

## MINUTES

North Dakota State Water Commission  
Bismarck, North Dakota

November 8, 1985

The North Dakota State Water Commission held a meeting on November 8, 1985, at the Old State Office Building, Bismarck, North Dakota. Acting Chairman, Kent Jones, called the meeting to order at 10:00 a.m., and requested Secretary, Vernon Fahy, to present the agenda.

MEMBERS PRESENT:

Kent Jones, Acting Chairman, Commissioner, Department of  
Agriculture, Bismarck  
Richard Backes, Member from Glenburn  
Joyce Byerly, Member from Watford City  
Jacob Gust, Member from West Fargo  
William Guy, Member from Bismarck  
Ray Hutton, Member from Oslo, Minnesota  
William Lardy, Member from Dickinson  
Jerome Spaeth, Member from Bismarck  
Vernon Fahy, State Engineer and Secretary, North Dakota  
State Water Commission, Bismarck

MEMBER ABSENT:

George A. Sinner, Governor-Chairman

OTHERS PRESENT:

State Water Commission Staff  
Approximately 10 persons interested in agenda items

The attendance register is on file in the State Water Commission offices (filed with official copy of minutes).

The meeting was recorded to assist in compilation of the minutes.

CONSIDERATION OF MINUTES  
OF SEPTEMBER 5, 1985 MEETING -  
APPROVED

The minutes of the September 5,  
1985 meeting were approved by the  
following motion:

It was moved by Commissioner Backes, seconded  
by Commissioner Lardy, and unanimously carried,  
that the minutes of September 5, 1985 be approved  
as circulated.

CONSIDERATION OF BID  
 RECEIVED FOR SOUTHWEST  
 PIPELINE PROJECT INTAKE  
 FACILITY AND DISCUSSION  
 OF POSSIBLE COURSES OF ACTION  
 (SWC Project No. 1736)

Secretary Fahy indicated that bids for the construction of the intake facility for the Southwest Pipeline Project were received on October 22, 1985. He noted that two bids were received, however, one of the bids was not exposed because the documents were not in compliance with State law. The only valid bid was that of Industrial Builders of Fargo in the amount of \$5,274,500. This was 43 percent above the consulting engineer's estimate.

Secretary Fahy indicated that this difference appears to be attributable to the substantial increase in costs associated with the subcontract work for the intake line and caisson included in the bid as compared to the quotation for that work given to the consulting engineer for estimating purposes.

Secretary Fahy said the bid and the engineer's estimate have been reviewed and he believes it to be in the best interest of the State to reject this single bid and to consider other alternatives, including that of readvertising for bids in the spring. He said the opportunity to proceed with construction prior to the heavy frost season is extremely remote considering the lateness of the season and the time involved in the advertising procedures.

It was the recommendation of the State Engineer that since the Commission has only one bid to consider which is significantly higher than the engineer's estimate, the lateness of the season, and the option to readvertise for bids in the spring are valid reasons for the Water Commission to reject the bid of Industrial Builders. It was also the recommendation of the State Engineer that if the Commission rejects the bid that the Commission direct the State Engineer to examine alternatives and report back to the Commission at a later date with recommendations for moving forward with the project.

Mr. Bruce McCollom discussed the bid in detail, and also discussed the work that is involved in the construction of the intake facility for the Southwest Pipeline Project.

Commissioner Backes inquired if there have been any preliminary contacts with Basin Electric for the joint use of their intake facilities.

Secretary Fahy indicated this alternative has been discussed and briefed the Commission members on past negotiations with Basin Electric. He indicated this alternative does merit a detailed investigation.

It was moved by Commissioner Byerly and seconded by Commissioner Gust that the State Water Commission reject the bid of Industrial Builders for the construction of the Southwest Pipeline Project

November 8, 1985

intake facility and direct the State Engineer to examine alternatives and report back to the Commission at a later date with recommendations on an alternate proposal.

In discussion of the motion, it was recommended that a target date of February 1, 1986 be established for the State Engineer to present recommendations to the State Water Commission for an alternate proposal. Commissioner Byerly withdrew her motion and Commissioner Gust likewise withdrew his second to the motion.

It was moved by Commissioner Byerly and seconded by Commissioner Gust that the State Water Commission reject the bid of Industrial Builders for the construction of the Southwest Pipeline Project intake facility and direct the State Engineer to examine alternatives and present recommendations to the State Water Commission on an alternate proposal by February 1, 1986.

Voting aye on the motion were Commissioners Byerly, Gust, Guy, Hutton, Lardy, Spaeth, Backes and Jones. There were no nay votes. The Chairman declared the motion passed.

PROGRESS REPORT ON  
NEGOTIATIONS CONCERNING  
RED RIVER DIKING SITUATION  
(SWC Project No. 1638-1)

David Sprynczynatyk reported on the progress of the Technical Committee regarding the Red River dikes. The Technical Committee was created by an agreement entered into in March,

1985, and is part of a lawsuit which involves the people in the area of study. The Technical Committee consisted of four engineers, two from North Dakota and two from Minnesota, whose purpose was to address seven issues regarding the dikes that were first built in 1975 along the Red River north of Grand Forks and to develop a plan of implementation to correct the dikes which have caused damages on both sides of the river. The Technical Committee's deadline to resolve the issues was November 2, 1985, and any unresolved issues were to go to an arbitrator. The Technical Committee has resolved five of the seven issues.

Cary Backstrand and James Fay, North Dakota's members of the Technical Committee, explained in detail each of the seven issues and their findings, which are attached hereto as APPENDIX "A".

