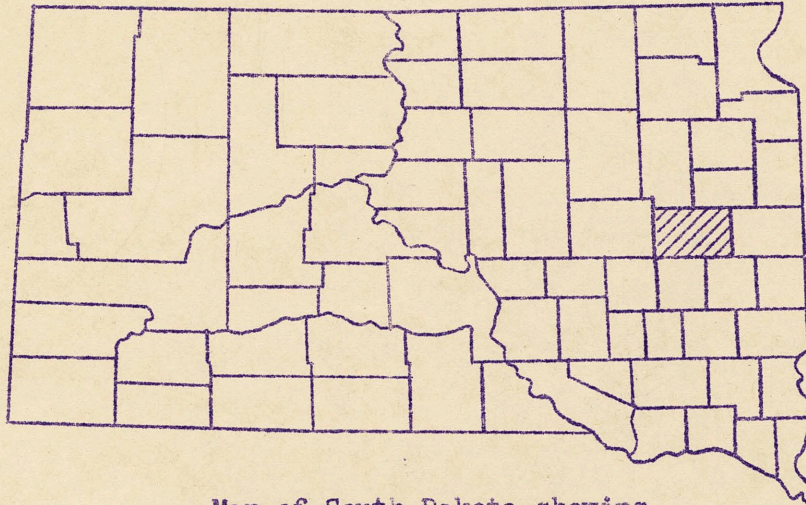
SUMMARY OF STATE SUPPLIES

In the entire state, a total of 48,479 wells were reported in response to questionnaires, returned by 60.1% of the recipients. If those who did not respond have a number of wells in proportion to those who reported, there are approximately 80,000 wells in South Dakota. There are possibly many less than this number since several counties with large numbers of wells returned over 75% of the questionnaires and since many farmers without wells did not reply because they were not requested to do so in the formal questionnaire. Of the wells reported, 16.2% are artesian, including both pumped and flowing wells. Shallow wells are 83.8% of the wells reported. Wells from shallow sources are thus obviously by far the most important means for obtaining water in rural South Dakota.

Important supplementary supplies are cisterns and springs. Roughly, there is more than one cistern to each 40 wells. Many springs are reported, however, in counties with very few wells, so that in some localities they are of considerable importance.

KINGSBURY COUNTY

Kingsbury county lies in east central South Dakota. It is bounded on the north by Hamlin county, on the east by Brookings county, on the south by Lake and Miner counties, and on the west by Beadle and Clark counties.



Map of South Dakota showing location of Kingsbury county.

The greater portion of the county is in farms, more than 90 per cent of the area being farmed. The county covers approximately 520,960 acres, with 1,625 farms or 470,449 acres in farms. Woodland pasture acres total 2,492 plowable pasture acres 39,755, and all other pasture acres 30,977. All other land in farm acres total 23,355 acres with total crop land 372,122 acres. Hay, oats, corn, barley and wheat are the important crops, being produced in the order named. Livestock is important, cattle, hogs, and sheep being produced in the order named. Dairy products are also very important.*

The importance of livestock, hogs and dairy cattle in particular, necessitate generally distributed supplies of water in the county. Supplies required are not great, but adequate and constant supplies of suitable water at relatively low cost are necessary to operate farms of these characteristics profitably.

On the well location map, all flowing wells and all deep pumped wells obtaining water from the Dakota-Lakota sandstones are shown in black as artes-

*South Dakota Agricultural Statistics, Annual Report, 1937

ian wells. All other wells are shown in red and are called shallow wells regardless of depth. On all other maps and in the tables the term shallow well applies only to wells 200 feet or less in depth, unless otherwise stated. The wells deeper than 200 feet are treated as deep wells and include all artesian wells except flowing wells 200 feet or less in depth. Questionnaires returned for Kingsbury county represent replies from 79 per cent of the recipients and report a total of 1103 wells.

