

EVALUATION OF GROUND-WATER RESOURCES  
EASTERN SOUTH DAKOTA AND UPPER BIG SIOUX RIVER  
SOUTH DAKOTA AND IOWA

TASK 6: AVERAGE ANNUAL WATER USE BY AQUIFER

DRAFT FINAL REPORT  
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- APPENDIX C - Ground water use by aquifer for municipalities in eastern South Dakota.
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for municipalities in eastern South Dakota.

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1. List of aquifers in eastern South Dakota showing total annual average use and total appropriation by use category.
2. Average unit irrigation application rate by County in eastern South Dakota.
3. Total ground-water use and acres permitted for irrigation in eastern South Dakota.
4. Rural water system use and appropriations.
5. Percentage distribution of water use and appropriation.
6. Eastern South Dakota ground-water summary.
7. Ranking of aquifers and management units by appropriation.
8. Ranking of aquifers and management units by average annual use.



## INTRODUCTION

This report is part of a series of studies being conducted by the U.S. Army Corps of Engineers to evaluate water resources in South Dakota and the Upper Big Sioux River in South Dakota and Iowa. The output contained in this report is restricted to that part of South Dakota east of the Missouri River and that part of the Big Sioux Basin located within South Dakota. The following listed Tasks are the output for this study.

### TASK 6 - DETERMINE AVERAGE ANNUAL WATER USE BY AQUIFER.

- A. Based on aquifer identification and delineation developed in Task 2, determine the aquifer for which each water right permit is granted and store data in water rights computer file.
- B. Separate water right permits by aquifer.
- C. Based on irrigation questionnaire files, domestic use estimates, and municipal/industrial water use records, estimate water use by aquifer.

The output from this Task shows the estimated current total average annual water use by aquifer. When used in conjunction with the total recoverable ground-water availability data by aquifer generated in Task 3 and the estimates of average annual recharge by aquifer to be generated in Task 7, the results will provide a guide for estimating the total amount of water available for future development and provide the framework for alternate man-

agement and development decisions.

## BASIC DATA MANIPULATION AND PRESENTATION

The voluminous data compiled for this task lends itself to manipulation by computer. Nearly all the tables are generated by the SAS (Statistical Analysis System) software program. Six basic data elements were entered into the SAS file to be manipulated as a basic data set. They are:

1. Aquifer identification for each water right permit.
2. Identification of each water right permit by its proper use category.
3. Determination of permitted acres for each irrigation permit.
4. Determination of annual appropriation for each permit.
5. Municipal water use estimates.
6. Inserting county identification for each permit.

Although the last basic data element (county identifier) was not required to meet the specific requirements for output of this task, it was included primarily to maintain output consistency between this Task and Task 3. It also allows comparison with many other types of inventories, many of which are conducted with a County format.



## TASK 6A

Task 6A specifies that each water right permit for ground water be identified by aquifer source and stored in the water rights computer file. This task required an examination of each permit and entering the identified aquifer into the SAS data file. At this time the other five basic data elements were determined (see previous section for list of six basic data elements). In order to determine the number of permitted acres and the annual appropriation a review of the legal permitting process for each permit was also required.

Water right permits are required and issued for 11 water use categories. They are:

1. Irrigation
2. Municipal
3. Rural water systems
4. Industrial
5. Commercial
6. Suburban housing development
7. Multiple use
8. Geothermal
9. Institutional
10. Recreational
11. Fish and wildlife propagation

Data for these categories plus rural domestic and livestock watering use categories were compiled to complete the water use

assessment for eastern South Dakota.

#### TASK 6B

Task 6B requires the compilation of all water right permits by aquifer. Appendix A consists of 11 tables and is a detailed listing of the individual ground-water permits by water use category. It also includes a listing of the other five data elements (county, appropriation, aquifer, permitted acres for irrigation, and municipal use). Appendix B is a compilation of the same data except the data are listed by county instead of by aquifer under each use category.

#### TASK 6C

The objective of this task is to estimate the average annual use for each water use category (including the non-permitted uses of rural domestic and livestock watering) so that a total average annual water use value can be estimated for each aquifer. With the exception of the irrigation water use category the estimated current use is also considered to be the average annual use. Since irrigation water use can vary so widely from year to year depending primarily upon precipitation, a different methodology has been employed to estimate the average annual use for irrigation. This methodology is explained in the next section of this report. Table 1 is a compilation showing the total estimated average annual water use and appropriation by use type and by aquifer.

TABLE 1 - LIST OF AQUIFERS IN EASTERN SOUTH DAKOTA  
SHOWING TOTAL ANNUAL AVERAGE USE  
AND TOTAL ANNUAL APPROPRIATION  
BY USE CATEGORY.

A Q U I F E R     A P P R O P R I A T I O N S     &     U S E S

Usage Type	Jan. 1, 1983 Appropriation (ac-ft)	Average Annual Use (ac-ft)
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UNIDENTIFIED AQUIFERS

Municipal	0	104
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ALTAMONT AQUIFER

Industrial	159	80
Irrigation	34,010	3,249
Livestock	0	1,802
Municipal	7,740	398
Rural Domestic	0	404
TOTAL	41,909	5,932

ANTELOPE VALLEY AQUIFER

Irrigation	6,036	333
Livestock	0	123
Municipal	2,172	17
Rural Domestic	0	38
TOTAL	8,208	511

BOWDLE AQUIFER  
Edmunds Management Unit

Irrigation	2,120	401
Livestock	0	288
Municipal	681	108
Rural Domestic	0	33
TOTAL	2,801	830

A Q U I F E R     A P P R O P R I A T I O N S     &     U S E S

Usage Type	Jan. 1, 1983 Appropriation (ac-ft)	Average Annual Use (ac-ft)
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Hoven North Management Unit		
Irrigation	2,384	310
Livestock	0	37
Rural Domestic	0	5
TOTAL	2,384	352

Hoven South Management Unit		
Irrigation	3,822	527
Livestock	0	224
Municipal	2,976	94
Rural Domestic	0	22
TOTAL	6,798	867

Lebanon Management Unit		
Irrigation	1,626	224
Livestock	0	194
Rural Domestic	0	20
TOTAL	1,626	438

BAD-CHEYENNE AQUIFER

Irrigation	8,357	1,026
Livestock	0	533
Rural Domestic	0	45
TOTAL	8,357	1,604

BRULE CREEK AQUIFER

Irrigation	5,344	554
Livestock	0	302
Municipal	1,651	314
Rural Domestic	0	95
TOTAL	6,995	1,265

A Q U I F E R      A P P R O P R I A T I O N S   &   U S E S

Usage Type	Jan. 1, 1983 Appropriation (ac-ft)	Average Annual Use (ac-ft)
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BIG SIOUX AQUIFER  
Aurora Management Unit

Irrigation	28,531	2,712
Livestock	0	411
Municipal	6,262	20
Rural Domestic	0	97
Suburban Housing Development	485	243
TOTAL	35,278	3,483

Brookings Management Unit

Commercial	29	15
Industrial	398	199
Irrigation	95,379	8,341
Livestock	0	924
Municipal	21,218	3,077
Rural Domestic	0	226
Rural Water System	6,516	547
Suburban Housing Development	22	11
TOTAL	123,562	<del>13,339</del> 13,340

Moody Management Unit

Irrigation	16,526	1,493
Livestock	0	677
Municipal	6,494	323
Rural Domestic	0	167
Rural Water System	3,764	402
TOTAL	26,784	3,062

Middle Skunk Creek Management Unit

Irrigation	7,390	699
Livestock	0	307
Rural Domestic	0	186
TOTAL	7,390	1,192

A Q U I F E R      A P P R O P R I A T I O N S      &      U S E S

Usage Type	Jan. 1, 1983 Appropriation (ac-ft)	Average Annual Use (ac-ft)
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North Management Unit

Commercial	2,094	1,047
Industrial	5,017	2,509
Irrigation	22,230	1,746
Livestock	0	516
Municipal	26,229	694
Rural Domestic	0	163
Rural Water System	724	455
TOTAL	56,294	7,130

North Deer Creek Management Unit

Irrigation	3,651	308
Livestock	0	55
Rural Domestic	0	13
TOTAL	3,651	376

Northern Skunk Creek Management Unit

Institutional	811	406
Irrigation	8,185	864
Livestock	0	416
Municipal	11,888	859
Rural Domestic	0	91
Rural Water System	2,172	0
TOTAL	23,056	2,636

South Management Unit

Commercial	1,050	525
Industrial	8,470	4,235
Irrigation	14,311	1,516
Livestock	0	443
Municipal	6,219	266
Rural Domestic	0	237
Rural Water System	2,360	0
TOTAL	32,410	7,222

A Q U I F E R     A P P R O P R I A T I O N S     &     U S E S

Usage Type	Jan. 1, 1983 Appropriation (ac-ft)	Average Annual Use (ac-ft)
Sioux Falls Management Unit		
Commercial	254	127
Geothermal	290	145
Industrial	239	120 <sup>9.5</sup>
Irrigation	5,818	532
Livestock	0	377
Multiple Use	362	181
Municipal	101,778	14,592
Rural Domestic	0	240
Rural Water System	9,144	694
Suburban Housing Development	724	362
TOTAL	118,609	17,370

Six Mile Creek Management Unit		
Irrigation	4,682	398
Livestock	0	41
Municipal	10,367	0
Rural Domestic	0	10
TOTAL	15,049	449

Southern Skunk Creek Management Unit		
Commercial	815	408
Industrial	239	120 <sup>7.5</sup>
Irrigation	1,125	101
Livestock	0	160
Municipal	11,808	0
Rural Domestic	0	102
TOTAL	13,987	890

Unnamed Creek Management Unit		
Irrigation	4,829	477
Livestock	0	68
Rural Domestic	0	16
TOTAL	4,829	561



A Q U I F E R      A P P R O P R I A T I O N S      &      U S E S

Usage Type	Jan. 1, 1983 Appropriation (ac-ft)	Average Annual Use (ac-ft)
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CROW CREEK AQUIFER

Irrigation	19,104	2,819
Livestock	0	306
Rural Domestic	0	31
TOTAL	19,104	3,156

CODELL SANDSTONE AQUIFER

Industrial	51	26
Institutional	143	72
Irrigation	1,410	158
Livestock	0	2,760
Municipal	2,504	387
Rural Domestic	0	308
TOTAL	4,108	3,710

CHOTEAU AQUIFER  
East Management Unit

Irrigation	2,260	392
Livestock	0	166
Rural Domestic	0	25
TOTAL	2,260	583

Middle Management Unit

Irrigation	2,400	277
Livestock	0	118
Municipal	1,991	226
Rural Domestic	0	17
TOTAL	4,391	638

A Q U I F E R      A P P R O P R I A T I O N S      &      U S E S

Usage Type	Jan. 1, 1983 Appropriation (ac-ft)	Average Annual Use (ac-ft)
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Tyndall Management Unit

Irrigation	10,188	1,680
Livestock	0	185
Municipal	4,879	0
Rural Domestic	0	2
TOTAL	15,067	1,867

West Management Unit

Irrigation	26,438	4,026
Livestock	0	579
Municipal	1,440	0
Rural Domestic	0	192
Recreational	434	217
TOTAL	28,312	5,014

CHAPELLE CREEK AQUIFER

Irrigation	378	56
Livestock	0	38
Rural Domestic	0	10
TOTAL	378	104

CROW LAKE AQUIFER

Irrigation	1,035	133
Livestock	0	102
Rural Domestic	0	11
TOTAL	1,035	246

A Q U I F E R      A P P R O P R I A T I O N S      &      U S E S

Usage Type	Jan. 1, 1983 Appropriation (ac-ft)	Average Annual Use (ac-ft)
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CORSICA AQUIFER

Livestock	0	384
Municipal	362	0
Rural Domestic	0	28
TOTAL	362	412

COTEAU LAKES AQUIFER

Irrigation	7,183	444
Livestock	0	36
Municipal	80	4
Rural Domestic	0	9
TOTAL	7,263	493

COW CREEK AQUIFER

Irrigation	11,168	2,059
Livestock	0	29
Rural Domestic	0	3
Suburban Housing Development	109	55
TOTAL	11,277	2,146

DELMONT AQUIFER

Fish & Wildlife Propagation	1,368	684
Irrigation	7,701	1,206
Livestock	0	21
Rural Domestic	0	0
TOTAL	9,069	1,911

A Q U I F E R      A P P R O P R I A T I O N S   &   U S E S

Usage Type	Jan. 1, 1983 Appropriation (ac-ft)	Average Annual Use (ac-ft)
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D E E P   J A M E S   A Q U I F E R

Irrigation	918	103
Livestock	0	99
Multiple Use	485	243
Rural Domestic	0	24
TOTAL	1,403	469

D A K O T A   F O R M A T I O N   A Q U I F E R

Commercial	412	206
Fish & wildlife Propagation	1,607	804
Industrial	145	73
Institutional	17	9
Irrigation	1,468	267
Livestock	0	12,503
Multiple Use	323	162
Municipal	22,330	2,332
Rural Domestic	0	2,306
Recreational	304	152
Rural Water System	2,896	43
Suburban Housing Development	486	243
TOTAL	29,988	19,098

E L M   A Q U I F E R

Ipswich Management Unit

Irrigation	5,907	637
Livestock	0	99
Rural Domestic	0	13
TOTAL	5,907	749

A Q U I F E R     A P P R O P R I A T I O N S     &     U S E S

Usage Type	Jan. 1, 1983 Appropriation (ac-ft)	Average Annual Use (ac-ft)
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Northern Brown Management Unit

Commercial	261	131
Industrial	804	402
Irrigation	11,375	1,311
Livestock	0	104
Multiple Use	2,389	1,195
Municipal	28,307	30
Rural Domestic	0	25
TOTAL	43,136	3,197

Southern Brown Management Unit

Commercial	239	120
Irrigation	2,072	232
Livestock	0	79
Rural Domestic	0	13
TOTAL	2,311	444

ELM CREEK AQUIFER

Irrigation	2,285	286
Livestock	0	228
Rural Domestic	0	20
TOTAL	2,285	534

ETHAN AQUIFER

Irrigation	3,696	417
Livestock	0	109
Rural Domestic	0	21
TOTAL	3,696	547

A Q U I F E R      A P P R O P R I A T I O N S   &   U S E S

Usage Type	Jan. 1, 1983 Appropriation (ac-ft)	Average Annual Use (ac-ft)
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FLOYD AQUIFER

Alexandria Management Unit

Livestock	0	88
Rural Domestic	0	13
TOTAL	0	101

East James Management Unit

Industrial	333	167
Irrigation	46,004	5,571
Livestock	0	893
Rural Domestic	0	128
TOTAL	46,337	6,758

Pearl Creek Management Unit

Irrigation	4,914	660
Livestock	0	20
Rural Domestic	0	3
TOTAL	4,914	683

FAIRMOUNT AQUIFER

Industrial	65	33
Irrigation	956	55
Livestock	0	141
Municipal	239	38
Rural Domestic	0	49
TOTAL	1,260	315

GRAND AQUIFER

Irrigation	21,422	2,908
Livestock	0	1,008
Municipal	3,590	311
Rural Domestic	0	135
TOTAL	25,012	4,362

A Q U I F E R     A P P R O P R I A T I O N S     &     U S E S

Usage Type	Jan. 1, 1983 Appropriation (ac-ft)	Average Annual Use (ac-ft)
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G E D D E S   A Q U I F E R

Irrigation	1,200	177
Livestock	0	254
Rural Domestic	0	12
TOTAL	1,200	443

G R A Y   G O O S E   A Q U I F E R

Irrigation	4,349	757
Livestock	0	171
Rural Domestic	0	41
Suburban Housing Development	72	36
TOTAL	4,421	1,005

H A R R I S B U R G   A Q U I F E R

Livestock	0	126
Rural Domestic	0	51
TOTAL	0	177

H I G H M O R E - B L U N T   A Q U I F E R

Industrial	1,086	543
Irrigation	20,760	3,145
Livestock	0	402
Municipal	1,774	292
Rural Domestic	0	42
TOTAL	23,620	4,424

A Q U I F E R     A P P R O P R I A T I O N S     &     U S E S

Usage Type	Jan. 1, 1983 Appropriation (ac-ft)	Average Annual Use (ac-ft)
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H O W A R D   A Q U I F E R

Irrigation	906	137
Livestock	0	342
Municipal	1,784	64
Rural Domestic	0	46
TOTAL	2,690	589

H U B O N M I X   A Q U I F E R

Irrigation	688	146
Livestock	0	136
Rural Domestic	0	1
TOTAL	688	283

H I L L S V I E W   A Q U I F E R

Irrigation	2,796	311
Livestock	0	180
Rural Domestic	0	19
TOTAL	2,796	510

I N T E R M E D I A T E   A Q U I F E R

Irrigation	1,260	186
Livestock	0	241
Rural Domestic	0	130
TOTAL	1,260	557



A Q U I F E R    A P P R O P R I A T I O N S    &    U S E S

Usage Type	Jan. 1, 1983 Appropriation (ac-ft)	Average Annual Use (ac-ft)
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I N Y A N   K A R A   G R O U P   A Q U I F E R

Commercial	210	105
Geothermal	239	120
Industrial	159	80
Livestock	0	664
Multiple Use	72	36
Municipal	3,279	304
Rural Domestic	0	113
Recreational	123	62
Suburban Housing Development	564	282
TOTAL	4,646	1,765

J A V A   A Q U I F E R

Livestock	0	196
Municipal	188	25
Rural Domestic	0	28
TOTAL	188	249

L E N N O X   A Q U I F E R

Irrigation	740	120
Livestock	0	30
Municipal	289	208
Rural Domestic	0	5
TOTAL	1,029	363

A Q U I F E R     A P P R O P R I A T I O N S     &     U S E S

Usage Type	Jan. 1, 1983 Appropriation (ac-ft)	Average Annual Use (ac-ft)
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LOWER-JAMES-MISSOURI AQUIFER

Commercial	2,454	1,227
Industrial	920	460
Irrigation	15,939	2,294
Livestock	0	581
Rural Domestic	0	132
TOTAL	19,313	4,694

Scotland Management Unit

Irrigation	2,146	353
Livestock	0	294
Rural Domestic	0	33
TOTAL	2,146	680

LESTERVILLE AQUIFER

Livestock	0	9
Rural Domestic	0	4
TOTAL	0	13

LOWER-VERMILLION-MISSOURI AQUIFER

Institutional	65	33
Irrigation	23,163	3,232
Livestock	0	354
Rural Domestic	0	108
Rural Water System	1,448	221
TOTAL	24,676	3,948

A Q U I F E R    A P P R O P R I A T I O N S    &    U S E S

Usage Type	Jan. 1, 1983 Appropriation (ac-ft)	Average Annual Use (ac-ft)
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MISSOURI AQUIFER

Commercial	116	58
Fish & wildlife Propagation	1,608	804
Industrial	159	80
Irrigation	134,789	15,699
Livestock	0	730
Multiple Use	2,896	1,448
Municipal	6,010	1,772
Rural Domestic	0	219
Recreational	6,487	3,244
Suburban Housing Development	442	221
TOTAL	152,507	24,274

Greenwood Management Unit

Irrigation	80	18
Livestock	0	15
Municipal	0	9
Rural Domestic	0	0
TOTAL	80	42

Pierre Management Unit

Irrigation	1,776	263
Livestock	0	30
Municipal	20,510	2,518
Rural Domestic	0	8
Suburban Housing Development	202	101
TOTAL	22,488	2,920

Peoria Management Unit

Irrigation	459	68
Livestock	0	8
Rural Domestic	0	2
TOTAL	459	78

A Q U I F E R     A P P R O P R I A T I O N S     &     U S E S

Usage Type	Jan. 1, 1983 Appropriation (ac-ft)	Average Annual Use (ac-ft)
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Tower Management Unit		
Livestock	0	5
Rural Domestic	0	0
TOTAL	0	5

MADISON GROUP AQUIFER

Geothermal	1,607	804
Livestock	0	77
Rural Domestic	0	9
TOTAL	1,607	890

MIDDLE JAMES AQUIFER

Aberdeen Management Unit		
Irrigation	8,453	1,062
Livestock	0	70
Municipal	159	0
Rural Domestic	0	16
TOTAL	8,612	1,148

Columbia Management Unit

Irrigation	18,743	1,925
Livestock	0	226
Municipal	1,303	34
Rural Domestic	0	48
Rural Water System	724	0
TOTAL	20,770	2,233

NIOBRARA FORMATION AQUIFER

Industrial	43	22
Irrigation	13,599	1,843
Livestock	0	3,069
Municipal	4,634	685
Rural Domestic	0	506
TOTAL	18,276	6,124

A Q U I F E R      A P P R O P R I A T I O N S      &      U S E S

Usage Type	Jan. 1, 1983 Appropriation (ac-ft)	Average Annual Use (ac-ft)
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NEWTON HILLS AQUIFER

Livestock	0	95	
Rural Domestic	0	39	
TOTAL	0	134	

ONAKA AQUIFER

Irrigation	240	26	
Livestock	0	69	
Municipal	0	6	
Rural Domestic	0	8	
TOTAL	240	109	

OKOBOJO CREEK AQUIFER

Irrigation	9,018	1,284	
Livestock	0	121	
Rural Domestic	0	14	
TOTAL	9,018	1,419	

PARKER-CENTERVILLE AQUIFER

Irrigation	49,051	7,505	
Livestock	0	255	
Municipal	1,506	228	
Rural Domestic	0	45	
Rural water System	1,448	0	
TOTAL	52,005	8,033	

A Q U I F E R     A P P R O P R I A T I O N S     &     U S E S

Usage Type	Jan. 1, 1983 Appropriation (ac-ft)	Average Annual Use (ac-ft)
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P L U M   C R E E K   A Q U I F E R

Irrigation	2,184	245
Livestock	0	122
Rural Domestic	0	18
TOTAL	2,184	385

P R A I R I E   C O T E A U   A Q U I F E R

Fish & Wildlife Propagation	4,395	2,198
Industrial	1,448	724
Irrigation	32,031	2,741
Livestock	0	1,512
Multiple Use	319	160
Municipal	7,724	395
Rural Domestic	0	373
Rural water System	1,224	66
Suburban Housing Development	159	80
TOTAL	47,300	8,248

P I E R R E   S H A L E   A Q U I F E R

Livestock	0	37
Rural Domestic	0	7
TOTAL	0	44

A Q U I F E R    A P P R O P R I A T I O N S    &    U S E S

Usage Type	Jan. 1, 1983 Appropriation (ac-ft)	Average Annual Use (ac-ft)
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PLEISTOCENE SERIES AQUIFER  
Miscellaneous Management Unit

Industrial	326	163
Irrigation	7,427	857
Municipal	2,353	31
Rural Water System	2,331	161
TOTAL	12,437	1,212

Unknown Management Unit

Commercial	573	287
Industrial	1,137	569
Irrigation	57,863	6,599
Multiple Use	80	40
Municipal	10,699	1,121
Suburban Housing Development	72	36
TOTAL	70,424	8,651

SELBY AQUIFER

Commercial	963	482
Irrigation	21,201	2,834
Livestock	0	375
Municipal	2,216	278
Rural Domestic	0	61
TOTAL	24,380	4,029

SPRING CREEK AQUIFER  
Artas Management Unit

Irrigation	420	47
Livestock	0	22
Rural Domestic	0	4
TOTAL	420	73

A Q U I F E R     A P P R O P R I A T I O N S     &     U S E S

Usage Type	Jan. 1, 1983 Appropriation (ac-ft)	Average Annual Use (ac-ft)
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Herreid Management Unit

Commercial	485	243
Livestock	0	113
Rural Domestic	0	21
TOTAL	485	377

McPherson Management Unit

Irrigation	3,779	438
Livestock	0	356
Rural Domestic	0	37
TOTAL	3,779	831

SHINDLER AQUIFER

Livestock	0	91
Rural Domestic	0	37
TOTAL	0	128

SIOUX QUARTZITE AQUIFER

Commercial	1,375	688
Industrial	2,035	1,018
Irrigation	105	10
Livestock	0	1,282
Municipal	4,383	994
Rural Domestic	0	327
Suburban Housing Development	239	120
TOTAL	8,137	4,438



A Q U I F E R      A P P R O P R I A T I O N S      &      U S E S

Usage Type	Jan. 1, 1983 Appropriation (ac-ft)	Average Annual Use (ac-ft)
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SPLIT ROCK CREEK FORMATION AQUIFER

Industrial	3,771	1,886
Municipal	478	53
TOTAL	4,249	1,939

SIOUX QUARTZITE WASH AQUIFER

Irrigation	429	63
Municipal	112	93
TOTAL	541	156

TULARE AQUIFER

Livestock	0	28
Rural Domestic	0	2
TOTAL	0	30

East James Management Unit

Irrigation	52,807	6,256
Livestock	0	131
Rural Domestic	0	21
TOTAL	52,807	6,408

Hitchcock Management Unit

Irrigation	42,695	5,217
Livestock	0	191
Municipal	1,926	0
Rural Domestic	0	29
TOTAL	44,621	5,437

A Q U I F E R     A P P R O P R I A T I O N S     &     U S E S

Usage Type	Jan. 1, 1983 Appropriation (ac-ft)	Average Annual Use (ac-ft)
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Hand Management Unit

Irrigation	23,378	2,958
Livestock	0	738
Rural Domestic	0	65
TOTAL	23,378	3,761

Hyde Management Unit

Irrigation	1,350	180
Livestock	0	294
Rural Domestic	0	23
TOTAL	1,350	497

Miller Management Unit

Livestock	0	104
Municipal	72	21
Rural Domestic	0	9
TOTAL	72	134

Ree Heights Management Unit

Livestock	0	41
Rural Domestic	0	4
TOTAL	0	45

Western Spink Management Unit

Irrigation	30,254	3,527
Livestock	0	209
Municipal	550	0
Rural Domestic	0	31
TOTAL	30,804	3,767

TWIN LAKES AQUIFER

Livestock	0	80
Rural Domestic	0	8
TOTAL	0	88

A Q U I F E R      A P P R O P R I A T I O N S      &      U S E S

Usage Type	Jan. 1, 1983 Appropriation (ac-ft)	Average Annual Use (ac-ft)
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UPPER-VERMILLION-MISSOURI AQUIFER

Irrigation	31,051	4,738
Livestock	0	775
Municipal	1,788	270
Rural Domestic	0	141
TOTAL	32,839	5,924

VEBLEN AQUIFER

Irrigation	17,073	828
Livestock	0	991
Municipal	12,437	1,231
Rural Domestic	0	317
TOTAL	29,510	3,367

VERMILLION-EAST-FORK AQUIFER

Commercial	804	402
Irrigation	15,563	1,631
Livestock	0	429
Municipal	9,550	262
Rural Domestic	0	67
Rural Water System	2,172	676
TOTAL	28,089	3,467

A Q U I F E R    A P P R O P R I A T I O N S    &    U S E S

Usage Type	Jan. 1, 1983 Appropriation (ac-ft)	Average Annual Use (ac-ft)
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Antelope Lake Management Unit

Irrigation	3,024	276
Livestock	0	30
Municipal	963	194
Rural Domestic	0	4
Rural Water System	2,462	0
TOTAL	6,449	504

Reid Lake Management Unit

Livestock	0	5
Rural Domestic	0	1
TOTAL	0	6

Spirit Lake Management Unit

Irrigation	4,802	492
Livestock	0	126
Rural Domestic	0	20
TOTAL	4,802	638

Willow Lake Management Unit

Commercial	239	120
Irrigation	6,164	592
Livestock	0	12
Municipal	253	30
Rural Domestic	0	2
TOTAL	6,656	755

VERMILLION-WEST-FORK AQUIFER

Irrigation	617	106
Livestock	0	38
Municipal	1,332	0
Rural Domestic	0	5
TOTAL	1,949	149

A Q U I F E R    A P P R O P R I A T I O N S    &    U S E S

Usage Type	Jan. 1, 1983 Appropriation (ac-ft)	Average Annual Use (ac-ft)
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WARREN AQUIFER

Morris Creek Management Unit

Irrigation	604	68
Livestock	0	67
Rural Domestic	0	13
TOTAL	604	148

Wolsey Management Unit

Irrigation	6,890	845
Livestock	0	39
Rural Domestic	0	6
TOTAL	6,890	890

West James Management Unit

Industrial	1,615	808
Irrigation	33,174	4,138
Livestock	0	466
Municipal	5,032	0
Rural Domestic	0	63
TOTAL	39,821	5,475

WALL LAKE AQUIFER

Irrigation	1,959	289
Livestock	0	576
Rural Domestic	0	255
Suburban Housing Development	173	87
TOTAL	2,132	1,207

WILMOT AQUIFER

Irrigation	5,885	314
Livestock	0	452
Municipal	7,240	0
Rural Domestic	0	130
TOTAL	13,125	896

A Q U I F E R      A P P R O P R I A T I O N S      &      U S E S

Usage Type	Jan. 1, 1983 Appropriation (ac-ft)	Average Annual Use (ac-ft)
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WAKONDA AQUIFER

Livestock	0	38
Rural Domestic	0	12
TOTAL	0	50

WHITE LAKE AQUIFER

Livestock	0	224
Rural Domestic	0	15
TOTAL	0	239

\* \* \* \* \*

TOTAL GROUND WATER APPROPRIATION IN EASTERN  
SOUTH DAKOTA EQUALS 1,683,821 AC-FT., BUT  
ONLY 268,648 AC-FT IS USED.

## Irrigation Use category

### Methodology

In an earlier irrigation water use analysis by CH2M Hill (Existing water supply conditions eastern South Dakota water supply study, Task Report No. 1, 1979) the difficulties of trying to establish an average annual water usage was discussed. It was pointed out that variability in acreage and application rates are in turn dependent upon precipitation, climate, cropping practice and water availability. The problem is also compounded due to lack of metering of irrigation within the State. In spite of these limitations several quantitative relationships were developed regarding irrigation water application. Two of those relationships are used in the present approach to quantification of average annual irrigation water use. The first of these is that on the average, 40 percent of the existing irrigation permit acreage has water applied to it in any given year. A second relationship was determined to exist between May through September precipitation and annual rates of application. This relationship is reproduced here as table 2 and shows the average unit irrigation application rate for each County in eastern South Dakota.

TABLE 2. Average unit irrigation application rate by County in eastern South Dakota.

Counties in Eastern South Dakota	Average Unit Irrigation application rate	
	Inches	Feet
Aurora .....	11.6	0.97
Beadle .....	10.1	0.84
Bon Homme .....	12.7	1.06
Brookings .....	7.6	0.63
Brown .....	10.1	0.84
Brule .....	13.3	1.11
Buffalo .....	13.3	1.11
Campbell .....	11.6	0.97
Charles Mix .....	13.3	1.11
Clark .....	8.2	0.68
Clay .....	13.4	1.12
Codington .....	7.4	0.62
Davison .....	10.1	0.84
Day .....	7.9	0.66
Deuel .....	5.7	0.48
Douglas .....	13.0	1.08
Edmunds .....	9.7	0.81
Faulk .....	9.9	0.83
Grant .....	4.4	0.37
Hamlin .....	7.3	0.61
Hand .....	10.8	0.90
Hanson .....	10.1	0.84
Hughes .....	13.3	1.11
Hutchinson .....	10.4	0.87
Hyde .....	12.0	1.00
Jerauld .....	11.6	0.97
Kingsbury .....	8.7	0.73
Lake .....	9.1	0.76
Lincoln .....	9.7	0.81
McCook .....	12.5	1.04
McPherson .....	10.0	0.83
Marshall .....	7.4	0.62
Miner .....	11.2	0.93
Minnehaha .....	8.1	0.68
Moody .....	7.8	0.65
Potter .....	12.4	1.03
Roberts .....	4.0	0.33
Sanborn .....	10.1	0.84
Spink .....	10.1	0.84
Sully .....	13.1	1.09
Turner .....	13.3	1.11
Union .....	9.1	0.76
walworth .....	11.7	0.98
Yankton .....	11.8	0.98



From appendix A, table A1, the total number of permitted acres for each aquifer is listed. The average annual water use for irrigation can thus be calculated in the following manner:

Multiply number of permitted acres per aquifer times 40 percent, times average feet of water applied for that county. This equals the total average annual number of acre feet of water applied per aquifer per year.

The totals shown for irrigation useage by aquifer in table 1 are based on the permitted acres as of January 1, 1983.

#### Discussion

The percentage of irrigated to permitted acres is shown in table 3 and varies from 21 to 47 percent for the years 1968 to 1979. Even from this relatively short and incomplete record it seems obvious that the percent of permitted acres is steadily increasing. If that general trend is true for the missing years of 1977, 1978, and 1980 through 1982, then it is very likely that the current average annual precentage of irrigated acres exceeds the 40 percent value used in the average annual water use calculations. If this trend is definitely established in the future then it would require only minimal calculations to project a new average annual irrigation use.

TABLE 3. Total ground-water use and acres permitted for irrigation in eastern South Dakota.\*

Year**	Acreage Irrigated	Acre-foot applied	Total acres permitted for irrigation from ground water	Percent irrigated
1968	31,200	28,800	113,646	27
1969	24,900	21,500	116,337	21
1970	34,300	35,900	151,466	23
1971	NA	NA	NA	NA
1972	25,900	19,100	118,773	22
1973	38,000	40,100	123,220	31
1974	45,000	46,500	122,580	37
1975	56,500	54,500	132,780	43
1976	105,300	141,800	237,336	44
1977	NA	NA	NA	NA
1978	NA	NA	NA	NA
1979	191,327	115,362	410,850	47
1-1-83	NA	NA	414,758	NA

\* Since 1972 includes those drainages west of the Missouri River that drain directly into the Missouri River. Estimated to be 5,000 acres in 1977.

\*\* Years 1968 through 1978 are derived from Table 16, Task Report No. 1 Existing Water Supply Conditions eastern South Dakota water supply study for Corps of Engineers, Omaha District, by CH2M Hill. Year 1979 is derived from Water Rights 1979 irrigation questionnaire.

## Municipal Use Category

Annual municipal use was calculated using figures derived from updating the use figures presented in table 4 from Task Report No. 1 by CH2M Hill. Where pumpage figures were unknown, estimates of the annual use were made. Where a municipality receives its water supply from a rural water system or surface water, the usage figure is zero.

Because of the detailed aquifer delineation and classification system presented in Tasks 1 and 2 of the present study the major aquifer source shows many modifications from those originally shown in table 4 from Task Report No. 1 by CH2M Hill.

A detailed list showing annual municipal appropriation by permit and aquifer is shown in appendix A, table A2. Appendix C shows annual use by aquifer for each municipality. Appendix D shows ground water use and annual appropriation by county. The latter appendix is useful in identifying municipalities where the present aquifer source does not match the permit appropriation aquifer source, those which have no permit, or those which have future use permits from other sources or from more than one source. Table 1 shows total municipal use and appropriations by aquifer.

TABLE 4. Rural Water System Use and Appropriations

System Name	Actual 1981 Pumpage source			Jan. 1, 1983 Appropriations source			
	pumpage (ac-ft)	aquifer*	man. unit*	permit no.	appro. (ac-ft)	aquifer*	man. unit*
* Big Sioux	402	BS	M	2054-3	<del>1,182</del> <sup>1882</sup>	BS	M
Brookings-Deuel	547	BS	B	2275-3** 4830-3	2,172 724	BS BS	B B
Clay	221	LVM		3905-3	1,448	LVM	
Grant-Roberts	66	PCO		4212-3	500	PCO	
Hanson	161	PS	M	4349-3 4432-3	1,448 883	PS PS	M M
Kingbrook	676	VEF		2275-3** 4137-3 4367-3	2,172 2,172 2,172	BS VEF BS	B  NSC
Lincoln	222	BS	SF	1789-3 1790-3 3454-3	1,180 1,180 1,180	BS BS BS	S SF S
* Minnehaha	472	BS	SF	2311-3 4838-3	2,896 5,086 <sup>5068</sup>	BS BS	SF SF
Sioux	455	BS	N	2032-3	724	BS	N
South Lincoln	43	DKOT		4300-3 4301-3 4817-3	1,448 1,448 1,448	DKOT PAC DKOT	

\* For aquifer and management unit abbreviations, see appendix D.  
 \*\* Permit no. 2275-3 is owned jointly by the Brookings-Deuel and Kingbrook Rural Water Systems.

### Rural Water Systems Use Category

Rural water use figures for 1981 were obtained from the South Dakota Association Rural Water Systems except for the Hanson Rural Water System which was not in operation for the full year and use was estimated. The individual rural water systems aquifer source and water use figures are shown on tables 1 and 4. Permit appropriations by aquifer and county are shown in appendices A and B respectively.

### Industrial Use Category

Reliable water use data for self supplied industrial users is virtually nonexistent. CH2M Hill in Task Report No. 1 estimated industrial use at 50 percent of permit appropriation. Using this formula it was estimated that 6,233 acre feet ground water was used for industrial purposes in 1979. Current (January 1, 1983) ground-water appropriations for industrial use total 28,619 acre feet. This same formula for estimating water use is applied to the water use figures in tables 1 and 5. Current industrial ground-water use is thus estimated to be 14,309 acre feet for 36 permit appropriations.

### Rural Domestic and Livestock Watering Use

The assumptions made concerning current people and livestock populations for calculation of rural domestic and livestock watering uses have been documented in the December, 1982, progress report (see attachment D).

TABLE 5. Percentage distribution of water use and appropriation.

Usage Type	Percent of total water appropriated*	Percent of total water used*	Percent of appropriation used annually
Commercial	0.7	2.3	50
Fish and wildlife prologation	0.5	1.7	50
Geothermal	0.1	0.4	50
Industrial	1.7	5.3	50
Institutional	0.1	0.2	50
Irrigation	70.1	51.5	11.7
Livestock	0	17.4	NA
Multiple	0.4	1.2	50
Municipal	23.4	13.1	9.0
Rural domestic	0	3.5	NA
Recreational	0.4	1.4	50
Rural water systems	2.3	1.2	8.3
Suburban housing development	0.2	0.6	50
	-----	-----	
	99.9	99.8	

\* Percent total of water appropriated and water used does not add to 100 percent due to rounding off in percent calculations.

The basis for determination of water use by aquifer was a January 1940 WPA report entitled Rural Water Supplies in South Dakota. This report details the results of questionnaires sent to rural water users in South Dakota aimed at determining the depth and quality of the wells.

With this as a basis, bedrock and surficial topographic maps and the aquifer maps prepared for Task 2 were used to determine the percentage of wells from each aquifer in the county. The percentage use was then determined by dividing the aquifer areal extent by the total area of the county.

This method of determining water use by aquifer makes the basic assumption that current percentage of use by aquifer is the same as it was in 1940.

#### Other Water Uses

Other water uses include:

1. Suburban housing development
2. Commercial
3. Multiple
4. Geothermal
5. Institutional
6. Recreational
7. Fish and wildlife propagation

As a group these water use categories have very little use data available and they comprise only 2.4 percent of the total ground-

water appropriated (see table 5). For these reasons annual water use for these categories were assumed to be 50 percent of the annual appropriation. If this percent use factor is applied to the total annual use summary, then as a group these uses account for approximately 7.8 of the total annual ground-water use. Based on the experience of use versus appropriation in those categories where more accurate use estimates are possible, it seems probable that this water use figure far exceeds actual use. As with other use categories, it would be relatively easy to recalculate estimated annual use as more reliable estimates of actual use become available.

#### SUMMARY OF MAJOR POINTS

(1) As of January 1, 1983, there are 1,683,821 acre feet of ground water appropriated for beneficial use in eastern South Dakota (see tables 1 and 6).

(2) On an average annual basis 268,648 acre feet of ground water are actually used. This use amounts to 16 percent of the total appropriation.

(3) Two use categories, irrigation and municipal use, account for 70.1 and 23.4 percent, respectively, of the total ground water appropriation or a total of 93.5 percent (see table 5).



Table 6. Eastern South Dakota Ground-Water Summary

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Usage Type	Jan. 1, 1983 Appropriation (ac-ft)	Average Annual Use (ac-ft)
Commercial	12,373	6,187
Fish & Wildlife Propagation	8,978	4,489
Geothermal	2,136	1,068
Industrial	28,619	14,310
Institutional	1,036	518
Irrigation	1,179,522	138,349
Livestock	0	46,737
Multiple Use	6,926	3,463
Municipal	393,749	35,312
Rural Domestic	0	9,403
Recreational	7,348	3,674
Rural Water System	39,385	3,265
Suburban Housing Development	3,749	1,875
TOTALS	<u>1,683,821</u>	<u>268,648</u>

(4) while ground-water appropriation is dominated by two major categories (irrigation and municipal), the water use allocation identifies three major users: irrigation, 51.5 percent; Livestock watering, 17.4 percent; and municipal, 13.1 percent; for a total of 82 percent of the total ground water used.

(5) In recent years the amount of permitted acres has risen at a slower rate than either the number of irrigated acres or the average annual water use for irrigation. This trend probably reflects an attitude of increased awareness of the potential benefits of an irrigation economy and efforts of the Division of Water Rights to cancel undeveloped permits.

(6) From table 16, Task Report No. 1 by CH2M Hill the average depth of water applied in eastern South Dakota for irrigation ranged from a low of 10.1 inches in 1972, a relatively wet year, to a high of 17.3 inches during the drought year of 1976. This represents a 72 percent variance between probable minimum and maximum application rates due primarily to precipitation variation. Over a period of time other factors could increase this percentage difference.

(7) In all calculations for ground-water use it was assumed that all water extracted was totally consumed. As data becomes available for return flow rates from various sources this factor can be integrated into the water availability model.

(8) The total water use does not account for ground-water losses due to flowing wells from the surficial or bedrock aquifer units.

(9) Appropriations and use from all bedrock aquifers amounts to about 4 percent and 13 percent, respectively, for eastern South Dakota.

(10) Tables 7 and 8 rank the aquifers and management units from highest to lowest for both appropriations and use, respectively.

(11) Tasks 2 and 3 identified approximately a minimum of 11,000,000 acres in eastern South Dakota underlain by surficial aquifers. In addition to these acres there are substantial additional unmapped acres underlain by surficial aquifers, primarily in the Prairie Coteau region. Assuming 0.5, 1.0, 1.5 and 2.0 inches of net recharge annually, and a minimum of 11,000,000 acres, then total net average recharge for surficial aquifers in eastern South Dakota is 440,000, 880,000, 1,430,000 and 1,870,000 acre feet, respectively. In order to evaluate recharge to surficial deposits versus use and appropriation, the appropriations and use of bedrock formations must be subtracted from the totals. This leaves 1,616,000 acre feet appropriated and 234,000 acre feet used annually from the surficial deposits. If the average annual recharge to surficial deposits is within the assumed range of 0.5 to 2.0 inches then, at worst, the aquifers are over-appropriated by a factor of 4. At best, the annual

TABLE 7. Ranking of Aquifers and Management Units  
by appropriation.

Aquifer	Management Unit	Appropriation (ac-ft)
Missouri		152,507
Big Sioux	Brookings	123,562
Big Sioux	Sioux Falls	118,609
Pleistocene Series	Unknown	70,424
Big Sioux	North	56,294
Tulare	East James	52,807
Parker-Centerville		52,005
Prairie Coteau		47,300
Floyd	East James	46,337
Tulare	Hitchcock	44,621
Elm	Northern Brown	43,136
Altamont		41,909
Warren	West James	39,821
Big Sioux	Aurora	35,278
Upper-Vermillion-Missouri		32,839
Big Sioux	South	32,410
Tulare	Western Spink	30,804
Dakota Formation		29,988
Veblen		29,510
Choteau	West	28,312
Vermillion-East-Fork		28,089
Big Sioux	Moody	26,784
Grand		25,012
Lower-Vermillion-Missouri		24,676

Aquifer	Management Unit	Appropriation (ac-ft)
Selby		24,380
Highmore-Blunt		23,620
Tulare	Hand	23,378
Big Sioux	Northern Skunk Creek	23,056
Missouri	Pierre	22,488
Middle James	Columbia	20,770
Lower-James-Missouri		19,313
Crow Creek		19,104
Niobrara Formation		18,276
Choteau	Tyndall	15,067
Big Sioux	Six Mile Creek	15,049
Big Sioux	Southern Skunk Creek	13,987
Wilmot		13,125
Pleistocene Series	Miscellaneous	12,437
Cow Creek		11,277
Delmont		9,069
Okobojo Creek		9,018
Middle James	Aberdeen	8,612
Bad-Cheyenne		8,357
Antelope Valley		8,208
Sioux Quartzite		8,137
Big Sioux	Middle Skunk Creek	7,390
Coteau Lakes		7,263
Brule Creek		6,995
Warren	Wolsey	6,890

Aquifer	Management Unit	Appropriation (ac-ft)
Bowdle	Hoven South	6,798
Vermillion-East-Fork	Willow Lake	6,656
Vermillion-East-Fork	Antelope Lake	6,449
Elm	Ipswich	5,907
Floyd	Pearl Creek	4,914
Big Sioux	Unnamed Creek	4,829
Vermillion-East-Fork	Spirit Lake	4,802
Inyan Kara Group		4,646
Gray Goose		4,421
Choteau	Middle	4,391
Split Rock Creek Formation		4,249
Codell Sandstone		4,108
Spring Creek	McPherson	3,779
Ethan		3,696
Big Sioux	North Deer Creek	3,651
Bowdle	Edmunds	2,801
HillsvieW		2,796
Howard		2,690
Bowdle	Hoven North	2,384
Elm	Southern Brown	2,311
Elm Creek		2,285
Choteau	East	2,260
Plum Creek		2,184
Lower-James-Missouri	Scotland	2,146
Wall Lake		2,132

Aquifer	Management Unit	Appropriation (ac-ft)
Vermillion-West-Fork		1,949
Bowdle	Lebanon	1,626
Madison Group		1,607
Deep James		1,403
Tulare	Hyde	1,350
Intermediate		1,260
Fairmount		1,260
Geddes		1,200
Crow Lake		1,035
Lennox		1,029
Hubonmix		688
Warren	Morris Creek	604
Sioux Quartzite Wash		541
Spring Creek	Herreid	485
Missouri	Peoria	459
Spring Creek	Artas	420
Chapelle Creek		378
Corsica		362
Onaka		240
Java		188
Missouri	Greenwood	80
Tulare	Miller	72
White Lake		0
Harrisburg		0
Newton Hills		0

Aquifer	Management Unit	Appropriation (ac-ft)
Shindler		0
Floyd	Alexandria	0
Twin Lakes		0
Wakonda		0
Tulare	Ree Heights	0
Pierre Shale		0
Tulare		0
Lesterville		0
Vermillion-East-Fork	Reid Lake	0
Missouri	Tower	0



TABLE 8. Ranking of Aquifers and Management Units  
by average annual use.

Aquifer	Management Unit	Usage (ac-ft)
Missouri		24,274
Dakota Formation		19,098
Big Sioux	Sioux Falls	17,370
Big Sioux	Brookings	13,339
Pleistocene Series	Unknown	8,651
Prairie Coteau		8,248
Parker-Centerville		8,033
Big Sioux	South	7,222
Big Sioux	North	7,130
Floyd	East James	6,758
Tulare	East James	6,408
Niobrara Formation		6,124
Altamont		5,932
Upper-Vermillion-Missouri		5,924
Warren	West James	5,475
Tulare	Hitchcock	5,437
Choteau	West	5,014
Lower-James-Missouri		4,694
Sioux Quartzite		4,438
Highmore-Blunt		4,424
Grand		4,362
Selby		4,029
Lower-Vermillion-Missouri		3,948
Tulare	Western Spink	3,767

Aquifer	Management Unit	Usage (ac-ft)
Tulare	Hand	3,761
Codell Sandstone		3,710
Big Sioux	Aurora	3,483
Vermillion-East-Fork		3,467
Veblen		3,367
Elm	Northern Brown	3,197
Crow Creek		3,156
Big Sioux	Moody	3,062
Missouri	Pierre	2,920
Big Sioux	Northern Skunk Creek	2,636
Middle James	Columbia	2,233
Cow Creek		2,146
Split Rock Creek Formation		1,939
Delmont		1,911
Choteau	Tyndall	1,867
Inyan Kara Group		1,765
Bad-Cheyenne		1,604
Okobojo Creek		1,419
Brule Creek		1,265
Pleistocene Series	Miscellaneous	1,212
wall Lake		1,207
Big Sioux	Middle Skunk Creek	1,192
Middle James	Aberdeen	1,148
Gray Goose		1,005
Wilmot		896

Aquifer	Management Unit	Usage (ac-ft)
Big Sioux	Southern Skunk Creek	890
Warren	Wolsey	890
Madison Group		890
Bowdle	Hoven South	867
Spring Creek	McPherson	831
Bowdle	Edmunds	830
Vermillion-East-Fork	Willow Lake	755
Elm	Ipswich	749
Floyd	Pearl Creek	683
Lower-James-Missouri	Scotland	680
Vermillion-East-Fork	Spirit Lake	638
Choteau	Middle	638
Howard		589
Choteau	East	583
Big Sioux	Unnamed Creek	561
Intermediate		557
Ethan		547
Elm Creek		534
Antelope Valley		511
Hillsview		510
Vermillion-East-Fork	Antelope Lake	504
Tulare	Hyde	497
Coteau Lakes		493
Deep James		469
Big Sioux	Six Mile Creek	449

Aquifer	Management Unit	Usage (ac-ft)
Elm	Southern Brown	444
Geddes		443
Bowdle	Lebanon	438
Corsica		412
Plum Creek		385
Spring Creek	Herreid	377
Big Sioux	North Deer Creek	376
Lennox		363
Bowdle	Hoven North	352
Fairmount		315
Hubonmix		283
Java		249
Crow Lake		246
White Lake		239
Harrisburg		177
Sioux Quartzite Wash		156
Vermillion-west-Fork		149
Warren	Morris Creek	148
Tulare	Miller	134
Newton Hills		134
Shindler		128
Onaka		109
Chapelle Creek		104
Floyd	Alexandria	101
Twin Lakes		88

Aquifer	Management Unit	Usage (ac-ft)
Missouri	Peoria	78
Spring Creek	Artas	73
wakonda		50
Tulare	Ree Heights	45
Pierre Shale		44
Missouri	Greenwood	42
Tulare		30
Lesterville		13
Vermillion-East-Fork	Reid Lake	6
Missouri	Tower	5

appropriation is approaching a balance with average annual recharge. Total average annual ground water use from surficial aquifers is approximately 16 to 53 percent of the assumed recharge rates.

Sometime during the next several years, conflicts could develop because of over-appropriation of ground water. This conclusion is strongly indicated when a critical examination is made of average annual use figures, the apparent annual use growth rate and the assumed average annual recharge rate. Task 7 will address the natural recharge rates. The results of that study will allow a regional as well as aquifer specific assessment of use versus appropriations.

APPENDIX A - GROUND WATER APPROPRIATION BY INDIVIDUAL  
PERMIT FOR EACH AQUIFER AND USE CATEGORY  
IN EASTERN SOUTH DAKOTA.





TABLE A1 - NUMBER OF PERMITTED ACRES AND ANNUAL  
APPROPRIATION FOR IRRIGATION USE.



### Table A1 Assumptions

Table A1, to a large extent, is based on the number of acres of land related to each irrigation permit. The appropriation is either two or three feet of water per acre, depending upon the permit's date of approval. There are exceptions however.

These exceptions often are for "changes in diversion point" and do not represent the use of any 'new' land or water; consequently the corresponding values for acres and appropriation were set to zero. Other permits are for additional land because the irrigator's existing appropriation is not being fully utilized. For example, consider when an irrigator adds an end-gun to his center pivot in order to irrigate the corners of his field. In these instances, acres are set to the additional value and the appropriation is set to zero. Less frequently, some irrigators request "additional water" because they did not seek their full appropriation when the permit was initially approved. Subsequently they apply for that appropriation missing from their initial permit and acreage. Hence their new permit shows acres equal to zero and appropriation equal to an amount which completes their full appropriation. Finally, in those rare cases where an irrigator holds a ground water permit to "supplement" a surface water permit it was assumed that the entire appropriation be considered as if it were for a ground water source.

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

As of January 1, 1983

Permit Number	County Name	Permitted Acres	Appropriation (ac-ft)
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-----  
ALTAMONT AQUIFER  
-----

1776-3	CLARK	135	405
2417-3	CLARK	268	804
2489-3	CLARK	936	2,808
2653-3	CLARK	289	867
2710-3	CLARK	252	756
2741-3	CLARK	800	2,400
2805-3	CLARK	254	762
2833-3	CLARK	305	915
2851-3	CLARK	294	882
2866-3	CLARK	194	582
3000-3	CLARK	760	2,280
3013-3	CLARK	132	396
3028-3	CLARK	132	396
3030-3	CLARK	186	558
3059-3	CLARK	269	807
3198-3	CLARK	1,112	3,336
3660-3	CLARK	151	453
4160-3	CLARK	160	480
4292-3	CLARK	320	640
4391-3	CLARK	160	0
4399-3	CLARK	270	540
4643-3	CLARK	132	264
4657-3	CLARK	160	320
4658-3	CLARK	160	320
4783-3	CLARK	180	360

	3,011	22,331
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2427-3	DAY	255	765
2816-3	DAY	283	849
2840-3	DAY	93	279
3299-3	DAY	400	1,200
3300-3	DAY	144	432
3932-3	DAY	186	558
3978-3	DAY	222	666
4156-3	DAY	132	396
4192-3	DAY	160	480
4337-3	DAY	184	368
4371-3	DAY	0	0
4459-3	DAY	115	230

	2,174	6,223
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2945-3	DEUEL	160	480
3214-3	DEUEL	271	813

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
3233-3	DEUEL	180	540
4126-3	DEUEL	149	447
4790-3	DEUEL	156	312
		916	2,592
4296-3	GRANT	142	284
2797-3	SPINK	160	480
3166-3	SPINK	136	408
3464-3	SPINK	132	396
4094-3	SPINK	160	480
4236-3	SPINK	260	780
4805-3	SPINK	18	36
		866	2,580

THERE ARE 49 PERMITS FOR THE ALTAMONT AQUIFER.  
 AMOUNT APPROPRIATED FROM AQUIFER = 34,010 AC-FT.  
 TOTAL NUMBER OF PERMITTED ACRES FOR AQUIFER = 12,109

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)

----- ANTELOPE VALLEY AQUIFER -----

1774-3	CODINGTON	160	480
1971-3	GRANT	361	1,082
2207-3	GRANT	350	1,050
2333-3	GRANT	500	1,500
2478-3	GRANT	75	225
3503-3A	GRANT	73	219
3782-3	GRANT	200	600
4334-3	GRANT	440	880
		1,999	5,556

THERE ARE 8 PERMITS FOR THE ANTELOPE VALLEY AQUIFER.  
 AMOUNT APPROPRIATED FROM AQUIFER = 6,036 AC-FT.  
 TOTAL NUMBER OF PERMITTED ACRES FOR AQUIFER = 2,159

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

As of January 1, 1983

Permit Number	County Name	Permitted Acres	Appropriation (ac-ft)
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-----  
BAD CHEYENNE AQUIFER  
-----

661-3	BEADLE	459	1,377
1925-3	BEADLE	640	1,920
3260-3	BEADLE	321	963
3301-3	BEADLE	140	420
4149-3	BEADLE	160	480
4387-3	BEADLE	110	220
4396-3	BEADLE	0	0

		-----	-----
		1,830	5,380

2786-3	HAND	200	600
2919-3	HAND	480	1,440
4824-3	HAND	160	320
4825-3	HAND	130	260
4826-3	HAND	144	288

		-----	-----
		1,114	2,908

3768-3	JERAULD	23	69
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THERE ARE 13 PERMITS FOR THE BAD CHEYENNE AQUIFER.  
 AMOUNT APPROPRIATED FROM AQUIFER = 8,357 AC-FT.  
 TOTAL NUMBER OF PERMITTED ACRES FOR AQUIFER = 2,967

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

As of January 1, 1983

Permit Number	County Name	Permitted Acres	Appropriation (ac-ft)
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-----  
BIG SIOUX AQUIFER  
-----

Aurora Management unit

589-3	BROOKINGS	7	21
644-3	BROOKINGS	149	448
1109-3	BROOKINGS	152	456
1344-3	BROOKINGS	99	297
1880-3	BROOKINGS	149	447
2073-3	BROOKINGS	100	300
2149-3	BROOKINGS	137	411
2161-3	BROOKINGS	132	396
2328-3	BROOKINGS	227	681
2429-3	BROOKINGS	137	411
2540-3	BROOKINGS	147	441
2558-3	BROOKINGS	94	282
2666-3	BROOKINGS	312	936
2676-3	BROOKINGS	264	792
2677-3	BROOKINGS	259	777
2698-3	BROOKINGS	66	198
2732-3	BROOKINGS	124	372
2735-3	BROOKINGS	138	414
2787-3	BROOKINGS	30	91
2800-3	BROOKINGS	513	1,539
2804-3	BROOKINGS	153	459
2809-3	BROOKINGS	156	468
2901-3	BROOKINGS	241	723
2902-3	BROOKINGS	151	453
2903-3	BROOKINGS	156	468
2904-3	BROOKINGS	156	468
3206-3	BROOKINGS	150	450
3211-3	BROOKINGS	145	435
3212-3	BROOKINGS	137	411
3213-3	BROOKINGS	430	1,290
3218-3	BROOKINGS	250	750
3219-3	BROOKINGS	308	924
3332-3	BROOKINGS	118	354
3333-3	BROOKINGS	148	444
3338-3	BROOKINGS	300	900
3347-3	BROOKINGS	156	468
3398-3	BROOKINGS	104	312
3452-3	BROOKINGS	132	396
3495-3	BROOKINGS	156	468
3557-3	BROOKINGS	70	210
3620-3	BROOKINGS	264	792
3668-3	BROOKINGS	132	396
3841-3	BROOKINGS	246	738
4112-3	BROOKINGS	243	729
4119-3	BROOKINGS	312	0



I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
4202-3	BROOKINGS	80	240
4241-3	BROOKINGS	235	705
4359-3	BROOKINGS	445	890
4416-3	BROOKINGS	156	312
4436-3	BROOKINGS	267	534
4477-3	BROOKINGS	0	0
4497-3A	BROOKINGS	312	624
4508-3	BROOKINGS	156	312
4515-3	BROOKINGS	156	312
4516-3	BROOKINGS	115	230
4537-3	BROOKINGS	120	240
4590-3	BROOKINGS	283	566
4600-3	BROOKINGS	140	280
4773-3	BROOKINGS	35	70
4859-3	BROOKINGS	156	0
		<u>10,707</u>	<u>28,531</u>

Current number of permits in management unit = 60  
 Irrigation appropriations from this management unit = 28,531 ac-ft  
 Number of acres under irrigation permit in the management  
 unit = 10,707

Brookings Management unit

113-3A	BROOKINGS	85	255
208-3	BROOKINGS	240	720
392-3	BROOKINGS	40	120
602-3	BROOKINGS	80	240
692-3	BROOKINGS	156	468
983-3	BROOKINGS	77	231
1017-3	BROOKINGS	125	375
1322-3	BROOKINGS	138	414
1940-3	BROOKINGS	70	210
2039-3	BROOKINGS	199	597
2048-3	BROOKINGS	120	360
2071-3	BROOKINGS	128	384
2072-3	BROOKINGS	154	461
2096-3	BROOKINGS	154	462
2097-3	BROOKINGS	98	294
2122-3	BROOKINGS	70	210
2123-3	BROOKINGS	240	720
2125-3	BROOKINGS	151	453
2126-3	BROOKINGS	151	453
2127-3	BROOKINGS	126	378
2128-3	BROOKINGS	156	468
2148-3	BROOKINGS	236	708
2150-3	BROOKINGS	119	357

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
2151-3	BROOKINGS	208	624
2152-3	BROOKINGS	116	348
2166-3	BROOKINGS	147	441
2167-3	BROOKINGS	139	417
2169-3	BROOKINGS	15	45
2211-3	BROOKINGS	164	492
2406-3	BROOKINGS	207	621
2437-3	BROOKINGS	132	396
2496-3	BROOKINGS	396	1,188
2527-3	BROOKINGS	255	765
2554-3	BROOKINGS	75	225
2555-3	BROOKINGS	124	372
2556-3	BROOKINGS	123	369
2557-3	BROOKINGS	113	339
2559-3	BROOKINGS	277	831
2589-3	BROOKINGS	149	447
2593-3	BROOKINGS	140	420
2594-3	BROOKINGS	266	798
2612-3	BROOKINGS	70	210
2663-3	BROOKINGS	194	582
2667-3	BROOKINGS	136	408
2695-3	BROOKINGS	142	426
2701-3	BROOKINGS	463	1,389
2702-3	BROOKINGS	216	648
2724-3	BROOKINGS	67	201
2842-3	BROOKINGS	458	1,374
2843-3	BROOKINGS	307	921
2844-3	BROOKINGS	152	456
2905-3	BROOKINGS	120	360
2906-3	BROOKINGS	136	408
2908-3	BROOKINGS	424	1,272
3202-3	BROOKINGS	141	423
3203-3	BROOKINGS	120	360
3204-3	BROOKINGS	296	888
3205-3	BROOKINGS	14	42
3207-3	BROOKINGS	147	441
3208-3	BROOKINGS	146	438
3209-3	BROOKINGS	103	309
3222-3	BROOKINGS	148	444
3239-3	BROOKINGS	154	462
3240-3	BROOKINGS	132	396
3346-3	BROOKINGS	163	489
3361-3	BROOKINGS	191	573
3366-3	BROOKINGS	160	480
3386-3	BROOKINGS	127	381
3416-3	BROOKINGS	107	322
3420-3	BROOKINGS	40	120
3481-3	BROOKINGS	151	453
3482-3	BROOKINGS	132	396
3506-3	BROOKINGS	156	468
3554-3	BROOKINGS	156	468

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
3555-3	BROOKINGS	141	423
3556-3	BROOKINGS	302	906
3601-3	BROOKINGS	148	444
3617-3	BROOKINGS	154	462
3618-3	BROOKINGS	156	468
3647-3	BROOKINGS	151	453
3650-3	BROOKINGS	160	480
3651-3	BROOKINGS	80	240
3730-3	BROOKINGS	156	468
3762-3	BROOKINGS	321	963
3765-3	BROOKINGS	780	2,340
3842-3	BROOKINGS	159	477
3913-3	BROOKINGS	120	360
3921-3	BROOKINGS	127	381
3951-3	BROOKINGS	212	636
4014-3	BROOKINGS	128	384
4025-3	BROOKINGS	140	420
4036-3	BROOKINGS	136	408
4081-3	BROOKINGS	86	258
4082-3	BROOKINGS	75	225
4087-3	BROOKINGS	80	240
4088-3	BROOKINGS	280	840
4109-3	BROOKINGS	424	1,272
4142-3	BROOKINGS	120	360
4234-3	BROOKINGS	25	75
4239-3	BROOKINGS	0	0
4242-3	BROOKINGS	180	540
4291-3	BROOKINGS	0	0
4305-3	BROOKINGS	156	312
4327-3	BROOKINGS	156	312
4330-3	BROOKINGS	145	289
4333-3	BROOKINGS	160	320
4338-3	BROOKINGS	132	264
4343-3	BROOKINGS	240	480
4352-3	BROOKINGS	147	294
4363-3	BROOKINGS	230	460
4373-3	BROOKINGS	50	100
4394-3	BROOKINGS	145	290
4454-3	BROOKINGS	117	234
4462-3	BROOKINGS	153	306
4462-3A	BROOKINGS	0	0
4467-3	BROOKINGS	40	0
4478-3	BROOKINGS	84	168
4483-3	BROOKINGS	270	540
4484-3	BROOKINGS	92	184
4507-3	BROOKINGS	252	504
4510-3	BROOKINGS	132	264
4607-3	BROOKINGS	231	462
4608-3	BROOKINGS	132	264
4617-3	BROOKINGS	156	312
4632-2	BROOKINGS	148	296

