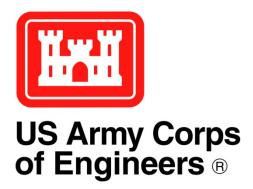
Appendix R Draft Environmental Impact Statement Public and Private Comments Received

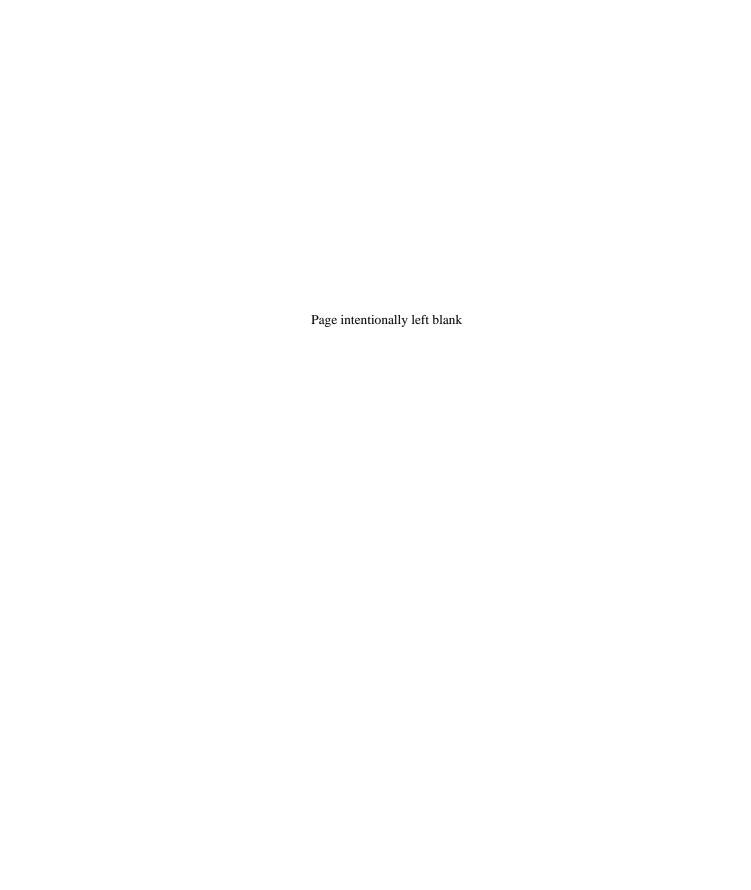
Fargo-Moorhead Metropolitan Area Flood Risk Management

Final Feasibility Report and Environmental Impact Statement

July 2011



Prepared by: U.S. Army Corps of Engineers St. Paul District 180 Fifth Street East, Suite 700 St. Paul, Minnesota 55101-1678



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August 5, 2010

Ref: 8EPR-N

Mr. Aaron Snyder St. Paul District U.S. Army Corps of Engineers 190 E. 5th St., Suite 401 St. Paul, MN 55101

Re:

Fargo-Moorhead Metro Area

Flood Risk Management FR/DEIS # 20100210

Dear Mr. Snyder:

The U.S. Environmental Protection Agency, Regions 8 and 5 (EPA) have reviewed the U.S. Army Corps of Engineers (Corps) Draft Feasibility Report and Environmental Impact Statement (FR/DEIS) for the Fargo-Moorhead Metropolitan Area Flood Risk Management project. EPA offers these comments in accordance with the Agency's responsibilities under the National Environmental Policy Act (NEPA), 42 U.S.C. Section 4332(2)(C) and Section 309 of the Clean Air Act, 42 U.S.C. Section 7609.

The majority of the Fargo-Moorhead metropolitan area is located in the floodplain of the Red River of the North and several tributaries. The proposed project is to reduce flood risk and flood damages. EPA has participated throughout the development of this project and we agree with the Corps that an action alternative is necessary to reduce flood risk and flood damages and to improve public safety.