DEPTH AND DISTRIBUTION

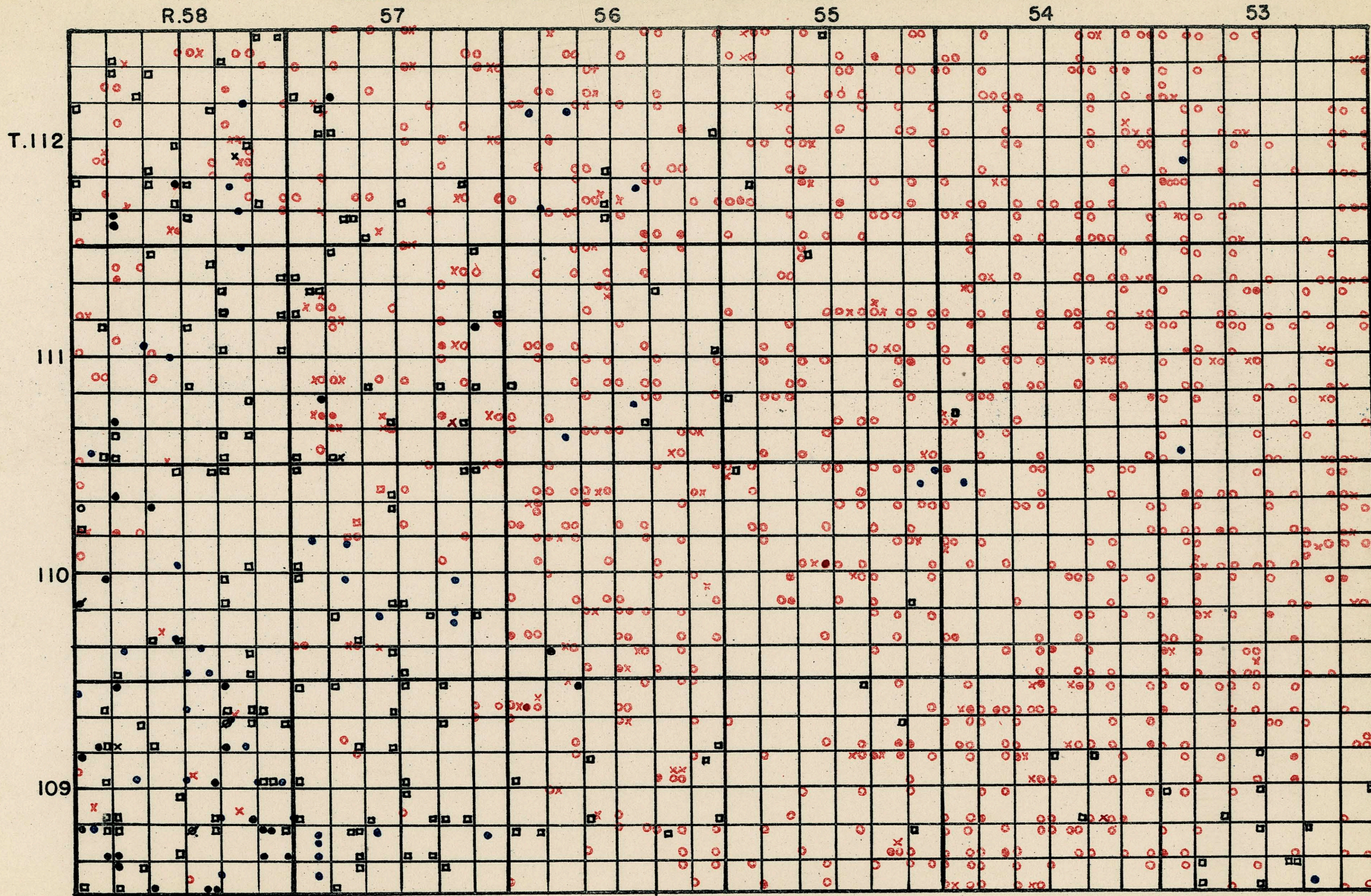
The wells of Kingsbury county are evenly distributed over the county (see well location map). Of the 24 townships, 23 averaged more than one well per square mile according to reports. One township, T.109N., R.54W., averaged two wells to each square mile. Somewhat less than half of the wells reported, were shallow pumped wells. The greater number of wells reported occurs in the northern and central portion of the county.

Many shallow wells are used in Kingsbury county, in fact nearly half, 45 per cent, or 476 were reported to be shallow. More than half of these, 57 per cent, were reported to be less than 100 feet deep. Forty four per cent of the shallow wells were reported to be less than 50 feet in depth; 13 per cent between the 50 and 100 foot depth, and 12.4 per cent between the 100 and 150 foot depth. From 150 to and including 200 feet, 30.6 per cent were reported. One township, T.109N., R.53W., reported only one shallow pumped well, and the greater number was found in T.110N., R.56W., which reported 45. The relative number of wells reported between 150 and 200 feet is considerably greater than that in much of the surrounding area.

The shallow well map outlines the areas of shallow wells in 50 foot depth intervals and shows areas in which wells of the depths indicated may commonly be expected.

Accuracy varies in proportion to the number of wells reported in the immediate vicinity and on constancy of the ground water table.

LOCATION OF ARTESIAN AND SHALLOW WELLS IN KINGSBURY COUNTY



- | | |
|---|--|
| <p>ARTESIAN WELLS</p> <ul style="list-style-type: none"> O FLOWING WELLS—STEADY OR INCREASING ● FLOWING WELLS—DECREASED FLOW X CEASED FLOWING □ PUMPED / CONTROLLED WELLS | <p>SHALLOW WELLS</p> <ul style="list-style-type: none"> ○ ADEQUATE SUPPLY ● INADEQUATE SUPPLY X DRY WELLS □ SPRINGS ● WELLS FROM OTHER SOURCES |
|---|--|

The percentage of the total wells of Kingsbury county which are shallow is shown by townships in the table below. This tabulation shows 45 per cent of the total wells in the county to be shallow flowing and shallow pumped wells. Of this number only six wells are shallow flowing. In T.111N., R.57W. two shallow flowing wells were reported and one each was reported in T.110N., R.56W., T.109N., R.56W., T.112N., R.57W., and T.112N., R.58W. The remaining townships reported only shallow pumped wells.

