

MINUTES OF THE  
STATE WATER COMMISSION MEETING  
Held in Bismarck, North Dakota  
April 20, 1964

Members Present:

Oscar Lunseth, Vice Chairman, Grand Forks  
Henry Steinberger, Member from Donnybrook  
Einar Dahl, Member from Watford City  
Gordon Gray, Member from Valley City  
Richard P. Gallagher, Member from Mandan  
Math Dahl, Commissioner, Department of Agriculture and Labor, Bismarck  
Milo W. Hoisveen, Secretary and Chief Engineer, State Engineer, Bismarck

Others Present:

Robert Raymond, Bismarck Tribune, Bismarck  
Tom Reynolds, United Press, Bismarck  
John Albreght, United Press, Bismarck  
Howard Christian, Corps of Engineers, Omaha  
C. B. Gray, Corps of Engineers, Omaha  
Cecil Moyes, Corps of Engineers, Riverdale  
C. J. Donahue, Corps of Engineers, Riverdale  
Jim Eastgate, Bismarck  
James Wachter, Bismarck  
Henry Entzel, Bismarck  
Andrew Mork, Mandan  
Sig Peterson, Almont  
N. J. Mosbrucker, Mandan  
Leo J. Toman, Flasher  
P. J. Schlosser, Mandan  
Robert Cox, Bismarck  
Jim Moore, Bismarck  
R. J. Sailer, Bismarck

The meeting of the State Water Commission was called to order by Vice Chairman Lunseth at 9:25 a.m. with Commissioners Henry Steinberger, Gordon Gray, Math Dahl, Einar Dahl, R. P. Gallagher and Secretary Hoisveen present.

MINUTES OF FEBRUARY 14  
AND FEBRUARY 25 APPROVED

It was moved by Commissioner Math Dahl and seconded by Commissioner Einar Dahl that the minutes of the February 14 and February 25 meetings be approved as circulated. The minutes had been previously circulated among the Commission members. Motion carried.

FINANCIAL STATEMENTS  
FOR FEBRUARY AND MARCH  
1964 APPROVED

Secretary Hoisveen reviewed the various items constituting the financial statements for February and March. It was moved by Commissioner Steinberger, seconded by Commissioner Math Dahl and carried that the February and March 1964 financial statements be approved.

ELLENDALE GROUNDWATER  
SURVEY - PROJECT #750

It was called to the attention of the Commission members that the City of Ellendale has requested an evaluation of surface water as well as ground water potential in the vicinity of that city. It was pointed out that the Commission would give them a surface water evaluation from studies which have been made in that area on the stream flows and impoundments, such as the Elm River and the Ellendale Dam, from which the City of Ellendale now obtains its municipal water supply. The city has expressed a desire to proceed with a supplemental study which would permit them if they so desire, to obtain water from an aquifer near the college. There is an ample supply of water in this area but the quality is inferior. The city has expressed a desire to have some testing of the water done in the area through test holes. Ellendale presently obtains its supply of water as the result of a study made by the Commission several years ago. The supply was implemented by the Commission when they constructed an underground dam. This supply was later augmented by the construction of a surface water dam over the underground dam. However, failure to obtain an easement from one landowner resulted in this party removing two flash boards from the dam which reduced the water availability during the past winter. This matter has now been cared for.

Secretary Hoisveen recommended that the State Water Commission participate in the supplemental survey. The cost to the Commission would approximately \$500 and \$500 for the City of Ellendale. This would give the City of Ellendale a good catalog of the water in that area and permit the State Water Commission to complete the groundwater report for Ellendale which was initiated by the U. S. Geological Survey seven years ago.

It was moved by Commissioner Gray, seconded by Commissioner Math Dahl and carried that the Commission participate in the supplemental groundwater survey for the City of Ellendale to the extent of \$500.

SMISHEK LAKE RECREATION -  
PROJECT #575

Smishek Lake is located near the town of Powers Lake. This lake has been improved by the installation of a dam constructed by the State Water Commission. It could be an outstanding recreation spot if the proper recreation facilities were provided such as trees, toilets, picnic tables, and etc. The cost of installing facilities for a recreation area would approximate \$1,500. The State School of Forestry is cooperating in the planting of trees. The Burke County Water Management District is active in stimulating use of the area. The lake is within four miles of the town of Powers Lake and should provide them with an ideal recreation area. The agreements with the legal entities with whom the Commission cooperates stipulates that the legal entity is to maintain the projects once they are built.

It was moved by Commissioner Steinberger, seconded by Commissioner Gallagher and carried that the Commission participate in the installation of park facilities at Smishek Lake. The Commission's share would be \$600 and the Burke County Water Management District's share would be \$900, a total of \$1,500.

AMENIA DAM SURVEY -  
PROJECT #418

Last fall the State Water Commission made a groundwater survey in the Amenia area to locate a source of municipal water for Amenia. No ground water could be located within reasonable distance of this small town. At the present time Amenia is getting its water from local sandpoint wells which

are not adequate to meet all their requirements. The Village of Amenia has now requested the Water Commission to make a study relative to locating a dam somewhere near the city which would permit them to store surface water for their municipal needs. When the first survey was made the Commission did not use all of the \$1,000 advance payment made for the groundwater study. Sufficient money remains in their groundwater study balance to conduct additional survey work. The balance of the \$200 could be credited to the groundwater study if the Commission so desires. The groundwater study will approximate \$1,500.

It was moved by Commissioner Gray and seconded by Commissioner Gallagher that the State Water Commission cooperate with the Village of Amenia in a groundwater survey. Motion carried.

