

## MINUTES

North Dakota State Water Commission  
Meeting Held In  
Bismarck, North Dakota

December 16 and 17, 1974

The North Dakota State Water Commission held a meeting in the Vocational Education Conference Room, State Office Building, Bismarck, North Dakota, on December 16, 1974. Governor-Chairman, Arthur A. Link, called the session to order at 1:30 p.m.

MEMBERS PRESENT:

Arthur A. Link, Governor-Chairman  
Richard Gallagher, Vice Chairman, Mandan  
James Jungroth, Member from Jamestown  
Alvin Kramer, Member from Minot  
Gordon Gray, Member from Valley City  
Donald Noteboom, Member from McKenzie County  
Myron Just, Commissioner, Department of Agriculture  
Vernon Fahy, State Engineer, Secretary and Chief Engineer, North  
Dakota State Water Commission, Bismarck

OTHERS PRESENT:

Approximately 60 people were in attendance for discussion on Souris River Flood Control Project  
Representatives from United Power Association-Cooperative Power Association  
Approximately 20 people were in attendance in addition to those listed

The proceedings of this meeting were tape recorded only to assist in compilation of minutes.

CONSIDERATION OF MINUTES OF  
OCTOBER 15, 1974 MEETING -  
APPROVED

dispensed with and approved as circulated.

It was moved by Commissioner Kramer, seconded by Commissioner Noteboom, and carried, that reading of the minutes of the October 15, 1974 meeting be

DISCUSSION ON SOURIS RIVER  
FLOOD CONTROL PROJECT  
(#1408)

northern section of North Dakota.

A delegation of approximately 60 persons appeared before the Commission to present both pro and con discussions of the Souris River Flood Control Project in the

Mrs. John (Paula) Ward, Minot, presented information and a slide presentation, including slides of the Souris Loop in North Dakota; flood profiles of the Des Lacs River; slides from the 1969 flood; aerial photos of the Souris River Valley; photos on the lower marsh unit; photo showing amount of storage that would be available if instead of placing the dam at Burlington, the dam were placed at the existing site of Lake Darling Dam on or approximately near that site, and the storage that exists in the valley between the two sites and above Lake Darling Dam; the Tolley Flats area; comparison of benefit-cost ratio of various alternatives that have been prepared for flood control for the city of Minot; and, land uses now existing between Burlington and Lake Darling in the proposed reservoir pool.

A copy of Mrs. Ward's statement was mailed to the Water Commission office for attachment to minutes as Appendix "A".

Stephen Ashley from Velva stated that the Corps of Engineers' proposal for flood protection provides for a 5000 cubic feet per second flow coming through Minot plus some runoff between the area down to Sawyer and Velva.

Sam Trutna from Mohall questioned as to what the benefit-cost ratio would be for the remainder of the project excluding the 5000 cfs channel through Minot. He would like to see the benefit-cost ratio for each alternative, along with a total benefit-cost ratio.

After discussion, Governor Link thanked Mrs. Ward for her presentation.

Richard Harp introduced five farmers from the Souris Loop area who desired to testify in opposition to the proposed Burlington Dam Project: Lawrence Scheresky, Des Lacs; Orlin Oium, Towner; Robert Booth, Sawyer; Clair Southam, Mohall; and, Lloyd Nygard, Minot. Statements presented by these gentlemen are attached as Appendices "B, C, D, E, F and G" respectively.

Mr. Harp invited the Commission at some future date, to meet with people in the Carpio area, and at this time Governor Link asked the delegation who were present in opposition of the proposed project to stand. He thanked them for their interest and for presenting their views.

Mr. Ralph Christensen, Chairman of the Ward County Water Management District, presented positions which were taken by the Souris River Flood Control Planning Committee, organized in 1972. This Committee is composed of representatives from the upstream area and its objective was to weigh various alternatives to deal with serious threats on the Souris River, and to make recommendations representing the interest of and viewpoints of residents and communities all along the river. The Position Paper as presented by Mr. Christensen is attached as Appendix "H".

December 16-17, 1974

Mr. Robert Calton from the St. Paul District Corps of Engineers, discussed the status of the proposed Burlington Dam with the Commission members. He noted that of the alternatives considered, the proposed Burlington Dam project was the most feasible as it would provide the highest degree of protection for downstream interests.

Senator Rolland Redlin from Minot presented a statement which is attached as Appendix "I".

Chester Reiten, Mayor of the city of Minot and State Senator, presented the statement labeled as Appendix "J".

Dan Aham, representing Sylvan Hubrig, President of Teamsters Local 74, read a letter from Mr. Hubrig which is attached as Appendix "K".

Bill Baker, a member of the Ward County Commissioners, presented a resolution that was adopted at its meeting on December 11, 1974, which reaffirms the Commission's previous support of the Souris River Channel Improvement Plan including a flood protection dam at Burlington and rejects other proposed alternative plans and calls on all appropriate local, state and federal officials to press forward for an orderly and early completion of the project. This resolution is attached as Appendix "L".

Representative Brynhild Haugland from the 5th District presented the statement attached as Appendix "M".

Ralph Christensen noted two points that should be considered in whatever plan is adopted. They are 1) adequate protection of the interests of property owners that might be displaced; and 2) the need for financial assistance from the state for some protective measures involving certain downstream properties.

Following lengthy discussion, Governor Link thanked the delegation for appearing.

REQUEST BY MONTANA-DAKOTA  
UTILITIES COMPANY TO DELAY  
FURTHER ACTION AT THIS TIME  
ON WATER PERMIT REQUEST  
(SWC Water Permit #1997)

Secretary Fahy indicated that a letter was received from Montana-Dakota Utilities Company on December 9, 1974, which in part states:

"The initial studies associated with the proposed Beulah, North Dakota generating plant were performed by the Bechtel Corporation and the results of those studies were utilized by Montana-Dakota Utilities Company as a basis for its application for a water permit which is now pending before the Commission.

December 16-17, 1974

"The Bechtel Corporation is now engaged in detailed design of the proposed project and in that connection has performed more in-depth studies relating thereto. That Company now advised that it is possible that the quantity of makeup water could not be pumped from the Knife River without utilization of a submerged weir and, in addition thereto, a detailed study of the daily flows of the Knife River also indicate that future studies should be undertaken to determine whether their original assumption was correct that the Brush Creek Dam could be filled and adequately tested to insure its integrity in order to be available to support commercial operation of the plant by 1981.

"The studies which the Bechtel Corporation is now performing with respect to the daily flows of the Knife River seem to indicate a probability that we could not construct the dam on Brush Creek, fill it, test it, drain it, if necessary to repair leaks, and refill it if found to be inadequate, and meet the 1981 critical schedule. As a result, the Bechtel Corporation is performing necessary studies relating to the utilization of water from either the Missouri River or Lake Sakakawea, with a water pipeline from that water source to the proposed Beulah plant.

"The Bechtel Corporation has assured us that it will complete these studies as soon as humanly possible and, in the interim, we respectfully request that our present application be held in abeyance by the Commission pending determination by Applicant as to whether the water permit application needs to be amended, changing the point of water diversion."

It was moved by Commissioner Noteboom that the Commission agree to delay further action on the water permit request by Montana-Dakota Utilities Company at this time, and that such application be held in abeyance. The motion was seconded by Commissioner Gray, and was carried.

WATER PERMIT REQUEST FOR  
GROUND-WATER APPROPRIATION  
FILED BY UNITED POWER  
ASSOCIATION-COOPERATIVE  
POWER ASSOCIATION  
(SWC Water Permit No. 2176)

Secretary Fahy stated that a water permit request has been filed in his office by United Power Association-Cooperative Power Association to divert 168 acre-feet from ground water which will be required for use during plant construction until the permanent river intake structure and

river water makeup lines are placed in service. He noted that if it was the desire of the Commission members, the public hearing could be handled as a regular hearing and would be held in the office of the State Engineer.

It was the consensus of the Commission members that the water permit request be acknowledged and that the State Engineer schedule and conduct the public hearing in his office.

December 16-17, 1974

CONSIDERATION OF RESOLUTION  
ADOPTED BY WEST RIVER DIVERSION  
CITIZENS ADVISORY COMMITTEE  
PROPOSING THAT THE STATE WATER  
COMMISSION AND BUREAU OF  
RECLAMATION JOINTLY DEVELOP  
A PLAN FOR WEST RIVER DIVERSION  
RESOLUTION NO. 74-12-368  
(SWC No. 1543)

Secretary Fahy stated that on September 17, 1974, the Citizens Advisory Committee to the West River Diversion Feasibility Study, adopted a resolution which endorsed and recommended that the North Dakota State Water Commission and the Bureau of Reclamation jointly appraise all inter-related studies and develop a joint plan for implementation for the diversion of water from Lake Sakakawea to all potential

water users in western North Dakota river basins. He then read a draft resolution which had been prepared by his staff for adoption of the joint study if it were the wishes of the Commission.

Mr. Bill Maixner from New England, North Dakota, stated that he is a farmer and livestock producer and his land is near the Cannonball River area, which is a part of the proposed West River Diversion plan. He stated that in looking at the total West River picture, there are 12,800,000 acres of land and only about 315,000 are irrigable and almost one-half of these irrigable acres are in the Cannonball area. This is also where the bulk of the coal lies. He does not believe in the "use it or lose it" philosophy and he also doesn't think that the people of southwestern North Dakota are fully aware of the implications of West River Diversion.

Commissioner Jungroth said he is not against planning, but from previous conversations, studies, etc., it looks like the only way the West River Diversion plan can become feasible is through industrialization. He believes this is a mistake and therefore, will vote against the resolution.

Following discussion, it was moved by Commissioner Gallagher that the State Water Commission adopt Resolution No. 74-12-368, West River Feasibility Study, endorsing and recommending legislation authorizing the Bureau of Reclamation and the North Dakota State Water Commission to jointly develop a plan for implementation of the diversion of water from Lake Sakakawea to all potential users in the western North Dakota river basins. Commissioner Noteboom seconded the motion. Governor Link called for a voice vote on the motion and all members voted aye, with the exception of Commissioner Jungroth voting nay. The motion was declared as passed. (See Appendix "N")

CONSIDERATION OF RESOLUTION  
TO CREATE LEGAL ENTITY IN  
WEST RIVER AREA -  
RESOLUTION NO. 74-12-369  
(SWC No. 1543)

Secretary Fahy stated that Senator Robert Stroup has prepared enabling legislation to create a West River Conservancy District in order to coordinate and facilitate the development and utilization

December 16-17, 1974

of the water and related land resources of southwestern North Dakota. He then read a draft resolution which had been prepared if it were the Commission's wishes to support such legislation.

After discussion, it was moved by Commissioner Noteboom, and seconded by Commissioner Gallagher, that the State Water Commission adopt Resolution No. 74-12-369, West River Conservancy District, which would endorse enabling legislation for creating a 14-county West River Conservancy District with the authority for taxation, construction, operation and maintenance of projects associated with the water and related land resources. Governor Link called for a vote on the motion. All members voted aye, with the exception of Commissioner Jungroth voting nay. The motion was declared as passed. (See Appendix "0")

DISCUSSION OF RESOLUTION  
REQUIRING AN ELECTRIC  
UTILITY TO SEEK APPROVAL  
FOR TRANSMISSION LINE  
ROUTE FROM COUNTY BOARDS  
AS A CONDITION FOR WATER  
PERMIT APPROVAL  
(#1373)

Secretary Fahy read a resolution which had been adopted and submitted by the North Dakota Water Management Districts Association at their meeting held on October 11, 1974. This resolution requested the State Water Commission to require an electric utility to consult with and obtain the written consent of the Board of County Commissioners and

the County Water Management District Board of Commissioners for each County the proposed high voltage transmission line is planned to transit as a condition for granting a water permit to such utility.

Commissioner Just and Mr. Mike Jacobs of the Department of Agriculture, reported on four meetings that have been held in Stutsman, LaMoure, Richland and Sargent Counties with respect to United Power Association-Cooperative Power Association's transmission line routing. These meetings were held to comply with a condition attached to the water permit which required public meetings on power line siting. Mr. Jacobs stated that the meetings have been generally well attended and listed several objections which were most frequently raised at the meetings: the power line reduces land value; the power line ruins irrigation potential and decreases the land's yield potential; the line represents a restrictive zoning of land; the power line creates a nuisance by interfering with farm operations; the bases of the power line towers will harbor weeds; the power line may pose a health hazard by increasing production of ozone and photochemical concentrations in the atmosphere; the power line may decrease germination of grains and fertility in cattle; and the power line is the manifestation of ungoverned growth in America and may not be necessary if energy conservation were effectively practiced or if the cooperatives would explore alternative energy sources, including nuclear, which is the most frequently mentioned.

December 16-17, 1974

A discussion centered around underground transmission lines and Mr. Jacobs stated that he has written to approximately 25 foreign countries requesting this information with respect to practices in their country.

After discussion, it was moved by Commissioner Kramer to acknowledge receipt of the resolution submitted by the North Dakota Water Management Districts Association and hold in abeyance. Commissioner Gray seconded the motion and all members voted aye.

