U.S. Hydropower Resource Assessment
for
South Dakota

James E. Francfort

Published December 1993

**Idaho National Engineering Laboratory
EG&G Idaho, Inc.
Idaho Falls, Idaho 83415**

**Prepared for the
U.S. Department of Energy
Assistant Secretary for Energy Efficiency and Renewable Energy
Idaho Operations Office
Under DOE Contract DE-AC07-76ID01570**

MASTER

REPRODUCTION OF THIS DOCUMENT IS PROHIBITED

2b

ABSTRACT

The Department of Energy is developing an estimate of the hydropower development potential in this country. The Hydropower Evaluation Software (HES) is a computer model that was developed by the Idaho National Engineering Laboratory for this purpose. The HES measures the potential hydropower resources available in the United States, using uniform criteria for measurement. The software was developed and tested using hydropower information and data provided by the Southwestern Power Administration. It is a dBASE menu-driven software application that allows the personal computer user to assign environmental attributes to potential hydropower sites, calculate development suitability factors for each site based on the environmental attributes present, and generate reports based on these suitability factors. This report details the resource assessment results for the state of South Dakota.

CONTENTS

ABSTRACT	iii
INTRODUCTION	1
Model Development	1
Model Goal	1
Dam Status	2
ASSESSMENT RESULTS	2
Summary Results	2
Detailed Results	4
OBTAINING INDIVIDUAL STATE INFORMATION	5
ADDITIONAL HYDROPOWER EVALUATION SOFTWARE INFORMATION	6
REFERENCES	6
Appendix A—Hydropower Capacity Summary	A-1
Appendix B—Hydropower Resource Assessment by River Basin	B-1
Appendix C—South Dakota (SD) Site	C-1
Appendix D—Resource Database Listing	D-1

FIGURES

1. Number of sites with various capacity potentials	2
2. The Hydropower Evaluation Software identified potential hydropower capacity and the unadjusted potential capacity	3
3. The number of sites with potential hydropower capacity and the total megawatts of potential capacity	3
4. Number of sites with potential hydropower capacity in the South Dakota river basins	4
5. Potential hydropower capacity in the South Dakota river basins	5

U.S. Hydropower Resource Assessment for South Dakota

INTRODUCTION

In June 1989, the U.S. Department of Energy initiated the development of a National Energy Strategy to identify the energy resources available to support the expanding demand for energy in the United States. Public hearings conducted as part of the strategy development process indicated that potential hydropower resources were not well defined. As a result, the Department of Energy established an interagency Hydropower Resource Assessment Team to ascertain the hydropower potential. In connection with these efforts by the Department of Energy, the Idaho National Engineering Laboratory designed the Hydropower Evaluation Software (HES), which has been used to perform a resource assessment of the undeveloped hydropower potential in South Dakota (as well as several other states). This report presents the results of the hydropower resource assessment for the state of South Dakota. Pumped storage hydropower potential is not included.

The HES was developed as a tool to measure hydropower potential by regional power marketing administrations and state energy agencies, because they were the most likely to have and need accurate hydropower information. The HES was not intended to provide precise development factors for individual sites, but to provide regional or state capacity totals. Because the software was developed as a generic measurement tool encompassing national issues, regional and state totals must be considered judiciously; various local issues may skew hydropower potential totals. The information for the resource assessment was compiled from the Federal Energy Regulatory Commission's Hydropower Resource Assessment database and several other sources. Refer to DOE/ID-10338, the User's Manual (Francfort, Matthews, Rinehart, 1991) for the specifics of the software and to DOE/ID-10430,

the Status Report (Francfort, Moore, Rinehart, 1993) for an overview of all resource assessment activities to date.

Model Development

Hydropower Evaluation Software, both a probability-factor computer model and a data base, is a dBASE, menu-driven software application that is intended to be user-friendly. Computer screens and report generation capabilities were developed to meet the needs of users nationwide. The software uses environmental attribute data to generate an overall project environmental suitability factor (PESF) between 0.1 and 0.9, where 0.9 indicates the highest likelihood of development and 0.1 indicates the lowest likelihood of development. Suitability factors depend on environmental attributes of a potential site. They reflect the considerations that (a) environmental concerns can make a potential site unacceptable, prohibiting its development (for a suitability factor of 0.1), or (b) absence of environmental concern can have little or no effect on the likelihood of site development (for a suitability factor of 0.9). A combination of attributes results in a lower suitability factor because multiple environmental considerations reduce the likelihood that a site may be developed to its physical potential.

Model Goal

The goal of the HES is to assemble an accurate resource database of all potential hydropower sites in the United States for use as a planning tool to determine the viable national hydropower potential. Potential hydropower is not limited to the development of new sites; it also includes the development of additional hydropower at sites that currently have hydropower but are not developed to their full potential. This hydropower potential is a source of nonpolluting, renewable energy available to meet the growing power needs of the United States. The HES should make

this goal attainable and help assure a set of uniform criteria for national assessment.

Dam Status

The effects of environmental attributes vary by dam status. The dam status classifications follow the Federal Energy Regulatory Commission (FERC) standard, which is

- W = Developed hydropower site with power. The total hydropower capacity has not been fully developed. Only the undeveloped capacity is discussed in this report.
- W/O = Developed site without power generation. The site has some type of developed impoundment or diversion structure but no hydropower generating capacity.
- U = Undeveloped site. The site does not have power generation capability nor a developed impoundment or diversion structure.

ASSESSMENT RESULTS

Summary Results

A total of 33 sites have been identified and assessed for their hydropower potential. Information as to the potential megawatts of capacity for 4 of the sites was not available; however, these sites have been identified as having hydropower potential and are included in the group of 33. The Hydropower Evaluation Software results for site capacities range from 35 kilowatts to 234 megawatts. Most of the sites have potential capacities of under 1 megawatts (Figure 1).

The unadjusted hydropower potential for South Dakota was identified as being 1,124 megawatts. The Hydropower Evaluation Software results lower this estimate 38% to 695 megawatts. The greatest reduction in undeveloped potential occurs at developed sites with current power production. These sites have a Hydropower Evaluation Software estimated capacity of 285 megawatts, a 50% reduction in capacity (Figure 2). The number of sites does not change, only the identified capacity is reassessed (Figure 3).

Figure 1. Number of sites with various capacity potentials. The unknown category is for sites that have hydropower potential but the size of the potential is undefined.

Figure 2. The Hydropower Evaluation Software identified potential hydropower capacity and the unadjusted potential capacity.

Figure 3. The number of sites with potential hydropower capacity and the total megawatts of potential capacity.

The 33 identified sites are located within 2 major and many minor river basins. The number of sites per river basin ranges from 1 each in many of the minor river basins to 6 sites in the Cheyenne River Basin (Figure 4). The Missouri main stream has the most undeveloped potential hydropower capacity of the South Dakota river basins (Figure 5).

Detailed Results

The appendices contain, in the form of Hydropower Evaluation Software generated reports, detailed information of the potential hydropower capacity in South Dakota. The appendices contain the following information:

- Appendix A** The hydropower capacity summary for South Dakota categorizes sites by dam status. The number of sites, unadjusted capacity, and Hydropower Evaluation Software adjusted capacity are provided based on the dam status.
- Appendix B** The hydropower resource assessment by river basin includes the FERC project number, project

name, stream name, dam status, unadjusted capacity, and Hydropower Evaluation Software adjusted capacity for each of the individual sites. Subtotals are provided for each river basin.

- Appendix C** This is a listing of the project numbers, plant name, stream name, if a site is Federally owned, unadjusted capacity, and Hydropower Evaluation Software adjusted capacity. The sites are grouped by dam status.

- Appendix D** This section contains a resource database listing for each of the 33 sites in South Dakota. Information includes plant, stream, state, county, river basin and owner names; project number; name plate and Hydropower Evaluation Software adjusted capacity ratings; the unit and plant types, dam status; latitude; longitude; and the environmental factors that the Hydropower Evaluation Software uses to determine the project environmental suitability factor.

Figure 4. Number of sites with potential hydropower capacity in the South Dakota river basins.

Figure 5. Potential hydropower capacity in the South Dakota river basins.

OBTAINING INDIVIDUAL STATE INFORMATION

Additional copies of the hydropower resource assessment results for individual states are available and can be obtained by writing or calling the National Technical Information Service (NTIS).

Telephone Orders – (703) 487-4650. NTIS sales desk and customer services are available between 8:30 a.m. and 5:00 p.m., Eastern Standard Time.

Fax – (703) 321-8547. Customers may fax their orders to NTIS. These orders may be charged to a NTIS deposit account, American Express, VISA, or MasterCard.