**BUFFALO LAKE SURVEY -  
PROJECT #565**

Buffalo Lake is located in south Pierce County and is under the jurisdiction of the Wildlife Service. A group of sportsmen in the area are requesting the Water Commission to develop the lake area. The group has expressed a desire to raise the dam approximately three feet. The soils underlying the present dam are sandy, therefore, there is considerable seepage loss. The Water Commission has been requested by the group to make a study of the seepage before the dam is raised. A \$200 deposit has been made in connection with checking the seepage losses. The purchase of the land adjacent to the lake by the Game and Fish Department might run between \$30,000 and \$50,000 depending on the take line. The actual construction cost of the dam would probably exceed \$20,000. To date the Commission does not have the permission of the Bureau of Sport Fisheries and Wildlife to go ahead with the construction of the dam. Permission should be sought by the Game and Fish Department. The raising of the dam will have an adverse effect on wildlife in some areas and enhance the wildlife in other areas.

It was moved by Commissioner Math Dahl and seconded by Commissioner Gallagher that the State Engineer be authorized to make a survey in the Buffalo Lake area. Motion carried.

**GRAND FORKS COUNTY GROUND-  
WATER SURVEY - PROJECT #950**

Grand Forks County and the Grand Forks County Water Management District are negotiating for a county-wide groundwater study. The Water Management District was created in October, 1963. The District has budgeted to meet the requirements of the groundwater study, which would cost the county \$32,000. The breakdown of expenditures over a four year period is: State Water Commission, \$7,750; Water Management District, \$7,750; U. S. Geological Survey, \$64,000; North Dakota Geological Survey - two years - \$2,000. The North Dakota Geological Survey does the geological mapping. Secretary Hoisveen stated that he would like to schedule this survey for July 1, 1964, if it is the desire of the Water Commission to proceed with the survey.

It was moved by Commissioner Steinberger, seconded by Commissioner Gray and carried that the Secretary be authorized to enter into an agreement with Grand Forks County for a county-wide groundwater survey.

**COLT DAM SURVEY  
PROJECT #1349**

The City of Beulah has requested a dam site survey with a view of constructing a dam near the City of Beulah. The present dam affords them a little water as the major portion of the dam was washed out a few years ago.

Beulah citizens feel that the dam and resulting reservoir will recharge the groundwater aquifer near the city and give them an added source of water supply. The City of Beulah has made a \$200 deposit toward this study.

It was moved by Commissioner Math Dahl and seconded by Commissioner Einar Dahl that the Secretary be authorized to conduct a dam survey in the vicinity of the City of Beulah. Motion carried.

MT. CARMEL SURVEY -  
PROJECT #1346

The proposed Mt. Carmel Dam is located in Cavalier County. The Commission has never performed any project activity in this county.

The City of Langdon as well as wildlife interests are interested in this project. A dam would create a fair body of water for that area. The original dam which was constructed by the W.P.A. has washed out. Cavalier County has a water management district who has made a \$200 deposit for this survey.

It was moved by Commissioner Gray, seconded by Commissioner Gallagher and carried that the Secretary be authorized to make a survey in the Mt. Carmel area.

YELLOWSTONE PUMPING  
IRRIGATION DISTRICT  
BANK EROSION - PROJECT  
#214

The Commission has been requested to assist on the bank erosion problem in the vicinity of the North Dakota-Montana line. The site has been viewed by the staff engineers, and the erosion was found to be quite extensive. It is, to a

degree, affecting the Yellowstone Pumping Irrigation District. Secretary Hoisveen stated he had written to the Corps concerning this problem. The Corps stated that on this type of problem they could only expend \$50,000, without going into a larger project. Little effective work could be performed for \$50,000. Secretary Hoisveen suggested that if it was agreeable to the Commission he would contact the Montana Water Resource Board relative to this matter and between North Dakota and Montana officials maybe they could work out a project through Congressional action of the two states. The Commission members recommended that the Montana officials be contacted by Secretary Hoisveen.

RICHLAND COUNTY DRAIN #55 -  
PROJECT #1199

The Richland County Water Management District is requesting the Commission to participate in the cost of constructing two bridges over drain #55

which would be for private drives. The State Water Commission has refrained from participating in bridge construction in the past. However, these are bridges which are eligible inasmuch as they are not a part of a road system. For some reason the construction of bridges was not included in the original estimate although several private drive bridges were. The cost would approximate \$2,500 per bridge. The two bridges are located relatively close together possibly within 1300' of each other as a consequence it would appear as though one bridge might serve both quarter sections. Secretary Hoisveen suggested that the Commission participate in one bridge only or limit participation to 20 percent on the two bridges in place of the usual 40%. Where other drains have been constructed, necessitating a bridge, the cost has been a part of the original estimate.

Commissioner Gallagher suggested that the original agreement be amended to include the bridges if there is no change of ownership or change of land use.

It was moved by Commissioner Gallagher and seconded by Commissioner Gray that the Commission entertain an amended application, provided

the necessity for these bridges is not caused by a change in ownership or change in land use subject to the original date of the application. Motion carried.

PROPOSED LEGISLATION -  
ARTESIAN WATER CONTROL

A copy of correspondence addressed to the Legislative Research Committee has been received from Dr. Wilson M. Laird, State Geologist, concerning control of the artesian water on the part of the State Geologist. This is a situation of long standing which states that the State Geologist is responsible for the control of artesian water in North Dakota. Dr. Laird feels that this should be under the control of the Water Commission as it would better fall in the category of Commission activities. While the Commission is not looking for an extension of its work, if there is going to be a change in this law it should probably be under the control of the Water Commission as we do have equipment that can be used for such work. Secretary Hoisveen suggested that the Commission accept the responsibility if we are authorized to do so by law. He also suggested that any new legislation make it a requirement that wells be equipped with proper controls. He indicated that the State Water Commission when authorized should inventory all flowing wells and inquire as to the desires of the owner in having them controlled. A flowing well is regarded as property and care would have to be exercised where they have been established as flowing wells over a period of years. Abandoned flowing wells could be corrected.

Commissioner Gallagher suggested that the Commission accept the law as it is and then as problems arise request money for future control activities. As experience is gained the Commission should be able to go to the owner and talk with him, and have some sort of authority, to tell him the size pipes that should be used, etc. Rules and regulations would necessarily be put into force by the Commission.

