

WILD RICE WATERSHED DISTRICT

11 East 5th Avenue – Ada, Minnesota 56510

Phone (218) 784-5501

SPECIAL MEETING

An informational meeting related to possible repairs to the Green Meadow Dam was held on January 5, 2005, at the VFW Meeting Room located at 415 West Main Street, Ada, MN.

The following members were in attendance: Joe Spaeth, Warren J. Seykora, Jim Skaurud, Diane Ista, Bob Wright and Jim Wagner Sr. The following members were absent: Steve Dalen. In addition, the following persons were also present: Attorney Elroy Hanson, Engineer Jerry Bents, Administrator Bennett and Loretta Johnson, Recording Secretary.

Chairman Seykora called the meeting to order at 9:15 a.m.

Administrator Bennett provided background information on the Green Meadow Dam Project, which is part of the Anthony, Pleasant View-Green Meadow Ditch Project that was established by a petition filed by landowners with the Board of Managers on May 30, 1985. Improvements included enlarging the capacity of Norman County Ditch No. 68, which, is the legal drainage system within the project area. Drainage improvements were included as part of the original project by providing additional drainage capacity to the Hadler Ditch and installing a levee system to convey runoff through the Green Meadow Creek. In order to contain flows from the drainage area the original improvements included increasing the bottom width, deepening the ditch at several locations and the addition of side slopes that were flattened for maintenance purposes and to allow the ditch to open earlier in the spring. A primary purpose of the drainage system is to enable the affected landowners to realize maximum drainage benefits for agricultural production. The Green Meadow Dam was constructed in the 1970s and included as a feature to the project. The Green Meadow Dam provides a controlled outlet for 28 square miles of the total 63 square miles of the drainage area contributing to the project. The project was constructed in 1988 at the original cost of \$795,670. Two hundred seventy six acres of land were acquired for the project with a total benefit of \$1,785,424.20.

Engineer Bents did a PowerPoint presentation on the Green Meadow Dam project and reviewed a report prepared by Midwest Testing Laboratory, Inc. (MTL) on the soils investigation performed on the dam. Bents provided the information included in the report along with cost estimates for three possible repair options.

The MTL report states; *"In our opinion, seepage and erosion will continue to be a problem for the dam which is constructed primarily of sand deposits. In our opinion, long-term seepage through the dam can transport fines from the sandy soils and may establish flowpaths for seepage, which can cause increased problems over time. Erosion of the embankment slopes should be expected to continue due to the sandy, erodible nature of the soil and topsoil found in this area. If these problems are unacceptable, we recommend constructing a new dam with a clay core (to control seepage), a keyway and a filter or drain on the downstream section of the embankment to permit free passage of water and prevent migration of fines through the filter."* Bents commented that since funding is most likely not available to reconstruct the dam he has prepared recommendations on a series of optional repairs for the Board to consider.

Option 1 – Minimum Procedure

From the MTL report it recommends; *“If past performance of the dam has been acceptable, as a minimum procedure, we recommend repairing all currently eroded portions of the dam and reestablishing the one foot thickness of the most impermeable soil on the outer portion of the dam, followed by the establishment of a thick vegetative growth to protect the dam from further erosion.”*

The Option 1 repair and cost estimate assumes the repair and re-grading all existing erosion/sloughing areas of the embankment, placement of a minimum one foot thick blanket of impermeable clay soil will be imported and placed to further reduce the potential for seepage and erosion at these locations (19+00-21+00, 23+50-35+00, 45+00-46+00, and 105+50-110+00.) For reconstruction on the downstream side of the embankment, it is assumed that native material from the adjacent land will be used. Upon completion of the repairs in the identified reaches, the final embankment cross-section would have a minimum 3:1 upstream and 2.5:1 downstream slope with top elevation constructed to 991.0. Note that it is assumed that the upstream slope will not be disturbed except for in the areas that will be repaired with the imported clay soil. All disturbed areas would be recovered with topsoil, seeded and mulched. In either case, any additional soil placed on the dam having a thickness of more than one foot would be notched into the current embankment to prevent future sliding along this interface. In addition to these repairs, this option also assumes that the embankment in the South ½ of Section 15 would be fenced to prevent cattle damage and allow for a thick vegetative growth to protect the dam from further erosion.