The Commission members discussed Finding 5 at length which indicates "The profile between river mile 236 and river mile 287 showing water surface elevations of a flow of 43,000 cfs, assuming infinitely high dikes in Minnesota and assuming dikes in North Dakota one foot below the 43,000 cfs profile."

Commissioner Hutton discussed his personal experiences with the Commission members relative to past flooding,

November 8, 1985

and commented on the entire diking situation. He stated he is opposed to the dikes in North Dakota being one foot lower than in Minnesota, but agreed that after many years of negotiations it probably was the best alternative at the time, however, he feels that other alternatives should be investigated.

Finding 6 is one of the issues which was not resolved - "The final determination of the Technical Committee as to the maximum allowable elevations of dikes in Minnesota and North Dakota between river mile 236 and river mile 287 of the Red River of the North. In reaching its final determination the Committee shall use Finding No. 5 as the height of the Minnesota dikes, with the North Dakota dikes set one foot below that elevation, and any deviation from those elevations shall be based on the following factors: increases in flood elevations, increases in stream velocities, resulting damages, environmental affects of the proposed elevations, elevations of natural terrain, sound engineering judgement, accepted dike design standards, increase in flood stage at existing city dikes, freeboard to the extent determined necessary by the Technical Committee, and degree of protection provided to both states."

Mr. Sprynczynatyk stated that the unresolved issue was whether or not freeboard should be allowed on the dikes. The agreement calls for the State Water Commission to select an arbitrator, and since this has only come about in the last few days, the local entities involved in this issue have not been contacted to ask for their suggestion as to an arbitrator.

It was the recommendation of the State Engineer that in order to move this process forward, that the Commission allow him to work with the local entities and to submit the name of an arbitrator as called for in the agreement for Finding 6. The criteria for the selection of an arbitrator was discussed.

It was moved by Commissioner Lardy and seconded by Commissioner Guy that the State Water Commission direct the State Engineer to work with the local entities in selecting an arbitrator for Finding 6 as called for in the Cooperative Agreement for the Formulation of a Corrective Plan for Agricultural Levees Between River Mile 236 and 287 of the Red River of the North.

Voting aye were Commissioners Backes, Byerly, Gust, Guy, Hutton, Lardy, Spaeth and Jones. There were no nay votes. The Chairman declared the motion passed.

The Technical Committee did not resolve Finding 7 - "A plan of implementation setting forth specific dates, or number of days by which certain steps must be completed. The plan of implementation shall be such that the necessary adjustments in dike

November 8, 1985

locations and elevations should take place as soon as feasible." This issue could not be resolved by the Committee because of the timing for bringing the dikes into compliance. This issue will be decided by arbitration.

Commissioner Gust stated that he has visited with a group of farmers living on the Minnesota side east of the dikes who have indicated they feel the dikes have impacted adversely upon them because the land drains into ditches which then drains into that specific area. He said it appears that the North Dakota people have an ally in those farmers who feel that the dikes on the Minnesota side should be completely removed. Commissioner Gust asked if this group had been involved in the negotiations.

Dave Sprynczynatyk indicated that this particular group has not been directly involved as they have been waiting for the outcome in hopes that the dikes will be removed as well.

Commissioner Hutton requested that he be advised of meetings scheduled in the Red River Valley area.

STATUS REPORT OF CORPS OF  
ENGINEERS PROPOSAL TO ASSESS  
WATER STORAGE FEES FOR  
SOUTHWEST PIPELINE PROJECT  
(SWC Project No. 1736)

Secretary Fahy updated the Commission members relative to the Corps of Engineers proposal to assess water storage fees for the Southwest Pipeline Project. He said that after many meetings and con-

ference calls with Corps of Engineers representatives in Washington, D.C., an understanding was reached that allowed the State of North Dakota to construct intake facilities on Corps of Engineers controlled land abutting Lake Sakakawea. Although the issues related to water storage charges have not been resolved, the language utilized in the settlement does not prejudice our position in contesting the Corps of Engineers water storage charge proposal.

Secretary Fahy advised the Commission members that he is currently working with the North and South Dakota Congressional Delegations relative to language that would make it clear that natural flows will be available for appropriation use by the State.

CONSIDERATION OF AGENCY  
FINANCIAL STATEMENT

Matt Emerson briefed the Commission members on the status of the projects authorized and reviewed the program budget expenditures through October 31, 1985.

NEXT MEETING OF STATE  
WATER COMMISSION

Secretary Fahy indicated that the next meeting of the State Water Commission has been scheduled for

November 8, 1985

December 13, 1985 at the Holiday Inn in Fargo, and is in conjunction with the annual conference of the North Dakota Water Users Association and the Water Resource Districts Association.

APPOINTMENT OF STATE WATER  
COMMISSION MEMBER TO WEST  
RIVER WATER SUPPLY DISTRICT  
(SWC Project No. 1736)

Secretary Fahy stated that the Legislature created a Water Supply District in the western part of the State several years ago to work towards developing a water supply for

that area. The Legislature mandated that a member of the Water Commission serve on this three-man board until such time as the board has been enlarged by elective process to include other governmental entities in the area. To date, no other entities have elected to join so it is necessary to appoint a member from the State Water Commission. Secretary Fahy said that normally the Commissioner representing the southwest area of the State has been selected. He indicated that the Governor has contacted Commissioner Lardy and he has agreed to accept this appointment.

It was moved by Commissioner Byerly and seconded by Commissioner Gust that Commissioner Lardy be appointed as a member of the West River Water Supply District.