Mail Orders – Mail orders should be sent to National Technical Information Service, Document Sales, 5285 Port Royal Road, Springfield, VA 22161. Call the sales desk for prices before placing an order.

Method of Payment – Customers may pay for reports (and other NTIS products and services) by (a) credit card (American Express, Visa, or MasterCard); (b) check or money order on a United States bank payable to NTIS; (c) a NTIS deposit account; or (d) by asking to be billed (add \$7.50 per order, United States, Canada, and Mexico, only).

Handling Fee – A \$3.00 handling fee per total order applies to orders from the United States, Canada, and Mexico. Handling charges do not apply to rush order service or pick-up orders.

Postage and Shipping – Orders are shipped first class mail, or equivalent, to addresses in the United States, Canada, and Mexico.

Order Turnaround Time – Orders for technical reports generally are shipped within 2 to 8 days of receipt. For faster service, NTIS offers rush order service.

Rush Order Service – Call 1-800-533-NTIS. In Virginia, Canada, and Mexico call (703) 487-4700. For NTIS rush order service add

\$15.00 per item. This guarantees that an order will be processed through NTIS within 24 hours of its receipt. These orders receive immediate, individual attention. The items ordered are delivered by first class mail. Call NTIS for information on rush order service for computer products.

For Help In Tracing an Order – Call (703) 487-4650 and request the customer service option.

ADDITIONAL HYDROPOWER EVALUATION SOFTWARE INFORMATION

Additional information concerning the Hydropower Evaluation Software can be obtained by contacting Ben Rinehart or Jim Francfort at the addresses provided below. Copies of the software and the User's Manual may also be obtained from these individuals.

Ben Rinehart
Idaho National Engineering Laboratory
P.O. Box 1625
Idaho Falls, ID 83415-3830
(208) 526-1002

Jim Francfort
Idaho National Engineering Laboratory
P.O. Box 1625
Idaho Falls, ID 83415-3875
(208) 526-6787

Information concerning the state of South Dakota involvement with the resource assessment or about the identified sites may be obtained by contacting:

Mark McKillip
Energy Conservation Programs
Governor's Office of Energy Policy
217 West Missouri, Suite 200
Pierre, South Dakota 57501-4516
(605) 773-3603

REFERENCES

- Francfort, J. E., S. D. Matthews, and B. N. Rinehart, 1991, *Hydropower Evaluation Software User's Manual*, DOE/ID-10338, Idaho National Engineering Laboratory, Idaho Falls, Idaho.
- Francfort, J. E., K. M. Moore, and B. N. Rinehart, 1993, *Uniform Criteria for U.S. Hydropower Resource Assessment, Hydropower Evaluation Software Status Report*, DOE/ID-10430, Idaho National Engineering Laboratory, Idaho Falls, Idaho.

Appendix A

Hydropower Capacity Summary

DATE: 10/05/93

HYDROPOWER CAPACITY SUMMARY

State	Category	Number of Projects	Name Plate Capacity (KW)	HES Adjusted Capacity (KW)
SD	With Power	5	569485	284958.75
	W/O Power	25	548416	405049.90
	Undeveloped	3	5980	5382
	STATE TOTAL	33	1123881	695390.65
TOTALS	With Power	5	569485	284958.75
	W/O Power	25	548416	405049.90
	Undeveloped	3	5980	5382
GRAND TOTAL		33	1123881	695390.65

Appendix B

Hydropower Resource Assessment by River Basin

HYDROPOWER RESOURCE ASSESSMENT BY RIVER BASIN

FERC Number	Plant Name/ Stream	Dam Stat	Name Plate Rating (KW)	PESF	PESF * KW
** River Basin CHEYENNE RIVER BASIN					
05628	BELLE FOURCHE OWL CR,BELLE FOURCHE R	WO	700.00	0.75	525.00
09127	CAMPBELL 1 REDWATER CNL(REDWATER CR)	WO	346.00	0.90	311.40
SD004	CHERRY CREEK CHEYENNE R	WO	14000.00	0.50	7000.00
SD005	PEDRO CHEYENNE R	WO	13000.00	0.50	6500.00
SD006	ANGOSTURA CHEYENNE R	WO	10000.00	0.50	5000.00
SD007	COAL MINE CHEYENNE R	WO	6000.00	0.50	3000.00
** Subtotal **			44046.00		22336.40
** River Basin MINOR RIVER BASINS					
SD024	Elm Dam Elm River	U	60.00	0.90	54.00
SD025	Canton Dam Sioux River	U	3020.00	0.90	2718.00
SD026	Flandreau Dam Sioux River	U	2900.00	0.90	2610.00
SD010	Spearfish #1 Spearfish Creek	W	620.00	0.50	310.00
SD011	Englewood Whitewood Creek	W	468.00	0.75	351.00
SD012	White River Hydroelectric Little White River	W	397.00	0.75	297.75
SD013	James Diversion James River	WO	690.00	0.90	621.00
SD014	Willow Creek Dam Willow Creek	WO	360.00	0.90	324.00
SD015	Willow Creek Lake Willow Creek	WO	300.00	0.90	270.00

HYDROPOWER RESOURCE ASSESSMENT BY RIVER BASIN

FERC Number	Plant Name/ Stream	Dam Stat	Name Plate Rating (KW)	PESF	PESF * KW
SD016	Crow Creek Dam Crow Creek	WO	110.00	0.90	99.00
SD017	Mitchell Dam Firesteel Creek	WO	70.00	0.50	35.00
SD018	Cold Brook Lake Fall River	WO	50.00	0.75	37.50
SD019	Vermillion Lake Vermillion River	WO	480.00	0.90	432.00
SD020	Sheridan Lake Spring Creek	WO	480.00	0.75	360.00
SD021	Deerfield Reservoir Castle Creek	WO	250.00	0.50	125.00
SD022	Pactola Reservoir Rapid Creek	WO	1330.00	0.50	665.00
SD023	Shadehill Reservoir Grand River	WO	200.00	0.50	100.00
SD027	Oglala Dam White Clay Creek	WO	0.00	0.75	0.00
SD028	Lake Parmley Snake Creek	WO	50.00	0.90	45.00
SD029	Houghton Dam James River	WO	0.00	0.10	0.00
SD030	Richmond Lake Foot Creek	WO	0.00	0.75	0.00
SD031	Columbia Road Dam James River	WO	0.00	0.10	0.00
** Subtotal **			11835.00		9454.25
** River Basin MISSOURI MAIN STREAM					
SD008	Gavins Point Dam Missouri River	W	100000.00	0.50	50000.00
SD009	Big Bend Dam Missouri River	W	468000.00	0.50	234000.00

HYDROPOWER RESOURCE ASSESSMENT BY RIVER BASIN

FERC Number	Plant Name/ Stream	Dam Stat	Name Plate Rating (KW)	PESF	PESF * KW
SD001	FORT RANDALL MISSOURI R	WO	176000.00	0.50	88000.00
SD002	OAHE MISSOURI R	WO	144000.00	0.90	129600.00
SD003	PONY HILLS DIV CNL(MISSOURI R)	WO	180000.00	0.90	162000.00
** Subtotal **			1068000.00		663600.00
*** Total ***			1123881.00		695390.65

Appendix C

South Dakota (SD) Sites

HYDROPOWER RESOURCE ASSESSMENT BY STATE

FERC Number	Plant Name/ Stream	Fed. Proj	Name Plate Rating (KW)	PESF	KW * PESF
** State Name SD					
** Dam Status: W					
SD008	Gavins Point Dam Missouri River	Yes	100000.00	0.50	50000.00
SD009	Big Bend Dam Missouri River	Yes	468000.00	0.50	234000.00
SD010	Spearfish #1 Spearfish Creek		620.00	0.50	310.00
SD011	Englewood Whitewood Creek		468.00	0.75	351.00
SD012	White River Hydroelectric Little White River		397.00	0.75	297.75
* Subsubtotal *			569485.00		284958.75
** Subtotal **			569485.00		284958.75
*** Total ***			569485.00		284958.75