It was moved by Commissioner Gray, seconded by Commissioner Kramer, and carried, that the Department of Agriculture be commended for their efforts in bringing the information concerning transmission line routing to the public in the various counties that are involved.

FURTHER CONSIDERATION OF  
WATER PERMIT REQUEST BY  
ROBERT AND DENNIS SLETTEN  
(SWC Water Permit No. 2116)

Secretary Fahy read a letter from the Rice Lake Beach and Boat Club which expressed their appreciation to the Commission for allowing them to appear at the meeting of October 15, 1974. He reviewed the

status of the Robert and Dennis Sletten water permit request and recommended that approval be granted for 420 acre-feet of water at a rate of 1,820 gallons per minute to be applied to the northwest quarter and northeast quarter of Section 21; and that the water for the southeast quarter of Section 16 should not be granted until test hole logs from that property are provided to the Commission along with production data from the wells to be constructed on Section 21. If these data show conditions to be favorable, the balance could then be granted.

It was moved by Commissioner Noteboom, seconded by Commissioner Jungroth, and carried, that the water permit request for Robert and Dennis Sletten be approved as recommended.

Commissioner Jungroth suggested that when an applicant applies for an irrigation water permit, the Commission should request a soil analysis study to determine whether or not the soil is compatible for irrigation. This would provide protection for the applicant before investing in an irrigation system. It was the consensus of the Commission that this item be considered at a future Commission meeting.

CONSIDERATION OF WATER  
PERMIT REQUESTS

Secretary Fahy presented requests for water permits from the applicants listed on Appendix "P" of these minutes, after withdrawing his recommendation for approval on the application submitted by Orrin Streich, Oakes, North Dakota - water permit No. 2160. He stated that

December 16-17, 1974

this request needs further study and information, and should be deferred at this time. The balance of the requests have been studied and reviewed by the Commission staff and are now ready for Commission action. It was the recommendation of the Chief Engineer that the Commission approve those permits which have been recommended by his staff for approval, and defer those requests which require additional information and investigations.

It was moved by Commissioner Kramer, seconded by Commissioner Jungroth, and carried, that the following water permit requests be approved subject to the conditions indicated on the application: No. 1857, William Schiermeister, Hazelton; No. 2137, Paul Blickensderfer, Mott; No. 2125, Ronald E. Gunsch, Zap; No. 2144, LeRoy P. Fettig, Hebron; No. 2142, City of Tuttle, Tuttle; No. 2126, Quentin Georgeson, New Rockford; No. 2143, Hettinger Experiment Station, Hettinger; No. 2149, E. Wayne Kelly, Carrington; No. 2158, Robert Mountain, Jamestown; No. 2159, Amoco Oil Company, Mandan; No. 2110, Howard L. Pare, Tolna; No. 2098, Lawrence T. Walker, Oberon; No. 2155, Lynn Peterson, LaMoure; No. 2156, Gerald Mangin, Ellendale; No. 2154, Minot Sand and Gravel Company, Minot; No. 2140, Gerald Dick, Englevale; No. 2166, Lawrence Meyer, Minot; No. 2124, Diocese of Bismarck Trust and Mary College, Inc. Trust, Bismarck; No. 2128, Dr. Lloyd G. Best, Wahpeton; No. 2118, Joey Schmidt, LaMoure; and, No. 2080, R. H. Baeth, McKenzie.

It was also moved by Commissioner Kramer, seconded by Commissioner Jungroth, and carried, that the following water permit requests be deferred at this time pending further investigations and information: No. 2146, Diocese of Bismarck Trust and Mary College, Inc. Trust, Bismarck; No. 2132, George Schiff, Ruso; No. 2123, Arctic Farm Company, Walhalla; No. 2168, Walter Hufnagel, Tappen; No. 2145, Vernon Halvorson, Larimore; No. 2167, Joseph Aberle, Minot; No. 2130, Neil Peters, Sutton; No. 2148, Wendal Dawson, Almont; and, No. 2160, Orrin R. Streich, Oakes. (See Appendix "P")

REQUEST FOR WATER PERMIT  
BY BASIN ELECTRIC POWER  
COOPERATIVE  
(SWC Water Permit No. 2179)

Secretary Fahy noted that an application has been received from Basin Electric Power Cooperative to divert 19,000 acre-feet of water for power generation purposes and for the joint use of

December 16-17, 1974

proposed facilities by Michigan-Wisconsin Pipeline Company. He stated that a meeting will be held with officials of both companies to gather more information about the request. The public hearing date could then be established at a future meeting of the Commission.

December 16, 1974.

The meeting was recessed at 7:00 p.m. on

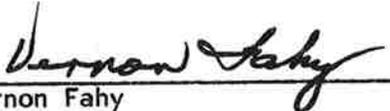
NATURAL GAS PIPELINE COMPANY  
OF AMERICA'S PUBLIC HEARING  
ON WATER PERMIT REQUEST  
(SWC Water Permit No. 2083)

On December 17, 1974, at 1:30 p.m.,  
Mountain Standard Time, the Commission  
reconvened its session in Dunn Center,  
North Dakota, at the City Auditorium to  
hold the public hearing on the water

permit request by Natural Gas Pipeline Company of America. Commission members will be provided a copy of the transcription of hearing upon completion by the Court Reporter. The hearing was adjourned at 6:00 p.m., M.S.T.

  
\_\_\_\_\_  
Arthur A. Link  
Governor-Chairman

ATTEST:

  
\_\_\_\_\_  
Vernon Fahy  
Secretary

December 16-17, 1974

STATEMENT TO ACCOMPANY  
SLIDE PRESENTATION  
CONCERNING FLOOD CONTROL PROPOSALS FOR MINOT, NORTH DAKOTA  
BEFORE THE NORTH DAKOTA WATER COMMISSION  
at Bismarck on December 16, 1974  
By Mrs. John A. (Paula) Ward  
Minot, North Dakota

This opportunity, to present information concerning flood control for the City of Minot, is appreciated. The Corps of Engineers' proposed Burlington Dam is no less controversial than problems besetting the residents in the Devils Lake area. Flood control for Minot is deserving of high priority, and the problems involved should be of interest to the State Water Commission.

Slide #1: Map of Souris Loop within North Dakota.

The Souris River enters the United States from Saskatchewan near Sherwood, North Dakota. The river forms a loop in our state and re-enters Canada at Manitoba near Westhope, North Dakota. Its major tributary, the Des Lacs River, joins the Souris near Burlington, North Dakota. The largest city on the Souris is Minot, with a population of about 32,000.

In 1969 there was a flood on the Souris which caused on the order of \$12 million in damages, 80 percent of which was sustained in Minot.

Slide #2: Following the 1969 flood, the Corps of Engineers proposed a flood control project which consisted of a dam at Burlington and a 3800 cfs channel through Minot. The existing channel capacity at that time was about 2000 cfs. In 1970, a flood occurred on the Des Lacs River which pointed out some inadequacies in the original Corps of Engineers plan.

The flood on the Des Lacs River, it appears, would have been worse had the dam at Burlington been in place that year. The peak of the flood was greater at Foxholm (on the Des Lacs) than at Minot. The peak flow at Foxholm on April 30, 1970 was 3660 cfs. The peak at Minot on May 2, 1970 was 2980 cfs. The reason for this can be understood if we review the topography of the two river valleys.

The Des Lacs River comes into the Souris River at Burlington. The Des Lacs has a gradient that is about 6 times steeper than the gradient of the Souris River. The Des Lacs Drops 3 feet per mile whereas the Souris drops one-half foot per mile. Because of this, flows on the Des Lacs have a tendency to back up into the more gently graded Souris Valley.

Placing a dam at Burlington just above the confluence of the Souris and Des Lacs would prevent this natural back up and rush the total Des Lacs flood toward Minot.

Following this realization, and after input from citizens, the Corps of Engineers agreed to a suggested increase in channel capacity from 3800 cfs to 5000 cfs, which would handle the flood on the Des Lacs. However, the Corps did not agree to move the damsite upstream which would have permitted the natural back up and would have taken the peak off the Des Lacs flood.

Instead, the Corps has left the damsite at Burlington where it was originally proposed, and they intend to put a diversion tunnel through the divide between the Des Lacs and Souris Valleys, to take the peak off the Des Lacs flood and store it behind the Burlington Dam.

Slide #3: To get an idea of the size of the project works, the confluence of the two rivers is shown here, including the damsite. We can see the broad, meandering Souris River as it winds its way down past Burlington. We can also see the Des Lacs River, the divide, and the confluence of the two rivers. The proposed Burlington Dam would

run from the side of the road seen in this aerial photo, to the divide between the Des Lacs and Souris, cutting through the loop of an oxbow.

The design pool for the reservoir would include all of the area shown in the Souris Valley all the way up to the Canadian Border.

We can get an idea of some of the present land uses in this area; floodplain forest, the open river itself, some meadow and pastureland, and some cropland.

Slide #4: This is a view of the same area from the ground. The town of Burlington is in the background. The road in the picture would be close to the eastern abutment of the dam.

Slide #5: These next few slides are taken in series and form a panorama of the valley at this point. Looking straight across to the divide, we are standing on what would be the eastern edge of the dam, which would go across the oxbow through the floodplain forest and anchor at the divide.

Slide #6: Swinging down the valley we can get an idea of some of the land that would be in the design pool of the proposed Burlington Dam. All of the land here in the valley, including all of this floodplain forest, the meadows and cropland which we saw in the aerial photos are shown here again.

Slide #7: Much of this land is used for agricultural production at the present time, some of it in wheat. This is a view of a wheatfield at sunset in the Souris Valley. This is part of what would be under water if the proposed dam were used for storage.

Slide #8: This is another aerial photo of the valley between Burlington and the Upper Souris National Wildlife Refuge. Again you can see the open water, floodplain forest, the meadow grassland and cropland. Along the sides of the valley, some of which would also be in the design pool, we can also see some upland type grassland.

Slide #9: As we go farther North, we reach the Southern boundary of the Upper Souris National Wildlife Refuge, at Baker Bridge. We can look on up the valley in this aerial photo, across the lower refuge pools, to Lake Darling Dam, and beyond that, Lake Darling. The lower refuge marsh units which we see here, the water levels being controlled by Lake Darling Dam, represent only about 20 percent of the total land area on the Upper Souris NWR, yet account for about 46 percent, or almost half of the production on that refuge. This is the most productive part of the wildlife refuge, and it is all in the design pool of the proposed Burlington Dam.

Slide #10: We have a few photos now of different areas on the lower marsh units. Here is one of the small impoundments on the refuge and we can see a wide variety of birds: coots, grebes, white pelicans, several kinds of ducks, herons, bitterns, and the upper extreme of the refuge provides cormorant nesting areas.

Slide #11: This is a picture taken on one of the laterals on the refuge. All of the dark area you see to the right of the picture, alongside that sunken log, are small fish fry. (See note on page 8.)

Slide #12 and #13: Here are pictures of some pelicans swimming down one of the laterals used to control the water level on the refuge.

Slide #14: This slide shows the amount of storage that would be available if, instead of placing the dam at Burlington, the dam were placed at the existing site of the Lake Darling Dam or approximately at that site. It also shows the storage that exists in the valley between those two sites and above Lake Darling Dam.

The Fish & Wildlife Service says that 36,500 acre feet of storage can be relied upon for storage in the existing Lake Darling Dam.

The spillway level of the existing Lake Darling Dam is at 1598 feet elevation to provide this 36,500 acre feet of storage. The water level would be drawn down to

1,594 feet elevation which is the spillway level of Marsh Unit #41 upstream.

At this point, 75,500 acre feet would be stored in the existing Lake Darling. If Lake Darling Dam were raised from the present spillway level up to the same elevation as the proposed Burlington Dam (1630 feet elevation at the top of the dam; design pool at elevation 1620 feet), we would be able to realize an additional 298,500 acre feet of storage, without backing water on to land in Canada.

Putting the dam at Burlington provides 125,000 acre feet of storage from the ground level to the spillway at Lake Darling Dam, and above that, up to 1620 feet elevation, 145,000 acre feet.

The total storage of the Burlington Dam for flood control would be 595,000 acre feet. The largest flood known to have occurred on the Souris, which was the largest historical flood, in 1882, had a 60-day volume of 550,000 acre feet, less than the storage which would be available behind the Burlington Dam. The Burlington Dam would be capable of storing all the water in the 1882 flood without spilling a drop.

In addition to that, there is a 5000 cfs channel. Having a larger channel reduces the amount of water we would have to store, so the Burlington Dam is much larger than would be necessary to store even all the water coming down the Souris in 60 days in 1882.

The dam at Lake Darling would be capable of storing 298,500 acre feet plus 36,500 acre feet or about 335,000 acre feet.

Slide #15: Putting that in perspective, we can take a look at the Corps' calculations as to what volume of water there would be above the channel design, to determine how much storage we would need.

Taking the 1882 flood, the largest historical flood on the Souris, and below that, there have been three large floods: 1904, 1948, and 1969. The 1969 flood was the 4th largest flood on the Souris.

1882: It was estimated that above the channel capacity existing in 1969, the flow at Sherwood, which would be the upstream end of Lake Darling, was 392,000 acre feet above the channel capacity of 2000 cfs.