The FR/DEIS fully analyzes three alternatives: No Action – continue emergency measures, a North Dakota diversion channel alternative and a Minnesota diversion channel alternative. Both diversion channel alternatives have a capacity of 35,000 cubic feet per second (cfs). The North Dakota diversion channel (ND 35K) which is also the Locally Preferred Plan alternative (LPP), has been identified by the Corps as the tentatively preferred alternative in the FR/DEIS. The Minnesota alternative (MN 35K) is also referred to as the Federally Comparable Plan (FCP).

The following bullets summarize EPA's concerns about the proposed project and our recommendations to improve the environmental analysis and mitigation measures. EPA's specific comments on the FR/DEIS start on page 5 of this letter.

EPA Concerns:

- The information provided in the Clean Water Act (CWA) § 404(b)(1) analysis does not fully support the conclusion that the ND 35K alternative (the tentatively selected preferred alternative) is the least environmentally damaging practicable alternative (LEDPA). This alternative impacts substantially more wetlands and riparian areas than the MN 35K alternative.
- The broad-based non-structural alternative described in Appendix P. and various scoping meetings appears to have been eliminated from the tentatively selected preferred alternative. The broad-based non-structural alternative measures will be important in maintaining the sustainability of flood protection in the Fargo-Moorhead area and limiting development in flood prone areas.
- The flood flow rates used to develop the proposed flood protection measures and determine environmental impacts have changed several times as the FR/DEIS was being prepared. As a whole, the project and analysis is much improved with the recalculation of flood rates, however the document is difficult to follow and it is often unclear which flood rates were used for the impact analysis.
- The impact analysis of the proposed alternatives on downstream flooding is incomplete because of the revisions to the flood flows mentioned above.
- The FR/DEIS did not include the environmental impacts of induced growth from changes to the regulatory floodplain.
- The mitigation and monitoring plans for the project are largely undefined.

EPA Recommendations:

- The CWA §404(b)(1) analysis needs to be revised to include a complete description of the decision process which resulted in identification of the tentatively preferred alternative, ND 35K. This documentation should include descriptions of the alternatives analyses, practicability determinations, and consideration of local preferences for both the ND 35K and MN 35K diversion channel alternatives.
- The broad-based non-structural alternative needs to be more fully developed and implemented as part of the selected diversion channel alternative.
- The revised impact analysis of the diversion channels on downstream flooding needs to be recalculated and mapped based on the new flows and distributed to the public and government agencies prior to issuing the FEIS.
- The environmental analysis needs to be updated or referenced to the recalculated flood discharge rates.

- Draft mitigation and monitoring plan(s) should be included in the FEIS identifying which measures are required, who will be implementing and funding the measures and identifying the criteria that will be used to determine success. Further, a monitoring and adaptive management program should be created to ensure mitigation measures are implemented effectively. Public participation and accountability should be included as part of these plans.
- The environmental analysis needs to look at the indirect impacts of the project such as inducing development in the former 100-year floodplain. The main areas of indirect impacts are wetland losses, loss of flood storage areas, and loss of riparian habitat. Ironically, the diversion channels will also increase development in the floodplain, increasing the area that may need to be protected during major flood events.
- The document should include a cumulative impacts analysis of other projects in the basin or affecting the basin including, but not limited to, Devil's Lake Outlet, which contributes or will contribute to flows into the Sheyenne River or other tributaries of the Red River during seasonal high flows.

Rating:

EPA's comments are based on the FR/DEIS and appendices that we received in June 2010. During our review of the FR/DEIS, we have also been discussing preparation of updated designs, revised analysis and development of the mitigation plan. We understand the tight schedule for construction of the Fargo-Moorhead flood control project has necessitated issuance of iterative versions of the feasibility studies, design plans and environmental analysis. However, we are concerned that the public and participating agencies may not have a full opportunity to review and comment on the major studies being prepared between the DEIS and FEIS. We recommend that the mitigation plan, downstream flooding analysis and fuller development of the non-structural alternatives be released to the public and agencies for comment prior to incorporating the information into the FEIS.