HYDROPOWER RESOURCE ASSESSMENT BY STATE

FERC Number	Plant Name/ Stream	Fed. Proj	Name Plate Rating (KW)	PESF	KW * PESF
** State Name SD					
** Dam Status: WO					
SD003	PONY HILLS DIV CNL(MISSOURI R)		180000.00	0.90	162000.00
SD004	CHERRY CREEK CHEYENNE R		14000.00	0.50	7000.00
SD005	PEDRO CHEYENNE R		13000.00	0.50	6500.00
SD028	Lake Parmley Snake Creek		50.00	0.90	45.00
SD029	Houghton Dam James River		0.00	0.10	0.00
SD030	Richmond Lake Foot Creek		0.00	0.75	0.00
SD031	Columbia Road Dam James River		0.00	0.10	0.00
SD001	FORT RANDALL MISSOURI R	Yes	176000.00	0.50	88000.00
SD002	OAHE MISSOURI R	Yes	144000.00	0.90	129600.00
SD006	ANGOSTURA CHEYENNE R	Yes	10000.00	0.50	5000.00
SD007	COAL MINE CHEYENNE R	Yes	6000.00	0.50	3000.00
SD013	James Diversion James River	Yes	690.00	0.90	621.00
SD018	Cold Brook Lake Fall River	Yes	50.00	0.75	37.50
SD020	Sheridan Lake Spring Creek	Yes	480.00	0.75	360.00
SD021	Deerfield Reservoir Castle Creek	Yes	250.00	0.50	125.00

HYDROPOWER RESOURCE ASSESSMENT BY STATE

FERC Number	Plant Name/ Stream	Fed. Proj	Name Plate Rating (KW)	PESF	KW * PESF
SD022	Pactola Reservoir Rapid Creek	Yes	1330.00	0.50	665.00
SD023	Shadehill Reservoir Grand River	Yes	200.00	0.50	100.00
SD014	Willow Creek Dam Willow Creek		360.00	0.90	324.00
SD015	Willow Creek Lake Willow Creek		300.00	0.90	270.00
SD016	Crow Creek Dam Crow Creek		110.00	0.90	99.00
SD017	Mitchell Dam Firesteel Creek		70.00	0.50	35.00
SD019	Vermillion Lake Vermillion River		480.00	0.90	432.00
SD027	Oglala Dam White Clay Creek		0.00	0.75	0.00
09127	CAMPBELL 1 REDWATER CNL(REDWATER CR)		346.00	0.90	311.40
05628	BELLE FOURCHE OWL CR,BELLE FOURCHE R		700.00	0.75	525.00
* Subsubtotal *			548416.00		405049.90
** Subtotal **			548416.00		405049.90
*** Total ***			548416.00		405049.90

HYDROPOWER RESOURCE ASSESSMENT BY STATE

FERC Number	Plant Name/ Stream	Fed. Proj	Name Plate Rating (KW)	PESF	KW * PESF
** State Name SD					
** Dam Status: U					
SD024	Elm Dam Elm River		60.00	0.90	54.00
SD025	Canton Dam Sioux River		3020.00	0.90	2718.00
SD026	Flandreau Dam Sioux River		2900.00	0.90	2610.00
* Subsubtotal *			5980.00		5382.00
** Subtotal **			5980.00		5382.00
*** Total ***			5980.00		5382.00

DATE: 10/05/93

HYDROPOWER CAPACITY SUMMARY

State	Category	Number of Projects	Name Plate Capacity (KW)	HES Adjusted Capacity (KW)
SD	With Power	5	569485	284958.75
	W/O Power	25	548416	405049.90
	Undeveloped	3	5980	5382
	STATE TOTAL	33	1123881	695390.65
TOTALS	With Power	5	569485	284958.75
	W/O Power	25	548416	405049.90
	Undeveloped	3	5980	5382
GRAND TOTAL		33	1123881	695390.65

Appendix D

Resource Database Listing

RESOURCE DATABASE LISTING

DATE: 10/05/93

PAGE NO: 1

FERC Number	Plant Name	Stream	State Name		
05628	BELLE FOURCHE	OWL CR,BELLE FOURCHE R	SD		
County Name	River Basin				
BUTTE	CHEYENNE RIVER BASIN				
Class	Owner Name				
R	ENERGENICS SYSTEMS INC				
Name Plate Rating (KW)	PESF	PESF*KW	Annual Energy Rating (MWh)	PESF Annual Energy Rating (MWh)	
700.00	0.75	525.00	0.00	0	
Unit Type	Plant Type	Project Status	Dam Status	Latitude Longitude	
C	ROR	XX	WO	4444.00 10340.00	
Factor	Exist	Prob	Factor	Exist	Prob
Wild/Scenic Protection		0.90	Wildlife Value		0.90
Wild/Scenic Tributary or			Threatened/Endangered Fish		0.90
Upstream/Downstream			Threatened/Endangered Wildlife		0.90
Wild/Scenic Location		0.90	Federal Land Code 103		0.90
Cultural Value		0.90	Federal Land Code 104		0.90
Fish Presence Value	Y	0.75	Federal Land Code 105		0.90
Geologic Value		0.90	Federal Land Code 106		0.90
Historic Value		0.90	Federal Land Code 107		0.90
Other Value		0.90	Federal Land Code 108		0.90
Recreation Value		0.90	Federal Land Code 198		0.90
Scenic Value		0.90			

RESOURCE DATABASE LISTING

DATE: 10/05/93

PAGE NO: 2

FERC Number	Plant Name	Stream	State Name
09127	CAMPBELL 1	REDWATER CNL(REDWATER CR)	SD

County Name	River Basin
BUTTE	CHEYENNE RIVER BASIN

Class	Owner Name
P	HYDROVEST INC

Name Plate Rating (KW)	PESF	PESF*KW	Annual Energy Rating (MWh)	PESF Annual Energy Rating (MWh)
346.00	0.90	311.40	0.00	0

Unit Type	Plant Type	Project Status	Dam Status	Latitude	Longitude
R	ROR	XX	WO	4436.00	10350.00

Factor	Exist	Prob	Factor	Exist	Prob
Wild/Scenic Protection		0.90	Wildlife Value		0.90
Wild/Scenic Tributary or			Threatened/Endangered Fish		0.90
Upstream/Downstream			Threatened/Endangered Wildlife		0.90
Wild/Scenic Location		0.90	Federal Land Code 103		0.90
Cultural Value		0.90	Federal Land Code 104		0.90
Fish Presence Value		0.90	Federal Land Code 105		0.90
Geologic Value		0.90	Federal Land Code 106		0.90
Historic Value		0.90	Federal Land Code 107		0.90
Other Value		0.90	Federal Land Code 108		0.90
Recreation Value		0.90	Federal Land Code 198		0.90
Scenic Value		0.90			

R E S O U R C E D A T A B A S E L I S T I N G

DATE: 10/05/93

PAGE NO: 3

FERC Number	Plant Name	Stream	State Name
SD001	FORT RANDALL	MISSOURI R	SD

County Name	River Basin
BON HOMME	MISSOURI MAIN STREAM

Class	Owner Name
F	CORPS OF ENGINEERS

Name Plate Rating (KW)	PESF	PESF*KW	Annual Energy Rating (MWh)	PESF Annual Energy Rating (MWh)
176000.00	0.50	88000.00	0.00	0

Unit Type	Plant Type	Project Status	Dam Status	Latitude Longitude	4304.00 9833.00
C	STG		WO		

Factor	Exist	Prob	Factor	Exist	Prob
Wild/Scenic Protection		0.90	Wildlife Value	Y	0.75
Wild/Scenic Tributary or Upstream/Downstream			Threatened/Endangered Fish		0.90
Wild/Scenic Location		0.90	Threatened/Endangered Wildlife	Y	0.75
Cultural Value	Y	0.75	Federal Land Code 103		0.90
Fish Presence Value	Y	0.75	Federal Land Code 104		0.90
Geologic Value		0.90	Federal Land Code 105		0.90
Historic Value	Y	0.75	Federal Land Code 106		0.90
Other Value		0.90	Federal Land Code 107		0.90
Recreation Value	Y	0.75	Federal Land Code 108		0.90
Scenic Value	Y	0.90	Federal Land Code 198		0.90

R E S O U R C E D A T A B A S E L I S T I N G

DATE: 10/05/93

PAGE NO: 4

FERC Number	Plant Name	Stream	State Name
SD002	OAHE	MISSOURI R	SD

County Name	River Basin
STANLEY	MINOR RIVER BASINS

Class	Owner Name
F	CORPS OF ENGINEERS

Name Plate Rating (KW)	PESF	PESF*KW	Annual Energy Rating (MWh)	PESF Annual Energy Rating (MWh)
144000.00	0.90	129600.00	0.00	0

Unit Type	Plant Type	Project Status	Dam Status	Latitude	4427.00
C	STG		WO	Longitude	10023.00