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
4635-3	BROOKINGS	264	528
4725-3	BROOKINGS	30	160
4894-3	BROOKINGS	92	184
		<u>20,472</u>	<u>57,534</u>
2157-3	DEUEL	64	192
2245-3	DEUEL	156	468
2564-3	DEUEL	110	330
2803-3	DEUEL	312	936
2911-3	DEUEL	132	396
2954-3	DEUEL	224	672
2991-3	DEUEL	270	810
3238-3	DEUEL	200	600
3667-3	DEUEL	480	1,440
4342-3	DEUEL	120	240
4504-3	DEUEL	0	0
4729-3	DEUEL	131	262
		<u>2,199</u>	<u>6,346</u>
141-3	HAMLIN	150	450
700-3	HAMLIN	181	543
775-3	HAMLIN	153	459
1475-3	HAMLIN	139	417
1814-3	HAMLIN	236	708
2028-3	HAMLIN	132	396
2061-3	HAMLIN	216	648
2068-3	HAMLIN	13	39
2147-3	HAMLIN	262	786
2172-3	HAMLIN	264	792
2174-3	HAMLIN	267	801
2175-3	HAMLIN	291	873
2221-3	HAMLIN	115	345
2264-3	HAMLIN	453	1,359
2412-3	HAMLIN	170	510
2413-3	HAMLIN	454	1,362
2419-3	HAMLIN	79	237
2420-3A	HAMLIN	132	396
2421-3	HAMLIN	134	402
2479-3	HAMLIN	258	774
2528-3	HAMLIN	270	810
2576-3	HAMLIN	214	642
2723-3	HAMLIN	140	420
2728-3	HAMLIN	340	1,020
2744-3	HAMLIN	132	396
2784-3	HAMLIN	297	891
2841-3	HAMLIN	124	372
2888-3	HAMLIN	160	480

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
3216-3	HAMLIN	285	855
3217-3	HAMLIN	320	960
3223-3	HAMLIN	312	936
3224-3	HAMLIN	200	600
3236-3	HAMLIN	140	420
3237-3	HAMLIN	87	261
3374-3	HAMLIN	400	1,200
3485-3	HAMLIN	240	720
3505-3	HAMLIN	126	378
3563-3	HAMLIN	238	714
3565-3	HAMLIN	127	381
3662-3	HAMLIN	140	420
3763-3	HAMLIN	130	390
3888-3	HAMLIN	0	0
3975-3	HAMLIN	40	120
4130-3	HAMLIN	132	396
4185-3	HAMLIN	155	465
4216-3	HAMLIN	97	292
4229-3	HAMLIN	217	651
4309-3	HAMLIN	254	508
4345-3	HAMLIN	132	264
4353-3	HAMLIN	188	376
4372-3	HAMLIN	57	114
4418-3	HAMLIN	77	0
4427-3	HAMLIN	0	0
4440-3	HAMLIN	146	292
4446-3	HAMLIN	160	320
4511-3	HAMLIN	143	286
4522-3	HAMLIN	255	510
4570-3	HAMLIN	132	264
4682-3	HAMLIN	120	240
4754-3	HAMLIN	140	280
4853-3	HAMLIN	160	320
4934-3	HAMLIN	119	238
		11,245	31,499

Current number of permits in management unit = 202  
 Irrigation appropriations from this management unit = 95,379 ac-ft  
 Number of acres under irrigation permit in the management  
 unit = 33,917

Moody Management unit

603-3	MOODY	199	596
658-3	MOODY	118	353
1155-3	MOODY	133	398
1340-3	MOODY	95	285

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	As of January 1, 1983	
		Permitted Acres	Appropriation (ac-ft)
1350-3	MOODY	158	474
1696-3	MOODY	289	867
1709-3	MOODY	132	396
1801-3	MOODY	131	393
1909-3	MOODY	152	455
1984-3	MOODY	145	434
2026-3	MOODY	132	396
2134-3	MOODY	169	507
2153-3	MOODY	85	256
2332-3	MOODY	115	345
2574-3	MOODY	148	444
2577-3	MOODY	175	525
2952-3	MOODY	130	390
2955-3	MOODY	170	510
2956-3	MOODY	90	270
2995-3A	MOODY	0	0
3254-3	MOODY	79	237
3293-3	MOODY	136	408
3402-3	MOODY	144	432
3496-3	MOODY	115	345
3626-3	MOODY	306	918
3640-3	MOODY	200	600
3663-3	MOODY	312	936
3749-3	MOODY	113	338
3751-3	MOODY	173	519
3772-3	MOODY	300	900
3801-3	MOODY	140	420
3843-3	MOODY	101	303
3923-3	MOODY	160	480
4329-3	MOODY	538	1,076
4597-3	MOODY	160	320
		-----	-----
		5,741	16,526

Current number of permits in management unit = 35  
 Irrigation appropriations from this management unit = 16,526 ac-ft  
 Number of acres under irrigation permit in the management  
 unit = 5,741

Middle Skunk Creek Management unit

1806-3	MINNEHAHA	126	378
2918-3	MINNEHAHA	457	1,371
2923-3	MINNEHAHA	120	360
3350-3	MINNEHAHA	132	396
3437-3	MINNEHAHA	80	240
3624-3	MINNEHAHA	172	516
3625-3	MINNEHAHA	160	480

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
3709-3	MINNEHAHA	160	480
3720-3	MINNEHAHA	156	468
3786-3	MINNEHAHA	80	240
4210-3	MINNEHAHA	235	705
4223-3	MINNEHAHA	95	285
4230-3	MINNEHAHA	237	711
4358-3	MINNEHAHA	260	520
4837-3	MINNEHAHA	120	240
		2,590	7,390

Current number of permits in management unit = 15  
 Irrigation appropriations from this management unit = 7,390 ac-ft  
 Number of acres under irrigation permit in the management unit = 2,590

North Management unit

151-3	CODINGTON	31	94
483-3	CODINGTON	140	420
668-3	CODINGTON	230	689
669-3	CODINGTON	53	159
722-3	CODINGTON	146	438
1115-3	CODINGTON	53	159
1612-3	CODINGTON	103	309
1997-3	CODINGTON	121	363
2120-3	CODINGTON	240	720
2130-3	CODINGTON	160	480
2168-3	CODINGTON	228	684
2171-3	CODINGTON	270	810
2277-3	CODINGTON	156	468
2313-3	CODINGTON	301	903
2477-3	CODINGTON	725	2,175
2497-3	CODINGTON	311	933
2615-3	CODINGTON	160	480
2827-3	CODINGTON	156	468
2892-3	CODINGTON	10	30
2927-3	CODINGTON	520	1,560
3228-3	CODINGTON	202	606
3232-3	CODINGTON	160	480
3450-3	CODINGTON	280	840
3489-3	CODINGTON	437	1,311
3491-3	CODINGTON	18	54
3724-3	CODINGTON	160	480
3824-3	CODINGTON	40	120
3839-3	CODINGTON	127	381
3941-3	CODINGTON	40	120
4180-3	CODINGTON	0	0

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
4181-3	CODINGTON	160	480
4226-3	CODINGTON	240	720
4822-3	CODINGTON	0	0
		<u>5,978</u>	<u>17,934</u>

2717-3A	GRANT	231	693
2717-3A	GRANT	231	693
3044-3	GRANT	270	810
4395-3	GRANT	180	360
		<u>912</u>	<u>2,556</u>

2036-3	HAMLIN	235	705
2783-3	HAMLIN	130	390
2792-3	HAMLIN	143	429
		<u>508</u>	<u>1,524</u>

4554-3	ROBERTS	108	216
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Current number of permits in management unit = 41  
 Irrigation appropriations from this management unit = 22,230 ac-ft  
 Number of acres under irrigation permit in the management  
 unit = 7,506

North Deer Creek Management unit

2124-3	BROOKINGS	126	378
4235-3	BROOKINGS	312	936
4250-3	BROOKINGS	139	417
4252-3	BROOKINGS	640	1,920
		<u>1,217</u>	<u>3,651</u>

Current number of permits in management unit = 4  
 Irrigation appropriations from this management unit = 3,651 ac-ft  
 Number of acres under irrigation permit in the management  
 unit = 1,217

Northern Skunk Creek Management unit

611-3	LAKE	194	582
1268-3	LAKE	143	429



I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
1328-3	LAKE	176	528
2987-3	LAKE	160	480
3048-3	LAKE	480	1,440
3385-3	LAKE	160	480
3407-3	LAKE	12	36
3641-3	LAKE	80	240
4133-3	LAKE	80	240
4311-3	LAKE	140	280
4360-3	LAKE	156	312
4361-3	LAKE	255	510
4453-3	LAKE	144	288
		----- 2,180	----- 5,845
3072-3	MOODY	636	1,908
3840-3	MOODY	144	432
		----- 780	----- 2,340

Current number of permits in management unit = 15  
 Irrigation appropriations from this management unit = 8,185 ac-ft  
 Number of acres under irrigation permit in the management unit = 2,960

South Management unit

204-3	LINCOLN	10	30
2254-3	LINCOLN	150	450
2256-3	LINCOLN	215	645
2353-3	LINCOLN	76	228
2541-3	LINCOLN	116	348
3566-3	LINCOLN	215	645
4868-3	LINCOLN	200	400
		----- 982	----- 2,746
346-3	MINNEHAHA	55	165
599-3	MINNEHAHA	30	90
686-3	MINNEHAHA	65	195
1907-3	MINNEHAHA	95	285
4316-3	MINNEHAHA	70	140
		----- 315	----- 875
50-3	UNION	158	474

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	As of January 1, 1983	
		Permitted Acres	Appropriation (ac-ft)
605-3	UNION	140	420
1677-3	UNION	310	930
2350-3	UNION	180	540
2366-3	UNION	136	408
2915-3	UNION	240	720
3070-3	UNION	120	360
3102-3	UNION	130	390
3316-3	UNION	80	240
3358-3	UNION	90	270
3425-3	UNION	80	240
3426-3	UNION	120	360
3686-3	UNION	120	360
3688-3	UNION	220	660
3691-3	UNION	240	720
3836-3	UNION	120	360
3837-3	UNION	160	480
3838-3	UNION	80	240
3880-3	UNION	346	1,038
4083-3	UNION	280	840
4888-3	UNION	160	320
4915-3	UNION	160	320
		3,670	10,690

Current number of permits in management unit = 34  
 Irrigation appropriations from this management unit = 14,311 ac-ft  
 Number of acres under irrigation permit in the management  
 unit = 4,967

Sioux Falls Management unit

402-3	MINNEHAHA	96	288
601-3	MINNEHAHA	28	83
610-3	MINNEHAHA	210	630
656-3	MINNEHAHA	80	240
1077-3	MINNEHAHA	10	30
1270-3	MINNEHAHA	127	381
1271-3	MINNEHAHA	395	1,185
1807-3	MINNEHAHA	75	225
2047-3	MINNEHAHA	428	1,283
2244-3	MINNEHAHA	175	525
2678-3	MINNEHAHA	116	348
3872-3	MINNEHAHA	200	600
4034-3	MINNEHAHA	32	0
		1,971	5,818

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

As of January 1, 1983

Permit Number	County Name	Permitted Acres	Appropriation (ac-ft)
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Current number of permits in management unit = 13  
 Irrigation appropriations from this management unit = 5,818 ac-ft  
 Number of acres under irrigation permit in the management  
 unit = 1,971

Six Mile Creek Management unit

556-3	BROOKINGS	147	441
2907-3	BROOKINGS	293	879
3298-3	BROOKINGS	108	324
3616-3	BROOKINGS	313	939
3669-3	BROOKINGS	128	384
3764-3	BROOKINGS	156	468
4079-3	BROOKINGS	395	1,185
4328-3	BROOKINGS	31	62
		-----	-----
		1,571	4,682

Current number of permits in management unit = 8  
 Irrigation appropriations from this management unit = 4,682 ac-ft  
 Number of acres under irrigation permit in the management  
 unit = 1,571

Southern Skunk Creek Management unit

367-3	MINNEHAHA	55	165
368-3	MINNEHAHA	97	291
404-3	MINNEHAHA	223	669
		-----	-----
		375	1,125

Current number of permits in management unit = 3  
 Irrigation appropriations from this management unit = 1,125 ac-ft  
 Number of acres under irrigation permit in the management  
 unit = 375

Unnamed Creek Management unit

2687-3	BROOKINGS	264	792
2725-3	BROOKINGS	303	909
3215-3	BROOKINGS	144	432
3484-3	BROOKINGS	140	420
3950-3	BROOKINGS	0	0

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
4124-3	BROOKINGS	66	198
4254-3	BROOKINGS	150	450
4428-3	BROOKINGS	356	712
4593-3	BROOKINGS	138	276
4697-3	BROOKINGS	320	640
		1,881	4,829

Current number of permits in management unit = 10  
 Irrigation appropriations from this management unit = 4,829 ac-ft  
 Number of acres under irrigation permit in the management  
 unit = 1,881

THERE ARE 440 PERMITS FOR THE BIG SIOUX AQUIFER.  
 AMOUNT APPROPRIATED FROM AQUIFER = 212,657 AC-FT.  
 TOTAL NUMBER OF PERMITTED ACRES FOR AQUIFER = 75,403

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)

-----  
BOWDLE AQUIFER  
-----

Edmunds Management unit

3559-3	EDMUNDS	160	480
4008-3	EDMUNDS	56	168
		-----	-----
		216	648

2259-3	POTTER	160	480
3111-3	POTTER	160	480
4415-3	POTTER	244	0
4449-3	POTTER	130	260
4768-3	POTTER	29	0
		-----	-----
		723	1,220

362-3	WALWORTH	84	252
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Current number of permits in management unit = 8  
 Irrigation appropriations from this management unit = 2,120 ac-ft  
 Number of acres under irrigation permit in the management unit = 1,023

Hoven North Management unit

1701-3	WALWORTH	320	960
1743-3	WALWORTH	140	419
2280-3	WALWORTH	80	240
2544-3	WALWORTH	120	360
2719-3	WALWORTH	135	405
		-----	-----
		795	2,384

Current number of permits in management unit = 5  
 Irrigation appropriations from this management unit = 2,384 ac-ft  
 Number of acres under irrigation permit in the management unit = 795

Hoven South Management unit

1622-3	POTTER	240	720
1623-3	POTTER	50	180

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
1704-3	POTTER	97	291
2270-3	POTTER	318	954
2271-3	POTTER	302	906
2598-3	POTTER	257	771
		1,274	3,822

Current number of permits in management unit = 6  
 Irrigation appropriations from this management unit = 3,822 ac-ft  
 Number of acres under irrigation permit in the management  
 unit = 1,274

Lebanon Management unit

2674-3	POTTER	390	1,170
3694-3	POTTER	152	456
		542	1,626

Current number of permits in management unit = 2  
 Irrigation appropriations from this management unit = 1,626 ac-ft  
 Number of acres under irrigation permit in the management  
 unit = 542

THERE ARE 21 PERMITS FOR THE BOWDLE AQUIFER.  
 AMOUNT APPROPRIATED FROM AQUIFER = 9,952 AC-FT.  
 TOTAL NUMBER OF PERMITTED ACRES FOR AQUIFER = 3,634

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

As of January 1, 1983

Permit Number	County Name	Permitted Acres	Appropriation (ac-ft)
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-----  
BRULE CREEK AQUIFER  
-----

1384-3	UNION	136	408
2007-3	UNION	80	240
2183-3	UNION	140	420
2193-3	UNION	136	408
2194-3	UNION	136	408
2585-3	UNION	240	720
2586-3	UNION	160	480
3123-3	UNION	110	330
3671-3	UNION	150	450
3816-3	UNION	160	480
3817-3	UNION	240	720
4684-3	UNION	60	120
4685-3	UNION	80	160
		-----	-----
		1,828	5,344

THERE ARE 13 PERMITS FOR THE BRULE CREEK AQUIFER.  
 AMOUNT APPROPRIATED FROM AQUIFER = 5,344 AC-FT.  
 TOTAL NUMBER OF PERMITTED ACRES FOR AQUIFER = 1,828

IRRIGATION SUMMARY  
BY AQUIFER

As of January 1, 1983  
Permit County Permitted Appropriation  
Number Name Acres (ac-ft)

-----CHAPELLE CREEK AQUIFER-----

2995-3	HUGHES	126	378
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THERE IS 1 PERMIT FOR THE CHAPELLE CREEK AQUIFER.  
AMOUNT APPROPRIATED FROM AQUIFER = 378 AC-FT.  
TOTAL NUMBER OF PERMITTED ACRES FOR AQUIFER = 126



I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	As of January 1, 1983	
		Permitted Acres	Appropriation (ac-ft)

-----  
C H O T E A U   A Q U I F E R  
-----

East Management unit

4584-3	HUTCHINSON	320	640
4679-3	HUTCHINSON	205	410
4704-3	HUTCHINSON	230	460
4706-3	HUTCHINSON	375	750
		1,130	2,260

Current number of permits in management unit = 4  
 Irrigation appropriations from this management unit = 2,260 ac-ft  
 Number of acres under irrigation permit in the management  
 unit = 1,130

Middle Management unit

1214-3	HUTCHINSON	160	480
1299-3	HUTCHINSON	160	480
3186-3	HUTCHINSON	480	1,440
		800	2,400

Current number of permits in management unit = 3  
 Irrigation appropriations from this management unit = 2,400 ac-ft  
 Number of acres under irrigation permit in the management  
 unit = 800

Tyndall Management unit

2299-3	BON HOMME	156	468
2587-3	BON HOMME	126	378
2743-3	BON HOMME	40	120
3576-3	BON HOMME	155	465
3577-3	BON HOMME	215	645
3579-3	BON HOMME	240	720
3581-3	BON HOMME	160	480
3582-3	BON HOMME	320	960
3583-3	BON HOMME	285	855
3809-3	BON HOMME	0	0
3810-3	BON HOMME	105	0
3811-3	BON HOMME	168	504

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
3851-3	BON HOMME	160	480
3889-3	BON HOMME	55	165
4096-3	BON HOMME	240	720
4240-3	BON HOMME	140	420
4474-3	BON HOMME	293	586
4474-3	BON HOMME	293	586
4650-3	BON HOMME	0	0
4650-3	BON HOMME	0	0
4727-3	BON HOMME	130	260
4727-3	BON HOMME	130	260
4787-3	BON HOMME	200	400
4787-3	BON HOMME	200	400
4850-3	BON HOMME	79	158
4850-3	BON HOMME	79	158
		<u>3,969</u>	<u>10,188</u>

Current number of permits in management unit = 26  
 Irrigation appropriations from this management unit = 10,188 ac-ft  
 Number of acres under irrigation permit in the management  
 unit = 3,969

West Management unit

2320-3	BON HOMME	303	909
293-3	CHARLES_MIX	240	720
311-3	CHARLES_MIX	200	600
327-3	CHARLES_MIX	120	360
363-3	CHARLES_MIX	185	555
1095-3	CHARLES_MIX	186	558
1230-3	CHARLES_MIX	160	480
1237-3	CHARLES_MIX	80	240
1252-3	CHARLES_MIX	120	360
1343-3	CHARLES_MIX	138	414
1352-3	CHARLES_MIX	132	396
1355-3	CHARLES_MIX	100	300
1368-3	CHARLES_MIX	240	720
1392-3	CHARLES_MIX	234	702
1395-3	CHARLES_MIX	80	240
1619-3A	CHARLES_MIX	235	704
1632-3	CHARLES_MIX	320	960
1633-3	CHARLES_MIX	140	420
1884-3	CHARLES_MIX	130	390
2216-3	CHARLES_MIX	260	780
2217-3	CHARLES_MIX	260	780
2250-3	CHARLES_MIX	182	546
2282-3	CHARLES_MIX	160	480
2310-3A	CHARLES_MIX	160	480

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	As of January 1, 1983	
		Permitted Acres	Appropriation (ac-ft)
2323-3	CHARLES_MIX	220	660
2583-3	CHARLES_MIX	80	240
2922-3	CHARLES_MIX	140	420
3318-3	CHARLES_MIX	80	240
3696-3	CHARLES_MIX	159	477
3697-3	CHARLES_MIX	160	480
3698-3	CHARLES_MIX	151	453
3700-3	CHARLES_MIX	160	480
3701-3	CHARLES_MIX	320	960
3704-3	CHARLES_MIX	160	480
3705-3	CHARLES_MIX	260	780
3706-3	CHARLES_MIX	160	480
3707-3	CHARLES_MIX	160	480
3736-3	CHARLES_MIX	0	0
3750-3	CHARLES_MIX	80	240
4004-3	CHARLES_MIX	200	600
4005-3	CHARLES_MIX	420	1,260
4198-3	CHARLES_MIX	200	600
4526-3	CHARLES_MIX	160	320
4594-3	CHARLES_MIX	250	500
4744-3	CHARLES_MIX	160	320
4869-3	CHARLES_MIX	160	320
4878-3	CHARLES_MIX	170	340
		8,072	23,315
1557-3	DOUGLAS	255	765
2142-3	DOUGLAS	132	396
3703-3	DOUGLAS	116	348
4059-3	DOUGLAS	235	705
		738	2,214

Current number of permits in management unit = 51  
 Irrigation appropriations from this management unit = 26,438 ac-ft  
 Number of acres under irrigation permit in the management  
 unit = 9,113

THERE ARE 84 PERMITS FOR THE CHOTEAU AQUIFER.  
 AMOUNT APPROPRIATED FROM AQUIFER = 41,286 AC-FT.  
 TOTAL NUMBER OF PERMITTED ACRES FOR AQUIFER = 15,012

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

As of January 1, 1983

Permit Number	County Name	Permitted Acres	Appropriation (ac-ft)
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-----  
CODELL SANDSTONE AQUIFER  
-----

1581-3	DAVISON	80	240
1693-3	DAVISON	220	660
		----- 300	----- 900
 3008-3	 SANBORN	 170	 510

THERE ARE 3 PERMITS FOR THE CODELL SANDSTONE AQUIFER.  
 AMOUNT APPROPRIATED FROM AQUIFER = 1,410 AC-FT.  
 TOTAL NUMBER OF PERMITTED ACRES FOR AQUIFER = 470

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

As of January 1, 1983

Permit Number	County Name	Permitted Acres	Appropriation (ac-ft)
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-----  
COTEAU LAKES AQUIFER  
-----

2795-3	DAY	582	1,746
4365-3	DAY	145	290
		-----	-----
		727	2,036
2662-3	ROBERTS	290	870
2931-3	ROBERTS	140	420
3931-3	ROBERTS	532	1,596
4041-3	ROBERTS	393	1,179
4466-3	ROBERTS	80	160
4569-3	ROBERTS	160	320
4604-3	ROBERTS	156	312
4649-3	ROBERTS	0	0
4756-3	ROBERTS	145	290
4886-3	ROBERTS	0	0
		-----	-----
		1,896	5,147

THERE ARE 12 PERMITS FOR THE COTEAU LAKES AQUIFER.  
 AMOUNT APPROPRIATED FROM AQUIFER = 7,183 AC-FT.  
 TOTAL NUMBER OF PERMITTED ACRES FOR AQUIFER = 2,623

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

As of January 1, 1983

Permit Number	County Name	Permitted Acres	Appropriation (ac-ft)
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-----  
COW CREEK AQUIFER  
-----

1285-3	SULLY	136	408
1492-3	SULLY	136	408
1785-3	SULLY	136	408
1871-3	SULLY	1,360	4,080
2138-3	SULLY	200	600
2195-3	SULLY	440	1,320
2260-3	SULLY	600	1,800
3349-3	SULLY	132	396
3377-3	SULLY	156	468
4481-3	SULLY	640	1,280
4775-3	SULLY	780	0
		-----	-----
		4,716	11,168

THERE ARE 11 PERMITS FOR THE COW CREEK AQUIFER.  
 AMOUNT APPROPRIATED FROM AQUIFER = 11,168 AC-FT.  
 TOTAL NUMBER OF PERMITTED ACRES FOR AQUIFER = 4,716

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

As of January 1, 1983

Permit Number	County Name	Permitted Acres	Appropriation (ac-ft)
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-----  
C R O W   C R E E K   A Q U I F E R  
-----

1684-3	BUFFALO	178	534
2751-3	BUFFALO	140	420
3456-3	BUFFALO	717	2,151
3456-3	BUFFALO	717	2,151
3492-3	BUFFALO	251	753
3493-3	BUFFALO	279	837
3512-3	BUFFALO	105	315
3609-3	BUFFALO	160	480
3657-3	BUFFALO	65	195
3892-3	BUFFALO	160	480
3939-3	BUFFALO	140	0
3974-3	BUFFALO	200	600
4030-3	BUFFALO	240	720
4078-3	BUFFALO	320	960
4078-3	BUFFALO	320	960
4078-3	BUFFALO	320	960
4852-3	BUFFALO	100	200
4852-3	BUFFALO	100	200

	-----	-----
	4,512	12,916

1980-3	JERAULD	390	1,170
2721-3	JERAULD	132	396
3395-3	JERAULD	160	480
3513-3	JERAULD	200	600
3540-3	JERAULD	575	1,725
3572-3	JERAULD	380	1,140
3996-3	JERAULD	119	357
4533-3	JERAULD	160	320

	-----	-----
	2,116	6,188

THERE ARE 26 PERMITS FOR THE CROW CREEK AQUIFER.  
 AMOUNT APPROPRIATED FROM AQUIFER = 19,104 AC-FT.  
 TOTAL NUMBER OF PERMITTED ACRES FOR AQUIFER = 6,628

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	As of January 1, 1983	
		Permitted Acres	Appropriation (ac-ft)

-----  
CROW LAKE AQUIFER  
-----

3160-3	AURORA	175	525
3294-3	AURORA	80	240
		255	765
752-3	JERAULD	90	270

THERE ARE 3 PERMITS FOR THE CROW LAKE AQUIFER.  
 AMOUNT APPROPRIATED FROM AQUIFER = 1,035 AC-FT.  
 TOTAL NUMBER OF PERMITTED ACRES FOR AQUIFER = 345



I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)

----- DAKOTA FORMATION AQUIFER -----

4769-3	BRULE	130	260
1054-3	BROWN	43	128
394-3	CHARLES_MIX	200	600
4572-3	TURNER	240	480

THERE ARE 4 PERMITS FOR THE DAKOTA FORMATION AQUIFER.  
 AMOUNT APPROPRIATED FROM AQUIFER = 1,468 AC-FT.  
 TOTAL NUMBER OF PERMITTED ACRES FOR AQUIFER = 613

IRRIGATION SUMMARY  
BY AQUIFER

As of January 1, 1983

Permit Number	County Name	Permitted Acres	Appropriation (ac-ft)
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----- DEEP JAMES AQUIFER -----

2314-3	BROWN	306	918
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THERE IS 1 PERMIT FOR THE DEEP JAMES AQUIFER.  
AMOUNT APPROPRIATED FROM AQUIFER = 918 AC-FT.  
TOTAL NUMBER OF PERMITTED ACRES FOR AQUIFER = 306

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

As of January 1, 1983

Permit Number	County Name	Permitted Acres	Appropriation (ac-ft)
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-----  
DELMONT AQUIFER  
-----

2163-3	CHARLES_MIX	154	462
2232-3	CHARLES_MIX	290	870
3695-3	CHARLES_MIX	67	201
4641-3A	CHARLES_MIX	0	0
		----- 511	----- 1,533

1746-3	DOUGLAS	120	360
1805-3	DOUGLAS	132	396
1895-3	DOUGLAS	150	450
2143-3	DOUGLAS	220	660
2144-3	DOUGLAS	128	384
2202-3	DOUGLAS	157	471
2214-3	DOUGLAS	169	507
2283-3	DOUGLAS	150	450
2284-3	DOUGLAS	122	366
3699-3	DOUGLAS	160	480
3702-3	DOUGLAS	151	453
3708-3	DOUGLAS	75	225
4461-3	DOUGLAS	163	326
4505-3	DOUGLAS	44	0
4528-3	DOUGLAS	280	560
4535-3	DOUGLAS	0	0
4670-3	DOUGLAS	40	80
		----- 2,261	----- 6,168

THERE ARE 21 PERMITS FOR THE DELMONT AQUIFER.  
 AMOUNT APPROPRIATED FROM AQUIFER = 7,701 AC-FT.  
 TOTAL NUMBER OF PERMITTED ACRES FOR AQUIFER = 2,772

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	As of January 1, 1983	
		Permitted Acres	Appropriation (ac-ft)

-----  
ELM AQUIFER  
-----

Ipswich Management unit

2521-3	EDMUNDS	540	1,520
2738-3	EDMUNDS	800	2,400
2768-3	EDMUNDS	160	480
2934-3	EDMUNDS	320	960
4040-3	EDMUNDS	149	447
		1,969	5,907

Current number of permits in management unit = 5  
 Irrigation appropriations from this management unit = 5,907 ac-ft  
 Number of acres under irrigation permit in the management unit = 1,969

Northern Brown Management unit

122-3	BROWN	279	837
205-3	BROWN	40	120
1364-3	BROWN	242	727
1536-3	BROWN	54	162
1667-3	BROWN	75	225
1673-3	BROWN	305	915
2233-3	BROWN	8	24
2481-3	BROWN	128	384
2563-3	BROWN	110	330
2580-3	BROWN	135	405
2603-3	BROWN	135	405
2604-3	BROWN	135	405
3384-3	BROWN	120	360
3988-3	BROWN	40	120
4015-3	BROWN	300	900
4017-3	BROWN	520	1,560
4022-3	BROWN	160	480
4086-3	BROWN	160	480
4157-3	BROWN	240	720
4257-3	BROWN	160	480
4261-3	BROWN	240	720
4339-3	BROWN	156	312
4340-3	BROWN	152	304
4890-3	BROWN	0	0
		3,894	11,375

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

As of January 1, 1983

Permit Number	County Name	Permitted Acres	Appropriation (ac-ft)
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Current number of permits in management unit = 24  
 Irrigation appropriations from this management unit = 11,375 ac-ft  
 Number of acres under irrigation permit in the management  
 unit = 3,894

Southern Brown Management unit

3007-3	BROWN	135	405
3652-3	BROWN	133	399
3692-3	BROWN	4	11
3747-3	BROWN	159	477
3956-3	BROWN	180	540
3976-3	BROWN	80	240
		----- 691	----- 2,072

Current number of permits in management unit = 6  
 Irrigation appropriations from this management unit = 2,072 ac-ft  
 Number of acres under irrigation permit in the management  
 unit = 691

THERE ARE 35 PERMITS FOR THE ELM AQUIFER.  
 AMOUNT APPROPRIATED FROM AQUIFER = 19,354 AC-FT.  
 TOTAL NUMBER OF PERMITTED ACRES FOR AQUIFER = 6,554

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	<u>As of January 1, 1983</u> Permitted Acres	Appropriation (ac-ft)
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-----  
ELM CREEK AQUIFER  
-----

1550-3	HAND	110	330
1555-3	HAND	152	455
1556-3	HAND	45	136
1672-3	HAND	208	625
1673-3	HAND	180	539
4688-3	HAND	100	200
		-----	-----
		795	2,285

THERE ARE 6 PERMITS FOR THE ELM CREEK AQUIFER.  
 AMOUNT APPROPRIATED FROM AQUIFER = 2,285 AC-FT.  
 TOTAL NUMBER OF PERMITTED ACRES FOR AQUIFER = 795

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

As of January 1, 1983

Permit Number	County Name	Permitted Acres	Appropriation (ac-ft)
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-----  
ETHAN AQUIFER  
-----

1362-3	DAVISON	560	1,680
1363-3	DAVISON	200	600
1480-3	DAVISON	240	720

		1,000	3,000
--	--	-------	-------

1333-3	HUTCHINSON	232	696
--------	------------	-----	-----

THERE ARE 4 PERMITS FOR THE ETHAN AQUIFER.  
 AMOUNT APPROPRIATED FROM AQUIFER = 3,696 AC-FT.  
 TOTAL NUMBER OF PERMITTED ACRES FOR AQUIFER = 1,232

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	As of January 1, 1983	
		Permitted Acres	Appropriation (ac-ft)

-----  
FAIRMOUNT AQUIFER  
-----

3538-3	ROBERTS	132	396
4844-3	ROBERTS	280	560
		412	956

THERE ARE 2 PERMITS FOR THE FAIRMOUNT AQUIFER.  
 AMOUNT APPROPRIATED FROM AQUIFER = 956 AC-FT.  
 TOTAL NUMBER OF PERMITTED ACRES FOR AQUIFER = 412



I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

As of January 1, 1983

Permit Number	County Name	Permitted Acres	Appropriation (ac-ft)
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-----  
FLOYD AQUIFER  
-----

East James Management unit

131-3	BEADLE	160	481
243-3	BEADLE	156	468
580-3	BEADLE	160	480
659-3	BEADLE	146	438
1142-3	BEADLE	230	690
1462-3	BEADLE	180	540
1522-3	BEADLE	240	720
1553-3	BEADLE	100	300
1736-3	BEADLE	150	450
1793-3	BEADLE	132	396
1794-3	BEADLE	132	396
1795-3	BEADLE	132	396
1796-3	BEADLE	128	384
2040-3	BEADLE	132	396
2181-3	BEADLE	240	720
2246-3	BEADLE	132	396
2247-3	BEADLE	100	300
2248-3	BEADLE	160	480
2261-3	BEADLE	174	522
2312-3	BEADLE	160	480
2480-3	BEADLE	350	1,050
2495-3	BEADLE	151	453
2547-3	BEADLE	264	792
2548-3	BEADLE	132	396
2595-3	BEADLE	132	396
2821-3	BEADLE	159	477
2829-3	BEADLE	160	480
2830-3	BEADLE	156	468
2835-3	BEADLE	140	420
2977-3	BEADLE	137	411
2988-3	BEADLE	400	1,200
3077-3	BEADLE	150	450
3078-3	BEADLE	140	420
3084-3	BEADLE	240	720
3085-3	BEADLE	244	732
3107-3	BEADLE	160	480
3262-3	BEADLE	134	402
3326-3	BEADLE	123	369
3465-3	BEADLE	155	465
3516-3	BEADLE	136	408
3517-3	BEADLE	111	333
3570-3	BEADLE	386	1,158
3863-3	BEADLE	100	300
3864-3	BEADLE	320	960
3935-3	BEADLE	132	396

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

As of January 1, 1983

Permit Number	County Name	Permitted Acres	Appropriation (ac-ft)
4010-3	BEADLE	264	792
4011-3	BEADLE	160	480
4123-3	BEADLE	132	396
4248-3	BEADLE	100	300
4397-3	BEADLE	141	282
4435-3	BEADLE	0	0
4487-3	BEADLE	200	400
4488-3	BEADLE	0	0
4488-3A	BEADLE	146	292
4566-3	BEADLE	160	320
4575-3A	BEADLE	90	180
4583-3	BEADLE	227	454
4589-3	BEADLE	109	218
4596-3	BEADLE	132	264
4683-3	BEADLE	138	276
4777-3	BEADLE	160	320
4778-3	BEADLE	100	200
4818-3	BEADLE	110	220
4820-3	BEADLE	140	280
4835-3	BEADLE	132	264
		<u>10,497</u>	<u>29,507</u>
2774-3	HANSON	320	960
1131-3	MINER	160	480
1137-3	MINER	150	450
1146-3	MINER	160	480
1147-3	MINER	80	240
1150-3	MINER	320	960
1165-3	MINER	160	480
1166-3	MINER	159	477
1184-3	MINER	160	480
1227-3	MINER	225	674
1367-3	MINER	840	2,520
1400-3	MINER	637	1,911
1413-3	MINER	160	480
1414-3	MINER	480	1,440
1417-3	MINER	480	1,440
1419-3	MINER	160	480
1648-3	MINER	160	480
4317-3	MINER	140	280
		<u>4,631</u>	<u>13,752</u>
957-3	SANBORN	140	420
1375-3	SANBORN	160	480
1375-3	SANBORN	160	480
2819-3	SANBORN	135	405
		-----	-----

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
		595	1,785

Current number of permits in management unit = 87  
 Irrigation appropriations from this management unit = 46,004 ac-ft  
 Number of acres under irrigation permit in the management  
 unit = 16,043

Pearl Creek Management unit

1883-3	BEADLE	121	363
2727-3	BEADLE	132	396
3606-3	BEADLE	15	45
3607-3	BEADLE	132	396
4114-3	BEADLE	264	792
4115-3	BEADLE	252	756
4197-3	BEADLE	80	240
4356-3	BEADLE	176	352
4378-3	BEADLE	278	556
4652-3	BEADLE	149	298
4854-3	BEADLE	160	320
4906-3	BEADLE	200	400
		<u>1,959</u>	<u>4,914</u>

Current number of permits in management unit = 12  
 Irrigation appropriations from this management unit = 4,914 ac-ft  
 Number of acres under irrigation permit in the management  
 unit = 1,959

THERE ARE 99 PERMITS FOR THE FLOYD AQUIFER.  
 AMOUNT APPROPRIATED FROM AQUIFER = 50,918 AC-FT.  
 TOTAL NUMBER OF PERMITTED ACRES FOR AQUIFER = 18,002

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

		<u>As of January 1, 1983</u>	
Permit Number	County Name	Permitted Acres	Appropriation (ac-ft)

-----  
G E D D E S   A Q U I F E R  
-----

3459-3	CHARLES_MIX	400	1,200
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THERE IS 1 PERMIT FOR THE GEDDES AQUIFER.  
 AMOUNT APPROPRIATED FROM AQUIFER = 1,200 AC-FT.  
 TOTAL NUMBER OF PERMITTED ACRES FOR AQUIFER = 400

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

As of January 1, 1983

Permit Number	County Name	Permitted Acres	Appropriation (ac-ft)
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-----  
GRAND AQUIFER  
-----

1342-3	CAMPBELL	130	390
1750-3	CAMPBELL	160	480
1990-3	CAMPBELL	132	396
2012-3	CAMPBELL	135	406
2119-3	CAMPBELL	136	408
2355-3	CAMPBELL	136	408
2949-3	CAMPBELL	160	480
3023-3	CAMPBELL	280	840
3170-3	CAMPBELL	264	792
3367-3	CAMPBELL	320	960
3368-3	CAMPBELL	320	960
3658-3	CAMPBELL	160	480
3684-3	CAMPBELL	1,200	3,600
3803-3	CAMPBELL	480	1,440
3879-3	CAMPBELL	320	960
3881-3	CAMPBELL	160	480
3882-3	CAMPBELL	160	480
3883-3	CAMPBELL	235	705
3993-3	CAMPBELL	480	1,440
4080-3	CAMPBELL	160	480
4310-3	CAMPBELL	320	640
4448-3A	CAMPBELL	160	320
4525-3	CAMPBELL	160	320
4602-3	CAMPBELL	160	320
4705-3	CAMPBELL	160	0

		6,488	18,185
--	--	-------	--------

3323-3	EDMUNDS	320	960
2983-3	WALWORTH	135	405
3165-3	WALWORTH	624	1,872

		759	2,277
--	--	-----	-------

THERE ARE 28 PERMITS FOR THE GRAND AQUIFER.  
 AMOUNT APPROPRIATED FROM AQUIFER = 21,422 AC-FT.  
 TOTAL NUMBER OF PERMITTED ACRES FOR AQUIFER = 7,567

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

As of January 1, 1983

Permit Number	County Name	Permitted Acres	Appropriation (ac-ft)
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-----  
GRAY GOOSE AQUIFER  
-----

1585-3	HUGHES	28	84
1621-3	HUGHES	249	747
1987-3	HUGHES	216	648
2488-3A	HUGHES	307	921
3354-3	HUGHES	135	405
4500-3	HUGHES	132	264
4521-3	HUGHES	320	640
4580-3	HUGHES	320	640
		----- 1,707	----- 4,349

THERE ARE 8 PERMITS FOR THE GRAY GOOSE AQUIFER.  
 AMOUNT APPROPRIATED FROM AQUIFER = 4,349 AC-FT.  
 TOTAL NUMBER OF PERMITTED ACRES FOR AQUIFER = 1,707

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

As of January 1, 1983

Permit Number	County Name	Permitted Acres	Appropriation (ac-ft)
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-----  
HIGHMORE-BLUNT AQUIFER  
-----

1091-3	HUGHES	154	462
1113-3	HUGHES	145	435
1116-3	HUGHES	35	105
1445-3	HUGHES	154	461
2043-3	HUGHES	89	268
2075-3	HUGHES	600	1,800
2354-3	HUGHES	52	156
2488-3	HUGHES	607	1,821
4767-3	HUGHES	312	0
4834-3	HUGHES	360	720
		-----	-----
		2,508	6,228

380-3	HYDE	92	276
380-3A	HYDE	26	0
1690-3	HYDE	1,040	3,120
1691-3	HYDE	640	1,920
2845-3	HYDE	320	960
3287-3	HYDE	160	480
3330-3	HYDE	260	780
3567-3	HYDE	0	0
		-----	-----
		2,538	7,536

1283-3	SULLY	640	1,920
1381-3	SULLY	126	378
1503-3	SULLY	200	600
1927-3	SULLY	320	960
2080-3	SJLLY	480	1,440
3821-3	SULLY	566	1,698
		-----	-----
		2,332	6,996

THERE ARE 24 PERMITS FOR THE HIGHMORE BLUNT AQUIFER.  
 AMOUNT APPROPRIATED FROM AQUIFER = 20,760 AC-FT.  
 TOTAL NUMBER OF PERMITTED ACRES FOR AQUIFER = 7,377

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

		As of January 1, 1983	
Permit Number	County Name	Permitted Acres	Appropriation (ac-ft)

-----  
HILLSVIEW AQUIFER  
-----

2337-3	McPHERSON	165	495
2951-3	McPHERSON	175	525
3971-3	McPHERSON	160	480
4013-3	McPHERSON	160	480
4129-3	McPHERSON	272	816
		932	2,796

THERE ARE 5 PERMITS FOR THE HILLSVIEW AQUIFER.  
 AMOUNT APPROPRIATED FROM AQUIFER = 2,796 AC-FT.  
 TOTAL NUMBER OF PERMITTED ACRES FOR AQUIFER = 932



I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	<u>As of January 1, 1983</u> Permitted Acres	Appropriation (ac-ft)
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----- HOWARD AQUIFER -----

4680-3	LAKE	133	266
4789-3	LAKE	320	640
		----- 453	----- 906

THERE ARE 2 PERMITS FOR THE HOWARD AQUIFER.  
 AMOUNT APPROPRIATED FROM AQUIFER = 906 AC-FT.  
 TOTAL NUMBER OF PERMITTED ACRES FOR AQUIFER = 453.

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)

-----  
HUBONMIX AQUIFER  
-----

4730-3	BON HOMME	40	80
4730-3	BON HOMME	40	80
4803-3	BON HOMME	132	264
4803-3	BON HOMME	132	264
		344	688

THERE ARE 4 PERMITS FOR THE HUBONMIX AQUIFER.  
 AMOUNT APPROPRIATED FROM AQUIFER = 688 AC-FT.  
 TOTAL NUMBER OF PERMITTED ACRES FOR AQUIFER = 344

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)

-----  
INTERMEDIATE AQUIFER  
-----

2218-3	CHARLES_MIX	260	780
3967-3	CHARLES_MIX	160	480
		420	1,260

THERE ARE 2 PERMITS FOR THE INTERMEDIATE AQUIFER.  
 AMOUNT APPROPRIATED FROM AQUIFER = 1,260 AC-FT.  
 TOTAL NUMBER OF PERMITTED ACRES FOR AQUIFER = 420

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)

-----  
LENNOX AQUIFER  
-----

4692-3	LINCOLN	135	270
4693-3	LINCOLN	235	470
		370	740

THERE ARE 2 PERMITS FOR THE LENNOX AQUIFER.  
 AMOUNT APPROPRIATED FROM AQUIFER = 740 AC-FT.  
 TOTAL NUMBER OF PERMITTED ACRES FOR AQUIFER = 370

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	As of January 1, 1983	
		Permitted Acres	Appropriation (ac-ft)

----- LOWER-JAMES-MISSOURI AQUIFER -----

3767-3	CLAY	125	375
4246-3	CLAY	208	624
4644-3	CLAY	220	440
		553	1,439
4020-3	HUTCHINSON	138	414
4804-3	HUTCHINSON	52	103
4902-3	HUTCHINSON	121	242
		311	759
277-3	YANKTON	40	120
316-3	YANKTON	76	228
374-3	YANKTON	158	474
384-3	YANKTON	113	339
484-3	YANKTON	113	339
512-3	YANKTON	60	180
1661-3	YANKTON	200	600
1687-3	YANKTON	83	249
1919-3	YANKTON	157	470
2338-3	YANKTON	117	351
3069-3	YANKTON	800	2,400
3292-3	YANKTON	180	540
3369-3	YANKTON	275	825
3399-3	YANKTON	145	435
3476-3	YANKTON	140	420
3862-3	YANKTON	80	240
3995-3	YANKTON	750	2,250
4091-3	YANKTON	471	1,413
4251-3	YANKTON	40	0
4443-3	YANKTON	148	296
4506-3	YANKTON	232	464
4551-3	YANKTON	140	280
4629-3	YANKTON	154	308
4827-3	YANKTON	160	320
4855-3	YANKTON	100	200
		4,932	13,741

Scotland Management unit

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
2611-3	YANKTON	160	480
3514-3	YANKTON	110	330
4179-3	YANKTON	80	240
4555-3	YANKTON	168	336
4661-3	YANKTON	320	640
4802-3	YANKTON	60	120
		----- 898	----- 2,146

Current number of permits in management unit = 6  
 Irrigation appropriations from this management unit = 2,146 ac-ft  
 Number of acres under irrigation permit in the management  
 unit = 898

THERE ARE 37 PERMITS FOR THE LOWER-JAMES-MISSOURI AQUIFER.  
 AMOUNT APPROPRIATED FROM AQUIFER = 18,085 AC-FT.  
 TOTAL NUMBER OF PERMITTED ACRES FOR AQUIFER = 6,693

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

As of January 1, 1983

Permit Number	County Name	Permitted Acres	Appropriation (ac-ft)
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-----  
LOWER-VERMILLION-MISSOURI AQUIFER  
-----

214-3	CLAY	145	435
215-3	CLAY	180	540
229-3	CLAY	240	720
309-3	CLAY	140	420
421-3	CLAY	160	480
671-3	CLAY	243	729
973-3	CLAY	135	405
974-3	CLAY	0	0
1035-3	CLAY	38	115
1569-3	CLAY	270	810
1813-3	CLAY	144	432
1916-3	CLAY	169	507
2362-3	CLAY	132	396
2807-3	CLAY	91	273
2944-3	CLAY	105	315
2950-3	CLAY	110	330
2966-3	CLAY	74	222
2978-3	CLAY	138	414
3010-3	CLAY	263	789
3037-3	CLAY	68	204
3039-3	CLAY	140	420
3066-3	CLAY	90	270
3109-3	CLAY	258	774
3167-3	CLAY	50	150
3197-3	CLAY	140	420
3488-3	CLAY	265	795
3544-3	CLAY	480	1,440
3546-3	CLAY	360	1,080
3547-3	CLAY	160	480
3571-3	CLAY	266	798
3798-3	CLAY	147	441
3873-3	CLAY	160	480
4024-3	CLAY	236	708
4424-3	CLAY	70	140
4664-3	CLAY	120	240
4731-3	CLAY	40	80
4896-3	CLAY	80	160

-----  
5,907

-----  
17,412

376-3	UNION	160	480
377-3	UNION	160	480
2242-3	UNION	136	408
2525-3	UNION	160	480
2896-3	UNION	265	795
2925-3	UNION	122	366

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
2938-3	UNION	136	408
2939-3	UNION	80	240
2957-3	UNION	136	408
3128-3	UNION	130	390
3291-3	UNION	272	816
3796-3	UNION	80	240
4393-3	UNION	120	240
		<u>1,957</u>	<u>5,751</u>

THERE ARE 50 PERMITS FOR THE LOWER-VERMILLION-MISSOURI AQUIFER.  
 AMOUNT APPROPRIATED FROM AQUIFER = 23,163 AC-FT.  
 TOTAL NUMBER OF PERMITTED ACRES FOR AQUIFER = 7,864



I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

As of January 1, 1983

Permit Number	County Name	Permitted Acres	Appropriation (ac-ft)
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MISSOURI AQUIFER  
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428-3	CLAY	70	210
430-3	CLAY	129	387
474-3	CLAY	128	385
475-3	CLAY	320	960
977-3	CLAY	420	1,260
1006-3	CLAY	204	613
1007-3	CLAY	107	321
1034-3	CLAY	121	363
1434-3	CLAY	63	189
1624-3	CLAY	80	240
2013-3	CLAY	160	480
2053-3	CLAY	922	2,766
2158-3	CLAY	187	561
2229-3	CLAY	186	558
2293-3	CLAY	180	540
2315-3	CLAY	536	1,608
2465-3	CLAY	136	408
2584-3	CLAY	162	486
2826-3	CLAY	280	840
2947-3	CLAY	136	408
3036-3	CLAY	206	618
3168-3	CLAY	172	516
3475-3	CLAY	72	216
3487-3	CLAY	88	264
3508-3	CLAY	154	462
3611-3	CLAY	130	390
3628-3	CLAY	130	390
3655-3	CLAY	60	180
3755-3	CLAY	310	930
3908-3	CLAY	80	240
4214-3	CLAY	64	192
4557-3	CLAY	78	156
4625-3	CLAY	25	50
4676-3	CLAY	132	264
4689-3	CLAY	160	320
4701-3	CLAY	170	340
4708-3	CLAY	132	264
4718-3	CLAY	160	320
4740-3	CLAY	135	270
		-----	-----
		6,985	19,965
47-3	UNION	126	378
52-3	UNION	145	435
53-3	UNION	193	579
54-3	UNION	140	420

I R R I G A T I O N . S U M M A R Y  
B Y A Q U I F E R

Permit Number	County Name	As of January 1, 1983	
		Permitted Acres	Appropriation (ac-ft)
59-3	UNION	160	480
152-3	UNION	43	130
179-3	UNION	200	600
232-3	UNION	160	480
234-3	UNION	160	480
237-3	UNION	160	480
306-3	UNION	240	720
313-3A	UNION	170	510
314-3	UNION	280	840
322-3	UNION	139	416
324-3	UNION	160	480
331-3	UNION	160	480
383-3	UNION	150	450
400-3	UNION	190	570
406-3	UNION	160	480
452-3	UNION	320	960
501-3	UNION	320	960
503-3	UNION	220	660
518-3	UNION	150	450
592-3	UNION	295	885
845-3	UNION	227	682
849-3	UNION	151	453
991-3	UNION	191	574
1019-3	UNION	230	690
1086-3	UNION	158	473
1086-3	UNION	125	376
1092-3	UNION	252	755
1096-3	UNION	78	234
1100-3	UNION	65	194
1133-3	UNION	84	252
1136-3	UNION	80	240
1188-3	UNION	189	567
1189-3	UNION	152	457
1200-3	UNION	158	474
1208-3	UNION	224	672
1256-3	UNION	180	540
1263-3	UNION	152	456
1291-3	UNION	108	324
1294-3	UNION	102	306
1297-3	UNION	160	480
1374-3	UNION	195	585
1530-3	UNION	275	825
1567-3	UNION	240	720
1615-3	UNION	80	240
1761-3	UNION	80	240
1786-3	UNION	140	420
1932-3	UNION	120	360
1936-3	UNION	80	240
2008-3	UNION	132	396
2011-3	UNION	95	285
2015-3	UNION	144	432

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
2016-3	UNION	160	480
2017-3	UNION	136	408
2079-3	UNION	160	480
2108-3	UNION	132	396
2109-3	UNION	80	240
2114-3	UNION	320	960
2117-3	UNION	90	270
2121-3	UNION	142	426
2141-3	UNION	160	480
2189-3	UNION	108	324
2201-3	UNION	154	462
2300-3	UNION	125	375
2334-3	UNION	190	570
2339-3	UNION	120	360
2340-3	UNION	216	648
2341-3	UNION	300	900
2342-3	UNION	115	345
2343-3	UNION	105	315
2344-3	UNION	80	240
2345-3	UNION	126	378
2346-3	UNION	66	198
2347-3	UNION	126	378
2348-3	UNION	75	225
2349-3	UNION	132	396
2357-3	UNION	136	408
2358-3	UNION	150	450
2359-3	UNION	132	396
2360-3	UNION	132	396
2361-3	UNION	132	396
2370-3	UNION	160	480
2371-3	UNION	140	420
2373-3	UNION	77	232
2401-3	UNION	145	435
2402-3	UNION	75	225
2410-3	UNION	232	696
2431-3	UNION	123	369
2433-3	UNION	160	480
2434-3	UNION	34	102
2435-3	UNION	102	306
2436-3	UNION	132	396
2447-3	UNION	136	408
2448-3	UNION	136	408
2449-3	UNION	90	270
2450-3	UNION	130	390
2466-3	UNION	272	816
2474-3	UNION	132	396
2475-3	UNION	148	444
2511-3	UNION	160	480
2512-3	UNION	82	246
2526-3	UNION	72	216
2531-3	UNION	255	765

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	As of January 1, 1983	
		Permitted Acres	Appropriation (ac-ft)
2532-3	UNION	200	600
2535-3	UNION	153	459
2550-3	UNION	120	360
2620-3	UNION	136	408
2621-3	UNION	136	408
2622-3	UNION	116	348
2623-3	UNION	136	408
2624-3	UNION	125	375
2625-3	UNION	132	396
2750-3	UNION	128	384
2753-3	UNION	106	318
2763-3	UNION	120	360
2858-3	UNION	160	480
2868-3	UNION	136	408
2889-3	UNION	250	750
2895-3	UNION	144	432
2935-3	UNION	70	210
2936-3	UNION	70	210
2937-3	UNION	160	480
2940-3	UNION	136	408
2958-3	UNION	160	480
3005-3	UNION	200	600
3011-3	UNION	233	699
3071-3	UNION	60	180
3112-3	UNION	143	429
3122-3	UNION	100	300
3127-3	UNION	181	542
3137-3	UNION	136	408
3153-3	UNION	80	240
3154-3	UNION	140	420
3169-3	UNION	145	435
3249-3	UNION	130	390
3283-3	UNION	160	480
3284-3	UNION	65	195
3286-3	UNION	130	390
3306-3	UNION	80	240
3313-3	UNION	309	927
3336-3	UNION	415	1,245
3344-3	UNION	133	399
3345-3	UNION	130	390
3353-3	UNION	90	270
3364-3	UNION	67	201
3365-3	UNION	120	360
3403-3	UNION	120	360
3430-3	UNION	200	600
3451-3	UNION	160	480
3461-3	UNION	433	1,299
3486-3	UNION	180	540
3515-3	UNION	136	408
3520-3	UNION	136	408
3527-3	UNION	68	204

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
3531-3	UNION	138	414
3549-3	UNION	240	720
3551-3	UNION	80	240
3602-3	UNION	139	417
3613-3	UNION	80	240
3635-3	UNION	160	480
3636-3	UNION	233	699
3644-3	UNION	63	189
3645-3	UNION	240	720
3659-3	UNION	80	240
3673-3	UNION	40	120
3674-3	UNION	140	420
3677-3	UNION	103	309
3679-3	UNION	240	720
3680-3	UNION	320	960
3711-3	UNION	160	480
3712-3	UNION	144	432
3769-3	UNION	80	240
3823-3	UNION	147	441
3828-3	UNION	200	600
3850-3	UNION	60	180
3853-3	UNION	160	480
3854-3	UNION	166	499
3857-3	UNION	164	491
3859-3	UNION	80	240
3866-3	UNION	70	210
3868-3	UNION	150	450
3869-3	UNION	144	432
3870-3	UNION	136	408
3871-3	UNION	281	843
3907-3	UNION	90	270
3910-3	UNION	130	390
3911-3	UNION	155	465
3920-3	UNION	180	540
3959-3	UNION	160	480
3970-3	UNION	78	234
4031-3	UNION	236	708
4032-3	UNION	200	600
4033-3	UNION	140	420
4045-3	UNION	673	2,019
4244-3	UNION	160	480
4247-3	UNION	267	801
4255-3	UNION	120	360
4259-3	UNION	25	75
4281-3	UNION	160	480
4370-3	UNION	60	120
4421-3	UNION	240	480
4433-3	UNION	160	320
4438-3	UNION	120	240
4439-3	UNION	220	440
4503-3	UNION	160	320

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
4527-3	UNION	80	160
4534-3	UNION	105	210
4543-3	UNION	320	640
4558-3	UNION	120	240
4562-3	UNION	80	160
4582-3	UNION	132	264
4585-3	UNION	190	380
4587-3	UNION	130	260
4598-3	UNION	132	264
4611-3	UNION	160	320
4651-3	UNION	160	320
4675-3	UNION	156	313
4677-3	UNION	80	160
4696-3	UNION	54	108
4702-3	UNION	60	120
4732-3	UNION	189	378
4734-3	UNION	120	240
4745-3	UNION	280	560
4762-3	UNION	160	320
4874-3	UNION	40	80
4884-3	UNION	50	100
		<u>34,725</u>	<u>100419</u>
126-3	YANKTON	200	600
127-3	YANKTON	160	480
278-3	YANKTON	65	195
366-3	YANKTON	160	480
373-3	YANKTON	80	240
437-3	YANKTON	76	228
1680-3	YANKTON	327	980
1879-3	YANKTON	604	1,812
1961-3	YANKTON	62	185
2116-3	YANKTON	132	396
2184-3	YANKTON	224	672
2331-3	YANKTON	32	96
2335-3	YANKTON	160	480
2443-3	YANKTON	192	576
3315-3	YANKTON	160	480
3343-3	YANKTON	130	390
3722-3	YANKTON	240	720
3846-3	YANKTON	260	780
3855-3	YANKTON	80	240
3865-3	YANKTON	110	330
3894-3	YANKTON	290	870
3964-3	YANKTON	260	780
4473-3	YANKTON	305	609
4491-3	YANKTON	60	120
4492-3	YANKTON	60	120
4603-3	YANKTON	35	70

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
4613-3	YANKTON	148	296
4678-3	YANKTON	130	260
4700-3	YANKTON	136	272
4742-3	YANKTON	160	320
4759-3	YANKTON	37	74
4782-3	YANKTON	127	254
		<u>5,201</u>	<u>14,405</u>

Greenwood Management unit

4800-3	CHARLES_MIX	40	80
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Pierre Management unit

786-3A	HUGHES	36	109
1083-3	HUGHES	15	45
1202-3	HUGHES	241	722
1304-3	HUGHES	25	75
1537-3	HUGHES	275	825
		<u>592</u>	<u>1,776</u>

Current number of permits in management unit = 5  
 Irrigation appropriations from this management unit = 1,776 ac-ft  
 Number of acres under irrigation permit in the management unit = 592

Peoria Management unit

2064-3	HUGHES	153	459
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THERE ARE 307 PERMITS FOR THE MISSOURI AQUIFER.  
 AMOUNT APPROPRIATED FROM AQUIFER = 137,104 AC-FT.  
 TOTAL NUMBER OF PERMITTED ACRES FOR AQUIFER = 47,697

I R R I G A T I O N   S U M M A R Y  
 B Y   A Q U I F E R

As of January 1, 1983

Permit Number	County Name	Permitted Acres	Appropriation (ac-ft)
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 M I D D L E   J A M E S   A Q U I F E R  
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Aberdeen Management unit

2867-3	BROWN	635	1,905
2870-3	BROWN	240	720
3274-3	BROWN	160	480
3480-3	BROWN	262	786
3972-3	BROWN	132	396
4639-3	BROWN	160	320
4681-3	BROWN	80	0
4757-3	BROWN	160	0
4784-3	BROWN	132	264
		-----	-----
		1,961	4,871

3031-3	SPINK	290	870
3187-3	SPINK	264	792
3725-3	SPINK	160	480
3848-3	SPINK	320	960
3867-3	SPINK	160	480
		-----	-----
		1,194	3,582

Current number of permits in management unit = 14  
 Irrigation appropriations from this management unit = 8,453 ac-ft  
 Number of acres under irrigation permit in the management  
 unit = 3,155

Columbia Management unit

1168-3	BROWN	48	144
1658-3	BROWN	84	252
2173-3	BROWN	316	948
2504-3	BROWN	140	420
2928-3	BROWN	133	399
2984-3	BROWN	300	900
2990-3	BROWN	280	840
3006-3	BROWN	280	840
3043-3	BROWN	160	480
3060-3	BROWN	280	840
3121-3	BROWN	250	750
3147-3	BROWN	280	840
3148-3	BROWN	245	735
3149-3	BROWN	270	810



I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
3150-3	BROWN	245	735
3151-3	BROWN	240	720
3408-3	BROWN	320	960
4166-3	BROWN	147	441
4898-3	BROWN	130	260
		4,148	12,314
2205-3	MARSHALL	183	549
2460-3	MARSHALL	441	1,323
2461-3	MARSHALL	231	693
2920-3	MARSHALL	320	960
2921-3	MARSHALL	160	480
3014-3	MARSHALL	382	1,146
3335-3	MARSHALL	156	468
3532-3	MARSHALL	270	810
		2,143	6,429

Current number of permits in management unit = 27  
 Irrigation appropriations from this management unit = 18,743 ac-ft  
 Number of acres under irrigation permit in the management  
 unit = 6,291

THERE ARE 41 PERMITS FOR THE MIDDLE JAMES AQUIFER.  
 AMOUNT APPROPRIATED FROM AQUIFER = 27,196 AC-FT.  
 TOTAL NUMBER OF PERMITTED ACRES FOR AQUIFER = 9,446

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	<u>As of January 1, 1983</u> Permitted Acres	Appropriation (ac-ft)
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-----  
ONAKA AQUIFER  
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4007-3	EDMUNDS	80	240
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THERE IS 1 PERMIT FOR THE ONAKA AQUIFER.  
 AMOUNT APPROPRIATED FROM AQUIFER = 240 AC-FT.  
 TOTAL NUMBER OF PERMITTED ACRES FOR AQUIFER = 80

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

As of January 1, 1983

Permit Number	County Name	Permitted Acres	Appropriation (ac-ft)
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-----  
OKOBOJO CREEK AQUIFER  
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835-3	POTTER	195	585
2100-3	POTTER	450	1,350
2316-3	POTTER	584	1,752

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		1,229	3,687

1090-3	SULLY	286	858
1213-3	SULLY	620	1,860
3406-3	SULLY	871	2,613

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		1,777	5,331

THERE ARE 6 PERMITS FOR THE OKOBOJO CREEK AQUIFER.  
 AMOUNT APPROPRIATED FROM AQUIFER = 9,018 AC-FT.  
 TOTAL NUMBER OF PERMITTED ACRES FOR AQUIFER = 3,006

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

As of January 1, 1983

Permit Number	County Name	Permitted Acres	Appropriation (ac-ft)
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PARKER-CENTERVILLE AQUIFER  
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117-3A	CLAY	66	198
182-3	CLAY	145	435
3049-3	CLAY	135	405
3157-3	CLAY	105	315
3245-3	CLAY	66	198
3543-3	CLAY	240	720
3545-3	CLAY	80	240
		-----	-----
		837	2,511