Deep wells: Deep wells, wells more than 200 feet deep, are very important sources of water supply in Kingsbury county, more than half of the wells reported, 55 per cent, being deep. Of the total of 1103 wells reported for the county, 593 or 54 per cent were deep pumped wells (see table 2), and 34 were flowing wells. Of this number, six were shallow flowing wells, leaving 28 wells deep flowing, over 200 feet in depth. Deep pumped and deep flowing wells reported for the county totaled 611 wells. The following table shows the location of these wells in the townships where they are from 16 to 98 per cent of the total number of wells in these townships. Minimum and maximum depths are also shown:

Twp.	Rge.	Number of Wells	Per cent of Total Wells	Depths	
				Minimum	Maximum
109N	53W	35	66.	208	950
109	54	57	74.	210	1162
109	55	17	51.5	207	1068
109	56	18	44.	225	1300
109	57	24	80.	800	1100
109	58	46	98.	600	1200
110	53	39	60.	203	610
110	54	29	61.7	220	700
110	55	28	65.1	210	1200
110	56	9	16.3	220	350
110	57	15	60.	800	1200
110	58	17	74.	300	1200
111	53	23	44.2	208	480
111	54	36	69.3	212	1184
111	55	30	75.	220	1700
111	56	9	20.	245	1400
111	57	17	40.	273	1356
111	58	19	63.3	864	1250
112	53	27	51.	218	400
112	54	28	46.	234	450
112	55	34	64.	250	1348
112	56	23	55.	280	1290
112	57	9	25.7	1100	1300
112	58	22	47.8	100	1370

KINGSBURY COUNTY



SHALLOW WELLS (0-200 FT)

DEPTHS AT WHICH SUPPLIES ARE COMMONLY OBTAINED

0-50 FT

50-100 FT

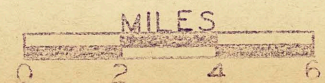
100-150 FT

150-200 FT

PREPARED BY
WORK PROJECTS ADMINISTRATION
OP 665-74-3-126 WP 3636



-LAKES



This tabulation indicates that in the eastern half of the county, these wells are an important source of supply, as well as in the western half. The deep flowing wells occur in T.109N., R.58W., T.110N., R.58W., and T.112N., R.58W. The shallowest well is 208 feet deep and the deepest well 1380 feet deep. The volume of flow was not reported for the deep flowing wells. Three were reported equipped with control valves.

