

REGISTER

ATTENDANCE AT STATE WATER COMMISSION

DATE 12-7-76 PLACE BISMARCK

PROJECT NO. \_\_\_\_\_

Your Name	Your Address	Who do you Represent? (Or Occupation)
1. <u>Don Johnson</u>	<u>Bismarck</u>	<u>Land &amp; Wildlife Service</u>
2. <u>Ed Smith</u>	<u>Minot</u>	<u>Souris River Basin Project</u>
3. <u>Robert M. Thompson</u>	<u>Page</u>	<u>North Cass Paper Man. Dist.</u>
4. <u>Jack Ene</u>	<u>Minot</u>	<u>Minot Daily News</u>
5. <u>Milo Hovinen</u>	<u>Bes</u>	<u>City of Fargo</u>
6. <u>Levin Derrig</u>	<u>Fargo</u>	<u>Houston Engr., Inc.</u>
7. <u>Wes Leisenburg</u>	<u>Hope N.D.</u>	<u>Steel Co. Water Comm.</u>
8. <u>Bennett Kindy</u>	<u>Portland, MO.</u>	<u>" " " "</u>
9. <u>Irving Derby</u>	<u>Ypsilanti N.D.</u>	<u>Farming</u>
10. <u>Art Dale</u>	<u>Montpelier N.D.</u>	<u>City Council</u>
11. <u>Dennis Henderson</u>	<u>Ypsilanti N.D.</u>	<u>Farming</u>
12. <u>Wilfred Johnson</u>	<u>Montpelier N.D.</u>	<u>Farmer</u>
13. <u>Don Gindlen</u>	<u>Bismarck N.D.</u>	<u>Attorney</u>
14. _____	_____	_____

## MINUTES

NORTH DAKOTA STATE WATER COMMISSION  
 Meeting Held In  
 State Room at Holiday Inn  
 Bismarck, North Dakota

December 7, 1976

The North Dakota State Water Commission held a meeting in conjunction with the annual joint convention of the North Dakota Water Users Association and the North Dakota Water Management Districts Association on December 7, 1976, in Bismarck, North Dakota. Governor-Chairman, Arthur A. Link, called the meeting to order at 9:00 a.m., and requested Secretary Vernon Fahy to present the agenda.

MEMBERS PRESENT:

Arthur A. Link, Governor-Chairman  
 Richard Gallagher, Vice Chairman, Mandan  
 Alvin Kramer, Member from Minot  
 Gordon Gray, Member from Valley City  
 Arthur Lanz, Member from Devils Lake  
 Arlene Wilhelm, Member from Dickinson  
 Myron Just, Commissioner, Department of Agriculture, Bismarck  
 Vernon Fahy, Secretary and State Engineer, North Dakota State  
 Water Commission, Bismarck

OTHERS PRESENT:

State Water Commission Staff Members  
 Representatives of the Souris Basin Coordinating Committee  
 Representatives of North Cass Water Management District  
 Representatives of Steele County Water Management District  
 Citizens from the Montpelier-Ypsilanti area  
 Milo W. Hoisveen, Consultant for the City of Fargo  
 Alan Grindberg, Attorney, Bismarck

Attendance Register is on file in the offices of the State Water Commission for the December 7, 1976 meeting (filed with official copy of Minutes)

Proceedings of this meeting were tape recorded to assist in compilation of the minutes.

CONSIDERATION OF MINUTES  
 OF SEPTEMBER 27 AND 28, 1976  
 MEETING - APPROVED

It was moved by Commissioner Lanz, seconded by Commissioner Just, and carried, that the minutes of the September 27 and 28, 1976 meeting held in Fargo, North Dakota, be approved as presented and distributed.

APPEARANCE OF DON OHNSTAD,  
ASSISTANT STUDY DIRECTOR,  
TO REPORT ON PROGRESS OF  
YELLOWSTONE LEVEL B STUDY  
(SWC Project No. 1507)

Mr. Don Ohnstad, Assistant Study Director for the Yellowstone Level B Study, stated that the Agricultural Ad Hoc Committee of the Yellowstone Level B Study had prepared a draft report on agricultural projections. Mr. Ohnstad, through use

of an overhead projector, presented selected excerpts from the draft report and discussed supporting data. The agricultural projection charts which he discussed are attached hereto as APPENDIX "A".

Mr. Ohnstad stated that there will be one more production, or demand, projection made on a regional-state preference by the State Study Team. The Bureau of Reclamation, Soil Conservation Service and State Water Commission are currently studying and identifying irrigation projects that could meet the demand. This information will be presented at the next State Study Team meeting to be held in Dickinson on December 14 and 15. The State Study Team will then consider this information and decide if it should be included as one of the alternative plans in the study.

APPEARANCE OF REPRESENTATIVES OF  
THE SOURIS BASIN COORDINATING  
COMMITTEE TO DISCUSS POSSIBLE  
SWC PARTICIPATION IN FLOOD CONTROL  
PROTECTION FOR CERTAIN DOWNSTREAM  
PROPERTIES  
(SWC Project No. 1408)

Secretary Fahy introduced Jack Bone and Ed Smith from Minot, North Dakota, who have requested an audience before the State Water Commission to update it on the progress of the Souris River flood control project in the Minot area.

Mr. Jack Bone, a member of the Flood Control Citizens Committee, Souris River, read a statement labeled as APPENDIX "B".

Mr. Ed Smith, also a member of the Souris Basin Coordinating Committee, reiterated the remarks made by Mr. Bone, stressing that his main objective as a member of the Committee is to receive and consider input from the interested and affected citizens in the Souris Basin.

Mr. Smith, on behalf of the Souris Basin Coordinating Committee, requested from the State Water Commission any assistance which could be given to help alleviate the problems within the Basin.

After questions from the Commission members, Secretary Fahy indicated that the type of assistance being requested of the Water Commission for flood control and drainage does fall within the purview of the State Water Commission. The general procedure for assistance is that the local entities develop the project and determine the financing. In the past, the Water Commission has participated up to 40 percent of qualified costs on projects such as of this nature.

As the local planning progresses and the local entities foresee the need for this type of work, Secretary Fahy assured the Committee representatives that this Commission would be receptive to receiving and considering a proposal for assistance within its budgetary limits.

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Governor Link thanked Mr. Bone and Mr. Smith for appearing before the Water Commission to express the interests of the Souris River Valley citizens.

**DISCUSSION OF WATER  
SUPPLY PROBLEMS AT  
FARGO, NORTH DAKOTA  
(SWC Project No. 305)**

Secretary Fahy briefed the Commission on the water supply shortage being experienced at Fargo, North Dakota, as a result of the Red River reaching historical low flows. News articles have been released indicating the possibility that sewage may be recycled through the water treatment plant in order to satisfy the city's water needs. The city's choices for alleviation of this water supply shortage are limited, and if the city is to develop a standby water supply for this critical period pending the resumption of flows in the Red River, that choice is going to have to come from ground water.

Secretary Fahy indicated that a meeting was held in his office recently and a good deal of time was spent in discussing possible ways to proceed in securing a ground-water source of supply for the city of Fargo. It was agreed that Fargo will proceed to examine several sources of ground water, which are also limited due to the development in that area. Ultimately, the city will approach the State Water Commission requesting assistance for a comprehensive study to meet its interim water supply needs.

Milo W. Hoisveen, former State Engineer, has been employed by the city of Fargo as a consultant. Mr. Hoisveen presented some of the background data which has been explored relative to securing an interim water supply for the city. He indicated that any assistance the State Water Commission could give to the city of Fargo in this emergency situation would be greatly appreciated.

Secretary Fahy stated that correspondence has been received from the Sheyenne River Valley Association indicating its comments on the city of Fargo's water supply, and also comments on a news article which appeared in the Fargo Forum. These letters are attached hereto as APPENDIX "C".

At this time, the Commission recessed their meeting so that members could attend the Bureau of Reclamation's hearing on the hypothetical withdrawal of one million acre-feet of water annually from the Missouri River and its environmental impacts.

**REQUEST FROM CITY OF ZEELAND  
FOR SWC PARTICIPATION IN AN  
AQUIFER TESTING PROGRAM FOR  
CITY WATER SUPPLY  
(SWC Project No. 815)**

Secretary Fahy recalled that at the September, 1976 Commission meeting, \$2,750 was approved to conduct a ground-water study for the city of Zeeland. The study results are very promising, therefore, an aquifer test must be performed to actually ascertain what the water supply quantities actually are. The city of Zeeland has requested Water Commission participation in this test,

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and it was Secretary Fahy's recommendation that the Commission honor this request in an amount not to exceed \$6,350.

It was moved by Commissioner Kramer, seconded by Commissioner Lanz, and carried, that the State Water Commission participate in an amount not to exceed \$6,350, subject to available funds, to conduct an aquifer test in continuation of obtaining an adequate water supply source for the city of Zeeland.

**CONSIDERATION OF WATER  
PERMIT REQUESTS**

Secretary Fahy presented APPENDIX "D" attached hereto, which represents water permit requests. He indicated that several persons have requested to appear before the Commission regarding some of the permits on the agenda.