If the channel capacity were increased to 5000 cfs, the flow above that entering Lake Darling would be 176,000 acre feet, for a period of 28 days.

Suppose we stored that 176,000 acre feet in a dam at Lake Darling. How much storage would it take up, and how much storage would we have left?

Without even having a Burlington Dam, just raising Lake Darling Dam to the same elevation as is proposed for the Burlington Dam, that 176,000 acre feet could be stored in Lake Darling up to an elevation of 1610.

Slide #16: With a design pool of 1620 feet elevation, the additional 10 feet would give us 159,000 acre feet of additional storage, almost the same amount again.

So even a dam at Lake Darling has almost twice the amount of storage needed to handle the largest historical flood, the 1882 flood.

In addition to that, we would forego putting the Burlington Dam at a point just above the confluence that would prevent the Des Lacs from backing up into the Souris, which would preserve the natural storage there, and there would be no need for a tunnel under those conditions, because a 5000 cfs channel on the Souris is more than enough to handle the 100-year flood on the Des Lacs (the 1970 flood).

This alternative, raising Lake Darling Dam, so that it would sustain a design pool of 1620 feet of elevation, would provide on the order of 200 year flood protection for Minot.

The presently proposed Corps of Engineers plan for the Burlington Dam with the Des Lacs Diversion Tunnel, and with a 5000 cfs channel, would provide on the order of 1000-year flood protection.

That would be at design pool level. Up to spillway level, it provides a good deal more than that.

Slide #17: Here is an aerial view of the existing Lake Darling Dam and Lake Darling. We can see the lower refuge marsh units, the most productive part of the refuge, the dam and the lake.

Raising Lake Darling Dam to 1620 feet elevation will allow us to store water in the existing lake. In this case, when we begin storing the water, we would be storing it over land that is already used for water storage.

When we would begin drawing the water level down, it would be drawn first off the land that is now used for other purposes, the area above Lake Darling.

If, on the other hand, we were to store water behind a Burlington Dam, we would begin storing water first on land that is presently used for agricultural production, fish and wildlife and other purposes. The water would be drawn off those areas last.

The impact on existing land uses is much greater from a Burlington Dam than it would be for a Lake Darling Dam.

Slide #18: There has also been criticism of conflicting projects in the valley and poor coordination of water resource development. This slide shows the Tolley Flats area.

Tolley Flats is located on the divide between the Souris and Des Lacs valleys, and it is a closed drainage basin. There is a plan now to drain Tolley Flats into Lake Darling which would add to the runoff entering Lake Darling during a wet year, and this would tend to intensify the flood threat on Minot and other communities in the Souris Valley.

It seems that there could be much better coordination of existing natural flood control rather than structural solutions that intensify the flooding problems in some areas.

Slide #19: This is a house in Minot. This picture was taken during the summer of 1972, when the house was under construction. It is located in the floodplain. The river isn't visible in the picture but it is within sight of the house, just a few yards away.

Minot's existing Floodplain Zoning Ordinance states that new houses constructed on the floodplain will not have basements and will have their first floors elevated above the 100-year flood profile. This house is located in an area that was flooded in 1969. (The 1969 flood was less than a 100-year frequency flood; it was about a 35-year frequency flood.)

This house happens to be a split level, and as you can see, the living quarters are below the flood profile.

Slide #20: In this picture, we can see the City Engineer's Building Permit in the window. The Floodplain Zoning Ordinance is not being rigidly enforced. Construction is still going on in the floodplain. Very seldom is it required that the first floor level be raised above the 100-year flood profile.

It is very easy to get a variance granted for that. In some cases, basements have been put in just on the basis of error and oversight by the City Engineer's Office.

The first line of defense that the City has against flood protection, that is, restricting or preventing development of the floodplain, is not being used. The City intends to allow further development of the floodplain at an even faster rate if the proposed flood control works are constructed.

Also, because not enough funds are available, the City of Minot is asking property owners on the channel to donate flowage easements so that channel work can be accomplished.

However, at the same time, the City has allocated revenue-sharing funds toward the construction of a multi-purpose building which will be built in the floodplain. This seems to indicate that the City has not made a rational decision in determining priorities for using funds that are available. It would seem that flood control would have the highest priority.

Slide #21: Here we have a comparison of the benefits and costs of several different proposals that have been considered for flood protection for the City of Minot.

For comparison, we have the 1969 proposal. The first costs at that time were estimated to be \$34 million. This included a proposed 3800 cfs channel and a dam at Burlington with reservoir storage capacity of 637,000 acre feet which would provide on the order of 150-year flood protection.

The Citizens Flood Control Planning Committee, which consisted of representatives from Minot and from upstream and downstream areas, met for about a year in 1972, to discuss various alternatives.

One of their conclusions was that economic and environmental conditions precluded planning for any more than 150-year flood protection, although they advised at least 100-year flood protection.

In 1973, the Corps of Engineers came out with the current plan. The estimated first costs at that time were \$78 million, now at \$84 million. The size of the channel at 5000 cfs, the size of the reservoir, even though not as much storage would be needed with a larger channel, was reduced to only 595,000 acre feet, still large enough to store the largest flood to have occurred on the river. This plan would provide on the order of 1000-year flood protection.

The alternative plan, that of raising Lake Darling to the same elevation that the Burlington Dam would be raised to, was estimated in 1972 to have first costs of \$49 million, with a 5000 cfs channel, and with 335,000 acre feet of storage which would then be available in Lake Darling. This would provide on the order of 200-year flood protection.

The economic analysis is also shown. In order for a project to be economically feasible, the benefit-cost ratio must exceed 1, that is, you must make more than one dollar for every dollar invested.

The estimated annual average costs (which includes interest and amortization) for the Burlington Dam and the channel were \$4,747,000. The estimated average annual benefits were \$5,662,000, giving the project a benefit-cost ratio of 1.2 to 1.

The benefits, however, have been manipulated to reach that \$5,662,000 level. Here is a breakdown of how benefits are assigned, which will give us an idea of how they have been calculated:

The flood damage prevention benefits, based on current conditions, that is, what is presently in the floodplain, and what would be protected by the project, are only \$2,201,000 a year, pitifully below the estimated average annual costs of \$4,747,000.

In order for this project to be feasible at all, the Corps has to project a future growth in the floodplain for the project to protect--the assigned amount of which is greater than that now existing in the floodplain: \$2,223,000.

So there is going to be a great deal of expansion of the floodplain development if the project is put in. I think this is rather foolish because even if there is protection against the Souris River above Burlington, and the Des Lacs River above

the point of the diversion tunnel, there is still a considerable unprotected area. Gassman Coulee, for example, which drains into the Souris River below Burlington, has been estimated by the Corps to have a standard project flood which would come out of Gassman Coulee at 10,600 cfs.

It would hit the river channel at U.S. 2 and 52 at 8000 cfs. The channel capacity of course, would be 5000 cfs, which would give Minot something like 3000 cfs over the banks.

In a flood of that magnitude coming out of Gassman Coulee, and with conceivably twice as much development on the floodplain as now exists, this would be comparable to the 1969 flood which peaked at 6000 cfs going through Minot with a channel capacity then at 2000 cfs.

Calculating for future growth is merely setting the stage for disaster at Minot. This is poor flood control planning. Even so, if we allow the calculations for future growth, and add up the benefits for flood damage prevention, which is the sole purpose of this project, it comes to only \$4,424,000, which is still less than the estimated average annual costs of \$4,747,000.

To bring the benefit-cost ratio up above 1, the Corps added in another benefit; "Lake Darling Dam: rehabilitation foregone." This is a little hard to understand, but what I make of it, what they are suggesting is that if we build Burlington Dam, we don't need Lake Darling Dam for flood control. So, should Lake Darling Dam fail, we won't have to rebuild it in order to provide flood control for Minot.

However, the fallacy in this argument is that Lake Darling Dam is not used primarily for flood control but for fish and wildlife management. The Fish & Wildlife Service has every intention of rebuilding Lake Darling Dam should it fail. The possibility that it would fail, however, is increased by storing water over it from a pool stored behind the Burlington Dam.

So \$553,000 listed as a benefit here should probably not be counted.

The next item added on was local employment, which is really a cost, but for the Corps, it is calculated here as a benefit. This would mean that there would be \$685,000 a year in local employment benefits. I have asked the Corps to itemize these benefits to demonstrate that they would actually be realized.

The Corps' response was: "Any estimate provided would be conjecture only." (See page 88 of the Final Updated Environmental Impact Statement, Minot Channel Modifications, Souris River, North Dakota, August, 1974.)

In any event, there is reason to believe that the proposed Burlington Dam would not remain a "dry" dam. There would be considerable pressure to store water rather than release it because of the downstream flooding effects, not only downstream from Minot in North Dakota, but downstream in Manitoba. The design pool would eventually, perhaps after storing the first floodwater, become operated as a wet dam rather than a dry dam.

Slide #22: However, even going along with the myth that it can be operated as a "dry" dam, let's take a look at some of the figures here. This is an elevation-duration-frequency curve shown for different types of floods.

A 100-year flood would store water above the 1600 foot elevation mark for about 130 days. Some of the impacts of this water storage would be:

About 4000 acres of grassland would be inundated by the 100-year flood pool at elevation 1602 until July 1. About 3500 acres would be inundated until September 1, which includes all of the normal plant-growing season. This is a major disturbance to the grasslands, and the results would be drastic, resulting in the elimination of the existing plant communities. The following year the grasses will be replaced by weeds, short-lived annuals which start the long succession back to the climax stage, a process

which takes 40-50 years minimum in this region of North Dakota, if protected from disturbances like grazing or inundation.

From a 100-year flood, 1/4 to 1/3 of the total floodplain forest would be expected to die from the long inundation of the root system.

The calculated flowage easement payments make no allowance for these losses in production following years of inundation.

The 1 percent chance flood or 100-year flood would inundate valley lands to elevation 1602 until July 1 and elevation 1600 until September 1, which would include Lake Darling. The effect of a long period of complete inundation at depths ranging from 20 to 40 feet for one plant-growing season at elevation 1600 would be the destruction of over 700 acres of floodplain forest which is among the most productive deer habitat in the state, and private woodlands used to shelter cattle in the winter.

None of these production losses have been calculated as costs to the project.

The Fish & Wildlife Service is not satisfied with the mitigation that has been proposed to date.

Slide #23: This photo shows the upstream end of Lake Darling where the land is inundated by the water now stored in the lake. You can see the meandering river channel as it used to exist on the valley bottom.

Slide #24: This photo shows the land use now existing between Burlington and Lake Darling in the proposed reservoir pool.

Let's look at these slides again. Which, do you believe, represents a better use of the land?

#23: Storage of water to alleviate the problems of unwise floodplain development downstream--which will encourage further unwise development?

#24: Or the present land uses of agriculture, livestock raising and fish and wildlife production?

Thank you for your patience. If there are any questions, I'll be happy to try to answer them.

I have two requests to make of the Water Commission:

- 1) If you would consider all aspects of this problem, I would suggest that you hold a special meeting in Carpio and other populated areas on the Des Lacs and Souris in order to hear the views of more concerned citizens.
- 2) I have provided the Water Commission with my analysis of the Environmental Impact Statement for the Burlington Dam, and I would urge each member of the Water Commission to take the time to read those comments.

Respectfully submitted,

*Paula Ward*

Mrs. John A. (Paula) Ward  
800 Northwest 15th Street  
Minot, North Dakota 58701

Note: An additional page is attached commenting further on questions raised by members of the Water Commission at the hearing.

Further comments relating to questions raised by members of the Water Commission at the hearing:

1. With respect to the color slide showing small fish on the Upper Souris National Wildlife Refuge: A member of the Water Commission asked if the fish were trout or carp. It is likely that the fish were neither trout nor carp but bullheads. According to available information, no carp exist in the United States' portion of the Souris River, although "carp-suckers" are found in the Loop.
2. Concerning the implementation of constructing the Lake Darling Dam alternative, a Water Commission member asked if separate authorization would be required, or what action would be necessary to implement that particular plan.

It appears to me that separate authorization would probably not be required since the Lake Darling Dam alternative is exactly that; an alternative, studied by the Corps, to the Burlington Dam proposal.

Furthermore, it should be noted that the Burlington Dam proposal is still considered only a proposal by Congress. This is pointed out clearly in the 1974 report of the Conference Committee concerning appropriations. The Conference Committee, at Senator Milton R. Young's request, called for the Corps of Engineers to report on the following alternatives in further study:

- a) a proposed channel to divert the Souris River from the point where it enters the state to where it re-enters Canada;
- b) the raising of Lake Darling Dam;
- c) further increasing the channel capacity through Minot;
- d) and a proposal to completely evacuate the flood plain in Minot.

It is important to note that the Corps has been instructed to report on these alternatives to local interests and to the conference committee before action is taken on appropriations in 1975 (for fiscal 1976).

A copy of the Conference Committee's report is available from Senator Young.

Sincerely,



Paula Ward

## WRITTEN STATEMENT TO THE STATE WATER COMMISSION

BY RICHARD HARP  
December 16, 1974

I have done an excessive amount of corresponding with the Army Corps of Engineers concerning the flowage easement problem concerned with the proposed flood control structure near Burlington. On June 6, 1974, a group of Farmers Union members met with 3 Corps officials in Minot. At this meeting it was explained that the decision on whether to take flowage easements or outright acquisition had not yet been made.

