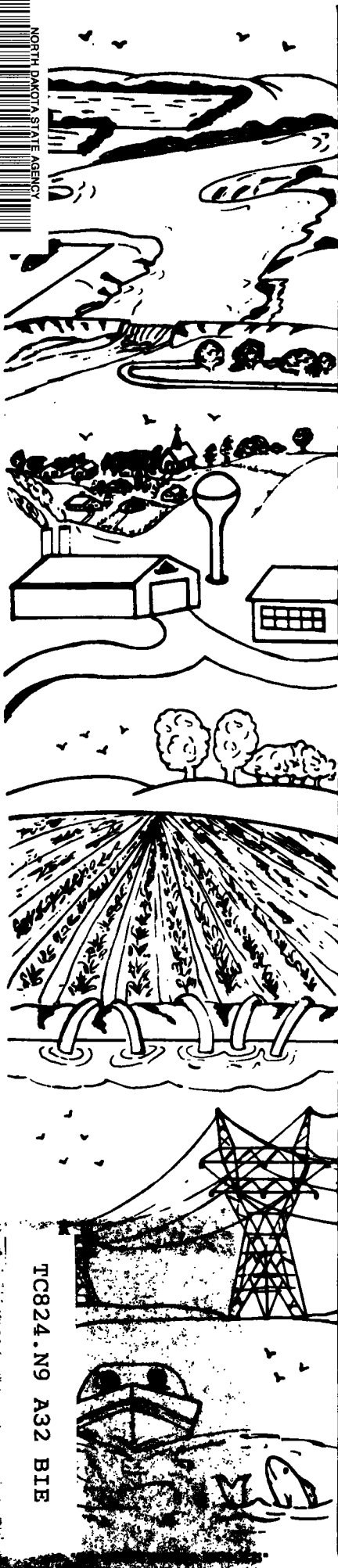


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NORTH DAKOTA STATE AGENCY



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Report of
NORTH DAKOTA STATE WATER COMMISSION
 State Office Building

NORTH DAKOTA STATE BISMARCK, NORTH DAKOTA
WATER CONSERVATION COMMISSION 58501

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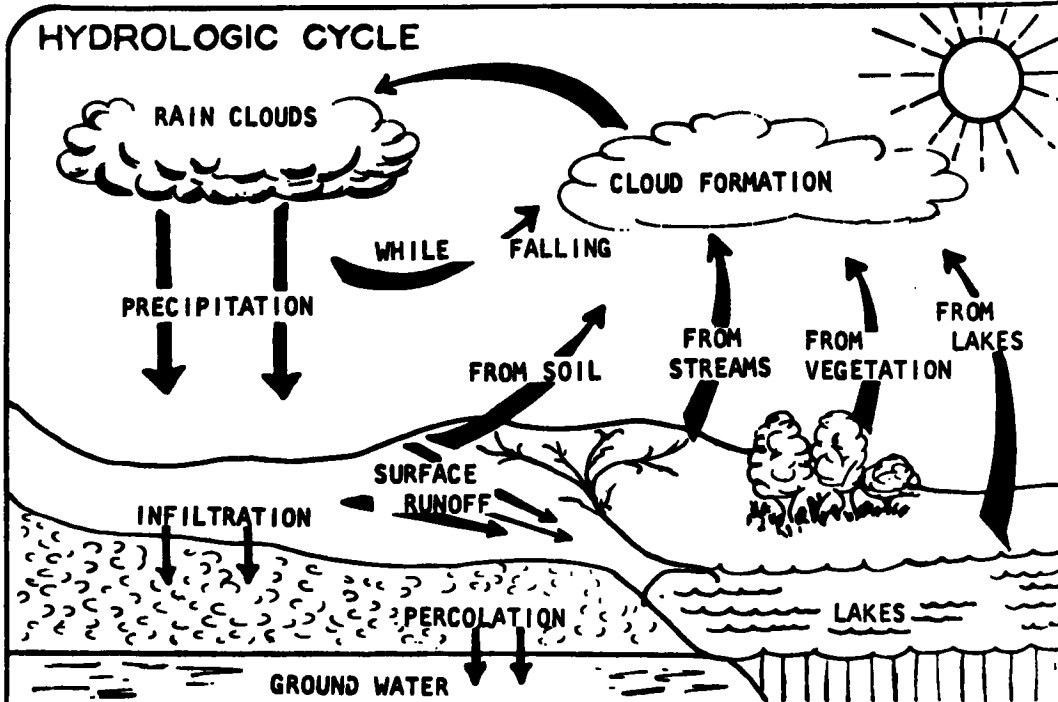
SEVENTEENTH BIENNIAL REPORT

FOR THE PERIOD

July 1, 1968 - June 30, 1970

Information Series #14

HYDROLOGIC CYCLE



North Dakota State Water Commission

State Office Building

(701) 224-2750

Bismarck, North Dakota 58501

September 30, 1970

Honorable William L. Guy
Governor of North Dakota
State Capitol
Bismarck, North Dakota

RE: 1968-1970 Biennial Report
SWC File C6-1

Dear Governor Guy:

In compliance with North Dakota laws, we transmit for your information and consideration the Seventeenth Biennial Report of the North Dakota State Water Commission and the Thirty-fourth Biennial Report of the State Engineer for the period July 1, 1968 to June 30, 1970.

Respectfully submitted,

Richard P. Gallagher, Vice Chairman
Harold R. Hanson
James R. Jungroth
Alvin A. Kramer
Gordon K. Gray
Arne Dahl

Milo W. Hoisveen
Secretary and Chief Engineer
State Engineer

Governor William L. Guy
Chairman
Richard P. Gallagher
Vice Chairman-Mandan

Harold Hanson
New England
Russell Dushinske
Devils Lake

Henry J. Steinberger
Dennybrook
James Jungroth
Jamestown

Arne Dahl, Ex-Officio Member
Comm. of Agriculture & Labor
Milo W. Hoisveen, Secretary
Chief Engineer & State Engineer

NORTH DAKOTA STATE WATER COMMISSION

SEVENTEENTH BIENNIAL REPORT

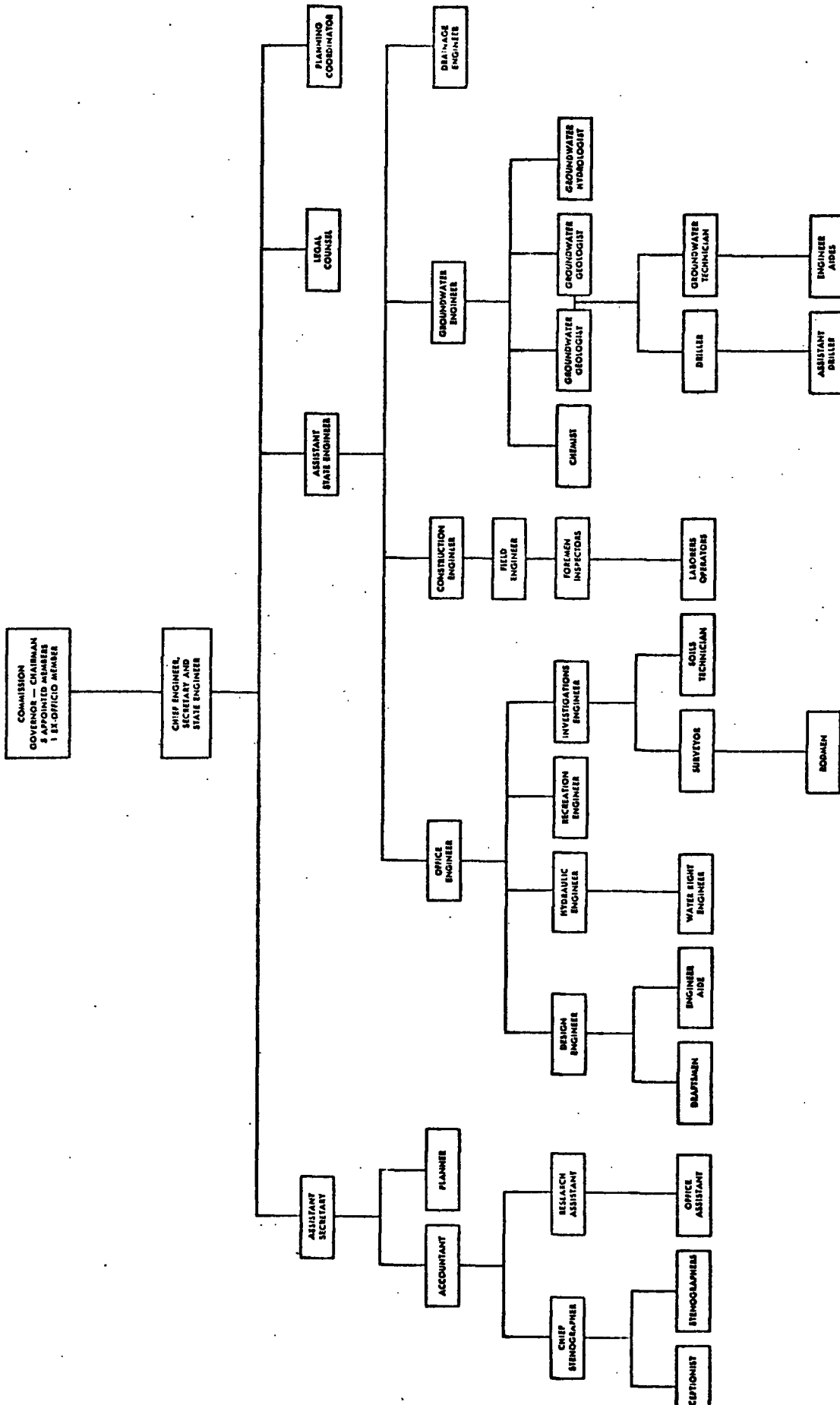
FOR THE PERIOD

July 1, 1968 - June 30, 1970

Information Series #14

NORTH DAKOTA STATE WATER COMMISSION

ORGANIZATION CHART



COMMISSION MEMBERS AND STAFF AS OF JUNE 30, 1970

Commission Members:

Name	Position	Date Appointed	Term Ends
Governor William L. Guy	Chairman	January 1, 1961	
Richard P. Gallagher	Vice-Chairman	July 1, 1961	July 1, 1973
Russell Dushinske	Member	July 1, 1965	July 1, 1970
Harold Hanson	Member	July 1, 1965	July 1, 1971
James R. Jungroth	Member	September 1, 1967	July 1, 1971
Alvin A. Kramer	Member	April 8, 1970	July 1, 1973
Arne Dahl	Ex-officio Member	January 1, 1965	

Staff:

Name	Position	Date Employed	Monthly Salary
Milo W. Hoisveen	Secretary-Chief Engineer State Engineer	July, 1954	\$1,625.00
Gordon Baesler	Water Rights Technician	July, 1955	720.00
Allen Balliet	Rodman	May, 1966	455.00
Raymond Christensen	Engineer Technician	December, 1963	655.00
Antoinette Dally	Stenographer	January, 1970	325.00
Matt Emerson	Assistant Secretary	May, 1966	970.00
Larry Froelich	Ground-Water Geologist	June, 1962	840.00
Dale Froemming	Construction Inspector	May, 1964	540.00
Oscar Gehring	Lab Technician	January, 1970	525.00
Dale Glover	Hydrologist	September, 1962	1,000.00
Alan Grindberg	Assistant Chief Engineer	June, 1966	1,265.00
Arland Grunseth	Investigation Engineer	September, 1965	960.00
William A. Hanson	Draftsman	April, 1970	475.00
Milton Heupel	Field Engineer	August, 1968	960.00
Eva Huchler	Stenographer	October, 1968	300.00
Hugh Jacobson	Assistant Driller	April, 1966	495.00
Cliff Jochim	Special Assistant Attorney General	May, 1963	575.00
Lester Keator	Soils Technician	April, 1970	500.00
James R. Knoll	Construction Inspector	April, 1969	475.00
Lewis Knutson	Driller	September, 1955	645.00
Kay Koch	Accountant	June, 1962	525.00
Rosalie Kottsick	Stenographer	March, 1970	300.00
Milton Lindvig	Ground-Water Engineer	November, 1963	1,000.00
Sharon Locken	Chief Stenographer	October, 1967	500.00
Robert McAdoo	Engineer Aide	June, 1970	487.75
Garvin Muri	Chemist	June, 1967	735.00
Charles Naplin	Ground-Water Geologist	June, 1967	790.00
C. P. Nelson	Drainage Engineer	December, 1959	980.00
George O'Brien	Draftsman	May, 1969	500.00
Donald Ohnstad	Planning Engineer	November, 1968	935.00
Roy Putz	Office Assistant	September, 1947	370.00
Eugene Sackman	Surveyor	March, 1957	650.00
George Schantz	Draftsman	October, 1963	525.00
Roger Schmid	Ground-Water Hydrologist	March, 1961	925.00
Delton Schulz	Office Engineer	July, 1961	1,110.00

Staff: (Continued)

<u>Name</u>	<u>Position</u>	<u>Date Employed</u>	<u>Monthly Salary</u>
Lloyd Scott	Draftsman	February, 1968	\$ 660.00
Anton Senger	Construction Inspector	August, 1961	570.00
Myrna Siems	Stenographer	October, 1969	260.00
Kenneth Simenson	Construction Engineer	February, 1966	1,000.00
Glenn Speaks	Construction Inspector	November, 1966	540.00
Ann Tillotson	Research Assistant	April, 1965	410.00
Roger Ulrich	Rodman	January, 1968	425.00
Howard Walterson	Construction Superintendent	March, 1959	670.00

COMMISSION MEETINGS

<u>Date</u>	<u>Location</u>
July 13, 1968	Minot
September 23, 1968	Bismarck
November 1, 1968	Fargo
December 17, 1968	Bismarck
February 11, 1969	Bismarck
April 10, 1969	Minot
May 21, 1969	Grafton
June 27, 1969	Devils Lake
August 12, 1969	Jamestown
September 24, 1969	Bowman
November 13, 1969	Bismarck
December 12, 1969	Minot
January 15, 1970	Fargo
March 25, 1970	Bismarck
May 22, 1970	Bismarck
June 23, 1970	Bisbee

NORTH DAKOTA STATE WATER COMMISSION
 FINANCIAL STATEMENT - JUNE 30, 1970
 1969-71 APPROPRIATIONS

GENERAL OPERATIONS: ACCOUNT	Available Funds		Disbursements		Account Balances		
	APPROPRIATION	RECEIPTS	TO DATE	JUNE '70	UNEXPENDED	ENCUMB.	UNENCUMB.
1009-Salaries Expense	\$ 811,901.00	\$ -	\$ 385,779.05	\$ 31,743.59	\$ 426,121.95	\$ -	\$ 426,121.95
2009-Fees & Services	140,000.00	-	67,772.12	6,265.93	72,227.88	-	72,227.88
3009-Supplies & Materials	150,500.00	-	73,173.90	6,302.01	77,326.10	-	77,326.10
4009-Equipment	35,000.00	-	23,695.11	-	11,304.89	4,602.80	6,702.09
7709-Red Basin Comm.	60,000.00	-	30,514.82	61.26	29,485.18	-	29,485.18
GENERAL OPERATIONS	\$1,115,401.00						
Federal Grants	82,000.00						
TOTAL GENERAL OPERATIONS	\$1,197,401.00	\$ -	\$ 580,935.00	\$ 44,372.79	\$ 616,466.00	\$ 4,602.80	\$ 611,863.20
CONTRACT FUND:							
336-770-Contract Cash	\$1,000,000.00						
Contract Collections	700,000.00	\$277,011.44					
Collections to Date		525,000.00					
Transfer from 001 to 336			\$ 783,806.56	\$ 53,997.85	\$ 916,193.44	\$811,006.00	\$ 105,187.44
TOTAL CONTRACT FUND	\$1,700,000.00	\$802,011.44	\$ 783,806.56	\$ 53,997.85	\$ 916,193.44	\$811,006.00	\$ 105,187.44
GRAND TOTALS	\$2,897,401.00	\$802,011.44	\$1,364,741.56	\$ 98,370.64	\$1,532,659.44	\$815,608.80	\$ 717,050.64

NORTH DAKOTA STATE WATER COMMISSION

STATUS OF CONSTRUCTION BOND GUARANTEE FUND
AS OF JUNE 30, 1970

ACCOUNT	Available Funds		Disbursements		Account Balances	
	APPROPRIATION	RECEIPTS*	TO DATE	JUNE '70	UNEXPENDED	ENCUMB. UNENCUMB.
535-770-CONST. BOND GUAR.	\$90,000.00	\$37,653.04	\$29,153.04	\$ -	\$90,000.00	\$ - \$90,000.00
0500-INVESTMENT PRIN.	20,000.00	-	10,500.00	-	9,500.00	- 9,500.00

NOTE - FUND #535-770 RECEIPTS ARE OBTAINED FROM RETIREMENT OF AN INTEREST ON SECURITIES THAT WERE IN THE COMMISSION'S SINKING FUND IN EXCESS OF THE AMOUNT REQUIRED TO RETIRE THE SERIES "J" BOND ISSUE ON DECEMBER 10, 1957. ORIGINAL DISBURSEMENTS FROM FUND #535-770 WERE MADE DURING THE EARLY 1940's IN ACCORDANCE WITH SECTION 61-02-56 OF THE CENTURY CODE WHICH PROVIDES THAT THE COMMISSION MAY GUARANTEE OR INSURE OR AGREE TO PAY THE INTEREST ON AND PRINCIPAL OF COMMISSION REVENUE BONDS NOT EXCEEDING 20% OF THE PAR VALUE OF ANY SUCH BONDS.