TOTAL OPINION OF PROBABLE COST FOR OPTION 1 = \$96,225

Option 2A – Resloping – Minimal Material Import Procedure

From the MTL report it recommends; *“If the previous dam performance has been acceptable and you wish to improve the seepage and erosion aspects of the current dam, we recommend flattening all upstream slopes which are currently steeper than the typical design slope of 3:1 and downstream slopes which are steeper than 2.5:1. Flattening of the slopes should help decrease seepage through the embankment.”*

Upon completion of the repairs in the noted reaches, the final embankment cross-section would have a minimum of 3:1 upstream and 2.5:1 downstream slope with top elevation constructed to 991.0. On the upstream side of the embankment, a minimum one-foot thick blanket of impermeable clay soil will be imported and placed to further reduce the potential for seepage and erosion at these locations (102+80-105+50 and 116+50-121+50). For reconstruction on the downstream side of the embankment, it is assumed that native material from the adjacent land will be used. Note that it is assumed that the upstream slope will not be disturbed except for in the areas that will be repaired with the imported clay soil. All disturbed areas would be recovered with topsoil, seeded and mulched. As noted in Option 1, any additional soil placed on the dam having a thickness of more than one foot would be notched into the current embankment to prevent future sliding along this interface.

TOTAL OPINION OF PROBABLY COST FOR OPTION 2A = \$162,100

Option 2B – Resoling – Extensive Material Import Procedure

From the MTL report it recommends; "Placement of a minimum one foot thick blanket of impermeable clay soil is recommended on the upstream slope to further reduce the potential for seepage through the existing dam. This layer of clay should be covered with topsoil and vegetation should be established capable of withstanding erosion from wave action and runoff."

The Option No. 2B repair and cost estimate assumes that all of the repairs noted in Option 2A are completed. In addition, a minimum one-foot thick blanket of impermeable clay soil will be imported and placed to further reduce the potential for seepage and erosion between Stations 110+00 to 116+50 and 121+50 to 142+50. Upon completion of the repairs in the noted reaches, the final embankment cross-section would have a minimum of 3:1 upstream and 2.5:1 downstream slope with top elevation construction to 991.0. As stated in Options 1 and 2, it is assumed that the upstream slope will not be disturbed except for in the areas that will be repaired with the imported clay soil. All disturbed areas would be recovered with topsoil, seeded and mulched.

TOTAL OPINION OF PROBABLE COST FOR OPTION 2B = \$212,630

Engineer Bents stated that the estimates do not include administrative and legal costs associated with land easement and rights of way.

Bennett also provided an amortization schedule for the three different options using a five-year, seven-year and ten year repayment schedule. For option three estimated to cost \$212,630 in repairs was amortized at 4% interest rate for five years would be between .27 cents per acre and \$2.68 per acre; seven years between .20 per acre and \$1.98 per acre and 10 years between .15 per acre and \$1.47 per acre.

Chairman Seykora opened the floor to questions. It was reported that Ed Ramstorf was unable to attend the meeting but requested that a seepage ditch be looked at as part of the repair to address water concerns in his basement.

Attorney Hanson provided information to the attendees regarding the process required in a Redetermination of Benefits.

Leon Johnson commented that if we continue to put more water into the dam structure there is no way that it can be kept safe. Manager Ista stated that she felt there is no more water but it continues to get there quicker. The question was raised about holding water on CRP acres so that landowners could have both storage and CRP. Manager Wagner commented that he had tried to do this on CRP, but was unable to get it worked out. Dale Sip asked if the banks were filled on the inside of the dam structure, would it decrease the capacity and questioned if it would be feasible to remove the sediment within the structure. Sip stated that landowners tell him that there is a lot of sediment and recommended when hauling in fill for the structure also hauling sediment out of the inside of the dam.

Manager Wagner stated that the southern end of the dam structure is pastured and there is not erosion in the areas where there is not pasture. Cary Sip noted that Steve Grieve stated the erosion areas shown have been there for 15 years and questioned using fertilize to reestablish the grass cover.

Kevin Jensen stated that it is going to take a combination of things including repairs to the south end of the structure, solving the problem for Ed Ramstorf; Jensen felt that in another 20 years the cost of the repair would probably increase ten fold.

Dave Vilmo stated that he would propose the repairs as listed in Option 2B. Vilmo went on to say the watershed district is working on obtaining holding areas, here we have a good one and we need to take care of it.

Manager Wagner said that if Steve Grieve uses the south side for pasture he should be compensated for the pasture land, no different than if it were anyone with wheat. Leon Johnson also commented that Steve Grieve needs to be compensated for his pasture land.

Sid Jackson questioned why clay wasn't used in the original structure.