121-3A	TURNER	80	240
121-3B	TURNER	80	240
142-3	TURNER	83	249
144-3	TURNER	160	480
156-3	TURNER	160	480
157-3	TURNER	160	480
164-3	TURNER	80	240
165-3	TURNER	160	480
166-3	TURNER	160	480
172-3	TURNER	120	360
176-3	TURNER	320	960
177-3	TURNER	160	480
181-3	TURNER	160	480
187-3	TURNER	160	480
189-3	TURNER	160	480
199-3	TURNER	160	480
225-3	TURNER	259	777
231-3	TURNER	160	480
288-3	TURNER	160	480
289-3	TURNER	80	240
290-3	TURNER	320	960
291-3	TURNER	80	240
304-3	TURNER	80	240
328-3	TURNER	147	441
345-3	TURNER	200	600
358-3	TURNER	161	482
387-3	TURNER	160	480
439-3	TURNER	63	189
439-3A	TURNER	97	291
456-3	TURNER	160	480
457-3	TURNER	80	240
510-3	TURNER	160	480
515-3	TURNER	135	405
568-3	TURNER	160	480
593-3	TURNER	100	300
776-3	TURNER	160	480

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
968-3	TURNER	40	120
969-3	TURNER	284	852
1164-3	TURNER	150	450
1348-3	TURNER	80	240
1388-3	TURNER	142	426
1433-3	TURNER	400	1,200
1584-3	TURNER	132	396
1664-3	TURNER	150	450
1771-3	TURNER	160	480
1773-3	TURNER	144	432
1784-3	TURNER	132	396
1878-3	TURNER	320	960
1890-3	TURNER	510	1,531
1931-3	TURNER	132	396
2031-3	TURNER	132	396
2051-3	TURNER	158	474
2062-3	TURNER	143	429
2063-3	TURNER	72	216
2135-3	TURNER	60	180
2156-3	TURNER	90	270
2200-3	TURNER	132	396
2213-3	TURNER	123	369
2220-3	TURNER	80	240
2230-3	TURNER	136	408
2234-3	TURNER	132	396
2287-3	TURNER	133	399
2288-3	TURNER	76	228
2352-3	TURNER	406	1,218
2365-3	TURNER	99	297
2499-3	TURNER	140	420
2552-3	TURNER	128	383
2661-3	TURNER	330	990
2690-3	TURNER	136	408
2691-3	TURNER	160	480
2734-3	TURNER	160	480
2764-3	TURNER	75	225
2810-3	TURNER	136	408
2852-3	TURNER	210	630
2897-3	TURNER	35	105
2898-3	TURNER	134	402
2962-3	TURNER	136	408
2971-3	TURNER	40	120
2981-3	TURNER	460	1,380
3050-3	TURNER	110	330
3158-3	TURNER	35	105
3246-3	TURNER	340	1,020
3248-3	TURNER	139	417
3267-3	TURNER	80	240
3500-3	TURNER	38	114
3501-3	TURNER	113	339
3504-3	TURNER	160	480

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
3548-3	TURNER	140	420
3758-3	TURNER	80	240
3805-3	TURNER	283	849
3812-3	TURNER	128	384
4122-3	TURNER	140	420
4152-3	TURNER	130	390
4218-3	TURNER	140	420
4341-3	TURNER	86	172
4366-3	TURNER	200	400
4605-3	TURNER	246	492
4605-3A	TURNER	0	0
4606-3	TURNER	75	150
4645-3	TURNER	240	480
4646-3	TURNER	300	600
4648-3	TURNER	0	0
4691-3	TURNER	127	254
4694-3	TURNER	150	300
4736-3	TURNER	0	0
4737-3	TURNER	63	126
4738-3	TURNER	150	300
4748-3	TURNER	80	160
		16,085	46,540

THERE ARE 115 PERMITS FOR THE PARKER-CENTERVILLE AQUIFER.  
 AMOUNT APPROPRIATED FROM AQUIFER = 49,051 AC-FT.  
 TOTAL NUMBER OF PERMITTED ACRES FOR AQUIFER = 16,922

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

As of January 1, 1983

Permit Number	County Name	Permitted Acres	Appropriation (ac-ft)
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-----  
PLEISTOCENE SERIES AQUIFER  
-----

Miscellaneous Management unit

2730-3	AURORA	320	960
3185-3	BROOKINGS	99	297
3497-3	BROOKINGS	70	210
3876-3	BROOKINGS	480	1,440
		-----	-----
		649	1,947

2681-3	CHARLES_MIX	146	438
3357-3	CHARLES_MIX	160	480
4472-3	CHARLES_MIX	410	820
		-----	-----
		716	1,738

2979-3	DEUEL	160	480
3953-3	MOODY	252	786
4061-3	MOODY	217	651
4523-3	MOODY	118	236
4877-3	MOODY	156	312
		-----	-----
		753	1,985

4457-3	ROBERTS	127	254
2139-3	WALWORTH	21	63

Current number of permits in management unit = 14  
 Irrigation appropriations from this management unit = 7,427 ac-ft  
 Number of acres under irrigation permit in the management unit = 2,746

Unknown Management unit

4530-3	AURORA	48	96
3754-3	BUFFALO	135	405
3845-3	BUFFALO	250	750
		-----	-----
		385	1,155

2665-3	BROOKINGS	152	456
2693-3	BROOKINGS	170	510
2694-3	BROOKINGS	220	660

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
2909-3	BROOKINGS	156	468
2910-3	BROOKINGS	156	468
3047-3	BROOKINGS	132	396
3210-3	BROOKINGS	120	360
3220-3	BROOKINGS	80	240
3221-3	BROOKINGS	162	486
3348-3	BROOKINGS	252	756
3678-3	BROOKINGS	182	546
3922-3	BROOKINGS	312	936
3953-3	BROOKINGS	262	786
3969-3	BROOKINGS	147	441
4150-3	BROOKINGS	136	408
4154-3	BROOKINGS	146	438
4155-3	BROOKINGS	312	936
4168-3	BROOKINGS	312	936
4213-3	BROOKINGS	146	438
4295-3	BROOKINGS	156	312
4332-3	BROOKINGS	150	300
4347-3	BROOKINGS	272	544
4364-3	BROOKINGS	411	822
4403-3	BROOKINGS	80	0
4442-3	BROOKINGS	136	272
4452-3	BROOKINGS	156	312
4468-3	BROOKINGS	468	936
4517-3	BROOKINGS	710	1,420
4518-3	BROOKINGS	408	816
4519-3	BROOKINGS	158	316
4524-3	BROOKINGS	120	240
4707-3	BROOKINGS	160	320
4726-3	BROOKINGS	127	254
4763-3	BROOKINGS	148	296
		<u>7,215</u>	<u>17,825</u>
3585-3	BON HOMME	25	75
1386-3	BRULE	212	636
3818-3	BRULE	600	1,800
4006-3	BRULE	220	660
4539-3	BRULE	59	118
		<u>1,091</u>	<u>3,214</u>
2543-3	CODINGTON	183	549
3800-3	CODINGTON	120	360
3909-3	CODINGTON	43	129
		<u>346</u>	<u>1,038</u>



I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
685-3	CLARK	298	394
783-3	CLARK	274	823
4793-3	CLARK	160	320
		----- 732	----- 2,037
1459-3	CHARLES_MIX	200	600
4761-3	CHARLES_MIX	170	340
		----- 370	----- 940
4801-3	DAY	225	450
4863-3	DAY	80	160
		----- 305	----- 610
281-3	DAVISON	83	249
409-3	DAVISON	30	90
1747-3	DAVISON	83	249
		----- 196	----- 588
1626-3	DEUEL	215	645
2861-3	DEUEL	223	669
2980-3	DEUEL	248	744
4765-3	DEUEL	200	0
		----- 886	----- 2,058
3400-3	FAULK	200	600
3401-3	FAULK	260	780
3904-3	FAULK	0	0
		----- 460	----- 1,380
1939-3	GRANT	71	213
2266-3	GRANT	309	927
4151-3	GRANT	180	540
4592-3	GRANT	95	190
4719-3	GRANT	160	320
4856-3	GRANT	88	176
		----- 903	----- 2,366

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
2508-3	HAND	136	408
3614-3	HAND	120	360
4574-3	HAND	85	170
		----- 341	----- 938
3942-3	HAMLIN	150	450
1527-3	HANSON	242	726
1528-3	HANSON	81	244
3510-3	HANSON	320	960
3511-3	HANSON	320	960
		----- 963	----- 2,890
3396-3	JERAULD	160	480
3783-3	JERAULD	122	366
4369-3	JERAULD	25	50
4660-3	JERAULD	280	560
		----- 587	----- 1,456
2890-3	KINGSBURY	114	342
1697-3	LAKE	4	12
3015-3	LINCOLN	156	468
3992-3	MINNEHAHA	203	609
2082-3	MCPHERSON	100	300
2943-3	MCPHERSON	54	162
3925-3	MCPHERSON	160	480
		----- 314	----- 942
1231-3	MINER	109	327
3622-3	MOODY	320	960
3639-3	MOODY	160	480
3799-3	MOODY	540	1,620
		----- 1,020	----- 3,060
1868-3	ROBERTS	107	321
1887-3	ROBERTS	57	171
3288-3	ROBERTS	430	1,290
4018-3	ROBERTS	64	192
4113-3	ROBERTS	120	360
		----- 778	----- 2,334

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	As of January 1, 1983	
		Permitted Acres	Appropriation (ac-ft)
679-3	SPINK	247	741
682-3	SPINK	94	282
1877-3	SPINK	93	279
2891-3	SPINK	52	156
2964-3	SPINK	254	762
3180-3	SPINK	160	480
3244-3	SPINK	241	723
3264-3	SPINK	100	300
3826-3	SPINK	160	480
4107-3	SPINK	182	546
4128-3	SPINK	80	240
4408-3	SPINK	160	320
4553-3	SPINK	160	0
4806-3	SPINK	117	234
		2,100	5,543
4243-3	SULLY	126	378
3471-3	TURNER	180	540
4019-3	TURNER	240	720
4665-3	TURNER	480	960
4693-3	TURNER	235	470
4747-3A	TURNER	0	0
4752-3	TURNER	240	480
4903-3	TURNER	121	242
4924-3	TURNER	480	960
		1,976	4,372
3687-3	UNION	120	360

Current number of permits in management unit = 120  
 Irrigation appropriations from this management unit = 57,863 ac-ft  
 Number of acres under irrigation permit in the management  
 unit = 22,024

THERE ARE 134 PERMITS FOR THE PLEISTOCENE SERIES AQUIFER.  
 AMOUNT APPROPRIATED FROM AQUIFER = 65,290 AC-FT.  
 TOTAL NUMBER OF PERMITTED ACRES FOR AQUIFER = 24,770

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	<u>As of January 1, 1983</u> Permitted Acres	Appropriation (ac-ft)
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----- PLUM CREEK AQUIFER -----

2812-3	HANSON	440	1,320
2813-3	HANSON	288	864
		----- 728	----- 2,184

THERE ARE 2 PERMITS FOR THE PLUM CREEK AQUIFER.  
 AMOUNT APPROPRIATED FROM AQUIFER = 2,184 AC-FT.  
 TOTAL NUMBER OF PERMITTED ACRES FOR AQUIFER = 728

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	As of January 1, 1983	
		Permitted Acres	Appropriation (ac-ft)

-----  
PRAIRIE COTEAU AQUIFER  
-----

2363-3	CODINGTON	198	594
3229-3	CODINGTON	270	810
3672-3	CODINGTON	223	669
3745-3	CODINGTON	160	480
3781-3	CODINGTON	264	792
4044-3	CODINGTON	156	468
4139-3	CODINGTON	262	786
4182-3	CODINGTON	0	0
4417-3	CODINGTON	1,034	2,068
4588-3A	CODINGTON	200	400
4749-3	CODINGTON	300	600
4926-3	CODINGTON	320	640

	3,387	8,307
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1016-3	CLARK	114	342
1898-3	CLARK	270	810
1899-3	CLARK	135	405
2672-3	CLARK	130	390
2700-3	CLARK	307	921
3026-3	CLARK	160	480
4186-3	CLARK	280	840

	1,396	4,188
--	-------	-------

760-3	DAY	167	502
1015-3	DAY	244	732
3665-3	DAY	640	1,920
3834-3	DAY	320	960
4027-3	DAY	160	480
4169-3	DAY	0	0
4191-3	DAY	152	0
4315-3	DAY	90	180
4595-3	DAY	150	300
4669-3	DAY	270	540
4821-3	DAY	330	660
4937-3	DAY	0	0

	2,523	6,274
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2715-3	GRANT	132	396
2733-3	GRANT	132	396
3342-3	GRANT	468	1,404
3503-3	GRANT	132	396

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
3561-3	GRANT	270	810
4153-3	GRANT	312	936
4184-3	GRANT	312	936
4406-3	GRANT	115	0
4637-3	GRANT	60	120
4709-3	GRANT	320	640
4715-3	GRANT	60	120
		<u>2,313</u>	<u>6,154</u>
2578-3	HAMLIN	135	405
2579-3	HAMLIN	135	405
		<u>270</u>	<u>810</u>
1803-3	KINGSBURY	296	887
2924-3	KINGSBURY	250	750
3131-3	KINGSBURY	147	441
3132-3	KINGSBURY	156	468
3413-3	KINGSBURY	80	240
		<u>929</u>	<u>2,786</u>
2565-3	ROBERTS	470	1,410
2582-3	ROBERTS	117	351
2673-3	ROBERTS	235	705
2794-3	ROBERTS	160	480
3599-3	ROBERTS	40	120
3778-3	ROBERTS	30	90
4610-3	ROBERTS	178	356
4862-3	ROBERTS	160	0
		<u>1,390</u>	<u>3,512</u>

THERE ARE 57 PERMITS FOR THE PRAIRIE COTEAU AQUIFER.  
 AMOUNT APPROPRIATED FROM AQUIFER = 32,031 AC-FT.  
 TOTAL NUMBER OF PERMITTED ACRES FOR AQUIFER = 12,208

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

As of January 1, 1983

Permit Number	County Name	Permitted Acres	Appropriation (ac-ft)
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-----  
SELBY AQUIFER  
-----

2192-3	CAMPBELL	260	780
2252-3	CAMPBELL	80	240
2274-3	CAMPBELL	80	240
2524-3	CAMPBELL	82	246
2590-3	CAMPBELL	80	240
2591-3	CAMPBELL	160	480
2605-3	CAMPBELL	80	240
2606-3	CAMPBELL	160	480
2607-3	CAMPBELL	80	240
2614-3	CAMPBELL	80	240
2930-3	CAMPBELL	140	420
3074-3	CAMPBELL	128	384
3075-3	CAMPBELL	480	1,440
3199-3	CAMPBELL	640	1,920
3311-3	CAMPBELL	560	1,680
3418-3	CAMPBELL	160	480
3419-3	CAMPBELL	320	960
3431-3	CAMPBELL	160	480
3473-3	CAMPBELL	440	1,320
3813-3	CAMPBELL	140	420
3878-3	CAMPBELL	320	960
3884-3	CAMPBELL	260	780
3898-3	CAMPBELL	0	0
3912-3	CAMPBELL	160	480
4368-3	CAMPBELL	0	0
4368-3	CAMPBELL	0	0
4614-3	CAMPBELL	320	640
		-----	-----
		5,370	15,790

4655-3	MCPHERSON	240	480
1758-3	WALWORTH	137	411
2772-3	WALWORTH	160	480
2773-3	WALWORTH	160	480
2948-3	WALWORTH	320	960
3417-3	WALWORTH	200	600
3991-3	WALWORTH	160	480
4173-3	WALWORTH	320	960
4304-3	WALWORTH	120	240
4544-3	WALWORTH	0	0
4925-3	WALWORTH	160	320
		-----	-----
		1,737	4,931

THERE ARE 38 PERMITS FOR THE SELBY AQUIFER.  
 AMOUNT APPROPRIATED FROM AQUIFER = 21,201 AC-FT.  
 TOTAL NUMBER OF PERMITTED ACRES FOR AQUIFER = 7,347.

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)

-----  
S I O U X   Q U A R T Z I T E   A Q U I F E R  
-----

124-3	DAVISON	10	30
3195-3	MINNEHAHA	25	75

THERE ARE 2 PERMITS FOR THE SIOUX QUARTZITE AQUIFER.  
 AMOUNT APPROPRIATED FROM AQUIFER =        105 AC-FT.  
 TOTAL NUMBER OF PERMITTED ACRES FOR AQUIFER =        35



IRRIGATION SUMMARY  
BY AQUIFER

As of January 1, 1983  
Permit County Permitted Appropriation  
Number Name Acres (ac-ft)

----- SIOUX QUARTZITE WASH AQUIFER -----

2506-3 TURNER 143 429

THERE IS 1 PERMIT FOR THE SIOUX QUARTZITE WASH AQUIFER.  
AMOUNT APPROPRIATED FROM AQUIFER = 429 AC-FT.  
TOTAL NUMBER OF PERMITTED ACRES FOR AQUIFER = 143

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	As of January 1, 1983	
		Permitted Acres	Appropriation (ac-ft)

-----  
SPRING CREEK AQUIFER  
-----

Artas Management unit

3340-3	McPHERSON	140	420
--------	-----------	-----	-----

McPherson Management unit

2893-3	McPHERSON	202	606
3012-3	McPHERSON	211	633
3656-3	McPHERSON	380	1,140
4267-3	McPHERSON	40	120
4268-3	McPHERSON	320	960
4576-3	McPHERSON	160	320
		1,313	3,779

Current number of permits in management unit = 6  
 Irrigation appropriations from this management unit = 3,779 ac-ft  
 Number of acres under irrigation permit in the management  
 unit = 1,313

THERE ARE 7 PERMITS FOR THE SPRING CREEK AQUIFER.  
 AMOUNT APPROPRIATED FROM AQUIFER = 4,199 AC-FT.  
 TOTAL NUMBER OF PERMITTED ACRES FOR AQUIFER = 1,453

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	As of January 1, 1983	
		Permitted Acres	Appropriation (ac-ft)

-----  
TULARE AQUIFER  
-----

East James Management unit

4545-3	BEADLE	79	158
134-3	SPINK	160	480
566-3	SPINK	85	255
961-3	SPINK	320	960
970-3	SPINK	312	936
987-3	SPINK	154	462
1033-3	SPINK	320	960
1048-3	SPINK	160	480
1049-3	SPINK	120	360
1050-3	SPINK	430	1,290
1071-3	SPINK	160	480
1072-3	SPINK	160	480
1073-3	SPINK	320	960
1120-3	SPINK	240	720
1201-3	SPINK	140	420
1223-3	SPINK	131	393
1247-3	SPINK	150	480
1312-3	SPINK	160	480
1358-3	SPINK	160	480
1458-3	SPINK	160	480
1504-3	SPINK	370	1,110
1521-3	SPINK	145	435
1552-3	SPINK	691	2,073
1700-3	SPINK	135	405
1722-3	SPINK	240	720
1723-3	SPINK	136	408
1724-3	SPINK	128	384
1876-3	SPINK	320	960
1891-3	SPINK	262	786
1894-3	SPINK	200	600
2208-3	SPINK	160	480
2235-3	SPINK	264	792
2236-3	SPINK	320	960
2276-3	SPINK	160	480
2375-3	SPINK	300	900
2418-3	SPINK	136	408
2514-3	SPINK	132	396
2553-3	SPINK	237	711
2561-3	SPINK	153	459
2613-3	SPINK	130	390
2618-3	SPINK	272	816
2729-3	SPINK	120	360
3034-3	SPINK	160	480
3035-3	SPINK	320	960
3056-3	SPINK	202	606

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
3062-3	SPINK	140	420
3063-3	SPINK	272	816
3103-3	SPINK	120	360
3113-3	SPINK	150	450
3114-3	SPINK	137	411
3159-3	SPINK	160	480
3173-3	SPINK	136	408
3175-3	SPINK	132	396
3176-3	SPINK	272	816
3177-3	SPINK	160	480
3178-3	SPINK	204	612
3179-3	SPINK	320	960
3181-3	SPINK	232	696
3182-3	SPINK	134	402
3189-3	SPINK	132	396
3242-3	SPINK	130	390
3272-3	SPINK	160	480
3273-3	SPINK	160	480
3378-3	SPINK	136	408
3390-3	SPINK	160	480
3390-3A	SPINK	0	0
3392-3	SPINK	320	960
3393-3	SPINK	160	480
3467-3	SPINK	160	480
3468-3	SPINK	320	960
3474-3	SPINK	160	480
3490-3A	SPINK	160	480
3714-3	SPINK	160	480
3733-3	SPINK	140	420
3748-3	SPINK	160	480
3856-3	SPINK	160	480
4057-3	SPINK	593	1,779
4131-3	SPINK	270	810
4158-3	SPINK	320	960
4195-3	SPINK	160	0
4196-3	SPINK	40	120
4203-3	SPINK	160	480
4374-3	SPINK	264	528
4375-3	SPINK	132	264
4376-3	SPINK	0	0
4389-3	SPINK	132	264
4390-3	SPINK	132	264
4451-3	SPINK	132	264
4486-3	SPINK	40	0
4586-3	SPINK	115	0
4612-3	SPINK	160	320
4699-3	SPINK	160	320
4714-3	SPINK	160	320
4739-3	SPINK	160	320
4753-3	SPINK	160	320
4772-3	SPINK	160	320

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
4845-3	SPINK	160	320
		<u>18,502</u>	<u>52,649</u>

Current number of permits in management unit = 97  
 Irrigation appropriations from this management unit = 52,807 ac-ft  
 Number of acres under irrigation permit in the management  
 unit = 18,581

Hitchcock Management unit.

130-3	BEADLE	98	294
149-3	BEADLE	320	960
246-3	BEADLE	160	480
282-3	BEADLE	160	480
416-3	BEADLE	158	474
443-3	BEADLE	65	195
498-3	BEADLE	320	960
563-3	BEADLE	296	888
1423-3	BEADLE	132	396
1511-3	BEADLE	135	405
1512-3	BEADLE	135	405
1523-3	BEADLE	160	480
1608-3	BEADLE	160	480
2078-3	BEADLE	924	2,772
2367-3	BEADLE	124	372
2457-3	BEADLE	132	396
2471-3	BEADLE	210	630
2472-3	BEADLE	136	408
2476-3	BEADLE	109	327
2484-3	BEADLE	135	405
2568-3	BEADLE	136	408
2569-3	BEADLE	280	840
2853-3	BEADLE	132	396
2976-3	BEADLE	160	480
3105-3	BEADLE	140	420
3106-3	BEADLE	140	420
3191-3	BEADLE	118	354
3192-3	BEADLE	140	420
3268-3	BEADLE	113	339
3317-3	BEADLE	90	270
3415-3	BEADLE	200	600
3466-3	BEADLE	153	459
3630-3	BEADLE	245	735
3631-3	BEADLE	355	1,065
3877-3	BEADLE	310	930
4146-3	BEADLE	130	390
4147-3	BEADLE	130	390

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

*Niobrara Formation  
Aquifer  
is out of order!*

As of January 1, 1983

Permit Number	County Name	Permitted Acres	Appropriation (ac-ft)
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NIOBRARA FORMATION AQUIFER  
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3435-3	AURORA	220	660
2588-3	BON HOMME	124	372
4132-3	BON HOMME	240	720
4578-3	BON HOMME	80	160
4578-3	BON HOMME	80	160
4626-3	BON HOMME	220	440
4626-3	BON HOMME	220	440
4779-3	BON HOMME	100	200
4779-3	BON HOMME	100	200

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	1,164	2,692

1238-3	DAVISON	386	1,158
1280-3	DAVISON	152	456
1412-3	DAVISON	160	480
1479-3	DAVISON	160	480
1797-3	DAVISON	320	960
1949-3	DAVISON	320	960
2932-3	DAVISON	175	525
3441-3	DAVISON	160	480
3442-3	DAVISON	111	333
3463-3	DAVISON	160	480
3766-3	DAVISON	240	720
3788-3	DAVISON	120	360
3789-3	DAVISON	130	0

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	2,594	7,392

1119-3	SPINK	160	480
1224-3	SPINK	160	480
1266-3	SPINK	160	480

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	480	1,440

3394-3	TURNER	160	480
4209-3	YANKTON	125	375
4758-3	YANKTON	120	240
4867-3	YANKTON	150	320

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	405	935

THERE ARE 29 PERMITS FOR THE NIOBRARA FORMATION AQUIFER.  
 AMOUNT APPROPRIATED FROM AQUIFER = 13,599 AC-FT.  
 TOTAL NUMBER OF PERMITTED ACRES FOR AQUIFER = 5,023

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
4217-3	BEADLE	130	390
4249-3	BEADLE	206	618
4273-3	BEADLE	430	1,290
4308-3	BEADLE	0	0
4335-3	BEADLE	135	0
4336-3	BEADLE	160	320
4350-3	BEADLE	132	264
4400-3	BEADLE	132	264
4482-3	BEADLE	132	264
4546-3	BEADLE	241	482
4547-3	BEADLE	80	160
4548-3	BEADLE	132	264
4550-3	BEADLE	320	640
4622-3A	BEADLE	101	202
4722-3A	BEADLE	160	320
4723-3	BEADLE	160	320
4728-3	BEADLE	138	276
4871-3	BEADLE	110	220
		9,940	27,417

98-3	SPINK	301	903
1509-3	SPINK	135	405
1571-3	SPINK	160	480
1600-3	SPINK	160	480
2278-3	SPINK	136	408
2422-3	SPINK	135	405
2428-3	SPINK	136	408
2440-3	SPINK	132	396
2485-3	SPINK	138	414
2486-3	SPINK	138	414
2592-3	SPINK	140	420
2869-3	SPINK	272	816
3052-3	SPINK	180	540
3065-3	SPINK	110	330
3108-3	SPINK	320	960
3172-3	SPINK	136	408
3174-3	SPINK	160	480
3255-3	SPINK	80	240
3261-3A	SPINK	130	390
3307-3	SPINK	95	285
3382-3	SPINK	160	480
3383-3	SPINK	160	480
3603-3	SPINK	132	396
3752-3	SPINK	160	480
3860-3	SPINK	160	480
4138-3	SPINK	80	240
4171-3	SPINK	120	360
4591-3	SPINK	132	264
4690-3	SPINK	334	668

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	As of January 1, 1983	
		Permitted Acres	Appropriation (ac-ft)
4703-3	SPINK	130	260
4712-3	SPINK	160	320
4713-3	SPINK	158	316
4819-3	SPINK	160	320
4847-3	SPINK	160	320
4870-3	SPINK	156	312
		----- 5,556	----- 15,278

Current number of permits in management unit = 90  
 Irrigation appropriations from this management unit = 42,695 ac-ft  
 Number of acres under irrigation permit in the management  
 unit = 15,496

Hand Management unit

3331-3	FAULK	320	960
109-3	HAND	121	363
1403-3	HAND	172	515
2656-3	HAND	135	405
2679-3	HAND	300	900
2737-3	HAND	135	405
2916-3	HAND	640	1,920
2982-3	HAND	480	1,440
2986-3	HAND	640	1,920
3064-3	HAND	160	480
3110-3	HAND	152	456
3190-3	HAND	140	420
3337-3	HAND	160	480
3421-3	HAND	480	1,440
3457-3	HAND	320	960
3553-3	HAND	260	780
3558-3	HAND	580	1,740
3760-3	HAND	132	396
3761-3	HAND	132	396
3973-3	HAND	320	960
4009-3	HAND	160	480
4016-3	HAND	160	480
4056-3	HAND	480	1,440
4102-3	HAND	76	228
4220-3	HAND	320	960
4284-3	HAND	180	540
4352-3	HAND	640	1,280
4355-3	HAND	160	320
4382-3	HAND	120	240
4529-3	HAND	132	0
4911-3	HAND	37	74
		-----	-----



I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
		7,923	22,418

Current number of permits in management unit = 31  
 Irrigation appropriations from this management unit = 23,378 ac-ft  
 Number of acres under irrigation permit in the management  
 unit = 8,243

Hyde Management unit

2720-3	HYDE	130	390
3334-3	HYDE	320	960
		----- 450	----- 1,350

Current number of permits in management unit = 2  
 Irrigation appropriations from this management unit = 1,350 ac-ft  
 Number of acres under irrigation permit in the management  
 unit = 450

western Spink Management unit

1424-3	BEADLE	254	762
2926-3	BEADLE	130	390
3243-3	BEADLE	89	267
3479-3	BEADLE	165	495
4134-3	BEADLE	128	384
4194-3	BEADLE	90	270
4222-3	BEADLE	240	720
4237-3	BEADLE	60	0
4912-3	BEADLE	380	760
		----- 1,536	----- 4,048
386-3	HAND	161	483
664-3	HAND	160	480
4167-3	HAND	132	396
		----- 453	----- 1,359
108-3	SPINK	160	480
136-3	SPINK	198	593
139-3	SPINK	145	435
398-3	SPINK	140	420

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	As of January 1, 1983	
		Permitted Acres	Appropriation (ac-ft)
470-3	SPINK	160	480
471-3	SPINK	160	480
472-3	SPINK	160	480
782-3	SPINK	160	480
839-3	SPINK	160	480
952-3	SPINK	160	480
960-3	SPINK	624	1,872
962-3	SPINK	160	480
965-3	SPINK	160	480
971-3	SPINK	156	468
972-3	SPINK	160	480
1040-3	SPINK	160	480
1203-3	SPINK	181	543
1613-3	SPINK	130	390
1708-3	SPINK	160	480
1725-3	SPINK	149	447
1923-3	SPINK	136	408
2487-3	SPINK	136	408
2659-3	SPINK	132	396
2992-3	SPINK	140	420
2993-3	SPINK	140	420
3045-3	SPINK	480	1,440
3046-3	SPINK	130	390
3053-3	SPINK	152	456
3054-3	SPINK	160	480
3126-3	SPINK	136	408
3161-3	SPINK	136	408
3162-3	SPINK	160	480
3163-3	SPINK	160	480
3164-3	SPINK	136	408
3265-3	SPINK	164	492
3282-3	SPINK	275	825
3321-3	SPINK	120	360
3339-3	SPINK	160	480
3376-2	SPINK	280	840
3379-3	SPINK	160	480
3380-3	SPINK	160	480
3852-3	SPINK	160	480
3861-3	SPINK	160	480
3936-3	SPINK	160	480
4260-3	SPINK	160	480
4344-3	SPINK	160	320
4897-3	SPINK	320	640
4935-3	SPINK	40	80
		----- 8,456	----- 24,847

Current number of permits in management unit = 60  
Irrigation appropriations from this management unit = 30,254 ac-ft

IRRIGATION SUMMARY  
BY AQUIFER

Permit Number	County Name	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)

Number of acres under irrigation permit in the management  
unit = 10,444

THERE ARE 280 PERMITS FOR THE TULARE AQUIFER.  
AMOUNT APPROPRIATED FROM AQUIFER = 150,484 AC-FT.  
TOTAL NUMBER OF PERMITTED ACRES FOR AQUIFER = 53,215

I R R I G A T I O N   S U M M A R Y  
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As of January 1, 1983

Permit Number	County Name	Permitted Acres	Appropriation (ac-ft)
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-----  
UPPER-VERMILLION-MISSOURI AQUIFER  
-----

2268-3	CLAY	206	618
2372-3	CLAY	128	384
3051-3	CLAY	120	360
3328-3	CLAY	121	363
3948-3	CLAY	135	405
3994-3	CLAY	332	996

	-----	1,042	----- 3,126
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180-3	TURNER	160	480
1930-3	TURNER	132	396
1930-3A	TURNER	132	396
1967-3	TURNER	136	408
2210-3	TURNER	230	690
2269-3	TURNER	188	564
2317-3	TURNER	160	480
2507-3	TURNER	69	207
2660-3	TURNER	110	330
2714-3	TURNER	163	489
2770-3	TURNER	116	348
2777-3	TURNER	189	567
2941-3	TURNER	140	420
3156-3	TURNER	132	396
3184-3	TURNER	200	600
3360-3	TURNER	160	480
3409-3	TURNER	136	408
3410-3	TURNER	112	336
3411-3	TURNER	138	414
3507-3	TURNER	69	207
3541-3	TURNER	228	684
3600-3	TURNER	206	618
3610-3	TURNER	364	1,092
3646-3	TURNER	144	432
3648-3	TURNER	142	426
3675-3	TURNER	136	408
3735-3	TURNER	132	396
3737-3	TURNER	320	960
3784-3	TURNER	132	396
3787-3	TURNER	280	840
3804-3	TURNER	172	516
3829-3	TURNER	90	270
3832-3	TURNER	191	573
3833-3	TURNER	128	384
3899-3	TURNER	168	504
3900-3	TURNER	140	420
3901-3	TURNER	420	1,260

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Permit Number	County Name	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
3902-3	TURNER	156	468
3903-3	TURNER	136	408
3906-3	TURNER	134	402
3918-3	TURNER	295	886
3926-3	TURNER	132	396
3943-3	TURNER	160	480
3944-3	TURNER	200	600
3945-3	TURNER	400	1,200
3955-3	TURNER	80	240
3960-3	TURNER	132	396
4105-3	TURNER	160	480
4172-3	TURNER	200	600
4265-3	TURNER	200	600
4552-3	TURNER	37	74
4560-3	TURNER	160	320
4561-3	TURNER	150	300
4647-3	TJRNER	160	320
4695-3	TJRNER	240	480
4720-3	TURNER	240	480
		<u>9,637</u>	<u>27,925</u>

THERE ARE 62 PERMITS FOR THE UPPER-VERMILLION-MISSOURI AQUIFER.  
 AMOUNT APPROPRIATED FROM AQUIFER = 31,051 AC-FT.  
 TOTAL NUMBER OF PERMITTED ACRES FOR AQUIFER = 10,679

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

As of January 1, 1983

Permit Number	County Name	Permitted Acres	Appropriation (ac-ft)
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-----  
VEBLEN AQUIFER

2722-3A	GRANT	270	810
2759-3	GRANT	198	594
2760-3	GRANT	117	351
2808-3	GRANT	140	420
2994-3	GRANT	97	291
3234-3	GRANT	240	720
3241-3	GRANT	130	390
3278-3	GRANT	320	960
3322-3	GRANT	110	330
3412-3	GRANT	149	447
3530-3	GRANT	244	732
3623-3	GRANT	105	315
3627-3	GRANT	136	408
3723-3	GRANT	164	492
3954-3	GRANT	176	528
4502-3	GRANT	40	80
4735-3	GRANT	89	178
4750-3	GRANT	160	320
4938-3	GRANT	160	320

	3,045	8,686
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696-3	ROBERTS	289	867
2854-3	ROBERTS	140	420
2860-3	ROBERTS	105	315
2887-3	ROBERTS	272	816
3250-3	ROBERTS	132	396
3341-3	ROBERTS	155	465
3388-3	ROBERTS	160	480
3522-3	ROBERTS	114	342
3536-3	ROBERTS	156	468
3537-3	ROBERTS	156	468
3776-3	ROBERTS	155	465
3927-3	ROBERTS	120	360
3934-3	ROBERTS	160	480
4164-3	ROBERTS	257	771
4177-3	ROBERTS	288	864
4323-3	ROBERTS	40	80
4323-3	ROBERTS	40	80
4741-3	ROBERTS	125	250

	2,864	8,387
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THERE ARE 37 PERMITS FOR THE VEBLEN AQUIFER.  
 AMOUNT APPROPRIATED FROM AQUIFER = 17,073 AC-FT.  
 TOTAL NUMBER OF PERMITTED ACRES FOR AQUIFER = 5,909

I R R I G A T I O N   S U M M A R Y  
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As of January 1, 1983

Permit Number	County Name	Permitted Acres	Appropriation (ac-ft)
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-----VERMILLION-EAST-FORK AQUIFER-----

60-3	KINGSBURY	114	341
77-3	KINGSBURY	105	316
1212-3	KINGSBURY	270	810
1456-3	KINGSBURY	186	558
1487-3	KINGSBURY	130	390
1533-3	KINGSBURY	293	879
1561-3	KINGSBURY	240	720
2037-3A	KINGSBURY	132	396
2086-3	KINGSBURY	62	186
2306-3	KINGSBURY	40	120
2798-3	KINGSBURY	120	360
3253-3	KINGSBURY	100	300
3312-3	KINGSBURY	132	396
3414-3	KINGSBURY	110	330
3478-3	KINGSBURY	160	480
3499-3	KINGSBURY	355	1,065
3822-3	KINGSBURY	160	480
3825-3	KINGSBURY	160	480
3937-3	KINGSBURY	29	86
3960-3	KINGSBURY	130	390
3961-3	KINGSBURY	130	390
4037-3	KINGSBURY	160	480
4187-3	KINGSBURY	160	480
4245-3	KINGSBURY	190	570
4282-3	KINGSBURY	40	120
		----- 3,708	----- 11,123
2989-3	LAKE	350	1,050
3621-3	LAKE	240	720
		----- 590	----- 1,770
3719-3	McCOOK	480	1,440
3875-3	McCOOK	184	552
		----- 664	----- 1,992
3643-3	TURNER	120	360
3756-3	TURNER	106	318
		----- 226	----- 678

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)

Antelope Lake Management unit

2308-3	CLARK	408	1,224
2533-3	CLARK	132	396
2716-3	CLARK	312	936
3897-3	CLARK	156	468
4931-3	CLARK	0	0
		<u>1,008</u>	<u>3,024</u>

Current number of permits in management unit = 5  
 Irrigation appropriations from this management unit = 3,024 ac-ft  
 Number of acres under irrigation permit in the management unit = 1,008

Spirit Lake Management unit

1911-3	CLARK	130	390
2696-3	CLARK	154	462
2731-3	CLARK	160	480
3296-3	CLARK	264	792
4221-3	CLARK	132	396
4324-3A	CLARK	222	444
4331-3	CLARK	304	608
		<u>1,366</u>	<u>3,572</u>

2137-3	KINGSBURY	90	270
2697-3	KINGSBURY	120	360
3422-3	KINGSBURY	80	240
3477-3	KINGSBURY	120	360
		<u>410</u>	<u>1,230</u>

Current number of permits in management unit = 11  
 Irrigation appropriations from this management unit = 4,802 ac-ft  
 Number of acres under irrigation permit in the management unit = 1,776

Willow Lake Management unit



I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
1721-3	CLARK	120	360
2212-3	CLARK	112	336
2322-3	CLARK	254	762
2970-3	CLARK	238	714
3145-3	CLARK	654	1,962
3146-3	CLARK	300	900
3827-3	CLARK	156	468
4414-3	CLARK	331	662
		2,165	6,164

Current number of permits in management unit = 8  
 Irrigation appropriations from this management unit = 6,164 ac-ft  
 Number of acres under irrigation permit in the management  
 unit = 2,165

THERE ARE 55 PERMITS FOR THE VERMILLION-EAST-FORK AQUIFER.  
 AMOUNT APPROPRIATED FROM AQUIFER = 29,553 AC-FT.  
 TOTAL NUMBER OF PERMITTED ACRES FOR AQUIFER = 10,137

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

		<u>As of January 1, 1983</u>	
Permit Number	County Name	Permitted Acres	Appropriation (ac-ft)

----- VERMILLION-WEST-FORK AQUIFER -----

2849-3	TURNER	7	21
3550-3	TURNER	132	396
4562-3	TURNER	100	200
		239	617

THERE ARE 3 PERMITS FOR THE VERMILLION-WEST-FORK AQUIFER.  
 AMOUNT APPROPRIATED FROM AQUIFER = 617 AC-FT.  
 TOTAL NUMBER OF PERMITTED ACRES FOR AQUIFER = 239

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)

-----  
W A L L   L A K E   A Q U I F E R  
-----

3632-3	TURNER	160	480
3633-3	TURNER	361	1,083
3634-3	TURNER	132	396
		653	1,959

THERE ARE 3 PERMITS FOR THE WALL LAKE AQUIFER.  
 AMOUNT APPROPRIATED FROM AQUIFER = 1,959 AC-FT.  
 TOTAL NUMBER OF PERMITTED ACRES FOR AQUIFER = 653

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)

-----  
WARREN AQUIFER  
-----

Morris Creek Management unit

513-3	DAVISON	61	184
1335-3	DAVISON	140	420
		-----	-----
		201	604

Current number of permits in management unit = 2  
 Irrigation appropriations from this management unit = 604 ac-ft  
 Number of acres under irrigation permit in the management unit = 201

Wolsey Management unit

2775-3	BEADLE	285	855
3327-3	BEADLE	480	1,440
3445-3	BEADLE	265	795
3447-3	BEADLE	140	420
3449-3	BEADLE	280	840
3542-3	BEADLE	320	960
3887-3	BEADLE	0	0
3916-3	BEADLE	0	0
4046-3	BEADLE	0	0
4141-3	BEADLE	100	300
4663-3	BEADLE	500	1,000
4755-3	BEADLE	140	280
		-----	-----
		2,510	6,890

Current number of permits in management unit = 12  
 Irrigation appropriations from this management unit = 6,890 ac-ft  
 Number of acres under irrigation permit in the management unit = 2,510

West James Management unit

235-3	BEADLE	210	630
247-3	BEADLE	200	600
808-3	BEADLE	144	432
1010-3	BEADLE	10	30
1220-3	BEADLE	160	480

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
1438-3	BEADLE	140	420
1440-3	BEADLE	40	120
1529-3	BEADLE	110	330
1529-3A	BEADLE	160	480
1775-3	BEADLE	160	480
1942-3	BEADLE	105	315
2407-3	BEADLE	280	840
2425-3	BEADLE	124	372
2426-3	BEADLE	138	414
2501-3	BEADLE	280	840
2581-3	BEADLE	168	504
2599-3	BEADLE	257	771
2680-3	BEADLE	440	1,320
2699-3	BEADLE	264	792
2762-3	BEADLE	200	600
3076-3	BEADLE	200	600
3082-3	BEADLE	275	825
3086-3	BEADLE	134	402
3089-3	BEADLE	140	420
3091-3	BEADLE	132	396
3092-3	BEADLE	112	336
3093-3	BEADLE	200	600
3095-3	BEADLE	140	420
3097-3	BEADLE	131	393
3098-3	BEADLE	132	396
3289-3	BEADLE	160	480
3458-3	BEADLE	190	570
3469-3	BEADLE	356	1,068
3472-3	BEADLE	140	420
3664-3	BEADLE	3	9
3753-3	BEADLE	300	0
3849-3	BEADLE	222	666
3891-3	BEADLE	140	420
4143-3	BEADLE	310	930
4263-3	BEADLE	140	420
4348-3	BEADLE	20	40
4377-3	BEADLE	132	264
4379-3	BEADLE	0	0
4485-3	BEADLE	264	528
4490-3	BEADLE	132	264
4520-3	BEADLE	132	264
4581-3	BEADLE	160	320
4615-3	BEADLE	130	260
4616-3	BEADLE	284	568
4662-3A	BEADLE	280	560
4716-3	BEADLE	258	516
4721-3	BEADLE	160	320
4724-3	BEADLE	252	504
		9,351	24,949

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
2364-3	JERAULD	153	459
2781-3	JERAULD	132	396
2824-3	JERAULD	60	180
3100-3	JERAULD	200	600
3266-3	JERAULD	115	345
3271-3A	JERAULD	122	366
4097-3	JERAULD	125	375
4326-3	JERAULD	132	264
		1,039	2,985
238-3	SANBORN	157	470
963-3	SANBORN	143	429
1145-3	SANBORN	320	960
1269-3	SANBORN	72	216
3025-3	SANBORN	160	480
3194-3	SANBORN	110	330
3302-3	SANBORN	785	2,355
		1,747	5,240

Current number of permits in management unit = 68  
 Irrigation appropriations from this management unit = 33,174 ac-ft  
 Number of acres under irrigation permit in the management  
 unit = 12,137

THERE ARE 82 PERMITS FOR THE WARREN AQUIFER.  
 AMOUNT APPROPRIATED FROM AQUIFER = 40,668 AC-FT.  
 TOTAL NUMBER OF PERMITTED ACRES FOR AQUIFER = 14,848

I R R I G A T I O N   S U M M A R Y  
B Y   A Q U I F E R

Permit Number	County Name	As of January 1, 1983	
		Permitted Acres	Appropriation (ac-ft)

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W I L M O T   A Q U I F E R  
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3133-3	GRANT	260	780
3134-3	GRANT	230	690
3389-3	GRANT	147	441
4084-3	GRANT	280	840
4085-3	GRANT	240	720
4786-3	GRANT	140	280
		1,297	3,751
2267-3	ROBERTS	140	420
2848-3	ROBERTS	4	12
4108-3	ROBERTS	138	414
4766-3	ROBERTS	284	568
4788-3	ROBERTS	360	720
		926	2,134

THERE ARE 11 PERMITS FOR THE WILMOT AQUIFER.  
 AMOUNT APPROPRIATED FROM AQUIFER = 5,885 AC-FT.  
 TOTAL NUMBER OF PERMITTED ACRES FOR AQUIFER = 2,223

\* \* \* \* \*

TOTAL IRRIGATION PERMITS FOR ALL OF THE AQUIFERS = 2,292  
 TOTAL GROUND WATER APPROPRIATED FOR IRRIGATION = 1,179,522 AC-FT  
 TOTAL ACRES PERMITTED FOR IRRIGATION IN EASTERN SOUTH DAKOTA = 419593.6





TABLE A2 - ANNUAL APPROPRIATION FOR MUNICIPAL USE.



### Table A2 Assumptions

Table A2 is based upon the diversion rate which was approved for each municipal permit. The annual appropriation is calculated by first multiplying the diversion rate (in cubic feet per second) times 86,400 (seconds) times 365 (days) and then dividing by 43,560 (number of cubic feet in an acre-foot of water).

Several municipalities hold "future use" permits. If a community has drawn upon this type of permit in a succeeding permit, like the situation at Pierre, then it was assumed that the "future use" diversion rate would be reduced by a corresponding amount.

M U N I C I P A L   A P P R O P R I A T I O N S  
 B Y   A Q U I F E R

Permit Number	County Name	Town or City Name	Annual Appropriation (ac-ft)
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ALTAMONT   AQUIFER

4052-3	CODINGTON	HENRY	1,528
4054-3	CODINGTON	WALLACE	2,172

4861-3	CLARK	CLARK	485
4127-3	CLARK	GARDEN CITY	724
4498-3	CLARK	GARDEN CITY	724

1651-3	DAY	ANDOVER	80
4320-3	DAY	BRISTOL	217
4049-3	DAY	ROSLYN	188
3101-3	DAY	WAUBAY	413

451-3	DEUEL	BRANDT	94
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1490-3	GRANT	REVILLO	297
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1913-3	KINGSBURY	ARLINGTON	818
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THERE ARE 12 PERMITS FOR THE ALTAMONT  
 AQUIFER WITH 7,740 AC-FT APPROPRIATED  
 TO MUNICIPAL USE.

M U N I C I P A L   A P P R O P R I A T I O N S  
B Y   A Q U I F E R

Permit Number	County Name	Town or City Name	Annual Appropriation (ac-ft)
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ANTELOPE VALLEY   AQUIFER

4053-3	CODINGTON	SOUTH SHORE	2,172
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THERE IS 1 PERMIT FOR THE ANTELOPE VALLEY  
AQUIFER WITH 2,172 AC-FT APPROPRIATED  
TO MUNICIPAL USE.

M U N I C I P A L   A P P R O P R I A T I O N S  
 B Y   A Q U I F E R

Permit Number	County Name	Town or City Name	Annual Appropriation (ac-ft)
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BOWDLE   A Q U I F E R

Edmunds   Management Unit

704-3	EDMUNDS	BOWDLE	319
770-3	EDMUNDS	BOWDLE	181

1329-3	POTTER	TOLSTOY	181
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3 Permits totalling 681

Hoven South   Management Unit

2855-3	POTTER	HOVEN	804
2855-3A	POTTER	HOVEN	0
4860-3	POTTER	HOVEN	2,172

3 Permits totalling 2,976

THERE ARE 6 PERMITS FOR THE BOWDLE  
 AQUIFER WITH 3,657 AC-FT APPROPRIATED  
 TO MUNICIPAL USE.

M U N I C I P A L   A P P R O P R I A T I O N S  
B Y   A Q U I F E R

Permit Number	County Name	Town or City Name	Annual Appropriation (ac-ft)
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BRULE CREEK   A Q U I F E R

758-3	UNION	ALCESTER	116
1056-3	UNION	BERESFORD	811
4909-3	UNION	BERESFORD	724

THERE ARE 3   P E R M I T S   F O R   T H E   B R U L E   C R E E K  
A Q U I F E R   W I T H   1,651   A C - F T   A P P R O P R I A T E D  
T O   M U N I C I P A L   U S E .

M U N I C I P A L   A P P R O P R I A T I O N S  
 B Y   A Q U I F E R

Permit Number	County Name	Town or City Name	Annual Appropriation (ac-ft)
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BIG SIOUX   A Q U I F E R

Aurora   Management Unit

1952-3	BROOKINGS	AURORA	145
1800-3	BROOKINGS	BROOKINGS	1,274
3979-3	BROOKINGS	BROOKINGS	4,843

3 Permits totalling 6,262

Brookings   Management Unit

1598-3	BROOKINGS	BROOKINGS	13,031
1759-3	BROOKINGS	VOLGA	1,195

534-3	DEUEL	CLEAR LAKE	796
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558-3	HAMLIN	CASTLEWOOD	644
1317-3	HAMLIN	ESTELLINE	796
617-3	HAMLIN	HAYTI	478
618-3	HAMLIN	HAYTI	434
3117-3	HAMLIN	HAYTI	239
557-3	HAMLIN	LAKE NORDEN	2,172
4055-3	HAMLIN	LAKE NORDEN	1,433

10 Permits totalling 21,218

Moody   Management Unit

1182-3	MOODY	FLANDREAU	2,331
3977-3	MOODY	FLANDREAU	3,620
1800-3	MOODY	TRENT	543

3 Permits totalling 6,494



MUNICIPAL APPROPRIATIONS  
BY AQUIFER

Permit Number	County Name	Town or City Name	Annual Appropriation (ac-ft)
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North Management Unit

322-3	CODINGTON	WATERTOWN	1,209
348-3	CODINGTON	WATERTOWN	579
349-3	CODINGTON	WATERTOWN	644
350-3	CODINGTON	WATERTOWN	579
351-3	CODINGTON	WATERTOWN	811
352-3	CODINGTON	WATERTOWN	811
353-3	CODINGTON	WATERTOWN	811
354-3	CODINGTON	WATERTOWN	811
1097-3	CODINGTON	WATERTOWN	565
1217-3	CODINGTON	WATERTOWN	398
1218-3	CODINGTON	WATERTOWN	14,479
1716-3	CODINGTON	WATERTOWN	579
2239-3	CODINGTON	WATERTOWN	1,955
2757-3	CODINGTON	WATERTOWN	1,050
3022-3	CODINGTON	WATERTOWN	948

15 Permits totalling 26,229

Northern Skunk Creek Management Unit

4499-3	LAKE	CHESTER	239
371-3	LAKE	MADISON	362
372-3	LAKE	MADISON	724
747-3	LAKE	MADISON	8,043
1079-3	LAKE	MADISON	1,955
1453-3	LAKE	MADISON	565

6 Permits totalling 11,888

South Management Unit

1158-3	LINCOLN	FAIRVIEW	130
1754-3	LINCOLN	HARRISBURG	1,448
4883-3	LINCOLN	HARRISBURG	159
1139-3	LINCOLN	HUDSON	514
1804-3	MINNEHAHA	BRANDON	869
4002-3	MINNEHAHA	BRANDON	2,896
4885-3	MINNEHAHA	BRANDON	203

MUNICIPAL APPROPRIATIONS  
BY AQUIFER

Permit Number	County Name	Town or City Name	Annual Appropriation (ac-ft)
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7 Permits totalling 6,219

Sioux Falls Management Unit

538-3	MINNEHAHA	BALTIC	130
2029-3	MINNEHAHA	BALTIC	239
4140-3	MINNEHAHA	BALTIC	724
562-3	MINNEHAHA	DELL RAPIDS	2,976
254-3	MINNEHAHA	SIOUX FALLS	1,122
255-3	MINNEHAHA	SIOUX FALLS	1,122
256-3	MINNEHAHA	SIOUX FALLS	804
257-3	MINNEHAHA	SIOUX FALLS	1,933
258-3	MINNEHAHA	SIOUX FALLS	319
259-3	MINNEHAHA	SIOUX FALLS	963
260-3	MINNEHAHA	SIOUX FALLS	963
261-3	MINNEHAHA	SIOUX FALLS	963
262-3	MINNEHAHA	SIOUX FALLS	1,122
263-3	MINNEHAHA	SIOUX FALLS	1,122
264-3	MINNEHAHA	SIOUX FALLS	1,122
265-3	MINNEHAHA	SIOUX FALLS	1,122
266-3	MINNEHAHA	SIOUX FALLS	1,122
267-3	MINNEHAHA	SIOUX FALLS	1,122
268-3	MINNEHAHA	SIOUX FALLS	724
269-3	MINNEHAHA	SIOUX FALLS	1,289
270-3	MINNEHAHA	SIOUX FALLS	1,209
271-3	MINNEHAHA	SIOUX FALLS	1,209
272-3	MINNEHAHA	SIOUX FALLS	1,043
273-3	MINNEHAHA	SIOUX FALLS	1,209
274-3	MINNEHAHA	SIOUX FALLS	1,448
275-3	MINNEHAHA	SIOUX FALLS	1,289
276-3	MINNEHAHA	SIOUX FALLS	1,289
298-3	MINNEHAHA	SIOUX FALLS	1,289
299-3	MINNEHAHA	SIOUX FALLS	2,259
300-3	MINNEHAHA	SIOUX FALLS	2,324
395-3	MINNEHAHA	SIOUX FALLS	2,259
396-3	MINNEHAHA	SIOUX FALLS	2,259
397-3	MINNEHAHA	SIOUX FALLS	2,259
448-3	MINNEHAHA	SIOUX FALLS	29,379
1305-3	MINNEHAHA	SIOUX FALLS	1,137
1306-3	MINNEHAHA	SIOUX FALLS	4,489
1347-3	MINNEHAHA	SIOUX FALLS	5,611
1579-3	MINNEHAHA	SIOUX FALLS	521
1941-3	MINNEHAHA	SIOUX FALLS	311
2018-3	MINNEHAHA	SIOUX FALLS	2,244
2019-3	MINNEHAHA	SIOUX FALLS	2,244
2747-3	MINNEHAHA	SIOUX FALLS	2,244
2886-3	MINNEHAHA	SIOUX FALLS	2,244
4098-3	MINNEHAHA	SIOUX FALLS	724

M U N I C I P A L   A P P R O P R I A T I O N S  
 B Y   A Q U I F E R

Permit Number	County Name	Town or City Name	Annual Appropriation (ac-ft)
4099-3	MINNEHAHA	SIOUX FALLS	724
4100-3	MINNEHAHA	SIOUX FALLS	724
4101-3	MINNEHAHA	SIOUX FALLS	724
4232-3	MINNEHAHA	SIOUX FALLS	514
4811-3	MINNEHAHA	SIOUX FALLS	2,693
4812-3	MINNEHAHA	SIOUX FALLS	2,903

50 Permits totalling 101,778

Six Mile Creek Management Unit

216-3	BROOKINGS	BROOKINGS	2,787
217-3	BROOKINGS	BROOKINGS	3,077
674-3	BROOKINGS	BROOKINGS	1,368
675-3	BROOKINGS	BROOKINGS	1,129
1117-3	BROOKINGS	BROOKINGS	1,043
1296-3	BROOKINGS	BROOKINGS	963

6 Permits totalling 10,367

Southern Skunk Creek Management Unit

449-3	MINNEHAHA	SIOUX FALLS	11,294
4231-3	MINNEHAHA	SIOUX FALLS	514

2 Permits totalling 11,808

THERE ARE 102 PERMITS FOR THE BIG SIOUX  
 AQUIFER WITH 202,263 AC-FT APPROPRIATED  
 TO MUNICIPAL USE.

M U N I C I P A L   A P P R O P R I A T I O N S  
 B Y   A Q U I F E R

Permit Number	County Name	Town or City Name	Annual Appropriation (ac-ft)
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CHOTEAU   AQUIFER

Middle Management Unit

1060-3	HUTCHINSON	PARKSTON	1,267
1869-3	HUTCHINSON	PARKSTON	724

2 Permits totalling 1,991

Tyndall Management Unit

1075-3	BON HOMME	TYNDALL	796
4839-3	BON HOMME	TYNDALL	4,083

2 Permits totalling 4,879

West Management Unit

569-3	CHARLES MIX	WAGNER	796
1782-3	CHARLES MIX	WAGNER	644

2 Permits totalling 1,440

THERE ARE 6 PERMITS FOR THE CHOTEAU  
 AQUIFER WITH 8,310 AC-FT APPROPRIATED  
 TO MUNICIPAL USE.

M U N I C I P A L   A P P R O P R I A T I O N S  
 B Y   A Q U I F E R

Permit Number	County Name	Town or City Name	Annual Appropriation (ac-ft)
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CODELL SANDSTONE   AQUIFER

4120-3	AURORA	PLANKINTON	261
1694-3	AURORA	STICKNEY	80
1892-3	CLAY	WAKONDA	239
1966-3	CHARLES MIX	GEDDES	275
687-3	CHARLES MIX	LAKE ANDES	528
555-3	DOUGLAS	ARMOUR	362
4836-3	DOUGLAS	CORSICA	101
4402-3	HUTCHINSON	TRIPP	463
1676-3	LAKE	NUNDA	72
3999-3	LAKE	RAMONA	123

THERE ARE 10 PERMITS FOR THE CODELL SANDSTONE  
 AQUIFER WITH 2,504 AC-FT APPROPRIATED  
 TO MUNICIPAL USE.

M U N I C I P A L   A P P R O P R I A T I O N S  
B Y   A Q U I F E R

Permit Number	County Name	Town or City Name	Annual Appropriation (ac-ft)
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CORSICA   A Q U I F E R

2669-3	DOUGLAS	CORSICA	362
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THERE IS 1 PERMIT FOR THE CORSICA  
AQUIFER WITH 362 AC-FT APPROPRIATED  
TO MUNICIPAL USE.

M U N I C I P A L   A P P R O P R I A T I O N S  
B Y   A Q U I F E R

Permit Number	County Name	Town or City Name	Annual Appropriation (ac-ft)
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COTEAU LAKES   AQUIFER

4195-3	MARSHALL	LAKE CITY	80
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THERE IS 1 PERMIT FOR THE COTEAU LAKES  
AQUIFER WITH 80 AC-FT APPROPRIATED  
TO MUNICIPAL USE.

M U N I C I P A L   A P P R O P R I A T I O N S  
 B Y   A Q U I F E R

Permit Number	County Name	Town or City Name	Annual Appropriation (ac-ft)
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DAKOTA FORMATION   A Q U I F E R

4272-3	BEADLE	HITCHCOCK	58
4256-3	BEADLE	VIRGIL	123
4219-3	BEADLE	WESSINGTON	724
508-3	BEADLE	WOLSEY	94
645-3	BEADLE	WOLSEY	94
4274-3	BEADLE	YALE	36
2846-3	BUFFALO	GANN VALLEY	145
1211-3	BROOKINGS	SINAI	22
540-3	BON HOMME	TYNDALL	738
614-3	BON HOMME	TYNDALL	724
997-3	BRULE	PUKWANA	362
1157-3	BROWN	CLAREMONT	109
4077-3	BROWN	FERNEY	22
1649-3	BROWN	GROTON	514
1740-3	BROWN	MANSFIELD	159
4058-3	BROWN	STRATFORD	80
1985-3	BROWN	WARNER	80
3275-3	CLARK	RAYMOND	362
705-3	CHARLES MIX	PLATTE	557
570-3	CHARLES MIX	WAGNER	398
488-3	DAY	PIERPONT	319
4262-3	DAVISON	ETHAN	159



M U N I C I P A L   A P P R O P R I A T I O N S  
 B Y   A Q U I F E R

Permit Number	County Name	Town or City Name	Annual Appropriation (ac-ft)
4302-3	EDMUNDS	ROSCOE	203
1726-3	FAULK	CRESBARD	80
1756-3	FAULK	ORIENT	36
4286-3	FAULK	ROCKHAM	29
825-3	HAND	MILLER	514
1132-3	HAND	MILLER	362
1148-3	HAND	MILLER	1,766
2718-3	HAND	MILLER	724
1228-3	HAMLIN	BRYANT	159
4444-3	JERAULD	ALPENA	1,448
1070-3	JERAULD	LANE	319
1602-3	KINGSBURY	LAKE PRESTON	253
1163-3	KINGSBURY	OLDHAM	369
1262-3	LINCOLN	CANTON	3,113
4312-3	LINCOLN	CANTON	420
1695-3	LINCOLN	WORTHING	72
4401-3	LINCOLN	WORTHING	167
4919-3	MARSHALL	LANGFORD	195
46-3	MCPHERSON	LEOLA	87
320-3	MCPHERSON	LEOLA	159
412-3	MCPHERSON	LEOLA	159
4303-3	MCPHERSON	WETONKA	22

M U N I C I P A L   A P P R O P R I A T I O N S  
 B Y   A Q U I F E R

Permit Number	County Name	Town or City Name	Annual Appropriation (ac-ft)
1583-3	MINER	CARTHAGE	145
4270-3	MINER	CARTHAGE	130
1650-3	MINER	ROSWELL	43
703-3	POTTER	GETTYSBURG	203
4322-3	SANBORN	FORESTBURG	188
1714-3	SANBORN	LETCHER	159
4321-3	SPINK	ASHTON	159
4064-3	SPINK	BRENTFORD	43
4076-3	SPINK	CONDE	130
4294-3	SPINK	DOLAND	181
1728-3	SPINK	FRANKFORT	116
1772-3	SPINK	MELLETTTE	138
499-3	SPINK	NORTHVILLE	36
545-3	SPINK	NORTHVILLE	14
529-3	SPINK	TULARE	319
1085-3	SPINK	TULARE	1,448
1777-3	SULLY	AGAR	33
750-3	TURNER	VIBORG	282
841-3	UNION	BERESFORD	500
4851-3	UNION	ELK POINT	500
4904-3	UNION	ELK POINT	471
1069-3	UNION	NORTH SIOUX CITY	398
1974-3	YANKTON	VOLIN	159

THERE ARE 67 PERMITS FOR THE DAKOTA FORMATION  
 AQUIFER WITH 22,330 AC-FT APPROPRIATED  
 TO MUNICIPAL USE.

M U N I C I P A L   A P P R O P R I A T I O N S  
B Y   A Q U I F E R

Permit Number	County Name	Town or City Name	Annual Appropriation (ac-ft)
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ELM   A Q U I F E R

Northern Brown   Management Unit

192-3	BROWN	ABERDEEN	7,964
3009-3	BROWN	ABERDEEN	12,307
3427-3	BROWN	ABERDEEN	7,240
4307-3	BROWN	FREDERICK	796

4 Permits totalling 28,307

THERE ARE 4 PERMITS FOR THE ELM  
AQUIFER WITH 28,307 AC-FT APPROPRIATED  
TO MUNICIPAL USE.

M U N I C I P A L   A P P R O P R I A T I O N S  
B Y   A Q U I F E R

Permit Number	County Name	Town or City Name	Annual Appropriation (ac-ft)
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FAIRMOUNT   AQUIFER

1273-3	ROBERTS	ROSHOLT	239
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THERE IS 1 PERMIT FOR THE FAIRMOUNT  
AQUIFER WITH 239 AC-FT APPROPRIATED  
TO MUNICIPAL USE.