Voting aye were Commissioners Backes, Byerly, Gust, Guy, Hutton, Spaeth and Jones. There were no nay votes. Commissioner Lardy did not vote. The Chairman declared the motion passed.

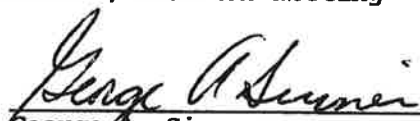
STATE WATER COMMISSIONERS  
SALARIES AND EXPENSES FOR  
ATTENDANCE AT MEETINGS

Commissioner Backes expressed concern that the Commission should be meeting more frequently, although he indicated that he is aware that

funds are not available for salaries and expenses for monthly meetings. He requested that the staff look into the possibilities of transferring funds in order to hold Commission meetings on a more frequent basis.

The Commission members also expressed a desire to hold meetings out in different areas of the state when weather permits.

There being no further business to come before the Commission at this time, it was moved by Commissioner Hutton, seconded by Commissioner Backes, and unanimously carried, that the meeting adjourn at 12:25 p.m.

  
George A. Sinner  
Governor-Chairman

ATTEST:

  
Vernon Fahy  
State Engineer and Secretary

November 8, 1985

NORTH DAKOTA STATE WATER COMMISSION

REGISTER

ATTENDANCE AT State Water Commission Meeting

DATE November 8, 1985 PLACE Bismarck, N.Dak.

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

Your Name	Your Address	Who do you Represent? (Or Occupation)
Lynn Garcia	Bismarck	PRAIRIE PUBLIC RADIO
Bruce F. McCollom	Bismarck	BW/BEC Engineering
Lori Schuette	Bismarck	NO Water Users
Don Simpson	Bismarck	U.S. Fish & Wildlife Service
Phyllis Smith	Bismarck	ND Rural Water Sys. Assn
Tim Fay	Bismarck	SWC
Steve Harrison	Bis	KFYR-TV
Jag Tursoak	Bismarck	GRAND FORKS HERALD
Nabeel Frink	Bismarck	SWC
Dick Moun	"	Bis. Morton W.P.
Cary Backstrom	Bismarck	SWC
Fletcher H. Kling	Bismarck	Basin Electric Power Corp

## APPENDIX "A"

IN ACCORDANCE WITH THE COOPERATIVE AGREEMENT FOR THE  
FORMULATION OF A CORRECTIVE PLAN FOR AGRICULTURAL  
LEVEES BETWEEN RIVER MILE 236 AND 287 OF THE  
RED RIVER OF THE NORTH

## FINDING 1

"A STANDARD POINT OF ELEVATION TO USE IN DETERMINING THE ELEVATIONS OF  
THE DIKES"

The Technical Committee finds that the standard point of elevation used  
in determining the elevations of the dikes shall be the National Geodetic  
Vertical Datum of 1929.

James T. Fay  
4/17/85

David C. Thyl

Ronald W. McLeans

Cary Backstrom



IN ACCORDANCE WITH THE COOPERATIVE AGREEMENT FOR THE  
FORMULATION OF A CORRECTIVE PLAN FOR AGRICULTURAL  
LEVEES BETWEEN RIVER MILE 236 AND 287 OF THE  
RED RIVER OF THE NORTH

FINDING 2

"THE COMPUTER MODELS OR OTHER METHODS OR FORMULAS WHICH THE TECHNICAL COMMITTEE DETERMINES ACCURATELY PROVIDES INFORMATION AS TO WATER SURFACE PROFILES (LEVELS WHICH SHALL BE USED IN THE MAKING OF FINDINGS NUMBER FIVE (5) AND SIX (6))"

The Technical Committee finds that it shall use computer program HEC-2, Water Surface Profile to compute water surface profiles. The data used in this Program may be that which was used by the United States Army Corps of Engineers to derive the information presented in the Red River of the North Main Stem Technical Report dated July 1982, provided that such data may be updated and/or corrected, if necessary.

Other models, methods, formulas, or techniques required to solve specific problems may be used under the following conditions:

1. Such models, methods, formulas or techniques are generally accepted in the field of hydraulics or hydrology.
2. The use of such models, methods, formulas, or techniques is agreed upon by at least three of the four members.
3. The model, method, formula, or technique is required by the nature of the specific problem.
4. Justification for using the model, method, formula or technique is presented with the statement of the finding for which it was required.

Cary Beckstead 5/14/85      5/14/85 Daniel P. Stuef  
Ronald J. Lewis 5/14/85      James T. Fay 5/14/85


RED RIVER OF THE NORTH TECHNICAL COMMITTEE

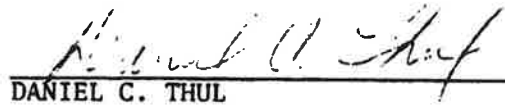
26 July 1985

In accordance with the Cooperative Agreement for the formulation of a corrective plan for Agricultural Levees between River Mile 236 and 287 of the Red River of the North, the following action is implemented.

Whereas, the Red River Dikes Technical Committee will not reach agreement on all findings within the 120 day time frame; therefore, we the members of the Technical Committee hereby agree to a 30 day time extension beginning on 4 August 1985 and extending to 3 September 1985.