Attorney Alan Grindberg of Bismarck appeared on water permit No. 2548, Joseph Aberle of Minot, who has requested a permit to irrigate 156 acres from ground-water sources.

Mr. Grindberg stated that a number of problems exist regarding this application, one being that Mr. Aberle has requested a permit for diversion from a well to irrigate on land that he neither owns or controls by lease. The persons who are the landowners of record have indicated they did not receive the statutory notice of the hearing, so therefore, they did not appear at the time of the hearing. Another problem is that the well was constructed before the application for a water permit was filed and this well was constructed to irrigate two quarter sections of land, while his water permit application is only for one quarter section.

Hydrology Division staff members have recommended that this particular request be deferred at this time, and it was Secretary Fahy's suggestion that Mr. Grindberg be invited to present further details relative to this request when the Commission again considers the application.

Relative to water permit No. 2553 filed by the Hoggarth Brothers in Stutsman County to irrigate 960 acres, the Hydrology Division of the State Water Commission has recommended that this application be deferred at this time because there is not enough available data to adequately assess the potential impact from the proposed development.

Several persons were in attendance to present some comments relative to the Hoggarth Brothers application.

Mr. Art Dale from Montpelier, North Dakota, representing the City Council, indicated the city's concern for water for human consumption. He noted that this past fall, some of the city citizens

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had circulated a petition requesting the City Council to look into the possibility of getting a more adequate water supply for the city. Shortly after receiving this petition, a letter was received from the Hoggarth Bros. for irrigation including lands within one-half mile of Montpelier city limits. The City Council does not feel there has been an adequate study done of the aquifers in the area and suggests that this request be delayed until this information is available.

Commissioner Kramer asked Mr. Dale if the city of Montpelier has made application for an additional water supply study.

Mr. Dale replied that the city has not made application for additional water supply, but has been working with the rural water users in such an attempt.

Secretary Fahy suggested that the city officials submit a letter to the Office of the State Engineer in Bismarck indicating their concerns for additional water supply. A representative of the Water Commission will then be assigned to meet with the locals, review their problems and discuss the alternatives and different ways to proceed.

Wilfred Johnson, a farmer from Montpelier, indicated that his farm adjoins the applicant's land. He is concerned about the amount of water the applicant has requested, but is not against irrigation, only the effect it will have on others in the area.

Mr. Johnson also stated that recently the school water in Montpelier had been condemned.

Dennis Hendrickson, a farmer in the Ypsilanti area, expressed his concerns regarding the large number of acres requested and the possibility of depletion of the aquifer.

Discussion then centered around how the recommendations are arrived at by members of the State Water Commission staff, general water permit information and bill draft legislation forthcoming regarding water permit procedures.

Milton Lindvig, Director of the Hydrology Division for the State Water Commission, indicated that several requests appear on the agenda from the Page, North Dakota (Cass County) area and the recommendations result from the following procedure: a number of assumptions and detailed and conservative type analysis were made of certain development schemes that could be laid out for the consideration of those particular applications because all of the requests were in the same general area. It was determined that to be conservative on the basis of the information available that the wells should be no closer than one or one and one-half miles apart. The impacts will then be measured from this proposed development to determine the quantitative views and possible further development within the area.

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After lengthy discussion, it was moved by Commissioner Kramer that the water permit recommendations be confirmed as presented by the State Engineer, subject to those conditions attached to each respective permit. The motion was seconded by Commissioner Gray.

In discussion of the motion, Commissioner Wilhelm commented on water permit No. 2483, Vernon Klose of Fairview, Montana. She indicated that several persons had stated their opposition to the granting of a portion of the request at the September, 1976 meeting. These individuals had communicated to Commissioner Wilhelm their desires to meet with the Commission on this particular application, and since another portion of the application does appear on the agenda for consideration at this meeting, she requested that action be deferred so that the individuals could be notified of the State Engineer's recommendations before additional water is granted to Mr. Klose.

Milton Lindvig indicated that Vern Klose's application is in McKenzie County and that county does not have a ground-water study at this time. He said that Mr. Klose has provided a substantial amount of test hole and water level information on which a recommendation was based to issue the first part of his request. Since that time, Mr. Klose has constructed a production well and an aquifer test was conducted. From those data, it was determined that there would be no adverse effects on the people who were expressing concern. Mr. Lindvig did indicate that the concerned individuals had not received this later information directly from his office because of the workload and lack of time.

Governor Link indicated that in view of the concern expressed, and taking into account the time of the year, there would be ample time to reconsider the request at the next Commission meeting. Proper communication can then be made with the concerned individuals so that all possible conflict is eliminated.

It was moved by Commissioner Wilhelm to amend the original motion to include water permit No. 2483, Vernon Klose, in those requests to be deferred based on the above discussion. The amended motion received a second from Commissioner Just. All members voted aye; the motion carried.

The following water permit requests were approved, subject to conditions attached to each individual permit:

No. 2526 - Dakotaville, Inc., Bismarck;  
 No. 2515 - Lawrence Cross, Milnor; No.  
 2531 - Rodney G. and Marvel M. Ebenhahn,

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Sheyenne; No. 2532 - Thomas E. Montgomery, Carrington; No. 2533 - Reuben Bontrager, Dazey (this request was approved by the State Engineer on October 8, 1976); No. 2538 - Ralph and William Thompson, Thomas A. Thompson Trust and William J. Thompson Trust, Page; No. 2539 - Robert Thompson, Thomas A. Thompson Trust, and William J. Thompson Trust, Page; No. 2540 - John Abbott, Steele (this request was approved by the State Engineer on November 15, 1976); No. 2513 - City of Belfield (this request was approved by the State Engineer on October 18, 1976); No. 2507 - Merlyn Yagow, Milnor; No. 2529 - German Farms, Fullerton; No. 2556 - Wayne Anderson, Page; No. 2552 - Paul P. Feder and George Grindberg, Fargo; No. 2512 - City of Cogswell; No. 2519 - City of Hettinger; No. 2496 - Thomas W. and Marvin W. Mund, DeLamere; No. 2549 - Stanley and John Hokana, Oakes; No. 2557 - Robert L. Nelson, LaMoure (this request was approved by the State Engineer on November 5, 1976); No. 2516 - City of Hazen; No. 2559 - George W. Laber, Jr., New Rockford; No. 2560 - Robert F. Reimers, Carrington; No. 2568 - Charles and Edward Satrom, Page; No. 2571 - Stephen D. Malmberg, Oakes; No. 2573 - Carl D. Larson, Fullerton; No. 2542 - Arnold Nielsen, Oakes; No. 2584 - Dale Case, Milnor; No. 2593 - Arvey Hartsoch, White Earth; No. 2587 - Sherwood Johnson, Page; No. 2509 - Clarence J. Greene, Tolna; No. 2463 - Guy Shaide, Cartwright; No. 2500 - Lloyd and/or Dennis Kittelson, Westby, Montana; No. 2510 - Donald Reistad, Alkabo; No. 2337 - Stanley Malmberg, Oakes; No. 2434 - Donald M. and Ruth L. Garnas, Page; and No. 2416 - Kenneth R. Schmidt, Williston.

The following applications were deferred pending additional study and investigations:

No. 2470 - Lloyd Ptacek, Cogswell; No. 2534, Leo Hoffner, Esmond; No. 2484 - Dick Brothers, Englevale; No. 2455 - Jim and Martin Schillo, Golva; No. 2464 - Ronald Wagner, Englevale; No. 2544 - Myron Tarno, Cleveland; No. 2545 - James Pesek, Alexander; No. 2235 - Tri-County Water Users, Inc., Lakota; No. 2548 - Joseph and Catherine Aberle, Minot; No. 2525 - Oliver

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County Water Management District, Center; No. 2530 - Marshall Claeys, Hecla, South Dakota; No. 2543 - Noel E. Schmoker, Dickey; No. 2554 - Thomas D. Moss, Steele; No. 2555 - William D. Neideffer, Wing; Nos. 2491, 2492 and 2493 - All Seasons Water Users Association, Inc.; No. 2541 - James Olson, Crete; No. 2521 - Leon and Wayne Witkowski, Stirum; No. 2528 - Donald Brandenburg, Edgeley; No. 2553 - Hoggarth Brothers, Courtenay; No. 2550 - Arnold Widmer, Crete; No. 2564 - Donald Forster, Oakes; No. 2518 - Albert and Margaret Hofmann, Medina; No. 2517 - Arnold Nielsen, Oakes; No. 2425 - Clarence R. Reed, Fargo; No. 2535 - Gaylon Brandt, Oakes; No. 2546 - Ronald Wagner, Englevale; No. 2486 - Mrs. Geraldine Maus, Golva; No. 2589 - Arthur Streifel, Esmond; No. 2592 - Clarence E. Lesmeister, Harvey; No. 2590 - William Scoville, Steele; No. 2563 - Lloyd Koster, Kramer; No. 2577 - Mooreton Ventures, Mooreton; No. 2591 - Alamo Farms, Oakes; No. 2536 - Gary A. Streich, Englevale; No. 2537 - Gary A. Streich, Englevale; No. 2586 - George Lauinger, Jr., Karlsruhe; and No. 2483 - Vernon Klose, Fairview, Montana.  
(SEE APPENDIX "D")

**DISCUSSION OF LEGISLATION  
FOR REVISION OF WATER LAWS**

last session of the Legislature, a resolution was introduced, and passed, to study the water laws. This resolution was assigned to the Natural Resources Committee of the Legislative Council. At that time, Mr. Sagsveen volunteered to help prepare the draft, which was accepted, as that department was undergoing some staff changes at that time.