M U N I C I P A L   A P P R O P R I A T I O N S  
 B Y   A Q U I F E R

Permit Number	County Name	Town or City Name	Annual Appropriation (ac-ft)
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GRAND   A Q U I F E R

4144-3	CAMPBELL	MOUND CITY	159
778-3	CAMPBELL	POLLOCK	405
1705-3	EDMUNDS	HOSMER	195
4914-3	EDMUNDS	ROSCOE	1,448
3947-3	FAULK	FAULKTON	724
2769-3	FAULK	ONAKA	543
3998-3	WALWORTH	GLENHAM	116

THERE ARE 7 PERMITS FOR THE GRAND  
 AQUIFER WITH 3,590 AC-FT APPROPRIATED  
 TO MUNICIPAL USE.

M U N I C I P A L   A P P R O P R I A T I O N S  
B Y   A Q U I F E R

Permit Number	County Name	Town or City Name	Annual Appropriation (ac-ft)
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HIGHMORE-BLUNT   AQUIFER

1130-3	HUGHES	BLUNT	94
2828-3	HUGHES	BLUNT	319
2455-3	HUGHES	HARROLD	159

744-3	HYDE	HIGHMORE	1,202
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THERE ARE 4   PERMITS FOR THE HIGHMORE-BLUNT  
AQUIFER WITH   1,774 AC-FT APPROPRIATED  
TO MUNICIPAL USE.

M U N I C I P A L   A P P R O P R I A T I O N S  
 B Y   A Q U I F E R

Permit Number	County Name	Town or City Name	Annual Appropriation (ac-ft)
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HOWARD   A Q U I F E R

1958-3	LAKE	WINFRED	72
4162-3	MINER	CANOVA	478
578-3	MINER	HOWARD	120
1599-3	MINER	HOWARD	796
244-3	MOODY	COLMAN	159
1061-3	MOODY	COLMAN	159

THERE ARE 6 PERMITS FOR THE HOWARD  
 AQUIFER WITH 1,784 AC-FT APPROPRIATED  
 TO MUNICIPAL USE.

M U N I C I P A L   A P P R O P R I A T I O N S  
 B Y   A Q U I F E R

Permit Number	County Name	Town or City Name	Annual Appropriation (ac-ft)
I N Y A N   K A R A   G R O U P   A Q U I F E R			
1198-3	CAMPBELL	MOUND CITY	123
1712-3	EDMUNDS	IPSWICH	1,086
4815-3	HAND	POLO	159
723-3	MCPHERSON	EUREKA	695
4117-3	SULLY	AGAR	65
390-3A	SULLY	ONIDA	188
595-3	SULLY	ONIDA	804
4178-3	SULLY	ONIDA	159

THERE ARE 8 PERMITS FOR THE INYAN KARA GROUP  
 AQUIFER WITH 3,279 AC-FT APPROPRIATED  
 TO MUNICIPAL USE.



M U N I C I P A L   A P P R O P R I A T I O N S  
B Y   A Q U I F E R

Permit Number	County Name	Town or City Name	Annual Appropriation (ac-ft)
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JAVA   A Q U I F E R

2258-3	WALWORTH	JAVA	188
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THERE IS 1 PERMIT FOR THE JAVA  
AQUIFER WITH 188 AC-FT APPROPRIATED  
TO MUNICIPAL USE.

M U N I C I P A L   A P P R O P R I A T I O N S  
B Y   A Q U I F E R

Permit Number	County Name	Town or City Name	Annual Appropriation (ac-ft)
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LENNOX   AQUIFER

429-3	LINCOLN	LENNOX	130
489-3	LINCOLN	LENNOX	159

THERE ARE 2 PERMITS FOR THE LENNOX  
AQUIFER WITH 289 AC-FT APPROPRIATED  
TO MUNICIPAL USE.

M U N I C I P A L   A P P R O P R I A T I O N S  
 B Y   A Q U I F E R

Permit Number	County Name	Town or City Name	Annual Appropriation (ac-ft)
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MIDDLE JAMES   A Q U I F E R

Aberdeen   Management Unit

4288-3	BROWN	WARNER	159
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Columbia   Management Unit

1903-3	BROWN	HECLA	217
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3915-3	MARSHALL	BRITTON	1,086
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2 Permits totalling 1,303

THERE ARE 3 PERMITS FOR THE MIDDLE JAMES  
 AQUIFER WITH 1,462 AC-FT APPROPRIATED  
 TO MUNICIPAL USE.

MUNICIPAL APPROPRIATIONS  
BY AQUIFER

Permit Number	County Name	Town or City Name	Annual Appropriation (ac-ft)
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MISSOURI AQUIFER

143-3	CLAY	VERMILLION	1,289
147-3	CLAY	VERMILLION	1,926
1255-3	UNION	ELK POINT	818
4207-3	UNION	JEFFERSON	652
1646-3	UNION	MCCOOK LK SAN DIST	652
4465-3	UNION	NORTH SIOUX CITY	405
1965-3	YANKTON	GAYVILLE	268

Pierre Management Unit

135-3	HUGHES	PIERRE	16,000
745-3	HUGHES	PIERRE	970
1486-3	HUGHES	PIERRE	963
4189-3	HUGHES	PIERRE	1,129
4190-3	HUGHES	PIERRE	1,448

5 Permits totalling 20,510

THERE ARE 12 PERMITS FOR THE MISSOURI AQUIFER WITH 26,520 AC-FT APPROPRIATED TO MUNICIPAL USE.

M U N I C I P A L   A P P R O P R I A T I O N S  
 B Y   A Q U I F E R

Permit Number	County Name	Town or City Name	Annual Appropriation (ac-ft)
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NIOBRARA FORMATION   AQUIFER

4121-3	AURORA	WHITE LAKE	123
4278-3	BEADLE	CAVOUR	203
1062-3	BON HOMME	SCOTLAND	420
4264-3	DAVISON	MOUNT VERNON	174
810-3	HUTCHINSON	FREEMAN	912
4776-3	HUTCHINSON	FREEMAN	478
4791-3	HUTCHINSON	FREEMAN	478
1604-3	LAKE	MADISON	883
2087-3	SANBORN	WOONSOCKET	362
1229-3	TURNER	IRENE	601

THERE ARE 10 PERMITS FOR THE NIOBRARA FORMATION  
 AQUIFER WITH 4,634 AC-FT APPROPRIATED  
 TO MUNICIPAL USE.

M U N I C I P A L   A P P R O P R I A T I O N S  
B Y   A Q U I F E R

Permit Number	County Name	Town or City Name	Annual Appropriation (ac-ft)
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PARKER-CENTERVILLE   AQUIFER

516-3	TURNER	HURLEY	1,122
517-3	TURNER	HURLEY	384

THERE ARE 2   PERMITS FOR THE PARKER-CENTERVILLE  
AQUIFER WITH   1,506 AC-FT APPROPRIATED  
TO MUNICIPAL USE.

M U N I C I P A L   A P P R O P R I A T I O N S  
 B Y   A Q U I F E R

Permit Number	County Name	Town or City Name	Annual Appropriation (ac-ft)
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PLEISTOCENE SERIES   AQUIFER

Miscellaneous   Management Unit

532-3	DEUEL	GARY	1,933
2856-3	DEUEL	TORONTO	362
468-3	YANKTON	LESTERVILLE	58

3 Permits totalling 2,353

Unknown   Management Unit

1727-3	BEADLE	WESSINGTON	326
4038-3	BROOKINGS	ELKTON	760
4536-3	BROOKINGS	ELKTON	159
3886-3	BROOKINGS	WHITE	36
564-3	DEUEL	ASTORIA	87
1738-3	FAULK	SENECA	36
4816-3	HAND	REE HEIGHTS	65
1963-3	HANSON	EMERY	413
10-3	JERAULD	WESSINGTON SPRINGS	203
11-3	JERAULD	WESSINGTON SPRINGS	760
344-3	JERAULD	WESSINGTON SPRINGS	398
4422-3	JERAULD	WESSINGTON SPRINGS	724

M U N I C I P A L   A P P R O P R I A T I O N S  
 B Y   A Q U I F E R

Permit Number	County Name	Town or City Name	Annual Appropriation (ac-ft)
4000-3	MINNEHAHA	COLTON	362
4001-3	MINNEHAHA	COLTON	159
767-3	MCCOOK	BRIDGEWATER	695
4188-3	MCCOOK	CANISTOTA	217
996-3	MCCOOK	SALEM	898
2517-3	MOODY	WARD	72
2596-3	ROBERTS	NEW EFFINGTON	65
1739-3	ROBERTS	SUMMIT	644
4771-3	TURNER	MARION	2,172
4798-3	TURNER	PARKER	1,448

22 Permits totalling 10,699

THERE ARE 25 PERMITS FOR THE PLEISTOCENE SERIES  
 AQUIFER WITH 13,052 AC-FT APPROPRIATED  
 TO MUNICIPAL USE.



M U N I C I P A L   A P P R O P R I A T I O N S  
 B Y   A Q U I F E R

Permit Number	County Name	Town or City Name	Annual Appropriation (ac-ft)
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PRAIRIE COTEAU   AQUIFER

4051-3	CODINGTON	FLORENCE	2,172
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4090-3	CLARK	BRADLEY	72
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1435-3	DAY	WAUBAY	333
567-3	DAY	WEBSTER	1,361

721-3	GRANT	STRANDBURG	94
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3073-3	KINGSBURY	BADGER	43
1652-3	KINGSBURY	DESMET	2,172
1210-3	KINGSBURY	HETLAND	36
1981-3	KINGSBURY	LAKE PRESTON	724

491-3	MARSHALL	VEBLEN	717
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THERE ARE 10 PERMITS FOR THE PRAIRIE COTEAU  
 AQUIFER WITH 7,724 AC-FT APPROPRIATED  
 TO MUNICIPAL USE.

M U N I C I P A L   A P P R O P R I A T I O N S  
 B Y   A Q U I F E R

Permit Number	County Name	Town or City Name	Annual Appropriation (ac-ft)
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SELBY   A Q U I F E R

2249-3	MCPHERSON	EUREKA	1,086
781-3	WALWORTH	SELBY	565
837-3	WALWORTH	SELBY	565

THERE ARE 3 PERMITS FOR THE SELBY  
 AQUIFER WITH 2,216 AC-FT APPROPRIATED  
 TO MUNICIPAL USE.

M U N I C I P A L   A P P R O P R I A T I O N S  
 B Y   A Q U I F E R

Permit Number	County Name	Town or City Name	Annual Appropriation (ac-ft)
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SIOUX QUARTZITE   A Q U I F E R

315-3	HANSON	ALEXANDRIA	130
2969-3	HANSON	ALEXANDRIA	2,172
539-3	LINCOLN	HARRISBURG	80
492-3	LINCOLN	LENNOX	159
759-3	LINCOLN	TEA	43
1554-3	LINCOLN	TEA	65
4928-3	MINNEHAHA	CORSON	7
4929-3	MINNEHAHA	CORSON	36
1926-3	MINNEHAHA	CROOKS	58
1289-3	MINNEHAHA	GARRETSON	217
3997-3	MINNEHAHA	GARRETSON	109
4280-3	MINNEHAHA	HARTFORD	557
4275-3	MINNEHAHA	HUMBOLDT	159
4271-3	MCCOOK	SPENCER	94
577-3	MINER	HOWARD	193
994-3	MINER	HOWARD	181
560-3	TURNER	CHANCELLOR	80
312-3	TURNER	MONROE	43

THERE ARE 18   PERMITS FOR THE SIOUX QUARTZITE  
 AQUIFER WITH   4,383 AC-FT APPROPRIATED  
 TO MUNICIPAL USE.

M U N I C I P A L   A P P R O P R I A T I O N S  
B Y   A Q U I F E R

Permit Number	County Name	Town or City Name	Annual Appropriation (ac-ft)
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SIOUX QUARTZITE WASH   AQUIFER

576-3	MINER	HOWARD	112
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THERE IS 1 PERMIT FOR THE SIOUX QUARTZITE WASH  
AQUIFER WITH      112 AC-FT APPROPRIATED  
TO MUNICIPAL USE.

M U N I C I P A L   A P P R O P R I A T I O N S  
B Y   A Q U I F E R

Permit Number	County Name	Town or City Name	Annual Appropriation (ac-ft)
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SPLIT ROCK CREEK FORMATION   AQUIFER

1138-3	MINNEHAHA	VALLEY SPRINGS	239
2113-3	MINNEHAHA	VALLEY SPRINGS	239

THERE ARE 2 PERMITS FOR THE SPLIT ROCK CREEK FORMATION  
AQUIFER WITH 478 AC-FT APPROPRIATED  
TO MUNICIPAL USE.

M U N I C I P A L   A P P R O P R I A T I O N S  
 B Y   A Q U I F E R

Permit Number	County Name	Town or City Name	Annual Appropriation (ac-ft)
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TULARE   AQUIFER

Hitchcock Management Unit

4161-3	SPINK	REDFIELD	1,926
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Miller Management Unit

785-3	HAND	ST. LAWRENCE	72
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Western Spink Management Unit

4774-3	SPINK	S. SPINK-N. BEADLE	550
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THERE ARE 3 PERMITS FOR THE TULARE  
 AQUIFER WITH 2,548 AC-FT APPROPRIATED  
 TO MUNICIPAL USE.

M U N I C I P A L   A P P R O P R I A T I O N S  
B Y   A Q U I F E R

Permit Number	County Name	Town or City Name	Annual Appropriation (ac-ft)
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U P P E R - V E R M I L L I O N - M I S S O U R I   A Q U I F E R

4204-3	TURNER	CENTERVILLE	724
525-3	TURNER	DAVIS	369
2041-3	TURNER	VIBORG	695

THERE ARE 3 PERMITS FOR THE UPPER-VERMILLION-MISSOURI  
AQUIFER WITH 1,788 AC-FT APPROPRIATED  
TO MUNICIPAL USE.

M U N I C I P A L   A P P R O P R I A T I O N S  
 B Y   A Q U I F E R

Permit Number	County Name	Town or City Name	Annual Appropriation (ac-ft)
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VEBLEN   A Q U I F E R

4050-3	GRANT	BIG STONE CITY	2,389
548-3	GRANT	MILBANK	1,520
549-3	GRANT	MILBANK	362
1769-3	GRANT	MILBANK	1,564
4785-3	GRANT	MILBANK	1,448
4048-3	GRANT	TWIN BROOKS	217
4125-3	MARSHALL	VEBLEN	159
2006-3	ROBERTS	CORONA	217
530-3	ROBERTS	PEEVER	80
719-3	ROBERTS	SISSETON	941
2409-3	ROBERTS	SISSETON	3,258
1764-3	ROBERTS	WILMOT	282

THERE ARE 12 PERMITS FOR THE VEBLEN  
 AQUIFER WITH 12,437 AC-FT APPROPRIATED  
 TO MUNICIPAL USE.



M U N I C I P A L   A P P R O P R I A T I O N S  
 B Y   A Q U I F E R

Permit Number	County Name	Town or City Name	Annual Appropriation (ac-ft)
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VERMILLION-EAST-FORK   AQUIFER

520-3	KINGSBURY	DESMET	3,620
523-3	KINGSBURY	DESMET	1,810
524-3	KINGSBURY	DESMET	1,810
1129-3	KINGSBURY	DESMET	543

1009-3	McCOOK	MONTROSE	319
3946-3	McCOOK	MONTROSE	724
4039-3	McCOOK	MONTROSE	724

Antelope Lake   Management Unit

4047-3	CLARK	CLARK	963
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Willow Lake   Management Unit

1601-3	CLARK	WILLOW LAKE	253
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THERE ARE 9   PERMITS FOR THE VERMILLION-EAST-FORK  
 AQUIFER WITH 10,766 AC-FT APPROPRIATED  
 TO MUNICIPAL USE.

M U N I C I P A L   A P P R O P R I A T I O N S  
B Y   A Q U I F E R

Permit Number	County Name	Town or City Name	Annual Appropriation (ac-ft)
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VERMILLION-WEST-FORK   AQUIFER

4797-3	TURNER	PARKER	1,332
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THERE IS 1 PERMIT FOR THE VERMILLION-WEST-FORK  
AQUIFER WITH 1,332 AC-FT APPROPRIATED  
TO MUNICIPAL USE.

M U N I C I P A L   A P P R O P R I A T I O N S  
B Y   A Q U I F E R

Permit Number	County Name	Town or City Name	Annual Appropriation (ac-ft)
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WARREN   AQUIFER

West James   Management Unit

565-3	BEADLE	HURON	1,448
753-3	BEADLE	HURON	2,896
4269-3	BEADLE	HURON	688

3 Permits totalling 5,032

THERE ARE 3 PERMITS FOR THE WARREN  
AQUIFER WITH 5,032 AC-FT APPROPRIATED  
TO MUNICIPAL USE.

M U N I C I P A L   A P P R O P R I A T I O N S  
B Y   A Q U I F E R

Permit Number	County Name	Town or City Name	Annual Appropriation (ac-ft)
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WILMOT   AQUIFER

4796-3	ROBERTS	SISSETON	7,240
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THERE IS 1 PERMIT FOR THE WILMOT  
AQUIFER WITH 7,240 AC-FT APPROPRIATED  
TO MUNICIPAL USE.

\* \* \* \* \*  
A TOTAL OF 360 GROUND WATER PERMITS ARE  
LISTED FOR MUNICIPAL USE IN EASTERN SOUTH DAKOTA.

IT IS CALCULATED THAT A TOTAL OF 393,749 AC-FT  
HAS BEEN APPROPRIATED FOR MUNICIPAL USE.

TABLE A3 - ANNUAL APPROPRIATION FOR RURAL WATER  
SYSTEM USE.



### Table A3 Assumptions

Table A3 is based upon the diversion rate which was approved for each Rural Water System permit. The annual appropriation is calculated by first multiplying the diversion rate (in cubic feet per second) times 86,400 (seconds) times 365 (days) and then dividing by 43,560 (number of cubic feet in an acre-foot of water).

RURAL WATER SYSTEM USE  
 APPROPRIATIONS  
 BY AQUIFER

Permit Number	County Name	Annual Appropriation (ac-ft)
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BIG SIOUX AQUIFER

Brookings Management Unit

2275-3	BROOKINGS	2,172
3982-3	BROOKINGS	2,172
3983-3	BROOKINGS	724

3983-3	DEUEL	724
4830-3	DEUEL	724

5 Permits totalling 6,516

Moody Management Unit

2054-3	MOODY	1,882
3984-3	MOODY	1,882

2 Permits totalling 3,764

North Management Unit

2032-3	CODINGTON	724
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Northern Skunk Creek Management Unit

4367-3	LAKE	2,172
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RURAL WATER SYSTEM USE  
 APPROPRIATIONS  
 BY AQUIFER

Permit Number	County Name	Annual Appropriation (ac-ft)
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South Management Unit

1789-3	LINCOLN	1,180
3454-3	LINCOLN	1,180

2 Permits totalling 2,360

Sioux Falls Management Unit

1790-3	MINNEHAHA	1,180
2311-3	MINNEHAHA	2,896
4838-3	MINNEHAHA	5,068

3 Permits totalling 9,144

14 PERMITS TOTALLING 24,680

DAKOTA FORMATION AQUIFER

4300-3	LINCOLN	1,448
4817-3	LINCOLN	1,448

2 PERMITS TOTALLING 2,896

LOWER-VERMILLION-MISSOURI AQUIFER

3905-3	CLAY	1,448
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MIDDLE JAMES AQUIFER

RURAL WATER SYSTEM USE  
 APPROPRIATIONS  
 BY AQUIFER

Permit Number	County Name	Annual Appropriation (ac-ft)
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Columbia Management Unit

4908-3	MARSHALL	724
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PARKER-CENTERVILLE AQUIFER

4301-3	LINCOLN	1,448
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PRAIRIE COTEAU AQUIFER

4212-3	CODINGTON	500
4770-3	CODINGTON	724

2 PERMITS TALLING 1,224

PLEISTOCENE SERIES AQUIFER

Miscellaneous Management Unit

4349-3	McCOOK	1,448
4432-3	McCOOK	883

2 Permits totalling 2,331

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RURAL WATER SYSTEM USE  
 APPROPRIATIONS  
 BY AQUIFER

Permit Number	County Name	Annual Appropriation (ac-ft)
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2 PERMITS TOTALLING 2,331

VERMILLION-EAST-FORK AQUIFER

4137-3	KINGSBURY	2,172
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Antelope Lake Management Unit

4384-3	CLARK	1,738
4384-3A	CLARK	0
4927-3	CLARK	724

3 Permits totalling 2,462

4 PERMITS TOTALLING 4,634

A TOTAL OF 39,385 ACRE-FEET OF  
 GROUND WATER ARE APPROPRIATED TO 27  
 RURAL WATER SYSTEM USE PERMITS IN EASTERN  
 SOUTH DAKOTA.



TABLE A4 - ANNUAL APPROPRIATION FOR SUBURBAN  
HOUSING DEVELOPMENT USE.



#### Table A4 Assumptions

Table A4 is based upon the diversion rate which was approved for each suburban housing development permit. The annual appropriation is calculated by first multiplying the diversion rate (in cubic feet per second) times 86,400 (seconds) times 365 (days) and then dividing by 43,560 (number of cubic feet in an acre-foot of water).

S U B U R B A N   H O U S I N G   U S E  
A P P R O P R I A T I O N S  
B Y   A Q U I F E R .

Permit Number	County Name	Annual Appropriation (ac-ft)
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BIG SIOUX   A Q U I F E R

Aurora   Management Unit

2404-3	BROOKINGS	485
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Brookings   Management Unit

1956-3	BROOKINGS	22
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Sioux Falls   Management Unit

4513-3	MINNEHAHA	724
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3 PERMITS TOTALLING 1,231

COW CREEK   A Q U I F E R

4905-3	SULLY	109
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DAKOTA FORMATION   A Q U I F E R

1566-3	BROWN	51
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S U B U R B A N   H O U S I N G   U S E  
 A P P R O P R I A T I O N S  
 B Y   A Q U I F E R

Permit Number	County Name	Annual Appropriation (ac-ft)
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2726-3	BROWN	80
2825-3	BROWN	355

3 PERMITS TOTALLING 486

GRAY GOOSE   AQUIFER

4567-3	HUGHES	72
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INYAN KARA GROUP   AQUIFER

1975-3	BROWN	246
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2224-3	HUGHES	159
2279-3	HUGHES	159

3 PERMITS TOTALLING 564

MISSOURI   AQUIFER

2817-3	UNION	290
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4916-3	YANKTON	152
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Pierre   Management Unit

1611-3	HUGHES	43
1897-3	HUGHES	159

SUBURBAN HOUSING USE  
 APPROPRIATIONS  
 BY AQUIFER

Permit Number	County Name	Annual Appropriation (ac-ft)
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2 Permits totalling	-----	202
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4 PERMITS TOTALLING	-----	644
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PRAIRIE COTEAU AQUIFER

4404-3	DAY	159
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PLEISTOCENE SERIES AQUIFER

Unknown Management Unit

3819-3	LINCOLN	72
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SIOUX QUARTZITE AQUIFER

720-3	MINNEHAHA	239
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WALL LAKE AQUIFER

4936-3	LINCOLN	72
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S U B U R B A N   H O U S I N G   U S E  
 A P P R O P R I A T I O N S  
 B Y   A Q U I F E R

Permit Number	County Name	Annual Appropriation (ac-ft)
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757-3	MINNEHAHA	101
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2 PERMITS TOTALLING 173

A TOTAL OF 3,749 ACRE-FEET OF  
 GROUND WATER ARE APPROPRIATED TO 20  
 SUBURBAN HOUSING DEVELOPMENT USE PERMITS IN EASTERN  
 SOUTH DAKOTA.

\* \* \* \* \*

A TOTAL OF 154 GROUND WATER PERMITS HAVE  
 BEEN ISSUED FOR USES OTHER THAN MUNICIPAL AND IRRIGATION  
 IN EASTERN SOUTH DAKOTA.

IT IS CALCULATED THAT A TOTAL OF 110,550 AC-FT  
 HAS BEEN APPROPRIATED FOR USES OTHER THAN MUNICIPAL AND  
 IRRIGATION FOR THESE PERMITS.



TABLE A5 - ANNUAL APPROPRIATION FOR INDUSTRIAL USE.



### Table A5 Assumptions

Table A5 is based upon the diversion rate which was approved for each industrial permit. The annual appropriation is calculated by first multiplying the diversion rate (in cubic feet per second) times 86,400 (seconds) times 365 (days) and then dividing by 43,560 (number of cubic feet in an acre-foot of water).

It was assumed that the water is used by the permit holder to make a product other than water. This distinction was made to separate the industrial and commercial use categories. Examples of industrial use include gravel washing operations, farms for fish propagation, dewatering of stone quarries, cooling towers (not to be confused with geothermal use), and meat processing.

I N D U S T R I A L    U S E  
A P P R O P R I A T I O N S  
B Y    A Q U I F E R

Permit Number	County Name	Annual Appropriation (ac-ft)
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A L T A M O N T    A Q U I F E R

1718-3	CLARK	159
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B I G    S I O U X    A Q U I F E R

Brookings Management Unit

509-3	BROOKINGS	398
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North Management Unit

494-3	CODINGTON	159
496-3	CODINGTON	58
842-3	CODINGTON	456
1402-3	CODINGTON	724
4932-3	CODINGTON	3,620

5 Permits totalling 5,017

South Management Unit

1618-3	MINNEHAHA	724
4842-3	MINNEHAHA	7,746

2 Permits totalling 8,470

Sioux Falls Management Unit

1947-3	MINNEHAHA	239
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INDUSTRIAL USE  
APPROPRIATIONS  
BY AQUIFER

Permit Number	County Name	Annual Appropriation (ac-ft)
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Southern Skunk Creek Management Unit

746-3	MINNEHAHA	239
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10 PERMITS TOTALLING 14,363

CODELL SANDSTONE AQUIFER

4383-3	DOUGLAS	51
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DAKOTA FORMATION AQUIFER

4538-3	MCPHERSON	145
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ELM AQUIFER

Northern Brown Management Unit

2657-3	BROWN	804
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INDUSTRIAL USE  
APPROPRIATIONS  
BY AQUIFER

Permit Number	County Name	Annual Appropriation (ac-ft)
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FLOYD AQUIFER

East James Management Unit

140-3	BEADLE	333
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FAIRMOUNT AQUIFER

4881-3	GRANT	65
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HIGHMORE-BLUNT AQUIFER

4512-3	SULLY	1,086
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INYAN KARA GROUP AQUIFER

4634-3	EDMUNDS	159
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INDUSTRIAL USE  
APPROPRIATIONS  
BY AQUIFER

Permit Number	County Name	Annual Appropriation (ac-ft)
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LOWER-JAMES-MISSOURI AQUIFER

840-3	YANKTON	804
1288-3	YANKTON	116

2 PERMITS TOTALLING -----920

MISSOURI AQUIFER

1173-3	CLAY	159
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NIOBRARA FORMATION AQUIFER

3734-3	DAVISON	43
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PRAIRIE COTEAU AQUIFER

2356-3	CODINGTON	1,448
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PLEISTOCENE SERIES AQUIFER

Miscellaneous Management Unit

4464-3	MOODY	326
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I N D U S T R I A L   U S E  
 A P P R O P R I A T I O N S  
 B Y   A Q U I F E R

Permit Number	County Name	Annual Appropriation (ac-ft)
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Unknown Management Unit

4447-3	EDMUNDS	1,086
4618-3	MINNEHAHA	51

2 Permits totalling 1,137

3 PERMITS TOTALLING 1,463

SIOUX QUARTZITE   AQUIFER

995-3	MINNEHAHA	724
1257-3	MINNEHAHA	1,231
1767-3	MINNEHAHA	80

3 PERMITS TOTALLING 2,035

SPLIT ROCK CREEK FORMATION   AQUIFER

42-3	MINNEHAHA	43
61-3	MINNEHAHA	1,122
70-3	MINNEHAHA	1,086
561-3	MINNEHAHA	1,281
742-3	MINNEHAHA	239

5 PERMITS TOTALLING 3,771

INDUSTRIAL USE  
APPROPRIATIONS  
BY AQUIFER

Permit Number	County Name	Annual Appropriation (ac-ft)
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WARREN AQUIFER

West James Management Unit

1277-3	BEADLE	963
4899-3	BEADLE	652

2 Permits totalling 1,615

2 PERMITS TOTALLING 1,615

A TOTAL OF 28,619 ACRE-FEET OF  
GROUND WATER ARE APPROPRIATED TO 36  
INDUSTRIAL USE PERMITS IN EASTERN  
SOUTH DAKOTA.



TABLE A6 - ANNUAL APPROPRIATION FOR COMMERCIAL USE.





### Table A6 Assumptions

Table A6 is based upon the diversion rate which was approved for each commercial permit. The annual appropriation is calculated by first multiplying the diversion rate (in cubic feet per second) times 86,400 (seconds) times 365 (days) and then dividing by 43,560 (number of cubic feet in an acre-foot of water).

It was assumed that the ultimate product of permit holder was water. This distinction was made to separate commercial and industrial use categories. As a result, most mobile home or trailer courts are considered commercial users because the water and rental space is sold with the intent of making a profit. By contrast, when a number of homeowners or a developer join several homes to defray the cost of a potable water supply then the use is considered to be for suburban housing development.

Also included in the commercial use category are establishments such as shopping malls, restaurants, and motels where the water is provided, more or less, as a convenience.

C O M M E R C I A L   U S E  
 A P P R O P R I A T I O N S  
 B Y   A Q U I F E R

Permit Number	County Name	Annual Appropriation (ac-ft)
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BIG SIOUX   AQUIFER

Brookings   Management Unit

2111-3	DEUEL	29
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North   Management Unit

2098-3	CODINGTON	16
3359-3	CODINGTON	36
4183-3	CODINGTON	109
4636-3	CODINGTON	1,933

4 Permits totalling 2,094

South   Management Unit

1908-3	MINNEHAHA	326
4792-3	MINNEHAHA	724

2 Permits totalling 1,050

Sioux Falls   Management Unit

4814-3	MINNEHAHA	145
4843-3	MINNEHAHA	109

2 Permits totalling 254

Southern Skunk Creek   Management Unit

2095-3	MINNEHAHA	49
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C O M M E R C I A L    U S E  
 A P P R O P R I A T I O N S  
 B Y    A Q U I F E R

Permit Number	County Name	Annual Appropriation (ac-ft)
2304-3	MINNEHAHA	14
2305-3	MINNEHAHA	130
4159-3	MINNEHAHA	485
4297-3	MINNEHAHA	43
4463-3	MINNEHAHA	14
4913-3	MINNEHAHA	80

7 Permits totalling 815

16 PERMITS TOTALLING 4,242

D A K O T A    F O R M A T I O N    A Q U I F E R

4829-3	BRULE	36
2761-3	BROWN	14
4672-3	LINCOLN	362

3 PERMITS TOTALLING 412

E L M    A Q U I F E R

Northern Brown Management Unit

1888-3	BROWN	261
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Southern Brown Management Unit

C O M M E R C I A L   U S E  
 A P P R O P R I A T I O N S  
 B Y   A Q U I F E R

Permit Number	County Name	Annual Appropriation (ac-ft)
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4426-3	BROWN	239
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2 PERMITS TOTALLING 500

INYAN KARA GROUP   AQUIFER

2767-3	BEADLE	130
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4810-3	BROWN	80
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2 PERMITS TOTALLING 210

LOWER-JAMES-MISSOURI   AQUIFER

4556-3	YANKTON	644
4619-3	YANKTON	1,810

2 PERMITS TOTALLING 2,454

MISSOURI   AQUIFER

535-3	UNION	80
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4501-3	YANKTON	36
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COMMERCIAL USE  
 APPROPRIATIONS  
 BY AQUIFER

Permit Number	County Name	Annual Appropriation (ac-ft)
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2 PERMITS TOTALLING 116

PLEISTOCENE SERIES AQUIFER

Unknown Management Unit

4631-3	DAY	485
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1292-3	MOODY	8
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4917-3	SULLY	80
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3 Permits totalling 573

3 PERMITS TOTALLING 573

SELBY AQUIFER

4314-3	McPHERSON	963
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SPRING CREEK AQUIFER

Herreid Management Unit

4918-3	CAMPBELL	485
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COMMERCIAL USE  
 APPROPRIATIONS  
 BY AQUIFER

Permit Number	County Name	Annual Appropriation (ac-ft)
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SIoux QUARTZITE AQUIFER

4493-3	HANSON	1,303
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3681-3	MINNEHAHA	36
3885-3	MINNEHAHA	36

3 PERMITS TOTALLING 1,375

VERMILLION-EAST-FORK AQUIFER

3820-3	KINGSBURY	804
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Willow Lake Management Unit

4420-3	CLARK	239
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2 PERMITS TOTALLING 1,043

A TOTAL OF 12,373 ACRE-FEET OF  
 GROUND WATER ARE APPROPRIATED TO 37  
 COMMERCIAL USE PERMITS IN EASTERN  
 SOUTH DAKOTA.

TABLE A7 - ANNUAL APPROPRIATION FOR MULTIPLE USE.





### Table A7 Assumptions

Table A7 is based upon the diversion rate which was approved for each multiple use permit. The annual appropriation is calculated by first multiplying the diversion rate (in cubic feet per second) times 86,400 (seconds) times 365 (days) and then dividing by 43,560 (number of cubic feet in an acre-foot of water).

M U L T I P L E     U S E  
A P P R O P R I A T I O N S  
B Y   A Q U I F E R

Permit Number	County Name	Annual Appropriation (ac-ft)
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BIG SIOUX    AQUIFER

Sioux Falls Management Unit

4880-3	MINNEHAHA	362
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DEEP JAMES    AQUIFER

4225-3	BROWN	485
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DAKOTA FORMATION    AQUIFER

4163-3	BROWN	116
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2972-3	CLAY	4
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762-3	DAVISON	203
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3 PERMITS TOTALLING	<u>          </u>	323
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ELM    AQUIFER

Northern Brown Management Unit

2074-3	BROWN	2,389
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M U L T I P L E    U S E  
 A P P R O P R I A T I O N ' S  
 B Y    A Q U I F E R

Permit Number	County Name	Annual Appropriation (ac-ft)
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INYAN KARA GROUP    AQUIFER

4276-3	HUGHES	72
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MISSOURI    AQUIFER

4887-3	UNION	2,896
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PRAIRIE COTEAU    AQUIFER

1865-3	DAY	319
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PLEISTOCENE SERIES    AQUIFER

Unknown Management Unit		
1779-3	BROOKINGS	80

A TOTAL OF    6,926 ACRE-FEET OF  
 GROUND WATER ARE APPROPRIATED TO    10  
 MULTIPLE USE PERMITS IN EASTERN  
 SOUTH DAKOTA.



TABLE A8 - ANNUAL APPROPRIATION FOR RECREATIONAL USE.



### Table A8 Assumptions

Table A8 is based upon the diversion rate which was approved for each recreational use permit. The annual appropriation is calculated by first multiplying the diversion rate (in cubic feet per second) times 86,400 (seconds) times 365 (days) and then dividing by 43,560 (number of cubic feet in an acre-foot of water).

R E C R E A T I O N A L   U S E  
A P P R O P R I A T I O N S  
B Y   A Q U I F E R

Permit Number	County Name	Annual Appropriation (ac-ft)
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CHOTEAU   AQUIFER

West   Management Unit

296-3	CHARLES MIX	217
297-3	CHARLES MIX	217

2 Permits totalling 434

2 PERMITS TOTALLING 434

DAKOTA FORMATION   AQUIFER

1024-3	BROWN	304
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INYAN KARA GROUP   AQUIFER

741-3	McPHERSON	123
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MISSOURI   AQUIFER

1606-3	UNION	4,040
4430-3	UNION	919
4565-3	UNION	1,528

3 PERMITS TOTALLING 6,487

A TOTAL OF 7,348 ACRE-FEET OF  
GROUND WATER ARE APPROPRIATED TO 7  
RECREATIONAL USE PERMITS IN EASTERN  
SOUTH DAKOTA.



TABLE A9 - ANNUAL APPROPRIATION FOR INSTITUTIONAL USE.



### Table A9 Assumptions

Table A9 is based upon the diversion rate which was approved for each institutional use permit. The annual appropriation is calculated by first multiplying the diversion rate (in cubic feet per second) times 86,400 (seconds) times 365 (days) and then dividing by 43,560 (number of cubic feet in an acre-foot of water).

I N S T I T U T I O N A L   U S E  
A P P R O P R I A T I O N S  
B Y   A Q U I F E R

Permit Number	County Name	Annual Appropriation (ac-ft)
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BIG SIOUX   AQUIFER

Northern Skunk Creek Management Unit

4813-3	LAKE	811
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CODELL SANDSTONE   AQUIFER

551-3	AURORA	123
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546-3	BON HOMME	10
553-3	BON HOMME	5
847-3	BON HOMME	5

4 PERMITS TOTALLING 143

DAKOTA FORMATION   AQUIFER

552-3	BON HOMME	17
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LOWER-VERMILLION-MISSOURI   AQUIFER

1293-3	CLAY	43
1870-3	CLAY	22

INSTITUTIONAL USE  
APPROPRIATIONS  
BY AQUIFER

Permit Number	County Name	Annual Appropriation (ac-ft)
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2 PERMITS TALLING ----- 65

A TOTAL OF 1,036 ACRE-FEET OF  
GROUND WATER ARE APPROPRIATED TO 8  
INSTITUTIONAL USE PERMITS IN EASTERN  
SOUTH DAKOTA.



TABLE A10 - ANNUAL APPROPRIATION FOR FISH AND WILDLIFE  
PROPAGATION USE.





### Table A10 Assumptions

Table A10 is based upon the diversion rate which was approved for each fish and wildlife propagation. The annual appropriation is calculated by first multiplying the diversion rate (in cubic feet per second) times 86,400 (seconds) times 365 (days) and then dividing by 43,560 (number of cubic feet in an acre-foot of water).

F I S H   A N D   W I L D L I F E   U S E  
 A P P R O P R I A T I O N S  
 B Y   A Q U I F E R

Permit Number	County Name	Annual Appropriation (ac-ft)
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DELMONT   AQUIFER

2010-3	DOUGLAS	1,368
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DAKOTA FORMATION   AQUIFER

220-3	CHARLES MIX	1,607
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MISSOURI   AQUIFER

953-3	YANKTON	804
4224-3	YANKTON	804

2 PERMITS TOTALLING 1,608

PRAIRIE COTEAU   AQUIFER

4385-3	DAY	2,585
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4106-3	ROBERTS	1,810
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2 PERMITS TOTALLING 4,395

A TOTAL OF 8,978 ACRE-FEET OF  
 GROUND WATER ARE APPROPRIATED TO 6  
 FISH AND WILDLIFE PROPAGATION USE PERMITS IN EASTERN  
 SOUTH DAKOTA.

TABLE A11 - ANNUAL APPROPRIATION FOR GEOTHERMAL USE.



### Table A11 Assumptions

Table A11 is based upon the diversion rate which was approved for each geothermal use permit. The annual appropriation is calculated by first multiplying the diversion rate (in cubic feet per second) times 86,400 (seconds) times 365 (days) and then dividing by 43,560 (number of cubic feet in an acre-foot of water).

G E O T H E R M A L   U S E  
A P P R O P R I A T I O N S  
B Y   A Q U I F E R

Permit Number	County Name	Annual Appropriation (ac-ft)
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BIG SIOUX   AQUIFER

Sioux Falls   Management Unit

4620-3	MINNEHAHA	290
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INYAN KARA GROUP   AQUIFER

4319-3	HUGHES	239
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MADISON GROUP   AQUIFER

4289-3	HUGHES	1,607
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A TOTAL OF   2,136 ACRE-FEET OF  
GROUND WATER ARE APPROPRIATED TO  
GEOTHERMAL USE PERMITS IN EASTERN   3  
SOUTH DAKOTA.

APPENDIX B - GROUND WATER APPROPRIATION BY INDIVIDUAL  
PERMIT FOR EACH COUNTY AND USE CATEGORY  
IN EASTERN SOUTH DAKOTA.





TABLE B1 - NUMBER OF PERMITTED ACRES AND ANNUAL  
APPROPRIATION FOR IRRIGATION USE.

### Table B1 Assumptions

Table B1, to a large extent, is based on the number of acres of land related to each irrigation permit. The appropriation is either two or three feet of water per acre, depending upon the permit's date of approval. There are exceptions however.

These exceptions often are for "changes in diversion point" and do not represent the use of any 'new' land or water; consequently the corresponding values for acres and appropriation were set to zero. Other permits are for additional land because the irrigator's existing appropriation is not being fully utilized. For example, consider when an irrigator adds an end-gun to his center pivot in order to irrigate the corners of his field. In these instances, acres are set to the additional value and the appropriation is set to zero. Less frequently, some irrigators request "additional water" because they did not seek their full appropriation when the permit was initially approved. Subsequently they apply for that appropriation missing from their initial permit and acreage. Hence their new permit shows acres equal to zero and appropriation equal to an amount which completes their full appropriation. Finally, in those rare cases where an irrigator holds a ground water permit to "supplement" a surface water permit it was assumed that the entire appropriation be considered as if it were for a ground water source.

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted Appropriation Acres	(ac-ft)

----- AURORA COUNTY -----

CROW LAKE AQUIFER

	3160-3	175	525
	3294-3	80	240

There are 2 permits listed for the CROW LAKE aquifer in AURORA County.  
 Amount appropriated from the aquifer = 765 ac-ft  
 Total number of permitted acres for aquifer = 255

NIOBRARA FORMATION AQUIFER

	3435-3	220	660
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PLEISTOCENE SERIES AQUIFER

Miscellaneous	2730-3	320	960
Unknown	4530-3	48	96

There are 2 permits listed for the PLEISTOCENE SERIES aquifer in AURORA County.  
 Amount appropriated from the aquifer = 1,056 ac-ft  
 Total number of permitted acres for aquifer = 368

THERE ARE 5 PERMITS LISTED FOR IRRIGATION IN AURORA COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION OF 2,481 ACRE-FEET OF GROUND WATER.  
 THEY HAVE 843 ACRES AVAILABLE FOR IRRIGATION.

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number.	As of January 1, 1983	
		Permitted Acres	Appropriation (ac-ft)

-----  
BEADLE COUNTY  
-----

BAD CHEYENNE   AQUIFER

661-3	459	1,377
1925-3	640	1,920
3260-3	321	963
3301-3	140	420
4149-3	160	480
4387-3	110	220
4396-3	0	0

There are 7 permits listed for the BAD CHEYENNE aquifer in BEADLE County.

Amount appropriated from the aquifer = 5,380 ac-ft  
Total number of permitted acres for aquifer = 1,830

FLOYD   AQUIFER

East James	131-3	160	481
East James	243-3	156	468
East James	580-3	160	480
East James	659-3	146	438
East James	1142-3	230	690
East James	1462-3	180	540
East James	1522-3	240	720
East James	1553-3	100	300
East James	1736-3	150	450
East James	1793-3	132	396
East James	1794-3	132	396
East James	1795-3	132	396
East James	1796-3	128	384
East James	2040-3	132	396
East James	2181-3	240	720
East James	2246-3	132	396
East James	2247-3	100	300
East James	2248-3	160	480
East James	2261-3	174	522
East James	2312-3	160	480

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
East James	2480-3	350	1,050
East James	2495-3	151	453
East James	2547-3	264	792
East James	2548-3	132	396
East James	2595-3	132	396
East James	2821-3	159	477
East James	2829-3	160	480
East James	2830-3	156	468
East James	2835-3	140	420
East James	2977-3	137	411
East James	2988-3	400	1,200
East James	3077-3	150	450
East James	3078-3	140	420
East James	3084-3	240	720
East James	3085-3	244	732
East James	3107-3	160	480
East James	3262-3	134	402
East James	3326-3	123	369
East James	3465-3	155	465
East James	3516-3	136	408
East James	3517-3	111	333
East James	3570-3	386	1,158
East James	3863-3	100	300
East James	3864-3	320	960
East James	3935-3	132	396
East James	4010-3	264	792
East James	4011-3	160	480
East James	4123-3	132	396
East James	4248-3	100	300
East James	4397-3	141	282
East James	4435-3	0	0
East James	4487-3	200	400
East James	4488-3	0	0
East James	4488-3A	146	292
East James	4566-3	160	320
East James	4575-3A	90	180
East James	4583-3	227	454
East James	4589-3	109	218
East James	4596-3	132	264
East James	4683-3	138	276
East James	4777-3	160	320
East James	4778-3	100	200
East James	4818-3	110	220
East James	4820-3	140	280
East James	4835-3	132	264

Current number of permits in management unit = 65

Irrigation appropriations from this management unit = 29,507 ac-ft

Number of acres under irrigation permit in the management unit = 10,497

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
Pearl Creek	1883-3	121	363
Pearl Creek	2727-3	132	396
Pearl Creek	3606-3	15	45
Pearl Creek	3607-3	132	396
Pearl Creek	4114-3	264	792
Pearl Creek	4115-3	252	756
Pearl Creek	4197-3	80	240
Pearl Creek	4356-3	176	352
Pearl Creek	4378-3	278	556
Pearl Creek	4652-3	149	298
Pearl Creek	4854-3	160	320
Pearl Creek	4906-3	200	400

Current number of permits in management unit = 12  
 Irrigation appropriations from this management unit = 4,914 ac-ft  
 Number of acres under irrigation permit in the management unit = 1,959

There are 77 permits listed for the FLOYD aquifer in BEADLE County.  
 Amount appropriated from the aquifer = 34,421 ac-ft  
 Total number of permitted acres for aquifer = 12,456

TULARE   AQUIFER

East James	4545-3	79	158
Hitchcock	130-3	98	294
Hitchcock	149-3	320	960
Hitchcock	246-3	160	480
Hitchcock	282-3	160	480
Hitchcock	416-3	158	474
Hitchcock	443-3	65	195
Hitchcock	498-3	320	960
Hitchcock	563-3	296	888
Hitchcock	1423-3	132	396
Hitchcock	1511-3	135	405
Hitchcock	1512-3	135	405
Hitchcock	1523-3	160	480
Hitchcock	1608-3	160	480
Hitchcock	2078-3	924	2,772
Hitchcock	2367-3	124	372
Hitchcock	2457-3	132	396
Hitchcock	2471-3	210	630
Hitchcock	2472-3	136	408
Hitchcock	2476-3	109	327

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
Hitchcock	2484-3	135	405
Hitchcock	2568-3	136	408
Hitchcock	2569-3	280	840
Hitchcock	2853-3	132	396
Hitchcock	2976-3	160	480
Hitchcock	3105-3	140	420
Hitchcock	3106-3	140	420
Hitchcock	3191-3	118	354
Hitchcock	3192-3	140	420
Hitchcock	3268-3	113	339
Hitchcock	3317-3	90	270
Hitchcock	3415-3	200	600
Hitchcock	3466-3	153	459
Hitchcock	3630-3	245	735
Hitchcock	3631-3	355	1,065
Hitchcock	3877-3	310	930
Hitchcock	4146-3	130	390
Hitchcock	4147-3	130	390
Hitchcock	4217-3	130	390
Hitchcock	4249-3	206	618
Hitchcock	4273-3	430	1,290
Hitchcock	4308-3	0	0
Hitchcock	4335-3	135	0
Hitchcock	4336-3	160	320
Hitchcock	4350-3	132	264
Hitchcock	4400-3	132	264
Hitchcock	4482-3	132	264
Hitchcock	4546-3	241	482
Hitchcock	4547-3	80	160
Hitchcock	4548-3	132	264
Hitchcock	4550-3	320	640
Hitchcock	4622-3A	101	202
Hitchcock	4722-3A	160	320
Hitchcock	4723-3	160	320
Hitchcock	4728-3	138	276
Hitchcock	4871-3	110	220

Current number of permits in management unit = 55  
 Irrigation appropriations from this management unit = 27,417 ac-ft  
 Number of acres under irrigation permit in the management unit = 9,940

Western Spink	1424-3	254	762
Western Spink	2926-3	130	390
Western Spink	3243-3	89	267
Western Spink	3479-3	165	495
Western Spink	4134-3	128	384
Western Spink	4194-3	90	270
Western Spink	4222-3	240	720
Western Spink	4237-3	60	0

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
Western Spink	4912-3	380	760

Current number of permits in management unit = 9  
 Irrigation appropriations from this management unit = 4,048 ac-ft  
 Number of acres under irrigation permit in the management unit = 1,536

There are 65 permits listed for the TULARE aquifer in BEADLE County.  
 Amount appropriated from the aquifer = 31,623 ac-ft  
 Total number of permitted acres for aquifer = 11,555

WARREN   AQUIFER

wolsey	2775-3	285	855
wolsey	3327-3	480	1,440
wolsey	3445-3	265	795
wolsey	3447-3	140	420
wolsey	3449-3	280	840
wolsey	3542-3	320	960
wolsey	3887-3	0	0
wolsey	3916-3	0	0
wolsey	4046-3	0	0
wolsey	4141-3	100	300
wolsey	4663-3	500	1,000
wolsey	4755-3	140	280

Current number of permits in management unit = 12  
 Irrigation appropriations from this management unit = 6,890 ac-ft  
 Number of acres under irrigation permit in the management unit = 2,510

West James	235-3	210	630
West James	247-3	200	600
West James	808-3	144	432
West James	1010-3	10	30
West James	1220-3	160	480
West James	1438-3	140	420
west James	1440-3	40	120
west James	1529-3	110	330
west James	1529-3A	160	480
west James	1775-3	160	480
West James	1942-3	105	315
West James	2407-3	280	840
West James	2425-3	124	372



I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
West James	2426-3	138	414
West James	2501-3	280	840
West James	2581-3	168	504
West James	2599-3	257	771
West James	2680-3	440	1,320
West James	2699-3	264	792
West James	2762-3	200	600
West James	3076-3	200	600
West James	3082-3	275	825
West James	3086-3	134	402
West James	3089-3	140	420
West James	3091-3	132	396
West James	3092-3	112	336
West James	3093-3	200	600
West James	3095-3	140	420
West James	3097-3	131	393
West James	3098-3	132	396
West James	3289-3	160	480
West James	3458-3	190	570
West James	3469-3	356	1,068
West James	3472-3	140	420
West James	3664-3	3	9
West James	3753-3	300	0
West James	3849-3	222	666
West James	3891-3	140	420
West James	4143-3	310	930
West James	4263-3	140	420
West James	4348-3	20	40
West James	4377-3	132	264
West James	4379-3	0	0
West James	4485-3	264	528
West James	4490-3	132	264
West James	4520-3	132	264
West James	4581-3	160	320
West James	4615-3	130	260
West James	4616-3	284	568
West James	4662-3A	280	560
West James	4716-3	258	516
West James	4721-3	160	320
West James	4724-3	252	504

Current number of permits in management unit = 53  
 Irrigation appropriations from this management unit = 24,949 ac-ft  
 Number of acres under irrigation permit in the management unit = 9,351

There are 65 permits listed for the WARREN aquifer in BEADLE County.  
 Amount appropriated from the aquifer = 31,839 ac-ft

IRRIGATION SUMMARY  
BY COUNTY

Management Unit	Permit Number	<u>As of January 1, 1983.</u>	
		Permitted Appropriation Acres	(ac-ft)

Total number of permitted acres for aquifer = 11,861

THERE ARE 214 PERMITS LISTED FOR IRRIGATION IN  
BEADLE COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION  
OF 103,263 ACRE-FEET OF GROUND WATER.  
THEY HAVE 37,703 ACRES AVAILABLE FOR IRRIGATION.

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted	Appropriation
		Acres	(ac-ft)

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B O N   H O M M E   C O U N T Y  
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C H O T E A U   A Q U I F E R

Tyndall	2299-3	156	468
Tyndall	2587-3	126	378
Tyndall	2743-3	40	120
Tyndall	3576-3	155	465
Tyndall	3577-3	215	645
Tyndall	3579-3	240	720
Tyndall	3581-3	160	480
Tyndall	3582-3	320	960
Tyndall	3583-3	285	855
Tyndall	3809-3	0	0
Tyndall	3810-3	105	0
Tyndall	3811-3	168	504
Tyndall	3851-3	160	480
Tyndall	3889-3	55	165
Tyndall	4096-3	240	720
Tyndall	4240-3	140	420
Tyndall	4474-3	293	586
Tyndall	4474-3	293	586
Tyndall	4650-3	0	0
Tyndall	4650-3	0	0
Tyndall	4727-3	130	260
Tyndall	4727-3	130	260
Tyndall	4787-3	200	400
Tyndall	4787-3	200	400
Tyndall	4850-3	79	158
Tyndall	4850-3	79	158

Current number of permits in management unit = 26  
 Irrigation appropriations from this management unit = 10,188 ac-ft  
 Number of acres under irrigation permit in the management  
 unit = 3,969

West	2320-3	303	909
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There are 27 permits listed for the CHOTEAU aquifer  
 in BON HOMME County.  
 Amount appropriated from the aquifer = 11,097 ac-ft  
 Total number of permitted acres for aquifer = 4,272

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	<u>As of January 1, 1983</u>	
		Permitted	Appropriation
		.Acres	(ac-ft)

HUBONMIX   AQUIFER

4730-3	40	80
4730-3	40	80
4803-3	132	264
4803-3	132	264

There are 4 permits listed for the HUBONMIX aquifer in BON HOMME County.  
 Amount appropriated from the aquifer = 688 ac-ft  
 Total number of permitted acres for aquifer = 344

NIOBRARA FORMATION   AQUIFER

2588-3	124	372
4132-3	240	720
4578-3	80	160
4578-3	80	160
4626-3	220	440
4626-3	220	440
4779-3	100	200
4779-3	100	200

There are 8 permits listed for the NIOBRARA FORMATION aquifer in BON HOMME County.  
 Amount appropriated from the aquifer = 2,692 ac-ft  
 Total number of permitted acres for aquifer = 1,164

PLEISTOCENE SERIES   AQUIFER

Unknown	3585-3	25	75
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THERE ARE 40 PERMITS LISTED FOR IRRIGATION IN BON HOMME COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION OF 14,552 ACRE-FEET OF GROUND WATER.

IRRIGATION SUMMARY  
BY COUNTY

Management Unit	Permit Number	<u>As of January 1, 1983</u>	
		Permitted	Appropriation
		Acres	(ac-ft)

THEY HAVE 5.805 ACRES AVAILABLE FOR IRRIGATION.

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted Acres	Appropriation (ac-ft)

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B R O O K I N G S   C O U N T Y  
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B I G   S I D U X   A Q U I F E R

Aurora	589-3	7	21
Aurora	644-3	149	448
Aurora	1109-3	152	456
Aurora	1344-3	99	297
Aurora	1880-3	149	447
Aurora	2073-3	100	300
Aurora	2149-3	137	411
Aurora	2161-3	132	396
Aurora	2328-3	227	681
Aurora	2429-3	137	411
Aurora	2540-3	147	441
Aurora	2558-3	94	282
Aurora	2666-3	312	936
Aurora	2676-3	264	792
Aurora	2677-3	259	777
Aurora	2698-3	66	198
Aurora	2732-3	124	372
Aurora	2735-3	138	414
Aurora	2787-3	30	91
Aurora	2800-3	513	1,539
Aurora	2804-3	153	459
Aurora	2809-3	156	468
Aurora	2901-3	241	723
Aurora	2902-3	151	453
Aurora	2903-3	156	468
Aurora	2904-3	156	468
Aurora	3206-3	150	450
Aurora	3211-3	145	435
Aurora	3212-3	137	411
Aurora	3213-3	430	1,290
Aurora	3218-3	250	750
Aurora	3219-3	308	924
Aurora	3332-3	118	354
Aurora	3333-3	148	444
Aurora	3338-3	300	900
Aurora	3347-3	156	468
Aurora	3398-3	104	312
Aurora	3452-3	132	396
Aurora	3495-3	156	468
Aurora	3557-3	70	210

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
Aurora	3620-3	264	792
Aurora	3668-3	132	396
Aurora	3841-3	246	738
Aurora	4112-3	243	729
Aurora	4119-3	312	0
Aurora	4202-3	80	240
Aurora	4241-3	235	705
Aurora	4359-3	445	890
Aurora	4416-3	156	312
Aurora	4436-3	267	534
Aurora	4477-3	0	0
Aurora	4497-3A	312	624
Aurora	4508-3	156	312
Aurora	4515-3	156	312
Aurora	4516-3	115	230
Aurora	4537-3	120	240
Aurora	4590-3	283	566
Aurora	4600-3	140	280
Aurora	4773-3	35	70
Aurora	4859-3	156	0

Current number of permits in management unit = 60  
 Irrigation appropriations from this management unit = 28,531 ac-ft  
 Number of acres under irrigation permit in the management unit = 10,707

Brookings	113-3A	85	255
Brookings	208-3	240	720
Brookings	392-3	40	120
Brookings	602-3	80	240
Brookings	692-3	156	468
Brookings	983-3	77	231
Brookings	1017-3	125	375
Brookings	1322-3	138	414
Brookings	1940-3	70	210
Brookings	2039-3	199	597
Brookings	2048-3	120	360
Brookings	2071-3	128	384
Brookings	2072-3	154	461
Brookings	2096-3	154	462
Brookings	2097-3	98	294
Brookings	2122-3	70	210
Brookings	2123-3	240	720
Brookings	2125-3	151	453
Brookings	2126-3	151	453
Brookings	2127-3	126	378
Brookings	2128-3	156	468
Brookings	2148-3	236	708
Brookings	2150-3	119	357
Brookings	2151-3	208	624

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
Brookings	2152-3	116	348
Brookings	2166-3	147	441
Brookings	2167-3	139	417
Brookings	2169-3	15	45
Brookings	2211-3	164	492
Brookings	2406-3	207	621
Brookings	2437-3	132	396
Brookings	2496-3	396	1,188
Brookings	2527-3	255	765
Brookings	2554-3	75	225
Brookings	2555-3	124	372
Brookings	2556-3	123	369
Brookings	2557-3	113	339
Brookings	2559-3	277	831
Brookings	2589-3	149	447
Brookings	2593-3	140	420
Brookings	2594-3	266	798
Brookings	2612-3	70	210
Brookings	2663-3	194	582
Brookings	2667-3	136	408
Brookings	2695-3	142	426
Brookings	2701-3	463	1,389
Brookings	2702-3	216	648
Brookings	2724-3	67	201
Brookings	2842-3	458	1,374
Brookings	2843-3	307	921
Brookings	2844-3	152	456
Brookings	2905-3	120	360
Brookings	2906-3	136	408
Brookings	2908-3	424	1,272
Brookings	3202-3	141	423
Brookings	3203-3	120	360
Brookings	3204-3	296	888
Brookings	3205-3	14	42
Brookings	3207-3	147	441
Brookings	3208-3	146	438
Brookings	3209-3	103	309
Brookings	3222-3	148	444
Brookings	3239-3	154	462
Brookings	3240-3	132	396
Brookings	3346-3	163	489
Brookings	3361-3	191	573
Brookings	3366-3	160	480
Brookings	3386-3	127	381
Brookings	3416-3	107	322
Brookings	3420-3	40	120
Brookings	3481-3	151	453
Brookings	3482-3	132	396
Brookings	3506-3	156	468
Brookings	3554-3	156	468
Brookings	3555-3	141	423



I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
Brookings	3556-3	302	906
Brookings	3601-3	148	444
Brookings	3617-3	154	462
Brookings	3618-3	156	468
Brookings	3647-3	151	453
Brookings	3650-3	160	480
Brookings	3651-3	80	240
Brookings	3730-3	156	468
Brookings	3762-3	321	963
Brookings	3765-3	780	2,340
Brookings	3842-3	159	477
Brookings	3913-3	120	360
Brookings	3921-3	127	381
Brookings	3951-3	212	636
Brookings	4014-3	128	384
Brookings	4025-3	140	420
Brookings	4036-3	136	408
Brookings	4081-3	86	258
Brookings	4082-3	75	225
Brookings	4087-3	80	240
Brookings	4088-3	280	840
Brookings	4109-3	424	1,272
Brookings	4142-3	120	360
Brookings	4234-3	25	75
Brookings	4239-3	0	0
Brookings	4242-3	180	540
Brookings	4291-3	0	0
Brookings	4305-3	156	312
Brookings	4327-3	156	312
Brookings	4330-3	145	289
Brookings	4333-3	160	320
Brookings	4338-3	132	264
Brookings	4343-3	240	480
Brookings	4362-3	147	294
Brookings	4363-3	230	460
Brookings	4373-3	50	100
Brookings	4394-3	145	290
Brookings	4454-3	117	234
Brookings	4462-3	153	306
Brookings	4462-3A	0	0
Brookings	4467-3	40	0
Brookings	4478-3	84	168
Brookings	4483-3	270	540
Brookings	4484-3	92	184
Brookings	4507-3	252	504
Brookings	4510-3	132	264
Brookings	4607-3	231	462
Brookings	4608-3	132	264
Brookings	4617-3	156	312
Brookings	4632-2	148	296
Brookings	4635-3	264	528

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
Brookings	4725-3	80	160
Brookings	4894-3	92	184

Current number of permits in management unit = 128  
 Irrigation appropriations from this management unit = 57,534 ac-ft  
 Number of acres under irrigation permit in the management unit = 20,472

North Deer Creek	2124-3	126	378
North Deer Creek	4235-3	312	936
North Deer Creek	4250-3	139	417
North Deer Creek	4252-3	640	1,920

Current number of permits in management unit = 4  
 Irrigation appropriations from this management unit = 3,651 ac-ft  
 Number of acres under irrigation permit in the management unit = 1,217

Six Mile Creek	556-3	147	441
Six Mile Creek	2907-3	293	879
Six Mile Creek	3298-3	108	324
Six Mile Creek	3616-3	313	939
Six Mile Creek	3669-3	128	384
Six Mile Creek	3764-3	156	468
Six Mile Creek	4079-3	395	1,185
Six Mile Creek	4328-3	31	62

Current number of permits in management unit = 8  
 Irrigation appropriations from this management unit = 4,682 ac-ft  
 Number of acres under irrigation permit in the management unit = 1,571

Unnamed Creek	2687-3	264	792
Unnamed Creek	2725-3	303	909
Unnamed Creek	3215-3	144	432
Unnamed Creek	3484-3	140	420
Unnamed Creek	3950-3	0	0
Unnamed Creek	4124-3	66	198
Unnamed Creek	4254-3	150	450
Unnamed Creek	4428-3	356	712
Unnamed Creek	4593-3	138	276
Unnamed Creek	4697-3	320	640

Current number of permits in management unit = 10  
 Irrigation appropriations from this management unit = 4,829 ac-ft  
 Number of acres under irrigation permit in the management unit = 1,881

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted Acres	Appropriation (ac-ft)

There are 210 permits listed for the BIG SIOUX aquifer in BROOKINGS County.