SCHEDULE OF BONDS & INTEREST RECEIVABLE - FUND #535-770

TYPE	DUE DATE	INTEREST RATE	INTEREST TO MATURITY	PRINCIPAL	TOTAL INCOME ANTICIPATED
SIoux IRRIGATION DIST. BONDS	1984 Serially	2.25%	\$2,373.75	\$9,500.00	\$11,873.75

(EXCESS OVER \$90,000.00 CASH IN FUND #535-770 TO BE CREDITED TO GENERAL FUND. 1/12/58 ATTORNEY GENERAL'S OPINION)

RECEIPTS:	
* RETIREMENT OF BONDS	\$24,000.00
INTEREST ON BONDS	9,521.05
SINKING FUND CASH	4,131.99
	<u>\$37,653.04</u>

* ACCUMULATION OF RECEIPTS TO
BOND GUARANTEE FUND
SINCE FUND CREATED IN 1939

RECAP OF DISBURSEMENTS AND PROJECT COSTS
July 1, 1968 to June 30, 1970

DISBURSEMENTS TO BE ACCOUNTED FOR:

Disbursements from Appropriations and Refunds - 1967-69	\$1,329,644.44	
Disbursements from Appropriations and Refunds - 1969-71	1,364,741.56	
Disbursements from Appropriations and Refunds - (prior) 1967-69	9,961.53	
Materials Used from Inventory - net	535.44	
Depreciation - Office and Field Equipment	<u>49,705.38</u>	
Total Disbursements to be accounted for		<u>\$2,753,517.47</u>

DISBURSEMENTS CHARGED TO STATE WATER COMMISSION
PROJECTS

2,631,819.03

DISBURSEMENTS CHARGED TO GENERAL OPERATING COSTS:

Personnel Services	80,832.50	
Field Equipment (new) (Book value - 151,594.15)	38,376.98	
Office Equipment (new) (Book value - 32,811.94)	9,893.44	
Shop Building (Book value - \$36,900.00)	- - -	
Materials and Supplies (Inventory - 27,278.56)	7,753.90	
Equipment Operation, Maintenance and Depreciation:		
Depreciation	49,705.38	
Operation & Maintenance	76,772.20	
Less Charged to Projects	<u>-138,573.43</u>	-12,095.85
Miscellaneous Expenses		<u>- 3,062.53</u>

Total Disbursements Charged to General
Operating Costs

Total Disbursements Accounted for

121,698.44
\$2,753,517.47

NORTH DAKOTA STATE WATER COMMISSION

Project Expenditures and Collections

July 1, 1968 to June 30, 1970

Project No.	Name	County	FY'69	FY'70	Total	Collections
216	Bowman-Haley Dam	Various	\$55,000.00	\$ 27.97	\$55,027.97	\$
221	Burlington Dam 1 & 2	Ward	518.41	4,281.04	4,799.45	
222	Buford-Trenton Irrigation Project	Williams	56.65	535.55	592.20	
227	Eaton Flood Irrigation	McHenry		4,552.31	4,552.31	
232	Knife River Basin	Various	12,300.08	34,984.42	47,284.50	
235	Goose River Flood Control	Trail	208.79	3,113.32	3,322.11	
237	Missouri River Diversion	Various	1,018.09	235.21	1,253.30	
245	Soland Dam	Mercer	125.49		125.49	
259	Kulm Dam	LaMoure	48,680.31	787.29	49,467.60	30,592.67
260	Olson Dam	Burleigh	408.30		408.30	200.00
262	Cannonball Basin	Various	29.21		29.21	
266	Tolna Dam #1	Nelson	520.23		520.23	
274	Neche Dam	Pembina		29.10	29.10	
291	Sarnia Dam	Nelson	139.06		139.06	
301	Tongue River	Pembina		29.01	29.01	
305	Red River Basin	Various	39,018.51	36,679.92	75,698.43	
319	Wakopa Project	Rolette	575.42		575.42	
320	Bohlman Dam	Hettinger	1,601.50		1,601.50	
322	State Water Plan	Various	61,808.70	42,309.70	104,118.40	
327	White Earth Dam	Mountrail	9,399.72	10,892.39	20,292.11	70,278.00
330	Lake Metigoshe	Bottineau	56.98	34.32	91.30	
342	Hansen Dam	Barnes	1,015.94		1,015.94	100.00
346	Epping Dam	Williams	2,268.08	132.47	2,400.55	1,000.00
347	Velva Flood Control	McHenry	1,649.88		1,649.88	
359	Wolf Butte Dam	Adams	1,143.77	3,118.67	4,262.44	
362	Balta Dam	Pierce		80.80	80.80	
364	Yanktonai Dam	McLean	61.60		61.60	
368	Hesper Dam	Benson		66.44	66.44	
371	Maddock Dam	Benson		58.19	58.19	
374	Danzig Dam	Morton	27.01		27.01	
389	Fessenden Dam	Wells	141.69		141.69	

<u>Project No.</u>	<u>Name</u>	<u>County</u>	<u>FY'69</u>	<u>FY'70</u>	<u>Total</u>	<u>Collections</u>
			\$	\$	\$	\$
391	Silver Lake Dam	Sargent	6,619.83	2,463.41	9,083.24	1,516.90
416	Devils Lake Basin	Various	57.59	211.44	269.03	5,686.11
420	Mirror Lake Dam	Adams	991.14		991.14	200.00
450	Sykeston Dam	Wells	624.32	14,364.04	14,988.36	
459	Brown Dam	Barnes	28.49	1,427.94	1,456.43	
460	Ueland Dam	Griggs	778.30	2,393.29	3,171.59	
461	Spiritwood Lake	Stutsman		2,511.03	2,511.03	
464	Niagria Dam	Grand Forks		58.30	58.30	
466	Just Dam	McIntosh	245.06	174.24	419.30	
475	Golden Lake	Steele		2,037.53	2,037.53	200.00
476	Faust Dam	Barnes		188.98	188.98	
479	Fish Creek Dam	Morton		408.07	426.15	
480	James River Basin	Various	18.08		426.15	
489	Ray Dam	Williams	114.90		114.90	
499	Lake Ensign	Barnes		235.40	235.40	
501	Pheasant Lake	Dickey		9,256.08	9,256.08	
503	Lake Ibsen	Benson		1,984.85	1,984.85	200.00
506	Big Meadow Drain	Williams		39.93	39.93	
511	Reed Dam	Burleigh	1.65		1.65	
527	Kelly Slough	Grand Forks	56.98		56.98	
528	McGregor Dam	Williams		1,717.77	1,717.77	3,114.48
538	Burlington Park Dam	Ward		28.44	28.44	
543	North Lemmon Lake Dam	Adams		21,636.94	21,636.94	15,844.45
557	Gascoyne Lake	Bowman	20.48		20.48	200.00
558	Linton Flood Control	Emmons		994.53	1,015.01	
559	Hurricane Lake	Pierce		740.29	740.29	200.00
560	Blacktail Dam	Williams	12,825.13	50,159.76	62,984.89	22,468.46
561	Tioga Dam	Williams	265.71	2,482.38	2,748.09	
565	Buffalo Lake	Pierce	8,978.57	5,702.17	14,680.74	
567	Pembilier Dam	Various	454.08	419.85	873.93	
568	Sheyenne River Channel Clearing	Cass	242.39	6,428.51	6,670.90	15,399.00
576	Missouri River Bank Stabilization	Various	8,720.47	1,232.02	9,952.49	3,363.07
580	Enderlin Park Dam	Ransom	168.65	596.26	764.91	
586	Short Creek Dam	Burke	849.46		849.46	
591	Fargo 12th Avenue North Dam	Cass	11,369.36		11,369.36	3,642.56
593	Sherwood Dam	Renville	52.20		52.20	
600	Crystal Dam	Pembina	829.37	9,111.59	9,940.96	27,242.46

<u>Project No.</u>	<u>Name</u>	<u>County</u>	<u>FY'69</u>	<u>FY'70</u>	<u>Total</u>	<u>Collections</u>
601	Bucephalia Dam	Foster	\$ 4,204.91	\$ 2,399.77	\$ 6,604.68	\$ 2,000.00
613	Arnegard Dam	McKenzie				
615	Ellendale Water Supply	Dickey		89.67	89.67	
619	Hunter Water Supply	Cass	3,949.70	18,348.89	22,298.59	
624	James River Channel Change	Stutsman	154.00		154.00	
626	Upper West Souris Flood Control	Various		357.89	357.89	
627	Froelich Dam	Sioux		155.46	155.46	
632	Antler Creek Dam	Bottineau	221.74	2,397.01	2,618.75	
646	Christine Dam	Richland		30,933.81	30,933.81	20,718.96
647	Green River Dam	Various		2,855.76	2,855.76	200.00
649	Ypsilanti Dam	Stutsman	1,038.65		1,038.65	
651	Hoopie Dam	Walsh		111.49	111.49	
653	Katz Dam	McLean		184.47	184.47	
656	New Rockford Railroad Dam	Eddy	121.34	45,735.17	45,856.51	
660	Grafton Railroad Dam	Walsh	53.63	75.90	129.53	
662	Park River Snagging & Clearing	Walsh	134.97		134.97	
665	Armourdale Dam	Towner	249.81	3,779.50	4,029.31	
667	Northgate Dam	Burke	68,094.60	15,032.62	83,127.22	48,000.00
671	Harvey Dam	Wells		420.86	420.86	
672	Turtle River State Park	Grand Forks	5,604.20	241.19	5,845.39	
679	Ditch Mapping	Various	54.01		54.01	
681	Drayton Dam	Pembina	31.72		31.72	
682	State Water Commission Shop	Burleigh		357.20	357.20	
685	Glenburn Water Supply	Renville	367.19	16,930.39	17,297.58	5,500.00
704	Chain Lakes Water Management Dist.	Ramsey	3.61		3.61	
721	Stone Creek Watershed	Bottineau		89.43	89.43	
722	Sweetwater-Dry Lake W. M. D.	Towner	103.93		103.93	
723	Towner County W. M. D.	Towner	66.55		66.55	
740	Bowman Ground-Water Survey	Bowman	74.54	68.59	143.13	
741	Buxton Ground-Water Survey	Trail	1,599.30	1,056.89	2,656.19	
745	Columbus Ground-Water Survey	Burke	1,246.98	595.54	1,842.52	
750	Ellendale Ground-Water Survey	Dickey	8,715.08	6,331.38	15,046.46	3,000.00
765	Hoopie Water Supply	Walsh	182.27	5,959.65	6,141.92	200.00
782	Minot Water Supply	Ward	28,498.77	46,943.25	75,442.02	
810	Westhope Water Supply	Bottineau	15,373.78		15,373.78	
817	Burleigh Co. Ground-Water Survey	Burleigh	113.85		113.85	
818	Kidder Co. Ground-Water Survey	Kidder	3,160.52	571.60	3,732.12	
819	Stutsman Co. Ground-Water Survey	Stutsman		127.58	127.58	