The bill was then drafted which the Natural Resources Committee considered and approved. The bill is primarily drafted to improve problem areas in the present law and maintains the present concept and doctrine refining certain areas which Mr. Sagsveen briefly reviewed.

He also reviewed new language which is contained in the bill draft in various areas which received some discussion.

Discussion pursued around the statutory authorities and responsibilities of the State Engineer and the State Water Commission as contained in the bill draft.

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Governor Link stated that he has received communication from a group of West River citizens who have indicated that they are preparing legislation dealing with water law. They have expressed a desire to meet with representatives of the Water Commission to discuss the proposals they are considering in relation to the legislation that the State Water Commission is considering. He indicated that he felt it would be beneficial to all concerned and that he will accept their invitation and call a meeting in the very near future, and asked the Commission if it is their desire to be notified of this meeting so that they may attend if they wish.

It was the consensus of the Commission that the Governor honor the invitation from the West River group and that each member of the Commission be notified of the date and place of the meeting.

Commissioner Gallagher suggested that at this meeting, the West River group have their proposed legislation in a draft form for discussion purposes.

Secretary Fahy stated that in view of the time constraints on this meeting, two agenda items could be held until the next meeting. Items being held over are the financial statement and the discussion of a policy for the reconstruction of drains.

Secretary Fahy indicated that an item for discussion purposes at the next meeting will be the consideration of a water marketing policy. Mr. Sagsveen said that he will mail copies of the draft regulation to the Commissioners prior to the next meeting for their review.

It was moved by Commissioner Gallagher, seconded by Commissioner Gray, and carried, that the meeting adjourn at 12:00 noon.

  
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 Arthur A. Link  
 Governor-Chairman

ATTEST:

  
 \_\_\_\_\_  
 Vernon Fahy  
 State Engineer, Secretary

December 7, 1976

## APPENDIX "A"

SELECTED EXCERPTS  
FROM  
AGRICULTURAL PROJECTIONS AND SUPPORTING DATA  
DRAFT REPORT NOV., 1976  
PREPARED BY THE  
AGRICULTURAL AD HOC GROUP

STATE OF MONTANA  
STATE OF NORTH DAKOTA  
STATE OF WYOMING  
ECONOMIC RESEARCH SERVICE  
U.S. BUREAU OF RECLAMATION  
SOIL CONSERVATION SERVICE

YELLOWSTONE RIVER BASIN AND ADJACENT COAL AREA

LEVEL B STUDY

Item 1. Comparison of Import-Export Assumptions for U.S. for E and E'

	Unit	3 Year Ave. Exports	1980				2000			
			E	E'		E	E'			
			Net Export	Import	Export	Net Export	Net Export	Import	Export	Net Export
<u>Millions</u>										
Wheat	Bu.	1,136 <sup>1/</sup>	755	1	760	759	814	1	920	919
Soybeans	Bu.	480 <sup>1/</sup>	570	0	750	750	684	-	1,475	1,475
Corn	Bu.	1,217 <sup>1/</sup>	1,159	1	890	889	1,275	1	2,070	2,069
Grain Sorghum	Bu.	190 <sup>2/</sup>	197.5	0	160	160	217.3	0	380	380
Oats	Bu.	35 <sup>2/</sup>	4.9	1	10	9	4.0	1	22	21
Barley	Bu.	68 <sup>2/</sup>	91.8	10	30	20	96.4	10	45	35
Beef & Veal	Carcass Lbs.	-1,753 <sup>3/</sup>	-1,914	2,097.1	135.6	-1,961.5	-2,909	3,073.8	150.2	-2,923.6
Pork	Carcass Lbs.	-269	-258	492.5	200.0	-292.5	-325	550.9	200.0	-350.9
Lamb & Mutton	Carcass Lbs.	-69	-177	221.6	5.0	-216.6	-203	278.6	5.0	-273.6

<sup>1/</sup> Based on an average of 72-73, 73-74 and 74-75 marketing years which vary for the commodities as to dates. From Agricultural Outlook, ERS, USDA, October 1976.

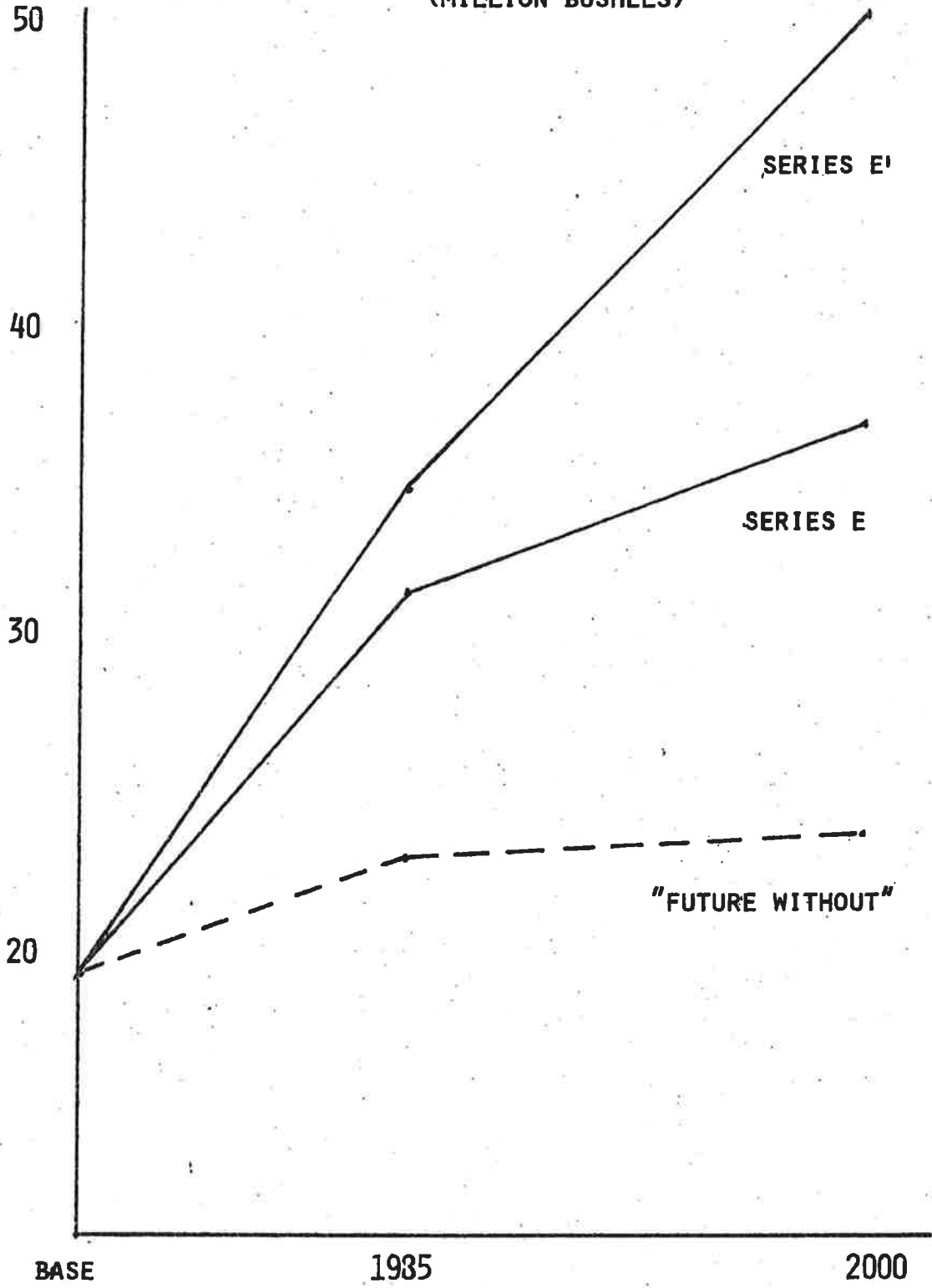
<sup>2/</sup> Average of 1971, 1972 and 1973 years. From USDA Agricultural Statistics, 1975.

<sup>3/</sup> A negative means net import. The figures in the 3 year average column for livestock are based on 1972 through 1974 net export average from USDA, Agricultural Statistics, 1975.