Amount appropriated from the aquifer = 99,227 ac-ft

Total number of permitted acres for aquifer = 35,848

P L E I S T O C E N E   S E R I E S   A Q U I F E R

Miscellaneous	3185-3	99	297
Miscellaneous	3497-3	70	210
Miscellaneous	3876-3	480	1,440

Current number of permits in management unit = 3

Irrigation appropriations from this management unit = 1,947 ac-ft

Number of acres under irrigation permit in the management unit = 649

Unknown	2665-3	152	456
Unknown	2693-3	170	510
Unknown	2694-3	220	660
Unknown	2909-3	156	468
Unknown	2910-3	156	468
Unknown	3047-3	132	396
Unknown	3210-3	120	360
Unknown	3220-3	80	240
Unknown	3221-3	162	486
Unknown	3348-3	252	756
Unknown	3678-3	182	546
Unknown	3922-3	312	936
Unknown	3953-3	262	786
Unknown	3969-3	147	441
Unknown	4150-3	136	408
Unknown	4154-3	146	438
Unknown	4155-3	312	936
Unknown	4168-3	312	936
Unknown	4213-3	146	438
Unknown	4295-3	156	312
Unknown	4332-3	150	300
Unknown	4347-3	272	544
Unknown	4364-3	411	822
Unknown	4403-3	80	0
Unknown	4442-3	136	272
Unknown	4452-3	156	312
Unknown	4468-3	468	936
Unknown	4517-3	710	1,420
Unknown	4518-3	408	816

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
Unknown	4519-3	158	316
Unknown	4524-3	120	240
Unknown	4707-3	160	320
Unknown	4726-3	127	254
Unknown	4763-3	148	296

Current number of permits in management unit = 34  
 Irrigation appropriations from this management unit = 17,825 ac-ft  
 Number of acres under irrigation permit in the management unit = 7,215

There are 37 permits listed for the PLEISTOCENE SERIES aquifer in BROOKINGS County.  
 Amount appropriated from the aquifer = 19,772 ac-ft  
 Total number of permitted acres for aquifer = 7,864

THERE ARE 247 PERMITS LISTED FOR IRRIGATION IN BROOKINGS COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION OF 118,999 ACRE-FEET OF GROUND WATER.  
 THEY HAVE 43,712 ACRES AVAILABLE FOR IRRIGATION.

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted	Appropriation
		Acres	(ac-ft)

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B R O W N   C O U N T Y  
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D E E P   J A M E S   A Q U I F E R

	2314-3	306	918
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D A K O T A   F O R M A T I O N   A Q U I F E R

	1054-3	43	128
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E L M   A Q U I F E R

Northern Brown	122-3	279	837
Northern Brown	205-3	40	120
Northern Brown	1364-3	242	727
Northern Brown	1536-3	54	162
Northern Brown	1667-3	75	225
Northern Brown	1678-3	305	915
Northern Brown	2233-3	8	24
Northern Brown	2481-3	128	384
Northern Brown	2563-3	110	330
Northern Brown	2580-3	135	405
Northern Brown	2603-3	135	405
Northern Brown	2604-3	135	405
Northern Brown	3384-3	120	360
Northern Brown	3988-3	40	120
Northern Brown	4015-3	300	900
Northern Brown	4017-3	520	1,560
Northern Brown	4022-3	160	480
Northern Brown	4086-3	160	480
Northern Brown	4157-3	240	720
Northern Brown	4257-3	160	480

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
Northern Brown	4261-3	240	720
Northern Brown	4339-3	156	312
Northern Brown	4340-3	152	304
Northern Brown	4890-3	0	0

Current number of permits in management unit = 24  
 Irrigation appropriations from this management unit = 11,375 ac-ft  
 Number of acres under irrigation permit in the management unit = 3,894

Southern Brown	3007-3	135	405
Southern Brown	3652-3	133	399
Southern Brown	3692-3	4	11
Southern Brown	3747-3	159	477
Southern Brown	3956-3	180	540
Southern Brown	3976-3	80	240

Current number of permits in management unit = 6  
 Irrigation appropriations from this management unit = 2,072 ac-ft  
 Number of acres under irrigation permit in the management unit = 691

There are 30 permits listed for the ELM aquifer in BROWN County.  
 Amount appropriated from the aquifer = 13,447 ac-ft  
 Total number of permitted acres for aquifer = 4,585

M I D D L E   J A M E S   A Q U I F E R

Aberdeen	2867-3	635	1,905
Aberdeen	2870-3	240	720
Aberdeen	3274-3	160	480
Aberdeen	3480-3	262	786
Aberdeen	3972-3	132	396
Aberdeen	4639-3	160	320
Aberdeen	4681-3	80	0
Aberdeen	4757-3	160	0
Aberdeen	4784-3	132	264

Current number of permits in management unit = 9  
 Irrigation appropriations from this management unit = 4,871 ac-ft  
 Number of acres under irrigation permit in the management unit = 1,961

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
Columbia	1168-3	48	144
Columbia	1658-3	84	252
Columbia	2173-3	316	948
Columbia	2504-3	140	420
Columbia	2928-3	133	399
Columbia	2984-3	300	900
Columbia	2990-3	280	840
Columbia	3006-3	280	840
Columbia	3043-3	160	480
Columbia	3060-3	280	840
Columbia	3121-3	250	750
Columbia	3147-3	280	840
Columbia	3148-3	245	735
Columbia	3149-3	270	810
Columbia	3150-3	245	735
Columbia	3151-3	240	720
Columbia	3408-3	320	960
Columbia	4166-3	147	441
Columbia	4898-3	130	260

Current number of permits in management unit = 19  
 Irrigation appropriations from this management unit = 12,314 ac-ft  
 Number of acres under irrigation permit in the management unit = 4,148

There are 28 permits listed for the MIDDLE JAMES aquifer in BROWN County.  
 Amount appropriated from the aquifer = 17,185 ac-ft  
 Total number of permitted acres for aquifer = 6,109

THERE ARE 60 PERMITS LISTED FOR IRRIGATION IN BROWN COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION OF 31,678 ACRE-FEET OF GROUND WATER.  
 THEY HAVE 11,043 ACRES AVAILABLE FOR IRRIGATION.

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted Appropriation	
		Acres	(ac-ft)

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BRULE COUNTY  
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DAKOTA FORMATION   AQUIFER

4769-3	130	250	
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PLEISTOCENE SERIES   AQUIFER

Unknown	1386-3	212	636
Unknown	3818-3	600	1,800
Unknown	4006-3	220	660
Unknown	4539-3	59	118

Current number of permits in management unit = 4  
 Irrigation appropriations from this management unit = 3,214 ac-ft  
 Number of acres under irrigation permit in the management  
 unit = 1,091

There are 4 permits listed for the PLEISTOCENE SERIES aquifer  
 in BRULE County.

Amount appropriated from the aquifer = 3,214 ac-ft  
 Total number of permitted acres for aquifer = 1,091

THERE ARE 5 PERMITS LISTED FOR IRRIGATION IN  
 BRULE COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION  
 OF 3,474 ACRE-FEET OF GROUND WATER.  
 THEY HAVE 1,221 ACRES AVAILABLE FOR IRRIGATION.



I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted	Appropriation
		Acres	(ac-ft)

-----  
B U F F A L O   C O U N T Y  
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C R O W   C R E E K   A Q U I F E R

1684-3	178	534
2751-3	140	420
3456-3	717	2,151
3456-3	717	2,151
3492-3	251	753
3493-3	279	837
3512-3	105	315
3609-3	160	480
3657-3	65	195
3892-3	160	480
3939-3	140	0
3974-3	200	600
4030-3	240	720
4078-3	320	960
4078-3	320	960
4078-3	320	960
4852-3	100	200
4852-3	100	200

There are 18 permits listed for the CROW CREEK aquifer in BUFFALO County.

Amount appropriated from the aquifer = 12,916 ac-ft

Total number of permitted acres for aquifer = 4,512

P L E I S T O C E N E   S E R I E S   A Q U I F E R

Unknown	3754-3	135	405
Unknown	3845-3	250	750

Current number of permits in management unit = 2

Irrigation appropriations from this management unit = 1,155 ac-ft

Number of acres under irrigation permit in the management unit = 385

IRRIGATION SUMMARY  
BY COUNTY

Management Unit	Permit Number	<u>As of January 1, 1983</u>	
		Permitted Appropriation Acres	(ac-ft)

There are 2 permits listed for the PLEISTOCENE SERIES aquifer in BUFFALO County.

Amount appropriated from the aquifer = 1,155 ac-ft

Total number of permitted acres for aquifer = 385

THERE ARE 20 PERMITS LISTED FOR IRRIGATION IN BUFFALO COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION OF 14,071 ACRE-FEET OF GROUND WATER. THEY HAVE 4,897 ACRES AVAILABLE FOR IRRIGATION.

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted	Appropriation
		Acres	(ac-ft)

-----  
CAMPBELL COUNTY  
-----

GRAND    AQUIFER

1342-3	130	390
1750-3	160	480
1990-3	132	396
2012-3	135	406
2119-3	136	408
2355-3	136	408
2949-3	160	480
3023-3	280	840
3170-3	264	792
3367-3	320	960
3368-3	320	960
3658-3	160	480
3684-3	1,200	3,600
3803-3	480	1,440
3879-3	320	960
3881-3	160	480
3882-3	160	480
3883-3	235	705
3993-3	480	1,440
4080-3	160	480
4310-3	320	640
4448-3A	160	320
4525-3	160	320
4602-3	160	320
4705-3	160	0

There are 25 permits listed for the GRAND aquifer  
in CAMPBELL County.  
Amount appropriated from the aquifer = 18,185 ac-ft  
Total number of permitted acres for aquifer = 6,488

SELBY    AQUIFER

2192-3	260	780
2252-3	80	240

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
	2274-3	80	240
	2524-3	82	246
	2590-3	80	240
	2591-3	160	480
	2605-3	80	240
	2606-3	160	480
	2607-3	80	240
	2614-3	80	240
	2930-3	140	420
	3074-3	128	384
	3075-3	480	1,440
	3199-3	640	1,920
	3311-3	560	1,680
	3418-3	160	480
	3419-3	320	960
	3431-3	160	480
	3473-3	440	1,320
	3813-3	140	420
	3878-3	320	960
	3884-3	260	780
	3898-3	0	0
	3912-3	160	480
	4368-3	0	0
	4368-3	0	0
	4614-3	320	640

There are 27 permits listed for the SELBY aquifer in CAMPBELL County.  
Amount appropriated from the aquifer = 15,790 ac-ft  
Total number of permitted acres for aquifer = 5,370

THERE ARE 52 PERMITS LISTED FOR IRRIGATION IN CAMPBELL COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION OF 33,975 ACRE-FEET OF GROUND WATER. THEY HAVE 11,858 ACRES AVAILABLE FOR IRRIGATION.

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted	Appropriation
		Acres	(ac-ft)

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C H A R L E S   M I X   C O U N T Y  
-----

C H O T E A U   A Q U I F E R

west	293-3	240	720
west	311-3	200	600
west	327-3	120	360
west	363-3	185	555
west	1095-3	186	558
west	1230-3	160	480
west	1237-3	80	240
west	1252-3	120	360
west	1343-3	138	414
west	1352-3	132	396
west	1355-3	100	300
west	1368-3	240	720
west	1392-3	234	702
west	1395-3	80	240
west	1619-3A	235	704
west	1632-3	320	960
west	1633-3	140	420
west	1884-3	130	390
west	2216-3	260	780
west	2217-3	260	780
west	2250-3	182	546
west	2282-3	160	480
west	2310-3A	160	480
west	2323-3	220	660
west	2583-3	80	240
west	2922-3	140	420
west	3318-3	80	240
west	3696-3	159	477
west	3697-3	160	480
west	3698-3	151	453
west	3700-3	160	480
west	3701-3	320	960
west	3704-3	160	480
west	3705-3	260	780
west	3706-3	160	480
west	3707-3	160	480
west	3736-3	0	0
west	3750-3	80	240
west	4004-3	200	600
west	4005-3	420	1,260

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
west	4198-3	200	600
west	4526-3	160	320
west	4594-3	250	500
west	4744-3	160	320
west	4869-3	160	320
west	4878-3	170	340

Current number of permits in management unit = 46  
 Irrigation appropriations from this management unit = 23,315 ac-ft  
 Number of acres under irrigation permit in the management unit = 8,072

There are 46 permits listed for the CHOTEAU aquifer in CHARLES\_MIX County.  
 Amount appropriated from the aquifer = 23,315 ac-ft  
 Total number of permitted acres for aquifer = 8,072

DELMONT   AQUIFER

2163-3	154	462
2232-3	290	870
3695-3	67	201
4641-3A	0	0

There are 4 permits listed for the DELMONT aquifer in CHARLES\_MIX County.  
 Amount appropriated from the aquifer = 1,533 ac-ft  
 Total number of permitted acres for aquifer = 511

DAKOTA FORMATION   AQUIFER

394-3	200	600
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GEDDES   AQUIFER

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
	3459-3	400	1,200

INTERMEDIATE   AQUIFER

2218-3	260	730
3967-3	160	480

There are 2 permits listed for the INTERMEDIATE aquifer in CHARLES\_MIX County.

Amount appropriated from the aquifer = 1,260 ac-ft

Total number of permitted acres for aquifer = 420

MISSOURI   AQUIFER

Greenwood	4800-3	40	80
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PLEISTOCENE SERIES   AQUIFER

Miscellaneous	2681-3	146	438
Miscellaneous	3357-3	160	480
Miscellaneous	4472-3	410	820

Current number of permits in management unit = 3

Irrigation appropriations from this management unit = 1,738 ac-ft

Number of acres under irrigation permit in the management unit = 716

Unknown	1459-3	200	600
Unknown	4761-3	170	340

Current number of permits in management unit = 2

Irrigation appropriations from this management unit = 940 ac-ft

Number of acres under irrigation permit in the management unit = 370

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	<u>As of January 1, 1983</u> Permitted Appropriation Acres            (ac-ft)
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There are 5 permits listed for the PLEISTOCENE SERIES aquifer  
in CHARLES\_MIX County.  
Amount appropriated from the aquifer = 2,678 ac-ft  
Total number of permitted acres for aquifer = 1,086

THERE ARE 60 PERMITS LISTED FOR IRRIGATION IN  
CHARLES\_MIX COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION  
OF 30,666 ACRE-FEET OF GROUND WATER.  
THEY HAVE 10,728 ACRES AVAILABLE FOR IRRIGATION.



I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted	Appropriation
		Acres	(ac-ft)

----- CLARK COUNTY -----

ALTAMONT   AQUIFER

1776-3	135	405
2417-3	268	804
2489-3	936	2,808
2653-3	289	867
2710-3	252	756
2741-3	800	2,400
2805-3	254	762
2833-3	305	915
2851-3	294	882
2866-3	194	582
3000-3	760	2,280
3013-3	132	396
3028-3	132	396
3030-3	186	558
3059-3	269	807
3198-3	1,112	3,336
3660-3	151	453
4160-3	160	480
4292-3	320	640
4391-3	160	0
4399-3	270	540
4643-3	132	264
4657-3	160	320
4658-3	160	320
4783-3	180	360

There are 25 permits listed for the ALTAMONT aquifer in CLARK County.

Amount appropriated from the aquifer = 22,331 ac-ft

Total number of permitted acres for aquifer = 8,011

PRAIRIE COTEAU   AQUIFER

1016-3	114	342
1898-3	270	810

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted Acres	Appropriation (ac-ft)
	1899-3	135	405
	2672-3	130	390
	2700-3	307	921
	3026-3	160	480
	4186-3	280	840

There are 7 permits listed for the PRAIRIE COTEAU aquifer in CLARK County.

Amount appropriated from the aquifer = 4,188 ac-ft  
Total number of permitted acres for aquifer = 1,396

P L E I S T O C E N E   S E R I E S   A Q U I F E R

Unknown	685-3	298	894
Unknown	783-3	274	823
Unknown	4793-3	160	320

Current number of permits in management unit = 3  
Irrigation appropriations from this management unit = 2,037 ac-ft  
Number of acres under irrigation permit in the management unit = 732

There are 3 permits listed for the PLEISTOCENE SERIES aquifer in CLARK County.

Amount appropriated from the aquifer = 2,037 ac-ft  
Total number of permitted acres for aquifer = 732

V E R M I L L I O N - E A S T - F O R K   A Q U I F E R

Antelope Lake	2308-3	408	1,224
Antelope Lake	2533-3	132	396
Antelope Lake	2716-3	312	936
Antelope Lake	3897-3	156	468
Antelope Lake	4931-3	0	0

Current number of permits in management unit = 5  
Irrigation appropriations from this management unit = 3,024 ac-ft  
Number of acres under irrigation permit in the management unit = 1,008

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted Acres	Appropriation (ac-ft)
Spirit Lake	1911-3	130	390
Spirit Lake	2696-3	154	462
Spirit Lake	2731-3	160	480
Spirit Lake	3296-3	264	792
Spirit Lake	4221-3	132	396
Spirit Lake	4324-3A	222	444
Spirit Lake	4331-3	304	608

Current number of permits in management unit = 7  
 Irrigation appropriations from this management unit = 3,572 ac-ft  
 Number of acres under irrigation permit in the management unit = 1,366

Willow Lake	1721-3	120	360
Willow Lake	2212-3	112	336
Willow Lake	2322-3	254	762
Willow Lake	2970-3	238	714
Willow Lake	3145-3	654	1,962
Willow Lake	3146-3	300	900
Willow Lake	3827-3	156	468
Willow Lake	4414-3	331	662

Current number of permits in management unit = 8  
 Irrigation appropriations from this management unit = 6,164 ac-ft  
 Number of acres under irrigation permit in the management unit = 2,165

There are 20 permits listed for the VERMILLION-EAST-FORK aquifer in CLARK County.  
 Amount appropriated from the aquifer = 12,760 ac-ft  
 Total number of permitted acres for aquifer = 4,539

THERE ARE 55 PERMITS LISTED FOR IRRIGATION IN CLARK COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION OF 41,316 ACRE-FEET OF GROUND WATER. THEY HAVE 14,678 ACRES AVAILABLE FOR IRRIGATION.

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted	Appropriation
		Acres	(ac-ft)

-----CLAY COUNTY-----

LOWER-JAMES-MISSOURI   AQUIFER

3767-3	125	375
4246-3	208	624
4644-3	220	440

There are 3 permits listed for the LOWER-JAMES-MISSOURI aquifer in CLAY County.

Amount appropriated from the aquifer = 1,439 ac-ft

Total number of permitted acres for aquifer = 553

LOWER-VERMILLION-MISSOURI   AQUIFER

214-3	145	435
215-3	180	540
229-3	240	720
309-3	140	420
421-3	160	480
671-3	243	729
973-3	135	405
974-3	0	0
1035-3	38	115
1569-3	270	810
1813-3	144	432
1916-3	169	507
2362-3	132	396
2807-3	91	273
2944-3	105	315
2950-3	110	330
2966-3	74	222
2978-3	138	414
3010-3	263	789
3037-3	68	204
3039-3	140	420
3066-3	90	270
3109-3	258	774
3167-3	50	150

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted Acres	Appropriation (ac-ft)
	3197-3	140	420
	3488-3	265	795
	3544-3	480	1,440
	3546-3	360	1,080
	3547-3	160	480
	3571-3	266	798
	3798-3	147	441
	3873-3	160	480
	4024-3	236	708
	4424-3	70	140
	4664-3	120	240
	4731-3	40	80
	4896-3	80	160

There are 37 permits listed for the LOWER-VERMILLION-MISSOURI aquifer in CLAY County.

Amount appropriated from the aquifer = 17,412 ac-ft

Total number of permitted acres for aquifer = 5,907

MISSOURI   AQUIFER

428-3	70	210
430-3	129	387
474-3	128	385
475-3	320	960
977-3	420	1,260
1006-3	204	613
1007-3	107	321
1034-3	121	363
1434-3	63	189
1624-3	80	240
2013-3	160	480
2053-3	922	2,766
2158-3	187	561
2229-3	186	558
2293-3	180	540
2315-3	536	1,608
2465-3	136	408
2584-3	162	486
2826-3	280	840
2947-3	136	408
3036-3	206	618
3168-3	172	516
3475-3	72	216
3487-3	88	264
3508-3	154	462

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
	3611-3	130	390
	3628-3	130	390
	3655-3	60	180
	3755-3	310	930
	3908-3	80	240
	4214-3	64	192
	4557-3	78	156
	4625-3	25	50
	4676-3	132	264
	4689-3	160	320
	4701-3	170	340
	4708-3	132	264
	4718-3	160	320
	4740-3	135	270

There are 39 permits listed for the MISSOURI aquifer in CLAY County.

Amount appropriated from the aquifer = 19,965 ac-ft

Total number of permitted acres for aquifer = 6,985

PARKER-CENTERVILLE   AQUIFER

	117-3A	66	198
	182-3	145	435
	3049-3	135	405
	3157-3	105	315
	3245-3	66	198
	3543-3	240	720
	3545-3	80	240

There are 7 permits listed for the PARKER-CENTERVILLE aquifer in CLAY County.

Amount appropriated from the aquifer = 2,511 ac-ft

Total number of permitted acres for aquifer = 837

UPPER-VERMILLION-MISSOURI   AQUIFER

	2268-3	206	618
	2372-3	128	384
	3051-3	120	360
	3328-3	121	363

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
	3948-3	135	405
	3994-3	332	996

There are 6 permits listed for the UPPER-VERMILLION-MISSOURI aquifer in CLAY County.

Amount appropriated from the aquifer = 3,126 ac-ft

Total number of permitted acres for aquifer = 1,042

THERE ARE 92 PERMITS LISTED FOR IRRIGATION IN CLAY COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION OF 44,453 ACRE-FEET OF GROUND WATER. THEY HAVE 15,325 ACRES AVAILABLE FOR IRRIGATION.

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted Acres	Appropriation (ac-ft)

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C O D I N G T O N   C O U N T Y  
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A N T E L O P E   V A L L E Y   A Q U I F E R

	1774-3	160	480
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B I G   S I D U X   A Q U I F E R

North	151-3	31	94
North	483-3	140	420
North	668-3	230	689
North	669-3	53	159
North	722-3	146	438
North	1115-3	53	159
North	1612-3	103	309
North	1997-3	121	363
North	2120-3	240	720
North	2130-3	160	480
North	2168-3	228	684
North	2171-3	270	810
North	2277-3	156	468
North	2313-3	301	903
North	2477-3	725	2,175
North	2497-3	311	933
North	2615-3	160	480
North	2827-3	156	468
North	2892-3	10	30
North	2927-3	520	1,560
North	3228-3	202	606
North	3232-3	160	480
North	3450-3	280	840
North	3489-3	437	1,311
North	3491-3	18	54
North	3724-3	160	480
North	3824-3	40	120
North	3839-3	127	381
North	3941-3	40	120
North	4180-3	0	0



I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
North	4181-3	160	480
North	4226-3	240	720
North	4822-3	0	0

Current number of permits in management unit = 33  
 Irrigation appropriations from this management unit = 17,934 ac-ft  
 Number of acres under irrigation permit in the management unit = 5,978

There are 33 permits listed for the BIG SIOUX aquifer in CODINGTON County.  
 Amount appropriated from the aquifer = 17,934 ac-ft  
 Total number of permitted acres for aquifer = 5,978

PRAIRIE COTEAU AQUIFER

2363-3	198	594
3229-3	270	810
3672-3	223	669
3745-3	160	480
3781-3	264	792
4044-3	156	468
4139-3	262	786
4182-3	0	0
4417-3	1,034	2,068
4588-3A	200	400
4749-3	300	600
4926-3	320	640

There are 12 permits listed for the PRAIRIE COTEAU aquifer in CODINGTON County.  
 Amount appropriated from the aquifer = 8,307 ac-ft  
 Total number of permitted acres for aquifer = 3,387

PLEISTOCENE SERIES AQUIFER

Unknown	2543-3	183	549
Unknown	3800-3	120	360
Unknown	3909-3	43	129

Current number of permits in management unit = 3

IRRIGATION SUMMARY  
BY COUNTY

Management Unit	Permit Number	<u>As of January 1, 1983</u>	
		Permitted Appropriation Acres	(ac-ft)

Irrigation appropriations from this management unit = 1,038 ac-ft  
Number of acres under irrigation permit in the management  
unit = 346

There are 3 permits listed for the PLEISTOCENE SERIES aquifer  
in CODINGTON County.

Amount appropriated from the aquifer = 1,038 ac-ft  
Total number of permitted acres for aquifer = 346

THERE ARE 49 PERMITS LISTED FOR IRRIGATION IN  
CODINGTON COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION  
OF 27,759 ACRE-Feet OF GROUND WATER.  
THEY HAVE 9,871 ACRES AVAILABLE FOR IRRIGATION.

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted	Appropriation
		Acres	(ac-ft)

-----  
DAVISON COUNTY  
-----

CODELL SANDSTONE   AQUIFER

	1581-3	80	240
	1693-3	220	660

There are 2 permits listed for the CODELL SANDSTONE aquifer in DAVISON County.

Amount appropriated from the aquifer = 900 ac-ft  
Total number of permitted acres for aquifer = 300

ETHAN   AQUIFER

	1362-3	560	1,680
	1363-3	200	600
	1480-3	240	720

There are 3 permits listed for the ETHAN aquifer in DAVISON County.

Amount appropriated from the aquifer = 3,000 ac-ft  
Total number of permitted acres for aquifer = 1,000

NIOBRARA FORMATION   AQUIFER

	1238-3	386	1,158
	1280-3	152	456
	1412-3	160	480
	1479-3	160	480
	1797-3	320	960
	1949-3	320	960
	2932-3	175	525
	3441-3	160	480
	3442-3	111	333

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
	3463-3	160	480
	3766-3	240	720
	3788-3	120	360
	3789-3	130	0

There are 13 permits listed for the NIOBRARA FORMATION aquifer in DAVISON County.

Amount appropriated from the aquifer = 7,392 ac-ft  
Total number of permitted acres for aquifer = 2,594

P L E I S T O C E N E   S E R I E S   A Q U I F E R

Unknown	281-3	83	249
Unknown	409-3	30	90
Unknown	1747-3	83	249

Current number of permits in management unit = 3  
Irrigation appropriations from this management unit = 588 ac-ft  
Number of acres under irrigation permit in the management unit = 196

There are 3 permits listed for the PLEISTOCENE SERIES aquifer in DAVISON County.

Amount appropriated from the aquifer = 588 ac-ft  
Total number of permitted acres for aquifer = 196

S I O U X   Q U A R T Z I T E   A Q U I F E R

	124-3	10	30
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W A R R E N   A Q U I F E R

Morris Creek	513-3	61	184
Morris Creek	1335-3	140	420

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	<u>As of January 1, 1983</u> Permitted Appropriation Acres      (ac-ft)
Current number of permits in management unit = 2		
Irrigation appropriations from this management unit =      604 ac-ft		
Number of acres under irrigation permit in the management unit =            201		

There are 2 permits listed for the WARREN aquifer  
in DAVISON County.  
Amount appropriated from the aquifer =      604 ac-ft  
Total number of permitted acres for aquifer =      201

THERE ARE 24 PERMITS LISTED FOR IRRIGATION IN  
DAVISON COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION  
OF 12,514 ACRE-Feet OF GROUND WATER.  
THEY HAVE      4,301 ACRES AVAILABLE FOR IRRIGATION.

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted Acres	Appropriation (ac-ft)

-----  
DAY COUNTY  
-----

ALTAMONT   AQUIFER

2427-3	255	765
2816-3	283	849
2840-3	93	279
3299-3	400	1,200
3300-3	144	432
3932-3	186	558
3978-3	222	666
4156-3	132	396
4192-3	160	480
4337-3	184	368
4371-3	0	0
4459-3	115	230

There are 12 permits listed for the ALTAMONT aquifer in DAY County.

Amount appropriated from the aquifer = 6,223 ac-ft

Total number of permitted acres for aquifer = 2,174

COTEAU LAKES   AQUIFER

2795-3	582	1,746
4365-3	145	290

There are 2 permits listed for the COTEAU LAKES aquifer in DAY County.

Amount appropriated from the aquifer = 2,036 ac-ft

Total number of permitted acres for aquifer = 727

PRAIRIE COTEAU   AQUIFER

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted Acres	Appropriation (ac-ft)
	760-3	167	502
	1015-3	244	732
	3665-3	640	1,920
	3834-3	320	960
	4027-3	160	480
	4169-3	0	0
	4191-3	152	0
	4315-3	90	180
	4595-3	150	300
	4669-3	270	540
	4821-3	330	660
	4937-3	0	0

There are 12 permits listed for the PRAIRIE COTEAU aquifer in DAY County.

Amount appropriated from the aquifer = 6,274 ac-ft

Total number of permitted acres for aquifer = 2,523

P L E I S T O C E N E   S E R I E S   A Q U I F E R

Unknown	4801-3	225	450
Unknown	4863-3	80	160

Current number of permits in management unit = 2

Irrigation appropriations from this management unit = 610 ac-ft

Number of acres under irrigation permit in the management unit = 305

There are 2 permits listed for the PLEISTOCENE SERIES aquifer in DAY County.

Amount appropriated from the aquifer = 610 ac-ft

Total number of permitted acres for aquifer = 305

THERE ARE 28 PERMITS LISTED FOR IRRIGATION IN DAY COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION OF 15,143 ACRE-FEET OF GROUND WATER. THEY HAVE 5,729 ACRES AVAILABLE FOR IRRIGATION.

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted Acres	Appropriation (ac-ft)

-----  
DEUEL COUNTY  
-----

ALTAMONT   AQUIFER

2945-3	160	480
3214-3	271	813
3233-3	180	540
4126-3	149	447
4790-3	156	312

There are 5 permits listed for the ALTAMONT aquifer in DEUEL County.

Amount appropriated from the aquifer = 2,592 ac-ft  
Total number of permitted acres for aquifer = 916

BIG SIOUX   AQUIFER

Brookings	2157-3	64	192
Brookings	2245-3	156	468
Brookings	2564-3	110	330
Brookings	2803-3	312	936
Brookings	2911-3	132	396
Brookings	2954-3	224	672
Brookings	2991-3	270	810
Brookings	3238-3	200	600
Brookings	3667-3	480	1,440
Brookings	4342-3	120	240
Brookings	4504-3	0	0
Brookings	4729-3	131	262

Current number of permits in management unit = 12  
Irrigation appropriations from this management unit = 6,346 ac-ft  
Number of acres under irrigation permit in the management unit = 2,199

There are 12 permits listed for the BIG SIOUX aquifer in DEUEL County.



I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	<u>As of January 1, 1983</u>	
		Permitted	Appropriation
		Acres	(ac-ft)

Amount appropriated from the aquifer = 6,346 ac-ft  
 Total number of permitted acres for aquifer = 2,199

P L E I S T O C E N E   S E R I E S   A Q U I F E R

Miscellaneous	2979-3	160	480
Unknown	1626-3	215	645
Unknown	2861-3	223	669
Unknown	2980-3	248	744
Unknown	4765-3	200	0

Current number of permits in management unit = 4  
 Irrigation appropriations from this management unit = 2,058 ac-ft  
 Number of acres under irrigation permit in the management  
 unit = 885

There are 5 permits listed for the PLEISTOCENE SERIES aquifer  
 in DEUEL County.

Amount appropriated from the aquifer = 2,538 ac-ft  
 Total number of permitted acres for aquifer = 1,046

THERE ARE 22 PERMITS LISTED FOR IRRIGATION IN  
 DEUEL COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION  
 OF 11,476 ACRE-FEET OF GROUND WATER.  
 THEY HAVE 4,161 ACRES AVAILABLE FOR IRRIGATION.

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted Acres	Appropriation (ac-ft)

-----  
D O U G L A S   C O U N T Y  
-----

C H O T E A U   A Q U I F E R

west	1557-3	255	765
west	2142-3	132	396
west	3703-3	116	348
west	4059-3	235	705

Current number of permits in management unit = 4  
 Irrigation appropriations from this management unit = 2,214 ac-ft  
 Number of acres under irrigation permit in the management  
 unit = 738

There are 4 permits listed for the CHOTEAU aquifer  
 in DOUGLAS County.  
 Amount appropriated from the aquifer = 2,214 ac-ft  
 Total number of permitted acres for aquifer = 738

D E L M O N T   A Q U I F E R

1746-3	120	360
1805-3	132	396
1895-3	150	450
2143-3	220	660
2144-3	128	384
2202-3	157	471
2214-3	169	507
2283-3	150	450
2284-3	122	366
3699-3	160	480
3702-3	151	453
3708-3	75	225
4461-3	163	326
4505-3	44	0
4528-3	280	560
4535-3	0	0
4670-3	40	80

IRRIGATION SUMMARY  
BY COUNTY

Management Unit	Permit Number	<u>As of January 1, 1983</u>	
		Permitted Appropriation Acres	(ac-ft)

There are 17 permits listed for the DELMONT aquifer  
in DOUGLAS County.  
Amount appropriated from the aquifer = 6,163 ac-ft  
Total number of permitted acres for aquifer = 2,251

THERE ARE 21 PERMITS LISTED FOR IRRIGATION IN  
DOUGLAS COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION  
OF 8,382 ACRE-FEET OF GROUND WATER.  
THEY HAVE 2,999 ACRES AVAILABLE FOR IRRIGATION.

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted Acres	Appropriation (ac-ft)

-----  
E D M U N D S   C O U N T Y  
-----

B O W D L E   A Q U I F E R

Edmunds	3559-3	150	480
Edmunds	4008-3	56	158

Current number of permits in management unit = 2  
 Irrigation appropriations from this management unit = 648 ac-ft  
 Number of acres under irrigation permit in the management unit = 216

There are 2 permits listed for the BOWDLE aquifer in EDMUNDS County.  
 Amount appropriated from the aquifer = 648 ac-ft  
 Total number of permitted acres for aquifer = 216

E L M   A Q U I F E R

Ipswich	2521-3	540	1,620
Ipswich	2733-3	800	2,400
Ipswich	2763-3	160	480
Ipswich	2934-3	320	960
Ipswich	4040-3	149	447

Current number of permits in management unit = 5  
 Irrigation appropriations from this management unit = 5,907 ac-ft  
 Number of acres under irrigation permit in the management unit = 1,969

There are 5 permits listed for the ELM aquifer in EDMUNDS County.  
 Amount appropriated from the aquifer = 5,907 ac-ft  
 Total number of permitted acres for aquifer = 1,969

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	<u>As of January 1, 1983</u>	
		Permitted	Appropriation
		Acres	(ac-ft)

GRAND   AQUIFER

	3323-3	320	960
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ONAKA   AQUIFER

	4007-3	80	240
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THERE ARE 9 PERMITS LISTED FOR IRRIGATION IN  
EDMUNDS COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION  
OF 7,755 ACRE-FEET OF GROUND WATER.  
THEY HAVE 2,585 ACRES AVAILABLE FOR IRRIGATION.

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted Appropriation	Acres      (ac-ft)

-----  
FAULK COUNTY  
-----

PLEISTOCENE SERIES    AQUIFER

Unknown	3400-3	200	600
Unknown	3401-3	260	780
Unknown	3904-3	0	0

Current number of permits in management unit = 3  
 Irrigation appropriations from this management unit = 1,380 ac-ft  
 Number of acres under irrigation permit in the management  
 unit = 460

There are 3 permits listed for the PLEISTOCENE SERIES aquifer  
 in FAULK County.

Amount appropriated from the aquifer = 1,380 ac-ft  
 Total number of permitted acres for aquifer = 460

TULARE    AQUIFER

Hand	3331-3	320	960
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THERE ARE 4 PERMITS LISTED FOR IRRIGATION IN  
 FAULK COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION  
 OF 2,340 ACRE-FEET OF GROUND WATER.  
 THEY HAVE 780 ACRES AVAILABLE FOR IRRIGATION.

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted	Appropriation
		Acres	(ac-ft)

-----  
GRANT COUNTY  
-----

ALTAMONT   AQUIFER

	4295-3	142	284
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ANTELOPE VALLEY   AQUIFER

	1971-3	361	1,082
	2207-3	350	1,050
	2333-3	500	1,500
	2478-3	75	225
	3503-3A	73	219
	3782-3	200	600
	4334-3	440	880

There are 7 permits listed for the ANTELOPE VALLEY aquifer in GRANT County.

Amount appropriated from the aquifer = 5,556 ac-ft

Total number of permitted acres for aquifer = 1,999

BIG SIOUX   AQUIFER

North	2717-3A	231	693
North	2717-3A	231	693
North	3044-3	270	810
North	4395-3	180	360

Current number of permits in management unit = 4

Irrigation appropriations from this management unit = 2,556 ac-ft

Number of acres under irrigation permit in the management unit = 912

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted	Appropriation
		Acres	(ac-ft)

There are 4 permits listed for the BIG SIOUX aquifer in GRANT County.

Amount appropriated from the aquifer = 2,556 ac-ft  
Total number of permitted acres for aquifer = 912

PRAIRIE COTEAU   AQUIFER

2715-3	132	396
2733-3	132	396
3342-3	468	1,404
3503-3	132	396
3561-3	270	810
4153-3	312	936
4184-3	312	936
4406-3	115	0
4637-3	60	120
4709-3	320	640
4715-3	60	120

There are 11 permits listed for the PRAIRIE COTEAU aquifer in GRANT County.

Amount appropriated from the aquifer = 6,154 ac-ft  
Total number of permitted acres for aquifer = 2,313

PLEISTOCENE SERIES   AQUIFER

Unknown	1939-3	71	213
Unknown	2266-3	309	927
Unknown	4151-3	180	540
Unknown	4592-3	95	190
Unknown	4719-3	160	320
Unknown	4856-3	88	176

Current number of permits in management unit = 6  
Irrigation appropriations from this management unit = 2,366 ac-ft  
Number of acres under irrigation permit in the management unit = 903

There are 6 permits listed for the PLEISTOCENE SERIES aquifer



I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	<u>As of January 1, 1983</u>	
		Permitted	Appropriation
		Acres	(ac-ft)

in GRANT County.

Amount appropriated from the aquifer = 2,360 ac-ft  
 Total number of permitted acres for aquifer = 903

VEBLEN AQUIFER

2722-3A	270	810
2759-3	198	594
2760-3	117	351
2808-3	140	420
2994-3	97	291
3234-3	240	720
3241-3	130	390
3278-3	320	960
3322-3	110	330
3412-3	149	447
3530-3	244	732
3623-3	105	315
3627-3	136	408
3723-3	164	492
3954-3	176	528
4502-3	40	80
4735-3	89	178
4750-3	160	320
4938-3	160	320

There are 19 permits listed for the VEBLEN aquifer in GRANT County.

Amount appropriated from the aquifer = 8,686 ac-ft  
 Total number of permitted acres for aquifer = 3,045

WILMOT AQUIFER

3133-3	260	780
3134-3	230	690
3389-3	147	441
4084-3	280	840
4085-3	240	720
4786-3	140	280

There are 6 permits listed for the WILMOT aquifer

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	<u>As of January 1, 1983</u> Permitted Appropriation Acres            (ac-ft)
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in GRANT County.  
 Amount appropriated from the aquifer =    3,751 ac-ft  
 Total number of permitted acres for aquifer =    1,297

THERE ARE 54 PERMITS LISTED FOR IRRIGATION IN  
 GRANT COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION  
 OF 29,353 ACRE-FEET OF GROUND WATER.  
 THEY HAVE 10,610 ACRES AVAILABLE FOR IRRIGATION.

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted Acres	Appropriation (ac-ft)

-----  
H A M L I N   C O U N T Y  
-----

BIG SIOUX   AQUIFER

Brookings	141-3	150	450
Brookings	700-3	181	543
Brookings	775-3	153	459
Brookings	1475-3	139	417
Brookings	1814-3	236	708
Brookings	2028-3	132	396
Brookings	2061-3	216	648
Brookings	2068-3	13	39
Brookings	2147-3	262	786
Brookings	2172-3	264	792
Brookings	2174-3	267	801
Brookings	2175-3	291	873
Brookings	2221-3	115	345
Brookings	2264-3	453	1,359
Brookings	2412-3	170	510
Brookings	2413-3	454	1,362
Brookings	2419-3	79	237
Brookings	2420-3A	132	396
Brookings	2421-3	134	402
Brookings	2479-3	258	774
Brookings	2528-3	270	810
Brookings	2576-3	214	642
Brookings	2723-3	140	420
Brookings	2728-3	340	1,020
Brookings	2744-3	132	396
Brookings	2784-3	297	891
Brookings	2841-3	124	372
Brookings	2888-3	160	480
Brookings	3216-3	285	855
Brookings	3217-3	320	960
Brookings	3223-3	312	936
Brookings	3224-3	200	600
Brookings	3236-3	140	420
Brookings	3237-3	87	261
Brookings	3374-3	400	1,200
Brookings	3485-3	240	720
Brookings	3505-3	126	378
Brookings	3563-3	238	714
Brookings	3565-3	127	381
Brookings	3662-3	140	420

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
Brookings	3763-3	130	390
Brookings	3888-3	0	0
Brookings	3975-3	40	120
Brookings	4130-3	132	396
Brookings	4185-3	155	465
Brookings	4216-3	97	292
Brookings	4229-3	217	651
Brookings	4309-3	254	508
Brookings	4345-3	132	264
Brookings	4353-3	188	376
Brookings	4372-3	57	114
Brookings	4418-3	77	0
Brookings	4427-3	0	0
Brookings	4440-3	146	292
Brookings	4446-3	160	320
Brookings	4511-3	143	286
Brookings	4522-3	255	510
Brookings	4570-3	132	264
Brookings	4682-3	120	240
Brookings	4754-3	140	280
Brookings	4853-3	160	320
Brookings	4934-3	119	238

Current number of permits in management unit = 62  
 Irrigation appropriations from this management unit = 31,499 ac-ft  
 Number of acres under irrigation permit in the management unit = 11,245

North	2036-3	235	705
North	2783-3	130	390
North	2792-3	143	429

Current number of permits in management unit = 3  
 Irrigation appropriations from this management unit = 1,524 ac-ft  
 Number of acres under irrigation permit in the management unit = 508

There are 65 permits listed for the BIG SIOUX aquifer in HAMLIN County.  
 Amount appropriated from the aquifer = 33,023 ac-ft  
 Total number of permitted acres for aquifer = 11,753

PRAIRIE COTEAU   AQUIFER

2578-3	135	405
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I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
	2579-3	135	405

There are 2 permits listed for the PRAIRIE COTEAU aquifer in HAMLIN County.

Amount appropriated from the aquifer = 810 ac-ft  
Total number of permitted acres for aquifer = 270

P L E I S T O C E N E   S E R I E S   A Q U I F E R

Unknown	3942-3	150	450
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THERE ARE 68 PERMITS LISTED FOR IRRIGATION IN HAMLIN COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION OF 34,283 ACRE-FEET OF GROUND WATER. THEY HAVE 12,173 ACRES AVAILABLE FOR IRRIGATION.

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted	Appropriation
		Acres	(ac-ft)

-----  
H A N D   C O U N T Y  
-----

B A D   C H E Y E N N E   A Q U I F E R

2786-3	200	600
2919-3	480	1,440
4824-3	160	320
4825-3	130	260
4826-3	144	288

There are 5 permits listed for the BAD CHEYENNE aquifer in HAND County.

Amount appropriated from the aquifer = 2,908 ac-ft

Total number of permitted acres for aquifer = 1,114

E L M   C R E E K   A Q U I F E R

1550-3	110	330
1555-3	152	455
1556-3	45	136
1672-3	208	625
1673-3	180	539
4688-3	100	200

There are 6 permits listed for the ELM CREEK aquifer in HAND County.

Amount appropriated from the aquifer = 2,285 ac-ft

Total number of permitted acres for aquifer = 795

P L E I S T O C E N E   S E R I E S   A Q U I F E R

Unknown	2508-3	136	408
Unknown	3614-3	120	360
Unknown	4574-3	85	170

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	<u>As of January 1, 1983</u>	
		Permitted Appropriation Acres	(ac-ft)

Current number of permits in management unit = 3  
 Irrigation appropriations from this management unit = 938 ac-ft  
 Number of acres under irrigation permit in the management  
 unit = 341

There are 3 permits listed for the PLEISTOCENE SERIES aquifer  
 in HAND County.

Amount appropriated from the aquifer = 938 ac-ft  
 Total number of permitted acres for aquifer = 341

TULARE   AQUIFER

Hand	109-3	121	363
Hand	1403-3	172	515
Hand	2656-3	135	405
Hand	2679-3	300	900
Hand	2737-3	135	405
Hand	2916-3	640	1,920
Hand	2982-3	480	1,440
Hand	2986-3	640	1,920
Hand	3064-3	160	480
Hand	3110-3	152	456
Hand	3190-3	140	420
Hand	3337-3	160	480
Hand	3421-3	480	1,440
Hand	3457-3	320	960
Hand	3553-3	260	780
Hand	3558-3	580	1,740
Hand	3760-3	132	396
Hand	3761-3	132	396
Hand	3973-3	320	960
Hand	4009-3	160	480
Hand	4016-3	160	480
Hand	4056-3	480	1,440
Hand	4102-3	76	228
Hand	4220-3	320	960
Hand	4284-3	180	540
Hand	4352-3	640	1,280
Hand	4355-3	160	320
Hand	4382-3	120	240
Hand	4529-3	132	0
Hand	4911-3	37	74

Current number of permits in management unit = 30  
 Irrigation appropriations from this management unit = 22,418 ac-ft

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted	Appropriation
		Acres	(ac-ft)

Number of acres under irrigation permit in the management unit = 7,923

western Spink	386-3	161	483
western Spink	664-3	160	480
western Spink	4167-3	132	396

Current number of permits in management unit = 3  
 Irrigation appropriations from this management unit = 1,359 ac-ft  
 Number of acres under irrigation permit in the management unit = 453

There are 33 permits listed for the TULARE aquifer in HAND County.  
 Amount appropriated from the aquifer = 23,777 ac-ft  
 Total number of permitted acres for aquifer = 8,376

THERE ARE 47 PERMITS LISTED FOR IRRIGATION IN HAND COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION OF 29,908 ACRE-FEET OF GROUND WATER.  
 THEY HAVE 10,626 ACRES AVAILABLE FOR IRRIGATION.



I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted	Appropriation
		Acres	(ac-ft)

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HANSON COUNTY  
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FLOYD   AQUIFER

East James	2774-3	320	960
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PLUM CREEK   AQUIFER

	2812-3	440	1,320
	2813-3	288	864

There are 2 permits listed for the PLUM CREEK aquifer in HANSON County.

Amount appropriated from the aquifer = 2,184 ac-ft  
Total number of permitted acres for aquifer = 728

PLEISTOCENE SERIES   AQUIFER

Unknown	1527-3	242	726
Unknown	1528-3	81	244
Unknown	3510-3	320	960
Unknown	3511-3	320	960

Current number of permits in management unit = 4  
Irrigation appropriations from this management unit = 2,890 ac-ft  
Number of acres under irrigation permit in the management unit = 963

There are 4 permits listed for the PLEISTOCENE SERIES aquifer in HANSON County.

Amount appropriated from the aquifer = 2,890 ac-ft  
Total number of permitted acres for aquifer = 963

IRRIGATION SUMMARY  
BY COUNTY

Management Unit	Permit Number	<u>As of January 1, 1983</u>	
		Permitted Appropriation Acres	(ac-ft)

THERE ARE 7 PERMITS LISTED FOR IRRIGATION IN  
HANSON COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION  
OF 6,034 ACRE-FEET OF GROUND WATER.  
THEY HAVE 2,011 ACRES AVAILABLE FOR IRRIGATION.

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted	Appropriation
		Acres	(ac-ft)

-----  
HUGHES COUNTY  
-----

CHAPELLE CREEK   AQUIFER

	2995-3	126	378
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GRAY GOOSE   AQUIFER

	1585-3	28	84
	1621-3	249	747
	1987-3	216	648
	2488-3A	307	921
	3354-3	135	405
	4500-3	132	254
	4521-3	320	640
	4580-3	320	640

There are 8 permits listed for the GRAY GOOSE aquifer in HUGHES County.

Amount appropriated from the aquifer = 4,349 ac-ft  
Total number of permitted acres for aquifer = 1,707

HIGHMORE BLUNT   AQUIFER

	1091-3	154	462
	1113-3	145	435
	1116-3	35	105
	1445-3	154	461
	2043-3	89	268
	2075-3	600	1,800
	2354-3	52	156
	2488-3	607	1,821
	4767-3	312	0

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
	4834-3	350	720

There are 10 permits listed for the HIGHMORE BLUNT aquifer in HUGHES County.

Amount appropriated from the aquifer = 6,228 ac-ft  
Total number of permitted acres for aquifer = 2,508

MISSOURI   AQUIFER

Pierre	786-3A	36	109
Pierre	1083-3	15	45
Pierre	1202-3	241	722
Pierre	1304-3	25	75
Pierre	1537-3	275	825

Current number of permits in management unit = 5  
Irrigation appropriations from this management unit = 1,776 ac-ft  
Number of acres under irrigation permit in the management unit = 592

Peoria	2064-3	153	459
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There are 6 permits listed for the MISSOURI aquifer in HUGHES County.  
Amount appropriated from the aquifer = 2,235 ac-ft  
Total number of permitted acres for aquifer = 745

THERE ARE 25 PERMITS LISTED FOR IRRIGATION IN HUGHES COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION OF 13,190 ACRE-FEET OF GROUND WATER. THEY HAVE 5,086 ACRES AVAILABLE FOR IRRIGATION.

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted	Appropriation
		Acres	(ac-ft)

----- HUTCHINSON COUNTY -----

CHOTEAU AQUIFER

East	4584-3	320	640
East	4679-3	205	410
East	4704-3	230	460
East	4706-3	375	750

Current number of permits in management unit = 4  
 Irrigation appropriations from this management unit = 2,260 ac-ft  
 Number of acres under irrigation permit in the management  
 unit = 1,130

Middle	1214-3	150	480
Middle	1299-3	150	480
Middle	3186-3	480	1,440

Current number of permits in management unit = 3  
 Irrigation appropriations from this management unit = 2,400 ac-ft  
 Number of acres under irrigation permit in the management  
 unit = 800

There are 7 permits listed for the CHOTEAU aquifer  
 in HUTCHINSON County.  
 Amount appropriated from the aquifer = 4,660 ac-ft  
 Total number of permitted acres for aquifer = 1,930

ETHAN AQUIFER

	1333-3	232	696
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I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted	Appropriation
		Acres	(ac-ft)

LOWER-JAMES-MISSOURI   AQUIFER

	4020-3	138	414
	4804-3	52	103
	4902-3	121	242

There are 3 permits listed for the LOWER-JAMES-MISSOURI aquifer in HUTCHINSON County.

Amount appropriated from the aquifer =        759 ac-ft  
Total number of permitted acres for aquifer =        311

THERE ARE 11 PERMITS LISTED FOR IRRIGATION IN HUTCHINSON COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION OF 6.115 ACRE-FEET OF GROUND WATER. THEY HAVE 2,473 ACRES AVAILABLE FOR IRRIGATION.

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted Appropriation Acres	(ac-ft)

-----  
H Y D E   C O U N T Y  
-----

HIGHMORE BLUNT   AQUIFER

380-3	92	276
380-3A	26	0
1690-3	1,040	3,120
1691-3	640	1,920
2845-3	320	960
3287-3	160	480
3330-3	260	780
3567-3	0	0

There are 3 permits listed for the HIGHMORE BLUNT aquifer in HYDE County.

Amount appropriated from the aquifer = 7,536 ac-ft

Total number of permitted acres for aquifer = 2,538

TULARE   AQUIFER

Hyde	2720-3	130	390
Hyde	3334-3	320	960

Current number of permits in management unit = 2

Irrigation appropriations from this management unit = 1,350 ac-ft

Number of acres under irrigation permit in the management unit = 450

There are 2 permits listed for the TULARE aquifer in HYDE County.

Amount appropriated from the aquifer = 1,350 ac-ft

Total number of permitted acres for aquifer = 450

THERE ARE 10 PERMITS LISTED FOR IRRIGATION IN HYDE COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION OF 8,886 ACRE-FEET OF GROUND WATER. THEY HAVE 2,988 ACRES AVAILABLE FOR IRRIGATION.

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted Acres	Appropriation (ac-ft)

-----  
JERAULD COUNTY  
-----

BAD CHEYENNE AQUIFER

	3768-3	23	69
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CROW CREEK AQUIFER

	1980-3	390	1,170
	2721-3	132	396
	3395-3	160	480
	3513-3	200	600
	3540-3	575	1,725
	3572-3	380	1,140
	3996-3	119	357
	4533-3	160	320

There are 8 permits listed for the CROW CREEK aquifer in JERAULD County.

Amount appropriated from the aquifer = 6,188 ac-ft  
Total number of permitted acres for aquifer = 2,116

CROW LAKE AQUIFER

	752-3	90	270
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PLEISTOCENE SERIES AQUIFER



I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
Unknown	3396-3	160	480
Unknown	3783-3	122	366
Unknown	4369-3	25	50
Unknown	4660-3	280	560

Current number of permits in management unit = 4  
 Irrigation appropriations from this management unit = 1,456 ac-ft  
 Number of acres under irrigation permit in the management unit = 587

There are 4 permits listed for the PLEISTOCENE SERIES aquifer in JERAULD County.  
 Amount appropriated from the aquifer = 1,456 ac-ft  
 Total number of permitted acres for aquifer = 587

WARREN   AQUIFER

West James	2364-3	153	459
West James	2781-3	132	396
West James	2824-3	60	180
West James	3100-3	200	600
West James	3266-3	115	345
West James	3271-3A	122	366
West James	4097-3	125	375
West James	4326-3	132	264

Current number of permits in management unit = 8  
 Irrigation appropriations from this management unit = 2,985 ac-ft  
 Number of acres under irrigation permit in the management unit = 1,039

There are 8 permits listed for the WARREN aquifer in JERAULD County.  
 Amount appropriated from the aquifer = 2,985 ac-ft  
 Total number of permitted acres for aquifer = 1,039

THERE ARE 22 PERMITS LISTED FOR IRRIGATION IN JERAULD COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION OF 10,968 ACRE-FEET OF GROUND WATER.  
 THEY HAVE 3,855 ACRES AVAILABLE FOR IRRIGATION.

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted	Appropriation
		Acres	(ac-ft)

-----  
KINGSBURY COUNTY  
-----

PRAIRIE COTEAU   AQUIFER

1303-3	296	887
2924-3	250	750
3131-3	147	441
3132-3	156	468
3413-3	80	240

There are 5 permits listed for the PRAIRIE COTEAU aquifer in KINGSBURY County.

Amount appropriated from the aquifer = 2,786 ac-ft

Total number of permitted acres for aquifer = 929

PLEISTOCENE SERIES   AQUIFER

Unknown	2890-3	114	342
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VERMILLION-EAST-FORK   AQUIFER

60-3	114	341
77-3	105	316
1212-3	270	810
1456-3	186	558
1487-3	130	390
1533-3	293	879
1561-3	240	720
2037-3A	132	396
2086-3	62	186
2306-3	40	120
2798-3	120	360
3253-3	100	300
3312-3	132	396
3414-3	110	330

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
	3478-3	160	480
	3499-3	355	1,065
	3822-3	160	480
	3825-3	160	480
	3937-3	29	86
	3960-3	130	390
	3961-3	130	390
	4037-3	160	480
	4187-3	160	480
	4245-3	190	570
	4282-3	40	120
Spirit Lake	2137-3	90	270
Spirit Lake	2697-3	120	360
Spirit Lake	3422-3	80	240
Spirit Lake	3477-3	120	360

Current number of permits in management unit = 4  
 Irrigation appropriations from this management unit = 1,230 ac-ft  
 Number of acres under irrigation permit in the management unit = 410

There are 29 permits listed for the VERMILLION-EAST-FORK aquifer in KINGSBURY County.  
 Amount appropriated from the aquifer = 12,353 ac-ft  
 Total number of permitted acres for aquifer = 4,118

THERE ARE 35 PERMITS LISTED FOR IRRIGATION IN KINGSBURY COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION OF 15,481 ACRE-FEET OF GROUND WATER. THEY HAVE 5,160 ACRES AVAILABLE FOR IRRIGATION.

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted Acres	Appropriation (ac-ft)

----- LAKE COUNTY -----

BIG SIOUX   AQUIFER

Northern Skunk Creek 611-3	194	582
Northern Skunk Creek 1268-3	143	429
Northern Skunk Creek 1328-3	176	528
Northern Skunk Creek 2987-3	160	480
Northern Skunk Creek 3048-3	480	1,440
Northern Skunk Creek 3385-3	160	480
Northern Skunk Creek 3407-3	12	36
Northern Skunk Creek 3641-3	80	240
Northern Skunk Creek 4133-3	80	240
Northern Skunk Creek 4311-3	140	280
Northern Skunk Creek 4360-3	156	312
Northern Skunk Creek 4361-3	255	510
Northern Skunk Creek 4453-3	144	288

Current number of permits in management unit = 13  
 Irrigation appropriations from this management unit = 5,845 ac-ft  
 Number of acres under irrigation permit in the management unit = 2,180

There are 13 permits listed for the BIG SIOUX aquifer in LAKE County.

Amount appropriated from the aquifer = 5,845 ac-ft  
 Total number of permitted acres for aquifer = 2,180

HOWARD   AQUIFER

4680-3	133	266
4789-3	320	640

There are 2 permits listed for the HOWARD aquifer in LAKE County.

Amount appropriated from the aquifer = 906 ac-ft  
 Total number of permitted acres for aquifer = 453

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	<u>As of January 1, 1983</u>	
		Permitted Appropriation Acres	(ac-ft)

PLEISTOCENE SERIES   AQUIFER

Unknown	1697-3	4	12
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VERMILLION-EAST-FORK   AQUIFER

	2989-3	350	1,050
	3621-3	240	720

There are 2 permits listed for the VERMILLION-EAST-FORK aquifer in LAKE County.

Amount appropriated from the aquifer = 1,770 ac-ft

Total number of permitted acres for aquifer = 590

THERE ARE 18 PERMITS LISTED FOR IRRIGATION IN LAKE COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION OF 8,533 ACRE-FEET OF GROUND WATER. THEY HAVE 3,227 ACRES AVAILABLE FOR IRRIGATION.

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted Acres	Appropriation (ac-ft)

-----  
L I N C O L N   C O U N T Y  
-----

B I G   S I O U X   A Q U I F E R

South	204-3	10	30
South	2254-3	150	450
South	2256-3	215	645
South	2353-3	76	228
South	2541-3	116	348
South	3566-3	215	645
South	4868-3	200	400

Current number of permits in management unit = 7  
 Irrigation appropriations from this management unit = 2,746 ac-ft  
 Number of acres under irrigation permit in the management  
 unit = 982

There are 7 permits listed for the BIG SIOUX aquifer  
 in LINCOLN County.  
 Amount appropriated from the aquifer = 2,746 ac-ft  
 Total number of permitted acres for aquifer = 982

L E N N O X   A Q U I F E R

	4692-3	135	270
	4693-3	235	470

There are 2 permits listed for the LENNOX aquifer  
 in LINCOLN County.  
 Amount appropriated from the aquifer = 740 ac-ft  
 Total number of permitted acres for aquifer = 370

P L E I S T O C E N E   S E R I E S   A Q U I F E R

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
Unknown	3015-3	156	468

THERE ARE 10 PERMITS LISTED FOR IRRIGATION IN  
LINCOLN COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION  
OF 3,954 ACRE-FEET OF GROUND WATER.  
THEY HAVE 1,508 ACRES AVAILABLE FOR IRRIGATION.

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	<u>As of January 1, 1983</u> Permitted Appropriation Acres      (ac-ft)
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 M C C O O K   C O U N T Y  
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VERMILLION-EAST-FORK   AQUIFER

3719-3	480	1,440
3875-3	184	552

There are 2 permits listed for the VERMILLION-EAST-FORK aquifer in McCook County.  
 Amount appropriated from the aquifer = 1,992 ac-ft  
 Total number of permitted acres for aquifer = 664

THERE ARE 2 PERMITS LISTED FOR IRRIGATION IN MCCOOK COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION OF 1,992 ACRE-FEET OF GROUND WATER.  
 THEY HAVE 664 ACRES AVAILABLE FOR IRRIGATION.



I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted	Appropriation
		Acres	(ac-ft)

-----  
MCPHERSON COUNTY  
-----

HILLSVIEW   AQUIFER

2337-3	165	495
2951-3	175	525
3971-3	160	480
4013-3	160	480
4129-3	272	816

There are 5 permits listed for the HILLSVIEW aquifer in McPHERSON County.

Amount appropriated from the aquifer = 2,796 ac-ft  
Total number of permitted acres for aquifer = 932

PLEISTOCENE SERIES   AQUIFER

Unknown	2082-3	100	300
Unknown	2943-3	54	162
Unknown	3925-3	160	480

Current number of permits in management unit = 3  
Irrigation appropriations from this management unit = 942 ac-ft  
Number of acres under irrigation permit in the management unit = 314

There are 3 permits listed for the PLEISTOCENE SERIES aquifer in McPHERSON County.

Amount appropriated from the aquifer = 942 ac-ft  
Total number of permitted acres for aquifer = 314

SELBY   AQUIFER

4655-3	240	480
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I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	<u>As of January 1, 1983</u>	
		Permitted	Appropriation
		Acres	(ac-ft)

SPRING CREEK   AQUIFER

Artas	3340-3	140	420
McPherson	2893-3	202	606
McPherson	3012-3	211	633
McPherson	3656-3	380	1,140
McPherson	4267-3	40	120
McPherson	4268-3	320	960
McPherson	4576-3	160	320

Current number of permits in management unit = 6  
 Irrigation appropriations from this management unit = 3,779 ac-ft  
 Number of acres under irrigation permit in the management  
 unit = 1,313

There are 7 permits listed for the SPRING CREEK aquifer  
 in McPHERSON County.  
 Amount appropriated from the aquifer = 4,199 ac-ft  
 Total number of permitted acres for aquifer = 1,453

THERE ARE 16 PERMITS LISTED FOR IRRIGATION IN  
 McPHERSON COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION  
 OF 8,417 ACRE-FEET OF GROUND WATER.  
 THEY HAVE 2,939 ACRES AVAILABLE FOR IRRIGATION.

I R R I G A T I O N S U M M A R Y  
B Y C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted Appropriation Acres	(ac-ft)

-----  
MARSHALL COUNTY  
-----

MIDDLE JAMES AQUIFER

Columbia	2205-3	183	549
Columbia	2460-3	441	1,323
Columbia	2461-3	231	693
Columbia	2920-3	320	960
Columbia	2921-3	160	480
Columbia	3014-3	382	1,146
Columbia	3335-3	156	468
Columbia	3532-3	270	810

Current number of permits in management unit = 8  
 Irrigation appropriations from this management unit = 6,429 ac-ft  
 Number of acres under irrigation permit in the management  
 unit = 2,143

There are 8 permits listed for the MIDDLE JAMES aquifer  
 in MARSHALL County.  
 Amount appropriated from the aquifer = 6,429 ac-ft  
 Total number of permitted acres for aquifer = 2,143

THERE ARE 8 PERMITS LISTED FOR IRRIGATION IN  
 MARSHALL COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION  
 OF 6,429 ACRE-FEET OF GROUND WATER.  
 THEY HAVE 2,143 ACRES AVAILABLE FOR IRRIGATION.

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted	Appropriation
		Acres	(ac-ft)

-----  
MINER COUNTY  
-----

FLOYD   AQUIFER

East James	1131-3	160	480
East James	1137-3	150	450
East James	1146-3	160	480
East James	1147-3	80	240
East James	1150-3	320	960
East James	1165-3	160	480
East James	1166-3	159	477
East James	1184-3	160	480
East James	1227-3	225	674
East James	1367-3	840	2,520
East James	1400-3	637	1,911
East James	1413-3	160	480
East James	1414-3	480	1,440
East James	1417-3	480	1,440
East James	1419-3	160	480
East James	1648-3	160	480
East James	4317-3	140	280

Current number of permits in management unit = 17  
 Irrigation appropriations from this management unit = 13,752 ac-ft  
 Number of acres under irrigation permit in the management  
 unit = 4,631

There are 17 permits listed for the FLOYD aquifer  
 in MINER County.  
 Amount appropriated from the aquifer = 13,752 ac-ft  
 Total number of permitted acres for aquifer = 4,631

PLEISTOCENE SERIES   AQUIFER

Unknown	1231-3	109	327
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IRRIGATION SUMMARY  
BY COUNTY

Management Unit	Permit Number	<u>As of January 1, 1983</u>	
		Permitted Appropriation	
		Acres	(ac-ft)

THERE ARE 18 PERMITS LISTED FOR IRRIGATION IN  
MINER COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION  
OF 14,079 ACRE-FEET OF GROUND WATER.  
THEY HAVE 4,740 ACRES AVAILABLE FOR IRRIGATION.