  
RONALD J. ADRIAN

  
JAMES T. FAY

  
DANIEL C. THUL

  
GARY BACKSTRAND

IN ACCORDANCE WITH THE COOPERATIVE AGREEMENT FOR THE  
FORMULATION OF A CORRECTIVE PLAN FOR AGRICULTURAL  
LEVEES BETWEEN RIVER MILE 236 AND 287 OF THE  
RED RIVER OF THE NORTH

FINDING 3

"THE SETBACKS OR ACTUAL LOCATIONS OF THE DIKES TO MINNESOTA AND NORTH DAKOTA SO AS TO ELIMINATE WHERE POSSIBLE DIKES FOLLOWING TOO CLOSELY TO THE MEANDERED LOOPS OF THE RED RIVER OF THE NORTH. IN SETTING THE LOCATIONS THE COMMITTEE SHOULD ATTEMPT TO SET THE LOCATIONS SO AS TO COMPLY WITH ALIGNMENT C SET OUT IN THE RED RIVER OF THE NORTH MAINSTEM TECHNICAL REPORT OF THE UNITED STATES ARMY CORPS OF ENGINEERS REPORT. THE COMMITTEE MAY VARY FROM ALIGNMENT C WHERE THE NEGATIVE IMPACT OF NOT COMPLYING WITH ALIGNMENT C IS OFFSET BY THE BENEFITS PROVIDED BY THE VARIANCE. IN ESTABLISHING THE SETBACKS OR ACTUAL LOCATIONS OF THE DIKES, THE TECHNICAL COMMITTEE SHALL TAKE INTO CONSIDERATION THE NEED FOR INGRESS AND EGRESS TO EXISTING FARMSTEADS."

The Technical Committee finds that the setbacks or actual locations of the dikes in Minnesota and in North Dakota shall be as depicted on the maps, labelled "Red River of the North Agricultural Levees Alignment 'F'", consisting of 6 sheets each signed by the members of the Technical Committee, dated August 20, 1985, and attached hereto.

The lines labelled "Alignment 'F'", shown on these maps, indicate the maximum allowable encroachment. Agricultural levees may be located landward of these lines, but may not be located closer to the Red River than shown by these lines. The actual locations of the dikes shall be determined by scaling from these maps. Actual locations may differ by up to 100 feet from the location determined by scaling.

Ray Backstrom 8/20/85

Donald J. [unclear] 8/20/85

David C. [unclear] 8/20/85

James T. [unclear] 8/20/85

IN ACCORDANCE WITH THE COOPERATIVE AGREEMENT FOR THE  
FORMULATION OF A CORRECTIVE PLAN FOR AGRICULTURAL  
LEVEES BETWEEN RIVER MILE 236 AND 287 OF THE  
RED RIVER OF THE NORTH

FINDING 4

"THE LOCATION AND ELEVATION OF DIKES PROVIDING PROTECTION TO  
HOLTERVILLE."

The Technical Committee finds that the area identified as Holterville on sheets 3 and 4 of the maps labelled "Red River of the North Agricultural Levees Alignment 'F'", and attached to finding number 3, may be protected by levees at any elevation. The portions of the agricultural levees not included in this area shall conform to the elevations determined in finding number 6.

Ray Bakstrand 8/20/85

Reynold J. Adams 8/20/85

David C. Thiel 8/20/85

James T. Lang 8/20/85

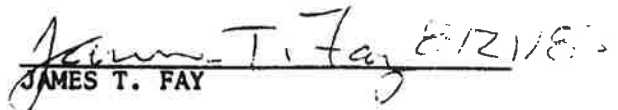
RED RIVER OF THE NORTH TECHNICAL COMMITTEE

21 August 1985

In accordance with the Cooperative Agreement for the formulation of a corrective plan for Agricultural Levees between River Mile 236 and 287 of the Red River of the North, the following action is implemented.

Whereas, the Red River Dikes Technical Committee will not reach agreement on all findings within the 120 day time frame; therefore, we the members of the Technical Committee hereby agree to a 30 day time extension beginning on 3 September 1985 and extending to 3 October 1985.

  
RONALD J. ADRIAN

  
JAMES T. FAY

  
DANIEL C. THUL

  
GARY BACKSTRAND

RED RIVER OF THE NORTH TECHNICAL COMMITTEE 3 October, 1985

In accordance with the Cooperative Agreement for the formulation of a corrective plan for Agricultural Levees between River Mile 236 and 287 of the Red River of the North, the following action is implemented.

Whereas, the Red River Dikes Technical Committee will not reach agreement on all findings within the 120 day time frame; therefore, we the members of the technical Committee hereby agree to a 30 day time extension beginning on 3 October 1985 and extending to 2 November 1985.