Pursuant to EPA policy and guidance, EPA rates the environmental impact of an action and the adequacy of the NEPA analysis. Since the Corps has "tentatively" identified a preferred alternative, EPA is rating each alternative presented in the FR/DEIS. Based on our review of the FR/DEIS and 404 (b)(1) analysis, we are rating the FR/DEIS as "EO-2" (Environmental Objections-Insufficient Information). The "EO" rating is based on impacts to wetlands and riparian areas. The "2" rating is based on the need for clarification or disclosure of information and the need for a final mitigation plan to accompany the Final EIS. A description of EPA's EIS rating system is also enclosed.

Thank you for considering our input. We would like to schedule a telephone call with the Army Corps of Engineers to discuss the concerns raised in this letter. If you have any questions regarding our comments, please call me at (303) 312-6004 or you may contact Dana Allen of my staff at (303) 312-6870. You may also contact Ken Westlake in Region 5 at (312) 886-2910.

Sincerely,

Larry Svotoda

Director, NEPA Program

Office of Ecosystems Protection and Remediation

EPA's Comments on the Fargo-Moorhead Draft Feasibility Report and Environmental Impact Statement (FR/DEIS) August 5, 2010

Background

The majority of the Fargo-Moorhead metropolitan area is located in the floodplain of the Red River of the North and several tributaries. The Red River has exceeded the National Weather Service flood stage of 18 feet in 47 of the past 108 years, and every year from 1993 through 2010. Although emergency measures have been successful, future average annual flood damages in the Fargo-Moorhead are estimated at \$195.9 million without an extensive flood control project.

The purpose of the proposed project is to reduce flood risk and flood damages in the Fargo-Moorhead Metropolitan area. The project will also restore or improve riparian habitat, increase wetland habitat and provide recreational opportunities. The FR/DEIS fully analyzes three alternatives: No Action – continue emergency measures, a North Dakota diversion channel and a Minnesota diversion channel. Both diversion channel alternatives have a capacity of 35,000 cubic feet per second. The Locally Preferred Plan alternative, the North Dakota 35K diversion channel, has been identified by the Corps as the tentatively preferred alternative in the FR/DEIS.

<u>ND 35K</u>

Locally Preferred Plan (LPP)
North Dakota, west of Fargo
36 miles long diversion channel
18 hwy bridges, 4 railroad bridges
5 control structures at:
Red, Wild Rice, Sheyenne, Maple, Rush
and Lower Rush Rivers

MN 35K

Federally Comparable Plan (FCP) Minnesota, east of Moorhead 25 miles long diversion channel 20 highway bridges, 4 railroad bridges Red River control structure

Wetlands

Clean Water Act § 404(b)(1) Analysis

1. The FR/DEIS includes a preliminary Clean Water Act (CWA) § 404(b)(1) Guidelines Evaluation in Attachment 1. The CWA § 404 (b)(1) analysis is used to determine the Least Environmentally Damaging Practical Alternative (LEDPA) under CWA § 404. The CWA § 404(b)(1) Guidelines state "no discharge shall be allowed if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem (waters of the U.S.) so long as the alternative does not have other significant adverse consequences" 40 C.F.R. 230.10(a).

The information provided in the CWA § 404(b)(1) analysis does not fully support the conclusion that the ND 35K alternative (the tentatively selected preferred alternative) is the LEDPA. The Corps needs to provide additional detail and discussion to justify why they believe the MN alternative (the FCP or NED) is not practicable. It appears that the MN 35K (FCP) alternative was not included in the § 404(b)(1) analysis because the FR/DEIS and § 404(b)(1) analyses used two different project purpose statements, with the project purpose statement for § 404(b)(1) specifically and additionally including reducing flood risk, flood damages and flood protection costs related to flooding of the ND tributaries. It is our understanding from discussions with the Corps that the MN alternative was not considered practicable for other reasons independent of either stated project purpose. In accordance with the Guidelines, an alternative is considered practicable if it is available and capable of being done after taking into consideration cost, existing technology and logistics in light of overall project purposes.