That very same evening Mr. Calton, from the St. Paul office handed out a statement (which no one had time to read that evening before the meeting was started.) The statement was titled "Statement Regarding Real Estate Policies Burlington Dam, Souris River, North Dakota" and dated 17 May 1974. The first paragraph stated:

1. "In its 3 September 1969 report, the Board of Engineers for Rivers and Harbors stated its belief that, because of the relatively infrequent filling of Burlington Reservoir, taking the lands by less than fee title would be appropriate, with human habitation restricted to elevations above the reservoir flow lines. By letter dated 10 November 1969, the Chief of Engineers stated to the Secretary of the Army his concurrence with the views and recommendations of the Board of Engineers for Rivers and Harbors. The project was authorized accordingly."

Now if the project was authorized as "taking the lands by less than fee title", how can the Corps officials try to make the land owners in the area think that the decision to take by fee title or flowage easement has not been made yet?

At this June 6 meeting I asked Mr. Calton if there was a law that stated that a flowage easement could not be payed more than one time -- in other words the farmers would receive payment for damages done by flooding of their land each time it was flooded, instead of receiving a one-time payment made when the flowage easement is taken, which is the policy of the Corps now and always has been.

I had to ask Mr. Calton this question three times before he gave me a definite answer. He said that there was a law, but he wasn't sure which one it was.

I wanted to know which one it was, so I wrote the Honorable Quentin Burdick and asked him. He forwarded my letter to the St. Paul office and they forwarded it to the Chicago office. Senator Burdick then forwarded his answer to me. The letter was from Col. Walter J. Slazak, Deputy Division Engineer of the Chicago office, dated 12 July 1974. He stated in this letter that "Although there is no specific statute which prohibits recurring payments for flood damages in situations where the Government

must acquire land ~~of~~ interests therein in connection with a project, we believe that such practice would violate the Fifth Amendment".

"As you know, under the Fifth Amendment, the Government is required to pay just compensation for the acquisition of real property or interests therein. In the case of fee acquisition, this requires payment of the fair market value for the land and improvements acquired. If the acquisition is of an easement, the Government is required to compensate the owner for the difference in the value of his land before and after the imposition of the easement. In the case of a flowage easement, where no structures for human habitation are permitted, the Government would be required to pay the diminution in value resulting from the loss of improvements, if any, plus reduction in the use of the land based upon the anticipated frequency and duration of project-caused flooding. To pay full damages and, in addition, damages for each flooding would result in over compensation by the Government. To pay only nominal damages plus payment for each flooding would not only violate the Fifth Amendment requirements for payment of just compensation but also render the Government's obligation uncertain and perpetual." Col. Slazak answered Senator Burdick's request due to the absence of Brig. Gen. Walter O. Bachus, Division Engineer.

About a week later the July 31, 1974 issue of the Minot Daily News stated: "The effort of Senator Milton R. Young, R-N.D., to get legislation written into an appropriations bill which would permit more than one payment for flowage easements on the Souris River for the flood control project has the full support of the North Central Division of the Army Corps of Engineers, its commanding officer reports."

I wrote and asked ~~the~~ Brig. Gen. Bachus how the legislation could have the "full support of the North Central Division of the Army Corps of Engineers" when one representative states there is a law forbidding it and another representative states that it would violate the Fifth Amendment? In all I asked him to answer 8 questions.

In his answer he only stated that "I understand that this matter is being discussed at the national level and we must, therefore, await the outcome".

The House Conferees did not agree with Senator Young, and he wrote back that "The problem now is that the Corps of Engineers, regardless of our views, has to abide by the decision of the conferees which means to revert to substantially their old policy".

I again wrote to Brig. Gen. Bachus and asked him to answer my 8 questions since the conferees had made a decision. He wrote back and stated "Since this matter is under consideration in Washington, not only before Congress, but also by the Office, Chief of Engineers, I feel it would be inappropriate to answer the questions posed by you in your 2 August letter pending such consideration. As I stated in my 8 August 1974

letter, we must await the outcome of the discussions at the national level".

I would like to know why it is a violation of the Fifth Amendment for the Government to rent land from the farmers when it is not a violation of the Fifth Amendment for the Government to rent land to the farmers? This seems to be a double reading of the Fifth Amendment.

It seems to me that the Corps could rent the land from the farmer for the purpose of flooding it. Payment due when it is flooded and that payment would be for the total amount of damage done. If the flood caused damages for five years, then pay the farmer for five years. If the flood just caused damage for a couple of months, then pay them for the damages of those two months. If there isn't a flood for 20 years, then the corps would not have to pay anything in that period of time.

According to the "Biological and Recreational Impacts of Nine Proposed Flood Control Alternatives in the Des Lacs and Souris River Flood Plains, North Dakota" conducted by James S. Lunan, Thomas Glorvigen and Gary Leslie of Minot State College for the U. S. Army Corps of Engineers, St. Paul District, under contract #DACW 37-73-C-0001, some of the grass lands, once inundated for a long period of time, would take from 30 to 100 years to restore to their original vegetation. The Corps failed to put this in their Impact Statement.

The land in the Souris Valley lying between Minot and the U. S.-Canadian border in Bottineau County could be lost for a full year due to a need to allow the water out of Burlington Dam at a faster rate and thus their land would stay flooded past the seeding and haying period.

In Memorandum #2, Page 4, ¶ 5 & 6, it states: "At full design pool level the authorized Burlington Reservoir was planned to be operated to control floods on the Souris River which might be expected to occur on an average of one in about 150 years. Reservoir release rates would be regulated so that, when combined with uncontrolled Des Lacs River flows, the total discharge would not exceed bank-full capacity of 2,300 cfs, (cubic feet per second) in unimproved channel reaches between Burlington and Minot and the Logan, North Dakota area. The 2,300 cfs flow below the confluence of the Souris and Des Lacs Rivers would be continued until the reservoir was emptied, a period of about 180 days".

"A critically low channel capacity of about 1,000 cfs exists within a 20-mile agricultural reach above the south boundary of the J. Clark Salyer National Wildlife Refuge near Towner, North Dakota. The authorized reservoir plan includes flowage easement acquisition of lands within this constricted channel reach since, with floods approaching the reservoir design flood, release rates from the reservoir would inundate adjacent agricultural lands for an extended period of time."

You will notice that they don't state what the cfs flow is between Logan and Towner.

I think that I can safely say that our main opposition to the proposed Burlington Dam is that if the U. S. Government is going to spend millions of dollars for flood protection for the city of Minot, then lets make sure that the city of Minot has 100% flood protection. I have always believed that if you don't want to have your home flooded, then don't build on a river bank.

The Corps plan is to build the proposed dam just above the confluence of the Souris and Des Lacs Rivers. When the Des Lacs River floods, a lot of the flood waters back up the Souris Valley toward ~~Canada~~ <sup>CANADA</sup>. If the dam is in the way this water would be forced to head straight into Minot. Thus the Corps has proposed the Des Lacs Diversion Tunnel.

In the spring of 1972, when the Corps was planning to build the dam below the confluence of the Des Lacs and Souris, they told the Souris River Flood Control Planning Committee that the diversion tunnel would cost 22 million dollars. Since the dam was being planned for below the confluence, there was no need for the diversion tunnel. Then in the Corps' phase one plan, released in 1973, they state the diversion tunnel would cost 14.1 million dollars. In the Environmental Impact Statement, 1974, They state it would cost 13.0 million dollars. I would like to know how, with the high rate of inflation in the last 2 years, the cost can drop almost 50%?

Mr. Calton states in a letter dated 28 August 1974: "Supporting benefit and cost data for a dam located at the Lake Darling Dam site are enclosed. These data are based on use of the full flood control storage to elevation 1620 (330,000 acre-foot) and a maximum regulated outflow of 2,000 cubic feet per second which approximates the existing damage free downstream channel capacity." I wrote Mr. Calton and asked for the costs and benefits that the Corps had used in studying the Lake Darling Dam Site. I would like to know why they have not considered the 5,000 cfs channel the Corps is in the process of constructing at this time?

In Design Memorandum #2, Page 6, P 13, concerning Gasman Coulee and the Des Lacs River, the Corps states: "Because of their location and steep gradient, both tributaries have a high potential for causing major damages in the Minot urban area." The Gasman Coulee enters into the Souris Valley just west of Minot so the proposed flood control structure would not give any protection from this coulee. Due to the fact that Gasman Coulee is narrower and has a steeper gradient than either the Des Lacs Valley or the Souris Valley, it is much more of a threat of a flash flood than the 2 latter ones are.

A Standard Project Flood (with the proposed flood control structure in place and with or without the proposed diversion tunnel) would put 18,900 cfs through the city

of Minot. The Standard Project Flood has a very small chance of happening, but then the Corps cannot guarantee the city of Minot that the year after the flood control project is finished, it will not occur. The 1969 high flow was just over 6,000 cfs. This gives you an idea of what 18,900 cfs could do to the city of Minot.

Although Floodplain Evacuation is the most expensive alternative for flood control on the Souris, it gives 100% protection and has the most favorable benefit cost ratio of 1.9. In the Corps "Review Survey of Souris River, North Dakota for Flood Control" dated July 15, 1969, they state: "Since other flood damage reduction alternatives were found to be much less costly and since evacuation would be sociably unacceptable, permanent evacuation was not considered further."

Over half of the Corps "plus" side of their cost-benefit ratio for Burlington Dam is figured on future development--something that isn't there now, but because of the dam, will be able to be built in the flood plain. Yet on the "loss" side they don't figure in the loss of crop production for the same time period.

In the Draft Revised Environmental Impact Statement for Burlington Dam, the Corps states: "With the proposed project, future generations would not be permitted to occupy those areas subject to a residual flood threat. However, those who now occupy the floodplain or those who occupy floodplain areas where improvements are proposed, can be expected to enjoy a greater sense of well-being, knowing that they would be free from the anxieties and hardships associated with flooding. Also, elimination of the flood threat would permit local government officials greater flexibility in planning for their communities".

In Design Memorandum #1, it states: "The city of Minot will have to set up a warning system for emergency evacuation of low lying areas".

In Design Memorandum #2, it states that the required local cooperation as set forth by the Board of Engineers for Rivers and Harbors will have to "At least annually inform affected interests that the project will not provide complete flood protection".

In one statement they say the people will not have to worry about flooding again and in the other statement they say they will always have to worry about a flood.

The proposed flood control project will not be completed for another nine years if it is constructed. Concerning Lake Darling, the Corps states: "The structural integrity of dams constructed a long time ago has become a matter of increased public concern, especially in view of the dam failures which have occurred in recent years. On the Souris River, the Lake Darling Dam was built in 1936. Hydrologic and hydraulic analysis indicate that its spillway would not be capable of passing a large flood. For example, it is estimated that the standard project flood in the Upper Souris River basin would lead to overtopping of the dam by 1 foot. Failure of Lake Darling

Dam would cause catastrophic damages and loss of life in Minot and elsewhere downstream. The estimated cost of rehabilitating Lake Darling Dam and spillway to meet present day standards would be approximately \$11 million". The Corps uses the \$11 million on the "plus" side of the cost-benefit ratio for the Burlington Dam. What if that Standard Project Flood comes in the next 5 years?

The complete outlet works of the proposed flood control structure is 80,000 cfs. If the city of Minot thought they had a flood in 1969 with about 6,000 cfs, what will they call it when they are hit with 80,000 cfs?

In closing I would like to list the organizations, etc., that are opposed to the proposed flood control structure. They are: North Dakota Farmers Union, North Dakota Farm Bureau, Ward County Farmers Union, Ward County Farm Bureau, Ward County NFO, McHenry County Farmers Union, McHenry County Farm Bureau, Renville County Farmers Union, Renville County Farm Bureau, North Dakota Wildlife Federation, Ward County Soil Conservation District, Theodore Roosevelt Chapter--Izaak Walton League of America, McHenry County Commissioners, Cities of Carpio, Donnybrook and Des Lacs, Townships of Carpio, Des Lacs, Foxholm, Kirkelie, Mayland, Ree, Rolling Green, St. Mary's, Vang, White Ash and Muskego, Harrison Township Supervisors, Carpio Community Club, Carpio School District, United School District No. 7, K-W Mixettes Homemakers Club, Hearth and Home Homemakers Club, Carpio Country Gals Homemakers Club, Third District Democrats and Verendrye Electric Cooperative (Verendrye serves almost the entire loop of the Souris River in North Dakota and most of the Des Lacs Valley).

*Richard Hay*

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The United Public School District of Burlington and Des Lacs is firmly opposed to the Burlington Dam and Diversion Tunnel Proposal of the Souris River Flood Control Program as proposed by the Corps of Engineers. We believe that without our full potential of resources of assessed valuation and school enrollment that we now have, we cannot preserve a high standard of education for our children. The loss of large sections of our school district and the attendant enrollment would be a serious blow to the directly affected students as well as the students who attend our schools. There is no way the Corps of Engineers can put a value on how much they destroy in the life of even one of these students.