  
RONALD J. ADRIAN

  
JAMES T. FAY

  
DANIEL C. THUL

  
GARY BACKSTRAND

RED RIVER OF THE NORTH -ALIGNMENT "F" - 43,000 CFS PROFILE

CROSS SECTION NUMBER	RIVER MILE ABOVE MOUTH	ELEVATION IN FEET	CROSS SECTION NUMBER	RIVER MILE ABOVE MOUTH	ELEVATION IN FEET
4320	236.00	799.0	5540	264.57	807.6
4400	236.16	799.1	5600	266.19	808.2
4410	236.91	799.4	5650	269.69	809.1
4500	237.18	799.5	5670	270.20	809.2
4600	239.44	800.2	5700	270.74	809.4
4610	239.68	800.3	5800	271.18	809.5
4700	242.46	801.1	5805	271.20	809.5
4800	243.88	801.4	5810	271.20	809.5
4860	245.32	801.8	5820	271.21	809.5
4870	245.32	801.8	5900	271.23	809.5
4880	245.32	801.8	5910	271.24	809.6
4890	245.32	801.8	5920	271.25	809.6
4900	245.46	801.9	5930	271.26	809.6
4922	247.17	802.2	6000	271.28	809.6
5000	248.94	802.6	6100	271.95	809.9
5010	250.56	803.1	6200	272.87	810.3
5100	252.76	803.5	6210	274.15	810.9
5200	254.91	804.2	6300	275.82	812.1
5210	255.00	804.3	6305	276.25	812.3
5220	255.00	804.3	6310	276.26	812.3
5230	255.00	804.3	6315	276.27	812.3
5240	255.00	804.3	6350	276.99	812.7
5260	257.08	805.1	6400	277.11	812.8
5270	257.08	805.1	6500	279.81	814.1
5280	257.08	805.1	6600	280.64	814.4
5290	257.09	805.1	6700	281.74	815.1
5300	258.22	805.4	6705	282.25	815.4
5310	258.85	805.6	6710	282.26	815.4
5400	259.81	805.8	6715	282.27	815.4
5500	262.06	806.6	6800	283.16	815.9
5510	264.56	807.6	6900	284.66	816.8
5520	264.56	807.6	7000	285.76	817.3
5530	264.57	807.6	7100	286.60	817.7
			7200	287.83	818.4

Cary Backstrand 10/25/85  
Cary Backstrand

Dan Thul 10/25/85  
Dan Thul

James T. Fay 10/25/85  
James T. Fay

Ronald J. Adrian 10-25-85  
Ronald J. Adrian

IN ACCORDANCE WITH THE COOPERATIVE AGREEMENT FOR THE  
FORMULATION OF A CORRECTIVE PLAN FOR THE  
AGRICULTURAL LEVEES BETWEEN RIVER MILE 236 and 287  
OF THE RED RIVER OF THE NORTH

FINDING 5

"THE PROFILE BETWEEN RIVER MILE 236 AND RIVER MILE 287 SHOWING  
WATER SURFACE ELEVATIONS OF A FLOW OF 43,000 CFS, ASSUMING  
INFINITELY HIGH DIKES IN MINNESOTA AND ASSUMING DIKES IN  
NORTH DAKOTA ONE FOOT BELOW THE 43,000 CFS PROFILE"

The Technical Committee finds that the 43,000 cfs profile is most accurately given by the energy gradient line. The Technical Committee finds that the most accurate estimate of the profile, as measured by the energy gradient, is that given on the table entitled "Red River of the North - Alignment "F" - 43,000 cfs Profile" and is attached to this finding. This profile was determined using the model set forth in Finding 2. Also, the profile was calibrated to the elevations recorded for the July 1975 flood and April 1978 flood with the location of the agricultural levees as set forth in Finding 3 and designated as Alignment "F". If conditions differ from those assumed (occurrences of ice jams, changes in the main channel and modifications to the effective flow area) it is possible that elevations may vary from this profile.

Cary Backstrand 10/25/85  
Cary Backstrand

Dan Thul 10/25/85  
Dan Thul

James T. Fay 10/25/85  
James T. Fay

Ronald J. Adrian 10-25-85  
Ronald J. Adrian



IN ACCORDANCE WITH THE COOPERATIVE AGREEMENT FOR THE  
FORMULATION OF A CORRECTIVE PLAN FOR THE  
AGRICULTURAL LEVEES BETWEEN RIVER MILE 236 AND 287  
OF THE RED RIVER OF THE NORTH

FINDING 6

"THE FINAL DETERMINATION OF THE TECHNICAL COMMITTEE AS TO THE MAXIMUM ALLOWABLE ELEVATIONS OF DIKES IN MINNESOTA AND NORTH DAKOTA BETWEEN RIVER MILE 236 AND RIVER MILE 287 OF THE RED RIVER OF THE NORTH. IN REACHING ITS FINAL DETERMINATION THE COMMITTEE SHALL USE FINDING NO. 5 AS THE HEIGHT OF THE MINNESOTA DIKES, WITH THE NORTH DAKOTA DIKES SET ONE-FOOT BELOW THAT ELEVATION, AND ANY DEVIATION FROM THOSE ELEVATIONS SHALL BE BASED ON THE FOLLOWING FACTORS: INCREASES IN FLOOD ELEVATIONS, INCREASES IN STREAM VELOCITIES, RESULTING DAMAGES, ENVIRONMENTAL AFFECTS OF THE PROPOSED ELEVATIONS, ELEVATIONS OF NATURAL TERRAIN, SOUND ENGINEERING JUDGEMENT, ACCEPTED DIKE DESIGN STANDARDS, INCREASE IN FLOOD STAGE AT EXISTING CITY DIKES, FREEBOARD TO THE EXTENT DETERMINED NECESSARY BY THE TECHNICAL COMMITTEE, AND DEGREE OF PROTECTION PROVIDED TO BOTH STATES.

The Technical Committee is unable to determine the "maximum allowable elevations" of the agricultural levees in Minnesota and North Dakota between river mile 236 and river mile 287 of the Red River of the North. Except as noted in this Finding the Technical Committee is unable to agree on whether other deviations from the profile in Finding 5 shall be permitted for the height of the Minnesota levees and whether other deviations from a profile one foot below the profile in Finding 5 shall be permitted for the height of North Dakota levees. Therefore, the arbitration mechanism is invoked solely to determine this issue.