<u>Project No.</u>	<u>Name</u>	<u>County</u>	<u>FY'69</u>	<u>FY'70</u>	<u>Total</u>	<u>Collections</u>
			\$	\$	\$	\$
820	Oak-Willow Cr. Snagging & Clearing	Various	61.00	160.44	221.44	
821	Bowman County W. M. D.	Bowman		362.71	362.71	
828	Homme Dam	Walsh	304.04		304.04	
832	Jamestown Dam	Stutsman	116.07		116.07	
841	Maple River Watershed	Various	26.40		26.40	
842	Starkweather Watershed	Various	496.88	100.20	597.08	
843	Edmore Watershed	Various	5,500.00		5,500.00	
849	Tongue River Watershed	Various	290.40		290.40	
852	Willow Creek Watershed	Various	26.81	53.97	80.78	
858	Eddy-Foster Ground-Water Survey	Eddy-Foster	165.00		165.00	
859	Williams Co. Ground-Water Survey	Williams	2,976.52	1,732.92	4,709.44	
860	McKenzie Co. Ground-Water Survey	McKenzie	29.04		29.04	
861	Burke-Mountrail Ground-Water Sur.	Burke-Mountrail	14,669.71	294.33	14,964.04	17,000.00
862	Divide Co. Ground-Water Survey	Divide		367.84	367.84	
863	Renville-Ward Ground-Water Survey	Renville-Ward	312.40	119.24	431.64	
864	Bottineau Co. Ground-Water Survey	Bottineau		126.49	126.49	
866	Cass County Ground-Water Survey	Cass	288.92	290.43	579.35	
868	Trail County Ground-Water Survey	Trail		59.62	59.62	
871	Pembina River Snagging & Clearing	Various		170.44	170.44	
926	Dickinson Flood Control	Stark	2,923.14		2,923.14	
929	Forest River Watershed	Various	415.21		415.21	
935	Bench Marks	Various	1,947.23	1,546.11	3,493.34	
936	Field Notes and Plats	Various	465.00	239.58	704.58	
940	Adams County Ground-Water Survey	Adams	105.14	59.62	164.76	
941	Benson-Pierce Ground-Water Survey	Benson-Pierce	23,200.38	29,385.79	52,586.17	21,200.00
942	Billings Co. Ground-Water Survey	Billings	214.05		214.05	
943	Bowman Co. Ground-Water Survey	Bowman		363.22	363.22	
944	Cavalier-Pembina Ground-Water Sur.	Cavalier-Pembina	4,450.39	27,783.46	32,233.85	18,382.04
947	Steele County Ground-Water Survey	Steele		98.79	98.79	
949	Golden Valley Ground-Water Survey	Golden Valley	339.48	280.23	619.71	
950	Grand Forks Co. Ground-Water Sur.	Grand Forks	304.15	1,648.34	1,952.49	
951	Grant County Ground-Water Survey	Grant		326.43	326.43	
952	Griggs County Ground-Water Survey	Griggs	84.04	394.82	478.86	
953	Hettinger-Stark Ground-Water Sur.	Hettinger-Stark	50,438.19	1,245.68	51,683.87	24,600.00
956	McHenry Co. Ground-Water Survey	McHenry	106.43	479.14	585.57	
958	McLean Co. Ground-Water Survey	McLean	7,150.55	26,887.80	34,038.35	19,000.00
959	Mercer-Oliver Ground-Water Survey	Mercer-Oliver	34,326.05	20,215.53	54,541.58	16,500.00
960	Morton Co. Ground-Water Survey	Morton	62.46	99.00	161.46	

<u>Project No.</u>	<u>Name</u>	<u>County</u>	<u>FY'69</u>	<u>FY'70</u>	<u>Total</u>	<u>Collections</u>
962	Nelson-Walsh Ground-Water Survey	Nelson-Walsh	\$12,004.96	\$34,212.85	\$46,217.81	\$ 23,000.00
964	Cavalier-Pembina Ground-Water Sur.	Cavalier-Pembina		33.00	33.00	
966	Ramsey Co. Ground-Water Survey	Ramsey		74.86	74.86	
967	Ransom Co. Ground-Water Survey	Ransom	33.00		33.00	
970	Sheridan Co. Ground-Water Survey	Sheridan		423.50	423.50	
971	Sioux County Ground-Water Survey	Sioux		98.79	98.79	
974	Steele Co. Ground-Water Survey	Steele	72.82		10,899.59	
975	Towner Co. Ground-Water Survey	Towner	56.76	10,826.77	56.76	
978	Wells County Ground-Water Survey	Wells	53.63		784.51	
980	Maple River Watershed	Dickey		61.60	61.60	
982	Park River W. S. & Flood Control	Various	213.62	295.42	509.04	
983	Coleharbor Water Supply	McLean	691.33		691.33	
984	Souris River Basin	Various	162.53	79.20	241.73	
985	Turtle River Watershed	Various		116.60	116.60	
986	Wild Rice "8" Watershed	Richland	270.05	212.19	482.24	
988	Antelope Creek Improvement	Richland	107.26		107.26	
989	Quality of Water Studies	Various	1,859.62	4,486.85	6,346.47	
999	Road Drainage - General	Various	122.21	87.45	209.66	
1002	Benson County Road Drainage	Benson		61.44	61.44	
1007	Burleigh County Road Drainage	Burleigh	140.37		140.37	
1008	Cass County Road Drainage	Cass		223.16	223.16	
1031	Nelson County Road Drainage	Nelson	26.82	58.30	85.12	
1035	Ramsey County Road Drainage	Ramsey		64.68	64.68	
1048	Trail County Road Drainage	Trail	122.44	90.92	213.36	
1053	Drainage - General	Various	2,971.83	2,671.70	5,643.53	
1054	Barnes County Drainage - General	Barnes	106.21	569.00	675.21	
1056	Bottineau Co. Drainage - General	Bottineau		160.05	160.05	
1061	Stone Creek Drain	Bottineau	162.03	126.62	288.65	
1063	Cass County Drainage - General	Cass		235.02	235.02	
1065	Cass County Drain #3	Cass		22,351.87	22,351.87	
1069	Cass County Drain #13	Cass	7,352.93	8,014.23	15,367.16	
1070	Cass County Drain #14	Cass	9,841.67	5,421.46	15,263.13	
1071	Cass County Drain #15	Cass	54.01	145.70	199.71	
1072	Cass County Drain #16	Cass	4,666.84		4,666.84	
1077	Cass County Drain #24	Cass	1,301.37	1,327.84	2,629.21	
1079	Cass County Drain #26	Cass	2,325.50		2,325.50	
1080	Cass County Drain #27	Cass	5,685.98		5,685.98	

<u>Project No.</u>	<u>Name</u>	<u>County</u>	<u>FY'69</u>	<u>FY'70</u>	<u>Total</u>	<u>Collections</u>
			\$	\$	\$	\$
1081	Cass County Drain #29	Cass		29.15	379.10	
1084	Cass County Drain #32	Cass		160.38	29.15	
1089	Cass County Drain #39	Cass		131.23	160.38	
1091	Cass County Drain #41	Cass		38.94	131.23	
1095	Cass County Drain #47	Cass		91.00	38.94	
1098	Cavalier Co. Drainage - General	Cavalier	107.25		198.25	
1101	Dickey County Drainage - General	Dickey	340.08		340.08	
1105	Grand Forks Co. Drainage - General	Grand Forks		29.15	29.15	
1107	Grand Forks Co. Drain #4	Grand Forks	2,810.24	87.40	2,897.64	
1129	LaMoire County Drainage - General	LaMoire		196.48	196.48	
1131	Nelson County Drainage - General	Nelson	366.81		823.85	
1133	Pembina County Drainage - General	Pembina	135.44	457.04	434.59	
1136	Pembina County Drain #6	Pembina	26.81	299.15	26.81	
1139	Pembina County Drain #10	Pembina	137.34	7.33	144.67	
1148	Pembina County Drain #24	Pembina	959.61		959.61	
1154	Pembina County Drain #38	Pembina	4,492.40		4,492.40	
1157	Pembina County Drain #47	Pembina	14.61		14.61	
1164	Pembina County Drain #64	Pembina		212.11	212.11	
1169	Pembina County Drain #62	Pembina		363.30	363.30	
1170	Pierce County Drainage - General	Pierce		77.59	77.59	
1171	Ramsey County Drainage - General	Ramsey		305.91	305.91	
1172	Ransom County Drainage - General	Ransom		86.94	86.94	
1173	Renville Co. Drainage - General	Renville		766.35	766.35	
1174	Richland Co. Drainage - General	Richland	81.02		81.02	
1176	Richland County Drain #2	Richland		900.12	900.12	
1185	Richland County Drain #18	Richland	43.98		43.98	
1196	Richland County Drain #37	Richland		539.23	539.23	
1218	Rolette County Drainage - General	Rolette	106.62		106.62	
1219	Sargent County Drainage - General	Sargent	54.01		54.01	
1223	Steele County Drainage - General	Steele	26.81	429.12	455.93	
1224	Trail County Drainage - General	Trail	53.63	262.35	315.98	
1252	Walsh County Drainage - General	Walsh	79.59	13.20	92.79	
1256	Walsh County Drain #25	Walsh		64.68	64.68	
1262	Ward County Drainage - General	Ward		116.60	116.60	
1263	Adams County Small Projects	Adams	225.24		225.24	
1265	Benson County Small Projects	Benson		333.65	333.65	
1267	Bottineau County Small Projects	Bottineau	62.96		62.96	
1270	Burleigh County Small Projects	Burleigh	85.42	209.10	294.52	
						200.00