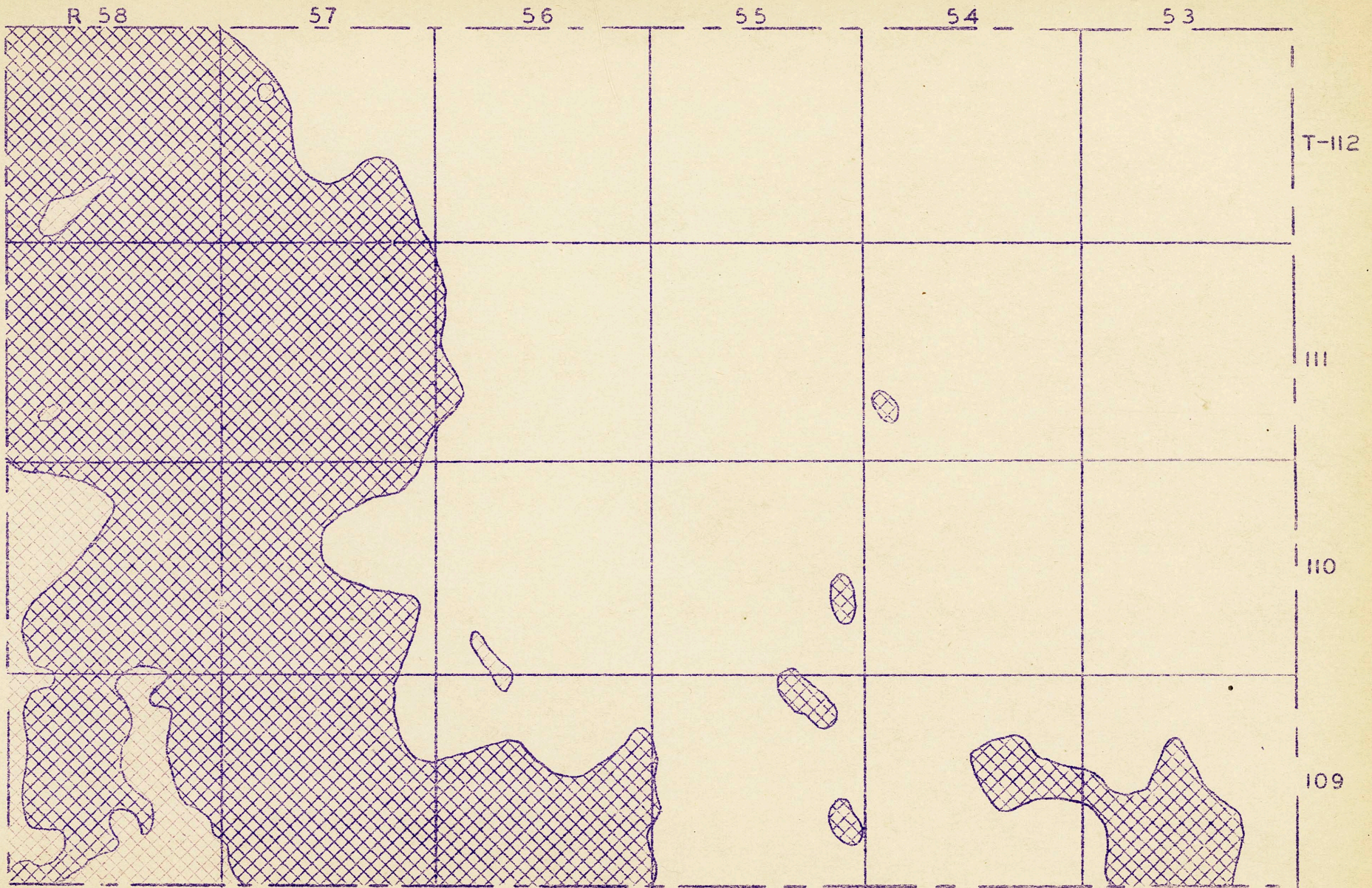
CHARACTER OF WATERS

The character of rural well waters of Kingsbury county has been determined by questionnaires filled out by users. Those receiving the questionnaires were asked to indicate whether they considered their supply to be hard, medium, or soft, and whether or not the water was satisfactory for drinking. Considerable variation in character of waters is indicated from this data. Shallow waters are mostly hard, whereas those from deeper wells penetrate soft water sources in many cases. Information was returned for 419 of the 476 shallow pumped wells on this question (see table 1). Of these, 61.9 per cent were reported as hard in character, 35.3 per cent were reported as medium in hardness and 2.8 per cent were reported soft. Thus, 97.2 per cent of the shallow rural water supplies in the county were considered hard or medium in hardness. Of the shallow flowing wells reported, all were found to be hard or medium hard in character (see table 3). There is a pronounced tendency for the shallow wells to be hard.

Although hard, most of the shallow wells produced suitable drinking water according to the replies. Fifty three, or 11.2 per cent of the total shallow pumped wells reported were considered unsuitable for drinking purposes. There may be numerous reasons for unsuitability, possibly including surface contamination. Since true chemical content of the supplies is not known, injurious ingredients may possibly be present. Approximately 9 per cent of reported wells were reported not satisfactory for drinking.