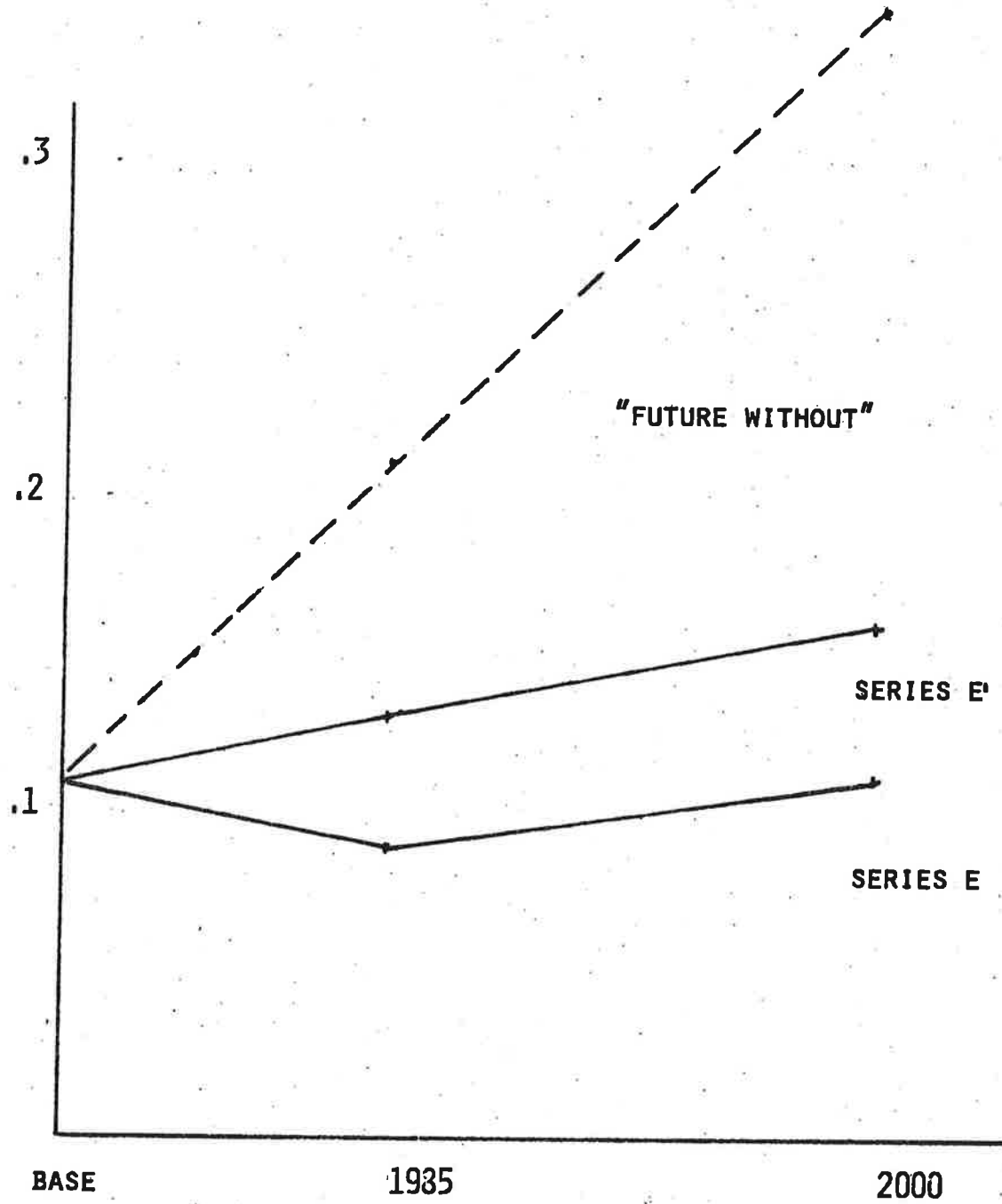
Item 3. Harvested Acres and Percents Irrigated  
and Nonirrigated for Without Situation  
North Dakota Tributaries

Crop	1985			2000		
	Harvested Acres	% Nonirr.	% Irr.	Harvested Acres	% Nonirr.	% Irr.
Wheat	1,539,258	99.1	.9	1,465,845	98.5	1.5
Rye	16,797	100.0	0	15,900	100.0	-
Corn	3,858	87.1	12.9	3,963	80.2	19.8
Silage	98,082	92.8	7.2	97,232	88.6	11.4
Oats	428,470	99.3	.7	407,357	98.9	1.1
Barley	257,522	99.1	.9	245,148	98.6	1.4
Hay	1,034,002	95.6	4.4	1,007,247	92.9	7.1
Flaxseed	51,285	97.6	2.4	49,312	96.1	3.9
Sugar Beets	9,348	0	100.0	14,675	0	100.0
Irish Potatoes	2,351	85.8	14.2	2,435	78.4	21.6
Dry Beans	2,110	79.6	20.4	2,265	70.2	29.8
Irr. Pasture	2,288	-	100.0	3,590	-	100.0
<b>Total</b>	<b>3,445,370</b>	<b>97.5</b>	<b>2.5</b>	<b>3,314,969</b>	<b>95.9</b>	<b>4.1</b>

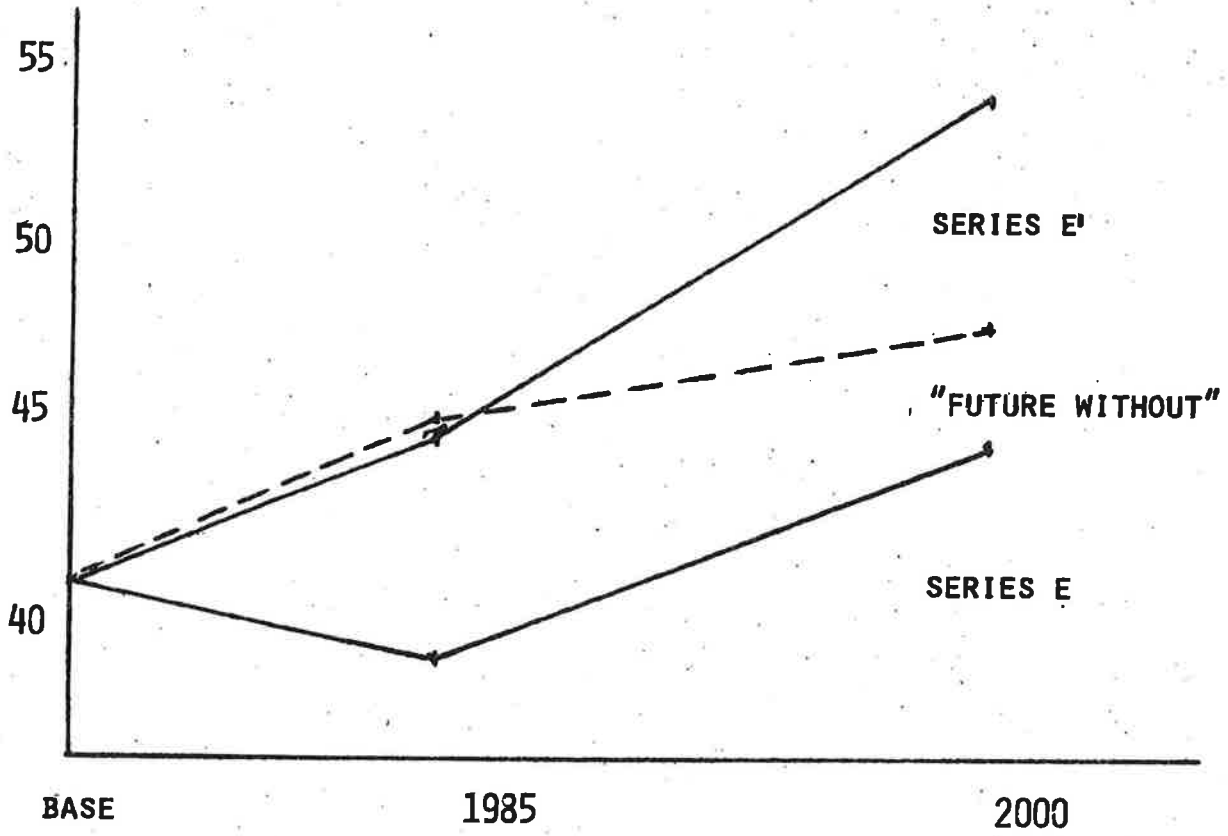
PROJECTED OATS PRODUCTION  
NORTH DAKOTA TRIBUTARIES  
(MILLION BUSHELS)



PROJECTED SUGAR BEET PRODUCTION  
NORTH DAKOTA TRIBUTARIES  
(MILLION TONS)