The Technical Committee does agree on the following deviations to the "maximum allowable elevations" of the agricultural levees:

1. A levee system around "Holterville" as agreed to in Finding 4.
2. The existing Corps of Engineers flood control levees around the City of Oslo, Minnesota.
3. Where "Alignment F" coincides with existing public roadways, the roadways may remain at their existing elevation, but may not be raised.
4. Ring dikes utilizing the agricultural levee alignment for the protection of farmsteads and homes and other reaches of the agricultural levee when determined by the local water management entity having jurisdiction, that the agricultural levee needs to be protected. However, in no case shall more than 20 percent of the length of the agricultural levee within any legal section of land be raised above the "maximum allowable elevations" of the agricultural levee.

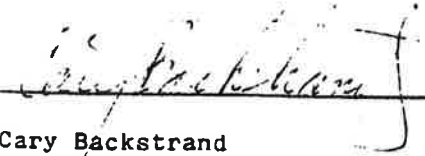
The Technical Committee finds that to assure the hydraulic conditions upon which this Finding is based remain constant, the elevations set by this Finding must apply to all agricultural levees within the determined "effective flow area". Roadways and driveways within the "effective flow area" must remain at or below their present elevations. For purposes of Finding 6 the "effective flow area" is the area east of the line depicted on the drawings attached to Finding 3 labeled "43,000 cfs effective flow limit", and west of a line described as follows:


Beginning at the intersection of Minnesota State Highway 220 and Minnesota State Highway 317 south along Minnesota State Highway 220 approximately 15 miles to Minnesota State Highway 1, then south approximately 1 1/2 miles on Marshall County State Aid Highway 9, continuing south approximately 3 1/2 miles along Polk County State Aid Highway 22, then east approximately 3 miles along an Esther Township Roadway, then east approximately 1 mile along an Esther Township Roadway, then south approximately 2 miles along Polk County State Aid Highway 64, terminating at the crossing of the Grand Marais Creek.

On the exterior side of the boundaries of this area, the compact requirements shall apply.


The "maximum allowable elevation" does not apply, and no agricultural dikes may be constructed or maintained, in the area circumscribed by the lines identified as "Alignment F" in Finding 3.

Dated this 31<sup>ST</sup> day of October, 1985.

  
Cary Backstrand

  
Dan Thul

  
James T. Fay

  
Ronald J. Adrian

IN ACCORDANCE WITH THE COOPERATIVE AGREEMENT FOR THE  
FORMULATION OF A CORRECTIVE PLAN FOR THE  
AGRICULTURAL LEVEES BETWEEN RIVER MILE 236 and 287  
OF THE RED RIVER OF THE NORTH

FINDING 7

"A PLAN OF IMPLEMENTATION SETTING FORTH SPECIFIC DATES, OR  
NUMBER OF DAYS BY WHICH CERTAIN STEPS MUST BE COMPLETED. THE  
PLAN OF IMPLEMENTATION SHALL BE SUCH THAT THE NECESSARY  
ADJUSTMENTS IN DIKE LOCATIONS AND ELEVATIONS SHOULD TAKE  
PLACE AS SOON AS FEASIBLE".

The Technical Committee is unable to agree on a "plan of  
implementation" and hereby submits this question to arbitration.

*Cary Backstrand* 10/31/85

Cary Backstrand

*Dan Thul* 10/31/85

Dan Thul

*James T. Fay* 10/31/85

James T. Fay

*Ronald J. Adrian* 10-31-85

Ronald J. Adrian

COOPERATIVE AGREEMENT FOR THE FORMULATION OF A  
CORRECTIVE PLAN FOR AGRICULTURAL LEVEES  
BETWEEN RIVER MILE 236 AND 287  
OF THE RED RIVER OF THE NORTH

PREAMBLE

WHEREAS, the present provisions of the Compact between the States of North Dakota and Minnesota provides an umbrella for formulation of workable solution to the problems of the dike existing between River Mile 236 and River Mile 287 of the Red River of the North; and

WHEREAS, both states and local water management agencies desire to finally resolve the issue of existing dikes by providing a working mechanism to resolve the present disputes on existing dikes; and

WHEREAS, both states and local water management agencies desire to work together in a joint effort to alleviate flooding of the Red River of the North and the damages resulting therefrom; and

WHEREAS the agreement between the two states provides in (k)(3) that "Corrective Plans - The local water management agencies shall utilize the technical assistance provided by the State Water Commission and the Department of Natural Resources, and in consultation with the affected property owners, expeditiously develop a corrective plan that will mitigate to the maximum extent possible the adverse impacts to the floodplain and will be in compliance or substantial compliance with the adopted criteria. The corrective plan shall include, among other things, an implementation schedule. Factors that will be considered, among other things, in the development of the corrective plan shall be increase in flood stage, increase of flood stage at existing city dikes, increase in stream velocity, environmental effects, utilization of farmsteads, property lines, existing roads, cost of dike modifications, and the amount of the reduction of the adverse impact in the floodplain that can be achieved in a reasonable manner."

NOW THEREFORE, the North Dakota State Water Commission, the Walsh County Water Management District, the Grand Forks County Water Management District, the Minnesota Department of Natural Resources and the Middle River- Snake River Watershed District agree to the following provisions and process towards development and implementation of a corrective plan.

I. TECHNICAL COMMITTEE

A technical committee is established comprised of 4 engineers or hydrologists competent in hydrology and hydraulics. The Minnesota Department of Natural Resources, the Middle River-Snake River Watershed District, the North Dakota Water Commission, and the Grand Forks and Walsh County Water Management Districts acting together, shall each appoint a technical representative to serve on the committee within 10 days of the execution of this agreement. The technical committee may use the United States Army Corps of Engineers for advisory and technical assistance. The function of the committee will be to determine the locations and maximum allowable elevations of dikes in Minnesota and North Dakota between River Mile 236 and River Mile 287 of the Red River of the North. Agreement of three of the four members of the technical committee on any finding shall make the finding binding on the technical committee. In arriving at the locations and maximum allowable elevations of dikes in Minnesota and North Dakota between River Mile 236 and River Mile 287 of the Red River of the North, the Technical Committee shall consider historical recorded data, the affect of roads including built-up roads and other structures including bridges of all types, effect of approaches to highways and railroads and effects of flood control projects and drainage improvement projects.

