

MINUTES OF SPECIAL MEETING
CASS COUNTY JOINT WATER RESOURCE DISTRICT
CASS COUNTY HIGHWAY DEPARTMENT
WEST FARGO, NORTH DAKOTA
NOVEMBER 16, 2016

The Cass County Joint Water Resource District met on November 16, 2016, at 9:30 a.m. at the Cass County Highway Department, West Fargo, North Dakota.

Present were Jacob Gust and Richard Sundberg, Rush River Water Resource District; Michelle Anderson, Administrative Assistant; Mike Opat and Josh Hassell, Engineers for the Board; Pat Downs, Moore Engineering, Inc.; Mike Hargiss, North Dakota Department of Health; Randy Gjestvang, Red River Retention Authority and State Water Commission; Bruce Kreft, North Dakota Game and Fish Department; Eric Dahl, Cass County Soil Conservation District; and those whose names appear on the attached roster.

Rush River Watershed Project Team Planning Meeting

Pat Downs welcomed the Rush River Watershed Project Team (Team) and introductions were made.

The Team reviewed the draft *Purpose and Need Statement*, goals and objectives for planning outcomes, the Alternatives formulated at previous meetings, data used to narrow the Alternatives from the *Alternative Screening Worksheet*, and the priority problem areas within the watershed identified for potential flood damage reduction solutions. Road elevation and culvert sizing were added to the list of Alternatives.

The purpose and goal of the Team meeting is to choose the level or target of protection and narrow down final Alternatives to meet the purpose and need for a detailed study to find potential solutions for flood damage reduction in the Rush River Watershed. Mr. Downs reviewed the areas of concern identified by the Team. He explained each part of the process requires written reasons and criteria for keeping or removing a conceptual project site.

Josh Hassell provided information on the HED-HMS, 2D-HECRAS modeling results for 10-year, 25-year, 50-year and 100-year, and 24-hour preliminary inundation maps using historical data from 2009-2011 based on depths of .5 inches or greater in the Rush River Watershed. A preliminary 2D HECRAS map was presented demonstrating a 10-year 24-hour event compared to a 100-year 24-hour event and the results at the priority damage areas identified by the Team at previous meetings. The Team determined the level or target of protection for watershed projects in the Rush River Watershed to be a 10-year 24-hour event, which produces an average rainfall of 3.48 inches and an average basin runoff of 1.29 inches.

A summary of remaining Alternatives was presented and discussed. The Team reviewed the *Evaluation Summary Worksheet* and analyzed the data to narrow down final Alternatives for flood damage reduction in the Rush River Watershed. The Team reviewed impoundment/dry dam, channelization, road elevation considerations and culvert sizing. Grassland restoration and best management practices (BMPs) were discussed as tools to use in conjunction with the primary Alternatives. Josh Hassel provided data on impoundments. Comparisons were made between the acres impacted to the volume inundation acres at the spillway. Mr. Downs stated location and property ownership were not considered.

Extensive discussion was held on Alternative #6. David Strand stated an impoundment on land intended for Alternative #6 will have very little benefit for slowing the flow of water and will make the soil salinity worse. Eric Pueppke stated he farms land around Alternative #6 and a continual small flow of water does exist between Sections 27 and 34 in Empire Township, but the road does not wash out. When wet conditions exist in Section 35, the water drains from the northeast and northwest corner into the center channel. Mr. Pueppke stated an impoundment is not going to offer further protection and holding water will further deteriorate the soil. A gas pipeline may also be located in this area. Mr. Pueppke and Harvey Morken stated Alternative #6 should be removed from the list of potential solutions.

Pat Downs reviewed the problem areas identified on the preliminary inundation map and explained road damage was reported upstream and downstream of the City of Amenia. Mr. Downs explained the City of Amenia is in the process of evaluating options for flood damage reduction and have discussed putting in a levee on the north side. They are investigating costs and how to fund the project. Mr. Downs referenced a letter received from the City of Amenia.

Alternative #7 was discussed as a potential solution. David Strand stated the road washouts and damages from the previous floods have been remedied. The township put in two culverts and took out the bridge. Eric Pueppke stated he is familiar with the roads marked on the preliminary inundation map, one is an abandoned road and the other is a grass trail that has not been graveled for 50 years. Mr. Stand and Mr. Pueppke stated road and field erosion are not a problem. Mr. Strand stated the partial solution is to change the size of the culverts.

Mr. Downs reviewed the Team meeting planning process and stated other problem areas in the watershed were identified by people not present at the meeting today. Bruce Kreft stated impoundments were considered at earlier meetings and upstream impoundments do have benefits for upstream and downstream property owners. Tom Roden and David Stand stated the problem is overland flooding. Tom Roden stated water in Harmony Township is due to overland water flow across the county in the spring. Josh Hassel explained modeling results do indicate overland water flow along with breakout flooding from the river. Mr. Stand stated there are no problems in the watershed and crop loss is because of overland flooding, not flooding from the Rush River channel. Mr. Strand stated if water is stored by an impoundment upstream, it would only benefit property owners

downstream. Mr. Strand stated damage downstream is not from the Rush River. Tom Roden stated the Rush River will break out in Harmony Township during high peak flow. Jim Howe stated channels already exist in Harmony Township that prevent overland flooding and an impoundment is not needed. Mr. Strand stated coulees on the Rush River also help to slow the flow of water downstream.

Discussion was held on the economic analysis, existing storage capacity of Brewer Lake, insurance available to cover crop loss from flood damage, legal drain capacity, state laws requirements for the size of culverts and road elevation considerations.

Bruce Kreft stated from an environmental perspective, the Corps of Engineers and other local agencies prefer off-channel projects, which may include an impoundment on farmland. Mike Hargiss stated Brewer Lake and the Rush River are listed on the 2014 impaired waters list with fish and other aquatic biota as threatened due to sediment and silt. Watershed projects on the main channel of the Rush River will have environmental impacts and increased mitigation, which will add to the overall project cost. Mr. Kreft stated options exist for the land to be productive during dry years. Eric Pueppke stated taking prime farmland out of production will have a negative economic impact. Mr. Strand stated he does not want an impoundment on his land.

Mr. Opat explained the Cass County Joint Water Resource District recommended the process for the Rush River Watershed due to funding available through the Natural Resources Conservation Service (NRCS). Harvey Morken stated he will not recommend an Alternative that will cause harm to a landowner. The Team agreed to meet with the Cass County Joint Water Resource District to provide an update, explain the issues and discuss the next step in the process.

Adjournment

There being no further business to be considered by the Board, the meeting adjourned without objection.

APPROVED:

Mark Brodshaug
Chairman

ATTEST:

Carol Harbeke Lewis
Secretary-Treasurer