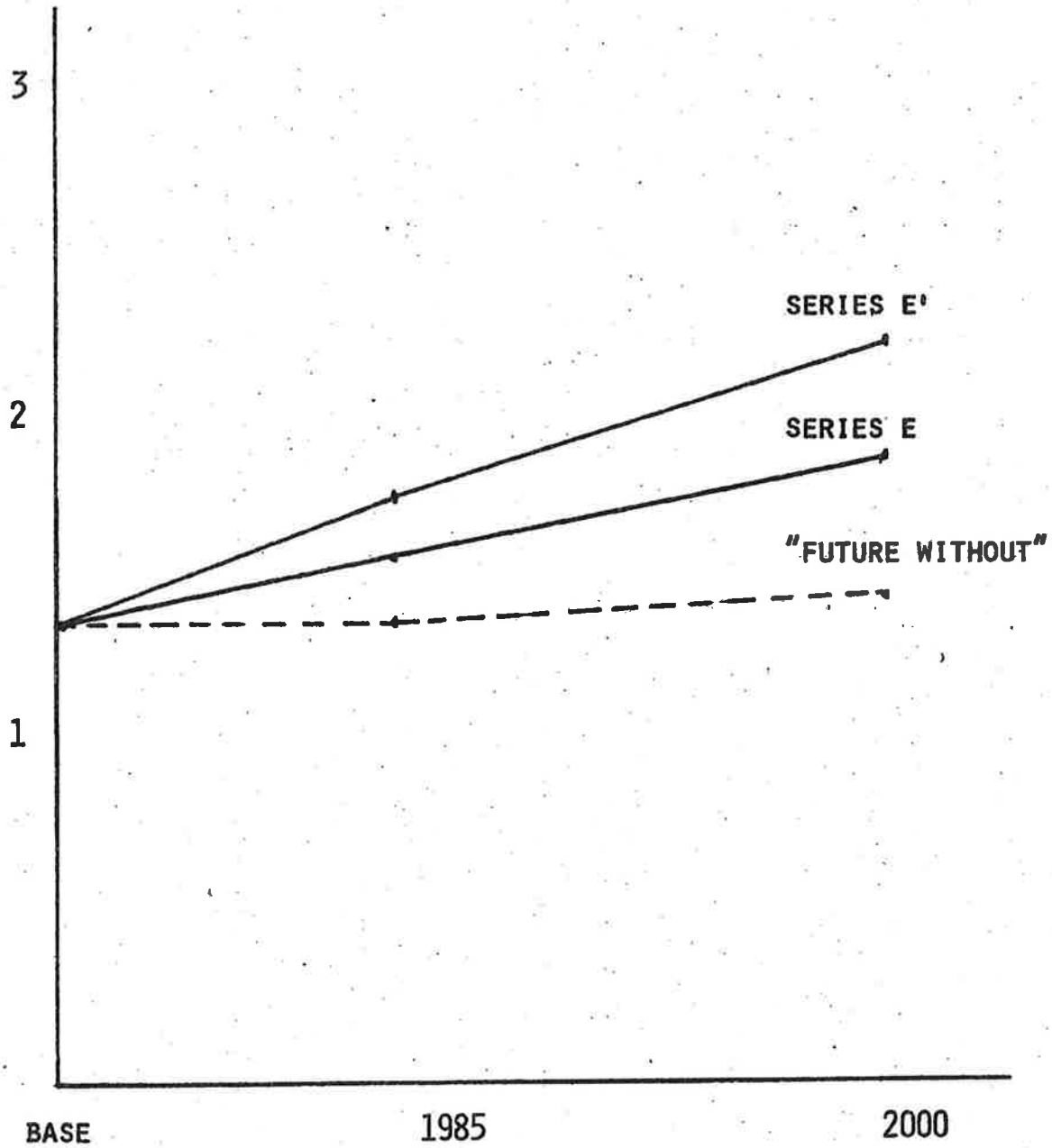


PROJECTED WHEAT PRODUCTION  
NORTH DAKOTA TRIBUTARIES  
(MILLION BUSHEL)





### PROJECTED HAY PRODUCTION NORTH DAKOTA TRIBUTARIES (MILLION TONS)



Appendix Table 5. Crop Yields for Total Harvested Acres  
for Base and as Reflected by OBERS E and E'  
Projections for North Dakota Tributaries<sup>1/</sup>

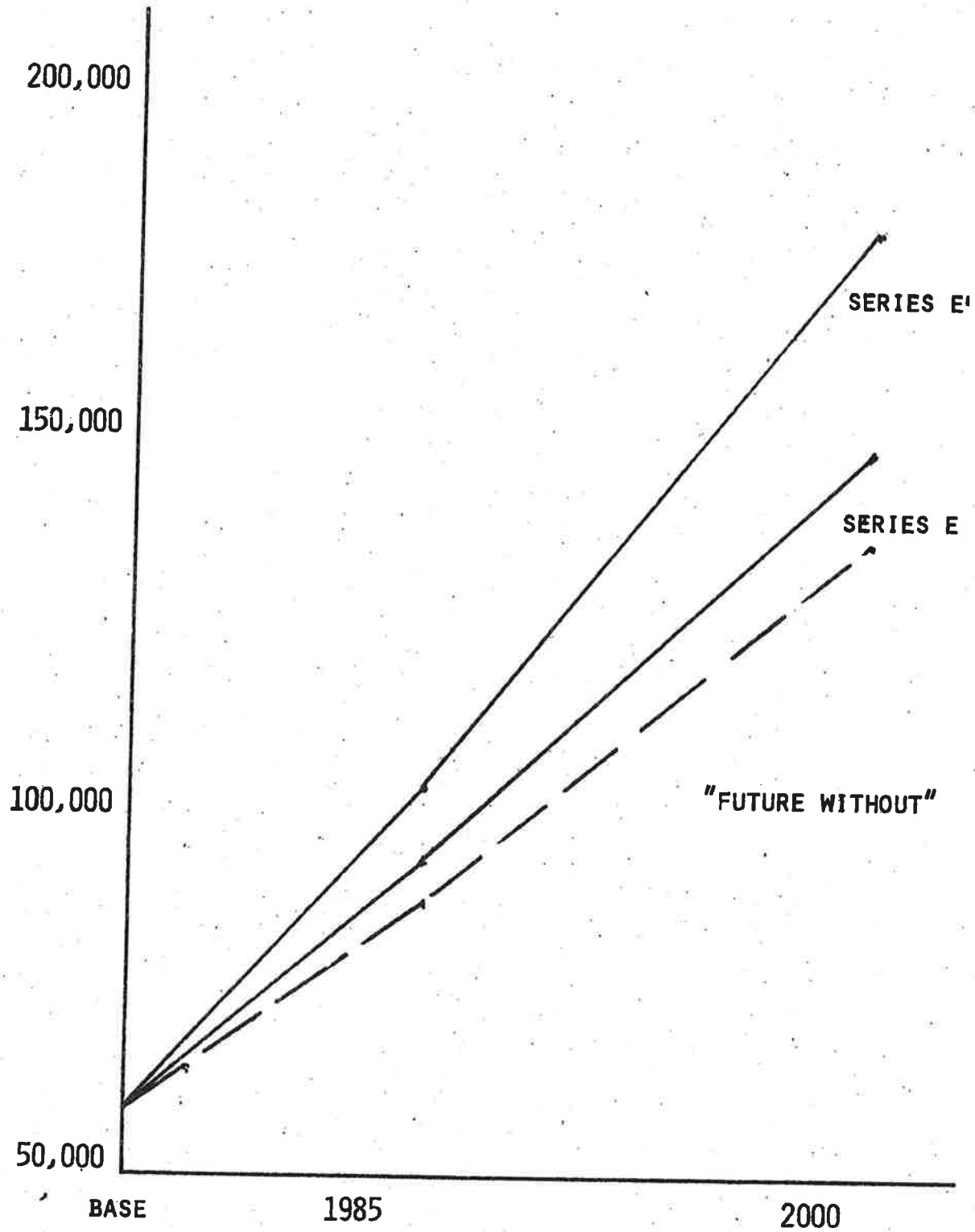
Crop	Unit	Base	Series E		Series E'	
			1985	2000	1985	2000
Wheat	Bu.	24.53	35.77	44.29	35.77	44.27
Rye	Bu.	29.20	40.19	50.03	40.19	50.03
Corn for Grain	Bu.	33.77	34.65	41.29	40.00	43.10
Silage	Tons	5.25	5.59	6.78	5.58	6.74
Oats	Bu.	42.18	59.49	69.16	59.48	69.11
Barley	Bu.	36.67	53.33	64.26	54.93	66.19
Hay	Tons	1.29	1.52	1.70	1.51	1.68
Soybeans	Bu.	20.33	14.68	16.18	14.97	16.50
Flaxseed	Bu.	9.63	15.70	19.72	15.70	19.72
Sugar Beets	Tons	18.69	19.78	23.50	19.44	23.08
Irish Potatoes	Cwt.	72.09	88.2	96.41	88.2	96.4
Dry Beans	Cwt.	12.95	15.40	17.9	15.40	17.9

<sup>1/</sup> Yields were determined by dividing production by the sum of irrigated and nonirrigated harvested acres.