The Souris River Flood Control program as proposed will directly affect 22 students from 9 families in the United #7 District. The loss of these students will be a financial loss to the school district in state foundation aid as follows:

15	Students,	Grades 1-6	@ \$475 <sup>00</sup>	\$ 7,125 <sup>-</sup>
3	"	"	3-8 @ \$540 <sup>00</sup>	1,620 <sup>-</sup>
4	"	"	9-12 @ \$756 <sup>00</sup>	<u>3,024<sup>-</sup></u>

(2)  
 Total of \$ 11,772.00

There will be a loss of 2,300 Acres of property to the district, with a taxable valuation of approximately \$120,000<sup>00</sup>. This \$120,000<sup>00</sup> taxable valuation times the total Levy of 75.29 mills makes a total of \$ 9,034.80 loss to the district.

STATE AID <sup>REVENUE</sup> LOSS : \$ 11,772.00

REVENUE LOSS (PROPERTY) : \$ 9,034.80

TOTAL LOSS \$ 20,806.80

directly lost to the district.

With the reduction of the TAX BASE there will be a loss to the BUILDING LEVY FUND AND THE SINKING AND INTEREST FUNDS. TO MAINTAIN THESE FUNDS A GREATER MILLAGE WILL HAVE TO BE LEVIED AGAINST THE REMAINING TAX PAYING PATRONS.

IN ADDITION, IT WILL DISRUPT PRESENT BUS ROUTES AND MAY DEMAND NEW ROUTES. WE KNOW THERE WILL BE A TEMPORARY INFLEX OF STUDENTS, MAKING IT IMPOSSIBLE TO PROVIDE FACILITIES AND EDUCATIONAL PROGRAMS IMMEDIATELY, AND AFTER A SHORT DURATION AN OUTFLUX OF STUDENTS; CREATING A HARDSHIP IN BOTH INSTANCES.

THE ANXIETIES THAT THIS PROJECT HAS CREATED ON OUR PATRONS AND COMMUNITY ALREADY HAS PROVEN TO HAVE GREAT LOSSES

IN PRODUCTIVITY OF MATERIAL THINGS, AS WELL AS TO MATERIAL PRODUCTIVITY OF UN-DETERMINED VALUES. I BELIEVE WE CAN ELIMINATE THE ANXIETIES OF THOSE WHO WANT FLOOD PROTECTION AND THOSE WHO ARE THREATENED WITH DESTRUCTION OF THEIR PROPERTIES, HOMES AND LIVELIHOOD BECAUSE OF THIS PROJECT; BY STRIKING A BALANCE BETWEEN THE 2 EXTREMES - NO FLOOD PROTECTION OR 1,000 YEAR FLOOD PROTECTION. I DON'T BELIEVE THERE ARE ANY OF US, REGARDLESS OF PROFESSION, THAT CAN PREDICT POSSIBILITIES FOR A PERIOD OF 5 TIMES THE LIFE OF OUR COUNTRY. WE FEEL THE HUMAN THING IS TO FIND THE REASONABLE SOLUTION, 100 YEARS AT A TIME.

WE NOTE BY YOUR IMPACT STATEMENT THAT YOU PLAN TO OBTAIN LAND FOR YOUR RESERVOIR PROJECT BY FLOWAGE EASEMENTS, AND YOU WOULD EXPECT OUR PARTONS TO PAY TAXES ON LAND ABOVE A BIG DAM. WE FEEL THIS IS TOTALLY UNFAIR. IT IS UNREASONABLE THAT A PUBLIC PROJECT SHOULD BE BURST AT INDIVIDUAL PROPERTY OWNERS EXPENSE. THE COST WOULD BE TO THE INDIVIDUAL PARTON AS WELL AS THE SCHOOL DISTRICTS. WE CANNOT BELIEVE THAT ANYONE WOULD THROW SUCH AN UNJUST BURDEN ON ANY GIVEN AREA,

(3)

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when it is Absolutely Not NEEDED in the proposed proportions.

There are other considerations also, such as environment, ecology and economics. The United #7 School District is opposed to the proposed project<sup>in present 50</sup> on these and the stated Arguments.

By  
Orlin R. Olum, Towner, North Dakota

Dec 16, Statement to State Water Commission

For the last four years we have watched, read and listened to the pro's and con's of the proposed Burlington Dam. From the very first we ranchers along the Mouse could see there were to be no advantages for us. The realtors, developers, and private purchasers of Minot had used poor judgment in development of the low areas and we were to pay the price.

Many homesteaders also built their homes in the sheltered areas on the banks of the Mouse, however nearly everyone of these were rezoned by the Historic floods early in the century. In the Towner area there are probably 3 Ranchsteads that suffer building damage during these so called 100 year floods. The majority of us get by and by having the water in the spring as nature would have it we always have been able to get the greater part of our hay up.

In the winter of 1971 and 72 a survey was taken along the Mouse from Velva to the J. Clark Salyer Refuge which showed a million dollar loss to fifty ranchers in this area if the river flow was sustained at a to great a depth to facilitate drainage of the cropland and hay meadows affected. These last three floods also show that the washouts leading into and out of meadows along the Mouse are washed wider when high levels of flow are kept up during the summer months. Frozen ground can sustain more current with less damage from erosion.

In the area I'm most familiar with, " from Towner and north"; drainage of the lowest meadows hayed consistently over the years is hindered when the July river flow is in excess of 200 cfs and an August flow is in excess of 125 cfs. As the flow is increased over these amounts additional landowners suffer; and as we near the 600 cfs mark all valley hayland drainage north of Towner is at a standstill.

With these circumstances very obvious to us, and not wanting to be a party to making the proposed dry dam a wet one; " which would supposedly

allow drainage over a period of years "; therefore obliterating our friends north of Minot, we have chosen to oppose the Burlington Dam and have worked through various organizations to do so . The one I'm most familiar with being our Local and County Farmers Union Organizations. *McHenry, W. D. 2 & Penville* *McHenry Comm.*  
 This year at one of the largest State Conventions in the history of the N.D.F.U. the State Organization was unanimously directed by its members to oppose the present plans for the Burlington Dam as proposed by the Corps of Engineers.

My personal opinion on this whole matter is , Why haven't the City fathers of Minot seen fit to rezone or regulate in some way development of the flood plain. My first experience with this type of flood was in 1949, certainly Minot could see the handwriting on the wall at that time also. How attractive Minot could be with a park all along the flood plain. Benches and camping facilities sustain very little flood damage.

Minot could well take some advice from Rapid City.

With these thoughts in mind I sincerely thank you for letting me appear before you and I ask your consideration in helping to right a wrong before it goes any further.

Thank You

Orlin R. Oium

Towner, N.Dak.

Statement taken from tape recording at State Water Commission Meeting held on December 16, 1974 - Bismarck, North Dakota

Governor Link, Water Commission and Ladies and Gentlemen:

I'm Bob Booth of Sawyer, a life-long resident, and 46 years on the Mouse River. My granddad homesteaded there in 1882. We've had our share of floods and have learned to live with it. There hasn't been a year that we haven't cropped this land. With a controlled flood such as the Burlington Dam, cropping this land would be cut considerable, maybe to as much as one-third. Cleaning the Mouse River of logs and rechanneling where needed to get rid of the runoff quicker is my idea. Also raise Lake Darling Dam to store more water. Burlington Dam would cost the taxpayers and landowners millions of dollars, not counting all the hardships. Thank you.

/S/ Robert Booth  
Sawyer, North Dakota

# Upper Mouse River Association

Mohall, North Dakota 58761

CLAIR O. SOUTHAM, MOHALL  
CHAIRMAN

HENRY P. SULLIVAN, MOHALL  
SECRETARY - TREASURER

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BEN ECKERT, MINOT  
RANCHER

Statement for presentation  
to  
North Dakota State Water Commission  
December 16, 1974

My name is Clair Southam

I am a resident of Renville County and I have been involved in consideration of proposed flood control measures on the Souris or Mouse River for several years. I am chairman of an organization known as the Upper Mouse River Association, and was a member of the the Souris River Flood Control Planning Committee.

Today I am appearing on behalf of the Upper Mouse River Association, and the Renville County community, and more especially those who would be directly affected by any Souris River flood control measures.

My way of background I wish to point out that Renville County lost about 26,000 acres to the Upper Souris Wildlife Refuge. This was a considerable loss in tax base to the County and its subdivisions and even greater loss to the economic base of the community. The only benefits to our community have been those incidental to such an area, and which are available to all persons.

Minot has directly benefited from the considerable degree of flood protection afforded by the Lake Darling Dam.

Without repeating details already available to you, the current flood control proposals include a 5000 cu.ft/sec channel through Minot, already approved and under construction. This is to be supplemented by a proposed upstream reservoir and certain downstream improvements

The latest recommendations of the U.S. Army Corps of Engineers of which I have knowledge, propose a dam at Burlington with a maximum flood pool level of 1620 feet above sea level. This, with the 5000 cfs channel, the Corps estimates would provide protection against a flood with a mathematical

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2/

chance of occurring about once in 1,000 years, or about a 1/10 of  
1 % chance of occurring in any given year.

The Renville County community and the Upper Mouse River Ass'n continue to express their firm opposition to any flood control proposal which has as a part thereof, a flood pool level higher than 1598 feet above sea level, or which would flood any lands not now in federal ownership.

1598 is the level of the spillway of the Lake Darling dam, and at that level the flood pool would not extend beyond the present boundaries of federal ownership, north of Lake Darling.

Our opposition to present proposals is based upon the following points:

First: Flood protection is available to Minot, to whatever mathematical probability is wished, by other methods. One method is evacuation of the flood plain. It can be extended to whatever area is deemed to be endangered. If properly planned, evacuation is complete protection and without any hazard of future structural failure. The first cost may be somewhat greater by this method, but future costs for maintenance and upkeep would be negligible. If evacuation were used, the major sacrifices of relocation would be borne by those who built in the flood plain and now have asked for help to correct their errors. In any flood control measures involving reservoir storage the sacrifice of relocation is borne by those who had no part in creating the problem, *certainly true in this case -*

Second: A reasonable degree of protection would be afforded by the 5,000 cfs channel, now under construction, together with the use of Lake Darling storage.

The Corps of Engineers

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3/

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The Flood Control Planning Committee recommended that a plan be made to protect against a major flood in the probability range of once in 150 years. The Corps of Engineers estimated the 150 year, 60 day flood volume at the gauge near Sherwood to be approximately 550,000 acre feet. A 5,000 cfs channel will pass 600,000 acre feet of water in a 60 day period. Storage would thus be needed for the excess above above 10,000 acre feet for those few days when the combined flow from the Souris and DesLacs rivers would exceed that figure.

In our opinion protection to the extent of a once in 1,000 year flood should be classed as "overkill". We feel that the Corps of Engineers felt that since the opposition was relatively weak, that this provided them an opportunity to plan a classic example of perfect flood control.

Third: If the storage available in Lake Darling is not considered sufficient to supplement the 5,000 cfs channel, a dam could be constructed in the Bakers Bridge area. This would provide close to 100,000 acre feet of storage without taking additional lands. This site is not acceptable to the Fish and Wildlife Service, and since this is an entrenched bureaucracy, ducks will undoubtedly prevail over people.

Fourth: In the event that a dam at Burlington is considered an absolutely necessary part of the flood control plan, then there is even less need to go above the 1598 ft. level. A dam at Burlington to the 1598 level would afford close to 150,000 acre feet of storage.

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4/

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Fifth: Should the maximum flood pool level be held to 1598 feet above sea level there will be no further adverse effects on Renville County. At that level the Mouse River Park is not flooded but is soggy. Private lands above are not flooded, but like the Park, some of them are quite wet.

If the proposal for a maximum flood pool level of 1620 is adopted, the McKinney Cemetery would be relocated. The Mouse River Park would be allowed to remain under private ownership but under flowage easements. (This seems to be the current plan.) The flowage easements would prohibit any permanent habitation, but would allow tents, trailers or other movable vacation shelters. The status of public buildings, auditorium, restaurant and other service facilities is not clear at this time. It is difficult to assess the long time effects on the use of the Park as a recreation area, though with out service buildings, the use would certainly decline.

Effects of the 1620 ft level upon the farm and ranch economy would be severe. There has been some suggestion that the government might seek flowage easements rather than acquisition in fee. Acceptance of such a policy by the owners would depend upon the payment offered and other conditions. Since a flowage easement is perpetual and there is no guaranty regarding the periods of flooding, unless the payment comes close to the actual sale value of the land they are not apt to be very well received.

Should acquisition in fee be the final policy it will it would mean an almost complete disruption of an economy that in 1972 had a gross income of over \$ 400,000.00. Current prices for grains would put the gross income close to \$500,000.00. Since the lands would be offered for lease after acquisition the loss would not be 100%, but it would be severe, both to the local economy

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5/

and to the governmental subdivisions.

The last detailed survey was taken in 1972. There were 18 units, 14 of which were surveyed by a personal interview. They were asked the question: "Would you attempt to continue your operations under a flowage easement?" 6 said definitely No, 4 said it was doubtful, and 4 had no opinion. When asked their opinion as to the effect of either easements, or fee acquisition with a lease back, a 40% reduction in gross income was the lowest estimate, 2 estimated 40% reduction, 3 estimated in the area of 50% reduction, 5 estimated a reduction of 60% or more.