It was moved by Commissioner Math Dahl, seconded by Commissioner Gray and carried that the Commission accept the proposal pertaining to artesian wells as recommended by Dr. Laird and that the Commission work with Dr. Laird on the proposed law.

WESTERN COUNTY WATER  
SPREADING RIGHTS

Secretary Hoisveen stated that the Commission was having difficulty in issuing water rights for water spreading devices. Water spreading is a form of irrigation which is performed by taking water from the streams of intermittent flows during the periods of high runoff in the spring or during heavy rain. In the past, the Commission has held water spreading applications down to 20 acres in some of the streams. The Commission has been criticized by the Association of Soil Conservation Districts for this practice. The Commission staff has now proposed some criteria which is acceptable to the Association. Secretary Hoisveen is advisor to the Water Resources Committee of the Association and has met with them relative to this matter. The following rules were suggested and accepted by them. The criteria could be incorporated in the Commission's rules and regulations pertaining to water spreading if desired. It is as follows:

1. Water spreading devices must be located on intermittent stream which is normally dry during June, July and August and does not have other extensive valid water rights;
2. If drainage basin is over 5 square miles in area, 1/4 cfs per square mile must pass before diversion takes place;

3. Average June flows must be bypassed before diversion is effected;
4. Complete plans for turnout will be furnished as part of application;
5. Water right subject to cancellation if owner or operator does not maintain bypass which allows specified flows to continue downstream.

It was moved by Commissioner Math Dahl and seconded by Commissioner Steinberger that rules be set up for water spreading as set forth above. Motion carried.

NORTH DAKOTA IRRIGATION  
DISTRICT DIRECTOR'S  
ASSOCIATION -- RESOLUTIONS

assistance in planning for, and development and operation of irrigation projects throughout the state.

Resolutions were received from the North Dakota Irrigation District Director's Association expressing its appreciation to various agencies, including the State Water Commission, for their

DRAYTON DAM RESOLUTION  
(Red River Basin Planning  
Committee)

construction of Drayton Dam was

read to the Commission. The resolution adopted by the Red River Basin Planning Committee at its meeting held March 6, 1964 relative to the cooperation between the state and federal agencies in regard to the

RED RIVER BASIN PLANNING  
COMMITTEE

is endeavoring to stimulate interest in the Red River Basin planning and that Minnesota in the past has not shown much inclination to enter into such planning. Commissioner Lunseth explained the background for the creation of the Red River Basin Planning Committee.

Commissioner Steinberger asked as to the policy and purpose of the Red River Basin Planning Committee. Commissioner Gray stated North Dakota

Commissioner Gallagher suggested that one of the meetings should be held in St. Paul as this would provide Governor Rolvaag an opportunity to attend and appreciate the scope of planning needed.

The meeting adjourned to reconvene at 1:00 p.m. The same Commission members were present for the afternoon meeting as were present in the morning with the exception of Commissioner Math Dahl. Also present were Howard Christian, C. B. Gray, Corps of Engineers, Omaha; Cecil Moyes and C. J. Donahue, Corps of Engineers, Riverdale; and Messrs. Jim Eastgate, James Wachter, Henry Entzel, Andrew Mork, Sig Peterson, N. J. Mosbrucker, Leo J. Toman, P. J. Schlosser, Robert Cox and Jim Moore. The purpose of their attendance was the Corps of Engineers discussion pertaining to bank stabilization.

MISSOURI RIVER BANK  
STABILIZATION - PROJECT  
#576

Mr. Christian stated that the most critical area of Missouri River Bank Stabilization is the Square Butte area. The purpose of the project is to control fluctuation and to eliminate, as much as possible, erosion bouncing back from one side to the other with as little expense as possible. The total appropriation for Missouri River Bank Stabilization is

\$3,000,000 which will care for five critical areas. Mr. Christian through the use of two charts explained how the Corps intends to control erosion. He stated that they had to consider both the upstream area and the downstream area. He explained how the curves would be formed to control the erosion. The most desirable curves are too expensive for the amount of money the Corps can spend on this particular project but they will put in a safe and secure bank protection without additional costs,—they are called refinement costs, performed by using revetment type structures. The red lines on the chart showed the dikes which allow for protection and tend to turn the current away from the bank. It has a 30 foot bite in the bank and a 10 foot top which can be constructed from the river or land. The blue line showed the land that will be needed for access, etc. The design eliminates some of the bite. The pencil line showed the desirable curvature. The low curve inside furnishes some erosion protection. This type of construction can be accomplished with the same amount of money as paved fill. The Corps can achieve a degree of security if built along a raw bank. This type of protection can be maintained and repaired before there is serious erosion to the bank and is cheaper to maintain. The structure to be built in the Square Butte area will be similar to that constructed at Buford-Trenton and south of Sioux City, Iowa. The Corps also has to take into consideration future development of this area. Mr. Gray, Corps of Engineers, explained why a certain amount of land along the river would be necessary for access and building dikes, etc. He stated the bank would be shaped and sloped which would mean that they would have to work on the land adjacent to the river. Some of the land would be reshaped to fit the river alignment. In doing so the farmer is going to lose a few feet which is the area needed to accomplish the slope and for the equipment to go in and out. The authorization act spells out the exact steps for the acquisition of land for right of way. Mr. Gray asked if any of those present had land along the river which would be subject to right of way acquisition. The Corps would need about 100 feet. Three of those present stated that they were in that area and assured the Corps that there would be no difficulty concerning right of way easements. There was discussion on whether the Corps should deal with individuals or whether the Corps should deal with the Morton County Water Management District. Mr. Gray read a proposed resolution to be signed by the Morton County Water Management District. Mr. Gray stated that the Corps would prefer to deal with a legal entity such as the Water Management District. If they dealt with the individuals they would have to have someone come in and search the records to be sure that these individuals owned the land. The search through these records would take considerable time. If they deal with a legal entity they would take the word of the district as to the ownership of the land. It is the desire of the Corps to let bids in May, advertise for three weeks, open the bids in June and commence work on the project in June. Vice Chairman Lunseth stated that if the Water Commission could be of any help to the Water Management District, the individuals or the Corps that Secretary Hoisveen would do whatever he could. Mr. Christian stated that Mr. Hoisveen had been of considerable help to the Corps. (The Corps representatives and the Morton County representatives left the meeting.)