The CWA § 404(b)(1) analysis needs to be revised to include a complete description of the decision process which resulted in identification of the tentatively preferred alternative. This documentation should include description of all FR/DEIS alternatives analyses (including the non-structural alternative measures associated with the MN 35K), practicability determinations, and consideration of local preferences. The burden of proof to demonstrate compliance with the Guidelines rests with the Corps, and sufficient information must be provided in the analysis (40 CFR 230.12(a)(3)(iv)). The § 404(b)(1) analysis needs to include additional documentation to substantiate the Corps' position that the ND 35K is the LEDPA. While this information may be available in other parts of the document, it needs to be presented in the context of the § 404(b)(1) analysis to substantiate the Corps conclusions.

2. The CWA § 404(b)(1) evaluation refers to the National Economic Development (NED) Plan, currently the Minnesota 40K alternative. However, the NED alternative was not analyzed in the FR/DEIS. The MN 35K (FCP) and the ND 35K (LPP) are the only alternatives fully analyzed in the FR/DEIS. We recommend that the alternatives discussed in the § 404(b)(1) evaluation be consistent with the FR/DEIS.

Wetlands -- Environmental Analysis and Mitigation

3. As described on page 260 in the mitigation section of the FR/DEIS, much of the proposed mitigation for riparian and geomorphic impacts is undefined. The FR/EIS identifies mitigation opportunities within the diversion channel for wetland impacts. However, this mitigation will not be appropriate for providing in-kind mitigation for impacts to forested wetland acres. Additionally, the Corps must also ensure that the suite of chemical, physical and ecological functions provided by the impacted wetlands are appropriately characterized and replaced. In order to do this, the Corps will need to provide a thorough analysis of the functions of the affected wetlands and riparian areas and identify in the mitigation plan how these functions will be mitigated. The mitigation plan should be consistent with the joint EPA, Corps Final Rule for Compensatory Mitigation for Losses of Aquatic Resources (2008).

We recommend that the FEIS include a full wetlands impact analysis, including a preliminary wetlands mitigation plan outlining the replacement ratios and availability of sites for in-kind mitigation.

- 4. In addition to wetlands mitigation options within the diversion channel, we recommend that additional mitigation opportunities for impacts to waters of the United States be identified and pursued in the upper watersheds of the Red, Wild Rice, Sheyenne, Maple and Rush river systems. These could include conversion of prior converted croplands back to wetlands and ponds (which will also assist in the retention of water in the watershed), and reversing the trend of the hydrograph toward more water.
- 5. For the ND 35K alternative, we note that the majority of the wetlands mitigation is proposed to take place in the diversion channel after intercepting the Rush and Lower Rush Rivers. We recommend that the expanded wetland analysis examine this area and other areas north and south of the Cities of Fargo and Moorhead for areas suitable for flood storage to mitigate the increase in flooding that would result from the proposed diversion channels. Looking at the flood depth maps and the areal extent of previous flooding, it appears that many of these areas have traditionally functioned as flood storage areas. These areas may also provide appropriate sites for forested wetland mitigation. The analysis should also look at the feasibility of modifying the proposed diversion channel in undeveloped areas, so that some areas of the channel bottom could revegetate with trees and shrubs.
- 6. The impact analysis for wetland losses underestimates direct impacts by separating construction impacts and permanent impacts and overestimates construction and indirect impacts caused by the channel by using a 2,000 foot width of disturbance to estimate wetland impacts. The analysis does not include the impacts from induced growth or the impacts of diverting flow from the Maple, Sheyenne and Rivers. The table below summarizes wetland impacts from the FR/DEIS:

	MN 35K (FCP)	ND 35K (LPP)
Wetland losses		
Permanent (channel footprint), direct impact	17 acres	32.5 acres
Wetlands within 5250' corridor Mix of direct construction (temporary), and indirect (2000 foot width likely over	85 acres	192 acres Does not include Rush Rivers de-watering and reduced flows for Maple and Sheyenne Rivers
estimated impacts)	[Width of Disturbance	≈ 2,000']
Indirect from induced development	Not included in FR/DEIS	Not included in FR/DEIS

We recommend that the analysis of direct wetlands impacts be revised to include construction impacts in the direct impacts. Further, these direct impacts should be divided into temporary (construction) and permanent (footprint of project) wetland losses.

Typically, indirect impacts would be those wetland losses that occur later or at locations not in the project area as a result of the project. For infrastructure projects, most indirect impacts stem from induced growth. By removing a substantial area of the community from the hundred year floodplain, additional and/or more rapid development will occur. This development will cause additional wetland impacts because of directly filling wetlands or draining wetlands for development.

- 7. Other likely indirect impacts would be from the diversion channel intercepting or cutting off wetland water sources. For example, it appears that there will be substantial wetland impacts from intercepting the flows into the Rush Rivers below the diversion channel, as described on page 201 of the FR/DEIS. The diversion channel may also block groundwater flow into this wetland area, depending on whether groundwater is a major source of water for the wetland system.
- 8. Table 16 -- Effectiveness in meeting planning objectives (page 80 FR/DEIS), lists the MN 35K as providing 1090 additional acres of wetlands. The North Dakota alignment would provide 593 additional acres of wetlands. The FEIS should clarify the source of these numbers and the reason for the large difference.

Design Flows for Flood Protection

Preparation of the FR/DEIS and impact analysis information have generated a lot of new analysis to quantify the appropriate design flood flow events for the Red River of the North. The FR/DEIS and the studies supporting the FR/DEIS have been in development during the same time frame as the new flood flow analysis. Overall, the recalculation of flood flow rates, in particular from the expert panel, will result in much better flood protection, improved design and a more sustainable flood control. However, it appears that much of the FR/DEIS impact analysis was prepared based on modeling using the 2009 flood stage as the equivalent of the 1% (100-year) flood event flow. The peak flood flows have been revised upwards to take into account climatic wet and dry cycles. The table below summarizes some of the different flood flow rates that have been used in developing the analysis for the Fargo-Moorhead flood control improvements and FR/DEIS.

	1% Chance (100- yr)		0.5% Chance (500-yr)	
	Stage at Fargo	Flow Rate (cfs)	Stage at Fargo	Flow Rate (cfs)
National Weather Service flood stage	18'			
FEMA (current)	38.3'			
FEMA (proposed)	39.3'			
2009 flood (Phase 3 feasibility study)	40.82'	29,400	46.7'	61,700
Expert Opinions – wet year	42.4'	34,700		

- 9. The FEIS should summarize the flood flows that will be used for the design of the proposed project and flood control efforts in the Fargo-Moorhead area. The FEIS also should note throughout the document which flow rates/flood stage were used in determining the impacts of the proposed project and determine whether the existing analysis needs to be updated for the new flood flows and stages. In particular, as noted in the FR/DEIS on page 145, the impact analysis for downstream water quantity will need to be revised in the FEIS to reflect new flow information and to analyze impacts from 0.5% probability (500-yr) flood.
- 10. The revised flow rate discussion should also disclose the various flood flow rates and stages that are being (will be) used for local, state, and FEMA flood protection efforts. The discussion should also address whether the revised flood stage numbers will change the local subdivision regulations and land use planning. (See also comments below regarding non-structural alternative).
- 11. The FEIS should discuss the pros and cons of designing a diversion channel for the approximately 1% probability (100-yr) flood event. This discussion should look at some of the other storm events such as the 700 -year flood level used in Winnipeg. We understand that level of flood protection is unlikely to be implemented solely by the Corps. However, it appears that additional flood protection can be gained by combining some of the measures from the non-structural alternative with a diversion channel alternative. [For example, will communities continue to raise or flood-proof new construction in case there is a greater than 1% (100-year) flood event or if the climatic wet cycle continues to increase flood discharge rates.]
- 12. Devil's Lake basin is currently experiencing rising waters and there is a renewed urgency to lower water levels. New proposals have been developed recently to increase discharges from Devil's Lake into the Sheyenne River. To the extent feasible, the FEIS should analyze the potential impacts of increased flow to the proposed project and flooding in the Fargo-Moorhead area.