Project No.	Name	County	FY'69	FY'70	Total	Collections
			\$	\$	\$	\$
1273	Dickey County Small Projects	Dickey		220.73	220.73	
1274	Divide County Small Projects	Divide			64.35	
1277	Emmons County Small Projects	Emmons	64.35	37.54	37.54	200.00
1278	Foster County Small Projects	Foster		111.16	111.16	
1279	Golden Valley Co. Small Projects	Golden Valley			316.91	
1281	Grant County Small Projects	Grant	316.91	35.70	35.70	
1282	Griggs County Small Projects	Griggs			105.60	
1285	LaMoure County Small Projects	LaMoure	105.60		135.42	
1286	Logan County Small Projects	Logan		135.42	43.01	
1287	McHenry County Small Projects	McHenry		267.20	1,245.62	200.00
1290	McLean County Small Projects	McLean	978.42	113.98	113.98	
1291	Mercer County Small Projects	Mercer			80.63	
1293	Mountrail County Small Projects	Mountrail	80.63		422.26	
1294	Nelson County Small Projects	Nelson	106.54	315.72	422.26	
1295	Oliver County Small Projects	Oliver	236.12	936.49	1,172.61	200.00
1296	Pembina County Small Projects	Pembina	114.30	55.94	170.24	
1301	Richland County Small Projects	Richland	99.85	240.58	340.43	
1306	Slope County Small Projects	Slope	84.37		84.37	
1307	Stark County Small Projects	Stark	25.85		25.85	
1308	Steele County Small Projects	Steele		84.15	84.15	
1310	Towner County Small Projects	Towner		395.29	395.29	
1312	Walsh County Small Projects	Walsh	102.91		102.91	
1314	Wells County Small Projects	Wells			131.07	
1316	Towner County Drainage	Towner	72.77	58.30	131.07	200.00
1318	Liberty Township Dam	Ransom		29.15	29.15	
1320	Willow Creek-Park River Watershed	Various	53.63		53.63	
1328	Cass County Drain #23	Cass	27.01		27.01	
1341	Rugby Ground-Water Survey	Pierce		51.21	51.21	
1344	Sheyenne River Flood Control	Various	424.85	699.23	1,124.08	
1346	Mt. Carmel Dam	Cavalier	1,654.82	31,281.15	32,935.97	
1347	Kindred Dam	Richland	134.07	42.17	176.24	
1348	Stutsman Co. Drainage - General	Stutsman	40.07	282.26	322.33	
1351	English Coulee	Grand Forks	58,448.85	29.10	58,477.95	18,920.74
1356	Red Willow Lake	Griggs		87.12	87.12	
1358	Sheep Creek Dam	Grant	7,791.53	169,123.86	176,915.39	28,582.10
1359	Barnes County Drain #2	Barnes	197.36		197.36	
1376	Outdoor Recreation - General	Various	953.74	604.26	1,558.00	
1377	Lucca Dam	Barnes	262.05	837.89	1,099.94	

<u>Project No.</u>	<u>Name</u>	<u>County</u>	<u>FY'69</u>	<u>FY'70</u>	<u>Total</u>	<u>Collections</u>
1378	Clausen Springs	Barnes	\$ 3,732.47	\$ 379.70	\$ 4,112.17	\$ 11,648.13
1382	Camel Butte Dam	Golden Valley	1,809.78		1,809.78	
1385	Cart Creek Snagging & Clearing	Various		17.89	17.89	
1388	W. M. D. - Statewide	Various	193.05	201.02	394.07	
1390	Watershed Projects	Various	5.83		5.83	
1392	Missouri R. Reservoir Oper. - Gen.	Various	90.20	89.13	179.33	
1393	Hydrologic Surveys - General	Various	31,932.29	26,968.05	58,900.34	
1394	Topographic Surveys - General	Various	73,965.99	161,413.30	235,379.29	
1395	Ground-Water Surveys - General	Various	56,483.32	39,019.57	95,502.89	
1396	Missouri R. Basin Comp. Planning	Various	2,862.89	1,618.84	4,481.73	
1397	Pollution Control - General	Various	34.71	133.27	167.98	
1398	Conservation Training Center	Various	261.74	512.78	774.52	
1400	Water Permits - General	Various	5,351.10	8,391.71	13,742.81	
1401	International Boundary Drain	Various	202.40	89.21	291.61	
1402	Carlson Dam	Griggs	59.40		59.40	
1403	N.D. Water Resources Research Inst.	Various	55.28		55.28	
1407	Stanley Dam	Mountrail	53,504.94	1,159.57	54,664.51	16,227.17
1408	Minot Flood Control	Ward	2,580.36	2,005.45	4,585.81	
1413	Buffalo Coulee Watershed	Trail	327.79	384.83	712.62	
1415	Richland County Drain #66	Richland	134.39	9,649.82	9,784.21	
1418	Big Coulee Dam	Towner	125,764.78	8,670.61	134,435.39	58,639.18
1419	Walsh County Drain #28	Walsh	32,168.91		32,168.91	
1422	Balthauser-Moyer Cutoff	Cass		72.82	72.82	
1423	O. E. P. Projects - General	Various	182.99		182.99	
1425	Hatton Dam	Steele	101.44		101.44	
1431	Emergency-Disaster Operation	Various	15,445.22	6,654.95	22,100.17	
1435	Green Lake	McIntosh	113.30		113.30	
1438	Mulberry Creek Drain	Cavalier	153.47		153.47	
1442	Flowing Wells	Various		102.74	102.74	
1444	Pembina Flood Control	Pembina	688.10	31,714.09	32,402.19	2,500.00
1445	Grand Forks County Drain #32	Grand Forks	16,736.90		16,736.90	
1446	Grand Forks County Drain #33	Grand Forks	4,329.03		4,416.48	
1449	Wells County Drainage - General	Wells		87.45	97.66	
1453	Karey Dam	Hettinger		97.66	97.66	
1454	Tolley Water Supply	Renville	43.80	92.06	92.06	200.00
1455	Wilson Dam	Dickey	24,868.48	32.70	25,167.26	11,426.97
1460	Ground-Water Recharge Research	Various	108.02	298.78	108.02	
1461	Pembina River Channel Change	Pembina		408.93	408.93	

<u>Project No.</u>	<u>Name</u>	<u>County</u>	<u>FY'69</u>	<u>FY'70</u>	<u>Total</u>	<u>Collections</u>
1464	Beulah Dam	Mercer	\$22,210.51		\$22,210.51	\$
1469	Big Buffalo Dam	Stutsman	97.59		97.59	
1471	Erie Dam	Cass	539.36	34,115.40	34,654.76	
1473	Stutsman County Drain #3	Stutsman	175.04	113.19	288.23	
1474	Trail County Drain #43	Trail	15,885.18		15,885.18	
1475	Trail County Drain #45	Trail	15,802.58		15,802.58	
1476	Hillsboro Mun. Watershed	Trail	194.37	2,153.34	2,347.71	
1477	Scophammer Dam	Renville				1,109.41
1479	Holly-Harwood Dam	Cass	2,056.09		2,056.09	
1481	State Office Building	Burleigh	34.10	395.05	429.15	
1482	Trail County Drain #46	Trail	29.21		29.21	
1483	Wells County Drain #1	Wells	4,718.09		4,718.09	
1484	Walsh County Drain #29	Walsh	10,186.69		10,186.69	
1487	Hans Creek Dam	Dunn	3,960.30	220.00	4,180.30	
1488	Trans Basin Division	Various		125.84	125.84	
1489	North Dakota Wetlands - General	Various	26.60	58.30	84.90	
1490	N.D. Research Conservation & Devel.	Various	27.06	145.75	172.81	
1491	Hidatsa Indian Village	Various	4.62		4.62	
1492	Wells County Drain #2	Wells		11,877.44	11,877.44	
1493	Brag Dam	Various	12,719.55	466.57	13,186.12	
1494	Missouri R. Main Stem Irrigation	Various		172.65	172.65	
1495	Lignite Resources Development	Various	2,566.17	1,789.25	4,355.42	
1496	Lake Elsie	Richland	247.58	1,624.20	1,871.78	200.00
1497	Thirty-Mile Creek Basin	Hettinger	18,570.13		18,570.13	
1498	Richland County Drain #68	Richland	137.35		137.35	
1499	Grand Forks County Drain #39	Grand Forks	161.74	2,788.28	2,950.02	
1501	Otter Creek Basin	Various	10,196.67		10,196.67	
1502	Jensen Dam	Grand Forks	2,183.44		2,183.44	
1503	Medora Dam	Billings	1,989.63		1,989.63	200.00
1504	Valley City Flood Control	Barnes	1,213.41		1,213.41	
1505	Grand Forks Drain #37	Grand Forks	14.60	1,347.87	1,362.47	
1507	Yellowstone River Basin	McKenzie	73.02		73.02	
1510	Cart Creek Dam	Various		2,440.61	2,440.61	200.00
1511	Grand Forks Drain #38	Grand Forks	126.24		126.24	
1512	Steele County W. M. D.	Steele	109.21		109.21	
1513	West. Missouri R. Direct Tribs.	Various	56.10		56.10	
1514	Cottonwood Lake	Williams	61.00		61.00	
			417.84		417.84	200.00