Item 2. Acres Required to Meet OBERS Projections  
Using Without Projected Yields.  
North Dakota Tributaries

Crop	E				E'			
	1985		2000		1985		2000	
	Nonirr.	Irr.	Nonirr.	Irr.	Nonirr.	Irr.	Nonirr.	Irr.
Wheat	1,308,685	11,885	1,361,056	20,727	1,506,028	13,677	1,633,811	24,880
Rye	25,277	-	25,856	-	35,606	-	43,394	-
Corn for Grain	1,323	196	232	57	1,152	170	1,235	305
Silage	132,817	10,305	92,574	11,911	143,876	11,163	106,175	13,661
Oats	588,138	4,146	628,465	6,990	648,810	4,574	868,178	9,656
Barley	274,913	2,497	303,954	4,316	308,668	2,803	360,664	5,121
Hay	1,145,624	52,727	1,209,350	92,426	1,267,244	58,325	1,425,612	108,954
Flaxseed	83,480	2,053	61,885	2,511	94,540	2,325	74,115	3,008
Sugar Beets	-	4,062	-	4,876	-	6,016	-	6,780
Irish Potatoes	1,103	183	1,119	308	1,200	200	1,234	340
Dry Beans	700	179	322	137	679	174	273	116
Subtotal	3,562,060	88,233	3,684,813	144,259	4,007,803	99,427	4,514,691	172,821
Irr. Pasture	-	2,420	-	3,957	-	2,728	-	4,741
Total	3,562,060	90,653	3,684,813	148,216	4,007,803	102,155	4,514,691	177,562

ACRES REQUIRED TO MEET OBERS PROJECTIONS  
USING "FUTURE WITHOUT" PROJECTED YIELDS  
NORTH DAKOTA TRIBUTARIES



by Jack C. Bone, member Flood Control Citizens Committee, Souris River

The assignment of Ed Smith as trouble shooter on the Souris River flood control project basically will involve representing the interests of people along the river and to deal with their problems. In so doing he expects to devote his time to listening to the people's concerns and to deal with the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, U.S. Soil Conservation Service, State Water Commission and county and local governments in resolving these concerns.

These are the types of problems he will be dealing with:

Stream flows	land acquisition
Trapped water	land leasing
drainage	relocations
diking	replacing tax losses
road raising	increasing channel capacities
farmstead protection	project modifications

In addition to devoting his time to see that the best interests of the people along the stream are protected, Smith plans to work with various governmental units at the local, state and national levels to achieve combined efforts in accomplishing things unlikely to be done without this governmental inter-action.

As an example, the State Water Commission could serve in a most helpful way by joining with the Corps of Engineers and county water management districts or county boards in correcting minor channel overflows, in providing drainage for trapped waters in big flood years, in diking work and related endeavors.

His activities are to be financed by contributions from individuals and organizations, businesses and possibly local governments.

## SHEYENNE VALLEY ASSOCIATION

P.O. Box 275  
Kindred, North Dakota

man Lynnes, President  
Leonard, North Dakota 58052

John Andvik, Vice President  
Kindred, North Dakota 58051

Leah Rogne, Secretary  
Kindred, North Dakota 58051

Carter Powell, Treasurer  
Leonard, North Dakota 58052

Lynn Runck, Membership  
Leonard, North Dakota 58052

November 24, 1976

State Water Commission  
Bismarck  
North Dakota 58501

Dear Water Commission Member:

We are enclosing a copy of a letter which the Sheyenne Valley Association sent last week to the Fargo Chamber of Commerce.

We felt we had to speak out to set the record straight on Mr. William Corwin's claim that 85% of the water being released from Baldhill for Fargo was being lost in transmission.

We were disturbed that this grossly inaccurate figure was used in two widely-read newspaper articles.

Far from being as great as Mr. Corwin leads us to believe, actual transmission losses are negligible. As is explained in our letter to the Chamber, the Sheyenne River picks up substantial flows as it passes through the Sheyenne Delta. The small losses that occur between Baldhill and Lisbon are more than compensated by the time the water reaches Kindred.

This point is not merely a technical one. Area citizens were understandably alarmed by these mistaken reports. Furthermore, Mr. Corwin has called for renewed support for the Kindred Dam based on these supposed large losses.

The implication that opponents of the Kindred Dam are conspiring to deny Fargo needed water supply particularly disturbs us. Water supply has never been a component of the Kindred Dam proposal. In light of this, we are puzzled when dam supporters cite water supply as a justification for the dam.

If water supply storage were a potential benefit of the Kindred Reservoir, no doubt the Corps would have included it in its projections. It did not -- in fact, the Corps explicitly excluded water supply as a benefit. (See page 50, Corps Interim Survey Report, House Document 91-330.)

Likewise, the suggestion that the Kindred Dam is needed for "regulation" is unfounded. The operation of the Sheyenne Diversion this fall clearly demonstrates the fact that significant channel losses do not occur on the Sheyenne, due to the stream flow contributions of the Sheyenne Delta. While significant channel losses may occur on some rivers, this is not the case with the Sheyenne.

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Consequently, moving water storage closer to Fargo is not necessary. It is relevant that, at Fargo's request, releases from Baldhill were reduced last week. According to Mayor Hentges, more water was getting to the Sheyenne Diversion that Fargo needed to divert.

As you know, water resource needs and public desires in the Sheyenne Basin are undergoing a complete re-evaluation. This was necessitated, according to the Corps, by the long time which has elapsed since authorization of the Kindred Dam and by the changed conditions which have occurred during this interim. Rather than "affirm" the previous proposal, the Corps and the community must "reformulate" their plans. If the new plan is substantially different than the original plan, it must be submitted to Congress for re-authorization.

The first consideration in these rather difficult deliberations must be a strict adherence to fact. Efforts to revive the Kindred Dam based on misleading information only serve to delay viable solutions to our water problems.

We look forward to continuing to work with you to find these solutions. Please contact us whenever we can be of help to you.

Sincerely yours,



Fred Schumacher  
Water Quality and Supply Chairman

cc: Senator Quentin Burdick  
Senator Milton Young  
Congressman Mark Andrews  
Corps of Engineers, St. Paul District  
Members, Citizens Advisory Committee - Lower Sheyenne Flood Control

## SHEYENNE VALLEY ASSOCIATION

P.O. Box 275  
Kindred, North Dakota

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John Andvik, Vice President  
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November 15, 1976

Leah Rogne, Secretary  
Kindred, North Dakota 58051

Carter Powell, Treasurer  
Leonard, North Dakota 58052

Lynn Runck, Membership  
Leonard, North Dakota 58052

Fargo Chamber of Commerce  
321 North 4th Street  
Fargo, North Dakota 58102

Dear Sirs:

I am writing concerning the report in the Forum, November 12, 1976, on the Chamber's recent action regarding water supply needs for Fargo.

In that article and again in a Forum interview Sunday, November 14, Mr. William Corwin suggests that 85% of the water being released from Baldhill for Fargo is lost in transmission.

This figure does not agree with flow data recorded by the U.S. Geological Survey at their Sheyenne River gauging stations.

Fargo has been pumping at a rate of 24 cfs at the Sheyenne Diversion. (An additional 10-15 cfs continues downstream.) If Mr. Corwin's figure of 85% is correct, Baldhill would have to be releasing at a rate in excess of 150 cfs. Actually, since mid-August, Baldhill has been releasing at a steady rate of 35-40 cfs.

According to the latest complete figures from the U.S.G.S., the highest loss that occurs during the water's travel down the Sheyenne is approximately 11% between Baldhill and Lisbon. From there on, the river actually picks up flows as it passes through the water-rich Sheyenne Delta (the Sandhills). The small losses which occur between Baldhill and Lisbon are more than compensated by the time the water reaches Kindred.

These figures are based on data obtainable from the U.S.G.S. This data will show that, as stated above, releases from Baldhill over the last three months have been at the rate of 35-40 cfs. While losses between Baldhill and Lisbon were rather high in the beginning, as much as 80% when the additional water first began to flow, within three weeks, losses between Baldhill and Lisbon had dropped to only 30%. This percentage continued to decrease until finally stabilizing at the approximate 11% figure. This figure was obtained by averaging releases from Baldhill over an 11-day period from Sept. 11 - Sept. 21, and comparing that to flows which reached Lisbon from Sept. 16 - Sept. 26.

Again, as pointed out above, the contribution of the Sheyenne Delta between Lisbon and Kindred more than makes up for the 11% loss occurring prior to Lisbon. Preliminary U.S.G.S. data shows flows at Kindred 125% of those at Lisbon.



-2-

While substantial channel losses do occur in some rivers, we are blessed with a "gaining river" due to the water storage capability of the Sheyenne Delta. Due to this special quality, a no-flow condition has never been recorded at West Fargo or Kindred. (See Souris-Red-Rainy River Basins Comprehensive Study, Vol. 1, page 136.)

Mr. Corwin stated that efforts are needed to support the Kindred Dam for water supply. However, area citizens and the Corps of Engineers are presently involved in a complete reformulation of plans for flood control and other water resource needs in the lower Sheyenne Basin. The Kindred Dam is no more likely a prospect than any of a number of other proposals. Efforts to revive the Kindred Dam based on misleading information only serve to delay viable solutions to our water problems.

As you know, there were no water supply or regulation benefits in the Kindred Dam proposal. It was recommended in 1968 by the Corps that water supply storage be transferred from Baldhill to the Kindred reservoir, if it were built, but this was to provide more flood control storage at Baldhill, not to bring the water storage closer to Fargo.

As the above figures on transmission losses show, the Sheyenne Delta is already acting as a reservoir to supplement flows -- and this is without any taxpayers money being spent.

Therefore, Mr. Corwin's suggestion that the Kindred Dam is needed "to serve as a regulator 50 miles from Fargo, rather than . . . 240 miles from here," is unfounded.