The character of the water supplied by deep pumped wells was reported

ARTESIAN AREAS 1938



KINGSBURY COUNTY

 FLOWING WELLS  PUMPED WELLS

PREPARED BY

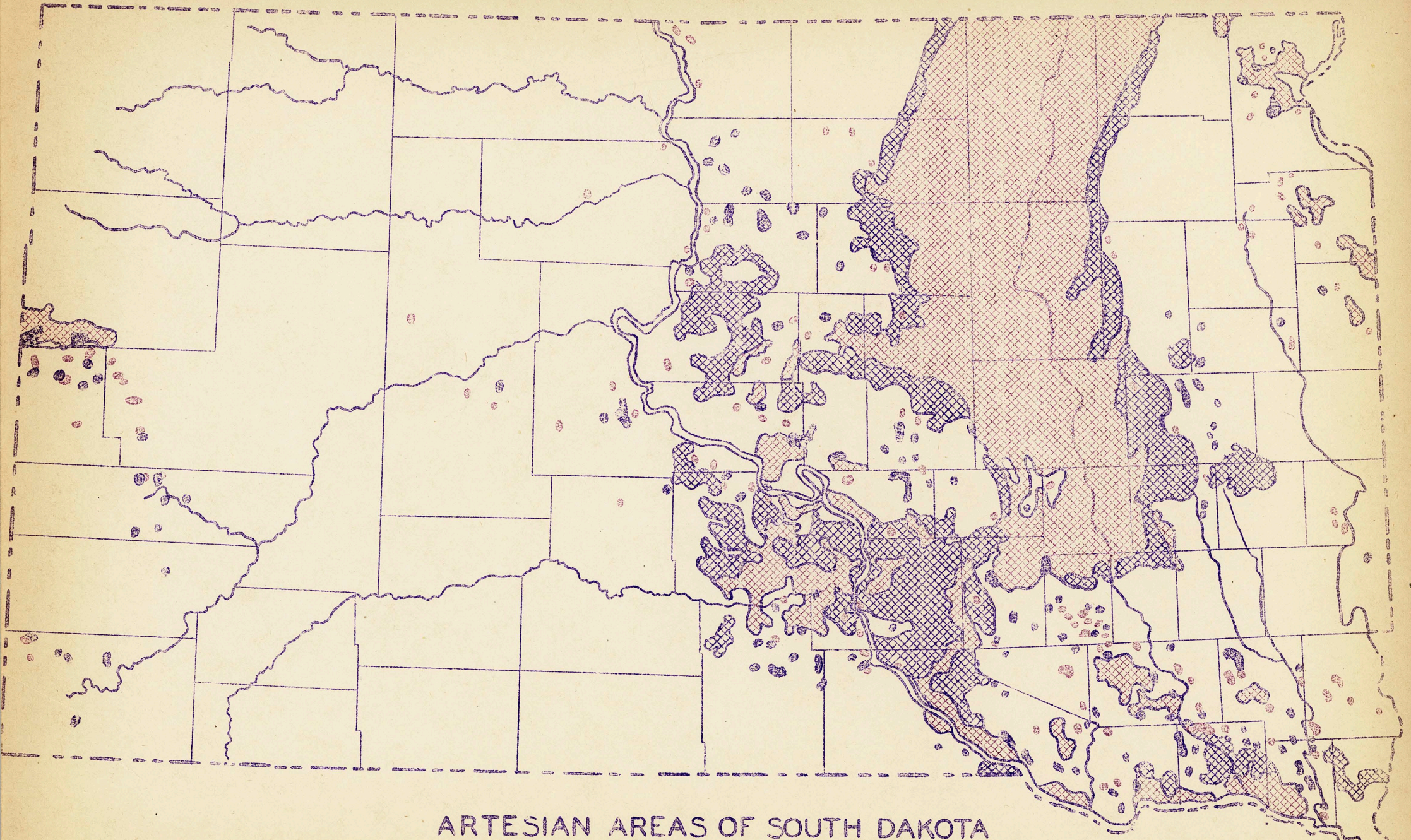
WORK PROJECTS ADMINISTRATION

O.P. 665-74-3-126

W.P. 3636





MILES





ARTESIAN AREAS OF SOUTH DAKOTA
1938

PREPARED BY
WORK PROJECTS ADMINISTRATION
OP 665-74-3-126
WP 3636

  FLOWING WELLS
  PUMPED ARTESIAN WELLS

for 561 wells (see table 2). Of this number, 51.5 per cent were reported to be hard, 18.7 per cent were moderately hard. Thus, 70.2 per cent of the water of deep pumped wells was reported moderately to definitely hard. The remainder, 29.8 per cent, was reported to be soft water. The percentage of hard or moderately hard water in deep pumped wells is not as great as that in shallow water supplies, but is nevertheless greater than that of soft water in the deep pumped wells. (See tables 2 and 3).

Most of the water from deep flowing wells appears to be soft, since 27 of 28 wells were reported to produce soft water. Twenty eight per cent of the deep flowing wells were reported unsuitable for drinking purposes. Since these wells produce water from the Dakota-Lakota sandstones, water from this source apparently produces soft water, which, in many cases, contains chemical ingredients objectionable for drinking purposes.

ADEQUACY OF SUPPLY

Rural water supplies from wells are generally adequate for current needs as indicated by responses to questionnaires. These needs vary and reports possibly cannot be interpreted as assuring an adequate supply during dry cycles in this and surrounding land areas.

Shallow pumped supplies, where they were used, seem to be generally considered adequate. Of the total wells reported, 53, or 11 per cent, were considered inadequate (see table 1). Reports of inadequacy are generally well distributed over the county with the exception of a few townships such as T.109 N., in which there is the high percentage of inadequacy, and probably indicates a very real shortage of shallow water supplies. Forty one shallow wells were used to irrigate a total of $4 \frac{1}{8}$ acres in plots varying in size from $\frac{1}{8}$ to $\frac{3}{4}$ acres.

Fifty three (nine per cent) deep pumped wells were reported as inadequate. The inadequate wells are distributed over the same area as other deep

wells. The greatest percentage of inadequacy occurs in T.111N.

The water supplies by flowing wells in the county were considered generally adequate. Eight of the 34 flowing wells were reported inadequate. (See table 3.) They are found in the area of most deep wells.

IRRIGATION

Well waters are used in Kingsbury county to irrigate relatively small plots such as farm gardens. Shallow wells, 40 in number, were used to irrigate $4 \frac{1}{8}$ acres in plots varying in size from $\frac{1}{8}$ to $\frac{3}{4}$ acres and 31 deep wells were used to irrigate approximately $3 \frac{5}{8}$ acres varying in size between $\frac{1}{8}$ and $1 \frac{3}{8}$ acres. Thirty one deep pumped wells were used to irrigate approximately $3 \frac{5}{8}$ acres of land in plots $\frac{1}{8}$ to $1 \frac{3}{8}$ acres in size. None of the flowing wells were used for irrigation.