<u>Project No.</u>	<u>Name</u>	<u>County</u>	<u>FY'69</u>	<u>FY'70</u>	<u>Total</u>	<u>Collect ions</u>
1515	Cottonwood Creek	LaMoure	\$ 1,170.03	\$17,961.16	\$19,131.19	\$ 200.00
1516	Flood Forecasting - General	Various		334.41	334.41	
1517	Beulah Flood Control	Mercer		632.32	632.32	
1518	Wahpeton Ground-Water Survey	Richland		36,936.16	36,936.16	
1520	Walsh County Drain #30	Walsh		196.09	196.09	
1521	Dunn County W. M. D.	Dunn		110.00	110.00	
1522	Cass-Clay Dam	Cass		4,001.65	4,001.65	
1523	Ward County Flood Control	Ward		3,718.98	3,718.98	200.00
1524	Crosby Dam	Divide		942.92	942.92	
1527	Oliver County Dam	Oliver		209.96	209.96	
1528	Cass County Drain #50	Cass		32.34	32.34	
1530	Cella Dam	Trail		56.34	56.34	
1531	Benson County Drain #1	Benson		75.15	75.15	
TOTALS			\$1,302,663.34	\$1,329,154.35	\$2,631,817.69	\$575,202.86

WATER PERMITS

For Period July 1, 1968 to June 30, 1970

APPLICATIONS FILED	-----	157
Irrigation	-----	102
Acre-Feet Requested	----- 27,702.4	
Acres Requested	----- 17,471.6	
Municipal	-----	10
Acre-Feet Requested	----- 3,427.4	
Industrial	-----	7
Acre-Feet Requested	----- 2,517.5	
Recreation	-----	7
Acre-Feet Requested - Storage	----- 4,514.0	
Acre-Feet Requested - Annual Use	----- 963.7	
Stockwater, Fish and Wildlife	-----	26
Acre-Feet Requested - Storage	----- 2,126.8	
Acre-Feet Requested - Annual Use	----- 822.4	
Flood Control	-----	3
Acre-Feet Requested - Storage	----- 5,147.0	
Acre-Feet Requested - Annual Use	----- 372.0	
Drainage Research	-----	1
Acre-Feet Requested	----- 480.0	
Municipal and Recreation	-----	1
Acre-Feet Requested - Storage	----- 4,220.0	
Acre-Feet Requested - Annual Use	----- 1,421.0	

WATER PERMIT APPLICATIONS
July 1, 1968 to June 30, 1970

<u>NO.</u>	<u>NAME AND ADDRESS</u>	<u>COUNTY</u>	<u>CLASS OF PERMIT</u>	<u>SOURCE</u>	<u>ACRE- FEET</u>	<u>ACRES</u>	<u>DATE OF CLAIM</u>	<u>STATUS</u>
1565	Jorgensen, Clark - Williston	Williams	Recreation	Little Muddy River and Underground Sources, trib. to Garrison Reservoir	18		7- 3-68	Approved
1566	Broderson, Einar - Waford City	McKenzie	Irrigation	Tobacco Garden Creek, trib. to Missouri River	60.1	60.1	7- 8-68	Approved
1567	Mattson, Merle E. - Tioga	Williams	Irrigation	Underground Sources	240	156	7-15-68	Approved
1568	Williams Company - Cleveland	Stutsman	Recreation	Unnamed Intermittent Stream, trib. to Non- Contributing Area and James River Basin	34 storage 18 annual use		7-16-68	Approved
1569	Holm, Alf H. - Epping	Williams	Recreation	Unnamed Draw, trib. to Long Creek & Garrison Reservoir	48 storage 15 annual use		7-18-68	Approved
1570	Rabe, William - Dickinson	Slope	Irrigation	Deep River, trib. to Little Missouri River	84.2	84.2	7-23-68	Approved
1571	Wolf, Albert - Mott	Hettinger	Irrigation	Unnamed Intermittent Draw, trib. to Cannonball River	10.2	10.2	7-30-68	Approved
1572	Galde, Osborne - Aneta	Nelson	Recreation	Unnamed Tributary, trib. to Sheyenne River	70.4 storage 30.3 annual use		7-30-68	Approved
1573	Jarvis, Jerry L. - Valley City	Barnes	Irrigation	Sheyenne River, trib. to Red River	15	10	8- 2-68	Approved
1574	Ferguson, Fred - White Earth	Williams	Irrigation	Underground Sources	474	237	8- 5-68	Approved
1575	Haggard, Clarence - Bismarck	Emmons	Irrigation	Badger Creek and Oahe Backup Water, trib. to Missouri River	168	84	8- 7-68	Approved
1576	Hufnagle, Harry - Tappen	Kidder	Irrigation	Underground Sources	918	612	8-14-70	Approved

<u>NO.</u>	<u>NAME AND ADDRESS</u>	<u>COUNTY</u>	<u>CLASS OF PERMIT</u>	<u>SOURCE</u>	<u>ACRE- FEET</u>	<u>ACRES</u>	<u>DATE OF CLAIM</u>	<u>STATUS</u>
1577	Heinrich, George - Adrian	LaMoire	Recreation	Unnamed Stream, trib. to James River	283.6 storage 67.5 annual use		8-14-68	Approved
1578	Fargo Park Board - Fargo	Cass	Recreation	Underground Sources	85		8-14-70	Approved
1579	Tweden, Orian - Matford City	McKenzie	Recreation	Unnamed Intermittent Draw, trib. to Garrison Reservoir	25.8 storage 13.5 annual use		8- 7-68	Approved
1580	Thompson, Norman - Hurdsville	Wells	Recreation	Unnamed Stream, trib. to Non-Contributing Area of the James River	44 storage 21 annual use		8-20-68	Approved
1581	Elletson, Perry E., Jr. - Cartwright	McKenzie	Irrigation	Charbonneau Creek, trib. to Yellowstone River	53.4	26.7	8-21-68	Approved
1582	Anderson, Iver - Grand Forks	Grand Forks	Recreation	Salt Water Coulee, trib. to Turtle River	40.3 storage 43.2 annual use		8-21-68	Approved
1583	Sveen, Woodrow N. - White Earth	Williams	Irrigation	Underground Sources	300	156	8-23-68	Approved
1584	Glimm, Franklin - Zahl	Williams	Irrigation	Underground Sources	309	206	8-23-68	Approved
1585	Kordonov, Joe - Belfield	Billings	Recreation	Unnamed Intermittent Draw, trib. to Green River	60 storage 24.9 annual use		8-26-68	Approved
1586	Dewitz, Gerald E. - Tappen	Kidder	Irrigation	Underground Sources	680	453.4	8-29-68	Approved
1587	Kienzie, Marvin - Woodworth	Stutsman	Irrigation	Underground Sources	550	367	8-29-68	Approved
1588	Hartsoch, Virgil - Ray	Williams	Irrigation	Underground Sources	160	161	9- 4-68	Approved
1589	Hartsoch, Verland - Ray	Williams	Irrigation	Beaver Creek, trib. to Garrison Reservoir	84	84	9- 4-68	Approved
1590	Schulz, Leno - Woodworth	Stutsman	Irrigation	Underground Sources	207	138	9- 4-68	Approved
1591	Weyrauch, Wallace W. - Ray	Williams	Irrigation	Underground Sources	450	451	9- 4-68	Approved

<u>NO.</u>	<u>NAME AND ADDRESS</u>	<u>COUNTY</u>	<u>CLASS OF PERMIT</u>	<u>SOURCE</u>	<u>ACRE- FEET</u>	<u>ACRES</u>	<u>DATE OF CLAIM</u>	<u>STATUS</u>
1592	Town & County Club - Devils Lake	Ramsey	Irrigation	Underground Sources	100	100	8-30-68	Approved
1593	Yourk, Walter - Fairfield	Billings	Recreation	Unnamed Intermittent Draw, trib. to Little Missouri River	38.5 storage 11.1 annual use		9- 6-68	Approved
1594	Dewitz, Edwin - Tappen	Kidder	Irrigation	Underground Sources	1975.8	1317.2	9- 9-68	Approved
1595	Olson, Willard - Tioga	Williams	Recreation	Unnamed Coulee, trib. to Beaver Creek and Garrison Reservoir	270 storage 81 annual use		9-10-68	Approved
1596	Columbus, City of - Columbus	Burke	Municipal	Underground Sources	250		9-11-68	Approved
1597	Mary College - Bismarck	Burleigh	Irrigation	Apple Creek, backwater from Missouri River and Oahe Reservoir	30.6	15.3	9-12-68	Approved
1598	S & S Construction - Moorhead, Minnesota	Cass	Industrial	Shenenne River, trib. to Red River of the North	10		9-13-68	Approved
1599	Tishmack, Pete B. - Shields	Grant	Irrigation	Unnamed Creek, trib. to Cannonball River	173	173	9-24-68	Approved
1600	Leavitt, Harold - Mohall	Renville	Recreation	Unnamed Stream, trib. to Souris River	16.4 storage 5.8 annual use		9-26-68	Approved
1601	Fandrick, Jessie - Bowman	Bowman	Irrigation	Unnamed Intermittent Creeks, trib. to North Fork of the Grand River	65.1	65.1	8- 6-68	Approved
1602	Wing, City of - Wing	Burleigh	Municipal	Underground Sources	160		9-30-68	Approved
1603	Stein, Ray E. - Taylor	Dunn	Irrigation	Knife River, trib. to Missouri River	132	132	10-15-68	Approved
1604	Orr, Floyd W. - Ypsilanti	Stutsman	Irrigation	Slough and Underground Sources	100	85.2	10-17-68	Approved
1605	Viall, Roy - Ray	Williams	Irrigation	Underground Sources	260	181.3	10-18-68	Approved