It is good we've had a chance to see the diversion in action this year since this gives us some quantitative data to substantiate what area residents have known for a long time -- that placement of water storage closer to Fargo is not necessary. It is not necessary unless there are plans, as yet unknown to the general public, to bring heavy water using industry into the Fargo-Moorhead area. If the Chamber knows of such plans, it should make them public.

We are concerned about area water needs and solutions are long overdue. We sincerely would like to work with you to find these solutions. This search should be guided by the facts, not by opinion.

Sincerely yours,



Fred Schumacher  
Water Quality and Supply Chairman

cc: Mayor Richard Hentges  
Mr. William Corwin  
Media

WATER PERMIT AGENDA FOR DECEMBER 7, 1976 MEETING

NO.	NAME AND ADDRESS	SOURCE	PURPOSE	AMOUNT REQUESTED	COMMENTS & RECOMMENDATIONS
2526	Dakotaville, Inc. - Bismarck (Burleigh County)	Missouri River	Commercial Recreation	296.0 acre-feet Storage plus 222.0 acre-feet Annual Use	296.0 acre-feet Storage plus 222.0 acre-feet Annual Use
2515	Cross, Lawrence - Milnor (Sargent County)	Ground Water	Irrigation	270.0 acre-feet 128.0 acres	153.0 acre-feet 102.0 acres
2470	Ptacek, Lloyd - Cogswell (Dickey County)	James River	Irrigation	275.0 acre-feet 227.0 acres	Defer action at this time pending further data and study.
2531	Ebenhahn, Rodney G. and Marvel M. - Sheyenne (Eddy County)	Ground Water	Irrigation	240.0 acre-feet 160.0 acres	232.5 acre-feet 155.0 acres
2532	Montgomery, Thomas E. - Carrington (Foster County)	Ground Water	Irrigation	480.0 acre-feet 320.0 acres	405.0 acre-feet 270.0 acres
2533	Bontrager, Reuben - Dazey (Barnes County)	Ground Water	Irrigation	480.0 acre-feet 320.0 acres	405.0 acre-feet 270.0 acres  (This request was approved by State Engineer on October 8, 1976)

APPENDIX "D"

NO.	NAME AND ADDRESS	SOURCE	PURPOSE	AMOUNT REQUESTED	COMMENTS & RECOMMENDATIONS
2534	Hoffner, Leo - Esmond (Benson County)	Ground Water	Irrigation	640.0 acre-feet 312.0 acres	Defer action at this time pending further data and study.
2484	Dick Brothers - Englevale (Ransom County)	Ground Water	Irrigation	960.0 acre-feet 480.0 acres	Defer action at this time pending further data and study.
2455	Schillo, Jim & Martin - Golva (Golden Valley Co.)	Unnamed Draw, trib. to Bullion Creek & Little Missouri River	Irrigation	116.0 acre-feet 116.0 acres	Defer action at this time pending further data and study.
2464	Wagner, Ronald - Englevale (Ransom County)	Ground Water	Irrigation	320.0 acre-feet 160.0 acres	Defer action at this time pending further data and study.
2538	Ralph and William Thompson, Thomas A. Thompson Trust and William J. Thompson Trust - Page (Cass County)	Ground Water	Irrigation	2640.0 acre-feet 1784.16 acres	Recommend for approval: 405.0 acre-feet 270.0 acres  (Remainder of request shall be held in abeyance pending further data acquisition)
2544	Tarno, Myron - Cleveland (Kidder County)	Ground Water	Irrigation	893.6 acre-feet 599.4 acres	Defer action at this time pending further data and study.

NO.	NAME AND ADDRESS	SOURCE	PURPOSE	AMOUNT REQUESTED	COMMENTS & RECOMMENDATIONS
2539	Robert Thompson, Thomas A. Thompson Trust, and William J. Thompson Trust - Page (Cass County)	Ground Water	Irrigation	2500.0 acre-feet 1702.26 acres	Recommend for approval: 607.5 acre-feet 405.0 acres  (Remainder of request shall be held in abeyance pending more data acquisition)
2540	Abbott, John - Steele (Kidder County)	Ground Water	Irrigation	482.7 acre-feet 321.8 acres	375.0 acre-feet 250.0 acres (This request was approved by the State Engineer on November 15, 1976)
2545	Pesek, James - Alexander (McKenzie County)	Unnamed Stream, trib. to Timber Creek and Missouri River	Irrigation	75.0 acre-feet storage plus 35.4 acre-feet annual use 101.8 acres	Defer action at this time pending further data and study.
2235	Tri-County Water Users, Inc. - Lakota (Grand Forks Co.)	Ground Water	Municipal- (Rural Domestic)	170.0 acre-feet	Defer action at this time pending further data and study.
2548	Aberle, Joseph and Catherine - Minot (McHenry County)	Ground Water	Irrigation	234.0 acre-feet 156.0 acres	Defer action at this time pending further data and study.
2513	Belfield, City of - Belfield (Stark County)	Ground Water	Municipal	200.0 acre-feet	200.0 acre-feet (This request was approved by State Engineer on October 18, 1976)

NO.	NAME AND ADDRESS	SOURCE	PURPOSE	AMOUNT REQUESTED	COMMENTS & RECOMMENDATIONS
2525	Oliver County Water Management District - Center (Oliver County)	Unnamed Stream, trib. to Square Butte Creek and Missouri River	Flood Control	5105.0 acre-feet storage (flood pool) plus 186.0 acre-feet annual use (permanent pool)	Defer action at this time pending further data and study.
2507	Yagow, Merlyn - Milnor (Ransom County)	Ground Water	Irrigation	640.0 acre-feet 320.0 acres	405.0 acre-feet 270.0 acres
2530	Claeys, Marshall - Hecla, So. Dak. (Sargent County)	Ground Water	Irrigation	640.0 acre-feet 320.0 acres	Defer action at this time pending further data and study.
2543	Schmoker, Noel E. - Dickey (LaMoure County)	Ground Water	Irrigation	308.0 acre-feet 154.0 acres	Defer action at this time pending further data and study.
2529	German Farms - Fullerton (Dickey County)	Ground Water	Irrigation	652.5 acre-feet 435.0 acres	Recommend for approval: 375.0 acre-feet 250.0 acres (Balance of request shall be held in abeyance pending further data acquisition)
2554	Moss, Thomas D. - Steele (Kidder County)	Ground Water	Irrigation	234.0 acre-feet 156.0 acres	Defer action at this time pending further data and study.

NO.	NAME AND ADDRESS	SOURCE	PURPOSE	AMOUNT REQUESTED	COMMENTS & RECOMMENDATIONS
2555	Neideffer, William D. - Wing (Burleigh County)	Dugout and/or Ground Water	Irrigation	156.0 acre-feet 156.0 acres	Defer action at this time pending further data and study.
2556	Anderson, Wayne - Page (Cass County)	Ground Water	Irrigation	520.0 acre-feet 348.8 acres	Recommend for approval: 202.5 acre-feet 135.0 acres (Balance of request shall be held in abeyance pending further data acquisition)
2552	Feder, Paul P. (owner) Grindberg, George (oper.) Fargo (Cass County)	Ground Water	Irrigation	157.37 acre-feet 157.37 acres	157.37 acre-feet 157.37 acres
2512	Cogswell, City of - Cogswell (Sargent County)	Ground Water	Municipal	80.0 acre-feet	80.0 acre-feet
2519	City of Hettinger - Hettinger (Adams County)	Ground Water	Municipal	160.0 acre-feet	160.0 acre-feet
2491	All Seasons Water Users Association, Inc. - Bottineau (Bottineau County)	Ground Water	Municipal - (Rural Domestic)	27.0 acre-feet	Defer action at this time pending further data and study.

NO.	NAME AND ADDRESS	SOURCE	PURPOSE	AMOUNT REQUESTED	COMMENTS & RECOMMENDATIONS
2492	All Seasons Water Users Association, Inc. - Souris (Bottineau County)	Ground Water	Municipal - (Rural Domestic)	17.0 acre-feet	Defer action at this time pending further data and study.
2493	All Seasons Water Users Association, Inc. - Westhope (Bottineau County)	Souris River	Municipal - (Rural Domestic)	60.0 acre-feet	Defer action at this time pending further data and study.
2541	Olson, James - Crete (Sargent County)	Ground Water	Irrigation	480.0 acre-feet 320.0 acres	Defer action at this time pending further data and study.
2521	Witkowski, Leon and Wayne - Stirum (Sargent County)	Ground Water	Irrigation	780.0 acre-feet 338.0 acres	Defer action at this time pending further data and study.
2496	Mund, Thomas W. and Marvin W. - DeLamere (Sargent County)	Ground Water	Irrigation	682.0 acre-feet 420.0 acres	327.0 acre-feet 155.0 acres
2549	Hokana, Stanley and John - Oakes (Dickey County)	Ground Water	Irrigation	588.0 acre-feet 294.0 acres	270.0 acre-feet 270.0 acres (170.0 acre-feet shall be held in abeyance pending further study.)