II. TECHNICAL COMMITTEE RESPONSIBILITIES

The committee shall specifically make the following findings in the order set out below. After each finding has been agreed upon, the committee shall set out the finding in writing and all members of the technical committee in agreement shall sign his or her name to the finding. After the finding has been executed by at least three members the committee may proceed to discuss the next finding. If the technical committee cannot agree on a finding, the committee shall immediately refer that matter to the arbitrator and proceed to discuss the next finding.

- (1) A standard point of elevation to use in determining the elevations of the dikes;
- (2) The computer models or other methods or formulas which the technical committee determines accurately provides information as to water surface profiles (levels) which shall be used in the making of findings number five (5) and six (6);
- (3) The setbacks or actual locations of the dikes to Minnesota and North Dakota so as to eliminate where possible dikes following too closely to the meandered loops of the Red River of the North. In setting the locations the committee should attempt to set the locations so as to comply with Alignment C set out in the Red River of the North Mainstem Technical Report of the United States Army Corps of Engineers report. The committee may vary from Alignment C where the negative impact of not complying with Alignment C is offset by the benefits provided by the variance. In establishing the setbacks or actual locations of the dikes, the Technical Committee shall take into consideration the need for ingress and egress to existing farmsteads.
- (4) The location and elevation of dikes providing protection to Holterville;
- (5) The profile between River Mile 236 and River Mile 287 showing water surface elevations of a flow of 43,000 cfs, assuming infinitely high dikes in Minnesota and assuming dikes in North Dakota one foot below the 43,000 cfs profile;
- (6) The final determination of the Technical Committee as to the maximum allowable elevations of dikes in Minnesota and North Dakota between River Mile 236 and River Mile 287 of the Red River of the North. In reaching its final determination the committee shall use Finding No. 5 as the height of the Minnesota dikes, with the North Dakota dikes set one foot below that elevation, and any deviation from those elevations shall be based on the following factors: increases in flood elevations, increases in stream velocities, resulting damages, environmental affects of the proposed elevations, elevations of natural terrain, sound engineering judgement, accepted dike design

standards, increase in flood stage at existing city dikes, freeboard to the extent determined necessary by the Technical Committee, and degree of protection provided to both states;

- (7) A plan of implementation setting forth specific dates, or number of days by which certain steps must be completed. The plan of implementation shall be such that the necessary adjustments in dike locations and elevations should take place as soon as feasible.

### III. PROCESS FOR FORMULATION

- (1) The Technical Committee shall immediately proceed and shall submit its report containing all the above findings within 120 days. This time frame can only be extended by the written agreement of 3 of the 4 members of the Technical Committee. The extension shall be only for 30 days and can only be extended for a like period again by written agreement of 3 of the 4 members of the committee, except that a third 30 day extension can be authorized by written agreement of all 4 members of the committee.
- (2) If at least three of the four members of the technical committee cannot reach agreement on any or all findings 1 through 5 within the time frame established above, the matter shall be submitted to the arbitrator who shall make his findings within 45 days of its submission to him. Each member of the committee shall provide the arbitrator with his or her written recommendation as to that finding within 10 days of the submission of the matter to the arbitrator. Findings of the Arbitrator shall be binding on the technical committee.
- (3) If at least three of the members of the technical committee cannot agree on Finding No. 6 within the time frame established above each committee member shall submit to the State of North Dakota and the State of Minnesota his or her own recommendations in writing immediately. Even if the committee cannot agree on Finding No. 6, they shall make Finding No. 7 taking into consideration the differing recommendations on Finding No. 6. If the committee cannot agree of Finding No. 7 it shall be submitted to the arbitrator in the same manner as Findings No. 1 through 5, and the arbitrator's decision shall be binding on the technical committee.



- (4) The arbitrator, if one is required, shall be selected by the Technical Committee in the following manner: If three out of four members of the Technical Committee agree as to the designation of an arbitrator, the selection of an arbitrator under this paragraph shall be complete. If three out of four members of the Technical Committee are unable to agree on the selection of an arbitrator, then, and in that event, the Technical Committee shall submit a list of four, accompanied by a resume of the qualifications of those included on the list, to the United States District Court for the District of North Dakota, Northeastern Division, from which list the District Court shall designate an arbitrator. The cost of the arbitrator, if any, shall be split evenly between the States of Minnesota and North Dakota.
- (5) The findings of the Technical Committee, or the arbitrator if the Technical Committee cannot agree, shall be binding on the North Dakota Water Commission and the Minnesota Department of Natural Resources and the local water management agencies, with the exception of Finding No. 6. If at least three members of the Technical Committee agree in writing to Finding No. 6, such a finding shall be binding on the States of North Dakota and Minnesota and the local water management agencies. If three out of four members of the Technical Committee sign their names to a finding for No. 6, that finding shall be construed automatically as a part of this agreement without the necessity for further action on the part of either state or any other entity.