<u>Factor</u>	<u>Exist</u>	<u>Prob</u>	<u>Factor</u>	<u>Exist</u>	<u>Prob</u>
Wild/Scenic Protection		0.90	Wildlife Value		0.90
Wild/Scenic Tributary or Upstream/Downstream			Threatened/Endangered Fish		0.90
Wild/Scenic Location		0.90	Threatened/Endangered Wildlife		0.90
Cultural Value		0.90	Federal Land Code 103		0.90
Fish Presence Value		0.90	Federal Land Code 104		0.90
Geologic Value		0.90	Federal Land Code 105		0.90
Historic Value		0.90	Federal Land Code 106		0.90
Other Value		0.90	Federal Land Code 107		0.90
Recreation Value		0.90	Federal Land Code 108		0.90
Scenic Value		0.90	Federal Land Code 198		0.90

RESOURCE DATABASE LISTING

DATE: 10/05/93

PAGE NO: 5

FERC Number	Plant Name	Stream	State Name
SD003	PONY HILLS	DIV CNL(MISSOURI R)	SD

County Name	River Basin
SULLY	MINOR RIVER BASINS

Class		Owner Name		
0				
Name Plate Rating (KW)	PESF	PESF*KW	Annual Energy Rating (MWh)	PESF Annual Energy Rating (MWh)
180000.00	0.90	162000.00	0.00	0

Unit Type	Plant Type	Project Status	Dam Status	Latitude	4427.00
C	DIV		WO	Longitude	10023.00

Factor	Exist	Prob	Factor	Exist	Prob
Wild/Scenic Protection	0.90		Wildlife Value	0.90	
Wild/Scenic Tributary or Upstream/Downstream			Threatened/Endangered Fish	0.90	
Wild/Scenic Location	0.90		Threatened/Endangered Wildlife	0.90	
Cultural Value	0.90		Federal Land Code 103	0.90	
Fish Presence Value	0.90		Federal Land Code 104	0.90	
Geologic Value	0.90		Federal Land Code 105	0.90	
Historic Value	0.90		Federal Land Code 106	0.90	
Other Value	0.90		Federal Land Code 107	0.90	
Recreation Value	0.90		Federal Land Code 108	0.90	
Scenic Value	0.90		Federal Land Code 198	0.90	

RESOURCE DATABASE LISTING

DATE: 10/05/93

PAGE NO: 6

FERC Number	Plant Name	Stream	State Name
SD004	CHERRY CREEK	CHEYENNE R	SD

County Name	River Basin
HAAKON	CHEYENNE RIVER BASIN

Class	Owner Name
-------	------------

0

Name Plate Rating (KW)	PESF	PESF*KW	Annual Energy Rating (MWh)	PESF Annual Energy Rating (MWh)
14000.00	0.50	7000.00	0.00	0

Unit Type	Plant Type	Project Status	Dam Status	Latitude 4427.00 Longitude 10128.00
C	STG		WO	

Factor	Exist	Prob	Factor	Exist	Prob
Wild/Scenic Protection		0.90	Wildlife Value	Y	0.75
Wild/Scenic Tributary or Upstream/Downstream			Threatened/Endangered Fish		0.90
Wild/Scenic Location		0.90	Threatened/Endangered Wildlife		0.90
Cultural Value	Y	0.75	Federal Land Code 103		0.90
Fish Presence Value	Y	0.75	Federal Land Code 104		0.90
Geologic Value		0.90	Federal Land Code 105		0.90
Historic Value	Y	0.75	Federal Land Code 106		0.90
Other Value		0.90	Federal Land Code 107		0.90
Recreation Value		0.90	Federal Land Code 108		0.90
Scenic Value	Y	0.90	Federal Land Code 198		0.90

R E S O U R C E D A T A B A S E L I S T I N G

DATE: 10/05/93

PAGE NO: 7

FERC Number	Plant Name	Stream	State Name
SD005	PEDRO	CHEYENNE R	SD

County Name	River Basin
MEADE	CHEYENNE RIVER BASIN

Class	Owner Name
-------	------------

0

Name Plate Rating (KW)	PESF	PESF*KW	Annual Energy Rating (MWh)	PESF Annual Energy Rating (MWh)
13000.00	0.50	6500.00	0.00	0

Unit Type	Plant Type	Project Status	Dam Status	Latitude 4427.00 Longitude 10128.00
C	STG		WO	

Factor	Exist	Prob	Factor	Exist	Prob
Wild/Scenic Protection		0.90	Wildlife Value	Y	0.75
Wild/Scenic Tributary or			Threatened/Endangered Fish		0.90
Upstream/Downstream			Threatened/Endangered Wildlife		0.90
Wild/Scenic Location		0.90	Federal Land Code 103		0.90
Cultural Value	Y	0.75	Federal Land Code 104		0.90
Fish Presence Value	Y	0.75	Federal Land Code 105		0.90
Geologic Value		0.90	Federal Land Code 106		0.90
Historic Value	Y	0.75	Federal Land Code 107		0.90
Other Value		0.90	Federal Land Code 108		0.90
Recreation Value		0.90	Federal Land Code 198		0.90
Scenic Value	Y	0.90			

RESOURCE DATABASE LISTING

DATE: 10/05/93

PAGE NO: 8

FERC Number	Plant Name	Stream	State Name		
SD006	ANGOSTURA	CHEYENNE R	SD		
County Name	River Basin				
FALL RIVER	CHEYENNE RIVER BASIN				
Class	Owner Name				
F	BUREAU OF RECLAMATION				
Name Plate Rating (KW)	PESF	PESF*KW	Annual Energy Rating (MWh)	PESF Annual Energy Rating (MWh)	
10000.00	0.50	5000.00	0.00	0	
Unit Type	Plant Type	Project Status	Dam Status	Latitude 4321.00 Longitude 10326.00	
R	STG		WO		
Factor	Exist	Prob	Factor	Exist	Prob
Wild/Scenic Protection		0.90	Wildlife Value	Y	0.75
Wild/Scenic Tributary or Upstream/Downstream			Threatened/Endangered Fish		0.90
Wild/Scenic Location		0.90	Threatened/Endangered Wildlife		0.90
Cultural Value	Y	0.75	Federal Land Code 103		0.90
Fish Presence Value	Y	0.75	Federal Land Code 104		0.90
Geologic Value		0.90	Federal Land Code 105		0.90
Historic Value	Y	0.75	Federal Land Code 106		0.90
Other Value		0.90	Federal Land Code 107		0.90
Recreation Value		0.90	Federal Land Code 108		0.90
Scenic Value	Y	0.90	Federal Land Code 198		0.90

RESOURCE DATABASE LISTING

DATE: 10/05/93

PAGE NO: 9

FERC Number	Plant Name	Stream	State Name
SD007	COAL MINE	CHEYENNE R	SD

County Name	River Basin
FALL RIVER	CHEYENNE RIVER BASIN

Class	Owner Name
F	CORPS OF ENGINEERS

Name Plate Rating (KW)	PESF	PESF*KW	Annual Energy Rating (MWh)	PESF Annual Energy Rating (MWh)
6000.00	0.50	3000.00	0.00	0

Unit Type	Plant Type	Project Status	Dam Status	Latitude Longitude	4349.00 10326.00
C	STG		WO		

Factor	Exist	Prob	Factor	Exist	Prob
Wild/Scenic Protection		0.90	Wildlife Value	Y	0.75
Wild/Scenic Tributary or Upstream/Downstream			Threatened/Endangered Fish		0.90
Wild/Scenic Location		0.90	Threatened/Endangered Wildlife		0.90
Cultural Value	Y	0.75	Federal Land Code 103		0.90
Fish Presence Value	Y	0.75	Federal Land Code 104		0.90
Geologic Value		0.90	Federal Land Code 105		0.90
Historic Value	Y	0.75	Federal Land Code 106		0.90
Other Value		0.90	Federal Land Code 107		0.90
Recreation Value		0.90	Federal Land Code 108		0.90
Scenic Value	Y	0.90	Federal Land Code 198		0.90

R E S O U R C E D A T A B A S E L I S T I N G

DATE: 10/05/93

PAGE NO: 10

FERC Number	Plant Name	Stream	State Name
SD008	Gavins Point Dam	Missouri River	SD

County Name	River Basin
Yankton	Missouri Main Stream

Class	Owner Name
F	Corps of Engineers

Name Plate Rating (KW)	PESF	PESF*KW	Annual Energy Rating (MWh)	PESF Annual Energy Rating (MWh)
100000.00	0.50	50000.00	0.00	0

Unit Type	Plant Type	Project Status	Dam Status	Latitude Longitude	0.00 0.00
C	STG		W		