JAMESTOWN CHANNEL CHANGE -  
PROJECT #624

The State Water Commission has been working with a group in Jamestown as well as personnel of the Crippled Children's Home regarding a channel change on the James River. The City of Jamestown, in cooperation with the group, is asking participation in making this channel change. The cost estimate is \$4,100. If the Commission participated it should not exceed 40% of the estimated cost.

It was moved by Commissioner Gray, seconded by Commissioner Einar Dahl and carried that the Commission participate in the cost of the channel change in the James River.

## SPRING RUNOFF - DAMS

Secretary Hoisveen commented on the spring runoff stating that there has been some spring runoff in some areas of North Dakota. Dam structures built in the past have stood up very well; however, one dam constructed last fall near Edmore is showing erosion. This possibly resulted from the fact that we were unable to get the emergency spillway sodded before it froze up last winter, inasmuch as the dam was built in October. It will be necessary for the Commission to make some repairs but it is not possible, at this time, to give an estimate of what it will cost. The Commission has in the past, when occurrences like this arise, given the Chief Engineer the authority to go ahead with necessary repair.

It was moved by Commissioner Gallagher, seconded by Commissioner Steinberger and carried that the Secretary be authorized to repair dams where necessary.

DRAINAGE POLICY -  
PROJECT #1053

At the June 10, 1963 meeting Secretary Hoisveen reviewed some of the policies regarding drainage participation which has served in guiding the Commission in cost participation. The Commission members were to review this information and act upon it at the next meeting, which has not been done. The recommended drainage policies will again be circulated for the members to study and will then be presented at the next Commission meeting. See Appendix A.

WELLS COUNTY GROUNDWATER  
SURVEY, Health, Education  
and Welfare Grant, Project  
#978

Secretary Hoisveen stated that at a previous Commission meeting he had mentioned the possibility of carrying on a research demonstration with the International Geotechnics and Research Company and Wells County on a groundwater study. This company has worked with the Health, Education and Welfare Department in Washington, D. C. Mr. Hoisveen stated that when he was in Washington, D. C. he had talked this matter over with the Department of Health, Education and Welfare and representatives of the Geotechnics Company. The HEW Department was anxious to undertake such a project in Wells County or a county of similar size if money were available to them. The Water Commission would be required to put in some money. Secretary Hoisveen stated he had discussed this quite thoroughly with Dr. Laird and that Dr. Laird is not convinced that this particular area is adapted to techtolinear methods of ascertaining water bearing area. The cost of such a project would be \$98,000. In a two year period Wells County would be putting in \$38,000, and a like amount would be put in by the Water Commission. Secretary Hoisveen recommended that the Water Commission's participation be no more than \$5,000, which sum would be used for drilling. Secretary Hoisveen stated that there were advantages in participating in this type of demonstration, but there were also disadvantages.

It was moved by Commissioner Steinberger, seconded by Commissioner Gallagher and carried that the Commission participate with the Geotechnics Company to the extent of \$5,000, which sum is to be used for drilling.

ENGLISH COULEE OUTFALL -  
PROJECT #1351

Secretary Hoisveen stated that there has been considerable encroachment going on in English Coulee which is a tributary of the Red River and flows thru a portion of Grand Forks. The Drainage Engineer of the State Water Commission and Highway Department engineers have come across encroachment that could impair Highway #2. As a result of a review of this situation with



the city engineer, the water management district and officials in Grand Forks it was thought advisable to send out a letter warning people that the channel had to be maintained at a specific opening. A letter was sent out informing property owners of this situation and certain corrections would be required of some owners in order to meet the specified opening.

Commissioner Gallagher was of the opinion that the law should be changed to permit the water management district to have the same power to control stream obstruction as they do drain obstruction. The Commission reaffirmed the opinion and the action of the staff in caring for this problem. (61-16-28.1)

SOURIS RIVER BASIN  
FLOOD CONTROL -  
PROJECT #984

Secretary Hoisveen stated that in the not too distant future, hearings are to be held in Minot on the Souris River basin flood control project. The present plan calls for storing water on land in the area above Minot and he felt that there will certainly be opposition to this plan. The storage as contemplated would be in the vicinity of Burlington. Several years ago the mayor of Minot had suggested that a study be made of Lake Darling dam as it was rumored to be unsafe. It was also thought inadvisable to attend a meeting concerning the Souris River Basin Flood Control as a Commission.

NORTH DAKOTA ASSOCIATION  
OF SOIL CONSERVATION DISTRICTS

Secretary Hoisveen stated that he had met with the Water Resources Committee of the North Dakota Association of Soil Conservation Districts concerning Public Law 566 which provided for 50% cost sharing for features that serve irrigation, recreation and fish and wildlife purposes. The Association adopted a resolution which Secretary Hoisveen presented urging that the Federal Congress modify Public Law 566 to permit political subdivisions of the states to cooperate with the U. S. Department of Agriculture on the 50% cost sharing basis for conservation purposes similar to that now governing fish and wildlife participation.

It was moved by Commissioner Gallagher, seconded by Commissioner Gray and carried that the Secretary be authorized to write a letter to our Congressional representation and interested Congressional committees concerning this proposal.

WATER RESOURCES MAP

The proposed water and power resources map was shown to the Commission members. Mr. Hoisveen explained the various items which will appear on the map. He indicated that the map would be available for distribution before May 1st. Much interest has been manifested in the map by schools in the state.

COOPERATIVE GROUND-  
WATER PROGRAM

The cooperative groundwater program direct expenditures from January 1 through March 31, 1964 was explained to the Commission. The amount of money expended during the period is the sum of \$12,196.34.