If three out of four members cannot agree on Finding No. 6, the parties shall submit the question of the determination of Finding No. 6 to binding arbitration pursuant to the rules of the American Arbitration Association in effect as of the date of this Agreement. Arbitrators shall be selected as follows: the Minnesota Department of Natural Resources and the North Dakota Water Commission shall each select an arbitrator. The two so chosen shall select a third arbitrator, which three arbitrators shall decide the issue.

IV. If it is determined that errors, other than those of opinion or judgement were made in arriving at the final determination of maximum elevations of the dikes, the Technical Committee may, if three out of four agree to do so, re-evaluate and revise any of its findings to correct the error or errors.

V. ENFORCEMENT

The parties agree to seek such funding and authorities as are necessary to implement the plan.

STATE OF MINNESOTA  
DEPARTMENT OF NATURAL RESOURCES

*Jack McLaughlin* *21 Mar 85*  
Commissioner Date

STATE OF NORTH DAKOTA  
STATE WATER COMMISSION

*Dennis Taylor* *3/27/85*  
Date

MIDDLE RIVER-SNAKE RIVER WATERSHED  
DISTRICT

*Otto Anderson* *3-26-85*  
Date

WALSH COUNTY WATER MANAGEMENT  
DISTRICT

*Charles J. Smith* *3-27-85*  
Date

GRAND FORKS COUNTY WATER  
MANAGEMENT DISTRICT

*Elmer Cummings* *3-27-85*  
Date

NORTH DAKOTA STATE WATER COMMISSION

REGISTER

ATTENDANCE AT State Water Commission

DATE December 13, 1985 PLACE Fargo, N.Dak.

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

Your Name	Your Address	Who do you Represent? (Or Occupation)
Danell Zeman	Towner, N.D.	Eaton Flood District
J. H. Tolman	Towner	Eaton Flood Dist.
Dlem Wenderlich	Valentine	McHenry Co. W.R.D.
Carol M. Shultz	Fargo	Cass County W.R.D.'S Secretary - Treasurer SCS & North Cass W.R.D.
Robert Boone	Fargo	Cass Co Divin 16842
Morris Melander	Hunter, N.D.	North Cass W.B.
Greg McEwen	Box 772 Moorhead, MN 56560	International Coalition for Land/Water Stewardship in the Red River Basin
Leo Bussinger	Bisbee N.D.	City of Bisbee Ald.
Earl Galloway	Benton, N.D.	Menard Co. W.R.D.
Ivan Bar	Turtle Lake N.D.	McLean W.R.D.
Al Wentz	Rugby N.D.	Mayor - City
Donald J. Ludeke	Bottineau N.D.	CONS. Eng. - City of Rugby
letcher H. Poling	Bismarck	Basin Electric Power Corp.
Dave Repley	Bismarck	NDSWC.
Milton O. Ludwig	Bismarck	NDSWC.

**NORTH DAKOTA STATE WATER COMMISSION  
REGISTER**

ATTENDANCE AT \_\_\_\_\_

DATE \_\_\_\_\_ PLACE \_\_\_\_\_

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

Your Name	Your Address	Who do you Represent? (Or Occupation)
ROGER LARSEN	Rt 2 Box 174 FARGO N.D.	HARWOOD AREA WATER MGMT
Michael W. Dunsik	ND STATE WATER COMMISSION 900 EAST BOULEVARD BISMARCK	NDSWC
Jeffrey Mattern	NDSWC BISMARCK	NDSWC
Bruce F. McLollom	500 N 3rd Bismarck ND	BW/BEC Engineers
Mike L. Frink	Bismarck	NDSWC
J. T. Fay	Bismarck	NDSWC
Randall Binigar	900 E Blvd. Bismarck	NDSWC
Randy Gjestvang	West Fargo	NDSWC
Rupert Klinghammer	Selle	Logan County W.R.D.
B. W. Egness	RT #1 Grand Forks	Gr. Forks County W. R. D.
Duane Mullerberg	RR1 Carrington	Foster Co W R D
Shenan Lindstrom	Shenfield ND	Foster Co W R D
Don Mitchell	West Fargo	Southeast Cass W R D
Nancy Flesberg	Argusville, N.D.	
Donald Elston	Hope, N. Dak.	Steele County W. R. D.

NORTH DAKOTA STATE WATER COMMISSION  
REGISTER

ATTENDANCE AT \_\_\_\_\_

DATE \_\_\_\_\_ PLACE \_\_\_\_\_

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

Your Name	Your Address	Who do you Represent? (Or Occupation)
Lee Ferdahl	Sharon, S. D.	Steele Co. W. R. B.
Bill Brudvik	Moyville ND	"
Jorgen Hauge	McLeod N. Dak.	Pickland County W. R. B.
Jeffrey Volk	W. Fargo	Moore Eng. Inc.
KIP MOORE	W. Fargo	CITY ENGINEER, W. FARGO
BOB PENWIMAN	ST PAUL MN	CORPS OF ENGINEERS
Herb Nathan	Colerherbar N. Dak.	S. O. C. D.
Vincent S. Reed	216 Benton Ave. Grand Forks, ND 58201	S. F. County Water Res. Dist
Jim Kistner	Harwood N.D.	" " " " " "
Frank H. Meyer	Watt, N. Dak.	Hettinger Co. W. R. B.
J. H. Wapler	RR Box 211 Harwood	N. D. Rural Water Assn
Joseph Hachuku	Page N. D.	Temple R. W. R. B.
Clarence Prisher	Davenport N. Dak.	Maple R. W. R. B.
Benny Warner	Mapleton, N. Dak.	Chairman of Maple R. W. R. B.
Frank Helberg	Harwood ND	SE Cass Reservoir