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted Acres	Appropriation (ac-ft)

-----  
MINNEHAHA COUNTY  
-----

BIG SIOUX AQUIFER

Middle Skunk Creek	1806-3	126	378
Middle Skunk Creek	2918-3	457	1,371
Middle Skunk Creek	2923-3	120	360
Middle Skunk Creek	3350-3	132	396
Middle Skunk Creek	3437-3	80	240
Middle Skunk Creek	3624-3	172	516
Middle Skunk Creek	3625-3	160	480
Middle Skunk Creek	3709-3	160	480
Middle Skunk Creek	3720-3	156	468
Middle Skunk Creek	3786-3	80	240
Middle Skunk Creek	4210-3	235	705
Middle Skunk Creek	4223-3	95	285
Middle Skunk Creek	4230-3	237	711
Middle Skunk Creek	4359-3	260	520
Middle Skunk Creek	4837-3	120	240

Current number of permits in management unit = 15  
 Irrigation appropriations from this management unit = 7,390 ac-ft  
 Number of acres under irrigation permit in the management  
 unit = 2,590

South	346-3	55	165
South	599-3	30	90
South	686-3	65	195
South	1907-3	95	285
South	4316-3	70	140

Current number of permits in management unit = 5  
 Irrigation appropriations from this management unit = 875 ac-ft  
 Number of acres under irrigation permit in the management  
 unit = 315

Sioux Falls	402-3	96	288
Sioux Falls	601-3	28	83
Sioux Falls	610-3	210	630
Sioux Falls	656-3	80	240
Sioux Falls	1077-3	10	30
Sioux Falls	1270-3	127	381

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted Acres	Appropriation (ac-ft)
Sioux Falls	1271-3	395	1,185
Sioux Falls	1807-3	75	225
Sioux Falls	2047-3	428	1,283
Sioux Falls	2244-3	175	525
Sioux Falls	2678-3	116	348
Sioux Falls	3872-3	200	600
Sioux Falls	4034-3	32	0

Current number of permits in management unit = 13  
 Irrigation appropriations from this management unit = 5,818 ac-ft  
 Number of acres under irrigation permit in the management unit = 1,971

Southern Skunk Creek	367-3	55	165
Southern Skunk Creek	368-3	97	291
Southern Skunk Creek	404-3	223	669

Current number of permits in management unit = 3  
 Irrigation appropriations from this management unit = 1,125 ac-ft  
 Number of acres under irrigation permit in the management unit = 375

There are 36 permits listed for the BIG SIOUX aquifer in MINNEHAHA County.  
 Amount appropriated from the aquifer = 15,208 ac-ft  
 Total number of permitted acres for aquifer = 5,251

P L E I S T O C E N E   S E R I E S   A Q U I F E R

Unknown	3992-3	203	609
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S I O U X   Q U A R T Z I T E   A Q U I F E R

	3195-3	25	75
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THERE ARE 38 PERMITS LISTED FOR IRRIGATION IN

IRRIGATION SUMMARY  
BY COUNTY

Management Unit	Permit Number	<u>As of January 1, 1983</u>	
		Permitted Appropriation Acres	(ac-ft)

MINNEHAHA COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION  
OF 15,892 ACRE-FEET OF GROUND WATER.  
THEY HAVE 5,479 ACRES AVAILABLE FOR IRRIGATION.



I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted	Appropriation
		Acres	(ac-ft)

-----  
MOODY COUNTY  
-----

BIG SIOUX   AQUIFER

Moody	503-3	199	596
Moody	653-3	118	353
Moody	1155-3	133	398
Moody	1340-3	95	285
Moody	1350-3	158	474
Moody	1696-3	289	867
Moody	1709-3	132	396
Moody	1801-3	131	393
Moody	1909-3	152	455
Moody	1984-3	145	434
Moody	2026-3	132	396
Moody	2134-3	169	507
Moody	2153-3	85	256
Moody	2332-3	115	345
Moody	2574-3	148	444
Moody	2577-3	175	525
Moody	2952-3	130	390
Moody	2955-3	170	510
Moody	2956-3	90	270
Moody	2995-3A	0	0
Moody	3254-3	79	237
Moody	3293-3	136	408
Moody	3402-3	144	432
Moody	3496-3	115	345
Moody	3626-3	306	918
Moody	3640-3	200	600
Moody	3663-3	312	936
Moody	3749-3	113	338
Moody	3751-3	173	519
Moody	3772-3	300	900
Moody	3801-3	140	420
Moody	3843-3	101	303
Moody	3923-3	160	480
Moody	4329-3	538	1,076
Moody	4597-3	160	320

Current number of permits in management unit = 35  
 Irrigation appropriations from this management unit = 16,526 ac-ft  
 Number of acres under irrigation permit in the management  
 unit = 5,741

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
Northern Skunk Creek	3072-3	636	1,908
Northern Skunk Creek	3840-3	144	432

Current number of permits in management unit = 2  
 Irrigation appropriations from this management unit = 2,340 ac-ft  
 Number of acres under irrigation permit in the management unit = 780

There are 37 permits listed for the BIG SIOUX aquifer in MOODY County.  
 Amount appropriated from the aquifer = 18,866 ac-ft  
 Total number of permitted acres for aquifer = 6,521

P L E I S T O C E N E   S E R I E S   A Q U I F E R

Miscellaneous	3953-3	262	786
Miscellaneous	4061-3	217	651
Miscellaneous	4523-3	118	236
Miscellaneous	4877-3	156	312

Current number of permits in management unit = 4  
 Irrigation appropriations from this management unit = 1,985 ac-ft  
 Number of acres under irrigation permit in the management unit = 753

Unknown	3622-3	320	960
Unknown	3639-3	160	480
Unknown	3799-3	540	1,620

Current number of permits in management unit = 3  
 Irrigation appropriations from this management unit = 3,060 ac-ft  
 Number of acres under irrigation permit in the management unit = 1,020

There are 7 permits listed for the PLEISTOCENE SERIES aquifer in MOODY County.  
 Amount appropriated from the aquifer = 5,045 ac-ft  
 Total number of permitted acres for aquifer = 1,773

IRRIGATION SUMMARY  
BY COUNTY

Management Unit	Permit Number	<u>As of January 1, 1983</u>	
		Permitted	Appropriation
		Acres	(ac-ft)

THERE ARE 44 PERMITS LISTED FOR IRRIGATION IN  
MOODY COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION  
OF 23,911 ACRE-FEET OF GROUND WATER.  
THEY HAVE 8,294 ACRES AVAILABLE FOR IRRIGATION.

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted	Appropriation
		Acres	(ac-ft)

----- POTTER COUNTY -----

BOWDLE   AQUIFER

Edmunds	2259-3	160	480
Edmunds	3111-3	160	480
Edmunds	4415-3	244	0
Edmunds	4449-3	130	260
Edmunds	4768-3	29	0

Current number of permits in management unit = 5  
 Irrigation appropriations from this management unit = 1,220 ac-ft  
 Number of acres under irrigation permit in the management  
 unit = 723

Hoven South	1622-3	240	720
Hoven South	1623-3	60	180
Hoven South	1704-3	97	291
Hoven South	2270-3	318	954
Hoven South	2271-3	302	906
Hoven South	2598-3	257	771

Current number of permits in management unit = 6  
 Irrigation appropriations from this management unit = 3,822 ac-ft  
 Number of acres under irrigation permit in the management  
 unit = 1,274

Lebanon	2674-3	390	1,170
Lebanon	3694-3	152	456

Current number of permits in management unit = 2  
 Irrigation appropriations from this management unit = 1,626 ac-ft  
 Number of acres under irrigation permit in the management  
 unit = 542

There are 13 permits listed for the BOWDLE aquifer  
 in POTTER County.  
 Amount appropriated from the aquifer = 6,668 ac-ft  
 Total number of permitted acres for aquifer = 2,539

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	<u>As of January 1, 1983</u>	
		Permitted	Appropriation
		Acres	(ac-ft)

OKOBOJO CREEK   AQUIFER

835-3	195	585
2100-3	450	1,350
2316-3	584	1,752

There are 3 permits listed for the OKOBOJO CREEK aquifer in POTTER County.

Amount appropriated from the aquifer = 3,687 ac-ft

Total number of permitted acres for aquifer = 1,229

THERE ARE 16 PERMITS LISTED FOR IRRIGATION IN POTTER COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION OF 10,355 ACRE-FEET OF GROUND WATER. THEY HAVE 3,768 ACRES AVAILABLE FOR IRRIGATION.

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted Acres	Appropriation (ac-ft)

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R O B E R T S   C O U N T Y  
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B I G   S I O U X   A Q U I F E R

North	4554-3	108	216
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C O T E A U   L A K E S   A Q U I F E R

2662-3		290	870
2931-3		140	420
3931-3		532	1,596
4041-3		393	1,179
4466-3		80	160
4569-3		160	320
4604-3		156	312
4649-3		0	0
4756-3		145	290
4886-3		0	0

There are 10 permits listed for the COTEAU LAKES aquifer in ROBERTS County.

Amount appropriated from the aquifer = 5,147 ac-ft  
Total number of permitted acres for aquifer = 1,896

F A I R M O U N T   A Q U I F E R

3538-3		132	396
4844-3		280	560

There are 2 permits listed for the FAIRMOUNT aquifer in ROBERTS County.

Amount appropriated from the aquifer = 956 ac-ft  
Total number of permitted acres for aquifer = 412

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted Acres	Appropriation (ac-ft)

PRAIRIE COTEAU   AQUIFER

2565-3	470		1,410
2582-3	117		351
2673-3	235		705
2794-3	160		480
3599-3	40		120
3778-3	30		90
4610-3	178		356
4862-3	160		0

There are 8 permits listed for the PRAIRIE COTEAU aquifer in ROBERTS County.

Amount appropriated from the aquifer = 3,512 ac-ft

Total number of permitted acres for aquifer = 1,390

PLEISTOCENE SERIES   AQUIFER

Miscellaneous	4457-3	127	254
Unknown	1868-3	107	321
Unknown	1887-3	57	171
Unknown	3288-3	430	1,290
Unknown	4018-3	54	192
Unknown	4113-3	120	360

Current number of permits in management unit = 5

Irrigation appropriations from this management unit = 2,334 ac-ft

Number of acres under irrigation permit in the management unit = 778

There are 6 permits listed for the PLEISTOCENE SERIES aquifer in ROBERTS County.

Amount appropriated from the aquifer = 2,583 ac-ft

Total number of permitted acres for aquifer = 905

VEBLEN   AQUIFER

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
	696-3	289	867
	2854-3	140	420
	2860-3	105	315
	2887-3	272	816
	3250-3	132	396
	3341-3	155	465
	3388-3	160	480
	3522-3	114	342
	3536-3	156	468
	3537-3	156	468
	3776-3	155	465
	3927-3	120	360
	3934-3	160	480
	4164-3	257	771
	4177-3	288	864
	4323-3	40	80
	4323-3	40	80
	4741-3	125	250

There are 18 permits listed for the VEBLEN aquifer in ROBERTS County.  
 Amount appropriated from the aquifer = 8,387 ac-ft  
 Total number of permitted acres for aquifer = 2,864

WILMOT   AQUIFER

	2267-3	140	420
	2848-3	4	12
	4108-3	138	414
	4766-3	284	568
	4788-3	360	720

There are 5 permits listed for the WILMOT aquifer in ROBERTS County.  
 Amount appropriated from the aquifer = 2,134 ac-ft  
 Total number of permitted acres for aquifer = 926

THERE ARE 50 PERMITS LISTED FOR IRRIGATION IN ROBERTS COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION OF 22,940 ACRE-FEET OF GROUND WATER.  
 THEY HAVE 8,501 ACRES AVAILABLE FOR IRRIGATION.



I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted	Appropriation
		Acres	(ac-ft)

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S A N B O R N   C O U N T Y  
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C O D E L L   S A N D S T O N E   A Q U I F E R

	3008-3	170	510
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F L O Y D   A Q U I F E R

East James	957-3	140	420
East James	1375-3	160	480
East James	1375-3	160	480
East James	2819-3	135	405

Current number of permits in management unit = 4  
 Irrigation appropriations from this management unit = 1,785 ac-ft  
 Number of acres under irrigation permit in the management  
 unit = 595

There are 4 permits listed for the FLOYD aquifer  
 in SANBORN County.  
 Amount appropriated from the aquifer = 1,785 ac-ft  
 Total number of permitted acres for aquifer = 595

W A R R E N   A Q U I F E R

West James	238-3	157	470
West James	963-3	143	429
West James	1145-3	320	960
West James	1269-3	72	216
West James	3025-3	160	480
West James	3194-3	110	330
West James	3302-3	785	2,355

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	<u>As of January 1, 1983</u> Permitted Appropriation Acres            (ac-ft)
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Current number of permits in management unit = 7  
 Irrigation appropriations from this management unit = 5,240 ac-ft  
 Number of acres under irrigation permit in the management  
 unit = 1,747

There are 7 permits listed for the WARREN aquifer  
 in SANBORN County.  
 Amount appropriated from the aquifer = 5,240 ac-ft  
 Total number of permitted acres for aquifer = 1,747

THERE ARE 12 PERMITS LISTED FOR IRRIGATION IN  
 SANBORN COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION  
 OF 7,535 ACRE-FEET OF GROUND WATER.  
 THEY HAVE 2,512 ACRES AVAILABLE FOR IRRIGATION.

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted	Appropriation
		Acres	(ac-ft)

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S P I N K   C O U N T Y  
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A L T A M O N T   A Q U I F E R

2797-3	160	480
3166-3	136	408
3464-3	132	396
4094-3	160	480
4236-3	260	730
4805-3	18	36

There are 6 permits listed for the ALTAMONT aquifer in SPINK County.

Amount appropriated from the aquifer = 2,580 ac-ft

Total number of permitted acres for aquifer = 866

M I D D L E   J A M E S   A Q U I F E R

Aberdeen	3031-3	290	870
Aberdeen	3187-3	264	792
Aberdeen	3725-3	160	480
Aberdeen	3848-3	320	960
Aberdeen	3867-3	160	480

Current number of permits in management unit = 5

Irrigation appropriations from this management unit = 3,582 ac-ft

Number of acres under irrigation permit in the management unit = 1,194

There are 5 permits listed for the MIDDLE JAMES aquifer in SPINK County.

Amount appropriated from the aquifer = 3,582 ac-ft

Total number of permitted acres for aquifer = 1,194

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit.	Permit Number	<u>As of January 1, 1983</u>	
		Permitted	Appropriation
		Acres	(ac-ft)

NIOBRARA FORMATION   AQUIFER

1119-3	160	480
1224-3	160	480
1266-3	160	480

There are 3 permits listed for the NIOBRARA FORMATION aquifer in SPINK County.

Amount appropriated from the aquifer = 1,440 ac-ft  
Total number of permitted acres for aquifer = 480

PLEISTOCENE SERIES   AQUIFER

Unknown	679-3	247	741
Unknown	682-3	94	282
Unknown	1877-3	93	279
Unknown	2891-3	52	156
Unknown	2964-3	254	762
Unknown	3180-3	160	480
Unknown	3244-3	241	723
Unknown	3264-3	100	300
Unknown	3826-3	160	480
Unknown	4107-3	182	546
Unknown	4128-3	80	240
Unknown	4408-3	160	320
Unknown	4553-3	160	0
Unknown	4806-3	117	234

Current number of permits in management unit = 14  
Irrigation appropriations from this management unit = 5,543 ac-ft  
Number of acres under irrigation permit in the management unit = 2,100

There are 14 permits listed for the PLEISTOCENE SERIES aquifer in SPINK County.

Amount appropriated from the aquifer = 5,543 ac-ft  
Total number of permitted acres for aquifer = 2,100

TULARE   AQUIFER

East James	134-3	160	480
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I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
East James	566-3	85	255
East James	961-3	320	960
East James	970-3	312	936
East James	987-3	154	462
East James	1033-3	320	960
East James	1048-3	160	480
East James	1049-3	120	360
East James	1050-3	430	1,290
East James	1071-3	160	480
East James	1072-3	160	480
East James	1073-3	320	960
East James	1120-3	240	720
East James	1201-3	140	420
East James	1223-3	131	393
East James	1247-3	160	480
East James	1312-3	160	480
East James	1358-3	160	480
East James	1458-3	160	480
East James	1504-3	370	1,110
East James	1521-3	145	435
East James	1552-3	691	2,073
East James	1700-3	135	405
East James	1722-3	240	720
East James	1723-3	136	408
East James	1724-3	128	384
East James	1876-3	320	960
East James	1891-3	262	786
East James	1894-3	200	600
East James	2208-3	160	480
East James	2235-3	264	792
East James	2236-3	320	960
East James	2276-3	160	480
East James	2375-3	300	900
East James	2418-3	136	408
East James	2514-3	132	396
East James	2553-3	237	711
East James	2561-3	153	459
East James	2613-3	130	390
East James	2618-3	272	816
East James	2729-3	120	360
East James	3034-3	160	480
East James	3035-3	320	960
East James	3056-3	202	606
East James	3062-3	140	420
East James	3063-3	272	816
East James	3103-3	120	360
East James	3113-3	150	450
East James	3114-3	137	411
East James	3159-3	160	480
East James	3173-3	136	408
East James	3175-3	132	396

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
East James	3176-3	272	816
East James	3177-3	160	480
East James	3178-3	204	612
East James	3179-3	320	960
East James	3181-3	232	696
East James	3182-3	134	402
East James	3189-3	132	396
East James	3242-3	130	390
East James	3272-3	160	480
East James	3273-3	160	480
East James	3378-3	136	408
East James	3390-3	160	480
East James	3390-3A	0	0
East James	3392-3	320	960
East James	3393-3	160	480
East James	3467-3	160	480
East James	3468-3	320	960
East James	3474-3	160	480
East James	3490-3A	160	480
East James	3714-3	160	480
East James	3733-3	140	420
East James	3748-3	160	480
East James	3856-3	160	480
East James	4057-3	593	1,779
East James	4131-3	270	810
East James	4158-3	320	960
East James	4195-3	160	0
East James	4196-3	40	120
East James	4203-3	160	480
East James	4374-3	264	528
East James	4375-3	132	264
East James	4376-3	0	0
East James	4389-3	132	264
East James	4390-3	132	264
East James	4451-3	132	264
East James	4486-3	40	0
East James	4586-3	115	0
East James	4612-3	160	320
East James	4699-3	160	320
East James	4714-3	160	320
East James	4739-3	160	320
East James	4753-3	160	320
East James	4772-3	160	320
East James	4845-3	160	320

Current number of permits in management unit = 96  
 Irrigation appropriations from this management unit = 52,649 ac-ft  
 Number of acres under irrigation permit in the management unit = 18,502

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
Hitchcock	98-3	301	903
Hitchcock	1509-3	135	405
Hitchcock	1571-3	160	480
Hitchcock	1600-3	160	480
Hitchcock	2278-3	136	408
Hitchcock	2422-3	135	405
Hitchcock	2428-3	136	408
Hitchcock	2440-3	132	396
Hitchcock	2485-3	138	414
Hitchcock	2486-3	138	414
Hitchcock	2592-3	140	420
Hitchcock	2869-3	272	816
Hitchcock	3052-3	180	540
Hitchcock	3065-3	110	330
Hitchcock	3108-3	320	960
Hitchcock	3172-3	136	408
Hitchcock	3174-3	160	480
Hitchcock	3255-3	80	240
Hitchcock	3261-3A	130	390
Hitchcock	3307-3	95	285
Hitchcock	3382-3	160	480
Hitchcock	3383-3	160	480
Hitchcock	3603-3	132	396
Hitchcock	3752-3	160	480
Hitchcock	3860-3	160	480
Hitchcock	4138-3	80	240
Hitchcock	4171-3	120	360
Hitchcock	4591-3	132	264
Hitchcock	4690-3	334	668
Hitchcock	4703-3	130	260
Hitchcock	4712-3	160	320
Hitchcock	4713-3	158	316
Hitchcock	4819-3	160	320
Hitchcock	4847-3	160	320
Hitchcock	4870-3	156	312

Current number of permits in management unit = 35  
 Irrigation appropriations from this management unit = 15,278 ac-ft  
 Number of acres under irrigation permit in the management unit = 5,556

Western Spink	108-3	160	480
Western Spink	136-3	198	593
western Spink	139-3	145	435
western Spink	398-3	140	420
Western Spink	470-3	160	480
Western Spink	471-3	160	480
Western Spink	472-3	160	480
Western Spink	782-3	160	480
Western Spink	839-3	160	480

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
Western Spink	952-3	160	480
Western Spink	960-3	624	1,872
Western Spink	962-3	160	480
Western Spink	965-3	160	480
Western Spink	971-3	156	468
Western Spink	972-3	160	480
Western Spink	1040-3	160	480
Western Spink	1203-3	181	543
Western Spink	1513-3	130	390
Western Spink	1708-3	160	480
Western Spink	1725-3	149	447
Western Spink	1923-3	136	408
Western Spink	2487-3	136	408
Western Spink	2659-3	132	396
Western Spink	2992-3	140	420
Western Spink	2993-3	140	420
Western Spink	3045-3	480	1,440
Western Spink	3046-3	130	390
Western Spink	3053-3	152	456
Western Spink	3054-3	160	480
Western Spink	3126-3	136	408
Western Spink	3161-3	136	408
Western Spink	3162-3	160	480
Western Spink	3163-3	160	480
Western Spink	3164-3	136	408
Western Spink	3265-3	164	492
Western Spink	3282-3	275	825
Western Spink	3321-3	120	360
Western Spink	3339-3	160	480
Western Spink	3376-2	280	840
Western Spink	3379-3	160	480
Western Spink	3380-3	160	480
Western Spink	3852-3	160	480
Western Spink	3861-3	160	480
Western Spink	3936-3	160	480
Western Spink	4260-3	160	480
Western Spink	4344-3	160	320
Western Spink	4897-3	320	640
Western Spink	4935-3	40	80

Current number of permits in management unit = 48  
 Irrigation appropriations from this management unit = 24,847 ac-ft  
 Number of acres under irrigation permit in the management unit = 8,456

There are 179 permits listed for the TULARE aquifer in SPINK County.  
 Amount appropriated from the aquifer = 92,774 ac-ft  
 Total number of permitted acres for aquifer = 32,514



IRRIGATION SUMMARY  
BY COUNTY

Management Unit	Permit Number	<u>As of January 1, 1983</u>	
		Permitted Appropriation Acres	(ac-ft)

THERE ARE 207 PERMITS LISTED FOR IRRIGATION IN  
SPINK COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION  
OF 105,919 ACRE-FEET OF GROUND WATER.  
THEY HAVE 37,154 ACRES AVAILABLE FOR IRRIGATION.

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted	Appropriation
		Acres	(ac-ft)

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SULLY COUNTY  
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COW CREEK   AQUIFER

1285-3	136	408
1492-3	136	408
1785-3	136	408
1871-3	1,360	4,080
2138-3	200	600
2195-3	440	1,320
2260-3	600	1,800
3349-3	132	396
3377-3	156	468
4481-3	640	1,280
4775-3	780	0

There are 11 permits listed for the COW CREEK aquifer in SULLY County.

Amount appropriated from the aquifer = 11,168 ac-ft  
Total number of permitted acres for aquifer = 4,716

HIGHMORE BLUNT   AQUIFER

1283-3	640	1,920
1381-3	126	378
1503-3	200	600
1927-3	320	960
2080-3	480	1,440
3821-3	566	1,698

There are 6 permits listed for the HIGHMORE BLUNT aquifer in SULLY County.

Amount appropriated from the aquifer = 6,996 ac-ft  
Total number of permitted acres for aquifer = 2,332

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted Acres	Appropriation (ac-ft)

OKOBOJO CREEK   AQUIFER

	1090-3	286	858
	1213-3	620	1,860
	3406-3	871	2,613

There are 3 permits listed for the OKOBOJO CREEK aquifer in SULLY County.

Amount appropriated from the aquifer = 5,331 ac-ft  
Total number of permitted acres for aquifer = 1,777

PLEISTOCENE SERIES   AQUIFER

Unknown	4243-3	126	378
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THERE ARE 21 PERMITS LISTED FOR IRRIGATION IN SULLY COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION OF 23,873 ACRE-FEET OF GROUND WATER. THEY HAVE 8,951 ACRES AVAILABLE FOR IRRIGATION.

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted	Appropriation
		Acres	(ac-ft)

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T U R N E R   C O U N T Y  
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D A K O T A   F O R M A T I O N   A Q U I F E R

	4572-3	240	480
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N I O B R A R A   F O R M A T I O N   A Q U I F E R

	3394-3	160	480
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P A R K E R - C E N T E R V I L L E   A Q U I F E R

	121-3A	80	240
	121-3B	80	240
	142-3	83	249
	144-3	160	480
	156-3	160	480
	157-3	160	480
	164-3	80	240
	165-3	160	480
	166-3	160	480
	172-3	120	360
	176-3	320	960
	177-3	160	480
	181-3	160	480
	187-3	160	480
	189-3	160	480
	199-3	160	480
	225-3	259	777
	231-3	160	480
	288-3	160	480
	289-3	80	240

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted Acres	Appropriation (ac-ft)
	290-3	320	960
	291-3	80	240
	304-3	80	240
	328-3	147	441
	345-3	200	600
	358-3	161	482
	387-3	160	480
	439-3	63	189
	439-3A	97	291
	456-3	160	480
	457-3	80	240
	510-3	160	480
	515-3	135	405
	568-3	160	480
	593-3	100	300
	776-3	160	480
	968-3	40	120
	969-3	284	852
	1164-3	150	450
	1348-3	80	240
	1388-3	142	426
	1433-3	400	1,200
	1584-3	132	396
	1664-3	150	450
	1771-3	160	480
	1773-3	144	432
	1784-3	132	396
	1878-3	320	960
	1890-3	510	1,531
	1931-3	132	396
	2031-3	132	396
	2051-3	158	474
	2062-3	143	429
	2063-3	72	216
	2135-3	60	180
	2156-3	90	270
	2200-3	132	396
	2213-3	123	369
	2220-3	80	240
	2230-3	136	408
	2234-3	132	396
	2287-3	133	399
	2288-3	76	228
	2352-3	406	1,218
	2365-3	99	297
	2499-3	140	420
	2552-3	128	383
	2661-3	330	990
	2690-3	136	408
	2691-3	160	480
	2734-3	160	480

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
	2764-3	75	225
	2810-3	136	408
	2852-3	210	630
	2897-3	35	105
	2898-3	134	402
	2962-3	136	408
	2971-3	40	120
	2981-3	460	1,330
	3050-3	110	330
	3158-3	35	105
	3246-3	340	1,020
	3248-3	139	417
	3267-3	80	240
	3500-3	38	114
	3501-3	113	339
	3504-3	160	480
	3548-3	140	420
	3758-3	80	240
	3805-3	283	849
	3812-3	128	384
	4122-3	140	420
	4152-3	130	390
	4218-3	140	420
	4341-3	86	172
	4366-3	200	400
	4605-3	246	492
	4605-3A	0	0
	4606-3	75	150
	4645-3	240	480
	4646-3	300	600
	4648-3	0	0
	4691-3	127	254
	4694-3	150	300
	4735-3	0	0
	4737-3	63	126
	4738-3	150	300
	4748-3	80	160

There are 108 permits listed for the PARKER-CENTERVILLE aquifer in TURNER County.

Amount appropriated from the aquifer = 46,540 ac-ft

Total number of permitted acres for aquifer = 16,085

PLEISTOCENE SERIES   AQUIFER

Unknown	3471-3	180	540
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I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted Acres	Appropriation (ac-ft)
Unknown	4019-3	240	720
Unknown	4665-3	480	960
Unknown	4693-3	235	470
Unknown	4747-3A	0	0
Unknown	4752-3	240	480
Unknown	4903-3	121	242
Unknown	4924-3	480	960

Current number of permits in management unit = 8  
 Irrigation appropriations from this management unit = 4,372 ac-ft  
 Number of acres under irrigation permit in the management unit = 1,976

There are 8 permits listed for the PLEISTOCENE SERIES aquifer in TURNER County.

Amount appropriated from the aquifer = 4,372 ac-ft  
 Total number of permitted acres for aquifer = 1,976

SIOUX QUARTZITE WASH    AQUIFER

2506-3	143	429
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UPPER-VERMILLION-MISSOURI    AQUIFER

180-3	160	480
1930-3	132	396
1930-3A	132	396
1967-3	136	408
2210-3	230	690
2269-3	188	564
2317-3	160	480
2507-3	69	207
2660-3	110	330
2714-3	163	489
2770-3	116	348
2777-3	189	567
2941-3	140	420
3156-3	132	396
3184-3	200	600
3360-3	160	480

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
	3409-3	136	408
	3410-3	112	336
	3411-3	138	414
	3507-3	69	207
	3541-3	228	684
	3600-3	206	618
	3610-3	364	1,092
	3646-3	144	432
	3648-3	142	426
	3675-3	136	408
	3735-3	132	396
	3737-3	320	960
	3784-3	132	396
	3787-3	280	840
	3804-3	172	516
	3829-3	90	270
	3832-3	191	573
	3833-3	128	384
	3899-3	168	504
	3900-3	140	420
	3901-3	420	1,260
	3902-3	156	468
	3903-3	136	408
	3906-3	134	402
	3918-3	295	886
	3926-3	132	396
	3943-3	160	480
	3944-3	200	600
	3945-3	400	1,200
	3955-3	80	240
	3966-3	132	396
	4105-3	160	480
	4172-3	200	600
	4265-3	200	600
	4552-3	37	74
	4560-3	160	320
	4561-3	150	300
	4647-3	160	320
	4695-3	240	480
	4720-3	240	480

There are 56 permits listed for the UPPER-VERMILLION-MISSOURI aquifer in TURNER County.

Amount appropriated from the aquifer = 27,925 ac-ft

Total number of permitted acres for aquifer = 9,637



I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted	Appropriation
		Acres	(ac-ft)

VERMILLION-EAST-FORK   AQUIFER

	3643-3	120	360
	3756-3	106	318

There are 2 permits listed for the VERMILLION-EAST-FORK aquifer in TURNER County.

Amount appropriated from the aquifer =        678 ac-ft  
Total number of permitted acres for aquifer =        226

VERMILLION-WEST-FORK   AQUIFER

	2849-3	7	21
	3550-3	132	396
	4562-3	100	200

There are 3 permits listed for the VERMILLION-WEST-FORK aquifer in TURNER County.

Amount appropriated from the aquifer =        517 ac-ft  
Total number of permitted acres for aquifer =        239

WALL LAKE   AQUIFER

	3632-3	160	480
	3633-3	361	1,083
	3634-3	132	396

There are 3 permits listed for the WALL LAKE aquifer in TURNER County.

Amount appropriated from the aquifer =    1,959 ac-ft  
Total number of permitted acres for aquifer =        653

THERE ARE 183 PERMITS LISTED FOR IRRIGATION IN TURNER COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION OF 83,480 ACRE-FEET OF GROUND WATER. THEY HAVE 29,360 ACRES AVAILABLE FOR IRRIGATION.

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted	Appropriation
		Acres	(ac-ft)

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UNION   COUNTY  
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BRULE CREEK   AQUIFER

1384-3	136	408
2007-3	80	240
2183-3	140	420
2193-3	136	408
2194-3	136	408
2585-3	240	720
2586-3	160	480
3123-3	110	330
3671-3	150	450
3816-3	160	480
3817-3	240	720
4684-3	80	120
4685-3	80	160

There are 13 permits listed for the BRULE CREEK aquifer in UNION County.

Amount appropriated from the aquifer = 5,344 ac-ft

Total number of permitted acres for aquifer = 1,828

BIG SIOUX   AQUIFER

South	50-3	158	474
South	605-3	140	420
South	1677-3	310	930
South	2350-3	180	540
South	2366-3	136	408
South	2915-3	240	720
South	3070-3	120	360
South	3102-3	130	390
South	3316-3	80	240
South	3358-3	90	270
South	3425-3	80	240
South	3426-3	120	360
South	3686-3	120	360
South	3688-3	220	660

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted Acres	Appropriation (ac-ft)
South	3691-3	240	720
South	3836-3	120	360
South	3837-3	160	480
South	3838-3	80	240
South	3880-3	346	1,038
South	4083-3	280	840
South	4888-3	160	320
South	4915-3	160	320

Current number of permits in management unit = 22  
 Irrigation appropriations from this management unit = 10,690 ac-ft  
 Number of acres under irrigation permit in the management unit = 3,670

There are 22 permits listed for the BIG SIOUX aquifer in UNION County.  
 Amount appropriated from the aquifer = 10,690 ac-ft  
 Total number of permitted acres for aquifer = 3,670

LOWER-VERMILLION-MISSOURI   AQUIFER

376-3	160	480
377-3	160	480
2242-3	136	408
2525-3	160	480
2896-3	265	795
2925-3	122	366
2938-3	136	408
2939-3	80	240
2957-3	136	408
3128-3	130	390
3291-3	272	816
3796-3	80	240
4393-3	120	240

There are 13 permits listed for the LOWER-VERMILLION-MISSOURI aquifer in UNION County.  
 Amount appropriated from the aquifer = 5,751 ac-ft  
 Total number of permitted acres for aquifer = 1,957

MISSOURI   AQUIFER

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
	47-3	126	378
	52-3	145	435
	53-3	193	579
	54-3	140	420
	59-3	160	480
	152-3	43	130
	179-3	200	600
	232-3	160	480
	234-3	160	480
	237-3	160	480
	306-3	240	720
	313-3A	170	510
	314-3	280	840
	322-3	139	416
	324-3	160	480
	331-3	160	480
	383-3	150	450
	400-3	190	570
	406-3	160	480
	452-3	320	960
	501-3	320	960
	503-3	220	660
	518-3	150	450
	592-3	295	885
	845-3	227	682
	849-3	151	453
	991-3	191	574
	1019-3	230	690
	1086-3	158	473
	1088-3	125	376
	1092-3	252	755
	1096-3	78	234
	1100-3	65	194
	1133-3	84	252
	1136-3	80	240
	1188-3	189	567
	1189-3	152	457
	1200-3	158	474
	1208-3	224	672
	1256-3	180	540
	1263-3	152	456
	1291-3	108	324
	1294-3	102	306
	1297-3	160	480
	1374-3	195	585
	1530-3	275	825
	1567-3	240	720
	1615-3	80	240
	1761-3	80	240
	1786-3	140	420

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
	1932-3	120	360
	1936-3	80	240
	2008-3	132	396
	2011-3	95	285
	2015-3	144	432
	2016-3	160	480
	2017-3	136	408
	2079-3	160	480
	2108-3	132	396
	2109-3	80	240
	2114-3	320	960
	2117-3	90	270
	2121-3	142	426
	2141-3	160	480
	2189-3	108	324
	2201-3	154	462
	2300-3	125	375
	2334-3	190	570
	2339-3	120	360
	2340-3	216	648
	2341-3	300	900
	2342-3	115	345
	2343-3	105	315
	2344-3	80	240
	2345-3	126	378
	2346-3	66	198
	2347-3	126	378
	2348-3	75	225
	2349-3	132	396
	2357-3	136	408
	2358-3	150	450
	2359-3	132	396
	2360-3	132	396
	2361-3	132	396
	2370-3	160	480
	2371-3	140	420
	2373-3	77	232
	2401-3	145	435
	2402-3	75	225
	2410-3	232	696
	2431-3	123	369
	2433-3	160	480
	2434-3	34	102
	2435-3	102	306
	2436-3	132	396
	2447-3	136	408
	2448-3	136	408
	2449-3	90	270
	2450-3	130	390
	2465-3	272	816
	2474-3	132	396

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	<u>As of January 1, 1983</u>	
		Permitted Acres	Appropriation (ac-ft)
	2475-3	148	444
	2511-3	160	480
	2512-3	82	246
	2526-3	72	216
	2531-3	255	765
	2532-3	200	600
	2535-3	153	459
	2550-3	120	360
	2620-3	136	408
	2621-3	136	408
	2622-3	116	348
	2623-3	136	408
	2624-3	125	375
	2625-3	132	396
	2750-3	128	384
	2753-3	106	318
	2763-3	120	360
	2858-3	160	480
	2868-3	136	408
	2889-3	250	750
	2895-3	144	432
	2935-3	70	210
	2936-3	70	210
	2937-3	160	480
	2940-3	136	408
	2958-3	160	480
	3005-3	200	600
	3011-3	233	699
	3071-3	60	180
	3112-3	143	429
	3122-3	100	300
	3127-3	181	542
	3137-3	136	408
	3153-3	80	240
	3154-3	140	420
	3169-3	145	435
	3249-3	130	390
	3283-3	160	480
	3284-3	65	195
	3286-3	130	390
	3306-3	80	240
	3313-3	309	927
	3336-3	415	1,245
	3344-3	133	399
	3345-3	130	390
	3353-3	90	270
	3364-3	67	201
	3365-3	120	360
	3403-3	120	360
	3430-3	200	600
	3451-3	160	480

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted Acres	Appropriation (ac-ft)
	3461-3	433	1,299
	3486-3	180	540
	3515-3	136	408
	3520-3	136	408
	3527-3	68	204
	3531-3	138	414
	3549-3	240	720
	3551-3	60	240
	3602-3	139	417
	3613-3	80	240
	3635-3	160	480
	3636-3	233	699
	3644-3	63	189
	3645-3	240	720
	3659-3	80	240
	3673-3	40	120
	3674-3	140	420
	3677-3	103	309
	3679-3	240	720
	3680-3	320	960
	3711-3	160	480
	3712-3	144	432
	3769-3	80	240
	3823-3	147	441
	3828-3	200	600
	3850-3	60	180
	3853-3	160	480
	3854-3	166	499
	3857-3	164	491
	3859-3	80	240
	3866-3	70	210
	3868-3	150	450
	3869-3	144	432
	3870-3	136	408
	3871-3	281	843
	3907-3	90	270
	3910-3	130	390
	3911-3	155	465
	3920-3	180	540
	3959-3	160	480
	3970-3	78	234
	4031-3	236	708
	4032-3	200	600
	4033-3	140	420
	4045-3	673	2,019
	4244-3	150	480
	4247-3	267	801
	4255-3	120	360
	4259-3	25	75
	4281-3	160	480
	4370-3	60	120

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted Acres	Appropriation (ac-ft)
	4421-3	240	480
	4433-3	160	320
	4438-3	120	240
	4439-3	220	440
	4503-3	160	320
	4527-3	80	160
	4534-3	105	210
	4543-3	320	640
	4553-3	120	240
	4562-3	80	160
	4582-3	132	264
	4585-3	190	380
	4587-3	130	260
	4593-3	132	264
	4611-3	160	320
	4651-3	160	320
	4675-3	156	313
	4677-3	80	160
	4696-3	54	108
	4702-3	60	120
	4732-3	189	378
	4734-3	120	240
	4745-3	280	560
	4762-3	160	320
	4874-3	40	80
	4884-3	50	100

There are 229 permits listed for the MISSOURI aquifer in UNION County.

Amount appropriated from the aquifer = 100,419 ac-ft

Total number of permitted acres for aquifer = 34,725

P L E I S T O C E N E   S E R I E S   A Q U I F E R

Unknown	3687-3	120	360
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THERE ARE 278 PERMITS LISTED FOR IRRIGATION IN UNION COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION OF 122,564 ACRE-FEET OF GROUND WATER. THEY HAVE 42,300 ACRES AVAILABLE FOR IRRIGATION.



I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted Appropriation Acres	(ac-ft)

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WALWORTH COUNTY  
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BOWDLE   AQUIFER

Edmunds	362-3	84	252
Hoven North	1701-3	320	960
Hoven North	1743-3	140	419
Hoven North	2280-3	80	240
Hoven North	2544-3	120	360
Hoven North	2719-3	135	405

Current number of permits in management unit = 5  
 Irrigation appropriations from this management unit = 2,384 ac-ft  
 Number of acres under irrigation permit in the management unit = 795

There are 6 permits listed for the BOWDLE aquifer in WALWORTH County.  
 Amount appropriated from the aquifer = 2,636 ac-ft  
 Total number of permitted acres for aquifer = 879

GRAND   AQUIFER

	2983-3	135	405
	3165-3	624	1,872

There are 2 permits listed for the GRAND aquifer in WALWORTH County.  
 Amount appropriated from the aquifer = 2,277 ac-ft  
 Total number of permitted acres for aquifer = 759

PLEISTOCENE SERIES   AQUIFER

Miscellaneous	2139-3	21	63
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I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted	Appropriation
		Acres	(ac-ft)

SELBY   AQUIFER

1758-3	137	411
2772-3	160	480
2773-3	160	480
2948-3	320	960
3417-3	200	600
3991-3	160	480
4173-3	320	960
4304-3	120	240
4544-3	0	0
4925-3	160	320

There are 10 permits listed for the SELBY aquifer in WALWORTH County.

Amount appropriated from the aquifer = 4,931 ac-ft

Total number of permitted acres for aquifer = 1,737

THERE ARE 19 PERMITS LISTED FOR IRRIGATION IN WALWORTH COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION OF 9,907 ACRE-FEET OF GROUND WATER. THEY HAVE 3,396 ACRES AVAILABLE FOR IRRIGATION.

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted	Appropriation
		Acres	(ac-ft)

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YANKTON COUNTY  
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LOWER-JAMES-MISSOURI   AQUIFER

	277-3	40	120
	316-3	76	228
	374-3	158	474
	384-3	113	339
	484-3	113	339
	512-3	60	180
	1661-3	200	600
	1687-3	83	249
	1919-3	157	470
	2338-3	117	351
	3069-3	800	2,400
	3292-3	180	540
	3369-3	275	825
	3399-3	145	435
	3476-3	140	420
	3862-3	80	240
	3995-3	750	2,250
	4091-3	471	1,413
	4251-3	40	0
	4443-3	148	296
	4506-3	232	464
	4551-3	140	280
	4629-3	154	308
	4827-3	160	320
	4855-3	100	200
Scotland	2611-3	160	480
Scotland	3514-3	110	330
Scotland	4179-3	80	240
Scotland	4555-3	168	336
Scotland	4661-3	320	640
Scotland	4802-3	60	120

Current number of permits in management unit = 6  
 Irrigation appropriations from this management unit = 2,146 ac-ft  
 Number of acres under irrigation permit in the management  
 unit = 898

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted	Appropriation
		Acres	(ac-ft)

There are 31 permits listed for the LOWER-JAMES-MISSOURI aquifer in YANKTON County.

Amount appropriated from the aquifer = 15,887 ac-ft  
Total number of permitted acres for aquifer = 5,830

MISSOURI   AQUIFER

126-3	200	600
127-3	160	480
278-3	65	195
366-3	160	480
373-3	80	240
437-3	76	228
1680-3	327	980
1379-3	604	1,812
1961-3	62	185
2116-3	132	396
2184-3	224	672
2331-3	32	96
2335-3	160	480
2443-3	192	576
3315-3	160	480
3343-3	130	390
3722-3	240	720
3846-3	260	780
3855-3	80	240
3865-3	110	330
3894-3	290	870
3964-3	260	780
4473-3	305	609
4491-3	60	120
4492-3	60	120
4603-3	35	70
4613-3	148	296
4678-3	130	260
4700-3	136	272
4742-3	160	320
4759-3	37	74
4782-3	127	254

There are 32 permits listed for the MISSOURI aquifer in YANKTON County.

Amount appropriated from the aquifer = 14,405 ac-ft  
Total number of permitted acres for aquifer = 5,201

I R R I G A T I O N   S U M M A R Y  
B Y   C O U N T Y

Management Unit	Permit Number	As of January 1, 1983	
		Permitted	Appropriation
		Acres	(ac-ft)

NIOBRARA FORMATION   AQUIFER

4209-3	125	375
4758-3	120	240
4867-3	160	320

There are 3 permits listed for the NIOBRARA FORMATION aquifer in YANKTON County.

Amount appropriated from the aquifer =           935 ac-ft  
Total number of permitted acres for aquifer =           405

THERE ARE 66 PERMITS LISTED FOR IRRIGATION IN YANKTON COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION OF 31,227 ACRE-FEET OF GROUND WATER. THEY HAVE 11,435 ACRES AVAILABLE FOR IRRIGATION.

\* \* \* \* \*

A GRAND TOTAL OF 1179522 ACRE-FEET OF GROUND WATER ARE APPROPRIATED TO 2,292 IRRIGATION PERMITS IN EASTERN SOUTH DAKOTA. A GRAND TOTAL OF 419,594 ACRES ARE COVERED BY THESE PERMITS.



TABLE B2 - ANNUAL APPROPRIATION FOR MUNICIPAL USE.





### Table B2 Assumptions

Table B2 is based upon the diversion rate which was approved for each municipal permit. The annual appropriation is calculated by first multiplying the diversion rate (in cubic feet per second) times 86,400 (seconds) times 365 (days) and then dividing by 43,560 (number of cubic feet in an acre-foot of water).

Several municipalities hold "future use" permits. If a community has drawn upon this type of permit in a succeeding permit, like the situation at Pierre, then it was assumed that the "future use" diversion rate would be reduced by a corresponding amount.

M U N I C I P A L . A P P R O P R I A T I O N S  
 B Y C O U N T Y

Permit Number	Town or City Name	Annual Appropriation (ac-ft)
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AURORA COUNTY

CODELL SANDSTONE AQUIFER

4120-3	PLANKINTON	261
1694-3	STICKNEY	80

2 PERMITS TOTALLING	-----	341
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NIOBRARA FORMATION AQUIFER

4121-3	WHITE LAKE	123
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THERE ARE 3 PERMITS LISTED FOR MUNICIPAL USE IN  
 AURORA COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION  
 OF 464 ACRE-FEET OF GROUND WATER.

M U N I C I P A L   A P P R O P R I A T I O N S  
 B Y   C O U N T Y

Permit Number	Town or City Name	Annual Appropriation (ac-ft)
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BEADLE COUNTY

DAKOTA FORMATION   AQUIFER

4272-3	HITCHCOCK	58
4256-3	VIRGIL	123
4219-3	WESSINGTON	724
508-3	WOLSEY	94
645-3	WOLSEY	94
4274-3	YALE	36

6 PERMITS TOTALLING 1,129

NIOBRARA FORMATION   AQUIFER

4278-3	CAVOUR	203
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PLEISTOCENE SERIES   AQUIFER

Unknown Management Unit

1727-3	WESSINGTON	326
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WARREN   AQUIFER

West James Management Unit

565-3	HURON	1,448
753-3	HURON	2,896
4269-3	HURON	<u>688</u>
3 Permits totalling		<u>5,032</u>

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M U N I C I P A L   A P P R O P R I A T I O N S  
B Y   C O U N T Y

Permit Number	Town or City Name	Annual Appropriation (ac-ft)
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3 PERMITS TOTALLING    5,032

THERE ARE    11 PERMITS LISTED FOR MUNICIPAL USE IN  
BEADLE COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION  
OF    6,690 ACRE-FEET OF GROUND WATER.

M U N I C I P A L   A P P R O P R I A T I O N S  
 B Y   C O U N T Y

Permit Number	Town or City Name	Annual Appropriation (ac-ft)
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BON HOMME COUNTY

CHOTEAU AQUIFER

Tyndall Management Unit

1075-3	TYNDALL	796
4839-3	TYNDALL	<u>4,083</u>
	2 Permits totalling	4,879

2 PERMITS TOTALLING 4,879

DAKOTA FORMATION AQUIFER

540-3	TYNDALL	738
614-3	TYNDALL	724

2 PERMITS TOTALLING 1,462

NIOBRARA FORMATION AQUIFER

1062-3	SCOTLAND	420
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THERE ARE 5 PERMITS LISTED FOR MUNICIPAL USE IN  
 BON HOMME COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION  
 OF 6,761 ACRE-FEET OF GROUND WATER.

MUNICIPAL APPROPRIATIONS  
BY COUNTY

Permit Number	Town or City Name	Annual Appropriation (ac-ft)
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BROOKINGS COUNTY

BIG SIOUX AQUIFER

Aurora Management Unit

1952-3	AURORA	145
1800-3	BROOKINGS	1,274
3979-3	BROOKINGS	<u>4,843</u>
3 Permits totalling		6,262

Brookings Management Unit

1598-3	BROOKINGS	13,031
1759-3	VOLGA	<u>1,195</u>
2 Permits totalling		14,226

Six Mile Creek Management Unit

216-3	BROOKINGS	2,787
217-3	BROOKINGS	3,077
674-3	BROOKINGS	1,368
675-3	BROOKINGS	1,129
1117-3	BROOKINGS	1,043
1296-3	BROOKINGS	<u>963</u>
6 Permits totalling		10,367

11 PERMITS TOTALLING 30,855

DAKOTA FORMATION AQUIFER

1211-3	SINAI	22
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PLEISTOCENE SERIES AQUIFER

Unknown Management Unit

M U N I C I P A L   A P P R O P R I A T I O N S  
 B Y   C O U N T Y

Permit Number	Town or City Name	Annual Appropriation (ac-ft)
4038-3	ELKTON	760
4536-3	ELKTON	159
3886-3	WHITE	<u>36</u>
	3 Permits totalling	955
	3 PERMITS TOTALLING	<u>955</u>

THERE ARE 15 PERMITS LISTED FOR MUNICIPAL USE IN  
 BROOKINGS COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION  
 OF 31,832 ACRE-FEET OF GROUND WATER.

M U N I C I P A L   A P P R O P R I A T I O N S  
 B Y   C O U N T Y

Permit Number	Town or City Name	Annual Appropriation (ac-ft)
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BROWN COUNTY

DAKOTA FORMATION   AQUIFER

1157-3	CLAREMONT	109
4077-3	FERNEY	22
1649-3	GROTON	514
1740-3	MANSFIELD	159
4058-3	STRATFORD	80
1985-3	WARNER	80

6 PERMITS TOTALLING 964

ELM   AQUIFER

Northern Brown Management Unit

192-3	ABERDEEN	7,964
3009-3	ABERDEEN	12,307
3427-3	ABERDEEN	7,240
4307-3	FREDERICK	<u>796</u>
4 Permits totalling		<u>28,307</u>

4 PERMITS TOTALLING 28,307

MIDDLE JAMES   AQUIFER

Aberdeen Management Unit

4288-3	WARNER	159
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Columbia Management Unit

1903-3	HECLA	217
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M U N I C I P A L   A P P R O P R I A T I O N S  
B Y   C O U N T Y

Permit Number	Town or City Name	Annual Appropriation (ac-ft)
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2 PERMITS TOTALLING		376
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THERE ARE 12 PERMITS LISTED FOR MUNICIPAL USE IN  
BROWN COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION  
OF 29,647 ACRE-FEET OF GROUND WATER.

MUNICIPAL APPROPRIATIONS  
BY COUNTY

	Permit Number	Town or City Name	Annual Appropriation (ac-ft)
BRULE COUNTY			
DAKOTA FORMATION AQUIFER			
	997-3	PUKWANA	362

THERE IS 1 PERMIT LISTED FOR MUNICIPAL USE IN  
BRULE COUNTY WHICH AMOUNTS TO A TOTAL APPROPRIATION  
OF 362 ACRE-FEET OF GROUND WATER.

MUNICIPAL APPROPRIATIONS  
BY COUNTY

	Permit Number	Town or City Name	Annual Appropriation (ac-ft)
BUFFALO COUNTY			
DAKOTA FORMATION AQUIFER			
	2846-3	GANN VALLEY	145

THERE IS 1 PERMIT LISTED FOR MUNICIPAL USE IN  
BUFFALO COUNTY WHICH AMOUNTS TO A TOTAL APPROPRIATION  
OF 145 ACRE-FEET OF GROUND WATER.

M U N I C I P A L   A P P R O P R I A T I O N S  
 B Y   C O U N T Y

Permit Number	Town or City Name	Annual Appropriation (ac-ft)
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CAMPBELL COUNTY

GRAND AQUIFER

4144-3	MOUND CITY	159
778-3	POLLOCK	405

2 PERMITS TOTALLING	564
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INYAN KARA GROUP AQUIFER

1198-3	MOUND CITY	123
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THERE ARE        3 PERMITS LISTED FOR MUNICIPAL USE IN  
 CAMPBELL COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION  
 OF        687 ACRE-FEET OF GROUND WATER.

M U N I C I P A L   A P P R O P R I A T I O N S  
 B Y   C O U N T Y

Permit Number	Town or City Name	Annual Appropriation (ac-ft)
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CHARLES MIX COUNTY

CODELL SANDSTONE AQUIFER

1966-3	GEDDES	275
687-3	LAKE ANDES	528

2 PERMITS TOTALLING 803

CHOTEAU AQUIFER

West Management Unit

569-3	WAGNER	796
1782-3	WAGNER	<u>644</u>
2 Permits totalling		<u>1,440</u>

2 PERMITS TOTALLING 1,440

DAKOTA FORMATION AQUIFER

705-3	PLATTE	557
570-3	WAGNER	398

2 PERMITS TOTALLING 955

THERE ARE 6 PERMITS LISTED FOR MUNICIPAL USE IN  
 CHARLES MIX COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION  
 OF 3,198 ACRE-FEET OF GROUND WATER.

M U N I C I P A L   A P P R O P R I A T I O N S  
 B Y   C O U N T Y

Permit Number	Town or City Name	Annual Appropriation (ac-ft)
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CLARK COUNTY

ALTAMONT AQUIFER

4861-3	CLARK	485
4127-3	GARDEN CITY	724
4498-3	GARDEN CITY	724

3 PERMITS TOTALLING 1,933

DAKOTA FORMATION AQUIFER

3275-3	RAYMOND	362
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PRAIRIE COTEAU AQUIFER

4090-3	BRADLEY	72
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VERMILLION-EAST-FORK AQUIFER

Antelope Lake Management Unit

4047-3	CLARK	963
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Willow Lake Management Unit

1601-3	WILLOW LAKE	253
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2 PERMITS TOTALLING 1,216

M U N I C I P A L   A P P R O P R I A T I O N S  
B Y   C O U N T Y

Permit Number .	Town or City Name	Annual Appropriation (ac-ft)
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THERE ARE        7 PERMITS LISTED FOR MUNICIPAL USE IN  
CLARK COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION  
OF    3,583 ACRE-FEET OF GROUND WATER.

MUNICIPAL APPROPRIATIONS  
BY COUNTY

	Permit Number	Town or City Name	Annual Appropriation (ac-ft)
CLAY COUNTY			
CODELL SANDSTONE AQUIFER			
	1892-3	WAKONDA	239
MISSOURI AQUIFER			
	143-3	VERMILLION	1,289
	147-3	VERMILLION	1,926
2 PERMITS TOTALLING			<u>3,215</u>

THERE ARE 3 PERMITS LISTED FOR MUNICIPAL USE IN  
CLAY COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION  
OF 3,454 ACRE-FEET OF GROUND WATER.



MUNICIPAL APPROPRIATIONS  
BY COUNTY

Permit Number	Town or City Name	Annual Appropriation (ac-ft)
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CODINGTON COUNTY

ALTAMONT AQUIFER

4052-3	HENRY	1,528
4054-3	WALLACE	2,172

2 PERMITS TOTALLING 3,700

ANTELOPE VALLEY AQUIFER

4053-3	SOUTH SHORE	2,172
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BIG SIOUX AQUIFER

North Management Unit

322-3	WATERTOWN	1,209
348-3	WATERTOWN	579
349-3	WATERTOWN	644
350-3	WATERTOWN	579
351-3	WATERTOWN	811
352-3	WATERTOWN	811
353-3	WATERTOWN	811
354-3	WATERTOWN	811
1097-3	WATERTOWN	565
1217-3	WATERTOWN	398
1218-3	WATERTOWN	14,479
1716-3	WATERTOWN	579
2239-3	WATERTOWN	1,955
2757-3	WATERTOWN	1,050
3022-3	WATERTOWN	<u>948</u>

15 Permits totalling 26,229

15 PERMITS TOTALLING 26,229

PRAIRIE COTEAU AQUIFER

M U N I C I P A L   A P P R O P R I A T I O N S  
B Y   C O U N T Y

Permit Number	Town or City Name	Annual Appropriation (ac-ft)
4051-3	FLORENCE	2,172

THERE ARE 19 PERMITS LISTED FOR MUNICIPAL USE IN  
CODINGTON COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION  
OF 34,273 ACRE-FEET OF GROUND WATER.

MUNICIPAL APPROPRIATIONS  
BY COUNTY

	Permit Number	Town or City Name	Annual Appropriation (ac-ft)
DAVISON COUNTY			
DAKOTA FORMATION AQUIFER			
	4262-3	ETHAN	159
NIOBRARA FORMATION AQUIFER			
	4264-3	MOUNT VERNON	174

THERE ARE 2 PERMITS LISTED FOR MUNICIPAL USE IN  
DAVISON COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION  
OF 333 ACRE-FEET OF GROUND WATER.

M U N I C I P A L   A P P R O P R I A T I O N S  
 B Y   C O U N T Y

	Permit Number	Town or City Name	Annual Appropriation (ac-ft)
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DAY COUNTY

ALTAMONT AQUIFER

	1651-3	ANDOVER	80
	4320-3	BRISTOL	217
	4049-3	ROSLYN	188
	3101-3	WAUBAY	413

4 PERMITS TOTALLING 898

DAKOTA FORMATION AQUIFER

	488-3	PIERPONT	319
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PRAIRIE COTEAU AQUIFER

	1435-3	WAUBAY	333
	567-3	WEBSTER	1,361

2 PERMITS TOTALLING 1,694

THERE ARE 7 PERMITS LISTED FOR MUNICIPAL USE IN  
 DAY COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION  
 OF 2,911 ACRE-FEET OF GROUND WATER.

M U N I C I P A L   A P P R O P R I A T I O N S  
 B Y   C O U N T Y

	Permit Number	Town or City Name	Annual Appropriation (ac-ft)
DEUEL COUNTY			
ALTAMONT AQUIFER			
	451-3	BRANDT	94
BIG SIOUX AQUIFER			
Brookings Management Unit			
	534-3	CLEAR LAKE	796
PLEISTOCENE SERIES AQUIFER			
Miscellaneous Management Unit			
	532-3	GARY	1,933
	2856-3	TORONTO	<u>362</u>
		2 Permits totalling	2,295
Unknown Management Unit			
	564-3	ASTORIA	87
		3 PERMITS TOTALLING	<u>2,382</u>

THERE ARE 5 PERMITS LISTED FOR MUNICIPAL USE IN DEUEL COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION OF 3,272 ACRE-FEET OF GROUND WATER.

M U N I C I P A L   A P P R O P R I A T I O N S  
 B Y   C O U N T Y

	Permit Number	Town or City Name	Annual Appropriation (ac-ft)
DOUGLAS COUNTY			
CODELL SANDSTONE AQUIFER			
	555-3	ARMOUR	362
	4836-3	CORSICA	101
		2 PERMITS TOTALLING	<u>463</u>

CORSICA AQUIFER

2669-3	CORSICA	362
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THERE ARE 3 PERMITS LISTED FOR MUNICIPAL USE IN  
 DOUGLAS COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION  
 OF 825 ACRE-FEET OF GROUND WATER.

M U N I C I P A L   A P P R O P R I A T I O N S  
 B Y   C O U N T Y

Permit Number	Town or City Name	Annual Appropriation (ac-ft)
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EDMUNDS COUNTY

BOWDLE AQUIFER

Edmunds Management Unit

704-3	BOWDLE	319
770-3	BOWDLE	<u>181</u>
	2 Permits totalling	500
	2 PERMITS TOTALLING	<u>500</u>

DAKOTA FORMATION AQUIFER

4302-3	ROSCOE	203
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GRAND AQUIFER

1705-3	HOSMER	195
4914-3	ROSCOE	1,448
	2 PERMITS TOTALLING	<u>1,643</u>

INYAN KARA GROUP AQUIFER

1712-3	IPSWICH	1,086
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THERE ARE 6 PERMITS LISTED FOR MUNICIPAL USE IN  
 EDMUNDS COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION  
 OF 3,432 ACRE-FEET OF GROUND WATER.

M U N I C I P A L   A P P R O P R I A T I O N S  
 B Y   C O U N T Y

Permit Number	Town or City Name	Annual Appropriation (ac-ft)
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FAULK COUNTY

DAKOTA FORMATION   AQUIFER

1726-3	CRESBARD	80
1756-3	ORIENT	36
4286-3	ROCKHAM	29

3 PERMITS TOTALLING 145

GRAND   AQUIFER

3947-3	FAULKTON	724
2769-3	ONAKA	543

2 PERMITS TOTALLING 1,267

PLEISTOCENE SERIES   AQUIFER

Unknown Management Unit

1738-3	SENECA	36
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THERE ARE 6 PERMITS LISTED FOR MUNICIPAL USE IN  
 FAULK COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION  
 OF 1,448 ACRE-FEET OF GROUND WATER.



MUNICIPAL APPROPRIATIONS  
BY COUNTY

	Permit Number	Town or City Name	Annual Appropriation (ac-ft)
GRANT COUNTY			
ALTAMONT AQUIFER			
	1490-3	REVILLO	297
PRAIRIE COTEAU AQUIFER			
	721-3	STRANDBURG	94
VEBLEN AQUIFER			
	4050-3	BIG STONE CITY	2,389
	548-3	MILBANK	1,520
	549-3	MILBANK	362
	1769-3	MILBANK	1,564
	4785-3	MILBANK	1,448
	4048-3	TWIN BROOKS	217
	6 PERMITS TOTALLING		<u>7,500</u>

THERE ARE 8 PERMITS LISTED FOR MUNICIPAL USE IN GRANT COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION OF 7,891 ACRE-Feet OF GROUND WATER.

M U N I C I P A L   A P P R O P R I A T I O N S  
 B Y   C O U N T Y

Permit Number	Town or City Name	Annual Appropriation (ac-ft)
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HAMLIN COUNTY

BIG SIOUX AQUIFER

Brookings Management Unit

558-3	CASTLEWOOD	644
1317-3	ESTELLINE	796
617-3	HAYTI	478
618-3	HAYTI	434
3117-3	HAYTI	239
557-3	LAKE NORDEN	2,172
4055-3	LAKE NORDEN	<u>1,433</u>
	7 Permits totalling	6,196

7 PERMITS TOTALLING 6,196

DAKOTA FORMATION AQUIFER

1228-3	BRYANT	159
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THERE ARE 8 PERMITS LISTED FOR MUNICIPAL USE IN  
 HAMLIN COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION  
 OF 6,355 ACRE-FEET OF GROUND WATER.

M U N I C I P A L   A P P R O P R I A T I O N S  
 B Y   C O U N T Y

Permit Number	Town or City Name	Annual Appropriation (ac-ft)
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HAND COUNTY

DAKOTA FORMATION   AQUIFER

825-3	MILLER	514
1132-3	MILLER	362
1148-3	MILLER	1,766
2718-3	MILLER	724

4 PERMITS TOTALLING 3,366

INYAN KARA GROUP   AQUIFER

4815-3	POLO	159
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PLEISTOCENE SERIES   AQUIFER

Unknown Management Unit

4816-3	REE HEIGHTS	65
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TULARE   AQUIFER

Miller Management Unit

785-3	ST. LAWRENCE	72
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THERE ARE        7 PERMITS LISTED FOR MUNICIPAL USE IN  
 HAND COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION  
 OF    3,662 ACRE-FEET OF GROUND WATER.