BROCHURE PROPOSAL

Secretary Hoisveen stated that under new legislation passed at the last session of the Legislature the biennial reports are to be mimeographed. The Commission receives many requests for information pertaining to our program and since a biennial report will not be available the Commission should consider the use of brochures as

a source of information. The cost of 10,000 brochures would be \$1,004. The Commission members were shown the brochures put out by the Garrison Diversion Conservancy District. A similar type brochure would be put out by the Water Commission, if the Commission so desired.

It was moved by Commissioner Gray, seconded by Commissioner Gallagher that the Secretary be authorized contract for the brochures covering the activities of the State Water Commission. Motion carried.

#### CITY OF MINOT WATER SUPPLY

The Commission was informed that the staff had been working with the City of Minot to find a water supply for that City. The aquifer has been receding as a result of the increased demand for water in that area. The U. S. Geological Survey officials have been working with the City of Minot also. Three years ago the Commission in cooperation with the U. S. Geological Survey made an analysis of the water flowing through Minot. It was determined that probably one of the best areas for recharge purposes was located in the Oak Park area. The City of Minot would like to attempt to see how much water might be entrained into the aquifer in this area. They have agreed that they would strip out the "donut" or lagoon and then run water into the test area in an effort to determine how fast a recharge is taking place in this particular area. The Commission and the U. S. Geological Survey are hopeful it will be a sizeable one. If water is not found Minot will be required to depend on the Souris River for its immediate water supply. This release is to be made from Lake Darling. The cost of the entrainment research project will be between \$1,000 or more for the State Water Commission and a similar amount from Minot. Secretary Hoisveen later determined that the U. S. Geological Survey would participate to the extent of matching the City of the Commission. The research project could possibly attain a figure of \$10,000 when combined with all participants.

It was moved by Commissioner Steinberger, seconded by Commissioner Gallagher that the Commission approve the experiment in Minot. Motion carried.

#### WATER RIGHTS

792

The application of Lloyd Njos of Williston, North Dakota to divert 400 acre-feet of water from an Unnamed Creek tributary of Blacktail Creek for the purpose of irrigating 240 acres of land was presented by the Secretary to the Commission for consideration.

The State Engineer, Milo W. Hoisveen, having considered the application and made his recommendation thereon for 100 acre-feet to irrigate 100 acres. The water right granted to divert 2.5 cfs but not to exceed 100 acre-feet of annual use for 100 acres, provided he at all times allows at least .5 cfs to flow downstream. It was moved by Commissioner Einar Dahl, seconded by Commissioner Steinberger and carried that the application as modified by the recommendation of the State Engineer be approved and the permit granted for the diversion of 100 acre-feet to irrigate 100 acres of land.

1122

The application of the Oakes Country Club of Oakes, North Dakota to divert 30 acre-feet of water from Bear Creek tributary of the James River for the purpose of irrigating 22.54 acres



of 162 acre-feet of water for municipal use.

1128

The application of the Walhalla Country Club, Walhalla, North Dakota to divert 100 acre-feet of water from the Pembina River for the purpose of irrigating 46.7 acres of land was presented by the Secretary to the Commission for consideration.

The State Engineer, Milo W. Hoisveen, having considered the application and made his recommendation thereon for 100 acre-feet to irrigate 46.7 acres, it was moved by Commissioner Einar Dahl, seconded by Commissioner Steinberger and carried that the application be approved and the permit granted for the diversion of 100 acre-feet to irrigate 46.7 acres of land.

There being no further business the meeting adjourned at 4 p.m.

Milo W. Hoisveen  
Secretary

ATTEST

William L. Guy  
Governor

## Appendix A

## RECOMMENDED COMMISSION POLICY ON DRAINS

- A. Control structures in old and new drains: Policy: Retain and confirm present policy of 50-50 participation in those drains where Commission forces perform the actual work and on a 40-60 basis where it is accomplished through some other means.
- B. On second rebuilt, which has been regarded as deferred maintenance, and in previous policy established as "No participation", - Suggested policy: Allow participation in reconstruction insofar as the improvement will benefit hydraulic characteristics, and permit a more realistic program of maintenance due to gentler slopes on the sides. Definition of improvement: That portion of the estimated excavation which is chargeable to widening the ditch bottom, deepening the ditch bottom below the designed grade of the previous improvement, and providing 3:1, 3½:1 or 4:1 side slopes in place of original 1½:1 or 2:1. Excavation of silted-up bottom or sloughed-in banks to be regarded as deferred maintenance. Replacement of drainage structures to be considered qualified items only insofar as capacity increase is needed. Drop structure participation to be considered separately.
- C. For simplicity, it is suggested that the proportion of excavation in the second rebuilt estimate which is chargeable to improved capacity, greater length, and a stabler, maintainable ditch be used to calculate the proportion of the basic 40% of qualified construction items normally committed, which could be allowed for the second reconstruction.

**NORTH DAKOTA STATE WATER COMMISSION**  
**MONTHLY REPORT OF APPROPRIATIONS AS OF APRIL 30, 1964**  
**1963 - 1965 APPROPRIATIONS**

FUND -2770	AVAILABLE FUNDS		DISBURSEMENTS		FUND BALANCES		
	APPROPRIATION	RECEIPTS	TO DATE	APR '64	UNEXPENDED	ENCUMB.	UNENQUMB.
1. COMM PD & EXP -15	6,500.00	.00	3,027.86	56.88	3,472.14	450.00	3,022.14
2. ADMINISTRATION -301	70,000.00	537.08	27,884.76	3,432.62	42,652.32	1,400.00	1,252.32
3. MTCR OF DAMS -302	150,000.00	53,476.48	122,727.41	10,176.98	80,749.07	13,703.00	67,044.07
4. INT'L & INT -303	10,000.00	10.00	5,480.85	682.84	4,529.15	.00	4,529.15
5. TOPOGRAPHIC -304	30,000.00	6,210.42	21,835.68	.00	14,374.74	14,374.74	.00
6. HYDROGRAPHIC -305	27,500.00	2,750.00	7,092.62	.00	23,157.38	11,657.38	11,500.00
7. ENGR & GEOL -306	60,000.00	43,554.03	74,443.89	2,091.34	29,110.14	1,200.00	27,910.14
8. COOP W/US DEP, ETC-307	60,000.00	6,000.00	29,096.38	2,557.66	36,903.62	500.00	36,403.62
9. ENGR INVESTIGATIONS-308	45,000.00	2,200.00	54,199.01	5,982.02	93,000.99	3,500.00	89,500.99
10. ADM OF WATER RIGHTS-309	10,000.00	.00	4,290.53	.00	5,709.47	.00	5,709.47
	569,000.00	114,738.01	350,078.99	24,980.34	333,659.02	46,787.12	286,871.90

NOTE- \$10,000 TRANSF. FROM #304 TO #305, 306, & 307.