SUPPLEMENTARY WATER SUPPLIES

Springs and cisterns are supplementary water supplies used in Kingsbury county. Springs appear to be of relatively little importance, but cisterns are very important.

Only three springs were reported in the county. Of these, located in T.110N., R.57W., two were reported moderately hard, and two were used for stock and domestic use; one was used for domestic purposes only. All were considered adequate.

In an area such as Kingsbury county, where much of the water supply derived from wells is hard or even moderately hard, cisterns are very important sources of supplementary supply.

Obviously, cisterns are used extensively here, 712 being reported in the county. They are used in part to supplement well supplies for drinking purposes where potable water supplies are not available, but they are very generally used for laundry purposes as a substitute for hard water from other sources. In

relation to total number of wells reported by townships, there appeared to be one cistern for every two wells in most of the area. Exceptions were noted in the southwestern section of the county, or T.110N., R.57W., and 58W., where there were 15 cisterns to 48 wells. A total of 645 were supplied by rain and 177 were filled by water from other sources. It will be noted that cisterns occupy a very important place in the use of water in those localities where the water is hard for laundry purposes.

KINGSBURY COUNTY

Table 1.

DATA ON PUMPED WELLS FROM 0 TO 200 FEET (INCL.) IN DEPTH

LOCATION		Number of Wells	DEPTH OF WELLS			CHARACTER OF WATER					ADEQUACY OF SUPPLY			
Twp.	Rge.		Min.	Max.	Ave.	Hard	Med.	Soft	Corrode Casing	Unsuitable for Drinking	Adequate	Inadequate	Number used for Irrigation	Approximate Acres Irrigated
109	53	18	14	200	106	13	5	-	3	5	17	1	-	-
109	54	20	11	200	126	11	7	1	2	5	17	3	-	-
109	55	16	8	200	62	9	4	-	2	3	15	1	1	1/8
109	56	22	10	180	82	15	5	-	1	4	21	1	1	-
109	57	6	21	200	76	3	-	-	1	-	6	-	-	-
109	58	1	-	-	40	1	-	-	-	-	1	-	-	-
110	53	26	12	200	116	18	7	-	5	7	23	3	3	-
110	54	18	18	200	156	14	2	-	4	7	16	2	1	1/4
110	55	15	13	200	84	7	4	-	5	4	12	3	1	1/8
110	56	45	10	200	73	16	20	4	3	6	38	7	5	5/8
110	57	10	10	150	66	9	1	-	1	2	8	2	-	-
110	58	6	16	40	30	5	1	-	-	2	3	3	-	-
111	53	29	8	196	115	16	8	-	5	5	27	2	2	-
111	54	16	18	200	129	8	4	1	2	6	16	-	1	1/8
111	55	10	20	200	98	4	3	-	1	2	10	-	-	-
111	56	36	8	115	25	9	23	1	1	-	34	2	5	1/2
111	57	24	10	180	91	11	10	2	5	6	18	6	1	-
111	58	11	12	86	44	8	-	1	2	1	10	1	-	-
112	53	26	9	200	121	14	8	-	6	4	24	2	-	-
112	54	34	12	200	87	13	15	-	1	4	31	3	3	1/4
112	55	19	139	200	163	15	3	1	3	5	16	3	6	3/4
112	56	20	9	200	98	11	6	-	1	2	18	2	4	1/2
112	57	25	5	193	71	12	10	1	4	3	23	2	6	5/8
112	58	23	15	115	81	17	2	-	4	12	19	4	1	1/4
Total		476				259	148	12	62	95	423	53	41	4 1/8

KINGSBURY COUNTY

Table 2.

DATA ON PUMPED WELLS OVER 200 FEET IN DEPTH

LOCATION		Number of Wells	DEPTH OF WELLS			CHARACTER OF WATER					ADEQUACY OF SUPPLY			
Twp.	Rge.		Min.	Max.	Ave.	Hard	Med.	Soft	Corrode Casing	Unsuitable for Drinking	Adequate	Inadequate	Number used for Irrigation	Approximate Acres Irrigated
109	53	35	208	950	452	18	7	7	3	4	31	4	1	-
109	54	57	210	1162	380	36	14	3	11	12	51	6	-	-
109	55	17	207	1086	515	10	2	4	6	3	12	5	3	1/8
109	56	18	225	1300	741	5	1	11	5	2	16	2	-	-
109	57	24	800	1100	1007	-	3	19	2	2	24	-	1	1/8
109	58	26	660	1100	879	-	-	24	6	1	24	2	2	1/2
110	53	39	203	610	360	30	8	-	8	9	34	5	1	1/4
110	54	29	220	700	349	22	6	1	6	8	28	1	1	-
110	55	28	210	1200	423	16	8	3	5	-	28	-	-	-
110	56	9	220	350	262	9	-	-	1	2	8	1	-	-
110	57	15	800	1200	1017	-	-	15	4	-	15	-	-	-
110	58	12	800	1000	924	-	-	12	1	-	12	-	2	1/4
111	53	33	208	480	314	26	5	-	9	7	31	2	4	1/4
111	54	36	212	1180	361	17	15	3	8	8	32	4	6	1 3/8
111	55	30	220	1700	370	21	7	2	6	6	29	1	2	-
111	56	9	245	1400	726	5	-	4	3	3	8	1	1	1/8
111	57	17	273	1356	1066	3	1	11	3	2	13	4	1	-
111	58	18	864	1250	1035	-	3	15	5	1	16	2	1	1/8
112	53	27	218	400	307	15	6	1	1	-	25	2	-	-
112	54	28	234	450	348	18	10	-	1	1	26	2	1	1/4
112	55	34	250	1348	425	24	3	3	5	9	33	1	4	1/4
112	56	23	280	1290	505	13	5	4	7	9	19	4	-	-
112	57	9	1100	1300	1178	-	1	8	3	2	7	2	-	-
112	58	20	900	1370	1080	1	-	17	2	2	18	2	-	-
Total		593				289	105	167	111	93	540	53	31	3 5/8