<u>Factor</u>	<u>Exist</u>	<u>Prob</u>	<u>Factor</u>	<u>Exist</u>	<u>Prob</u>
Wild/Scenic Protection	Y	0.50	Wildlife Value	Y	0.75
Wild/Scenic Tributary or Upstream/Downstream			Threatened/Endangered Fish	Y	0.75
Wild/Scenic Location	N	0.90	Threatened/Endangered Wildlife	N	0.90
Cultural Value	Y	0.75	Federal Land Code 103	N	0.90
Fish Presence Value	Y	0.75	Federal Land Code 104	N	0.90
Geologic Value	N	0.90	Federal Land Code 105	N	0.90
Historic Value	N	0.90	Federal Land Code 106	N	0.90
Other Value	N	0.90	Federal Land Code 107	N	0.90
Recreation Value	Y	0.75	Federal Land Code 108	N	0.90
Scenic Value	Y	0.90	Federal Land Code 198	N	0.90

RESOURCE DATABASE LISTING

DATE: 10/05/93

PAGE NO: 11

FERC Number	Plant Name	Stream	State Name		
SD009	Big Bend Dam	Missouri River	SD		
County Name	River Basin				
Buffalo	Missouri Main Stream				
Class	Owner Name				
F	Corps of Engineers				
Name Plate Rating (KW)	PESF	PESF*KW	Annual Energy Rating (MWh)	PESF Annual Energy Rating (MWh)	
468000.00	0.50	234000.00	0.00	0	
Unit Type	Plant Type	Project Status	Dam Status	Latitude Longitude	0.00 0.00
C	STG		W		
Factor	Exist	Prob	Factor	Exist	Prob
Wild/Scenic Protection	N	0.90	Wildlife Value	Y	0.75
Wild/Scenic Tributary or Upstream/Downstream			Threatened/Endangered Fish	Y	0.75
Wild/Scenic Location	N	0.90	Threatened/Endangered Wildlife	Y	0.75
Cultural Value	Y	0.75	Federal Land Code 103	N	0.90
Fish Presence Value	Y	0.75	Federal Land Code 104	N	0.90
Geologic Value	N	0.90	Federal Land Code 105	N	0.90
Historic Value	N	0.90	Federal Land Code 106	N	0.90
Other Value	N	0.90	Federal Land Code 107	Y	0.75
Recreation Value	Y	0.75	Federal Land Code 108	N	0.90
Scenic Value	N	0.90	Federal Land Code 198	N	0.90

RESOURCE DATABASE LISTING

DATE: 10/05/93

PAGE NO: 12

FERC Number	Plant Name	Stream	State Name
SD010	Spearfish #1	Spearfish Creek	SD

County Name	River Basin
Lawrence	Spearfish Creek

Class	Owner Name
P	Private Ownership HM Company

Name Plate Rating (KW)	PESF	PESF*KW	Annual Energy Rating (MWh)	PESF Annual Energy Rating (MWh)
620.00	0.50	310.00	0.00	0

Unit Type	Plant Type	Project Status	Dam Status	Latitude Longitude	0.00 0.00
C	STG	W	W		

Factor	Exist	Prob	Factor	Exist	Prob
Wild/Scenic Protection	N	0.90	Wildlife Value	Y	0.75
Wild/Scenic Tributary or Upstream/Downstream			Threatened/Endangered Fish	N	0.90
Wild/Scenic Location	N	0.90	Threatened/Endangered Wildlife	N	0.90
Cultural Value	Y	0.75	Federal Land Code 103	N	0.90
Fish Presence Value	Y	0.75	Federal Land Code 104	Y	0.75
Geologic Value	N	0.90	Federal Land Code 105	N	0.90
Historic Value	N	0.90	Federal Land Code 106	N	0.90
Other Value	N	0.90	Federal Land Code 107	N	0.90
Recreation Value	N	0.90	Federal Land Code 108	N	0.90
Scenic Value	Y	0.90	Federal Land Code 198	N	0.90

R E S O U R C E D A T A B A S E L I S T I N G

DATE: 10/05/93

PAGE NO: 13

FERC Number	Plant Name	Stream	State Name
SD011	Englewood	Whitewood Creek	SD

County Name	River Basin
Lawrence	Whitewood Creek

Class		Owner Name			
P	HM	Company			
Name Plate Rating (KW)	PESF	PESF*KW	Annual Energy Rating (MWh)	PESF Annual Energy Rating (MWh)	
468.00	0.75	351.00	0.00	0	

Unit Type	Plant Type	Project Status	Dam Status	Latitude Longitude	0.00 0.00
C	STG		W		

Factor	Exist	Prob	Factor	Exist	Prob
Wild/Scenic Protection	N	0.90	Wildlife Value	N	0.90
Wild/Scenic Tributary or Upstream/Downstream			Threatened/Endangered Fish	N	0.90
Wild/Scenic Location	N	0.90	Threatened/Endangered Wildlife	N	0.90
Cultural Value	N	0.90	Federal Land Code 103	N	0.90
Fish Presence Value	Y	0.75	Federal Land Code 104	N	0.90
Geologic Value	N	0.90	Federal Land Code 105	N	0.90
Historic Value	N	0.90	Federal Land Code 106	N	0.90
Other Value	N	0.90	Federal Land Code 107	N	0.90
Recreation Value	N	0.90	Federal Land Code 108	N	0.90
Scenic Value	N	0.90	Federal Land Code 198	N	0.90

R E S O U R C E D A T A B A S E L I S T I N G

DATE: 10/05/93

PAGE NO: 14

FERC Number	Plant Name	Stream	State Name
SD012	White River Hydroelectric	Little White River	SD

County Name	River Basin
Mallette	Little White River

Class	Owner Name
-------	------------

P	Don Jones
---	-----------

Name Plate Rating (KW)	PESF	PESF*KW	Annual Energy Rating (MWh)	PESF Annual Energy Rating (MWh)
397.00	0.75	297.75	0.00	0

Unit Type	Plant Type	Project Status	Dam Status	Latitude Longitude	0.00 0.00
C	STG		W		

<u>Factor</u>	<u>Exist</u>	<u>Prob</u>	<u>Factor</u>	<u>Exist</u>	<u>Prob</u>
Wild/Scenic Protection	N	0.90	Wildlife Value	N	0.90
Wild/Scenic Tributary or			Threatened/Endangered Fish	N	0.90
Upstream/Downstream			Threatened/Endangered Wildlife	N	0.90
Wild/Scenic Location	N	0.90	Federal Land Code 103	N	0.90
Cultural Value	N	0.90	Federal Land Code 104	N	0.90
Fish Presence Value	Y	0.75	Federal Land Code 105	N	0.90
Geologic Value	N	0.90	Federal Land Code 106	N	0.90
Historic Value	N	0.90	Federal Land Code 107	N	0.90
Other Value	N	0.90	Federal Land Code 108	N	0.90
Recreation Value	N	0.90	Federal Land Code 198	N	0.90
Scenic Value	N	0.90			

R E S O U R C E D A T A B A S E L I S T I N G

DATE: 10/05/93

PAGE NO: 15

FERC Number	Plant Name	Stream	State Name		
SD013	James Diversion	James River	SD		
	County Name	River Basin			
	Beadle	James River			
	Class	Owner Name			
	F	Bureau of Reclamation			
Name Plate Rating (KW)	PESF	PESF*KW	Annual Energy Rating (MWh)	PESF Annual Energy Rating (MWh)	
690.00	0.90	621.00	0.00	0	
Unit Type	Plant Type	Project Status	Dam Status	Latitude Longitude	0.00 0.00
C	RES		WO		
Factor	Exist	Prob	Factor	Exist	Prob
Wild/Scenic Protection	N	0.90	Wildlife Value	N	0.90
Wild/Scenic Tributary or Upstream/Downstream			Threatened/Endangered Fish	N	0.90
Wild/Scenic Location	N	0.90	Threatened/Endangered Wildlife	N	0.90
Cultural Value	N	0.90	Federal Land Code 103	N	0.90
Fish Presence Value	N	0.90	Federal Land Code 104	N	0.90
Geologic Value	N	0.90	Federal Land Code 105	N	0.90
Historic Value	N	0.90	Federal Land Code 106	N	0.90
Other Value	N	0.90	Federal Land Code 107	N	0.90
Recreation Value	N	0.90	Federal Land Code 108	N	0.90
Scenic Value	N	0.90	Federal Land Code 198	N	0.90