\$6,210.42 TRANSF. FROM EM COMM TO #304.

SWC FILE 05-1.2

**NORTH DAKOTA STATE WATER COMMISSION  
STATUS OF CONTINUING APPROPRIATIONS  
AS OF APRIL 30, 1964**

FUND	AVAILABLE FUNDS		DISBURSEMENTS		FUND BALANCES		
	APPROPRIATION	RECEIPTS	TO DATE	APR '64	UNEXPENDED	ENCUMB.	UNENCUMB.
20. MULTIPLE-PURPOSE CARRIED FWD -3770	500,000.00 337,928.21	63,384.36	86,041.36	6,707.80	815,271.21	518,023.38	297,242.83
21. CONST BOND GUAR-8770	90,000.00	21,311.69	20,539.00	.00	90,772.69	.00	90,772.69

NOTE -FUND #21 RECEIPTS ARE OBTAINED FROM RETIREMENT OF AND INTEREST ON SECURITIES THAT WERE IN THE COMMISSION'S SINKING FUND IN EXCESS OF THE AMOUNT REQUIRED TO RETIRE THE SERIES "J" BOND ISSUE ON DECEMBER 10'57. ORIGINAL DISBURSEMENTS FROM FUND #21 WERE MADE DURING THE EARLY 1940'S IN ACCORDANCE WITH SECTION 61-02-56 OF THE CENTURY CODE WHICH PROVIDES THAT THE COMMISSION MAY GUARANTEE OR INSURE, OR AGREE TO-PAY, THE INTEREST ON AND PRINCIPAL OF COMMISSION REVENUE BONDS, NOT EXCEEDING 20% OF THE PAR VALUE OF ANY SUCH BONDS.

**SCHEDULE OF BONDS & INTEREST RECEIVABLE - FUND #21 "8770"**

TYPE	DUE DATE	INTEREST RATE	INTEREST REQ. TO MATURITY	PRINCIPAL	TOTAL INCOME ANTICIPATED
U.S. SERIES K BONDS	5-65	2.76%	\$ 62.10	\$1,500	\$ 1,562.10
U.S. SERIES K BONDS	4-67	2.76%	165.60	2,000	2,165.60
U.S. TREASURY BONDS	12-68	2.50%	375.00	3,000	3,375.00
SIoux IRRIG DIST BONDS	1984 SERIALLY	2.25%	4,173.75	15,500	19,673.75
			\$4,776.45	\$22,000	\$26,776.45
			FUND BALANCE		90,772.69
			LESS ORIG. APPROPRIATION -		90,000.00
					\$27,549.14

NOTE-EXCESS OVER \$90,000 CASH TO BE CREDITED TO GENERAL FUND - 1-2-58 AG OPINION.

NORTH DAKOTA STATE WATER COMMISSION  
PAYROLL - APRIL 30, 1964

SALARIED EMPLOYEES

NAME	POSITION	PAY GRADE	REMARKS	SALARY	W/TX	S.S.	INS.	BONDS	NET
HOISVEEN, MILO W.	STATE ENGR	Q-10	INC JUL '63	1,125.00	134.20	40.78	15.00	131.25	803.77
BAESLER, GORDON	DRAFTSMAN	G-8	INC JUL '63	443.67	47.40	16.08			380.19
CHRISTENSEN, RAY	ENGR AID	E-5	INC APR '64	298.67	34.20	10.83			253.64
COOPER, VERNON S.	ASST SECY	1/2 I-7	INC NOV '63	275.34	30.00	9.98	15.00		220.36
DRAKE, SHERRY N	STENO	D-2	STA MAR '64	231.75	32.20	8.40	2.70		188.45
ENGSTROM, VIRGLE	RODMAN	D-7	INC APR '64	265.50	29.70	9.62	2.70		223.48
FREDRICKSON, FRED	COORDINATOR	I-9	INC JUL '63	700.00	74.70	25.38	15.00		584.92
FROELICH, LARRY	GEOLOGIST	H-7	INC JAN '64	491.67	29.70	17.82	14.65		429.50
GLOVER, DALE	HYDROLOGIST	J-9	INC JUL '63	640.67	150.00	23.22			467.45
HILAND, LEONE	CH STENO	F-10	INC JUN '63	402.17	49.60	14.58	2.80		335.19
JOB, RHODA	FILE CLERK	D-6	INC JUN '63	258.75	20.80	9.38	13.25		215.32
JOHIM, CLIFF	ATTORNEY	E-5	INC APR '64	298.67	46.20	10.83	15.00		226.64
KNUTSON, LEWIS	DRILLER	H-2	INC AUG '63	429.17	36.90	15.56			376.71
LINDVIG, MILT	ENGINEER	H-8	STA NOV '63	504.17	63.60	18.28			422.29
LIVERSAGE, KAY	STENO	D-4	INC DEC '63	245.25	26.40	8.89	2.70		207.26
NELSON, C. P.	ENGINEER	L-5	INC APR '64	690.67	98.00	25.04			567.63
PUTZ, ROY	OFF ASST	C-8	INC APR '64	231.92	16.60	8.41	2.70		204.21
RIVINIUS, MERRIL	ENGINEER	K-3	INC JAN '64	600.67	86.80	21.77	2.95		489.15
SACKMAN, EUGENE	SURVEYOR	H-4	INC APR '64	454.17	31.90	16.46	14.65		391.16
SANDWICK, HAZEN	ENGINEER	M-5	INC DEC '63	767.67	70.30	27.83	15.00		654.54
SCHANTZ, GEORGE	ENGR AID	E-2	INC APR '64	274.67	23.10	9.96			241.61
SCHMID, ROGER	GEOLOGIST	K-4	INC JAN '64	508.67	40.30	18.44	.25		449.68
SCHULZ, DEL	ENGINEER	K-4	INC JUL '63	617.67	79.00	22.39	2.95		513.33
SCHULZ, JIM	ACCOUNTANT	J-8	INC JUL '63	625.17	63.50	22.66	15.00		524.01
WALTERSON, HOWARD	CONST SUPT	I-3	INC MAR '64	494.67	53.00	17.93	10.00		413.74
WALTERSON, JEAN	DRAFTSMAN	F-5	INC JUL '63	354.67	34.30	12.86			307.51
ZIEGLER, VICTOR	ENGINEER	M-7	INC JUL '63	787.67	93.60	28.55	15.00		650.52
SWG GROUP INSURANCE	~ 2295			110.00			110.00		.00
KNUTSON, LANNY	DRILLER	2.10	INC APR '64	304.00	35.80	11.02	2.70		254.48
SENGER, ANTON	OPERATOR	2.25	INC MAR '64	342.00	41.10	12.39			288.51
VOELLER, PIUS	FOREMAN	2.40	INC MAR '64	240.00		8.71	14.65		216.64
				14,014.74	1,572.90	504.05	304.65	131.25	11,501.89