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1606	Bonogofsky, Joe - Freda	Grant	Irrigation	Unnamed Creek, trib. to Dogtooth Creek and the Cannonball River	88	88	10-22-68	Approved
1607	Rott Brothers - Nortonville	Kidder	Irrigation	Underground Sources	1404	936	10-22-68	Approved
1608	Cavalier Country Club - Cavalier	Pembina	Irrigation	Tongue River (Renwick Dam M4), Tongue River Water- shed Dam #4, trib. to Red River	60	30	10-24-68	Approved
1609	Cavalier County Water Management District (Mt. Carmel Dam) - Langdon	Cavaller	Municipal - Recreation	Little Pembina River, trib. to Pembina River & Red River of the North & possible diversion of water from Mulberry Creek	4220 storage 1421 annual use		10-29-68	Approved
1610	Luidahl, Robert D. - Midwest City, Okla.	Benson	Irrigation	Sheyenne River and Unnamed Streams, trib. to Red River	166.5	133.2	11- 6-68	Approved
1611	Hakanson, Donald - Maddock	Benson	Irrigation	Sheyenne River and Unnamed Stream, trib. to Red River	124	99.1	11- 6-68	Approved
1612	Hufnagel, Walter - Tappen	Kidder	Irrigation	Underground Sources	1179	786	11-14-68	Approved
1613	Walhalla, City of - Walhalla	Pembina	Municipal	Underground Sources	161		11-15-68	Approved
1614	Dvorak, David D. - Manning	Dunn	Irrigation	Crooked Creek, trib. to Knife River	50	50	11-20-68	Approved
1615	Sheyenne, City of - Sheyenne	Eddy	Municipal	Underground Sources	100		12- 5-68	Approved
1616	Eddy County Park Board - New Rockford	Eddy	Recreation	James River	200 storage 110.2 annual use		12-12-68	Approved
1617	U. S. Forest Service - Billings, Montana	Stark	Municipal	Underground Sources	12.2		12-19-68	Approved
1618	Zacharias, Vincent E. and Sons - Kathryn	Ransom	Irrigation	Underground Sources	199.4	159.5	12-12-68	Approved
1619	North Dakota Game and Fish Department (Fish Creek Dam) - Bismarck	Morton	Recreation	Fish Creek, trib. to Heart River	1050 storage 201 annual use		1- 7-69	Approved

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1620	Harvey Golf Club - Harvey	Wells	Irrigation	Sheyenne River, trib. to Red River	128	64.5	1-17-69	Approved
1621	Hettinger County Water Management District - Mott	Hettinger	Flood Control	Unnamed Tributary, trib. to Cannonball River	1662 storage 105 annual use		1-27-69	Approved
1622	Brew, Dale - Manning	Dunn	Irrigation	Knife River, trib. to Missouri River	54	54	2- 5-69	Approved
1623	Johnson, Karnes - Sentinel Butte	Slope	Irrigation	Unnamed Intermittent Creeks, trib. to Little Missouri River	70	69.3	2-26-69	Approved
1624	Grand Forks County Water Management District - Grand Forks	Grand Forks	Recreation	English Coulee, trib. to Red River of the North	210 storage 77.5 annual use		3-10-69	Approved
1625	Zunick, Vernon O. - White Earth	Mountrail	Irrigation	White Earth River, trib. to Missouri River	26	25.6	3-17-69	Approved
1626	Price, Raymond - Hensler	Oliver	Irrigation	Missouri River	520	260.8	3-17-69	Approved
1627	Kemmet, Alton - Tappen	Kidder	Irrigation	Underground Sources	234	156	3-31-69	Approved
1628	Kemmet, Jacob - Tappen	Kidder	Irrigation	Underground Sources	456	304	3-31-69	Approved
1629	Wagner, Carl - Arena	Burleigh	Irrigation	Unnamed Stream, non- contributing area of the Missouri River	11.9	11.9	4- 7-69	Approved
1630	Candee, Harvey B. - Gladstone	Stark	Recreation	Unnamed Intermittent Draw, trib. to Heart River	25 storage 12 annual use		4- 2-69	Approved
1631	Bibler, Charlie A. - Williston	Williams	Irrigation	Unnamed Creeks and Draws, trib. to Stony Creek and Garrison Reservoir	46.5	46.5	4-11-69	Approved
1632	Porsborg Water Works - Mandan	Morton	Industrial	Underground Sources	64.5		4-30-69	Approved
1633	Kary, Roy, Jr. - Killdeer	Dunn	Irrigation	Little Knife River, trib. to Knife River	18	18	5- 1-69	Approved
1634	Winter, Kelth D. - Cartwright	McKenzie	Irrigation	Horse Creek, trib. to Yellowstone River	56.8	56.8	5- 5-69	Approved

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1635	Helfrich Brothers - Glen Ullin	Grant	Irrigation	Small Stream, trib. to the Heart River	26	26	5-15-69	Approved
1636	Kersten, Carl - Newburg	Bottineau	Recreation	Runoff, trib. to the Souris River	448.8 storage 120 annual use		5- 7-69	Approved
1637	Griggs, John P. - Medora	Billings	Irrigation	Unnamed Intermittent draws, and Little Missouri River, trib. to Missouri River	169.4	169.4	5-14-69	Approved
1638	Streich, Orrin & Luella - Englevale	Ransom	Irrigation	Underground Sources	900	720	5-23-69	Approved
1639	Walsh County Water Management District - Grafton	Cavalier	Flood Control	Middle Branch Park River, trib. to Park River	1948 storage 216 annual use		5-29-69	Approved
1640	Turtle Lake, City of - Turtle Lake	McLean	Municipal	Underground Sources	140		5- 9-69	Approved
1641	Rojic Brothers - Sentinel Butte	Golden Valley	Irrigation	Unnamed Branch of Andrews Creek, trib. to Little Missouri River	45.2	45.2	3-17-69	Approved
1642	Brown, Grant - Dunn Center	Dunn	Irrigation	Unnamed Drainage, trib. to Spring Creek and Knife River	130	65	6-17-69	Approved
1643	Roemlich, Jacob - Mott	Hettinger	Recreation	Unnamed Intermittent Stream, trib. to Cannonball River	100 storage 50 annual use		6-23-69	Approved
1644	Davis, Leonard - Killdeer	Dunn	Irrigation	Unnamed Intermittent Draw, trib. to Spring Creek and the Knife River	46.4	46.4	6-30-69	Approved
1645	Pan American Petroleum Corporation - Glendive, Montana	Burke	Industrial	Underground Sources	424		7- 2-69	Approved
1646	U. S. Forest Service - Billings, Montana	Slope	Recreation	Second Creek, trib. to Little Missouri River	311 storage 95 annual use		7- 9-69	Approved
1647	Schuler, Ben - Streeter	Logan	Irrigation	Underground Sources	480	320	7- 7-69	Pending
1648	Lowe, Donald - Rhame	Bowman	Recreation	Unnamed Stream, trib. to Little Missouri River	38 storage 21 annual use		7-24-69	Approved
1649	H-T Ranch - Dickinson	Slope	Irrigation	Deep Creek, trib. to Little Missouri River	22	10.6	7-22-69	Pending

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1650	Larson, John M. - Lemmon, South Dakota	Adams	Irrigation	Intermittent Stream, trib. to Cedar Creek and Cannonball River	54.4	54.4	8- 4-69	Approved
1651	Ward, Logan - Bismarck	Burleigh	Irrigation	Burnt Creek, trib. to Missouri River	33.2	33.2	8- 6-69	Pending
1652	Stroh, William - Manning	Dunn	Irrigation	Crooked Creek, trib. to Knife River	36.2	36.2	8- 6-69	Approved
1653	McClusky, City of - McClusky	Sheridan	Municipal	Underground Sources	400		8- 7-69	Approved
1654	Hove, Haakon M. - Ray	Williams	Irrigation	Underground Sources	21	21	8-12-69	Approved
1655	Forthun, Oren - Alexander	McKenzie	Irrigation	Unnamed Intermittent Draw, trib. to Timber Creek and Missouri River	130.5	130.5	8-12-69	Approved
1656	Uhlman, Dr. Eugene B. - Williston	Williams	Irrigation	Missouri River	120	63	8-20-69	Approved
1657	Jensen, LeRoy - Powers Lake	Burke	Recreation	Intermittent Streams, trib. to Missouri River	28.3 storage 17.3 annual use		9-12-69	Pending
1658	Arithson, Ed - Bowman	Bowman	Irrigation	Unnamed Intermittent Draws, trib. to Grand River	88.2	88.2	4-21-69	Approved
1659	Zap, City of - Zap	Mercer	Municipal	Underground Sources	540		9-11-69	Approved
1660	Walsh County Water Management District - Grafton	Cavalier- Pembina	Flood Control	Middle Branch Park River, trib. to Park River and Red River	1537 storage 51 annual use		9-19-69	Approved
1661	Basin Electric Power Cooperative - Bismarck	Mercer	Industrial	Underground Sources	300		9-22-69	Approved
1662	Maher, James A. and Daniel E. - Morristown, So. Dak.	Sioux	Irrigation	Unnamed Coulee, trib. to Hay Creek, Cedar River and Cannonball River	20.8	41.6	9-22-69	Approved
1663	Dietrich, Clem - Bismarck	Burleigh	Recreation	Unnamed Channel, trib. to unnamed slough and Missouri River	32.5 storage 10 annual use		9-22-69	Approved
1664	Hirsch, Roger - Mott	Hettinger	Irrigation	Thirty-Mile Creek, trib. to Cannonball River	61.4	61.4	10- 1-69	Deferred