The rest said they were unable to give an estimate.

The 18 units encompassed a total of 23,978 acres. 4,500 acres were located in the probable flood pool area, but these include farm headquarters, feed and wintering lots and other key uses. There were 900 cows bred for calving in the herds on these units. Any one with an elementary knowledge of North Dakota conditions will realize that any considerable dislocation of these operations would bring about a large loss in economic production. The Corps of Engineers has consistently minimized any possibility of production loss, saying that the lands could be leased and that therefor they would still be producing. Their other stock answer was that the operator could relocate and that the production could therefor be continued. We have asked repeatedly for an independent, unbiased survey by a competent authority, but this they have felt unnecessary, or at least it has not been forthcoming.

We feel our position is just and reasonable. We realize that the sheer weight of numbers are against us. We have to hope that enough fairminded people will become aware of all that is involved, to at least partially compensate for the numerical inferiority. We appreciate this opportunity of presenting our case to the North Dakota State Water Commission.

Governor Link and Members of the State Water Commission:

Statement By Lloyd NGAARD

Reviewing the proposed Souris River Flood control program is difficult to do in a short time. The citizens advisory committee had 16 meetings and I wonder some times if we scratched the surface. I don't know how many thousands of hours I have spent, personally, in the study of the proposals in the last 15 years. But in the limited time that I have been given at this time, may I give emphasis on at least two points.

One is in reference to the size of the storage created by the proposed Burlington dam and the associations on channel improvement. The other point is on the site of the proposed Burlington dam.

In the first Corps of Engineers proposal for flood control for Minot, there were no provisions made for the improvement of the channel or facilitating the flows down the Souris valley -- only obstructions were proposed in a dam at Burlington on the Souris and a dam at Kenmare on the Des Lacs river. The dam at Kenmare was subsequently dropped because it added nothing of consequence to the project. The dam at Burlington was to give a 100 year flood protection for Minot. It was evident to many of us living in the area that flooding would occur at Minot and up and down the valley, regardless of the dam, since the channel through the city had only a 2,000 cfs. capacity -- narrowing down to 1500 cfs at one point. A group of us concerned citizens near Burlington were among the first to stress clearing, straightening, and improving the channel through the populated areas. Changes have eventually been made to alter the original channel from the 1500-2000 cfs. capacity to 3800 cfs and then finally to 5,000 cfs. You would think that this would have reduced the necessity for some of the water storage. But the plan now still calls for the Burlington dam with the elaborate Des Lacs diversion tunnel

along with the 5,000 cfs channel from Burlington through Minot with improvements through Sawyer and Velva. It would appear that it should be a moral obligation that the valley be used for the most practical purpose; or else give everybody flood protection in any program undertaken.

Let's look at the factor of water storage. The Burlington dam is just as large as proposed now in 1974 as it was in 1963 when it was first proposed even though the channel capacity has been tripled in Minot at a given point.

According to the Corps' proposal, the largest flood on record-- 1904-- needs 117,200 acre feet of storage above the 5,000 cfs channel design. The Corps says that the 1969 flood would have required 51,500 acre feet above the 5,000 cfs channel design. Let's analyze these statements.

In 1969, flow figures taken from the U.S. Geological records show that at Minot, there were 9,300 acre feet that flowed over the 5,000 cfs channel design. The rest was stored in Lake Darling. In other words -- if 500 cfs could have been released each day from Lake Darling in 1969, for 10 days previous to April 13th, there would have been no need for any more storage than what Lake Darling had at that time. The proposed 5,000 cfs channel would have handled the flow with no flooding in Minot. There were no releases from the Darling dam in 1969 until April 13th according to flow records. In comparison, over 34,000 acre feet had flowed through Minot in March of 1974 compared with 19 acre feet in 1969. Releases from Lake Darling in 1974 ran from 175 to 525 cfs in March. Total volume of water in 1974 coming in at Sherwood, up to June 10, was more than in 1969 up to <sup>the</sup> June 10th

date. And yet the peak flow did not exceed 3530 cfs at Minot in 1974.

In the 1904 flood (which is the largest on record) the Corps states that 117,200 acre feet of storage would be needed over the 5,000 cfs channel design. By the management method of drawing down Lake Darling similar to that which was done in 1974, you could reduce 117,200 acre feet needed to approximately 45,000 acre feet needed. Since 1904, the Boundary dam in Canada with storage capacity of 49,000 acre feet and the Moose Mountain Creek dam with 13,000 acre feet along with other storage facilities have been put in and should surely aid the cause downstream. Canadians are contemplating building more storage dams on the Souris river, and if we could cooperate with their efforts it would give a more controlled flow on the Souris from the upstream border to the downstream border.

The site of the Burlington dam is contrary to natural surroundings. Due to the river gradient being so steep, the Des Lacs river flows in at the confluence with rapidity. The Souris valley is very flat in the area and as a result the Des Lacs river water backs up the Souris valley all the way to Baker Bridge. Milo Hoisveen, the state engineer in 1968, said that about one-half of the Des Lacs water backs up the Souris. In 1970, this proved to be quite accurate. The 1970 flow from the Des Lacs was considered a 100 year flood from that source. Had the Burlington dam been in place in 1970, people living downstream would have had a much higher flow as illustrated by the chart. The Burlington dam would have forced the Des Lacs water downstream. But without the dam there was 4, 5, and 6 feet of water backed up on the meadows above the confluence alleviating the pressure downstream.

Because of the dam's location, it has been proposed that a diversion tunnel along with a diversion dam be built below Foxholm to take the excess water from the Des Lacs of over 2,500 cfs. into the Burlington reservoir. This <sup>tunnel</sup> is now estimated to cost 13 million dollars. My neighbor drowned in the Des Lacs at Foxholm in 1970, and my interest in this flood control project sharpened considerably after that event. However, where the life was lost, no flood protection has been proposed.

You will note that without the Burlington dam, the peak flow at Minot from the Des Lacs in 1970 was about 2,980 cfs. This was considered a 100 year flood. With the proposed 5,000 cfs channel improvements and no dam obstruction to prevent the water from backing up the valley, the Des Lacs river would appear to be controlled for at least a 200 year flood without the Burlington dam or Des Lacs diversion tunnel.

The question that comes to my mind is: why do we want to propose structures for a flood that may happen once in 1100 years, or, if it went to spillway level, once in 2,400 years? The practicability of such a thing seems absurd. If the flood for which we are planning is so big that the Burlington dam and the diversion tunnel will not take care of the flood, why do we want the structure in the first place? In Design Memorandum No. 1, of the Corps studies, it states that with the Burlington dam and Des Lacs diversion tunnel in place the peak discharge at Minot would be 18,900 cfs. This is over three times the peak flow in 1969. The peak flow from the Des Lacs drainage below the diversion tunnel and Burlington dam can reach 11,400 cfs., and from the Gasman coulee 10,800 cfs. In this case, it would seem advisable to evacuate the low areas of the valley.

The citizens advisory committee recommended that it would not be feasible economically or environmentally to plan for flood control facilities that would give more than 100 to 150 years of flood protection. It would seem that if we can't be practical in the length of time for which we plan, we should evacuate the areas subject to flooding so that there will be a minimum of losses -- economically, environmentally, or of loss of life.

## SOURIS RIVER FLOOD CONTROL PLANNING COMMITTEE

## POSITION PAPER

The Souris River Flood Control Planning Committee was organized early in 1972, made up of representatives from upstream area, from Minot and environs and from downstream areas. Its objective was to weigh various alternatives to deal with serious flood threats on the Souris River and make recommendations representing the interest of and viewpoints of residents and communities all along the river.

"Generally, the committee confined its recommendations to courses of action within the prescribed limitations imposed upon the Corps of Engineers for such projects. But there are exceptions that committee members felt worthy of consideration in applying local solutions to local problems.

" A great deal of compromise went into the recommendations finally adopted with representatives of the various sections of the river willing to "each take our lumps." as one committeeman put it, in order to offer the Corps of Engineers a consensus on a meaningful course of action.

These are the top priorities that went into the decisions made: the protection of people, the least possible damage or disruption to property upstream or downstream and the preservation of the environment, plus its enhancement wherever possible.

"These are the positions taken on the project by the committee:

"1. Resolution of the flood problem through the basic general concepts

"6. The committee agrees upon a site for a dam above the confluence of the 221  
Souris and Des Lacs rivers as acceptable but leaves the final selection question  
open pending more detailed investigations by the Corps of Engineers of human,  
economic, functional and environmental factors. The committee also feels on this  
point that the corps must be left in a flexible position to deal with the various  
agencies and pressures that must be dealt with in flood control projects. The  
committee favors the least possible infringement on private property in selection  
of a site and urges every effort to utilize public lands where feasible.

"7. The committee recommends a flood control plan which would provide for  
a flood of the magnitude that occurs once in 100 years. We feel economic and  
environmental factors would preclude planning for protection of floods greater  
than those which occur once in 150 years.

"8. Continuation of flood control zoning after the project is in operation  
is favored where risks remain.

"9. A tunnel of adequate capacity connecting the Des Lacs River and the  
Souris River and related works is favored. The plan would insure limiting the  
downstream flow on the Souris to 5,000 cfs even when the Des Lacs River has a  
major flood.

"10. The committee asks full Corps of Engineers cooperation in a state  
and local program to provide diking, road raising and other protective measures  
for people living downstream where the channel will not handle a 5,000 cfs flow.

"11. An upstream land acquisition policy - to be reviewed by this committee  
which will provide adequate compensation to all who are displaced. This policy  
is to be broad enough to recognize all the difficult factors involved in relocation

known the viewpoints of the people in the valley and to work to resolve problems . 222  
that arise. This body would continue to be active in the planning, construction  
and operational phases of the flood control project."

Adopted this 30th. Day of November, 1972

**MEMBERS:**

Ralph Christensen - Minot - Chairman

\*Stephen Ashley - Velva

Earl Beck - Minot

\*Wally Beyer - Velva

Jack Bone - Minot

Robert Brooks - Burlington

Harold Brunner - Rural Minot

Walfrid Hankla - Minot

Al Kramer - Minot

Kyle Miller - Bantry

Robert Moe - Minot

Lloyd Nygard - Rural Minot

Clair Southam - Mohall

\* Stephen Ashley replaced Wally Beyer.

December 16, 1974

To the Honorable Arthur Link, Governor of North Dakota and other members of the State Water Commission.

My name is Rolland Redlin, my family and I live in Minot. I am engaged in banking and farming and serve as a State Senator from the 5th Legislative District.

Having lived in Minot since 1967 I have witnessed first hand the devastation of our city in the tragic 40 day flood of 1969 and the threat of flood the following year. Just last spring I walked near the banks of a rising river with flood warnings ringing in my ears from the radio and TV and headlines in the paper warning of impending flood disaster.

With favorable weather, much work by dedicated citizens and the knowledgable help of the Army Corps of Engineers, the river was contained in its banks. All of which effort involved thousands of men and equipment, hours, thousands of taxpayer's dollars and emotional strain that tested the limits of human capacity to endure.

Many of the persons having homes in central Minot are our pioneer senior citizens. I won't soon forget the one senior couple I saw standing on the river bank seeming to ask in their troubled expression, "Why this for the third time in ~~two~~ <sup>SIX</sup> years?"

Governor and other members of this commission, I believe that the people of Minot are united and concerned as never before in their dedication to providing complete flood protection for our city so that our people can plan for the future with confidence and without fear.

We know that controlling floods in an entire river valley is beyond the capacity of our city alone. We believe that the United States as a whole has charged the Army Corps of Engineers to deal with problems of this magnitude. We believe that the Corps has the best grasp of our total problem and that they have indeed surveyed alternatives. We believe we should proceed with deliberate speed to protect the Souris Valley from flood catastrophe by building the project engineered by the Corps which includes the Burlington Dry Dam, Des Lacs Diversion and channel improvements.

To demonstrate the solidarity of our community both political party conventions adopted resolutions of resounding support for the Corps' project. I served on the resolutions committee of the 5th district Dem. NPL Party. The following resolution was presented to the convention ~~last summer~~ :

" Whereas, Minot has narrowly escaped another flood disaster, but not without considerable expense and inconvenience to many persons, and not without tremendous anxiety and anguish for our entire city;

Therefore, be it resolved that the 5th Dist. Dem. NPL express wholehearted support for flood control for our city, which will fully protect all our citizens against any foreseeable flood damage and for building this protection by construction of a dry dam as soon as possible, with adequate assurance to landowners and political subdivisions that their interest will be protected."

After discussion the resolution was adopted by an overwhelming majority.

During the '69 flood and each of our flood threat years, I have surveyed the upstream situation from the air and by automobile. Last Spring I was part of a Red Cross team which surveyed the plight of valley residents upstream from our city to the Canadian border. Most of the valley farmsteads had been evacuated and the entire area looked like a large lake with the river channel distinguishable occassionally only by observing trees extending above the water. I fail to understand how a control structure operating in a flood year to preserve downstream areas from damage could harm upstream areas much more than nature does now. This river is a slow flowing river and always seeks to spread out in many areas.