NORTH DAKOTA STATE WATER COMMISSION  
MONTHLY REPORT OF APPROPRIATIONS AS OF MAY 31, 1964  
1963 - 1965 APPROPRIATIONS

FUND -2770	AVAILABLE FUNDS		DISBURSEMENTS		FUND BALANCES		
	APPROPRIATION	RECEIPTS	TO DATE	MAY '64	UNEXPENDED	ENCUMB.	UNENCUMB.
1. COMM PD & EXP -15	6,500.00	.00	3,695.16	667.30	2,804.84	450.00	2,354.84
2. ADMINISTRATION -301	70,000.00	538.58	29,756.77	1,872.01	40,781.81	1,400.00	39,381.81
3. MTCE OF DAMS -302	150,000.00	59,276.48	129,813.32	7,085.91	79,463.16	5,700.00	73,763.16
4. INT'L & INT -303	10,000.00	10.00	5,915.48	434.63	4,094.52	.00	4,094.52
5. TOPOGRAPHIC -304	30,000.00	6,210.42	23,040.32	1,204.64	13,170.10	13,170.10	.00
6. HYDROGRAPHIC -305	27,500.00	2,750.00	12,135.91	5,043.29	18,114.09	6,614.09	11,500.00
7. ENGR & GEOL -306	60,000.00	43,554.03	76,935.18	2,491.29	26,618.85	1,200.00	25,418.85
8. COOP W/US DEP ETC-307	60,000.00	6,000.00	31,599.69	2,503.31	34,400.31	500.00	33,900.31
9. ENGR INVESTIGATION-308	45,000.00	2,400.00	59,363.52	5,164.51	88,036.48	3,500.00	84,536.48
10. ADM WATER RIGHTS-309	10,000.00	.00	5,191.85	901.32	4,808.15	.00	4,808.15
	569,000.00	120,739.51	1,377,447.20	27,368.21	312,292.31	32,534.19	279,758.12

NOTE - \$10,000 TRANSF. FROM #304 TO #305, 306, & 307.

\$6,210.42 TRANSF. FROM EM COMM TO #304.

SWC FILE 05-1.2

NORTH DAKOTA STATE WATER COMMISSION

STATUS OF CONTINUING APPROPRIATIONS  
AS OF MAY 31, 1954

FUND	AVAILABLE FUNDS		DISBURSEMENTS		FUND BALANCES		
	APPROPRIATION	RECEIPTS	TO DATE	MAY '64	UNEXPENDED	ENCUMB.	UNENCUMB.
20. MULTIPLE PURPOSE CARRIED FWD -3770	500,000.00 337,928.21	79,941.19	206,094.09	120,052.73	711,775.31	416,052.54	295,722.77
21. CONST BOND GUAR-8770	90,000.00	21,332.39	20,539.00	.00	90,793.39	.00	90,793.39

NOTE- FUND #21 RECEIPTS ARE OBTAINED FROM RETIREMENT OF AND INTEREST ON SECURITIES THAT WERE IN THE COMMISSION'S SINKING FUND IN EXCESS OF THE AMOUNT REQUIRED TO RETIRE THE SERIES "J" BOND ISSUE ON DECEMBER 10 '57. ORIGINAL DISBURSEMENTS FROM FUND #21 WERE MADE DURING THE EARLY 1940'S IN ACCORDANCE WITH SECTION 61-02-56 OF THE CENTURY CODE WHICH PROVIDES THAT THE COMMISSION MAY GUARANTEE OR INSURE, OR AGREE TO PAY, THE INTEREST ON AND PRINCIPAL OF COMMISSION REVENUE BONDS, NOT EXCEEDING 20% OF THE PAR VALUE OF ANY SUCH BONDS.

SCHEDULE OF BONDS & INTEREST RECEIVABLE - FUND #21 "8770"

TYPE	DUE DATE	INTEREST RATE	INTEREST REC. TO MATURITY	PRINCIPAL	TOTAL INCOME ANTICIPATED
U.S. SERIES K BONDS	5-65	2.76%	\$ 41.40	\$1,500	\$1,541.40
U.S. SERIES K BONDS	4-67	2.76%	165.60	2,000	2,165.60
U.S. TREASURY BONDS	12-68	2.50%	375.00	3,000	3,375.00
SIX IRRIG DIST BONDS	1984 SERIALY	2.25%	4,173.75	15,500	19,673.75
			<u>\$ 4,755.75</u>	<u>\$22,000</u>	<u>\$26,755.75</u>
			FUND BALANCE . . . . .		90,793.39
			LESS ORIGN. APPROPRIATION:		<u>-90,000.00</u>
					<u>\$27,549.14</u>

NOTE-- EXCESS OVER \$90,000 CASH TO BE CREDITED TO GENERAL FUND. 1-2-58 AG OPINION.