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1665	Agricultural Research Service - Mandan	Dickey	Drainage Research	Underground Sources	480		10- 6-69	Approved
1666	Stroh, William - Manning	Dunn	Recreation	Unnamed Intermittent Draw, trib. to Knife River	34.2 storage 15 annual use		10- 7-69	Approved
1667	Pleines, Joseph - Woodworth	Stutsman	Irrigation	Underground Sources	240	160	10- 8-69	Approved
1668	Bosserman, Floyd - Golva	Golden Valley	Irrigation	Bullion Creek, trib. to Little Missouri River	1470	980	9-10-69	Approved
1669	Thompson, Albert and Margaret - Oberon	Benson	Irrigation	Underground Sources	590	377.4	9-12-69	Pending
1670	North Dakota Agricultural Experiment Station - Fargo	Dickey	Irrigation	Underground Sources	24	12	10-24-69	Approved
1671	Abelman, Marvin - Alexander	McKenzie	Irrigation	Timber Creek, trib. to Garrison Reservoir	312	156.4	10-17-69	Pending
1672	Turbiville, Harry J. - Marmarth	Bowman	Irrigation	Little Missouri River, trib. to Missouri River	64.4	64.4	10-20-69	Approved
1673	Lehr, C. C. - Gackle	LaMoure	Recreation	Unnamed Stream, trib. to Bone Hill Creek and James River	104 storage 41 annual use		12- 2-69	Approved
1674	Stevenson, J. C. - Carson	Grant	Irrigation	Unnamed Creek, trib. to Louse Creek and Cannonball River	39.8	39.8	12- 9-69	Approved
1675	Finneman, Clarence - Golva	Golden Valley	Irrigation	Unnamed Draw, trib. to Bullion Creek and Little Missouri River	150.2	150.2	12-22-69	Pending
1676	McLeish, Thurman and Steve - Braddock	Emmons	Irrigation	Long Lake Creek, trib. to Long Lake	142.8	142.8	1- 2-70	Approved
1677	Schnell, Robert - Lemmon, So. Dak.	Adams	Irrigation	Unnamed Stream, trib. to Cedar River and Cannonball River	142.4	142.4	12- 3-69	Approved

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1678	Trenton Water Users Cooperative - Trenton	Williams	Municipal	Underground Sources	162		1-27-70	Approved
1679	ABM Aquifer Site - Omaha, Nebraska	Walsh	Industrial	Underground Sources	1613		1-15-70	Approved
1680	Paulson, Ingvald O. - Taylor	Dunn	Irrigation	Knife River, trib. to Missouri River	95	95	2- 6-70	Approved
1681	Moe, Donald - Crosby	Divide	Irrigation	Unnamed Channel, trib. to Unnamed Sloughs	10	6.7	2-26-70	Pending
1682	Kiker, Russell L., Jr. - Sentinel Butte	Slope	Irrigation	Williams Creek, trib. to Little Missouri River	180.9	180.9	2-19-70	Approved
1683	Evanson, Orvis P. - Arnegard	McKenzie	Irrigation	Unnamed Intermittent Draw, trib. to Cherry Creek and Little Missouri River	96.2	96.2	2-16-70	Approved
1684	Beitelspacher, Neil - Linton	Emmons	Irrigation	Unnamed Tributary, trib. to Sand and Beaver Creeks and Missouri River	10	10	2-18-70	Approved
1685	North Dakota State Game and Fish Department (Blacktail Dam) - Bismarck	Williams	Recreation	Blacktail Creek, trib. to Little Muddy and Missouri River	2640 storage 480 annual use		2-10-70	Pending
1686	Rippley, Bill - Bismarck	Burleigh	Industrial	Underground Sources	56		3- 2-70	Approved
1687	Tormaschy, Ralph M. - Dickinson	Dunn	Irrigation	Crooked Creek, trib. to Knife River and Missouri River	32	32	3- 4-70	Approved
1688	Wurtz, Richard - Plaza	Mountain	Irrigation	Garrison Reservoir, trib. to Missouri River	131	65.5	3- 6-70	Approved
1689	Hehn, Werner - Leith	Grant	Irrigation	Unnamed Creek, trib. to Cannonball River	12	19	3- 9-70	Approved
1690	Taylor, City of - Taylor	Stark	Municipal	Underground Sources	73		3-11-70	Approved
1691	Hoff Brothers - Richardton	Stark	Recreation	Unnamed Intermittent Draw, trib. to the Knife River	35 storage 17.7 annual use		3-11-70	Approved

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1692	Ellison, Edward and Larry - Thunder Hawk, So. Dak	Grant	Irrigation	Unnamed Creek, trib. to Cedar River and Cannonball River	88.8	88.8	3-11-70	Approved
1693	Igoe, James J. and Sons Construction, Inc. - Bismarck	Burleigh	Industrial	Underground Sources	50		3-31-70	Approved
1694	Glas, Anton - Linton	Emmons	Irrigation	Missouri River	1168	584	4- 1-70	Approved
1695	Duppong, Nick - Glen Ullin	Morton	Recreation	Muddy Creek, trib. to Heart River	32 storage 24 annual use		3-31-70	Pending
1696	Bohnet, Robert - Bentley	Adams	Irrigation	Timber Creek, trib. to Cedar River and Cannonball River	123.5	123.5	4- 2-70	Approved
1697	Tjelde, Leif - Cartwright	McKenzie	Irrigation	Yellowstone River, trib. to Missouri River	231.3	154.2	4- 7-70	Approved
1698	Enzi, Kriss W. - Braddock	Emmons	Irrigation	West Branch Long Lake Creek, trib. to Long Lake	76.9	76.9	4- 8-70	Deferred
1699	Muggli, Victor - Glen Ullin	Morton	Recreation	Unnamed Stream, trib. to Big Muddy Creek	46 storage 13.5 annual use		4- 8-70	Approved
1700	Dillingner, Mike - Gladstone	Dunn	Irrigation	Unnamed Intermittent Draws, trib. to Knife River	213	213	4-10-70	Approved
1701	James Valley Lands, Inc. - LaMoure	Dickey	Irrigation	James River, trib. to Missouri River	123	82	4-14-70	Approved
1702	Meiklejohn, Harry - Dickey	LaMoure	Irrigation	James River, trib. to Missouri River	250	224	12- 2-69	Pending
1703	Hauck, Nick J. - Richardton	Dunn	Irrigation	Unnamed Intermittent Draw, trib. to Knife River	154	77	4-20-70	Pending
1704	Anderson, Arnold L. - Williston	Williams	Irrigation	Unnamed Coulee and Painted Woods Creek, trib. to Missouri River	72.1	72.1	4-28-70	Approved
1705	Hetzel, Glenn E. - Mott	Hettinger	Irrigation	Chilton Creek, trib. to Cannonball River	63.9	63.9	4-27-70	Approved
1706	Kiefer, Duane E. - Bismarck	Emmons	Irrigation	Oahe Reservoir, trib. to Missouri River	353.4	235.6	4-27-70	Approved

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1707	Finneman, C. T. - Golva	Golden Valley	Irrigation	Bullion Creek & Unnamed Branch at Bullion Creek, trib. to Little Missouri River	1084.3	1084.3	4-30-70	Approved
1708	Sax, Thorai C. - Watford City	McKenzie	Irrigation	Unnamed Intermittent Draw, trib. to Tobacco Garden and Garrison Reservoir	144	71.7	5- 1-70	Pending
1709	Stuber, O. L. - Bowman	Slope	Irrigation	Unnamed Intermittent Draw, trib. to Deep Creek (Little Missouri River)	75.4	75.4	4- 9-70	Pending
1710	Oderman, Harold - Belfield	Billings	Irrigation	Frank's Creek, trib. to Little Missouri River	218	109.2	5- 4-70	Pending
1711	Hilliuss, David - Leith	Grant	Irrigation	Unnamed Intermittent Creek, trib. to Cannonball River	25	26	5-14-70	Pending
1712	Parrish, Lloyd - Watford City	McKenzie	Irrigation	Unnamed Creek, trib. to North Fork Little Missouri River	60	35.4	5-15-70	Pending
1713	Swenson, Kent R. - Belfield	Billings	Recreation	Unnamed Tributary, trib. to Bull Creek and South Branch Heart River	63.7 storage 35.4 annual use		5-22-70	Pending
1714	Anderson, J. E. - Trotters	McKenzie	Irrigation	Little Missouri River and Unnamed Intermittent Draw, trib. to Missouri River	324	324.2	5-28-70	Pending
1715	Bloomgren, Ernest - Bowman	Slope	Irrigation	Unnamed Draw, trib. to Deep Creek (Little Missouri River)	14	10.5	6-16-70	Pending
1716	Minow, James - Sidney, Montana	McKenzie	Irrigation	Unnamed Intermittent Draws, trib. to Bennie Piere Creek & Yellowstone River	264	131.4	6- 8-70	Pending
1717	Jesse Brothers - Bowdon	Kidder	Recreation	Non-contributing Area of the Missouri River Basin	36.9 storage 13.5 annual use		6-22-70	Pending
1718	St. John Chapter, Isaak Walton League - St. John	Rolette	Recreation	McGillis Creek, trib. to Pembina River and Red River of the North	134 storage 84 annual use		6-22-70	Pending
1719	Boeshans, William P. and Robert T. - Elgin	Grant	Irrigation	Unnamed Intermittent Draw, trib. to Cannonball River	20	11	6-23-70	Pending

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1720	Faul, Leander - Harvey	Wells	Recreation	Unnamed Channel, trib. to James River	37.8 storage 16.5 annual use		6-23-70	Pending
1721	Gruber, Frank - Scranton	Bowman	Irrigation	Unnamed Draw, trib. to North Fork of the Grand River	40	40	6-26-70	Pending

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