The point is that if a catastrophic flood comes along, the dam would be pressed into action to contain the catastrophe. In the rare years when that happens, the upstream area is flooded regardless. The high water there would be of longer duration but the federal government has a compensation plan for that. Actually, had the present flood control plan been in effect since 1900, the dam would have been used only twice, once in 1904 and again in 1969. Except for those years, the river would be contained in the much larger channel being provided for Minot, Sawyer, Logan and other points.

Those who talk evacuation of the flood plain in the City of Minot have failed to weigh the countless factors well enumerated by my colleagues in testimony today. There is an additional point I would like to emphasize. The regulated flow of a flooding river will do much to protect and preserve downstream interests clear around the loop and back to Canada. We do not wish just to design a way to rush the problem through Minot without regard for the benefits that can come from a carefully regulated flow for downstream concerns when catastrophe is on its way.

We believe that the time for decision and action is here. I ask your support to hasten the construction of the Dry Dam, Des Lacs Diversion and construction of channel improvements.

*Rolland Kellin*

December 16, 1974

GOVERNOR LINK, WATER COMMISSIONERS, LADIES AND GENTLEMEN:

The community of Minot must have flood protection. Everyone agrees to that. Differences occur only in how to provide that protection.

THE PROBLEM

In 1969 we had a flood. Some 3600 homes were flooded out for a period of 40 days. The cost in damage was \$12 million. The cost in economic dislocation was probably three years lost in progress. But more importantly the social cost, the well-being of a good many of the people who live in the flood plain was immeasurable. The City of Minot has long been progressive, moving surely and swiftly forward in building a high quality of life for its citizens. The three years after 1969 showed a distinct slow down in progress. 1/3 of the people who live in the flood plain are elderly. A good many of those are living on fixed incomes. They are unable to cope with the continuing threat of flooding that has occurred from the uncontrolled rivers.

We had another flood threat in 1970. In 1972 again high water caused a great deal of concern on the part of the people and this last Spring of 1974 saw a good many people evacuate the flood plain, once again.

*City of Minot*

I don't know how many times I heard elderly people tell me they will not move back into the flood plain, that their peace of mind was not possible with the continuing threat of flooding. Many of these elderly abandoned long-term apartments where the rent was moderate and affordable for apartments that were not affordable. A general lowering of their quality of life was the effect. The City government, the Corps of Engineers, and community agencies got together immediately after the first flood and began working on a rush basis to develop flood control project plans. Fortunately, the Corps had already made a study beginning in 1957 of the Souris and had given warnings to the community about a decade before.

All the alternatives available were studied again very carefully. A citizen committee, composed of upstream residents, downstream residents, and residents of the City of Minot labored for a year with the Corps of Engineers to study in detail all of the alternatives that were available. The Corps of Engineers, the State Water Commission, the Fish and Wildlife Services worked patiently with this committee, investigating diversions, big dams, little dams, many dams, flood plain evacuation, dredging, and any other idea that anyone had.

The conclusion by all agencies was that the best alternative -- considering all things -- was a combination of dam, diversion tunnel, and channel improvements. A great deal of differing opinion occurred in the process of developing that alternative. A great deal of compromise occurred by members of the citizens committee, and the final statement reflects a near unanimous agreement on the best alternative.

A major concession by Minot was the willingness to accept a dry dam which would be fully drained each year regardless of the size of the flood. It would operate only three times every 100 years, based on computa-

*City of Minot*

tions of past flows in the river. Because such a dam would give considerably less flood protection to Minot, the channel capacity through the City was raised from 3,800 to 5,000 cubic feet per second.

This greatly increased the local estimated cost of \$1.3 million authorized by the citizens of Minot and was made possible only by the fact that people living along the river were willing to donate much larger pieces of land for the bigger channel.

The Corps of Engineers in their final recommended plan has projected a dam with somewhat increased protection -- a bigger dam. But that reflects their concern for their responsibility as they see it.

#### FLOOD PLAIN EVACUATION

The Citizens Committee and the Corps of Engineers rejected Flood Plain Evacuation because of the highly unfavorable cost-benefit ratio. What the people who advocate Flood Plain Evacuation are really asking for, Mr. Governor, is that we take a community the size of Mandan out of the heart of Minot and relocate it.

Flood Plain Evacuation would take away all the homes, take away all the schools, take away all the churches, businesses and industry. Relocate all the people, relocate all the structures. Leave nothing there that would impede the flow of water in any way. Abandon your streets, curbs and gutters and sidewalks. Cut off your water and sewer lines, gas lines, and electric lines. Visualizing that, the proponents of flood plain evacuation say: "What a wonderful park." They don't answer the question, "What do you do with the streets?" If you leave the streets there, you've got a 5600 acre

area, gridded with 40 miles of streets, curbs and gutters and sidewalks. If you just leave your streets there, eventually the weeds will grow up between them. If you try to patch all the cracks and potholes, you are wasting a great deal of your resources for basically interior streets in a park.

So, perhaps you say, well then, "Lets tear up all the streets and put sod down." Looking objectively at that, you find that if you're going to tear up the streets, you really ought to tear up the curbs and gutters and sidewalks, too. Otherwise you'll have the same kind of problem occurring and if you're going to sod the streets and make a real nice prairie again, the curbs and gutters and sidewalks really don't fit in too well. So then you're down to saying we're going to bulldoze the streets, the curbs and gutters, and the sidewalks. And it seems to us a little bit unrealistic at that point to presume that you can tear up all of that along tree-lined streets without tearing down the trees. So the environmental costs of flood plain evacuation are considerable. You're really looking at an entirely denuded landscape, bulldozed and graded.

You've also made two communities out of one. Half of the 3600 homes that would have to be relocated would go to the north hill, and half would go to the south hill.

I feel many people would choose just to leave, not to go to either one of Minot's hills. And those that had no reasonable alternative and were forced to stay, would not be happy with the choice made by the government.

The economics of flood plain evacuation are not feasible. Just to buy 3600 homes at an average cost of \$25,000 is \$90,000,000. Relocation costs would be over and above that \$90,000,000 figure. Then, there are

another 306 commercial and industrial establishments, 8 schools, 15 churches, 240 trailer homes. The Corps' estimate of costs made in The Final Environmental Impact Statement of August, 1974 ran into a total of \$143,000,000 for this alternative. And if the Federal government provided the money, the local share would still be \$32.6 million or 20 times the total amount collected by Minot in the highest tax year in History.

The main problem, Mr. Governor, is that people who frequently think of an idea do not think of the administrative problems and details of carrying out that idea.

Flood plain evacuation makes sense in flash flood prone areas -- such as Rapid City -- where loss of life is so likely if a flood occurs that you can take no alternative but to move the people out from under that guillotine. And it makes sense where flooding occurs in the outskirts of a community.

But it definitely does not make sense when that flood plain is the historic center of town. It doesn't make sense when the flood plain is the oldest development, the original settlement, the heart of a community. In Minot the flood plain area provides roots for the community.

THE PEOPLE HAVE SPOKEN

But more importantly, Mr. Governor, the people of the community of Minot have spoken about their desires. In November, 1969 the citizens of Minot went to the polls to vote to tax themselves to provide local share money on the flood control project. There were 14 precincts, 7 of them in the flood plain and 7 of them on the hills. Each one overwhelmingly adopted the bond issue. The total vote was 91% for and 9% against.

*City of Minot*

Last Spring Mr. Sy Hubrig circulated petitions for a period of about 10 days to two weeks assessing opinions of the populace for the flood control project and specifically the upstream dam. He got about 7,000 residents to sign in that period of time.

Public hearings by local agencies, the City government, the County Commission, the Ward County Management Board, have all been very highly attended, greatly publicized, and the general concensus is that the people want the protection of the upstream dam.

For the past two months the City of Minot has been talking to people who live along the river, obtaining easements for the channel modification improvements. We are asking the people to donate their land for permanent easements for flood control. So far, 75 out of 87 needed in the first reach through the City have been donated.

And both political parties have endorsed the project.

I think it is clear, Mr. Governor, that the people of the community feel that we must have flood protection. At the same time the technical people have concluded that the alternative selected is the best one available.

It's ironic that usually it's the people and the technicians who normally disagree. In this case, it's the majority of the people and the technical experts who agree and a small minority of the people disagree.

It's been said that sound decision-making is merely defining each available alternative, making a critical analysis of the consequences of each alternative, and then selecting the alternative with the most favorable consequences among the choices. To that extent, our decision making has been rational and sound.

*City of Minot*

Author of Book  
 "SOME DAY WE'VE GOT  
 TO GET ORGANIZED"

# SYLVAN E. HUBRIG

Bus. Phones  
 839-5211 - 839-5218  
 Res. Phone 839-3228

P. O. BOX 1832  
 MINOT, NORTH DAKOTA 58701

BUSINESS REPRESENTATIVE  
 TEAMSTERS UNION LOCAL NO. 74

December 13, 1974

State Water Commission:

In April of 1974 I circulated a petition in Minot, North Dakota publicly for signatures. The Petition read quote " Whereas great hardship and property damage was caused in the City of Minot and areas downstream by the flooding of the Souris River in 1969, and Whereas there has been the continuous threat of the Souris river again flooding the City of Minot and down stream areas since 1969, and, Whereas there is again an immediate threat that the Souris river will again flood the City of Minot and downstream areas as in 1969, and Whereas the dry dam as proposed by the U. S. Army Corps of Engineers would alleviate any future flooding or threats of flooding in the City of Minot and downstream area. Therefore, we, the undersigned, do hereby petition the Honorable Arthur Link, Governor of North Dakota, and President and Congress of the United States to immediately take the necessary steps for the construction of the proposed dry dam and any other necessary measures for flood control."unquote.

We did not have an organized drive to secure signatures. It was purely on a voluntary basis and we received over 6,500 signatures, within about a twenty day period.

I delivered copies of the signed Petition to the President of the United States, Richard Nixon; U. S. Senator Milton R. Young and U. S. Senator Quentin Burdick and Governor Arthur Link.

I believe that the majority of the voting taxpayers have spoken in favor of the Burlington Dam, which they have a right to under the Constitution. The past floods at Minot have cost untold human suffering and dollars to residents of Minot and the Business establishments of Minot.

Without flood protection, such as the Burlington Dam, the residents and Businesses of Minot stand a chance for the same re-occurrence, which would be a disaster for the Minot area.

Senator Young made this statement before the November 5th Election, to the people of Minot, " If he was re-elected, that they could expect flood protection in the Minot area."

The vast majority of the Labor Movement of Minot support the construction of the Burlington Dam for the protection of Minot.

Therefore, I request that the Burlington Dam be built, with no further delays, as I believe it to be absolutely necessary that the people of Minot have protection, not only now but for the years to come.

Respectfully,

*Sylvan E. Hubrig*  
 Sylvan Hubrig  
 President of Teamsters Local 74

R E S O L U T I O N

WHEREAS, the major disastrous flood of 1969 on the Souris River at and near Minot, North Dakota, and subsequent minor flooding in 1970 and 1974 which resulted in millions of dollars in property damage and incalculable costs in time and effort on the part of Ward County citizens, has demonstrated the urgent need for comprehensive flood control on the Souris River; and

WHEREAS, Ward County, North Dakota, has since May 1, 1969, by action of its governing body, joined with other political sub-divisions in the Minot, North Dakota, area in seeking long range flood protection from the Souris River by a comprehensive program of river channel improvement, construction of a flood protection dam near Burlington and flood plain management; and

WHEREAS, subsequent to adoption by the United States Congress of a flood control plan embodying all the above elements on the Souris River, Ward County has proceeded to carry out its obligations promptly and completely including adoption of flood plain regulations, acquiring of right of entry and temporary easements for snagging and clearing of the Souris Channel from Logan upstream to the Riverbend Addition, securing of right of entry for construction and temporary and permanent easements for river channel widening and straightening from the Riverbend Addition to the downstream city limits of the City of Minot and the purchase for mitigation purposes of approximately 100 acres of land; and

WHEREAS, in the discharge of these duties Ward County has expended more than two hundred seventy eight thousand dollars plus many thousands of personnel hours of County employees and officials; and

WHEREAS, the governing Board of Ward County is prepared to continue and complete its obligations under the congressionally approved plan and desires to move ahead with this project without delay so as to avoid the inflationary effect and continued hazard of undue delay; and

WHEREAS, recent activities by a small number of individuals and organizations give cause for concern that delay will result from the reopening of questions long since settled after appropriate consideration without any significant change in the findings which led to and support the currently authorized plan for Souris River Flood Control.

NOW, THEREFORE BE IT RESOLVED, by the Ward County Board of Commissioners in session at Minot, North Dakota, Wednesday, December 11, 1974, that Ward County reaffirms its support by previous action of the Souris River Channel Improvement Plan including a flood protection dam at Burlington and rejects other, proposed alternative plans and calls on all appropriate local, state and federal officials to press forward for an orderly and early completion of the project; and

BE IT FURTHER RESOLVED, that copies of this resolution be forwarded to: the Ward County Water Management District, the City of Minot, the State of North Dakota Water Commission, the St. Paul Office of the U.S. Corps of Engineers and the North Dakota Congressional Delegation at Washington, D.C.