NORTH DAKOTA STATE WATER COMMISSION  
PAYROLL - MAY 31, 1964

SALARIED EMPLOYEES

NAME	POSITION	PAY GRADE	REMARKS	SALARY	W/TX.	SS.	INS	BONDS	NET
HOISVEEN, MILO W.	STATE ENGR	Q-10	INC JUL '63	1,125.00	134.20	10.88	15.00	131.25	833.67
BESLER, GORDON	DRAFTSMAN	G-8	INC JUL '63	443.67	47.40	16.08			380.19
CHRISTENSEN, RAY	ENGR AID	E-5	INC APR '64	298.67	34.20	10.83			253.64
COOPER, VERNON S.	ASST SECY	1-7	INC NOV '63	275.34	30.00	9.98	15.00		220.36
DEAKE, SHERRYN	STENO	D-5	INC MAY '64	252.00	35.30	9.13	2.70		204.87
ENGSTROM, VIRGLE	RODMAN	D-7	INC APR '64	265.50	29.70	9.62	2.70		223.48
FREDRICKSON, FRED	COORDINATOR	I-9	INC JUL '63	700.00	74.70	25.38	15.00		584.92
FREDLICH, LARRY	GEOLOGIST	H-7	INC JAN '64	491.67	29.70	17.82	14.65		429.50
GLOVER, DALE	HYDROLOGIST	J-9	INC JUL '63	640.67	150.00	23.22			467.45
HILAND, LEONE	CH STENO	G-6	INC MAY '64	421.67	52.40	15.29	2.80		351.18
JOHIM, CLIFF	ATTORNEY	F-5	INC APR '64	298.67	46.20	10.83	15.00		226.64
KNUTSON, LEWIS	DRILLER	H-2	INC AUG '63	429.17	36.90	15.56			376.71
LINDVIG, MILT	ENGINEER	H-8	STA NOV '63	504.17	63.60	18.28			422.29
LIVERSAGE, KAY	STENO	E-2	INC MAY '64	274.67	30.90	9.96	2.70		231.11
MURRAY, MARILYN	STENO-PT	B-8	STA JUN '64	100.00	6.50	3.63			89.87
NEILSON, G. P.	ENGINEER	L-5	INC APR '64	690.67	98.00	25.04			567.63
PUTZ, ROY	OFF ASST	C-8	INC APR '64	231.92	16.60	8.41	2.70		204.21
RYINIUS, MERRIL	ENGINEER	K-3	INC JAN '64	600.67	86.80	21.77	2.95		489.15
SACKMAN, EUGENE	SURVEYOR	H-4	INC APR '64	454.17	31.90	16.46	14.65		391.16
SANDWICK, HAZEN	ENGINEER	M-5	INC DEC '63	767.67	70.30	27.83	15.00		654.54
SCHANTZ, GEORGE	ENGR AID	E-2	INC APR '64	274.67	23.10	9.96			241.61
SCHMID, ROGER	GEOLOGIST	K-4	INC JAN '64	508.67	40.30	18.44	.25		449.68
SCHULZ, DEL	ENGINEER	K-4	INC JUL '63	617.67	79.00	22.39	2.95		513.33
SCHULZ, JIM	ACCOUNTANT	J-8	INC JUL '63	625.17	63.50	22.66	15.00		524.01
SHACKLEFORD, WM.	RODMAN	C-5	STA MAY '64	102.22	10.80	3.71			87.71
WALTERSON, HOWARD	CONST SUPT	K-3	INC MAR '64	494.67	53.00	17.93	10.00		413.74
WALTERSON, JEAN	DRAFTSMAN	F-5	INC JUL '63	354.67	42.70	12.86			299.11
ZIEGLER, VICTOR	ENGINEER	M-7	INC JUL '63	787.67	93.60	28.55	15.00		650.52
SWG GROUP INSURANCE - 2105				105.00			105.00		.00

PAYROLL - CONTINUED

HOURLY EMPLOYEES

NAME	POSITION	PAY GRADE	REMARKS	SALARY	W/TX.	S.S.	INS.	BONDS	NET
FROEMMING, DALE	OPERATOR	1.60	STA MAY'64	140.80	16.20	5.10			119.50
HILZENDAGER, DENNIS	OPERATOR	1.70	INC APR'64	290.70	33.70	10.54			246.46
KNOTSON, LANNY	DRILLER	2.10	INC APR'64	547.25	67.60	19.83	2.70		457.12
KOSLE, ROBERT	OPERATOR	1.60	STA MAY'64	140.80	16.20	5.10			119.50
MORGEN, NICHOLAS	OPERATOR	1.50	STA MAY'64	16.50	2.35	.60			13.55
OLSON, PALMER	OPERATOR	1.50	STA MAY'64	144.00		5.22			138.78
PETERSON, JOHN	OPERATOR	2.15	INC APR'63	449.35	56.00	16.29			377.06
SAUVAGEAU, DUANE	OPERATOR	1.60	STA MAY'64	140.80	16.20	5.10			119.50
SCHOCK, RUDOLF	OPERATOR	1.60	STA MAY'64	140.80	16.20	5.10			119.50
SINGER, ANTON	OPERATOR	2.25	INC MAR'64	603.00	74.90	21.86			506.24
WELLER, PIUS	FOREMAN	2.40	INC MAR'64	357.60	5.60	12.97	14.65		324.38
WEIGEL, JOE	OPERATOR	1.95	INC APR'64	474.83	57.80	17.22			399.81
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				16,582.81	1,874.05	567.43	286.40	131.25	13,723.68