KINGSBURY COUNTY
Table 3.
DATA ON FLOWING WELLS

LOCATION		Number of Wells	DEPTH OF WELLS			CHARACTER OF WATER					ADEQUACY OF SUPPLY					
Twp.	Rge		Min.	Max.	Ave.	Hard	Med.	Soft	Corrode Casing	Unsuitable for Drinking	Adequate	Inadequate	Number used for Irrigation	Approx. Acres Irrigated	Ave. Gallon Per Min	Number Controlled
109	56	1	-	-	130	-	1	-	-	-	1	-	1	1/8	-	-
109	58	20	600	1200	880	-	-	19	1	1	15	5	-	-	-	2
110	56	1	-	-	90	1	-	-	-	-	1	-	-	-	-	-
110	58	5	300	1200	845	-	-	5	-	-	4	1	-	-	3	1
111	57	2	-	-	80	1	1	-	-	-	2	-	1	1/8	-	-
111	58	1	-	-	1000	-	-	1	-	-	1	-	-	-	-	-
112	57	1	-	-	20	-	1	-	1	-	1	-	-	-	-	-
112	58	3	100	986	684	1	-	2	-	-	1	2	-	-	-	-
Total		34				3	3	27	2	1	26	8	2	1/4	-	3

Note: No wells reported for this group from the following townships and ranges: T.109N., R.53, 54, 55, 57W - T.110N., R.53, 54, 55, 57W - T.111N., R.53, 54, 55, 56W - T.112N., R.53, 54, 55, 56W

Kingsbury County Well Notes

The following are pertinent remarks quoted from questionnaires returned by farmers and are included opinions of the water situation as expressed by the individual farmers and must be so applied.

- T.109N., R.53W.
NE 1/4 Sec. 5 190 feet:
"Four inch casing in original well rusted out so tried to drill in two different locations only to lose tools and etc at about 400 ft. due to quicksand, which made it necessary to sink 2 inch casing in original well."
- T.109N., R.54W.
SE 1/4 Sec. 10 300 feet:
"Dug 2 other wells, one 400 ft. and one 125 ft. Both were no good; this one is fair but very bothersome with sand points, use two, one upon the other, and must renew every three years."
- T.109N., R.54W.
NW 1/4 Sec. 16 290 feet:
"The man who put this well down seemed to have difficulty finding water, but we washed the well out this summer and the men who did the work said there was plenty of water but that the casing was poor and thought maybe there were holes in it as it pumped some mud after it was washed out. The water seems clear now, but the stream of water is not very big when it pumps."
- T.109N., R.55W.
NE 1/4 Sec. 27 690 feet:
"This well has an unlimited amount of water. I am not sure when this well was drilled. The casing is in fair shape and we put new pipes in it last fall."
- T.109N., R.56W.
NE 1/4 Sec. 25 255 feet:
"Have two cisterns, one at house for rain water and one near well for supply tank. The soft water is piped into the house with hot and cold running water and both."
- T.109N., R.56W.
SW 1/4 Sec. 31 80 feet:
"Could not get the curb down as there was quick sand."
- T.110N., R.53W.
NW 1/4 Sec. 1 40 feet:
"This well does not supply sufficient water. We haul city water in our cistern for general purposes, as the well gives only a pail or two at a time."
- T.110N., R.63W.
SW 1/4 Sec. 20 468 feet:
"The difficulty in getting water here were because the drillers years ago were not equipped to go down beyond 400 ft."
- T.110N., R.53W.
Sec. 31 135 feet:
"In 1929 we had a new well put down a depth of 400 ft. It pumped for 4 days and then quit and we had to have a new one. It has given water at all times by installing new screens every three years, but the vein is poor as it will only supply water for a small amount of livestock."