NO.	NAME AND ADDRESS	SOURCE	PURPOSE	AMOUNT REQUESTED	COMMENTS & RECOMMENDATIONS
2337	Malmberg, Stanley - Oakes (Dickey County)	Ground Water	Irrigation	This is a request for change in point of diversion from the NW¼NW¼ Sec 15, Twp 131, Rge 59, to SW¼NW¼ Sec 15, Twp 131, Rge 59	It is recommended that this change in the point of diversion be granted.
2528	Brandenburg, Donald - Edgeley (LaMoure County)	Ground Water	Irrigation	800.0 acre-feet 480.0 acres	Defer action at this time pending further data and study.
2557	Nelson, Robert L. - LaMoure (Dickey County)	Ground Water	Irrigation	308.0 acre-feet 154.0 acres	202.5 acre-feet 135.0 acres  (This request was approved by State Engineer on Nov. 5, 1976)
2516	Hazen, City of - Hazen (Mercer County)	Ground Water	Municipal	800.0 acre-feet	800.0 acre-feet
2553	Hoggarth Bros. - Courtenay (Stutsman County)	Ground Water	Irrigation	1401.0 acre-feet 936.0 acres	Defer action at this time pending further data and study.
2559	Laber, George W., Jr. - New Rockford (Eddy County)	Ground Water	Irrigation	260.0 acre-feet 173.1 acres	260.0 acre-feet 173.1 acres



NO.	NAME AND ADDRESS	SOURCE	PURPOSE	AMOUNT REQUESTED	COMMENTS & RECOMMENDATIONS
2560	Reimers, Robert F. - Carrington (Stutsman and Foster Counties)	Ground Water	Irrigation	1860.0 acre-feet 1240.0 acres	352.5 acre-feet 235.0 acres  (An additional 1507.0 acre- feet to be held in abeyance pending further aquifer data)
2550	Widmer, Arnold - Crete (Sargent County)	Ground Water	Irrigation	640.0 acre-feet 398.7 acres	Defer action at this time pending further data and study.
2564	Forster, Donald - Oakes (Dickey County)	Ground Water	Irrigation	480.0 acre-feet 320.0 acres	Defer action at this time pending further data and study.
2568	Satrom, Charles and Edward - Page (Steele County)	Ground Water	Irrigation	960.0 acre-feet 640.0 acres	Recommend for approval: 405.0 acre-feet 270.0 acres  (Balance of request shall be held in abeyance pending more data acquisition)
2571	Malmberg, Stephen D. - Oakes (Dickey County)	Ground Water	Irrigation	320.0 acre-feet 160.0 acres	210.0 acre-feet 140.0 acres
2573	Larson, Carl D. - Fullerton (Dickey County)	Ground Water	Irrigation	638.0 acre-feet 318.9 acres	405.0 acre-feet 270.0 acres

NO.	NAME AND ADDRESS	SOURCE	PURPOSE	AMOUNT REQUESTED	COMMENTS & RECOMMENDATIONS
2518	Hofmann, Albert and Margaret - Medina (Stutsman County)	Ground Water	Irrigation	312.0 acre-feet 156.0 acres	Defer action at this time pending further data and study.
2517	Nielsen, Arnold - Oakes (Dickey County)	James River	Irrigation	252.0 acre-feet 168.5 acres	Defer action at this time pending further data and study.
2542	Nielsen, Arnold - Oakes (Dickey County)	Ground Water	Irrigation	240.0 acre-feet 160.0 acres	240.0 acre-feet 160.0 acres
2425	Reed, Clarence R. - Fargo (Ransom County)	Ground Water	Irrigation	2080.0 acre-feet 1040.0 acres	Defer action at this time pending further data and study.
2535	Brandt, Gaylon - Oakes (Dickey County)	James River	Irrigation	625.0 acre-feet 416.9 acres	Defer action at this time pending further data and study.
2546	Wagner, Ronald - Englevale (Ransom County)	Ground Water	Irrigation	340.0 acre-feet 226.1 acres	Defer action at this time pending further data and study.

NO page 248 in Original

NO.	NAME AND ADDRESS	SOURCE	PURPOSE	AMOUNT REQUESTED	COMMENTS & RECOMMENDATIONS
2486	Maus, Mrs. Geraldine - Golva (Golden Valley County)	Unnamed Draw, trib. to Bullion Creek and Little Missouri River	Irrigation	147.8 acre-feet 147.8 acres	Defer action at this time pending further data and study.
2589	Streifel, Arthur - Esmond (Benson County)	Ground Water	Irrigation	320.0 acre-feet 156.0 acres	Defer action at this time pending further data and study.
2592	Lesmeister, Clarence E.- Harvey (Pierce County)	Ground Water	Irrigation	224.0 acre-feet 111.18 acres	Defer action at this time pending further data and study.
2590	Scoville, William - Steele (Kidder County)	Ground Water	Irrigation	740.25 acre-feet 493.5 acres	Defer action at this time pending further data and study.
2563	Koster, Lloyd - Kramer (Dickey County)	James River	Irrigation	480.0 acre-feet 320.0 acres	Defer action at this time pending further data and study.
2577	Mooreton Ventures - Mooreton (Ransom County)	Ground Water	Irrigation	640.0 acre-feet 320.0 acres	Defer action at this time pending further data and study.

NO.	NAME AND ADDRESS	SOURCE	PURPOSE	AMOUNT REQUESTED	COMMENTS & RECOMMENDATIONS
2584	Case, Dale - Milnor (Ransom County)	Ground Water	Irrigation	265.0 acre-feet 177.65 acres	238.0 acre-feet 158.8 acres
2591	Alamo Farms - Oakes (Dickey County)	Ground Water	Irrigation	400.0 acre-feet 200.0 acres	Defer action at this time pending further data and study.
2593	Hartsoch, Arvey - White Earth (Williams County)	Lake Sakakawea	Irrigation	300.0 acre-feet 172.55 acres	300.0 acre-feet 172.55 acres
2587	Johnson, Sherwood - Page (North Cass County)	Ground Water	Irrigation	500.0 acre-feet 470.63 acres	Recommend for approval: 202.5 acre-feet 135.0 acres in SW $\frac{1}{4}$ of Sec 34, Twp 143, Rge 54 (Remainder of request shall be held in abeyance)
2536	Streich, Gary A. - Englevale (Ransom County)	Ground Water	Irrigation	47.95 acre-feet 191.8 acres	Defer action at this time pending further data and study.
2537	Streich, Gary A. - Englevale (Ransom County)	Ground Water	Irrigation	418.8 acre-feet 279.2 acres	Defer action at this time pending further data and study.

NO.	NAME AND ADDRESS	SOURCE	PURPOSE	AMOUNT REQUESTED	COMMENTS & RECOMMENDATIONS
2586	Lauinger, George Jr. - Karlsruhe (McHenry County)	Ground Water	Irrigation	320.0 acre-feet 156.0 acres	Defer action at this time pending further data and study.
2483	Klose, Vernon - Fairview, Mont. (McKenzie County)	Ground Water	Irrigation		A portion of the water requested under this application was granted on September 3, 1976 and the remaining portion of the request was held in abeyance pending the acquisition of further data - it is now recommended that the portion held in abeyance be released allowing an additional 97.5 acre-feet of water to irrigate an additional 65.0 acres at a pumping rate of 390 gallons per minute.
	(This permit was deferred by State Water Commission action on December 7, 1976)				
2509	Greene, Clarence J. - Tolna (Benson County)	Ground Water	Irrigation	960.0 acre-feet 624.0 acres	800.0 acre-feet 133.0 acres
2463	Shaide, Guy - Cartwright (McKenzie County)	Charbonneau Creek and Yellowstone River, trib. to Yellowstone River	Irrigation	200.0 acre-feet 99.6 acres	99.6 acre-feet (45.8 a.f. Yellowstone R. 45.8 a.f. Charbonneau C.) 99.6 acres (45.8 acres Yellowstone R. 45.8 acres Charbonneau C.)
2500	Kittelison, Lloyd and/or Dennis - Westby, Montana (Divide County)	Ground Water	Irrigation	1920.0 acre-feet 936.0 acres	Recommend for approval: 630.0 acre-feet 420.0 acres in NE $\frac{1}{4}$ & SW $\frac{1}{4}$ of Sec 1, & SW $\frac{1}{4}$ of Sec 35-Twp 162, Rge 103 (An additional 720.0 acre-feet of water shall be held in abeyance pending additional data.)

NO.	NAME AND ADDRESS	SOURCE	PURPOSE	AMOUNT REQUESTED	COMMENTS & RECOMMENDATIONS
2510	Reistad, Donald - Alkabo (Divide County)	Ground Water	Irrigation	640.0 acre-feet 312.0 acres	420.0 acre-feet 280.0 acres
2337	Malmborg, Stanley - Oakes (Dickey County)	Ground Water	Irrigation	320.0 acre-feet 156.0 acres	210.0 acre-feet 140.0 acres
2434	Garnas, Donald M. and Ruth L. - Page (Cass County)	Ground Water	Irrigation	222.6 acre-feet 148.4 acres	183.0 acre-feet 122.0 acres
2416	Schmidt, Kenneth R. - Williston (Williams County)	Little Muddy River, trib. to Missouri River	Irrigation	130.0 acre-feet 132.0 acres	130.0 acre-feet 132.0 acres