RESOURCE DATABASE LISTING

DATE: 10/05/93

PAGE NO: 16

FERC Number	Plant Name	Stream	State Name		
SD014	Willow Creek Dam	Willow Creek	SD		
	County Name	River Basin			
	Beadle	Willow Creek			
	Class	Owner Name			
	M	SD Game, Fish and Parks			
Name Plate Rating (KW)	PESF	PESF*KW	Annual Energy Rating (MWh)	PESF Annual Energy Rating (MWh)	
360.00	0.90	324.00	0.00	0	
Unit Type	Plant Type	Project Status	Dam Status	Latitude Longitude	0.00 0.00
C	RES		WO		
Factor	Exist	Prob	Factor	Exist	Prob
Wild/Scenic Protection	N	0.90	Wildlife Value	N	0.90
Wild/Scenic Tributary or Upstream/Downstream			Threatened/Endangered Fish	N	0.90
Wild/Scenic Location	N	0.90	Threatened/Endangered Wildlife	N	0.90
Cultural Value	N	0.90	Federal Land Code 103	N	0.90
Fish Presence Value	N	0.90	Federal Land Code 104	N	0.90
Geologic Value	N	0.90	Federal Land Code 105	N	0.90
Historic Value	N	0.90	Federal Land Code 106	N	0.90
Other Value	N	0.90	Federal Land Code 107	N	0.90
Recreation Value	N	0.90	Federal Land Code 108	N	0.90
Scenic Value	N	0.90	Federal Land Code 198	N	0.90

RESOURCE DATABASE LISTING

DATE: 10/05/93

PAGE NO: 17

FERC Number	Plant Name	Stream	State Name		
SD015	Willow Creek Lake	Willow Creek	SD		
County Name	River Basin				
Brown	Willow Creek				
Class	Owner Name				
M	City of Aberdeen				
Name Plate Rating (KW)	PESF	PESF*KW	Annual Energy Rating (MWh)	PESF Annual Energy Rating (MWh)	
300.00	0.90	270.00	0.00	0	
Unit Type	Plant Type	Project Status	Dam Status	Latitude Longitude	0.00 0.00
C	RES		WO		
Factor	Exist	Prob	Factor	Exist	Prob
Wild/Scenic Protection	N	0.90	Wildlife Value	N	0.90
Wild/Scenic Tributary or Upstream/Downstream			Threatened/Endangered Fish	N	0.90
Wild/Scenic Location	N	0.90	Threatened/Endangered Wildlife	N	0.90
Cultural Value	N	0.90	Federal Land Code 103	N	0.90
Fish Presence Value	N	0.90	Federal Land Code 104	N	0.90
Geologic Value	N	0.90	Federal Land Code 105	N	0.90
Historic Value	N	0.90	Federal Land Code 106	N	0.90
Other Value	N	0.90	Federal Land Code 107	N	0.90
Recreation Value	N	0.90	Federal Land Code 108	N	0.90
Scenic Value	N	0.90	Federal Land Code 198	N	0.90

RESOURCE DATABASE LISTING

DATE: 10/05/93

PAGE NO: 18

FERC Number	Plant Name	Stream	State Name		
SD016	Crow Creek Dam	Crow Creek	SD		
	County Name	River Basin			
	Buffalo	Crow Creek			
	Class	Owner Name			
	M	Crow Creek Tribe			
Name Plate Rating (KW)	PESF	PESF*KW	Annual Energy Rating (MWh)	PESF Annual Energy Rating (MWh)	
110.00	0.90	99.00	0.00	0	
Unit Type	Plant Type	Project Status	Dam Status	Latitude Longitude	0.00 0.00
C	RES		WO		

Factor	Exist	Prob	Factor	Exist	Prob
Wild/Scenic Protection	N	0.90	Wildlife Value	N	0.90
Wild/Scenic Tributary or Upstream/Downstream			Threatened/Endangered Fish	N	0.90
Wild/Scenic Location	N	0.90	Threatened/Endangered Wildlife	N	0.90
Cultural Value	N	0.90	Federal Land Code 103	N	0.90
Fish Presence Value	N	0.90	Federal Land Code 104	N	0.90
Geologic Value	N	0.90	Federal Land Code 105	N	0.90
Historic Value	N	0.90	Federal Land Code 106	N	0.90
Other Value	N	0.90	Federal Land Code 107	N	0.90
Recreation Value	N	0.90	Federal Land Code 108	N	0.90
Scenic Value	N	0.90	Federal Land Code 198	N	0.90

RESOURCE DATABASE LISTING

DATE: 10/05/93

PAGE NO: 19

FERC Number	Plant Name	Stream	State Name
SD017	Mitchell Dam	Firesteel Creek	SD

County Name	River Basin
Davison	Firesteel Creek

Class	Owner Name
-------	------------

M	City of Mitchell
---	------------------

Name Plate Rating (KW)	PESF	PESF*KW	Annual Energy Rating (MWh)	PESF Annual Energy Rating (MWh)
70.00	0.50	35.00	0.00	0

Unit Type	Plant Type	Project Status	Dam Status	Latitude Longitude	0.00 0.00
C	RES		WO		

Factor	Exist	Prob	Factor	Exist	Prob
Wild/Scenic Protection	N	0.90	Wildlife Value	N	0.90
Wild/Scenic Tributary or Upstream/Downstream			Threatened/Endangered Fish	N	0.90
Wild/Scenic Location	N	0.90	Threatened/Endangered Wildlife	N	0.90
Cultural Value	N	0.90	Federal Land Code 103	N	0.90
Fish Presence Value	Y	0.75	Federal Land Code 104	N	0.90
Geologic Value	N	0.90	Federal Land Code 105	N	0.90
Historic Value	Y	0.75	Federal Land Code 106	N	0.90
Other Value	N	0.90	Federal Land Code 107	N	0.90
Recreation Value	Y	0.75	Federal Land Code 108	N	0.90
Scenic Value	N	0.90	Federal Land Code 198	N	0.90

RESOURCE DATABASE LISTING

DATE: 10/05/93

PAGE NO: 20

FERC Number	Plant Name	Stream	State Name		
SD018	Cold Brook Lake	Fall River	SD		
County Name	River Basin				
Fall River	Fall River				
Class	Owner Name				
F	Corps of Engineers				
Name Plate Rating (KW)	PESF	PESF*KW	Annual Energy Rating (MWh)	PESF Annual Energy Rating (MWh)	
50.00	0.75	37.50	0.00	0	
Unit Type	Plant Type	Project Status	Dam Status	Latitude Longitude	0.00 0.00
C	RES		WO		
Factor	Exist	Prob	Factor	Exist	Prob
Wild/Scenic Protection	N	0.90	Wildlife Value	N	0.90
Wild/Scenic Tributary or Upstream/Downstream			Threatened/Endangered Fish	N	0.90
Wild/Scenic Location	N	0.90	Threatened/Endangered Wildlife	N	0.90
Cultural Value	N	0.90	Federal Land Code 103	N	0.90
Fish Presence Value	N	0.90	Federal Land Code 104	Y	0.75
Geologic Value	N	0.90	Federal Land Code 105	N	0.90
Historic Value	N	0.90	Federal Land Code 106	N	0.90
Other Value	N	0.90	Federal Land Code 107	N	0.90
Recreation Value	N	0.90	Federal Land Code 108	N	0.90
Scenic Value	N	0.90	Federal Land Code 198	N	0.90

RESOURCE DATABASE LISTING

DATE: 10/05/93

PAGE NO: 21

FERC Number	Plant Name	Stream	State Name		
SD019	Vermillion Lake	Vermillion River	SD		
County Name	River Basin				
McCook	Vermillion				
Class	Owner Name				
M	SD Game, Fish and Parks				
Name Plate Rating (KW)	PESF	PESF*KW	Annual Energy Rating (MWh)	PESF Annual Energy Rating (MWh)	
480.00	0.90	432.00	0.00	0	
Unit Type	Plant Type	Project Status	Dam Status	Latitude Longitude	0.00 0.00
C	RES		WO		
Factor	Exist	Prob	Factor	Exist	Prob
Wild/Scenic Protection	N	0.90	Wildlife Value	N	0.90
Wild/Scenic Tributary or Upstream/Downstream			Threatened/Endangered Fish	N	0.90
Wild/Scenic Location	N	0.90	Threatened/Endangered Wildlife	N	0.90
Cultural Value	N	0.90	Federal Land Code 103	N	0.90
Fish Presence Value	N	0.90	Federal Land Code 104	N	0.90
Geologic Value	N	0.90	Federal Land Code 105	N	0.90
Historic Value	N	0.90	Federal Land Code 106	N	0.90
Other Value	N	0.90	Federal Land Code 107	N	0.90
Recreation Value	N	0.90	Federal Land Code 108	N	0.90
Scenic Value	N	0.90	Federal Land Code 198	N	0.90

R E S O U R C E D A T A B A S E L I S T I N G

DATE: 10/05/93

PAGE NO: 22

FERC Number	Plant Name	Stream	State Name
SD020	Sheridan Lake	Spring Creek	SD

County Name	River Basin
Pennington	Spring Creek

Class	Owner Name
F	US Forest Service

Name Plate Rating (KW)	PESF	PESF*KW	Annual Energy Rating (MWh)	PESF Annual Energy Rating (MWh)
480.00	0.75	360.00	0.00	0