- T.110N., R.54W.
NW 1/4 Sec. 23
385 feet:
"This is the third well at this depth that has been drilled since 1898. Also one at 220 feet. The trouble has been with corrosion of the screen and casing."
- T.110N., R.55W.
NE 1/4 Sec. 26
575 feet:
"My well has never been cleaned or recased, seems to pump as usual. Water not as soft as rain water but needs no cleansing for laundry purposes."
- T.110N., R.56W.
NW 1/4 Sec. 17
24 feet:
"We have had considerable trouble keeping out the extra fine sand, otherwise I believe this well could not be pumped dry."
- T.110N., R.56W.
SW 1/4 Sec. 19
Depth not given:
"This well on the southwest of 19 is a shallow well. I found it in 1884 and its been furnishing plenty of water ever since. It is 15 ft. deep and a wooden curb 3 foot square of plank."
- T.110N., R.56W.
NW 1/4 Sec. 27
122 feet:
"The sand vein which supplies the water in this well is only about 10 inches and is very fine. We tried sand points in this well but they would only work for about 2 or 3 months and would become corroded, that is why I have a six inch well without any point. I have two shallow wells on this farm, one about 14 and the other about 16 feet which have some water in them now."
- T.110N., R.57W.
NW 1/4 Sec. 19
1000 feet:
"There have been many shallow wells dug but were not a success as far as amount and condition of water was concerned. An artesian well was drilled but was not good for irrigation because a white sediment forms on the ground and spoils it."
- T.110N., R.58W.
NW 1/4 Sec. 17
36 feet:
"This well when windmill is running in moderate wind for 20 minutes or so will pump well so low that you can hear the pipes sucking water, but if mill is shut off for 10 or 15 minutes it will again fill to its average height. We are using about 450 to 500 gallons per day for livestock, hogs, and poultry. We do not use this water for drinking or laundry as its much to hard and also does not agree with everybodys stomach. We haul out water for drinking and laundry from places having artesian wells."
- T.111N., R.53W.
NE 1/4 Sec. 20
196 feet:
"Alkali"
- T.111N., R.53W.
SW 1/4 Sec. 22
186 feet:
"We dug lots of bored holes 50 or 60 ft. deep but could not find any water, so we drilled this one. It is 186 ft. deep and 46 years old also have the second windmill and cannot see but what it is as good as ever. Of course we had to clean it and the water is hard but is very good to drink."

- T.111N., R.56W.
SE 1/4 Sec. 4
20 feet:
"A creek runs through the farm. The soil east of said creek is clay and water is not to be found, west the soil is sand and water is abundant."
- T.111N., R.56W.
NW 1/4 Sec. 9
16 feet:
"Soil on farm is all clay and that on section 9 where well is located is sand. No water has ever been located on farm except on extreme south west corner in small strip of sand sub soil."
- T.111N., R.56W.
NW 1/4 Sec. 15
8 feet:
"Well on this farm is 100 rods from buildings. Up at the buildings they can get nothing but blue clay."
- T.111N., R.57W.
NW 1/4 Sec. 11
18 feet:
"I have three wells on this farm, one at the house, one at the barn with windmill and one in the hog yard. All wells are the same depth. In 1935-36 the water level dropped two feet. We had to go down deeper and in the spring of 37 it came back up again."
- T.111N., R.57W.
SW 1/4 Sec. 22
22 feet:
"The well is a spring ogered 22 ft. The last 8 feet was gravel. The water from this well is as good as the best ever drank and is easy to pump."
- T.111N., R.58W.
SE 1/4 Sec. 19
45 feet:
"Have bored 12 wells on farm before finding well with good supply of water."
- T.111N., R.58W.
SE 1/4 Sec. 31
897 feet:
"I can't tell the date it quit flowing. Casing good as far as I know. Water is clear most of the time but gets rather cloudy at times."
- T.112N., R.54W.
SW 1/4 Sec. 9
12 feet:
"This well is spring water out of the side of a hill, but about 5 ft. below the surface, runs in as fast as you can pump it out. There seems to be more water pressure this year than last."
- T.112N., R.55W.
SW 1/4 Sec. 3
158 feet:
"This is not a good dependable well for the average farm. There is only about two ft. rise of water and its fine sand I cannot use a sand point on account of the shallow use of water. So I make my own arrangements in place of sand point."
- T.112N., R.55W.
NE 1/4 Sec. 17
370 feet:
"This drilled well will need a new screen soon. The water is rusty at times now."
- T.112N., R.56W.
SW 1/4 Sec. 25
310 feet:
"I can get a well about in the center of the farm at a depth of 12 ft. with good soft water. With normal rainfall it will supply about 20 barrels a day."

EXTENSION SERVICE
SOUTH DAKOTA STATE COLLEGE
of Agriculture and Mechanic Arts
Brookings, South Dakota

Published and distributed under Acts of
Congress, May 8 and June 30, 1914, by the
Agricultural Extension Service of the South
Dakota State College of Agriculture and
Mechanic Arts, Brookings, A. M. Eberle,
Director, U. S. Department of
Agriculture cooperating.