M U N I C I P A L   A P P R O P R I A T I O N S  
 B Y   C O U N T Y

Permit Number	Town or City Name	Annual Appropriation (ac-ft)
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HANSON COUNTY

PLEISTOCENE SERIES   AQUIFER

Unknown Management Unit

1963-3	EMERY	413
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SIOUX QUARTZITE   AQUIFER

315-3	ALEXANDRIA	130
2969-3	ALEXANDRIA	2,172

2 PERMITS TOTALLING 2,302

THERE ARE      3 PERMITS LISTED FOR MUNICIPAL USE IN  
 HANSON COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION  
 OF    2,715 ACRE-FEET OF GROUND WATER.

MUNICIPAL APPROPRIATIONS  
BY COUNTY

	Permit Number	Town or City Name	Annual Appropriation (ac-ft)
HUGHES COUNTY			
HIGHMORE-BLUNT AQUIFER			
	1130-3	BLUNT	94
	2828-3	BLUNT	319
	2455-3	HARROLD	159
	3 PERMITS TOTALLING		<u>572</u>

MISSOURI AQUIFER

Pierre Management Unit

	135-3	PIERRE	16,000
	745-3	PIERRE	970
	1486-3	PIERRE	963
	4189-3	PIERRE	1,129
	4190-3	PIERRE	<u>1,448</u>
	5 Permits totalling		<u>20,510</u>
	5 PERMITS TOTALLING		<u>20,510</u>

THERE ARE 8 PERMITS LISTED FOR MUNICIPAL USE IN  
HUGHES COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION  
OF 21,082 ACRE-FEET OF GROUND WATER.

MUNICIPAL APPROPRIATIONS  
BY COUNTY

	Permit Number	Town or City Name	Annual Appropriation (ac-ft)
HUTCHINSON COUNTY			
CODELL SANDSTONE AQUIFER			
	4402-3	TRIPP	463
CHOTEAU AQUIFER			
Middle Management Unit			
	1060-3	PARKSTON	1,267
	1869-3	PARKSTON	<u>724</u>
		2 Permits totalling	1,991
		2 PERMITS TOTALLING	<u>1,991</u>
NIOBRARA FORMATION AQUIFER			
	810-3	FREEMAN	912
	4776-3	FREEMAN	478
	4791-3	FREEMAN	478
		3 PERMITS TOTALLING	<u>1,868</u>

THERE ARE 6 PERMITS LISTED FOR MUNICIPAL USE IN  
HUTCHINSON COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION  
OF 4,322 ACRE-FEET OF GROUND WATER.

M U N I C I P A L   A P P R O P R I A T I O N S  
B Y   C O U N T Y

	Permit Number	Town or City Name	Annual Appropriation (ac-ft)
HYDE COUNTY			
HIGHMORE-BLUNT AQUIFER			
	744-3	HIGHMORE	1,202

THERE IS 1 PERMIT LISTED FOR MUNICIPAL USE IN  
HYDE COUNTY WHICH AMOUNTS TO A TOTAL APPROPRIATION  
OF 1,202 ACRE-FEET OF GROUND WATER.

M U N I C I P A L   A P P R O P R I A T I O N S  
 B Y   C O U N T Y

Permit Number	Town or City Name	Annual Appropriation (ac-ft)
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JERAULD COUNTY

DAKOTA FORMATION   AQUIFER

4444-3	ALPENA	1,448
1070-3	LANE	319

2 PERMITS TOTALLING 1,767

PLEISTOCENE SERIES   AQUIFER

Unknown Management Unit

10-3	WESSINGTON SPRINGS	203
11-3	WESSINGTON SPRINGS	760
344-3	WESSINGTON SPRINGS	398
4422-3	WESSINGTON SPRINGS	<u>724</u>
4	Permits totalling	<u>2,085</u>

4 PERMITS TOTALLING 2,085

THERE ARE        6 PERMITS LISTED FOR MUNICIPAL USE IN  
 JERAULD COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION  
 OF    3,852 ACRE-FEET OF GROUND WATER.



MUNICIPAL APPROPRIATIONS  
BY COUNTY

Permit Number	Town or City Name	Annual Appropriation (ac-ft)
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KINGSBURY COUNTY

ALTAMONT AQUIFER

1913-3	ARLINGTON	818
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DAKOTA FORMATION AQUIFER

1602-3	LAKE PRESTON	253
1163-3	OLDHAM	369

2 PERMITS TOTALLING 622

PRAIRIE COTEAU AQUIFER

3073-3	BADGER	43
1652-3	DESMET	2,172
1210-3	HETLAND	36
1981-3	LAKE PRESTON	724

4 PERMITS TOTALLING 2,975

VERMILLION-EAST-FORK AQUIFER

520-3	DESMET	3,620
523-3	DESMET	1,810
524-3	DESMET	1,810
1129-3	DESMET	543

4 PERMITS TOTALLING 7,783

THERE ARE 11 PERMITS LISTED FOR MUNICIPAL USE IN  
KINGSBURY COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION  
OF 12,198 ACRE-FEET OF GROUND WATER.

M U N I C I P A L   A P P R O P R I A T I O N S  
 B Y   C O U N T Y

Permit Number	Town or City Name	Annual Appropriation (ac-ft)
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LAKE COUNTY

BIG SIOUX AQUIFER

Northern Skunk Creek Management Unit

4499-3	CHESTER	239
371-3	MADISON	362
372-3	MADISON	724
747-3	MADISON	8,043
1079-3	MADISON	1,955
1453-3	MADISON	<u>565</u>
6 Permits totalling		<u>11,888</u>

6 PERMITS TOTALLING 11,888

CODELL SANDSTONE AQUIFER

1676-3	NUNDA	72
3999-3	RAMONA	123

2 PERMITS TOTALLING 195

HOWARD AQUIFER

1958-3	WINFRED	72
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NIOBRARA FORMATION AQUIFER

1604-3	MADISON	883
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THERE ARE 10 PERMITS LISTED FOR MUNICIPAL USE IN  
 LAKE COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION  
 OF 13,038 ACRE-FEET OF GROUND WATER.

MUNICIPAL APPROPRIATIONS  
BY COUNTY

Permit Number	Town or City Name	Annual Appropriation (ac-ft)
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LINCOLN COUNTY

BIG SIOUX AQUIFER

South Management Unit

1158-3	FAIRVIEW	130
1754-3	HARRISBURG	1,448
4883-3	HARRISBURG	159
1139-3	HUDSON	<u>514</u>
4 Permits totalling		2,251

4 PERMITS TOTALLING 2,251

DAKOTA FORMATION AQUIFER

1262-3	CANTON	3,113
4312-3	CANTON	420
1695-3	WORTHING	72
4401-3	WORTHING	167

4 PERMITS TOTALLING 3,772

LENNOX AQUIFER

429-3	LENNOX	130
489-3	LENNOX	159

2 PERMITS TOTALLING 289

SIOUX QUARTZITE AQUIFER

539-3	HARRISBURG	80
492-3	LENNOX	159
759-3	TEA	43
1554-3	TEA	65

M U N I C I P A L   A P P R O P R I A T I O N S  
B Y   C O U N T Y

Permit Number	Town or City Name	Annual Appropriation (ac-ft)
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4 PERMITS TOTALLING 347

THERE ARE 14 PERMITS LISTED FOR MUNICIPAL USE IN  
LINCOLN COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION  
OF 6.659 ACRE-FEET OF GROUND WATER.

MUNICIPAL APPROPRIATIONS  
BY COUNTY.

Permit Number	Town or City Name	Annual Appropriation (ac-ft)
McCOOK COUNTY		

PLEISTOCENE SERIES AQUIFER

Unknown Management Unit

767-3	BRIDGEWATER	695
4188-3	CANISTOTA	217
996-3	SALEM	<u>898</u>
3 Permits totalling		<u>1,810</u>

3 PERMITS TOTALLING 1,810

SIOUX QUARTZITE AQUIFER

4271-3	SPENCER	94
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VERMILLION-EAST-FORK AQUIFER

1009-3	MONTROSE	319
3946-3	MONTROSE	724
4039-3	MONTROSE	724

3 PERMITS TOTALLING 1,767

THERE ARE 7 PERMITS LISTED FOR MUNICIPAL USE IN  
McCOOK COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION  
OF 3,671 ACRE-FEET OF GROUND WATER.

M U N I C I P A L   A P P R O P R I A T I O N S  
 B Y   C O U N T Y

Permit Number	Town or City Name	Annual Appropriation (ac-ft)
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MCPHERSON COUNTY

DAKOTA FORMATION   AQUIFER

46-3	LEOLA	87
320-3	LEOLA	159
412-3	LEOLA	159
4303-3	WETONKA	22

4 PERMITS TOTALLING 427

INYAN KARA GROUP   AQUIFER

723-3	EUREKA	695
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SELBY   AQUIFER

2249-3	EUREKA	1,086
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THERE ARE        6 PERMITS LISTED FOR MUNICIPAL USE IN  
 MCPHERSON COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION  
 OF    2,208 ACRE-FEET OF GROUND WATER.

MUNICIPAL APPROPRIATIONS  
BY COUNTY

	Permit Number	Town or City Name	Annual Appropriation (ac-ft)
MARSHALL COUNTY			
COTEAU LAKES AQUIFER			
	4195-3	LAKE CITY	80
DAKOTA FORMATION AQUIFER			
	4919-3	LANGFORD	195
MIDDLE JAMES AQUIFER			
	Columbia Management Unit		
	3915-3	BRITTON	1.086
PRAIRIE COTEAU AQUIFER			
	491-3	VEBLEN	717
VEBLEN AQUIFER			
	4125-3	VEBLEN	159

THERE ARE 5 PERMITS LISTED FOR MUNICIPAL USE IN  
MARSHALL COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION  
OF 2,237 ACRE-FEET OF GROUND WATER.

M U N I C I P A L   A P P R O P R I A T I O N S  
 B Y   C O U N T Y

	Permit Number	Town or City Name	Annual Appropriation (ac-ft)
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MINER COUNTY

DAKOTA FORMATION   AQUIFER

	1583-3	CARTHAGE	145
	4270-3	CARTHAGE	130
	1650-3	ROSWELL	43

3 PERMITS TOTALLING 318

HOWARD   AQUIFER

	4162-3	CANOVA	478
	578-3	HOWARD	120
	1599-3	HOWARD	796

3 PERMITS TOTALLING 1,394

SIOUX QUARTZITE   AQUIFER

	577-3	HOWARD	193
	994-3	HOWARD	181

2 PERMITS TOTALLING 374

SIOUX QUARTZITE WASH   AQUIFER

	576-3	HOWARD	112
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THERE ARE      9 PERMITS LISTED FOR MUNICIPAL USE IN  
 MINER COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION  
 OF    2,198 ACRE-FEET OF GROUND WATER.



M U N I C I P A L   A P P R O P R I A T I O N S  
 B Y   C O U N T Y

Permit Number	Town or City Name	Annual Appropriation (ac-ft)
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MINNEHAHA COUNTY

BIG SIOUX AQUIFER

South Management Unit

1804-3	BRANDON	869
4002-3	BRANDON	2,896
4885-3	BRANDON	<u>203</u>
3 Permits totalling		3,968

Sioux Falls Management Unit

538-3	BALTIC	130
2029-3	BALTIC	239
4140-3	BALTIC	724
562-3	DELL RAPIDS	2,976
254-3	SIOUX FALLS	1,122
255-3	SIOUX FALLS	1,122
256-3	SIOUX FALLS	804
257-3	SIOUX FALLS	1,933
258-3	SIOUX FALLS	319
259-3	SIOUX FALLS	963
260-3	SIOUX FALLS	963
261-3	SIOUX FALLS	963
262-3	SIOUX FALLS	1,122
263-3	SIOUX FALLS	1,122
264-3	SIOUX FALLS	1,122
265-3	SIOUX FALLS	1,122
266-3	SIOUX FALLS	1,122
267-3	SIOUX FALLS	1,122
268-3	SIOUX FALLS	724
269-3	SIOUX FALLS	1,289
270-3	SIOUX FALLS	1,209
271-3	SIOUX FALLS	1,209
272-3	SIOUX FALLS	1,043
273-3	SIOUX FALLS	1,209
274-3	SIOUX FALLS	1,448
275-3	SIOUX FALLS	1,289
276-3	SIOUX FALLS	1,289
298-3	SIOUX FALLS	1,289
299-3	SIOUX FALLS	2,259
300-3	SIOUX FALLS	2,324
395-3	SIOUX FALLS	2,259
396-3	SIOUX FALLS	2,259
397-3	SIOUX FALLS	2,259
448-3	SIOUX FALLS	29,379
1305-3	SIOUX FALLS	1,137

MUNICIPAL APPROPRIATIONS  
BY COUNTY

Permit Number	Town or City Name	Annual Appropriation (ac-ft)
1306-3	SIOUX FALLS	4,489
1347-3	SIOUX FALLS	5,611
1579-3	SIOUX FALLS	521
1941-3	SIOUX FALLS	311
2018-3	SIOUX FALLS	2,244
2019-3	SIOUX FALLS	2,244
2747-3	SIOUX FALLS	2,244
2886-3	SIOUX FALLS	2,244
4098-3	SIOUX FALLS	724
4099-3	SIOUX FALLS	724
4100-3	SIOUX FALLS	724
4101-3	SIOUX FALLS	724
4232-3	SIOUX FALLS	514
4811-3	SIOUX FALLS	2,693
4812-3	SIOUX FALLS	<u>2,903</u>
50 Permits totalling		101,778

Southern Skunk Creek Management Unit

449-3	SIOUX FALLS	11,294
4231-3	SIOUX FALLS	<u>514</u>
2 Permits totalling		11,808

55 PERMITS TOTALLING 117,554

PLEISTOCENE SERIES AQUIFER

Unknown Management Unit

4000-3	COLTON	362
4001-3	COLTON	<u>159</u>
2 Permits totalling		521

2 PERMITS TOTALLING 521

SIOUX QUARTZITE AQUIFER

4928-3	CORSON	7
4929-3	CORSON	36
1926-3	CROOKS	58
1289-3	GARRETSON	217
3997-3	GARRETSON	109

M U N I C I P A L   A P P R O P R I A T I O N S  
 B Y   C O U N T Y

Permit Number	Town or City Name	Annual Appropriation (ac-ft)
4280-3	HARTFORD	557
4275-3	HUMBOLDT	159

7 PERMITS TOTALLING 1,143

SPLIT ROCK CREEK FORMATION   AQUIFER

1138-3	VALLEY SPRINGS	239
2113-3	VALLEY SPRINGS	239

2 PERMITS TOTALLING 478

THERE ARE    66 PERMITS LISTED FOR MUNICIPAL USE IN  
 MINNEHAHA COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION  
 OF 119,696 ACRE-FEET OF GROUND WATER.

MUNICIPAL APPROPRIATIONS  
BY COUNTY

Permit Number	Town or City Name	Annual Appropriation (ac-ft)
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MOODY COUNTY

BIG SIOUX AQUIFER

Moody Management Unit

1182-3	FLANDREAU	2,331
3977-3	FLANDREAU	3,620
1800-3	TRENT	<u>543</u>
	3 Permits totalling	6,494
	3 PERMITS TOTALLING	<u>6,494</u>

HOWARD AQUIFER

244-3	COLMAN	159
1061-3	COLMAN	159
	2 PERMITS TOTALLING	<u>318</u>

PLEISTOCENE SERIES AQUIFER

Unknown Management Unit

2517-3	WARD	72
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THERE ARE 6 PERMITS LISTED FOR MUNICIPAL USE IN MOODY COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION OF 6,884 ACRE-FEET OF GROUND WATER.

MUNICIPAL APPROPRIATIONS  
BY COUNTY

	Permit Number	Town or City Name	Annual Appropriation (ac-ft)
<b>POTTER COUNTY</b>			
<b>BOWDLE AQUIFER</b>			
Edmunds Management Unit			
	1329-3	TOLSTOY	181
Hoven South Management Unit			
	2855-3	HOVEN	804
	2855-3A	HOVEN	0
	4860-3	HOVEN	<u>2,172</u>
	3 Permits totalling		<u>2,976</u>
	4 PERMITS TOTALLING		<u><u>3,157</u></u>
<b>DAKOTA FORMATION AQUIFER</b>			
	703-3	GETTYSBURG	203

THERE ARE 5 PERMITS LISTED FOR MUNICIPAL USE IN  
POTTER COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION  
OF 3,360 ACRE-FEET OF GROUND WATER.

MUNICIPAL APPROPRIATIONS  
BY COUNTY

	Permit Number	Town or City Name	Annual Appropriation (ac-ft)
ROBERTS COUNTY			
FAIRMOUNT AQUIFER			
	1273-3	ROSHOLT	239
PLEISTOCENE SERIES AQUIFER			
Unknown Management Unit			
	2596-3	NEW EFFINGTON	65
	1739-3	SUMMIT	644
		2 Permits totalling	709
		2 PERMITS TOTALLING	709
VEBLEN AQUIFER			
	2006-3	CORONA	217
	530-3	PEEVER	80
	719-3	SISSETON	941
	2409-3	SISSETON	3,258
	1764-3	WILMOT	282
		5 PERMITS TOTALLING	4,778
WILMOT AQUIFER			
	4796-3	SISSETON	7,240

THERE ARE 9 PERMITS LISTED FOR MUNICIPAL USE IN  
ROBERTS COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION  
OF 12,966 ACRE-FEET OF GROUND WATER.

M U N I C I P A L   A P P R O P R I A T I O N S  
 B Y   C O U N T Y

Permit Number	Town or City Name	Annual Appropriation (ac-ft)
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SANBORN COUNTY

DAKOTA FORMATION   AQUIFER

4322-3	FORESTBURG	188
1714-3	LETCHER	159

2 PERMITS TOTALLING 347

NIOBRARA FORMATION   AQUIFER

2087-3	WOONSOCKET	362
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THERE ARE      3 PERMITS LISTED FOR MUNICIPAL USE IN  
 SANBORN COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION  
 OF      709 ACRE-FEET OF GROUND WATER.

M U N I C I P A L   A P P R O P R I A T I O N S  
 B Y   C O U N T Y

Permit Number	Town or City Name	Annual Appropriation (ac-ft)
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SPINK COUNTY

DAKOTA FORMATION   AQUIFER

4321-3	ASHTON	159
4064-3	BRENTFORD	43
4076-3	CONDE	130
4294-3	DOLAND	181
1728-3	FRANKFORT	116
1772-3	MELLETTTE	138
499-3	NORTHVILLE	36
545-3	NORTHVILLE	14
529-3	TULARE	319
1085-3	TULARE	1,448

10 PERMITS TOTALLING 2,584

TULARE   AQUIFER

Hitchcock Management Unit

4161-3	REDFIELD	1,926
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Western Spink Management Unit

4774-3	S. SPINK-N. BEADLE	550
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2 PERMITS TOTALLING 2,476

THERE ARE    12 PERMITS LISTED FOR MUNICIPAL USE IN  
 SPINK COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION  
 OF    5,060 ACRE-FEET OF GROUND WATER.



MUNICIPAL APPROPRIATIONS  
BY COUNTY

	Permit Number	Town or City Name	Annual Appropriation (ac-ft)
SULLY COUNTY			
DAKOTA FORMATION AQUIFER			
	1777-3	AGAR	33
INYAN KARA GROUP AQUIFER			
	4117-3	AGAR	65
	390-3A	ONIDA	188
	595-3	ONIDA	804
	4178-3	ONIDA	159
4 PERMITS TOTTALLING			<u>1,216</u>

THERE ARE 5 PERMITS LISTED FOR MUNICIPAL USE IN  
SULLY COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION  
OF 1,249 ACRE-FEET OF GROUND WATER.

MUNICIPAL APPROPRIATIONS  
BY COUNTY

	Permit Number	Town or City Name	Annual Appropriation (ac-ft)
TURNER COUNTY			
DAKOTA FORMATION AQUIFER			
	750-3	VIBORG	282
NIOBRARA FORMATION AQUIFER			
	1229-3	IRENE	601
PARKER-CENTERVILLE AQUIFER			
	516-3	HURLEY	1,122
	517-3	HURLEY	384
	2 PERMITS TOTALLING		<u>1,506</u>
PLEISTOCENE SERIES AQUIFER			
Unknown Management Unit			
	4771-3	MARION	2,172
	4798-3	PARKER	<u>1,448</u>
	2 Permits totalling		<u>3,620</u>
	2 PERMITS TOTALLING		<u>3,620</u>
SIOUX QUARTZITE AQUIFER			
	560-3	CHANCELLOR	80
	312-3	MONROE	43

M U N I C I P A L   A P P R O P R I A T I O N S  
 B Y   C O U N T Y

Permit Number	Town or City Name	Annual Appropriation (ac-ft)
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2 PERMITS TOTALLING 123

UPPER-VERMILLION-MISSOURI   AQUIFER

4204-3	CENTERVILLE	724
525-3	DAVIS	369
2041-3	VIBORG	695

3 PERMITS TOTALLING 1,788

VERMILLION-WEST-FORK   AQUIFER

4797-3	PARKER	1,332
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THERE ARE   12 PERMITS LISTED FOR MUNICIPAL USE IN  
 TURNER COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION  
 OF   9,252 ACRE-FEET OF GROUND WATER.

MUNICIPAL APPROPRIATIONS  
BY COUNTY

	Permit Number	Town or City Name	Annual Appropriation (ac-ft)
UNION COUNTY			
BRULE CREEK AQUIFER			
	758-3	ALCESTER	116
	1056-3	BERESFORD	811
	4909-3	BERESFORD	724
		3 PERMITS TOTALLING	<u>1,651</u>
DAKOTA FORMATION AQUIFER			
	841-3	BERESFORD	500
	4851-3	ELK POINT	500
	4904-3	ELK POINT	471
	1069-3	NORTH SIOUX CITY	398
		4 PERMITS TOTALLING	<u>1,869</u>
MISSOURI AQUIFER			
	1255-3	ELK POINT	818
	4207-3	JEFFERSON	652
	1646-3	MCCOOK LK SAN DIST	652
	4465-3	NORTH SIOUX CITY	405
		4 PERMITS TOTALLING	<u>2,527</u>

THERE ARE 11 PERMITS LISTED FOR MUNICIPAL USE IN  
UNION COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION  
OF 6,047 ACRE-FEET OF GROUND WATER.

M U N I C I P A L   A P P R O P R I A T I O N S  
 B Y   C O U N T Y

	Permit Number	Town or City Name	Annual Appropriation (ac-ft)
WALWORTH COUNTY			
GRAND AQUIFER			
	3998-3	GLENHAM	116
JAVA AQUIFER			
	2258-3	JAVA	188
SELBY AQUIFER			
	781-3	SELBY	565
	837-3	SELBY	565
	2 PERMITS TOTALLING		<u>1,130</u>

THERE ARE 4 PERMITS LISTED FOR MUNICIPAL USE IN  
 WALWORTH COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION  
 OF 1,434 ACRE-FEET OF GROUND WATER.

M U N I C I P A L   A P P R O P R I A T I O N S  
 B Y   C O U N T Y

	Permit Number	Town or City Name	Annual Appropriation (ac-ft)
YANKTON COUNTY			
DAKOTA FORMATION   AQUIFER			
	1974-3	VOLIN	159
MISSOURI   AQUIFER			
	1965-3	GAYVILLE	268
PLEISTOCENE SERIES   AQUIFER			
	Miscellaneous Management Unit		
	468-3	LESTERVILLE	58

THERE ARE        3 PERMITS LISTED FOR MUNICIPAL USE IN  
 YANKTON COUNTY WHICH AMOUNT TO A TOTAL APPROPRIATION  
 OF        485 ACRE- FEET OF GROUND WATER.

A GRAND TOTAL OF 393,749 ACRE- FEET OF  
 GROUND WATER ARE APPROPRIATED TO 360  
 MUNICIPAL PERMITS IN EASTERN SOUTH DAKOTA.

TABLE B3 - ANNUAL APPROPRIATION FOR RURAL WATER  
SYSTEM USE.





### Table B3 Assumptions

Table B3 is based upon the diversion rate which was approved for each Rural water System permit. The annual appropriation is calculated by first multiplying the diversion rate (in cubic feet per second) times 86,400 (seconds) times 365 (days) and then dividing by 43,560 (number of cubic feet in an acre-foot of water).

RURAL WATER SYSTEM USE  
 APPROPRIATIONS  
 BY COUNTY

Permit Number	Annual Appropriation (ac-ft)
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BROOKINGS COUNTY

BIG SIOUX AQUIFER

Brookings Management Unit

2275-3	2,172
3982-3	2,172
3983-3	<u>724</u>
3 Permits totalling	5,068

3 PERMITS TOTALLING 5,068

THERE ARE 3 PERMITS LISTED FOR RURAL WATER SYSTEM  
 USE IN BROOKINGS COUNTY WHICH AMOUNT TO A TOTAL  
 APPROPRIATION OF 5,068 ACRE-FEET

CODINGTON COUNTY

BIG SIOUX AQUIFER

North Management Unit

2032-3	724
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PRAIRIE COTEAU AQUIFER

4212-3	500
4770-3	724

2 PERMITS TOTALLING 1,224

RURAL WATER SYSTEM USE  
 APPROPRIATIONS  
 BY COUNTY

Permit Number	Annual Appropriation (ac-ft)
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THERE ARE 3 PERMITS LISTED FOR RURAL WATER SYSTEM  
 USE IN CODINGTON COUNTY WHICH AMOUNT TO A TOTAL  
 APPROPRIATION OF 1,948 ACRE-FEET

CLARK COUNTY

VERMILLION-EAST-FORK AQUIFER

Antelope Lake Management Unit

4384-3	1,738
4384-3A	0
4927-3	<u>724</u>
3 Permits totalling	<u>2,462</u>

3 PERMITS TOTALLING 2,462

THERE ARE 3 PERMITS LISTED FOR RURAL WATER SYSTEM  
 USE IN CLARK COUNTY WHICH AMOUNT TO A TOTAL  
 APPROPRIATION OF 2,462 ACRE-FEET

CLAY COUNTY

LOWER-VERMILLION-MISSOURI AQUIFER

3905-3	1,448
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THERE IS 1 PERMIT LISTED FOR RURAL WATER SYSTEM  
 USE IN CLAY COUNTY WHICH AMOUNTS TO A TOTAL  
 APPROPRIATION OF 1,448 ACRE-FEET

RURAL WATER SYSTEM USE  
APPROPRIATIONS  
BY COUNTY

Permit Number	Annual Appropriation (ac-ft)
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DEUEL COUNTY

BIG SIOUX AQUIFER

Brookings Management Unit

3983-3	724
4830-3	<u>724</u>
2 Permits totalling	1,448

2 PERMITS TOTALLING 1,448

THERE ARE 2 PERMITS LISTED FOR RURAL WATER SYSTEM  
USE IN DEUEL COUNTY WHICH AMOUNT TO A TOTAL  
APPROPRIATION OF 1,448 ACRE-FEET

KINGSBURY COUNTY

VERMILLION-EAST-FORK AQUIFER

4137-3	2,172
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THERE IS 1 PERMIT LISTED FOR RURAL WATER SYSTEM  
USE IN KINGSBURY COUNTY WHICH AMOUNTS TO A TOTAL  
APPROPRIATION OF 2,172 ACRE-FEET

LAKE COUNTY

BIG SIOUX AQUIFER

Northern Skunk Creek Management Unit

RURAL WATER SYSTEM USE  
 APPROPRIATIONS  
 BY COUNTY

Permit Number	Annual Appropriation (ac-ft)
4367-3	2,172

THERE IS 1 PERMIT LISTED FOR RURAL WATER SYSTEM  
 USE IN LAKE COUNTY WHICH AMOUNTS TO A TOTAL  
 APPROPRIATION OF 2,172 ACRE-FEET

LINCOLN COUNTY

BIG SIOUX AQUIFER

South Management Unit

1789-3	1,180
3454-3	<u>1,180</u>
2 Permits totalling	2,360

2 PERMITS TOTALLING 2,360

DAKOTA FORMATION AQUIFER

4300-3	1,448
4817-3	1,448

2 PERMITS TOTALLING 2,896

PARKER-CENTERVILLE AQUIFER

4301-3	1,448
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RURAL WATER SYSTEM USE  
 APPROPRIATIONS  
 BY COUNTY

Permit Number	Annual Appropriation (ac-ft)
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THERE ARE 5 PERMITS LISTED FOR RURAL WATER SYSTEM  
 USE IN LINCOLN COUNTY WHICH AMOUNT TO A TOTAL  
 APPROPRIATION OF 6,704 ACRE-FEET

MINNEHAHA COUNTY

BIG SIOUX AQUIFER

Sioux Falls Management Unit

1790-3	1,180
2311-3	2,896
4838-3	<u>5,068</u>
3 Permits totalling	9,144

3 PERMITS TOTALLING 9,144

THERE ARE 3 PERMITS LISTED FOR RURAL WATER SYSTEM  
 USE IN MINNEHAHA COUNTY WHICH AMOUNT TO A TOTAL  
 APPROPRIATION OF 9,144 ACRE-FEET

McCOOK COUNTY

PLEISTOCENE SERIES AQUIFER

Miscellaneous Management Unit

4349-3	1,448
4432-3	<u>883</u>
2 Permits totalling	2,331

2 PERMITS TOTALLING 2,331

RURAL WATER SYSTEM USE  
 APPROPRIATIONS  
 BY COUNTY

Permit Number	Annual Appropriation (ac-ft)
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THERE ARE 2 PERMITS LISTED FOR RURAL WATER SYSTEM  
 USE IN McCOOK COUNTY WHICH AMOUNT TO A TOTAL  
 APPROPRIATION OF 2,331 ACRE-FEET

MARSHALL COUNTY

MIDDLE JAMES AQUIFER

Columbia Management Unit

4908-3	724
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THERE IS 1 PERMIT LISTED FOR RURAL WATER SYSTEM  
 USE IN MARSHALL COUNTY WHICH AMOUNTS TO A TOTAL  
 APPROPRIATION OF 724 ACRE-FEET

MOODY COUNTY

BIG SIOUX AQUIFER

Moody Management Unit

2054-3	1,882
3984-3	<u>1,882</u>
2 Permits totalling	3,764

2 PERMITS TOTALLING 3,764

THERE ARE 2 PERMITS LISTED FOR RURAL WATER SYSTEM  
 USE IN MOODY COUNTY WHICH AMOUNT TO A TOTAL  
 APPROPRIATION OF 3,764 ACRE-FEET

RURAL WATER SYSTEM USE  
APPROPRIATIONS  
BY COUNTY

Permit  
Number

Annual  
Appropriation  
(ac-ft)

A TOTAL OF 39,385 ACRE-FEET OF  
GROUND WATER ARE APPROPRIATED TO 27  
RURAL WATER SYSTEM USE PERMITS IN EASTERN SOUTH DAKOTA.



TABLE B4 - ANNUAL APPROPRIATION FOR SUBURBAN HOUSING  
DEVELOPMENT USE.



#### Table B4 Assumptions

Table B4 is based upon the diversion rate which was approved for each suburban housing development permit. The annual appropriation is calculated by first multiplying the diversion rate (in cubic feet per second) times 86,400 (seconds) times 365 (days) and then dividing by 43,560 (number of cubic feet in an acre-foot of water).

S U B U R B A N   H O U S I N G   U S E  
 A P P R O P R I A T I O N S  
 B Y   C O U N T Y

Permit Number	Annual Appropriation (ac-ft)
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BROOKINGS COUNTY

BIG SIOUX AQUIFER

Aurora Management Unit

2404-3	485
--------	-----

Brookings Management Unit

1956-3	22
--------	----

2 PERMITS TOTALLING 507

THERE ARE 2 PERMITS LISTED FOR SUBURBAN HOUSING DEVELOPMENT  
 USE IN BROOKINGS COUNTY WHICH AMOUNT TO A TOTAL  
 APPROPRIATION OF 507 ACRE-FEET

BROWN COUNTY

DAKOTA FORMATION AQUIFER

1566-3	51
2726-3	80
2825-3	355

3 PERMITS TOTALLING 486

INYAN KARA GROUP AQUIFER

1975-3	246
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S U B U R B A N   H O U S I N G   U S E  
A P P R O P R I A T I O N S  
B Y   C O U N T Y

Permit Number	Annual Appropriation (ac-ft)
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THERE ARE        4 PERMITS LISTED FOR SUBURBAN HOUSING DEVELOPMENT  
USE IN BROWN COUNTY WHICH AMOUNT TO A TOTAL  
APPROPRIATION OF        732 ACRE-FEET

DAY COUNTY

PRAIRIE COTEAU AQUIFER

4404-3	159
--------	-----

THERE IS        1 PERMIT LISTED FOR SUBURBAN HOUSING DEVELOPMENT  
USE IN DAY COUNTY WHICH AMOUNTS TO A TOTAL  
APPROPRIATION OF        159 ACRE-FEET

HUGHES COUNTY

GRAY GOOSE AQUIFER

4567-3	72
--------	----

INYAN KARA GROUP AQUIFER

2224-3	159
2279-3	159

2 PERMITS TALLING ----- 318

S U B U R B A N   H O U S I N G   U S E  
A P P R O P R I A T I O N S  
B Y   C O U N T Y

Permit Number	Annual Appropriation (ac-ft)
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MISSOURI   AQUIFER

Pierre   Management   Unit

1611-3	43
1897-3	159
2 Permits totalling	202

2 PERMITS TOTALLING 202

THERE ARE        5 PERMITS LISTED FOR SUBURBAN HOUSING DEVELOPMENT  
USE IN HUGHES   COUNTY WHICH AMOUNT TO A TOTAL  
APPROPRIATION OF        592 ACRE-FEET

LINCOLN   COUNTY

PLEISTOCENE SERIES   AQUIFER

Unknown   Management   Unit

3819-3	72
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WALL LAKE   AQUIFER

4936-3	72
--------	----

THERE ARE        2 PERMITS LISTED FOR SUBURBAN HOUSING DEVELOPMENT  
USE IN LINCOLN   COUNTY WHICH AMOUNT TO A TOTAL  
APPROPRIATION OF        144 ACRE-FEET

S U B U R B A N   H O U S I N G   U S E  
A P P R O P R I A T I O N S  
B Y   C O U N T Y

Permit Number	Annual Appropriation (ac-ft)
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MINNEHAHA COUNTY

BIG SIOUX AQUIFER

Sioux Falls Management Unit

4513-3	724
--------	-----

SIOUX QUARTZITE AQUIFER

720-3	239
-------	-----

WALL LAKE AQUIFER

757-3	101
-------	-----

THERE ARE 3 PERMITS LISTED FOR SUBURBAN HOUSING DEVELOPMENT  
USE IN MINNEHAHA COUNTY WHICH AMOUNT TO A TOTAL  
APPROPRIATION OF 1.064 ACRE-FEET

SULLY COUNTY

COW CREEK AQUIFER

4905-3	109
--------	-----

S U B U R B A N   H O U S I N G   U S E  
A P P R O P R I A T I O N S  
B Y   C O U N T Y

Permit Number	Annual Appropriation (ac-ft)
------------------	------------------------------------

THERE IS        1 PERMIT LISTED FOR SUBURBAN HOUSING DEVELOPMENT  
USE IN SULLY COUNTY WHICH AMOUNTS TO A TOTAL  
APPROPRIATION OF        109 ACRE-FEET

U N I O N   C O U N T Y

MISSOURI   AQUIFER

2817-3	290
--------	-----

THERE IS        1 PERMIT LISTED FOR SUBURBAN HOUSING DEVELOPMENT  
USE IN UNION COUNTY WHICH AMOUNTS TO A TOTAL  
APPROPRIATION OF        290 ACRE-FEET

Y A N K T O N   C O U N T Y

MISSOURI   AQUIFER

4916-3	152
--------	-----

THERE IS        1 PERMIT LISTED FOR SUBURBAN HOUSING DEVELOPMENT  
USE IN YANKTON COUNTY WHICH AMOUNTS TO A TOTAL  
APPROPRIATION OF        152 ACRE-FEET

A TOTAL OF    3,749 ACRE-FEET OF  
GROUND WATER ARE APPROPRIATED TO        20  
SUBURBAN HOUSING DEVELOPMENT USE PERMITS IN EASTERN SOUTH DAKOTA.



TABLE B5 - ANNUAL APPROPRIATION FOR INDUSTRIAL USE.



### Table B5 Assumptions

Table B5 is based upon the diversion rate which was approved for each industrial permit. The annual appropriation is calculated by first multiplying the diversion rate (in cubic feet per second) times 86,400 (seconds) times 365 (days) and then dividing by 43,560 (number of cubic feet in an acre-foot of water).

It was assumed that the water is used by the permit holder to make a product other than water. This distinction was made to separate the industrial and commercial use categories. Examples of industrial use include gravel washing operations, farms for fish propagation, dewatering of stone quarries, cooling towers (not to be confused with geothermal use), and meat processing.

I N D U S T R I A L   U S E  
A P P R O P R I A T I O N S  
B Y   C O U N T Y

Permit Number	Annual Appropriation (ac-ft)
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B E A D L E   C O U N T Y

F L O Y D   A Q U I F E R

East James Management Unit

140-3	333
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W A R R E N   A Q U I F E R

West James Management Unit

1277-3	963
4899-3	<u>652</u>
2 Permits totalling	1,615

2 PERMITS TOTALLING 1,615

THERE ARE      3 PERMITS LISTED FOR INDUSTRIAL  
USE IN BEADLE COUNTY WHICH AMOUNT TO A TOTAL  
APPROPRIATION OF    1,948 ACRE-FEET

B R O O K I N G S   C O U N T Y

B I G   S I O U X   A Q U I F E R

Brookings Management Unit

509-3	398
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I N D U S T R I A L   U S E  
A P P R O P R I A T I O N S  
B Y   C O U N T Y

Permit Number	Annual Appropriation (ac-ft)
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THERE IS        1 PERMIT LISTED FOR INDUSTRIAL  
USE IN BROOKINGS COUNTY WHICH AMOUNTS TO A TOTAL  
APPROPRIATION OF        398 ACRE-FEET

BROWN COUNTY

ELM AQUIFER

Northern Brown Management Unit

2657-3	804
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THERE IS        1 PERMIT LISTED FOR INDUSTRIAL  
USE IN BROWN COUNTY WHICH AMOUNTS TO A TOTAL  
APPROPRIATION OF        804 ACRE-FEET

CODINGTON COUNTY

BIG SIOUX AQUIFER

North Management Unit

494-3	159
496-3	58
842-3	456
1402-3	724
4932-3	<u>3,620</u>
5 Permits totalling	<u>5,017</u>

5 PERMITS TOTALLING 5,017

PRAIRIE COTEAU AQUIFER

INDUSTRIAL USE  
APPROPRIATIONS  
BY COUNTY

Permit Number	Annual Appropriation (ac-ft)
2356-3	1,448

THERE ARE 6 PERMITS LISTED FOR INDUSTRIAL  
USE IN CODINGTON COUNTY WHICH AMOUNT TO A TOTAL  
APPROPRIATION OF 6,465 ACRE-FEET

CLARK COUNTY

ALTAMONT AQUIFER

1718-3	159
--------	-----

THERE IS 1 PERMIT LISTED FOR INDUSTRIAL  
USE IN CLARK COUNTY WHICH AMOUNTS TO A TOTAL  
APPROPRIATION OF 159 ACRE-FEET

CLAY COUNTY

MISSOURI AQUIFER

1173-3	159
--------	-----

THERE IS 1 PERMIT LISTED FOR INDUSTRIAL  
USE IN CLAY COUNTY WHICH AMOUNTS TO A TOTAL  
APPROPRIATION OF 159 ACRE-FEET

INDUSTRIAL USE  
APPROPRIATIONS  
BY COUNTY

Permit Number	Annual Appropriation (ac-ft)
------------------	------------------------------------

DOUGLAS COUNTY

CODELL SANDSTONE AQUIFER

4383-3	51
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THERE IS 1 PERMIT LISTED FOR INDUSTRIAL  
USE IN DOUGLAS COUNTY WHICH AMOUNTS TO A TOTAL  
APPROPRIATION OF 51 ACRE-FEET

DAVISON COUNTY

NIOBRARA FORMATION AQUIFER

3734-3	43
--------	----

THERE IS 1 PERMIT LISTED FOR INDUSTRIAL  
USE IN DAVISON COUNTY WHICH AMOUNTS TO A TOTAL  
APPROPRIATION OF 43 ACRE-FEET

EDMUNDS COUNTY

INYAN KARA GROUP AQUIFER

4634-3	159
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I N D U S T R I A L   U S E  
A P P R O P R I A T I O N S  
B Y   C O U N T Y

Permit Number	Annual Appropriation (ac-ft)
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P L E I S T O C E N E   S E R I E S   A Q U I F E R

Unknown Management Unit

4447-3	1,086
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THERE ARE        2 PERMITS LISTED FOR INDUSTRIAL  
USE IN EDMUNDS COUNTY WHICH AMOUNT TO A TOTAL  
APPROPRIATION OF    1,245 ACRE-FEET

G R A N T   C O U N T Y

F A I R M O U N T   A Q U I F E R

4881-3	65
--------	----

THERE IS        1 PERMIT LISTED FOR INDUSTRIAL  
USE IN GRANT COUNTY WHICH AMOUNTS TO A TOTAL  
APPROPRIATION OF        65 ACRE-FEET

M I N N E H A H A   C O U N T Y

B I G   S I O U X   A Q U I F E R

South Management Unit

1618-3	724
4842-3	<u>7,746</u>
2 Permits totalling	8,470



I N D U S T R I A L   U S E  
A P P R O P R I A T I O N S  
B Y   C O U N T Y

Permit Number	Annual Appropriation (ac-ft)
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Sioux Falls Management Unit

1947-3	239
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Southern Skunk Creek Management Unit

746-3	239
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4 PERMITS TOTALLING 8,948

PLEISTOCENE SERIES   AQUIFER

Unknown Management Unit

4618-3	51
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SIOUX QUARTZITE   AQUIFER

995-3	724
1257-3	1,231
1767-3	80

3 PERMITS TOTALLING 2,035

SPLIT ROCK CREEK FORMATION   AQUIFER

42-3	43
61-3	1,122
70-3	1,080
561-3	1,281
742-3	239

INDUSTRIAL USE  
APPROPRIATIONS  
BY COUNTY

Permit Number	Annual Appropriation (ac-ft)
------------------	------------------------------------

5 PERMITS TALLING 3,771

THERE ARE 13 PERMITS LISTED FOR INDUSTRIAL  
USE IN MINNEHAHA COUNTY WHICH AMOUNT TO A TOTAL  
APPROPRIATION OF 14,805 ACRE-FeET

McPHERSON COUNTY

DAKOTA FORMATION AQUIFER

4538-3	145
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THERE IS 1 PERMIT LISTED FOR INDUSTRIAL  
USE IN MCPHERSON COUNTY WHICH AMOUNTS TO A TOTAL  
APPROPRIATION OF 145 ACRE-FeET

MOODY COUNTY

PLEISTOCENE SERIES AQUIFER

Miscellaneous Management Unit

4464-3	326
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THERE IS 1 PERMIT LISTED FOR INDUSTRIAL  
USE IN MOODY COUNTY WHICH AMOUNTS TO A TOTAL  
APPROPRIATION OF 326 ACRE-FeET

INDUSTRIAL USE  
APPROPRIATIONS  
BY COUNTY

Permit  
Number

Annual  
Appropriation  
(ac-ft)

SULLY COUNTY

HIGHMORE-BLUNT AQUIFER

4512-3

1,086

THERE IS 1 PERMIT LISTED FOR INDUSTRIAL  
USE IN SULLY COUNTY WHICH AMOUNTS TO A TOTAL  
APPROPRIATION OF 1,086 ACRE-FEET

YANKTON COUNTY

LOWER-JAMES-MISSOURI AQUIFER

840-3  
1288-3

804  
116

2 PERMITS TOTALLING 920

THERE ARE 2 PERMITS LISTED FOR INDUSTRIAL  
USE IN YANKTON COUNTY WHICH AMOUNT TO A TOTAL  
APPROPRIATION OF 920 ACRE-FEET

A TOTAL OF 28,619 ACRE-FEET OF  
GROUND WATER ARE APPROPRIATED TO 36  
INDUSTRIAL USE PERMITS IN EASTERN SOUTH DAKOTA.



TABLE B6 - ANNUAL APPROPRIATION FOR COMMERCIAL USE.



### Table B6 Assumptions

Table B6 is based upon the diversion rate which was approved for each commercial permit. The annual appropriation is calculated by first multiplying the diversion rate (in cubic feet per second) times 86,400 (seconds) times 365 (days) and then dividing by 43,560 (number of cubic feet in an acre-foot of water).

It was assumed that the ultimate product of permit holder was water. This distinction was made to separate commercial and industrial use categories. As a result, most mobile home or trailer courts are considered commercial users because the water and rental space is sold with the intent of making a profit. By contrast, when a number of homeowners or a developer join several homes to defray the cost of a potable water supply then the use is considered to be for suburban housing development.

Also included in the commercial use category are establishments such as shopping malls, restaurants, and motels where the water is provided, more or less, as a convenience.

COMMERCIAL USE  
APPROPRIATIONS  
BY COUNTY

Permit Number	Annual Appropriation (ac-ft)
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BEADLE COUNTY

INYAN KARA GROUP AQUIFER

2767-3	130
--------	-----

THERE IS 1 PERMIT LISTED FOR COMMERCIAL  
USE IN BEADLE COUNTY WHICH AMOUNTS TO A TOTAL  
APPROPRIATION OF 130 ACRE-FEET

BRULE COUNTY

DAKOTA FORMATION AQUIFER

4829-3	36
--------	----

THERE IS 1 PERMIT LISTED FOR COMMERCIAL  
USE IN BRULE COUNTY WHICH AMOUNTS TO A TOTAL  
APPROPRIATION OF 36 ACRE-FEET

BROWN COUNTY

DAKOTA FORMATION AQUIFER

2761-3	14
--------	----



COMMERCIAL USE  
APPROPRIATIONS  
BY COUNTY

Permit Number	Annual Appropriation (ac-ft)
------------------	------------------------------------

ELM AQUIFER

Northern Brown Management Unit

1888-3	261
--------	-----

Southern Brown Management Unit

4426-3	239
--------	-----

2 PERMITS TALLING 500

INYAN KARA GROUP AQUIFER

4810-3	80
--------	----

THERE ARE 4 PERMITS LISTED FOR COMMERCIAL  
USE IN BROWN COUNTY WHICH AMOUNT TO A TOTAL  
APPROPRIATION OF 594 ACRE-FEET

CAMPBELL COUNTY

SPRING CREEK AQUIFER

Herreid Management Unit

4918-3	485
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COMMERCIAL USE  
 APPROPRIATIONS  
 BY COUNTY

Permit Number	Annual Appropriation (ac-ft)
------------------	------------------------------------

THERE IS 1 PERMIT LISTED FOR COMMERCIAL  
 USE IN CAMPBELL COUNTY WHICH AMOUNTS TO A TOTAL  
 APPROPRIATION OF 485 ACRE-FEET

CODINGTON COUNTY

BIG SIOUX AQUIFER

North Management Unit

2098-3	16
3359-3	36
4183-3	109
4636-3	<u>1,933</u>
4 Permits totalling	2,094

4 PERMITS TOTALLING 2,094

THERE ARE 4 PERMITS LISTED FOR COMMERCIAL  
 USE IN CODINGTON COUNTY WHICH AMOUNT TO A TOTAL  
 APPROPRIATION OF 2,094 ACRE-FEET

CLARK COUNTY

VERMILLION-EAST-FORK AQUIFER

Willow Lake Management Unit

4420-3	239
--------	-----

THERE IS 1 PERMIT LISTED FOR COMMERCIAL  
 USE IN CLARK COUNTY WHICH AMOUNTS TO A TOTAL

COMMERCIAL USE  
APPROPRIATIONS  
BY COUNTY

Permit Number	Annual Appropriation (ac-ft)
------------------	------------------------------------

APPROPRIATION OF 239 ACRE-FEET

DAY COUNTY

PLEISTOCENE SERIES AQUIFER

Unknown Management Unit

4631-3	485
--------	-----

THERE IS 1 PERMIT LISTED FOR COMMERCIAL  
USE IN DAY COUNTY WHICH AMOUNTS TO A TOTAL  
APPROPRIATION OF 485 ACRE-FEET

DEUEL COUNTY

BIG SIOUX AQUIFER

Brookings Management Unit

2111-3	29
--------	----

THERE IS 1 PERMIT LISTED FOR COMMERCIAL  
USE IN DEUEL COUNTY WHICH AMOUNTS TO A TOTAL  
APPROPRIATION OF 29 ACRE-FEET

HANSON COUNTY

COMMERCIAL USE  
APPROPRIATIONS  
BY COUNTY

Permit  
Number

Annual  
Appropriation  
(ac-ft)

SIOUX QUARTZITE AQUIFER

4493-3

1,303

THERE IS 1 PERMIT LISTED FOR COMMERCIAL  
USE IN HANSON COUNTY WHICH AMOUNTS TO A TOTAL  
APPROPRIATION OF 1,303 ACRE-FEET

KINGSBURY COUNTY

VERMILLION-EAST-FORK AQUIFER

3820-3

804

THERE IS 1 PERMIT LISTED FOR COMMERCIAL  
USE IN KINGSBURY COUNTY WHICH AMOUNTS TO A TOTAL  
APPROPRIATION OF 804 ACRE-FEET

LINCOLN COUNTY

DAKOTA FORMATION AQUIFER

4672-3

362

THERE IS 1 PERMIT LISTED FOR COMMERCIAL  
USE IN LINCOLN COUNTY WHICH AMOUNTS TO A TOTAL  
APPROPRIATION OF 362 ACRE-FEET

C O M M E R C I A L   U S E  
A P P R O P R I A T I O N S  
B Y   C O U N T Y

Permit Number	Annual Appropriation (ac-ft)
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MINNEHAHA COUNTY

BIG SIOUX AQUIFER

South Management Unit

1908-3	326
4792-3	724
2 Permits totalling	1,050

Sioux Falls Management Unit

4814-3	145
4843-3	109
2 Permits totalling	254

Southern Skunk Creek Management Unit

2095-3	49
2304-3	14
2305-3	130
4159-3	485
4297-3	43
4463-3	14
4913-3	80
7 Permits totalling	815

11 PERMITS TOTALLING 2,119

SIOUX QUARTZITE AQUIFER

3681-3	36
3885-3	36

2 PERMITS TOTALLING 72

COMMERCIAL USE  
APPROPRIATIONS  
BY COUNTY

Permit  
Number

Annual  
Appropriation  
(ac-ft)

THERE ARE 13 PERMITS LISTED FOR COMMERCIAL  
USE IN MINNEHAHA COUNTY WHICH AMOUNT TO A TOTAL  
APPROPRIATION OF 2,191 ACRE-FEET

McPHERSON COUNTY

SELBY AQUIFER

4314-3

963

THERE IS 1 PERMIT LISTED FOR COMMERCIAL  
USE IN MCPHERSON COUNTY WHICH AMOUNTS TO A TOTAL  
APPROPRIATION OF 963 ACRE-FEET

MOODY COUNTY

PLEISTOCENE SERIES AQUIFER

Unknown Management Unit

1292-3

8

THERE IS 1 PERMIT LISTED FOR COMMERCIAL  
USE IN MOODY COUNTY WHICH AMOUNTS TO A TOTAL  
APPROPRIATION OF 8 ACRE-FEET

SULLY COUNTY

COMMERCIAL USE  
 APPROPRIATIONS  
 BY COUNTY

Permit Number	Annual Appropriation (ac-ft)
------------------	------------------------------------

PLEISTOCENE SERIES AQUIFER

Unknown Management Unit

4917-3	80
--------	----

THERE IS 1 PERMIT LISTED FOR COMMERCIAL  
 USE IN SULLY COUNTY WHICH AMOUNTS TO A TOTAL  
 APPROPRIATION OF 80 ACRE-FEET

UNION COUNTY

MISSOURI AQUIFER

535-3	80
-------	----

THERE IS 1 PERMIT LISTED FOR COMMERCIAL  
 USE IN UNION COUNTY WHICH AMOUNTS TO A TOTAL  
 APPROPRIATION OF 80 ACRE-FEET

YANKTON COUNTY

LOWER-JAMES-MISSOURI AQUIFER

4556-3	644
4619-3	1,810

2 PERMITS TOTALLING 2,454

COMMERCIAL USE  
APPROPRIATIONS  
BY COUNTY

Permit  
Number

Annual  
Appropriation  
(ac-ft)

MISSOURI AQUIFER

4501-3

36

THERE ARE 3 PERMITS LISTED FOR COMMERCIAL  
USE IN YANKTON COUNTY WHICH AMOUNT TO A TOTAL  
APPROPRIATION OF 2,490 ACRE-FEET

A TOTAL OF 12,373 ACRE-FEET OF  
GROUND WATER ARE APPROPRIATED TO 37  
COMMERCIAL USE PERMITS IN EASTERN SOUTH DAKOTA.



TABLE B7 - ANNUAL APPROPRIATION FOR MULTIPLE USE.



### Table B7 Assumptions

Table B7 is based upon the diversion rate which was approved for each multiple use permit. The annual appropriation is calculated by first multiplying the diversion rate (in cubic feet per second) times 86,400 (seconds) times 365 (days) and then dividing by 43,560 (number of cubic feet in an acre-foot of water).

M U L T I P L E    U S E  
A P P R O P R I A T I O N S  
B Y    C O U N T Y

Permit  
Number

Annual  
Appropriation  
(ac-ft)

BROOKINGS COUNTY

PLEISTOCENE SERIES AQUIFER

Unknown Management Unit

1779-3

80

THERE IS        1 PERMIT LISTED FOR MULTIPLE USE  
USE IN BROOKINGS COUNTY WHICH AMOUNTS TO A TOTAL  
APPROPRIATION OF        80 ACRE-FEET

BROWN COUNTY

DEEP JAMES AQUIFER

4225-3

485

DAKOTA FORMATION AQUIFER

4163-3

116

ELM AQUIFER

Northern Brown Management Unit

2074-3

2,389

M U L T I P L E   U S E  
A P P R O P R I A T I O N S  
B Y   C O U N T Y

Permit  
Number

Annual  
Appropriation  
(ac-ft)

THERE ARE        3 PERMITS LISTED FOR MULTIPLE USE  
USE IN BROWN    COUNTY WHICH AMOUNT TO A TOTAL  
APPROPRIATION OF    2,990 ACRE-FEET

CLAY    COUNTY

DAKOTA FORMATION    AQUIFER

2972-3

4

THERE IS        1 PERMIT LISTED FOR MULTIPLE USE  
USE IN CLAY    COUNTY WHICH AMOUNTS TO A TOTAL  
APPROPRIATION OF        4 ACRE-FEET

DAY    COUNTY

PRAIRIE COTEAU    AQUIFER

1865-3

319

THERE IS        1 PERMIT LISTED FOR MULTIPLE USE  
USE IN DAY    COUNTY WHICH AMOUNTS TO A TOTAL  
APPROPRIATION OF        319 ACRE-FEET

DAVISON    COUNTY

M U L T I P L E    U S E  
A P P R O P R I A T I O N S  
B Y    C O U N T Y

Permit Number	Annual Appropriation (ac-ft)
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DAKOTA FORMATION    AQUIFER

762-3	203
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THERE IS        1 PERMIT LISTED FOR MULTIPLE USE  
USE IN DAVISON    COUNTY WHICH AMOUNTS TO A TOTAL  
APPROPRIATION OF        203 ACRE-FEET

HUGHES    COUNTY

INYAN KARA GROUP    AQUIFER

4276-3	72
--------	----

THERE IS        1 PERMIT LISTED FOR MULTIPLE USE  
USE IN HUGHES    COUNTY WHICH AMOUNTS TO A TOTAL  
APPROPRIATION OF        72 ACRE-FEET

MINNEHAHA    COUNTY

BIG SIOUX    AQUIFER

Sioux Falls    Management Unit

4880-3	362
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M U L T I P L E   U S E  
A P P R O P R I A T I O N S  
B Y   C O U N T Y

Permit  
Number

Annual  
Appropriation  
(ac-ft)

THERE IS        1 PERMIT LISTED FOR MULTIPLE USE  
USE IN MINNEHAHA COUNTY WHICH AMOUNTS TO A TOTAL  
APPROPRIATION OF        362 ACRE-FEET

UNION COUNTY

MISSOURI AQUIFER

4887-3

2,896

THERE IS        1 PERMIT LISTED FOR MULTIPLE USE  
USE IN UNION COUNTY WHICH AMOUNTS TO A TOTAL  
APPROPRIATION OF        2,896 ACRE-FEET

A TOTAL OF        6,926 ACRE-FEET OF  
GROUND WATER ARE APPROPRIATED TO        10  
MULTIPLE USE        USE PERMITS IN EASTERN SOUTH DAKOTA.





TABLE B8 - ANNUAL APPROPRIATION FOR RECREATIONAL USE.



### Table B8 Assumptions

Table B8 is based upon the diversion rate which was approved for each recreational use permit. The annual appropriation is calculated by first multiplying the diversion rate (in cubic feet per second) times 86,400 (seconds) times 365 (days) and then dividing by 43,560 (number of cubic feet in an acre-foot of water).

R E C R E A T I O N A L    U S E  
A P P R O P R I A T I O N S  
B Y    C O U N T Y

Permit Number	Annual Appropriation (ac-ft)
------------------	------------------------------------

BROWN COUNTY

DAKOTA FORMATION    AQUIFER

1024-3	304
--------	-----

THERE IS        1 PERMIT LISTED FOR RECREATIONAL  
USE IN BROWN COUNTY WHICH AMOUNTS TO A TOTAL  
APPROPRIATION OF        304 ACRE-FEET

CHARLES MIX COUNTY

CHOTEAU AQUIFER

West Management Unit

296-3	217
297-3	<u>217</u>
2 Permits totalling	434

2 PERMITS TOTALLING 434

THERE ARE        2 PERMITS LISTED FOR RECREATIONAL  
USE IN CHARLES MIX COUNTY WHICH AMOUNT TO A TOTAL  
APPROPRIATION OF        434 ACRE-FEET

McPHERSON COUNTY

INYAN KARA GROUP    AQUIFER

741-3	123
-------	-----

RECREATIONAL USE  
APPROPRIATIONS  
BY COUNTY

Permit Number	Annual Appropriation (ac-ft)
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THERE IS 1 PERMIT LISTED FOR RECREATIONAL  
USE IN McPHERSON COUNTY WHICH AMOUNTS TO A TOTAL  
APPROPRIATION OF 123 ACRE-FEET

UNION COUNTY

MISSOURI AQUIFER

1606-3	4,040
4430-3	919
4565-3	1,528

3 PERMITS TOLLING 6,487

THERE ARE 3 PERMITS LISTED FOR RECREATIONAL  
USE IN UNION COUNTY WHICH AMOUNT TO A TOTAL  
APPROPRIATION OF 6,487 ACRE-FEET

A TOTAL OF 7,348 ACRE-FEET OF  
GROUND WATER ARE APPROPRIATED TO 7  
RECREATIONAL USE PERMITS IN EASTERN SOUTH DAKOTA.



TABLE B9 - ANNUAL APPROPRIATION FOR INSTITUTIONAL USE.





### Table B9 Assumptions

Table B9 is based upon the diversion rate which was approved for each institutional use permit. The annual appropriation is calculated by first multiplying the diversion rate (in cubic feet per second) times 86,400 (seconds) times 365 (days) and then dividing by 43,560 (number of cubic feet in an acre-foot of water).

I N S T I T U T I O N A L    U S E  
A P P R O P R I A T I O N S  
B Y    C O U N T Y

Permit Number	Annual Appropriation (ac-ft)
------------------	------------------------------------

AURORA    COUNTY

CODELL SANDSTONE    AQUIFER

551-3	123
-------	-----

THERE IS        1 PERMIT LISTED FOR INSTITUTIONAL  
USE IN AURORA    COUNTY WHICH AMOUNTS TO A TOTAL  
APPROPRIATION OF        123 ACRE-FEET

BON HOMME    COUNTY

CODELL SANDSTONE    AQUIFER

546-3	10
553-3	5
847-3	5

3 PERMITS TOTALLING	20
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DAKOTA FORMATION    AQUIFER

552-3	17
-------	----

THERE ARE        4 PERMITS LISTED FOR INSTITUTIONAL  
USE IN BON HOMME    COUNTY WHICH AMOUNT TO A TOTAL  
APPROPRIATION OF        37 ACRE-FEET

CLAY    COUNTY

INSTITUTIONAL USE  
APPROPRIATIONS  
BY COUNTY

Permit Number	Annual Appropriation (ac-ft)
------------------	------------------------------------

CLAY COUNTY

LOWER-VERMILLION-MISSOURI AQUIFER

1293-3	43
1870-3	22

2 PERMITS TALLING 65

THERE ARE 2 PERMITS LISTED FOR INSTITUTIONAL  
USE IN CLAY COUNTY WHICH AMOUNT TO A TOTAL  
APPROPRIATION OF 65 ACRE-FEET

LAKE COUNTY

BIG SIOUX AQUIFER

Northern Skunk Creek Management Unit

4813-3	811
--------	-----

THERE IS 1 PERMIT LISTED FOR INSTITUTIONAL  
USE IN LAKE COUNTY WHICH AMOUNTS TO A TOTAL  
APPROPRIATION OF 811 ACRE-FEET

A TOTAL OF 1,036 ACRE-FEET OF  
GROUND WATER ARE APPROPRIATED TO 8  
INSTITUTIONAL USE PERMITS IN EASTERN SOUTH DAKOTA.



TABLE B10 - ANNUAL APPROPRIATION FOR FISH AND WILDLIFE  
PROPAGATION USE.



### Table B10 Assumptions

Table B10 is based upon the diversion rate which was approved for each fish and wildlife propagation. The annual appropriation is calculated by first multiplying the diversion rate (in cubic feet per second) times 86,400 (seconds) times 365 (days) and then dividing by 43,560 (number of cubic feet in an acre-foot of water).

F I S H A N D W I L D L I F E U S E  
A P P R O P R I A T I O N S  
B Y C O U N T Y

Permit  
Number

Annual  
Appropriation  
(ac-ft)

CHARLES MIX COUNTY

DAKOTA FORMATION AQUIFER

220-3

1,607

THERE IS 1 PERMIT LISTED FOR FISH AND WILDLIFE PROPAGATION  
USE IN CHARLES MIX COUNTY WHICH AMOUNTS TO A TOTAL  
APPROPRIATION OF 1,607 ACRE-FEET

DAY COUNTY

PRAIRIE COTEAU AQUIFER

4385-3

2,585

THERE IS 1 PERMIT LISTED FOR FISH AND WILDLIFE PROPAGATION  
USE IN DAY COUNTY WHICH AMOUNTS TO A TOTAL  
APPROPRIATION OF 2,585 ACRE-FEET

DOUGLAS COUNTY

DELMONT AQUIFER

2010-3

1,368



F I S H   A N D   W I L D L I F E   U S E  
 A P P R O P R I A T I O N S  
 B Y   C O U N T Y

Permit Number	Annual Appropriation (ac-ft)
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THERE IS      1 PERMIT LISTED FOR FISH AND WILDLIFE PROPAGATION  
 USE IN DOUGLAS COUNTY WHICH AMOUNTS TO A TOTAL  
 APPROPRIATION OF    1,368 ACRE-FEET

ROBERTS COUNTY

PRAIRIE COTEAU AQUIFER

4106-3	1,810
--------	-------

THERE IS      1 PERMIT LISTED FOR FISH AND WILDLIFE PROPAGATION  
 USE IN ROBERTS COUNTY WHICH AMOUNTS TO A TOTAL  
 APPROPRIATION OF    1,810 ACRE-FEET

YANKTON COUNTY

MISSOURI AQUIFER

953-3	804
4224-3	804

2 PERMITS TOTALLING 1,608

THERE ARE      2 PERMITS LISTED FOR FISH AND WILDLIFE PROPAGATION  
 USE IN YANKTON COUNTY WHICH AMOUNT TO A TOTAL  
 APPROPRIATION OF    1,608 ACRE-FEET

A TOTAL OF    8,978 ACRE-FEET OF  
 GROUND WATER ARE APPROPRIATED TO      6  
 FISH AND WILDLIFE PROPAGATION USE PERMITS IN EASTERN SOUTH DAKOTA.