Manager Dalen arrived at 10:25 a.m.

Manager Ista felt that she would also like to see Option 2B, to do as much as possible at the present time; along with compensation to Grieve for the pasture land.

Dale Sip questioned using fiber blanket or mesh to protect the integrity of the structure. Engineer Bents stated that fiber blanket is approximately \$1.50 per yard, and the cost is greater than the risk. Sip asked the cost of just using a dozer and adding two feet of protection to the top of the dam. Sip felt that you are only protection 20-30 percent of the dam for this price. Engineer Bents stated that the areas where there are steeper slopes are what is being addressed and are eroded areas and where the slopes are flatter; you would not need to rework these areas.

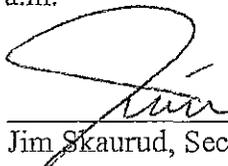
Horace Ooley questioned if there is a profile of the overflow section, because there is water continually over that. Ooley also asked the status of the township road and questioned who is responsible for the road as it washes out.

Cory Hanson, a Green Meadow Township Board member, stated that over the past years FEMA has assisted with costs to the repair of the road. Hanson stated that the District at one time requested a listing of costs related to the repairs but providing this is rather difficult because they are not specifically documented as they are usually done in conjunction with other repairs. Hanson also stated that it is important to address Ed Ramstorf's concerns regarding seepage into his basement, because he does have a major problem.

Chairman Seykora thanked everyone for their attendance at the meeting and asked that the Board would like to have landowners respond at the end of the meeting by marking their handouts as to which of the proposed repairs they would prefer to have done. Seykora noted that comments could also be dropped off at the District office.

The Board of Managers took no action at this time.

The meeting was adjourned at 10:55 a.m.



Jim Skaurud, Secretary



WILD RICE WATERSHED DISTRICT
 TRANSFERS
 YEAR ENDING 12/31/2004

FUND DESCRIPTION	BALANCE 12/31/2004	TO PROJECT	ADMINISTRATIVE	RRWMB CONSTRUCTION	SEC 205 MITIGATION	WORKS OF COMMON BENEFIT	BALANCE 12/31/2004
DNR-KlevgardArends	(14,091.71)			14091.71			0.00
PERMITS & INVESTIGATIONS\Violations	(43,843.23)			43,843.23			0.00
PUBLIC INFORMATION\DATA REQUEST	(6,232.70)					6,232.70	0.00
UPPER FELTON DITCH-STORAGE INV.	(4,472.52)			4,472.52			0.00
WAUBUN WETLAND BANKING	(1,876.12)				1,876.12		0.00
UPPER MOCCASIN CRK	(142.63)			142.63			0.00
WR RIVER PUBLIC ACCESS	(321.25)			321.25			0.00
COE 1135 SETBACK LEVEE	(1,236.93)				1,236.93		0.00
LEGISLATIVE FUNDING	(1,462.05)			1,462.05			0.00
SKAURUD FLOOD STORAGE	(150.00)			150.00			0.00
MARSH CREEK SITE #6	(145,590.44)			145,590.44			0.00
FELTON OFF CHANNEL-FLOOD STGE	(211.25)			211.25			0.00
SWCD 319 FLOOD STORAGE	(252.00)			252.00			0.00
CREP 260 RED RIVER BASIN	(347.70)			347.70			0.00
SYSTEMS APPROACH-CARRYOVER	(472.00)			472.00			0.00
WR COE FEASABILITY STUDY	(196,443.51)				196,443.51		0.00
UPPER RCHS-PL 84-99 2002	(9,827.26)				9,827.26		0.00
NORTHERN IMPROVEMENT	(4,275.65)			4,275.65			0.00
PROJECT #10-MASHAUG CRK	(317.90)			317.90			0.00
PROJECT #35-SANDE DETENTION	(6,655.77)			6,655.77			0.00
PROJECT #36-MARSH CREEK #3	(7,159.00)			7,159.00			0.00
PROJECT #38-ROCKWELL DAM	(5,442.12)			5,442.12			0.00
PROJECT #39-MASHAUG DAM	(495.28)			495.28			0.00
OVERALL PLAN (10YEAR)	0.00		1,500.00	0.00			1,500.00
CAP IMPROVEMENTS (10 YEAR)	0.00		2,500.00	0.00			2,500.00
WORKS OF COMMON BENEFIT	0.00		29,000.00	0.00			29,000.00
TOTALS	(451,319.02)	0.00	33,000.00	235,702.50	209,383.82	6,232.70	