Unit Type	Plant Type	Project Status	Dam Status	Latitude Longitude	0.00 0.00
C	RES		WO		

Factor	Exist	Prob	Factor	Exist	Prob
Wild/Scenic Protection	N	0.90	Wildlife Value	N	0.90
Wild/Scenic Tributary or Upstream/Downstream			Threatened/Endangered Fish	N	0.90
Wild/Scenic Location	N	0.90	Threatened/Endangered Wildlife	N	0.90
Cultural Value	N	0.90	Federal Land Code 103	N	0.90
Fish Presence Value	N	0.90	Federal Land Code 104	Y	0.75
Geologic Value	N	0.90	Federal Land Code 105	N	0.90
Historic Value	N	0.90	Federal Land Code 106	N	0.90
Other Value	N	0.90	Federal Land Code 107	N	0.90
Recreation Value	N	0.90	Federal Land Code 108	N	0.90
Scenic Value	N	0.90	Federal Land Code 198	N	0.90

R E S O U R C E D A T A B A S E L I S T I N G

DATE: 10/05/93

PAGE NO: 23

FERC Number	Plant Name	Stream	State Name
SD021	Deerfield Reservoir	Castle Creek	SD

County Name	River Basin
Pennington	Castle Creek

Class		Owner Name			
F		Bureau of Reclamation			
Name Plate Rating (KW)	PESF	PESF*KW	Annual Energy Rating (MWh)	PESF Annual Energy Rating (MWh)	
250.00	0.50	125.00	0.00	0	
Unit Type	Plant Type	Project Status	Dam Status	Latitude Longitude	0.00 0.00
C	RES		WO		

Factor	Exist	Prob	Factor	Exist	Prob
Wild/Scenic Protection	N	0.90	Wildlife Value	N	0.90
Wild/Scenic Tributary or Upstream/Downstream			Threatened/Endangered Fish	N	0.90
Wild/Scenic Location	N	0.90	Threatened/Endangered Wildlife	N	0.90
Cultural Value	N	0.90	Federal Land Code 103	N	0.90
Fish Presence Value	Y	0.75	Federal Land Code 104	Y	0.75
Geologic Value	N	0.90	Federal Land Code 105	N	0.90
Historic Value	N	0.90	Federal Land Code 106	N	0.90
Other Value	N	0.90	Federal Land Code 107	N	0.90
Recreation Value	N	0.90	Federal Land Code 108	N	0.90
Scenic Value	N	0.90	Federal Land Code 198	N	0.90

R E S O U R C E D A T A B A S E L I S T I N G

DATE: 10/05/93

PAGE NO: 24

FERC Number	Plant Name	Stream	State Name
SD022	Pactola Reservoir	Rapid Creek	SD

County Name	River Basin
Pennington	Rapid Creek

Class	Owner Name
F	Bureau of Reclamation
Name Plate Rating (KW)	PESF PESF*KW Annual Energy Rating (MWh) PESF Annual Energy Rating (MWh)
1330.00	0.50 665.00 0.00 0

Unit Type	Plant Type	Project Status	Dam Status	Latitude Longitude	0.00 0.00
C	RES		WO		

Factor	Exist	Prob	Factor	Exist	Prob
Wild/Scenic Protection	N	0.90	Wildlife Value	N	0.90
Wild/Scenic Tributary or Upstream/Downstream			Threatened/Endangered Fish	N	0.90
Wild/Scenic Location	N	0.90	Threatened/Endangered Wildlife	N	0.90
Cultural Value	Y	0.75	Federal Land Code 103	N	0.90
Fish Presence Value	Y	0.75	Federal Land Code 104	Y	0.75
Geologic Value	N	0.90	Federal Land Code 105	N	0.90
Historic Value	N	0.90	Federal Land Code 106	N	0.90
Other Value	N	0.90	Federal Land Code 107	N	0.90
Recreation Value	Y	0.75	Federal Land Code 108	N	0.90
Scenic Value	N	0.90	Federal Land Code 198	N	0.90

R E S O U R C E D A T A B A S E L I S T I N G

DATE: 10/05/93

PAGE NO: 25

FERC Number	Plant Name	Stream	State Name
SD023	Shadehill Reservoir	Grand River	SD

County Name	River Basin
Perkins	Grand

Class	Owner Name
F	Bureau of Reclamation
Name Plate Rating (KW)	PESF PESF*KW Annual Energy Rating (MWh) PESF Annual Energy Rating (MWh)
200.00	0.50 100.00 0.00 0

Unit Type	Plant Type	Project Status	Dam Status	Latitude Longitude	0.00 0.00
C	RES		WO		

<u>Factor</u>	<u>Exist</u>	<u>Prob</u>	<u>Factor</u>	<u>Exist</u>	<u>Prob</u>
Wild/Scenic Protection	N	0.90	Wildlife Value	N	0.90
Wild/Scenic Tributary or Upstream/Downstream			Threatened/Endangered Fish	N	0.90
Wild/Scenic Location	N	0.90	Threatened/Endangered Wildlife	N	0.90
Cultural Value	N	0.90	Federal Land Code 103	N	0.90
Fish Presence Value	N	0.90	Federal Land Code 104	Y	0.75
Geologic Value	N	0.90	Federal Land Code 105	N	0.90
Historic Value	N	0.90	Federal Land Code 106	N	0.90
Other Value	N	0.90	Federal Land Code 107	N	0.90
Recreation Value	Y	0.75	Federal Land Code 108	N	0.90
Scenic Value	N	0.90	Federal Land Code 198	N	0.90

RESOURCE DATABASE LISTING

DATE: 10/05/93

PAGE NO: 26

FERC Number	Plant Name	Stream	State Name		
SD024	Elm Dam	Elm River	SD		
County Name	River Basin				
Brown	Elm				
Class	Owner Name				
M	SD School and Public Lands				
Name Plate Rating (KW)	PESF	PESF*KW	Annual Energy Rating (MWh)		
60.00	0.90	54.00	0.00		
Unit Type	Plant Type	Project Status	Dam Status		
C			U		
Latitude	Longitude				
0.00	0.00				
Factor	Exist	Prob	Factor	Exist	Prob
Wild/Scenic Protection	N	0.90	Wildlife Value	N	0.90
Wild/Scenic Tributary or Upstream/Downstream			Threatened/Endangered Fish	N	0.90
Wild/Scenic Location	N	0.90	Threatened/Endangered Wildlife	N	0.90
Cultural Value	N	0.90	Federal Land Code 103	N	0.90
Fish Presence Value	N	0.90	Federal Land Code 104	N	0.90
Geologic Value	N	0.90	Federal Land Code 105	N	0.90
Historic Value	N	0.90	Federal Land Code 106	N	0.90
Other Value	N	0.90	Federal Land Code 107	N	0.90
Recreation Value	N	0.90	Federal Land Code 108	N	0.90
Scenic Value	N	0.90	Federal Land Code 198	N	0.90

RESOURCE DATABASE LISTING

DATE: 10/05/93

PAGE NO: 27

FERC Number	Plant Name	Stream	State Name
SD025	Canton Dam	Sioux River	SD

County Name	River Basin
Lincoln	Sioux

Class		Owner Name			
M		SD Game, Fish and Parks			
Name Plate Rating (KW)	PESF	PESF*KW	Annual Energy Rating (MWh)	PESF Annual Energy Rating (MWh)	
3020.00	0.90	2718.00	0.00	0	

Unit Type	Plant Type	Project Status	Dam Status	Latitude Longitude	0.00 0.00
C			U		

Factor	Exist	Prob	Factor	Exist	Prob
Wild/Scenic Protection	N	0.90	Wildlife Value	N	0.90
Wild/Scenic Tributary or Upstream/Downstream			Threatened/Endangered Fish	N	0.90
Wild/Scenic Location	N	0.90	Threatened/Endangered Wildlife	N	0.90
Cultural Value	N	0.90	Federal Land Code 103	N	0.90
Fish Presence Value	N	0.90	Federal Land Code 104	N	0.90
Geologic Value	N	0.90	Federal Land Code 105	N	0.90
Historic Value	N	0.90	Federal Land Code 106	N	0.90
Other Value	N	0.90	Federal Land Code 107	N	0.90
Recreation Value	N	0.90	Federal Land Code 108	N	0.90
Scenic Value	N	0.90	Federal Land Code 198	N	0.90