TABLE B11 - ANNUAL APPROPRIATION FOR GEOTHERMAL USE.



### Table B11 Assumptions

Table B11 is based upon the diversion rate which was approved for each geothermal use permit. The annual appropriation is calculated by first multiplying the diversion rate (in cubic feet per second) times 86,400 (seconds) times 365 (days) and then dividing by 43,560 (number of cubic feet in an acre-foot of water).

G E O T H E R M A L   U S E  
A P P R O P R I A T I O N S  
B Y   C O U N T Y

Permit Number	Annual Appropriation (ac-ft)
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HUGHES COUNTY

INYAN KARA GROUP AQUIFER

4319-3	239
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MADISON GROUP AQUIFER

4289-3	1,607
--------	-------

THERE ARE 2 PERMITS LISTED FOR GEOTHERMAL  
USE IN HUGHES COUNTY WHICH AMOUNT TO A TOTAL  
APPROPRIATION OF 1,846 ACRE-FEET

MINNEHAHA COUNTY

BIG SIOUX AQUIFER

Sioux Falls Management Unit

4620-3	290
--------	-----

THERE IS 1 PERMIT LISTED FOR GEOTHERMAL  
USE IN MINNEHAHA COUNTY WHICH AMOUNTS TO A TOTAL  
APPROPRIATION OF 290 ACRE-FEET

G E O T H E R M A L   U S E  
A P P R O P R I A T I O N S  
B Y   C O U N T Y

Permit  
Number

Annual  
Appropriation  
(ac-ft)

A TOTAL OF 2,136 ACRE-FEET OF  
GROUND WATER ARE APPROPRIATED TO 3  
GEOTHERMAL USE PERMITS IN EASTERN SOUTH DAKOTA.

\* \* \* \* \*  
A TOTAL OF 154 GROUND WATER PERMITS HAVE  
BEEN ISSUED FOR USES OTHER THAN MUNICIPAL AND IRRIGATION  
IN EASTERN SOUTH DAKOTA.

IT IS CALCULATED THAT A TOTAL OF 110,550 AC-FT  
HAS BEEN APPROPRIATED FOR USES OTHER THAN MUNICIPAL AND  
IRRIGATION FOR THESE PERMITS.





APPENDIX C - GROUND WATER USE BY AQUIFER FOR MUNICIPALITIES  
IN EASTERN SOUTH DAKOTA.



### Explanation for tables C1 and C2

Municipalities listed include all those in eastern South Dakota that hold a water right permit for ground water plus 40 other municipalities that do not hold a water right permit for ground water. The latter 40 are also listed in appendix D and are those which have no appropriation.

Annual Pumpage (ac-ft): This column is presented in acre feet. Most of this information was supplied by the Office of Drinking water, Dept. of Water and Natural Resources and consists primarily of 1977 water use data. In a few instances the annual pumpage was determined and/or updated by the South Dakota Geological Survey.



TABLE C1 - LIST OF MUNICIPALITIES AND ESTIMATED CURRENT  
USE FROM UNIDENTIFIED AQUIFERS.



M U N I C I P A L U S E  
B Y A Q U I F E R

County Name	Town or City Name	Annual Pumpage (ac-ft)
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MUNICIPALITIES THAT PUMP FROM UNIDENTIFIED AQUIFERS

CAMPBELL	ARTAS	6
CLARK	NAPLES	3
CLAY	ALSEN	3
DAY	BUTLER	3
DAY	LILY	7
DOUGLAS	HARRISON	11
HAMLIN	DEMPSTER	7
HUTCHINSON	DIMOCK	14
HUTCHINSON	KAYLOR	12
HUGHES	CANNING	2
HYDE	STEPHAN	4
LAKE	RUTLAND	4
MCPHERSON	AMHERST	6
MINER	EPIPHANY	5
MINER	FEDORA	9
MINER	VILAS	3
TURNER	DOLTON	5

MUNICIPAL USE FROM AQUIFERS WHICH ARE UNIDENTIFIED AMOUNTS TO 104 AC-FT.





TABLE C2 - LIST OF MUNICIPALITIES AND ESTIMATED CURRENT  
USE FROM KNOWN AQUIFERS.



M U N I C I P A L U S E  
B Y A Q U I F E R

County Name	Town or City Name	Annual Pumpage (ac-ft)
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ANTELOPE VALLEY AQUIFER

CODINGTON	SOUTH SHORE	17
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MUNICIPAL USE FROM THE ANTELOPE VALLEY AQUIFER  
AMOUNTS TO 17 AC-FT.

M U N I C I P A L U S E  
B Y A Q U I F E R

County Name	Town or City Name	Annual Pumpage (ac-ft)
----------------	-------------------------	------------------------------

ALTAMONT AQUIFER

CODINGTON	HENRY	15
CODINGTON	WALLACE	8
CLARK	GARDEN CITY	10
DAY	ANDOVER	12
DAY	BRISTOL	40
DAY	GRENVILLE	13
DAY	PIERPONT	20
DAY	ROSLYN	21
DAY	WAUBAY	98
DEUEL	BRANDT	0
GRANT	REVILLO	12
KINGSBURY	ARLINGTON	149
MUNICIPAL USE FROM THE ALTAMONT AQUIFER		
AMOUNTS TO	398 AC-FT.	

M U N I C I P A L U S E  
B Y A Q U I F E R

County Name	Town or City Name	Annual Pumpage (ac-ft)
----------------	-------------------------	------------------------------

BIG SIOUX AQUIFER

Aurora Management Unit

BROOKINGS	AURORA	20
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Brookings Management Unit

BROOKINGS	BROOKINGS	2,463
BROOKINGS	BRUCE	18
BROOKINGS	VOLGA	188
DEUEL	CLEAR LAKE	168
HAMLIN	CASTLEWOOD	73
HAMLIN	ESTELLINE	87
HAMLIN	HAYTI	33
HAMLIN	LAKE NORDEN	47
		<u>3,077</u>

Moody Management Unit

MOODY	EGAN	24
MOODY	FLANDREAU	284
MOODY	TRENT	15
		<u>323</u>

North Management Unit

CODINGTON	WATERTOWN	694
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Northern Skunk Creek Management Unit

LAKE	CHESTER	13
LAKE	MADISON	846
		<u>859</u>

South Management Unit

LINCOLN	FAIRVIEW	6
LINCOLN	HARRISBURG	29
LINCOLN	HUDSON	31
MINNEHAHA	BRANDON	200
		<u>266</u>

Sioux Falls Management Unit

M U N I C I P A L   U S E  
B Y   A Q U I F E R

County Name	Town or City Name	Annual Pumpage (ac-ft)
MINNEHAHA	BALTIC	31
MINNEHAHA	SIOUX FALLS	14,561
		<hr/>
		14,592

MUNICIPAL USE FROM THE BIG SIOUX AQUIFER  
AMOUNTS TO 19,831 AC-FT.

M U N I C I P A L   U S E  
B Y   A Q U I F E R

County Name	Town or City Name	Annual Pumpage (ac-ft)
----------------	-------------------------	------------------------------

BOWDLE   AQUIFER

Edmunds   Management Unit

EDMUNDS	BOWDLE	97
POTTER	TOLSTOY	11
		108

Hoven South   Management Unit

POTTER	HOVEN	94
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The City of Hoven withdraws ground water from both the Hoven North and Hoven South Management Units of the Bowdle Aquifer but all water use has been credited to the Hoven South Management Unit for the purposes of this table.

MUNICIPAL USE FROM THE BOWDLE   AQUIFER  
AMOUNTS TO        202 AC-FT.

M U N I C I P A L U S E  
B Y A Q U I F E R

County Name	Town or City Name	Annual Pumpage (ac-ft)
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BRULE CREEK AQUIFER

UNION	ALCESTER	91
UNION	BERESFORD	223

MUNICIPAL USE FROM THE BRULE CREEK AQUIFER  
AMOUNTS TO 314 AC-FT.



M U N I C I P A L U S E  
B Y A Q U I F E R

County Name	Town or City Name	Annual Pumpage (ac-ft)
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CHOTEAU AQUIFER

Middle Management Unit

HUTCHINSON	PARKSTON	226
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West Management Unit

CHARLES MIX	WAGNER	0
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MUNICIPAL USE FROM THE CHOTEAU AQUIFER  
AMOUNTS TO 226 AC-FT.

M U N I C I P A L U S E  
B Y A Q U I F E R

County Name	Town or City Name	Annual Pumpage (ac-ft)
----------------	-------------------------	------------------------------

CODELL SANDSTONE AQUIFER

AURORA	PLANKINTON	86
AURORA	STICKNEY	35
CLAY	WAKONDA	0
CHARLES MIX	GEDDES	0
CHARLES MIX	LAKE ANDES	0
CHARLES MIX	RAVINA	9
DOUGLAS	ARMOUR	0
DOUGLAS	CORSICA	90
DOUGLAS	DELMONT	22
HUTCHINSON	TRIPP	119
LAKE	NUNDA	7
LAKE	RAMONA	19

MUNICIPAL USE FROM THE CODELL SANDSTONE AQUIFER  
AMOUNTS TO 387 AC-FT.

M U N I C I P A L   U S E  
B Y   A Q U I F E R

County Name	Town or City Name	Annual Pumpage (ac-ft)
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COTEAU LAKES   AQUIFER

MARSHALL	LAKE CITY	4
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MUNICIPAL USE FROM THE COTEAU LAKES   AQUIFER  
AMOUNTS TO        4 AC-FT.

M U N I C I P A L   U S E  
B Y   A Q U I F E R

County Name	Town or City Name	Annual Pumpage (ac-ft)
----------------	-------------------------	------------------------------

DAKOTA FORMATION   AQUIFER

BEADLE	BROADLAND	4
BEADLE	HITCHCOCK	13
BEADLE	VIRGIL	4
BEADLE	WOLSEY	37
BEADLE	YALE	13
BUFFALO	GANN VALLEY	6
BROOKINGS	SINAI	12
BRULE	KIMBALL	120
BRULE	PUKWANA	17
BROWN	CLAREMONT	18
BROWN	FERNEY	4
BROWN	GROTON	154
BROWN	MANSFIELD	9
BROWN	STRATFORD	9
BROWN	VERDON	2
BROWN	WARNER	11
CLARK	RAYMOND	10
CHARLES MIX	PLATTE	0
DAVISON	ETHAN	26
EDMUNDS	ROSCOE	32
FAULK	CHELSEA	4
FAULK	CRESBARD	19
FAULK	ORIENT	11
FAULK	ROCKHAM	5
FAULK	ZELL	6
HAND	MILLER	301
HAMLIN	BRYANT	0
JERAULD	ALPENA	26
JERAULD	LANE	8
KINGSBURY	BANCROFT	4
KINGSBURY	ESMOND	2
KINGSBURY	IROQUOIS	21
KINGSBURY	OLDHAM	24
LINCOLN	CANTON	479
LINCOLN	WORTHING	25

M U N I C I P A L U S E  
B Y A Q U I F E R

County Name	Town or City Name	Annual Pumpage (ac-ft)
MARSHALL	KIDDER	10
MARSHALL	LANGFORD	28
McPHERSON	LEOLA	110
McPHERSON	WETONKA	2
MINER	CARTHAGE	30
MINER	ROSWELL	3
POTTER	GETTYSBURG	0
SANBORN	FORESTBURG	11
SANBORN	LETCHER	17
SPINK	ASHTON	12
SPINK	ATHOL	6
SPINK	BRENTFORD	8
SPINK	CONDE	23
SPINK	DOLAND	47
SPINK	FRANKFORT	16
SPINK	MELLETTE	17
SPINK	NORTHVILLE	10
SPINK	REDFIELD	528
SPINK	TULARE	18
YANKTON	VOLIN	0

MUNICIPAL USE FROM THE DAKOTA FORMATION AQUIFER  
AMOUNTS TO 2,332 AC-FT.

M U N I C I P A L U S E  
 B Y A Q U I F E R

County Name	Town or City Name	Annual Pumpage (ac-ft)
----------------	-------------------------	------------------------------

ELM AQUIFER

Northern Brown Management Unit

BROWN	ABERDEEN	0
BROWN	FREDERICK	30
		-----
		30

MUNICIPAL USE FROM THE ELM AQUIFER  
 AMOUNTS TO 30 AC-FT.

M U N I C I P A L   U S E  
B Y   A Q U I F E R

County Name	Town or City Name	Annual Pumpage (ac-ft)
----------------	-------------------------	------------------------------

FAIRMOUNT   AQUIFER

ROBERTS	ROSHOLT	38
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MUNICIPAL USE FROM THE FAIRMOUNT   AQUIFER  
AMOUNTS TO      38 AC-FT.

M U N I C I P A L U S E  
 B Y A Q U I F E R

County Name	Town or City Name	Annual Pumpage (ac-ft)
-------------	-------------------	------------------------

GRAND AQUIFER

CAMPBELL	HERREID	94
CAMPBELL	POLLOCK	29
EDMUNDS	HOSMER	37
FAULK	FAULKTON	138
WALWORTH	GLENHAM	13

MUNICIPAL USE FROM THE GRAND AQUIFER  
 AMOUNTS TO 311 AC-FT.



M U N I C I P A L U S E  
B Y A Q U I F E R

County Name	Town or City Name	Annual Pumpage (ac-ft)
----------------	-------------------------	------------------------------

HIGHMORE-BLUNT AQUIFER

HUGHES	BLUNT	37
HUGHES	HARROLD	15
HYDE	HIGHMORE	240

MUNICIPAL USE FROM THE HIGHMORE-BLUNT AQUIFER  
AMOUNTS TO 292 AC-FT.

M U N I C I P A L   U S E  
B Y   A Q U I F E R

County Name	Town or City Name	Annual Pumpage (ac-ft)
----------------	-------------------------	------------------------------

HOWARD   AQUIFER

LAKE	WINFRED	9
MINER	CANOVA	17
MOODY	COLMAN	38

MUNICIPAL USE FROM THE HOWARD   AQUIFER  
AMOUNTS TO      64 AC-FT.

M U N I C I P A L U S E  
 B Y A Q U I F E R

County Name	Town or City Name	Annual Pumpage (ac-ft)
----------------	-------------------------	------------------------------

INYAN KARA GROUP AQUIFER

CAMPBELL	MOUND CITY	14
EDMUNDS	IPSWICH	166
HAND	POLO	1
SULLY	AGAR	13
SULLY	ONIDA	110

MUNICIPAL USE FROM THE INYAN KARA GROUP AQUIFER  
 AMOUNTS TO 304 AC-FT.

M U N I C I P A L   U S E  
B Y   A Q U I F E R

County Name	Town or City Name	Annual Pumpage (ac-ft)
----------------	-------------------------	------------------------------

JAVA   A Q U I F E R

WALWORTH	JAVA	25
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MUNICIPAL USE FROM THE JAVA   A Q U I F E R  
AMOUNTS TO      25 AC-FT.

M U N I C I P A L   U S E  
B Y   A Q U I F E R

County Name	Town or City Name	Annual Pumpage (ac-ft)
----------------	-------------------------	------------------------------

LENNOX   AQUIFER

LINCOLN	LENNOX	208
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MUNICIPAL USE FROM THE LENNOX   AQUIFER  
AMOUNTS TO   208 AC-FT.

M U N I C I P A L U S E  
B Y A Q U I F E R

County Name	Town or City Name	Annual Pumpage (ac-ft)
----------------	-------------------------	------------------------------

MIDDLE JAMES AQUIFER

Columbia Management Unit

BROWN	HECLA	34
MARSHALL	BRITTON	0
		<hr/>
		34

MUNICIPAL USE FROM THE MIDDLE JAMES AQUIFER  
AMOUNTS TO 34 AC-FT.

M U N I C I P A L U S E  
B Y A Q U I F E R

County Name	Town or City Name	Annual Pumpage (ac-ft)
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MISSOURI AQUIFER

CLAY	BURBANK	6
CLAY	MECKLING	8
CLAY	VERMILLION	1,132
UNION	ELK POINT	192
UNION	JEFFERSON	40
UNION	MCCOOK LK SAN DIST	133
UNION	NORTH SIOUX CITY	224
YANKTON	GAYVILLE	23
YANKTON	MISSION HILL	14

Greenwood Management Unit

CHARLES MIX	GREENWOOD	9
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Pierre Management Unit

HUGHES	PIERRE	2,518
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MUNICIPAL USE FROM THE MISSOURI AQUIFER  
AMOUNTS TO 4,299 AC-FT.

M U N I C I P A L   U S E  
B Y   A Q U I F E R

County Name	Town or City Name	Annual Pumpage (ac-ft)
----------------	-------------------------	------------------------------

NIOBRARA FORMATION   AQUIFER

AURORA	WHITE LAKE	0
BEADLE	CAVOUR	11
BON HOMME	SCOTLAND	143
BON HOMME	TYNDALL	181
DAVISON	MOUNT VERNON	33
HUTCHINSON	FREEMAN	198
SANBORN	WOONSOCKET	119
TURNER	IRENE	0

MUNICIPAL USE FROM THE NIOBRARA FORMATION   AQUIFER  
AMOUNTS TO   685 AC-FT.



M U N I C I P A L U S E  
B Y A Q U I F E R

County Name	Town or City Name	Annual Pumpage (ac-ft)
----------------	-------------------------	------------------------------

ONAKA AQUIFER

FAULK	ONAKA	6
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MUNICIPAL USE FROM THE ONAKA AQUIFER  
AMOUNTS TO 6 AC-FT.

M U N I C I P A L U S E  
B Y A Q U I F E R

County Name	Town or City Name	Annual Pumpage (ac-ft)
----------------	-------------------------	------------------------------

PARKER-CENTERVILLE AQUIFER

TURNER	HURLEY	33
TURNER	PARKER	195

MUNICIPAL USE FROM THE PARKER-CENTERVILLE AQUIFER  
AMOUNTS TO 228 AC-FT.

M U N I C I P A L U S E  
B Y A Q U I F E R

County Name	Town or City Name	Annual Pumpage (ac-ft)
----------------	-------------------------	------------------------------

PLEISTOCENE SERIES AQUIFER

Miscellaneous Management Unit

DEUEL	GARY	31
DEUEL	TORONTO	0
YANKTON	LESTERVILLE	0
		31

Unknown Management Unit

BEADLE	WESSINGTON	32
BROOKINGS	ELKTON	101
BROOKINGS	WHITE	0
DEUEL	ASTORIA	13
FAULK	SENECA	10
GRANT	MARVIN	6
HAND	REE HEIGHTS	15
HANSON	EMERY	38
JERAULD	WESSINGTON SPRINGS	227
KINGSBURY	LAKE PRESTON	118
MINNEHAHA	COLTON	84
McCOOK	BRIDGEWATER	89
McCOOK	SALEM	230
MOODY	WARD	5
ROBERTS	NEW EFFINGTON	22
ROBERTS	SUMMIT	28
TURNER	MARION	103
		1,121

MUNICIPAL USE FROM THE PLEISTOCENE SERIES AQUIFER  
AMOUNTS TO 1,152 AC-FT.

M U N I C I P A L   U S E  
B Y   A Q U I F E R

County Name	Town or City Name	Annual Pumpage (ac-ft)
----------------	-------------------------	------------------------------

PRAIRIE COTEAU   AQUIFER

CODINGTON	FLORENCE	17
CLARK	BRADLEY	13
DAY	WEBSTER	328
GRANT	STRANDBURG	8
KINGSBURY	BADGER	11
KINGSBURY	HETLAND	7
MARSHALL	EDEN	11

MUNICIPAL USE FROM THE PRAIRIE COTEAU   AQUIFER  
AMOUNTS TO      395 AC-FT.

M U N I C I P A L U S E  
B Y A Q U I F E R

County Name	Town or City Name	Annual Pumpage (ac-ft)
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SELBY AQUIFER

MCPHERSON	EUREKA	139
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WALWORTH	SELBY	139
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MUNICIPAL USE FROM THE SELBY AQUIFER  
AMOUNTS TO 278 AC-FT.

M U N I C I P A L   U S E  
B Y   A Q U I F E R

County Name	Town or City Name	Annual Pumpage (ac-ft)
----------------	-------------------------	------------------------------

SIOUX QUARTZITE   AQUIFER

HANSON	ALEXANDRIA	87
HUTCHINSON	MENNO	111
LINCOLN	TEA	25
MINNEHAHA	CORSON	4
MINNEHAHA	CROOKS	14
MINNEHAHA	DELL RAPIDS	279
MINNEHAHA	GARRETSON	123
MINNEHAHA	HARTFORD	116
MINNEHAHA	HUMBOLDT	35
MCCOOK	SPENCER	32
MINER	HOWARD	139
TURNER	CHANCELLOR	18
TURNER	MONROE	11

MUNICIPAL USE FROM THE SIOUX QUARTZITE   AQUIFER  
AMOUNTS TO      994 AC-FT.

M U N I C I P A L U S E  
B Y A Q U I F E R

County Name	Town or City Name	Annual Pumpage (ac-ft)
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SIOUX QUARTZITE WASH AQUIFER

MCCOOK	CANISTOTA	93
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MUNICIPAL USE FROM THE SIOUX QUARTZITE WASH AQUIFER  
AMOUNTS TO 93 AC-FT.

M U N I C I P A L   U S E  
B Y   A Q U I F E R

County Name	Town or City Name	Annual Pumpage (ac-ft)
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SPLIT ROCK CREEK FORMATION   AQUIFER

MINNEHAHA	VALLEY SPRINGS	53
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MUNICIPAL USE FROM THE SPLIT ROCK CREEK FORMATION   AQUIFER  
AMOUNTS TO      53 AC-FT.



M U N I C I P A L U S E  
B Y A Q U I F E R

County Name	Town or City Name	Annual Pumpage (ac-ft)
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TULARE AQUIFER

Miller Management Unit

HAND	ST. LAWRENCE	21
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Western Spink Management Unit

SPINK	S. SPINK-N. BEADLE	0
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MUNICIPAL USE FROM THE TULARE AQUIFER  
AMOUNTS TO 21 AC-FT.

M U N I C I P A L U S E  
B Y A Q U I F E R

County Name	Town or City Name	Annual Pumpage (ac-ft)
----------------	-------------------------	------------------------------

UPPER-VERMILLION-MISSOURI AQUIFER

TURNER	CENTERVILLE	127
TURNER	DAVIS	9
TURNER	VIBORG	134

MUNICIPAL USE FROM THE UPPER-VERMILLION-MISSOURI AQUIFER  
AMOUNTS TO 270 AC-FT.

M U N I C I P A L U S E  
 B Y A Q U I F E R

County Name	Town or City Name	Annual Pumpage (ac-ft)
----------------	-------------------------	------------------------------

VEBLEN AQUIFER

GRANT	BIG STONE CITY	86
GRANT	MILBANK	567
GRANT	TWIN BROOKS	10
MARSHALL	VEBLEN	32
ROBERTS	CORONA	11
ROBERTS	PEEVER	17
ROBERTS	SISSETON	433
ROBERTS	WILMOT	75

MUNICIPAL USE FROM THE VEBLEN AQUIFER  
 AMOUNTS TO 1,231 AC-FT.

M U N I C I P A L U S E  
 B Y A Q U I F E R

County Name	Town or City Name	Annual Pumpage (ac-ft)
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VERMILLION-EAST-FORK AQUIFER

KINGSBURY	DESMET	230
-----------	--------	-----

McCOOK	MONTROSE	32
--------	----------	----

Antelope Lake Management Unit

CLARK	CLARK	194
-------	-------	-----

Willow Lake Management Unit

CLARK	WILLOW LAKE	30
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MUNICIPAL USE FROM THE VERMILLION-EAST-FORK AQUIFER  
 AMOUNTS TO 486 AC-FT.

M U N I C I P A L U S E  
B Y A Q U I F E R

County Name	Town or City Name	Annual Pumpage (ac-ft)
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WARREN AQUIFER

West James Management Unit

BEADLE	HURON	0
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MUNICIPAL USE FROM THE WARREN AQUIFER  
AMOUNTS TO 0 AC-FT.

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IT IS CALCULATED THAT A TOTAL OF 233  
MUNICIPALITIES PUMP APPROXIMATELY 35,312  
AC-FT WHILE THEY HAVE 393,749 AC-FT  
APPROPRIATED TO THEM.



APPENDIX D - GROUND WATER USE AND APPROPRIATION BY COUNTY  
FOR MUNICIPALITIES IN EASTERN SOUTH DAKOTA.





## Appendix D Explanation

Municipalities listed include all those in eastern South Dakota that hold a water right permit for ground water plus 40 other municipalities that do not hold water right permits for ground water. The latter 40 are those which have no appropriation listed for them.

Abbreviations are used to identify aquifers and management units in the columns labelled 'Source (pumpage)' and 'Source (approp.)'. These abbreviations and corresponding names are listed below.

Abbreviation			
Aquifer	Management Unit	Aquifer Name	Management Unit Name
A		Altamont	
AV		Antelope Valley	
B	E	Bowdle	Edmunds
B	HS	Bowdle	Hoven South
BRC		Brule Creek	
BS	A	Big Sioux	Aurora
BS	B	Big Sioux	Brookings
BS	M	Big Sioux	Moody
BS	N	Big Sioux	North
BS	NSC	Big Sioux	Northern Skunk Creek
BS	S	Big Sioux	South
BS	SF	Big Sioux	Sioux Falls
CDLL		Codell Sandstone	
CH	M	Cnoteau	Middle
CH	W	Choteau	west
COL		Coteau Lakes	
DKOT		Dakota Formation	
E	NB	Elm	Northern Brown

Abbreviation			
Aquifer	Management Unit	Aquifer Name	Management Unit Name
FMT		Fairmount	
G		Grand	
HB		Highmore-Blunt	
HO		Howard	
INKR		Inyan Kara Group	
J		Java	
L		Lennox	
M		Missouri	
M	G	Missouri	Greenwood
M	P	Missouri	Pierre
MJ	C	Middle James	Columbia
NBRR		Niobrara Formation	
O		Onaka	

Abbreviation			
Aquifer	Management Unit	Aquifer Name	Management Unit Name
PAC		Parker-Centerville	
PCO		Prairie Coteau	
PS	M	Pleistocene Series	Miscellaneous
PS	U	Pleistocene Series	Unknown
S		Selby	
SOUX		Sioux Quartzite	
SRKC		Split Rock Creek Formation	
SXWS		Sioux Quartzite Wash	
T	M	Tulare	Miller
T	WS	Tulare	Western Spink
UVM		Upper-Vermillion-Missouri	
VEB		Veblen	
VEF		Vermillion-East-Fork	
VEF	AL	Vermillion-East-Fork	Antelope Lake
VEF	WL	Vermillion-East-Fork	Willow Lake
W	WJ	Warren	West James

Special Case  
Abbreviation

Aquifer	Management Unit	Explanation
?		Used only in the column labelled 'Source (pumpage)' and indicates it was not possible to identify the aquifer, due to lack of well construction data, from which a municipality obtains its water.
MULT		Used only in the column labelled 'Source (approp.)' and indicates that a municipality holds water right permits for more than one aquifer. No abbreviation will be listed in the management unit column if this is listed in the aquifer column.
	MULT	Used only in the column labelled 'Source (approp.)' and indicates that a municipality holds water right permits for more than one management unit within a given aquifer.

Source (pumpage): This column identifies the primary aquifer (and management unit if applicable) from which the ground water supply for a given municipality is obtained.

Annual Pumpage (ac-ft): This column is presented in acre feet. Most of this information was supplied by the Office of Drinking Water, Dept. of Water and Natural Resources and consists primarily of 1977 water use data. In a few instances the annual pumpage was determined and/or modified by the South Dakota Geological Survey.

Some municipalities have not developed or do not use their permitted ground water source. In this case the annual pumpage is listed as zero (ie: the City of White Lake in Aurora County).

Approp. (ac-ft):

This column is presented in acre feet and was determined by the South Dakota Geological Survey, Dept. of Water and Natural Resources. This column lists the total amount of ground water appropriated to a given municipality. Some municipalities have more than one permit and some hold permits for more than one aquifer.

Source (approp.):

This column identifies the aquifer (and management unit if applicable) from which a municipality holds a ground water appropriation. Some municipalities have had ground water appropriated to them from more than one aquifer and/or from more than one management unit. In the case of more than one aquifer, the abbreviation 'MULT' is listed with no listing for management unit. In the case of one aquifer and more than one management unit within that aquifer, the proper abbreviation for the aquifer is listed and the abbreviation 'MULT' is listed for the management unit.

M U N I C I P A L   U S E   &   A P P R O P R I A T I O N S  
B Y   C O U N T Y

<u>Source (pumpage)</u>		Town or	Annual	Approp.	<u>Source (approp.)</u>	
Aquifer	Man.	City	Pumpage	(ac-ft)	Aquifer	Man.
Name	Unit	Name	(ac-ft)	(ac-ft)	Name	Unit

AURORA   C O U N T Y

CDLL		PLANKINTON	86	261	CDLL
CDLL		STICKNEY	35	80	CDLL
NBRR		WHITE LAKE	0	123	NBRR
				-----	
				464	

MUNICIPAL USE FROM AURORA COUNTY  
AMOUNTS TO      121 AC-FT.

M U N I C I P A L   U S E   &   A P P R O P R I A T I O N S  
B Y   C O U N T Y

<u>Source (pumpage)</u>		Town or	Annual		<u>Source (approp.)</u>	
Aquifer	Man.	City	Pumpage	Approp.	Aquifer	Man.
Name	Unit	Name	(ac-ft)	(ac-ft)	Name	Unit

BEADLE COUNTY

DKOT		BROADLAND	4	0		
DKOT		HITCHCOCK	13	58	DKOT	
DKOT		VIRGIL	4	123	DKOT	
DKOT		WOLSEY	37	188	DKOT	
DKOT		YALE	13	36	DKOT	
NBRR		CAVOUR	11	203	NBRR	
PS	U	WESSINGTON	32	1,050	MULT	
W	WJ	HURON	0	5,032	W	WJ
				-----		
				6,690		

MUNICIPAL USE FROM BEADLE COUNTY  
AMOUNTS TO 114 AC-FT.

M U N I C I P A L   U S E   &   A P P R O P R I A T I O N S  
B Y   C O U N T Y

<u>Source (pumpage)</u>		Town or	Annual	Approp.	<u>Source (approp.)</u>	
Aquifer	Man.	City	Pumpage	(ac-ft)	Aquifer	Man.
Name	Unit	Name	(ac-ft)	(ac-ft)	Name	Unit

B O N   H O M M E   C O U N T Y

NBRR		SCOTLAND	143	420	NBRR
NBRR		TYNDALL	181	6,341	MULT
				6,761	

MUNICIPAL USE FROM BON HOMME COUNTY  
AMOUNTS TO 324 AC-FT.



M U N I C I P A L   U S E   &   A P P R O P R I A T I O N S  
B Y   C O U N T Y

<u>Source (pumpage)</u>		Town or City Name	Annual Pumpage (ac-ft)	Approp. (ac-ft)	<u>Source (approp.)</u>	
Aquifer Name	Man. Unit				Aquifer Name	Man. Unit

B R O O K I N G S   C O U N T Y

BS	A	AURORA	20	145	BS	A
BS	B	BROOKINGS	2,463	29,515	BS	MULT
BS	B	BRUCE	18	0		
BS	B	VOLGA	188	1,195	BS	B
DKOT		SINAI	12	22	DKOT	
PS	U	ELKTON	101	919	PS	U
PS	U	WHITE	0	36	PS	U
				31,832		

MUNICIPAL USE FROM BROOKINGS COUNTY  
AMOUNTS TO 2,802 AC-FT.

M U N I C I P A L   U S E   &   A P P R O P R I A T I O N S  
B Y   C O U N T Y

<u>Source (pumpage)</u>		Town or	Annual	Approp.	<u>Source (approp.)</u>	
Aquifer	Man.	City	Pumpage	(ac-ft)	Aquifer	Man.
Name	Unit	Name	(ac-ft)	(ac-ft)	Name	Unit

BROWN COUNTY

DKOT		CLAREMONT	18	109	DKOT	
DKOT		FERNEY	4	22	DKOT	
DKOT		GROTON	154	514	DKOT	
DKOT		MANSFIELD	9	159	DKOT	
DKOT		STRATFORD	9	80	DKOT	
DKOT		VERDON	2	0		
DKOT		WARNER	11	239	MULT	
E	NB	ABERDEEN	0	27,511	E	NB
E	NB	FREDERICK	30	796	E	NB
MJ	C	HECLA	34	217	MJ	C
				29,647		

MUNICIPAL USE FROM BROWN COUNTY  
AMOUNTS TO 271 AC-FT.

M U N I C I P A L   U S E   &   A P P R O P R I A T I O N S  
B Y   C O U N T Y

<u>Source (pumpage)</u>		Town or	Annual		<u>Source (approp.)</u>	
Aquifer	Man.	City	Pumpage	Approp.	Aquifer	Man.
Name	Unit	Name	(ac-ft)	(ac-ft)	Name	Unit

BRULE COUNTY

DKOT		KIMBALL	120	0		
DKOT		PUKWANA	17	362		DKOT
				-----		
				362		

MUNICIPAL USE FROM BRULE COUNTY  
AMOUNTS TO 137 AC-FT.

M U N I C I P A L   U S E   &   A P P R O P R I A T I O N S  
B Y   C O U N T Y

<u>Source (pumpage)</u>		Town or	Annual			<u>Source (approp.)</u>	
Aquifer	Man.	City	Pumpage	Approp.	Aquifer	Man.	
Name	Unit	Name	(ac-ft)	(ac-ft)	Name	Unit	

B U F F A L O   C O U N T Y

DKOT	GANN VALLEY	6	145		DKOT
			-----		
			145		

MUNICIPAL USE FROM BUFFALO COUNTY  
AMOUNTS TO            6 AC-FT.

M U N I C I P A L   U S E   &   A P P R O P R I A T I O N S  
B Y   C O U N T Y

<u>Source (pumpage)</u>		Town or	Annual			<u>Source (approp.)</u>	
Aquifer	Man.	City	Pumpage	Approp.	Aquifer	Man.	
Name	Unit	Name	(ac-ft)	(ac-ft)	Name	Unit	

CAMPBELL   COUNTY

?		ARTAS	6	0			
G		HERREID	94	0			
G		POLLOCK	29	405	G		
INKR		MOUND CITY	14	282			MULT
				-----			
				687			

MUNICIPAL USE FROM CAMPBELL COUNTY  
AMOUNTS TO      143 AC-FT.

M U N I C I P A L   U S E   &   A P P R O P R I A T I O N S  
B Y   C O U N T Y

<u>Source (pumpage)</u>		Town or City Name	Annual Pumpage (ac-ft)	Approp. (ac-ft)	<u>Source (approp.)</u>	
Aquifer Name	Man. Unit				Aquifer Name	Man. Unit

CHARLES MIX COUNTY

CDLL		GEDDES	0	275	CDLL
CDLL		LAKE ANDES	0	528	CDLL
CDLL		RAVINA	9	0	
CH	W	WAGNER	0	1,838	MULT
DKOT		PLATTE	0	557	DKOT
M	G	GREENWOOD	9	0	
				-----	
				3,198	

MUNICIPAL USE FROM CHARLES MIX COUNTY  
AMOUNTS TO 18 AC-FT.

M U N I C I P A L   U S E   &   A P P R O P R I A T I O N S  
B Y   C O U N T Y

<u>Source (pumpage)</u>		Town or	Annual		<u>Source (appropriation)</u>	
Aquifer	Man.	City	Pumpage	Approp.	Aquifer	Man.
Name	Unit	Name	(ac-ft)	(ac-ft)	Name	Unit

CLARK COUNTY

?		NAPLES	3	0		
A		GARDEN CITY	10	1,448	A	
DKOT		RAYMOND	10	362	DKOT	
PCO		BRADLEY	13	72	PCO	
VEF	AL	CLARK	194	1,448	MULT	
VEF	WL	WILLOW LAKE	30	253	VEF	WL
				3,583		

MUNICIPAL USE FROM CLARK COUNTY  
AMOUNTS TO 260 AC-FT.

M U N I C I P A L   U S E   &   A P P R O P R I A T I O N S  
B Y   C O U N T Y

<u>Source (pumpage)</u>		Town or City Name	Annual Pumpage (ac-ft)	Approp. (ac-ft)	<u>Source (approp.)</u>	
Aquifer Name	Man. Unit				Aquifer Name	Man. Unit

CLAY COUNTY

?		ALSEN	3	0		
CDLL		WAKONDA	0	239	CDLL	
M		BURBANK	6	0		
M		MECKLING	8	0		
M		VERMILLION	1,132	3,215		M
				3,454		

MUNICIPAL USE FROM CLAY COUNTY  
AMOUNTS TO 1,149 AC-FT.



M U N I C I P A L   U S E   &   A P P R O P R I A T I O N S  
B Y   C O U N T Y

<u>Source (pumpage)</u>		Town or	Annual	Approp.	<u>Source (approp.)</u>	
Aquifer	Man.	City	Pumpage	(ac-ft)	Aquifer	Man.
Name	Unit	Name	(ac-ft)	(ac-ft)	Name	Unit

C O D I N G T O N   C O U N T Y

A		HENRY	15	1,528		A
A		WALLACE	8	2,172		A
AV		SOUTH SHORE	17	2,172		AV
BS	N	WATERTOWN	694	26,229		BS      N
PCO		FLORENCE	17	2,172		PCO
				34,273		

MUNICIPAL USE FROM CODINGTON COUNTY  
AMOUNTS TO      751 AC-FT.

M U N I C I P A L   U S E   &   A P P R O P R I A T I O N S  
B Y   C O U N T Y

<u>Source (pumpage)</u>		Town or	Annual	Approp.	<u>Source (approp.)</u>	
Aquifer	Man.	City	Pumpage	(ac-ft)	Aquifer	Man.
Name	Unit	Name	(ac-ft)	(ac-ft)	Name	Unit

DAY COUNTY

?		BUTLER	3	0		
?		LILY	7	0		
A		ANDOVER	12	80	A	
A		BRISTOL	40	217	A	
A		GRENVILLE	13	0		
A		PIERPONT	20	319	DKOT	
A		ROSLYN	21	188	A	
A		WAUBAY	98	746	MULT	
PCO		WEBSTER	328	1,361	PCO	
				2,911		

MUNICIPAL USE FROM DAY COUNTY  
AMOUNTS TO 542 AC-FT.

M U N I C I P A L   U S E   &   A P P R O P R I A T I O N S  
B Y   C O U N T Y

<u>Source (pumpage)</u>		Town or	Annual		<u>Source (appropriation)</u>	
Aquifer	Man.	City	Pumpage	Approp.	Aquifer	Man.
Name	Unit	Name	(ac-ft)	(ac-ft)	Name	Unit

DAVISON COUNTY

DKOT		ETHAN	26	159		DKOT
NBRR		MOUNT VERNON	33	174		NBRR
				-----		
				333		

MUNICIPAL USE FROM DAVISON COUNTY  
AMOUNTS TO      59 AC-FT.

M U N I C I P A L   U S E   &   A P P R O P R I A T I O N S  
B Y   C O U N T Y

<u>Source (pumpage)</u>		Town or City Name	Annual Pumpage (ac-ft)	Approp. (ac-ft)	<u>Source (approp.)</u>	
Aquifer Name	Man. Unit				Aquifer Name	Man. Unit

D E U E L   C O U N T Y

A		BRANDT	0	94	A	
BS	B	CLEAR LAKE	168	796	BS	B
PS	M	GARY	31	1,933	PS	M
PS	M	TORONTO	0	362	PS	M
PS	U	ASTORIA	13	87	PS	U
				-----		
				3,272		

MUNICIPAL USE FROM DEUEL COUNTY  
AMOUNTS TO      212 AC-FT.

M U N I C I P A L   U S E   &   A P P R O P R I A T I O N S  
B Y   C O U N T Y

<u>Source (pumpage)</u>		Town or	Annual	Approp.	<u>Source (approp.)</u>	
Aquifer	Man.	City	Pumpage	(ac-ft)	Aquifer	Man.
Name	Unit	Name	(ac-ft)	(ac-ft)	Name	Unit

D O U G L A S   C O U N T Y

?		HARRISON	11	0	
CDLL		ARMOUR	0	362	CDLL
CDLL		CORSICA	90	463	MULT
CDLL		DELMONT	22	0	
				-----	
				825	

MUNICIPAL USE FROM DOUGLAS COUNTY  
AMOUNTS TO      123 AC-FT.

M U N I C I P A L   U S E   &   A P P R O P R I A T I O N S  
B Y   C O U N T Y

<u>Source (pumpage)</u>		Town or	Annual		<u>Source (approp.)</u>	
Aquifer	Man.	City	Pumpage	Approp.	Aquifer	Man.
Name	Unit	Name	(ac-ft)	(ac-ft)	Name	Unit

EDMUNDS   COUNTY

B	E	BOWDLE	97	500	B	E
DKOT		ROSCOE	32	1,651	MULT	
G		HOSMER	37	195	G	
INKR		IPSWICH	166	1,086	INKR	
				3,432		

MUNICIPAL USE FROM EDMUNDS COUNTY  
AMOUNTS TO      332 AC-FT.

M U N I C I P A L   U S E   &   A P P R O P R I A T I O N S  
B Y   C O U N T Y

<u>Source (pumpage)</u>		Town or	Annual		<u>Source (approp.)</u>	
Aquifer	Man.	City	Pumpage	Approp.	Aquifer	Man.
Name	Unit	Name	(ac-ft)	(ac-ft)	Name	Unit

F A U L K   C O U N T Y

DKOT		CHELSEA	4	0		
DKOT		CRESBARD	19	80	DKOT	
DKOT		ORIENT	11	36	DKOT	
DKOT		ROCKHAM	5	29	DKOT	
DKOT		ZELL	6	0		
G		FAULKTON	138	724	G	
O		ONAKA	6	543	G	
PS	U	SENECA	10	36	PS	U
				-----		
				1,448		

MUNICIPAL USE FROM FAULK COUNTY  
AMOUNTS TO 199 AC-FT.

M U N I C I P A L   U S E   &   A P P R O P R I A T I O N S  
B Y   C O U N T Y

<u>Source (pumpage)</u>		Town or	Annual		<u>Source (approp.)</u>	
Aquifer	Man.	City	Pumpage	Approp.	Aquifer	Man.
Name	Unit	Name	(ac-ft)	(ac-ft)	Name	Unit

GRANT COUNTY

A		REVILLO	12	297	A
PCO		STRANDBURG	8	94	PCO
PS	U	MARVIN	6	0	
VEB		BIG STONE CITY	86	2,389	VEB
VEB		MILBANK	567	4,894	VEB
VEB		TWIN BROOKS	10	217	VEB
				7,891	

MUNICIPAL USE FROM GRANT COUNTY  
AMOUNTS TO 689 AC-FT.



M U N I C I P A L   U S E   &   A P P R O P R I A T I O N S  
B Y   C O U N T Y

<u>Source (pumpage)</u>		Town or	Annual		<u>Source (approp.)</u>	
Aquifer	Man.	City	Pumpage	Approp.	Aquifer	Man.
Name	Unit	Name	(ac-ft)	(ac-ft)	Name	Unit

HAMLIN COUNTY

?		DEMPSTER	7	0		
BS	B	CASTLEWOOD	73	644	BS	B
BS	B	ESTELLINE	87	796	BS	B
BS	B	HAYTI	33	1,151	BS	B
BS	B	LAKE NORDEN	47	3,605	BS	B
DKOT		BRYANT	0	159	DKOT	
				6,355		

MUNICIPAL USE FROM HAMLIN COUNTY  
AMOUNTS TO 247 AC-FT.

M U N I C I P A L   U S E   &   A P P R O P R I A T I O N S  
B Y   C O U N T Y

<u>Source (pumpage)</u>		Town or	Annual		<u>Source (approp.)</u>	
Aquifer	Man.	City	Pumpage	Approp.	Aquifer	Man.
Name	Unit	Name	(ac-ft)	(ac-ft)	Name	Unit

H A N D   C O U N T Y

DKOT		MILLER	301	3,366		DKOT
INKR		POLO	1	159		INKR
PS	U	REE HEIGHTS	15	65		PS            U
T	M	ST. LAWRENCE	21	72		T            M
				3,662		

MUNICIPAL USE FROM HAND COUNTY  
AMOUNTS TO        338 AC-FT.

M U N I C I P A L   U S E   &   A P P R O P R I A T I O N S  
B Y   C O U N T Y

<u>Source (pumpage)</u>		Town or	Annual		<u>Source (appropriation)</u>	
Aquifer	Man.	City	Pumpage	Approp.	Aquifer	Man.
Name	Unit	Name	(ac-ft)	(ac-ft)	Name	Unit

HANSON   COUNTY

PS	U	EMERY	38	413	PS	U
SOUX		ALEXANDRIA	87	2,302	SOUX	
				2,715		

MUNICIPAL USE FROM HANSON COUNTY  
AMOUNTS TO      125 AC-FT.

M U N I C I P A L   U S E   &   A P P R O P R I A T I O N S  
B Y   C O U N T Y

<u>Source (pumpage)</u>		Town or	Annual		<u>Source (approp.)</u>	
Aquifer	Man.	City	Pumpage	Approp.	Aquifer	Man.
Name	Unit	Name	(ac-ft)	(ac-ft)	Name	Unit

HUGHES COUNTY

?		CANNING	2	0		
HB		BLUNT	37	413	HB	
HB		HARROLD	15	159	HB	
M	P	PIERRE	2,518	20,510	M	P
				21,082		

MUNICIPAL USE FROM HUGHES COUNTY  
AMOUNTS TO 2,572 AC-FT.

M U N I C I P A L   U S E   &   A P P R O P R I A T I O N S  
B Y   C O U N T Y

<u>Source (pumpage)</u>		Town or City Name	Annual Pumpage (ac-ft)	Approp. (ac-ft)	<u>Source (approp.)</u>	
Aquifer Name	Man. Unit				Aquifer Name	Man. Unit
HUTCHINSON COUNTY						
?		DIMOCK	14	0		
?		KAYLOR	12	0		
CDLL		TRIPP	119	463	CDLL	
CH	M	PARKSTON	226	1,991	CH	M
NBRR		FREEMAN	198	1,868	NBRR	
SOUX		MENNO	111	0		
				-----		
				4,322		

MUNICIPAL USE FROM HUTCHINSON COUNTY  
AMOUNTS TO 680 AC-FT.

M U N I C I P A L   U S E   &   A P P R O P R I A T I O N S  
B Y   C O U N T Y

<u>Source (pumpage)</u>		Town or	Annual			<u>Source (approp.)</u>	
Aquifer	Man.	City	Pumpage	Approp.			Aquifer
Name	Unit	Name	(ac-ft)	(ac-ft)			Name
					Man.		
					Unit		

H Y D E   C O U N T Y

?		STEPHAN	4	0		
HB		HIGHMORE	240	1,202	HB	
				-----		
				1,202		

MUNICIPAL USE FROM HYDE COUNTY  
AMOUNTS TO      244 AC-FT.

M U N I C I P A L   U S E   &   A P P R O P R I A T I O N S  
B Y   C O U N T Y

<u>Source (pumpage)</u>		Town or	Annual		<u>Source (appropriation)</u>	
Aquifer	Man.	City	Pumpage	Approp.	Aquifer	Man.
Name	Unit	Name	(ac-ft)	(ac-ft)	Name	Unit

JERAULD   C O U N T Y

DKOT		ALPENA	26	1,448		DKOT
DKOT		LANE	8	319		DKOT
PS	U	WESSINGTON SPRINGS	227	2,085		PS            U
				-----		
				3,852		

MUNICIPAL USE FROM JERAULD COUNTY  
AMOUNTS TO    261 AC-FT.

M U N I C I P A L   U S E   &   A P P R O P R I A T I O N S  
B Y   C O U N T Y

<u>Source (pumpage)</u>		Town or City Name	Annual Pumpage (ac-ft)	Approp. (ac-ft)	<u>Source (approp.)</u>	
Aquifer Name	Man. Unit				Aquifer Name	Man. Unit
KINGSBURY COUNTY						
A		ARLINGTON	149	818	A	
DKOT		BANCROFT	4	0		
DKOT		ESMOND	2	0		
DKOT		IROQUOIS	21	0		
DKOT		OLDHAM	24	369	DKOT	
PCO		BADGER	11	43	PCO	
PCO		HETLAND	7	36	PCO	
PS	U	LAKE PRESTON	118	977	MULT	
VEF		DESMET	230	9,955	MULT	
			-----			
			12,198			

MUNICIPAL USE FROM KINGSBURY COUNTY  
AMOUNTS TO 566 AC-FT.



M U N I C I P A L   U S E   &   A P P R O P R I A T I O N S  
B Y   C O U N T Y

<u>Source (pumpage)</u>		Town or	Annual	Approp.	<u>Source (approp.)</u>	
Aquifer	Man.	City	Pumpage	(ac-ft)	Aquifer	Man.
Name	Unit	Name	(ac-ft)	(ac-ft)	Name	Unit

L A K E   C O U N T Y

?		RUTLAND	4	0		
BS	NSC	CHESTER	13	239	BS	NSC
BS	NSC	MADISON	846	12,532	MULT	
CDLL		NUNDA	7	72	CDLL	
CDLL		RAMONA	19	123	CDLL	
HO		WINFRED	9	72	HO	
				13,038		

MUNICIPAL USE FROM LAKE COUNTY  
AMOUNTS TO 898 AC-FT.

M U N I C I P A L   U S E   &   A P P R O P R I A T I O N S  
B Y   C O U N T Y

<u>Source (pumpage)</u> Aquifer    Man. Name        Unit	Town or City Name	Annual Pumpage (ac-ft)	Approp. (ac-ft)	<u>Source (approp.)</u> Aquifer    Man. Name        Unit
--	-------------------------	------------------------------	--------------------	--

LINCOLN COUNTY

BS	S	FAIRVIEW	6	130	BS	S
BS	S	HARRISBURG	29	1,687	MULT	
BS	S	HUDSON	31	514	BS	S
DKOT		CANTON	479	3,533	DKOT	
DKOT		WORTHING	25	239	DKOT	
L		LENNOX	208	448	MULT	
SOUX		TEA	25	108	SOUX	
				6,659		

MUNICIPAL USE FROM LINCOLN COUNTY  
AMOUNTS TO        803 AC-FT.

M U N I C I P A L   U S E   &   A P P R O P R I A T I O N S  
B Y   C O U N T Y

<u>Source (pumpage)</u>	Town or	Annual	Approp.	<u>Source (approp.)</u>
Aquifer    Man.	City	Pumpage	(ac-ft)	Aquifer    Man.
Name        Unit	Name	(ac-ft)	(ac-ft)	Name        Unit

MCCOOK    COUNTY

PS	U	BRIDGEWATER	89	695	PS	U
PS	U	SALEM	230	898	PS	U
SOUX		SPENCER	32	94	SOUX	
SXWS		CANISTOTA	93	217	PS	U
VEF		MONTROSE	32	1,767	VEF	
				3,671		

MUNICIPAL USE FROM MCCOOK COUNTY  
AMOUNTS TO        476 AC-FT.

M U N I C I P A L   U S E   &   A P P R O P R I A T I O N S  
B Y   C O U N T Y

<u>Source (pumpage)</u>		Town or	Annual	Approp.	<u>Source (approp.)</u>	
Aquifer	Man.	City	Pumpage	(ac-ft)	Aquifer	Man.
Name	Unit	Name	(ac-ft)	(ac-ft)	Name	Unit

MCPHERSON COUNTY

?		AMHERST	6	0		
DKOT		LEOLA	110	405	DKOT	
DKOT		WETONKA	2	22	DKOT	
S		EUREKA	139	1,781	MULT	
				2,208		

MUNICIPAL USE FROM MCPHERSON COUNTY  
AMOUNTS TO 257 AC-FT.

M U N I C I P A L   U S E   &   A P P R O P R I A T I O N S  
B Y   C O U N T Y

<u>Source (pumpage)</u>		Town or	Annual	Approp.	<u>Source (appropriation)</u>	
Aquifer	Man.	City	Pumpage	(ac-ft)	Aquifer	Man.
Name	Unit	Name	(ac-ft)	(ac-ft)	Name	Unit

MARSHALL COUNTY

COL		LAKE CITY	4	80	COL	
DKOT		KIDDER	10	0		
DKOT		LANGFORD	28	195	DKOT	
MJ	C	BRITTON	0	1,086	MJ	C
PCO		EDEN	11	0		
VEB		VEBLEN	32	876	MULT	
				2,237		

MUNICIPAL USE FROM MARSHALL COUNTY  
AMOUNTS TO 85 AC-FT.

M U N I C I P A L   U S E   &   A P P R O P R I A T I O N S  
B Y   C O U N T Y

<u>Source (pumpage)</u>		Town or	Annual	Approp.	<u>Source (approp.)</u>	
Aquifer	Man.	City	Pumpage	(ac-ft)	Aquifer	Man.
Name	Unit	Name	(ac-ft)	(ac-ft)	Name	Unit

MINER COUNTY

?		EIPHANY	5	0	
?		FEDORA	9	0	
?		VILAS	3	0	
DKOT		CARTHAGE	30	275	DKOT
DKOT		ROSWELL	3	43	DKOT
HO		CANOVA	17	478	HO
SOUX		HOWARD	139	1,402	MULT
				2,198	

MUNICIPAL USE FROM MINER COUNTY  
AMOUNTS TO 206 AC-FT.

M U N I C I P A L   U S E   &   A P P R O P R I A T I O N S  
B Y   C O U N T Y

<u>Source (pumpage)</u>		Town or	Annual		<u>Source (appropriation)</u>	
Aquifer	Man.	City	Pumpage	Approp.	Aquifer	Man.
Name	Unit	Name	(ac-ft)	(ac-ft)	Name	Unit

MINNEHAHA   C O U N T Y

BS	S	BRANDON	200	3,968	BS	S
BS	SF	BALTIC	31	1,093	BS	SF
BS	SF	SIOUX FALLS	14,561	109,517	BS	MULT
PS	U	COLTON	84	521	PS	U
SOUX		CORSON	4	43	SOUX	
SOUX		CROOKS	14	58	SOUX	
SOUX		DELL RAPIDS	279	2,976	BS	SF
SOUX		GARRETSON	123	326	SOUX	
SOUX		HARTFORD	116	557	SOUX	
SOUX		HUMBOLDT	35	159	SOUX	
SRKC		VALLEY SPRINGS	53	478	SRKC	
				119,696		

MUNICIPAL USE FROM MINNEHAHA COUNTY  
AMOUNTS TO 15,500 AC-FT.

M U N I C I P A L   U S E   &   A P P R O P R I A T I O N S  
B Y   C O U N T Y

<u>Source (pumpage)</u>		Town or	Annual	Approp.	<u>Source (approp.)</u>	
Aquifer	Man.	City	Pumpage	(ac-ft)	Aquifer	Man.
Name	Unit	Name	(ac-ft)	(ac-ft)	Name	Unit

MOODY COUNTY

BS	M	EGAN	24	0	BS	M
BS	M	FLANDREAU	284	5,951	BS	M
BS	M	TRENT	15	543	BS	M
HO		COLMAN	38	318	HO	
PS	U	WARD	5	72	PS	U
				-----		
				6,884		

MUNICIPAL USE FROM MOODY COUNTY  
AMOUNTS TO 366 AC-FT.



M U N I C I P A L   U S E   &   A P P R O P R I A T I O N S  
B Y   C O U N T Y

<u>Source (pumpage):</u>		Town or	Annual		<u>Source (approp.)</u>	
Aquifer	Man.	City	Pumpage	Approp.	Aquifer	Man.
Name	Unit	Name	(ac-ft)	(ac-ft)	Name	Unit

POTTER COUNTY

B	E	TOLSTOY	11	181	B	E
B	HS	HOVEN	94	2,976	B	HS
DKOT		GETTYSBURG	0	203	DKOT	
				-----		
				3,360		

MUNICIPAL USE FROM POTTER COUNTY  
AMOUNTS TO 105 AC-FT.

M U N I C I P A L   U S E   &   A P P R O P R I A T I O N S  
B Y   C O U N T Y

<u>Source (pumpage)</u>		Town or City Name	Annual Pumpage (ac-ft)	Approp. (ac-ft)	<u>Source (approp.)</u>	
Aquifer Name	Man. Unit				Aquifer Name	Man. Unit

ROBERTS   COUNTY

FMT		ROSHOLT	38	239	FMT	
PS	U	NEW EFFINGTON	22	65	PS	U
PS	U	SUMMIT	28	644	PS	U
VEB		CORONA	11	217	VEB	
VEB		PEEVER	17	80	VEB	
VEB		SISSETON	433	11,439	MULT	
VEB		WILMOT	75	282	VEB	
				-----		
				12,966		

MUNICIPAL USE FROM ROBERTS COUNTY  
AMOUNTS TO      624 AC-FT.

M U N I C I P A L   U S E   &   A P P R O P R I A T I O N S  
B Y   C O U N T Y

<u>Source (pumpage)</u>	Town or	Annual	Approp.	<u>Source (approp.)</u>
Aquifer   Man.	City	Pumpage	(ac-ft)	Aquifer   Man.
Name   Unit	Name	(ac-ft)	(ac-ft)	Name   Unit

S A N B O R N   C O U N T Y

DKOT	FORESTBURG	11	188	DKOT
DKOT	LETCHER	17	159	DKOT
NBRR	WOONSOCKET	119	362	NBRR
			-----	
			709	

MUNICIPAL USE FROM SANBORN COUNTY  
AMOUNTS TO      147 AC-FT.

M U N I C I P A L   U S E   &   A P P R O P R I A T I O N S  
B Y   C O U N T Y

<u>Source (pumpage)</u>		Town or	Annual		<u>Source (approp.)</u>	
Aquifer	Man.	City	Pumpage	Approp.	Aquifer	Man.
Name	Unit	Name	(ac-ft)	(ac-ft)	Name	Unit

S P I N K   C O U N T Y

DKOT		ASHTON	12	159	DKOT	
DKOT		ATHOL	6	0		
DKOT		BRENTFORD	8	43	DKOT	
DKOT		CONDE	23	130	DKOT	
DKOT		DOLAND	47	181	DKOT	
DKOT		FRANKFORT	16	116	DKOT	
DKOT		MELLETTE	17	138	DKOT	
DKOT		NORTHVILLE	10	50	DKOT	
DKOT		REDFIELD	528	1,926	T	H
DKOT		TULARE	18	1,767	DKOT	
T	WS	S. SPINK-N. BEADLE	0	550	T	WS
				-----		
				5,060		

MUNICIPAL USE FROM SPINK COUNTY  
AMOUNTS TO 685 AC-FT.

M U N I C I P A L   U S E   &   A P P R O P R I A T I O N S  
B Y   C O U N T Y

Source (pumpage)	Town or	Annual	Approp.	Source (approp.)
Aquifer   Man.	City	Pumpage	(ac-ft)	Aquifer   Man.
Name      Unit.	Name	(ac-ft)	(ac-ft)	Name      Unit

SULLY   C O U N T Y

INKR	AGAR	13	98	MULT
INKR	ONIDA	110	1,151	INKR
			1,249	

MUNICIPAL USE FROM SULLY COUNTY  
AMOUNTS TO      123 AC-FT.

M U N I C I P A L   U S E   &   A P P R O P R I A T I O N S  
B Y   C O U N T Y

<u>Source (pumpage)</u>		Town or	Annual	Approp.	<u>Source (approp.)</u>	
Aquifer	Man.	City	Pumpage	(ac-ft)	Aquifer	Man.
Name	Unit	Name	(ac-ft)	(ac-ft)	Name	Unit

TURNER COUNTY

?		DOLTON	5	0		
NBRR		IRENE	0	601	NBRR	
PAC		HURLEY	33	1,506	PAC	
PAC		PARKER	195	2,780	MULT	
PS	U	MARION	103	2,172	PS	U
SOUX		CHANCELLOR	18	80	SOUX	
SOUX		MONROE	11	43	SOUX	
UVM		CENTERVILLE	127	724	UVM	
UVM		DAVIS	9	369	UVM	
UVM		VIBORG	134	977	MULT	
				-----		
				9,252		

MUNICIPAL USE FROM TURNER COUNTY  
AMOUNTS TO 635 AC-FT.

M U N I C I P A L   U S E   &   A P P R O P R I A T I O N S  
B Y   C O U N T Y

<u>Source (pumpage)</u>		Town or	Annual		<u>Source (approp.)</u>	
Aquifer	Man.	City	Pumpage	Approp.	Aquifer	Man.
Name	Unit	Name	(ac-ft)	(ac-ft)	Name	Unit

U N I O N   C O U N T Y

BRC		ALCESTER	91	116		BRC
BRC		BERESFORD	223	2,035		MULT
M		ELK POINT	192	1,789		MULT
M		JEFFERSON	40	652		M
M		MCCOOK LK SAN DIST	133	652		M
M		NORTH SIOUX CITY	224	803		MULT
				6,047		

MUNICIPAL USE FROM UNION COUNTY  
AMOUNTS TO 903 AC-FT.

M U N I C I P A L   U S E   &   A P P R O P R I A T I O N S  
B Y   C O U N T Y

Source (pumpage)	Town or	Annual	Approp.	Source (approp.)
Aquifer    Man.	City	Pumpage	(ac-ft)	Aquifer    Man.
Name        Unit	Name	(ac-ft)	(ac-ft)	Name        Unit

WALWORTH    COUNTY

G	GLENHAM	13	116	G
J	JAVA	25	188	J
S	SELBY	139	1,130	S
			1,434	

MUNICIPAL USE FROM WALWORTH COUNTY  
AMOUNTS TO    177 AC-FT.



M U N I C I P A L   U S E   &   A P P R O P R I A T I O N S  
B Y   C O U N T Y

<u>Source (pumpage)</u>		Town or	Annual		<u>Source (approp.)</u>	
Aquifer	Man.	City	Pumpage	Approp.	Aquifer	Man.
Name	Unit	Name	(ac-ft)	(ac-ft)	Name	Unit

YANKTON COUNTY

DKOT		VOLIN	0	159	DKOT	
M		GAYVILLE	23	268	M	
M		MISSION HILL	14	0		
PS	M	LESTERVILLE	0	58	PS	M
				-----		
				485		

MUNICIPAL USE FROM YANKTON COUNTY  
AMOUNTS TO 37 AC-FT.

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IT IS CALCULATED THAT A TOTAL OF 233  
MUNICIPALITIES PUMP APPROXIMATELY 35,312  
AC-FT WHILE THEY HAVE 393,749 AC-FT  
APPROPRIATED TO THEM.

UQS0009 - END OF DATA SET