ADOPTED: December 11, 1974

ATTEST: Dave Senger  
Deputy Ward County Auditor

Carl J. Beck  
C. M. Baker  
W. J. Clapp  
W. J. Feldahl  
Chas. M. Foster

WARD COUNTY COMMISSIONERS

This statement was taken from the tape recording of State Water Commission meeting held on December 16, 1974 -

STATEMENT BY

Brynhild Haugland  
North Dakota Representative  
5th District

December 16, 1974

Mr. Governor, Members of the Commission, and interested citizens:

By resolution, Republicans in the 5th District at the biennial convention on June 5, 1974, gave their unanimous support for the Souris River Flood Control Project as planned by the Army Corps of Engineers. This is a use so vital to the future of Minot as well as all other communities along the stream that there wasn't a dissenting voice at the District GOP Convention. This is not a party issue in the 5th District. The Democrats feel as we do, and I think that Rolly Redlin has spoken very well. With 12,000 people displaced during the 1969 flood, many for months and some for good, and with damages close to \$12 million, Minot has just begun to win back the losses it took in that catastrophe. Ever since that flood, further complicated by very high flows and some damage in 1970 and 1974, Minot has been in fourth place along the four biggest cities of the state in all the industry that mark prosperity and growth. Here remains as a break on our economy and our growth. It will not be dissipated until work has begun on an upstream structure that will prevent a recurrence of that 1969 nightmare. This project has been in the planning stage since 1957. How long must this city and other points downstream wait while the minority strives to force the Corps of Engineers down one blind ally after another?

The possibility has been made to evacuate the floodplain in Minot. This would build in permanently the great inconvenience that we experienced in the flood when divided by a 40-day lake - one city became two. Evacuating the

## RESOLUTION 74-12-368

## West River Joint Feasibility Study

WHEREAS, the North Dakota State Water Commission has under study the potential and feasibility of development of the water and related land resources of the 14-county area lying south and west of the Missouri River in North Dakota; and

WHEREAS, such study is addressing all water uses and needs and considers potential development with and without supplemental water supplies; and

WHEREAS, the study offers several alternative levels of development; and that the study is to be completed by June 30, 1975; and

WHEREAS, the Bureau of Reclamation has investigated potential alternative water requirements for future use in the 14-county area lying south and west of the Missouri River in North Dakota; and

WHEREAS, other studies have also dealt with the area and are interrelated to the efforts of the two aforementioned studies; and

WHEREAS, the State Water Commission and the Bureau of Reclamation have expressed an interest in combining their efforts to provide an optimum plan of development for western North Dakota.

NOW, THEREFORE, BE IT RESOLVED by the North Dakota State Water Commission at its meeting in Bismarck, North Dakota, on December 16-17, 1974, that it endorses and recommends legislation authorizing the Bureau of Reclamation and the North Dakota State Water Commission to jointly develop a plan for implementation of the diversion of water from Lake Sakakawea to all potential users in the western North Dakota river basins.

BE IT FURTHER RESOLVED that the North Dakota State Water Commission request the North Dakota Congressional Delegation and State Legislature to provide authorization and funding to the Bureau of Reclamation and the North Dakota State Water Commission to pursue the study.

BE IT FURTHER RESOLVED that copies of this Resolution be transmitted to the North Dakota Congressional Delegation, State Legislative leaders, Honorable Rogers C. B. Morton, Secretary, Department of the Interior; and James Connolly, Chairman, West River Study Citizens Advisory Committee.

FOR THE NORTH DAKOTA STATE WATER COMMISSION:

Arthur A. Link  
Arthur A. Link  
Governor-Chairman

SEAL

ATTEST:

Vern Fahy  
Vern Fahy  
Secretary

## RESOLUTION 74-12-369

## West River Conservancy District

WHEREAS, the development and utilization of the land and water resources of the West River area in North Dakota are of public concern; and

WHEREAS, there is a need to coordinate and facilitate the development and utilization of the resources of southwestern North Dakota; and

WHEREAS, local citizen participation on an area and regional basis is important in the planning and operation of water resources projects.

NOW, THEREFORE, BE IT RESOLVED by the North Dakota State Water Commission at its meeting held in Bismarck, North Dakota, on December 16-17, 1974, that it endorses enabling legislation for creating a 14-county West River Conservancy District with the authority for taxation, construction, operation and maintenance of projects associated with the water and related land resources.

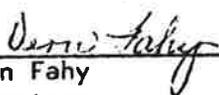
BE IT FURTHER RESOLVED that copies of this Resolution be transmitted to the North Dakota State Legislators and Chairman of the County Commissioners in the West River area.

FOR THE NORTH DAKOTA STATE WATER COMMISSION:

  
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Arthur A. Link  
Governor-Chairman

SEAL

ATTEST:

  
\_\_\_\_\_  
Vern Fahy  
Secretary

WATER PERMIT AGENDA - DECEMBER 16, 1974

NO.	NAME AND ADDRESS	SOURCE	PURPOSE	AMOUNT REQUESTED	COMMENTS & RECOMMENDATIONS
2146	Diocese of Bismarck Trust and Mary College, Inc. Trust - Bismarck (Burleigh County)	Ground Water	Irrigation	300.0 acre-feet 156.0 acres	Defer action at this time pending further study and investigations.
1857	Schiermeister, Wm. - Hazelton (Emmons County)	Intermittent Stream, trib. to Missouri River	Recreation	89.7 acre-feet storage plus 39.0 acre-feet annual use	89.7 acre-feet storage plus 39.0 acre-feet annual use
2137	Blickensderfer, Paul - Mott (Hettinger County)	Intermittent Draw, trib. to Cannonball River	Recreation	120.0 acre-feet storage plus 64.8 acre-feet annual use	120.0 acre-feet storage 64.8 acre-feet annual use (This request was approved by the State Engineer on October 29, 1974)
2125	Gunsch, Ronald E. - Zap (Mercer County)	Knife River, a trib. to Missouri River; or from Ground Water	Irrigation	525.0 acre-feet 262.5 acres	394.0 acre-feet Groundwater; or 262.5 acre-feet Knife River 262.5 acres
2144	Fettig, LeRoy P. - Hebron (Mercer County)	Knife River and Elm Creek, trib. to Knife & Missouri Rivers	Irrigation - Waterspreading	1053.0 acre-feet 526.6 acres	526.6 acre-feet 526.6 acres
2142	Tuttle, City of - Tuttle (Kidder County)	Ground Water	Municipal	48.0 acre-feet	48.0 acre-feet

NO.	NAME AND ADDRESS	SOURCE	PURPOSE	AMOUNT REQUESTED	COMMENTS & RECOMMENDATIONS
2132	Schiff, George - Ruso (McLean County)	Ground Water	Irrigation	283.0 acre-feet 143.6 acres	Defer action at this time pending further study and information.
2126	Georgeson, Quentin - New Rockford (Eddy County)	Ground Water	Irrigation	654.0 acre-feet 327.0 acres	490.0 acre-feet 327.0 acres
2143	Hettinger Experiment Station - Hettinger (Adams County)	Unnamed Intermittent Draw, trib. to Flat Creek and North Fork of the Grand River	Irrigation - Waterspreading	320.0 acre-feet 159.6 acres	159.6 acre-feet 159.6 acres  (This request was approved by State Engineer on October 29, 1974)
2149	Kelly, E. Wayne - Carrington (Foster County)	Ground Water	Irrigation	1248.0 acre-feet 624.0 acres	840.0 acre-feet 615.0 acres (740.0 a.f. approved to irrigate 540.0 acres - balance pending acquisition of aquifer yielding. Pumping rate subject to modification.)
2158	Mountain, Robert - Jamestown (Stutsman County)	Hintz Bros. Coulee, trib. to James River	Recreation	40.6 acre-feet storage 13.2 acre-feet annual use	40.6 acre-feet storage 13.2 acre-feet annual use  (This request was approved by State Engineer on October 29, 1974)
2159	Amoco Oil Company - Mandan (Morton County)	Intermittent Draw, trib. to Missouri River	Industrial	60.0 acre-feet storage	60.0 acre-feet storage

NO.	NAME AND ADDRESS	SOURCE	PURPOSE	AMOUNT REQUESTED	COMMENTS & RECOMMENDATIONS
2110	Pare, Howard L. - ToIna (Benson County)	Ground Water	Irrigation	800.0 acre-feet 389.0 acres	584.0 acre-feet 389.0 acres
2098	Walker, Lawrence T. - Oberon (Benson County)	Ground Water	Irrigation	468.0 acre-feet 312.0 acres	420.0 acre-feet 280.0 acres
2155	Peterson, Lynn - LaMoure (LaMoure County)	Ground Water	Irrigation	256.0 acre-feet 128.0 acres	192.0 acre-feet 128.0 acres
2156	Mangin, Gerald - Ellendale (LaMoure County)	Ground Water	Irrigation	320.0 acre-feet 160.0 acres	210.0 acre-feet 160.0 acres
2154	Minot Sand and Gravel Company - Minot (McLean County)	Missouri River	Industrial (Sand and Gravel Washing)	250.0 acre-feet	250.0 acre-feet
2123	Arctic Farm Company - Walhalla (Pembina County)	Pembina River, trib. to Red River	Irrigation	320.0 acre-feet 298.2 acres	Defer action at this time pending further information and study.

NO.	NAME AND ADDRESS	SOURCE	PURPOSE	AMOUNT REQUESTED	COMMENTS & RECOMMENDATIONS
2168	Hufnagel, Walter - Tappen (Kidder County)	Ground Water	Irrigation	516.1 acre-feet 344.1 acres	Defer action at this time pending further information and study.
2145	Halvorson, Vernon - Larimore (Grand Forks Co.)	Unnamed Creek, trib to Little Goose and Goose Rivers	Recreation	63.5 acre-feet storage plus 45.0 acre-feet annual use	Re-schedule hearing due to the fact that newspaper did not publish the notice.
2140	Dick, Gerald - Englevale (Ransom County)	Ground Water	Irrigation	320.0 acre-feet 160.0 acres	210.0 acre-feet 160.0 acres
2167	Aberle, Joseph - Minot (McHenry County)	Ground Water	Irrigation	240.0 acre-feet 156.0 acres	Defer action at this time pending further study and receipt of test logs.
2130	Peters, Neil - Sutton (Griggs County)	Ground Water	Irrigation	1814.7 acre-feet 1209.8 acres	Defer action at this time pending further study and investigations.
2166	Meyer, Lawrence - Minot (McHenry County)	Ground Water	Irrigation	312.0 acre-feet 156.0 acres	234.0 acre-feet 156.0 acres

NO.	NAME AND ADDRESS	SOURCE	PURPOSE	AMOUNT REQUESTED	COMMENTS & RECOMMENDATIONS
2148	Dawson, Wendal - Almont (Grant County)	Unnamed Draw, trib. to Heart River	Irrigation (Stockwater, Fish and Wildlife)	135.0 acre-feet storage plus 135.0 acre-feet annual use	Public hearing to be re-advertised due to the fact that one-mile radius landowners were not notified before hearing.
2124	Diocese of Bismarck Trust and May College, Inc. Trust - Bismarck (Burleigh County)	Ground Water	Irrigation	1000.0 acre-feet 624.0 acres	936.0 acre-feet 624.0 acres
2160	Strelch, Orrin R. - Oakes (Dickey County)	James River	Irrigation	480.0 acre-feet 480.0 acres	480.0 acre-feet 480.0 acres  (12-16-74- Recommendation withdrawn by State Engineer for further study)
2128	Best, Dr. Lloyd G. - Wahpeton (Richland County)	Ground Water	Irrigation	1680.0 acre-feet 1120.0 acres	1470 acre-feet 980 acres (840 af approved at 3300 gpm to irrigate 560 acres-balance reserv- ed pending acquisition of data regarding the aqui- fer yielding capacity.)
2118	Schmidt, Joey - LaMoure (LaMoure County)	Ground Water	Irrigation	848.0 acre-feet 424.0 acres	555.0 acre-feet 370.0 acres
2080	Baeth, R.H. - McKenzie (Burleigh County)	Ground Water	Irrigation	693.5 acre-feet 462.3 acres	405.0 acres 607.0 acre-feet (250.0 af approved to irrigate 280 acres in S½ Sec 14, bal- ance reserved pending ac- quisition of data re- garding the aquifer yie-

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floodplain would again make Minot two cities at least a mile apart full of problems with schools, streets, bridges, businesses and people. There would be many industrial businesses and residential casualties of this mass evacuation. Typical of the losses of small industry would be a bottling plant, represented here today by its President, Ken Miller. Is Ken Miller in the room? Instead production would move to the Bismarck plant. Minot would not only loose the plant but many jobs. What about our huge grain elevators, the two railroads, six large schools and two college campuses? And, of course, the cost of moving everything out of the wide floodplain would be so vast that the Corps of Engineers rooted out as not coming anywhere near qualifying for authorization based on the benefit-cost ratio. So here we are being led down yet another path intended merely to delay a course of action already approved at the city, county, and state levels of government and authorized by the Congress of the United States.

Gentlemen, please help us to get going on the flood control project.

/S/ Brynhild Haugland