RESOURCE DATABASE LISTING

DATE: 10/05/93

PAGE NO: 28

FERC Number	Plant Name	Stream	State Name		
SD026	Flandreau Dam	Sioux River	SD		
County Name	River Basin				
Moody	Sioux				
Class	Owner Name				
M	SD Game, Fish and Parks				
Name Plate Rating (KW)	PESF	PESF*KW	Annual Energy Rating (MWh)	PESF Annual Energy Rating (MWh)	
2900.00	0.90	2610.00	0.00	0	
Unit Type	Plant Type	Project Status	Dam Status	Latitude Longitude	0.00 0.00
C			U		
Factor	Exist	Prob	Factor	Exist	Prob
Wild/Scenic Protection	N	0.90	Wildlife Value	N	0.90
Wild/Scenic Tributary or Upstream/Downstream			Threatened/Endangered Fish	N	0.90
Wild/Scenic Location	N	0.90	Threatened/Endangered Wildlife	N	0.90
Cultural Value	N	0.90	Federal Land Code 103	N	0.90
Fish Presence Value	N	0.90	Federal Land Code 104	N	0.90
Geologic Value	N	0.90	Federal Land Code 105	N	0.90
Historic Value	N	0.90	Federal Land Code 106	N	0.90
Other Value	N	0.90	Federal Land Code 107	N	0.90
Recreation Value	N	0.90	Federal Land Code 108	N	0.90
Scenic Value	N	0.90	Federal Land Code 198	N	0.90

RESOURCE DATABASE LISTING

DATE: 10/05/93

PAGE NO: 29

FERC Number	Plant Name	Stream	State Name
SD027	Oglala Dam	White Clay Creek	SD
	County Name	River Basin	
	Shannon	White Clay Creek	
	Class	Owner Name	
	M	Oglala Sioux Tribe	
Name Plate Rating (KW)	PESF	PESF*KW	Annual Energy Rating (MWh)
0.00	0.75	0.00	0.00
			PESF Annual Energy Rating (MWh)
			0
Unit Type	Plant Type	Project Status	Dam Status
c	RES		WO
		Latitude	4310.30
		Longitude	10244.24
Factor	Exist	Prob	Factor
Wild/Scenic Protection	N	0.90	Wildlife Value
Wild/Scenic Tributary or			Threatened/Endangered Fish
Upstream/Downstream			Threatened/Endangered Wildlife
Wild/Scenic Location	N	0.90	Federal Land Code 103
Cultural Value	N	0.90	Federal Land Code 104
Fish Presence Value	N	0.90	Federal Land Code 105
Geologic Value	N	0.90	Federal Land Code 106
Historic Value	N	0.90	Federal Land Code 107
Other Value	N	0.90	Federal Land Code 108
Recreation Value	N	0.90	Federal Land Code 198
Scenic Value	N	0.90	

RESOURCE DATABASE LISTING

DATE: 10/05/93

PAGE NO: 30

FERC Number	Plant Name	Stream	State Name
SD028	Lake Parmley	Snake Creek	SD

County Name	River Basin
Edmunds	Snake Creek

Class	Owner Name
C	Game, Fish, and Parks

Name Plate Rating (KW)	PESF	PESF*KW	Annual Energy Rating (MWh)	PESF Annual Energy Rating (MWh)
50.00	0.90	45.00	0.00	0

Unit Type	Plant Type	Project Status	Dam Status	Latitude Longitude	4526.30 9843.54
c	RES		WO		

Factor	Exist	Prob	Factor	Exist	Prob
Wild/Scenic Protection	N	0.90	Wildlife Value	N	0.90
Wild/Scenic Tributary or Upstream/Downstream			Threatened/Endangered Fish	N	0.90
Wild/Scenic Location	N	0.90	Threatened/Endangered Wildlife	N	0.90
Cultural Value	N	0.90	Federal Land Code 103	N	0.90
Fish Presence Value	N	0.90	Federal Land Code 104	N	0.90
Geologic Value	N	0.90	Federal Land Code 105	N	0.90
Historic Value	N	0.90	Federal Land Code 106	N	0.90
Other Value	N	0.90	Federal Land Code 107	N	0.90
Recreation Value	N	0.90	Federal Land Code 108	N	0.90
Scenic Value	N	0.90	Federal Land Code 198	N	0.90

RESOURCE DATABASE LISTING

DATE: 10/05/93

PAGE NO: 31

FERC Number	Plant Name	Stream	State Name
SD029	Houghton Dam	James River	SD

County Name	River Basin
Brown	James River

Class		Owner Name		
C	Department of Interior			
Name Plate Rating (KW)	PESF	PESF*KW	Annual Energy Rating (MWh)	PESF Annual Energy Rating (MWh)
0.00	0.10	0.00	0.00	0

Unit Type	Plant Type	Project Status	Dam Status	Latitude	4546.30
C	RES		WO	Longitude	9815.00

Factor	Exist	Prob	Factor	Exist	Prob
Wild/Scenic Protection	Y	0.50	Wildlife Value	Y	0.75
Wild/Scenic Tributary or Upstream/Downstream			Threatened/Endangered Fish	N	0.90
Wild/Scenic Location	N	0.90	Threatened/Endangered Wildlife	N	0.90
Cultural Value	N	0.90	Federal Land Code 103	N	0.90
Fish Presence Value	N	0.90	Federal Land Code 104	N	0.90
Geologic Value	N	0.90	Federal Land Code 105	Y	0.10
Historic Value	N	0.90	Federal Land Code 106	N	0.90
Other Value	N	0.90	Federal Land Code 107	N	0.90
Recreation Value	N	0.90	Federal Land Code 108	N	0.90
Scenic Value	N	0.90	Federal Land Code 198	N	0.90

RESOURCE DATABASE LISTING

DATE: 10/05/93

PAGE NO: 32

FERC Number	Plant Name	Stream	State Name			
SD030	Richmond Lake	Foot Creek	SD			
County Name	River Basin					
Brown	Foot Creek					
Class	Owner Name					
C	Game, Fish, and Parks					
Name Plate Rating (KW)	PESF	PESF*KW	Annual Energy Rating (MWh)	PESF Annual Energy Rating (MWh)		
0.00	0.75	0.00	0.00	0		
Unit Type	PlUnit Type	Plant Status	Project Status	Dam Longitude	Latitude	4532.06
C	RES		WO		9835.30	
Factor	Exist	Prob	Factor	Exist	Prob	
Wild/Scenic Protection	N	0.90	Wildlife Value	N	0.90	
Wild/Scenic Tributary or Upstream/Downstream			Threatened/Endangered Fish	N	0.90	
Wild/Scenic Location	N	0.90	Threatened/Endangered Wildlife	N	0.90	
Cultural Value	N	0.90	Federal Land Code 103	N	0.90	
Fish Presence Value	N	0.90	Federal Land Code 104	N	0.90	
Geologic Value	N	0.90	Federal Land Code 105	N	0.90	
Historic Value	N	0.90	Federal Land Code 106	N	0.90	
Other Value	N	0.90	Federal Land Code 107	N	0.90	
Recreation Value	Y	0.75	Federal Land Code 108	N	0.90	
Scenic Value	N	0.90	Federal Land Code 198	N	0.90	

RESOURCE DATABASE LISTING

DATE: 10/05/93

PAGE NO: 33

FERC Number	Plant Name	Stream	State Name
SD031	Columbia Road Dam	James River	SD

County Name	River Basin
Brown	James

Class	Owner Name
C	Department of Interior

Name Plate Rating (KW)	PESF	PESF*KW	Annual Energy Rating (MWh)	PESF Annual Energy Rating (MWh)
0.00	0.10	0.00	0.00	0

Unit Type	Plant Type	Project Status	Dam Status	Latitude Longitude	4540.00 9819.00
C	RES		WO		

Factor	Exist	Prob	Factor	Exist	Prob
Wild/Scenic Protection	Y	0.50	Wildlife Value	Y	0.75
Wild/Scenic Tributary or Upstream/Downstream			Threatened/Endangered Fish	N	0.90
Wild/Scenic Location	N	0.90	Threatened/Endangered Wildlife	N	0.90
Cultural Value	N	0.90	Federal Land Code 103	N	0.90
Fish Presence Value	N	0.90	Federal Land Code 104	N	0.90
Geologic Value	N	0.90	Federal Land Code 105	Y	0.10
Historic Value	N	0.90	Federal Land Code 106	N	0.90
Other Value	N	0.90	Federal Land Code 107	N	0.90
Recreation Value	N	0.90	Federal Land Code 108	N	0.90
Scenic Value	N	0.90	Federal Land Code 198	N	0.90

DATE

FILMED

3 / 24 / 94

END