Non-Structural Alternative

Sustainability and Preservation of the Floodplain

Over the last one hundred years, a series of flood control projects have been constructed to reduce flood risk for the Fargo-Moorhead area. In the long term, none of these flood protection measures have maintained the desired level of flood protection. Many of these previous flood control projects have been undermined by development in flood-prone areas, re-building in flood prone areas, and agricultural and development activities which eliminate flood storage and increase peak flows. Climatic cycles have also affected flooding. New flood control projects often have the effect of increasing development in flood prone areas. We anticipate that more flood prone areas in metropolitan Fargo-Moorhead will be developed as a result of the project changing the regulatory floodplain and zoning and building requirements.

13. Even if the new flood diversion channel is constructed, the Fargo-Moorhead area will continue to experience some flooding due the topography of the Red River Basin. As noted on page 235, Figure 82, there will still be substantial flooding north and south of Fargo

during the 500-year storm. Flooding will continue along all rivers during larger flood events. We are therefore, very concerned to see that the non-structural alternative has been dropped from the tentatively preferred alternative, in Section 3.11.1.2, page 89. It was our understanding from earlier discussions that the non-structural alternatives would be carried through and implemented along with the selected "structural" alternative. All of the measures listed on page 4 of Appendix P – Non-Structural should be implemented along with the "construction alternatives"; such as:

- Floodplain regulation and floodplain management,
- Coordinate with the National Flood Control Insurance Program,
- Watershed/floodplain land use planning,
- Land development redirection
- Raise buildings above a particular flood elevation
- Restore natural and beneficial floodplain functions

The "non-structural" alternative in the FR/DEIS also seems to have been modified from the initial concept of preserving and maximizing flood protection in the entire Fargo-Moorhead Metropolitan Area, as discussed in earlier interagency meetings and Appendix P. In the FR/DEIS, the non-structural alternative focuses on construction actions for buildings identified in two specific areas northwest and south of Fargo to increase flood protection for the MN 35K alternative.

We therefore recommend that the non-structural alternative described in Appendix P and other project meetings be fully integrated into the flood diversion channel project. We understand that the Corps will not be implementing and funding much of the non-structural alternative; however, the long-term success of the Corps' flood control project will be dependent on successful implementation of the non-structural alternative.

- 14. The non-structural alternative should be more fully developed. For example, will all or some of the measures listed on page 4 of Appendix P be implemented, what entities will be responsible for implementing the measures and how will the measures be funded? The non-structural alternative should incorporate the measures that have already been implemented by state and local governments updated to reflect changes that are anticipated as a result of the diversion channel. The expanded alternatives discussion should disclose how local and Federal Emergency Management Agency (FEMA) floodplain ordinances and building restrictions will be affected by the revised floodplain delineation that will result from construction of one of the diversion channels.
- 15. Implementation of the non-structural alternative should correlate with the additional analysis on indirect impacts (discussed below), as the level of induced growth in flood prone areas will vary depending on the implementation of the non-structural alternative. The Corps may want to consider using an expert panel to envision how the non-structural alternative will be implemented in the planning time frame (e.g., 20 years in the future). The indirect impact analysis would be based on that combination of future development and non-structural flood control policies and projects.

- 16. Among the more important of the non-structural alternative measures listed on page 4 of Appendix P are: continuation of floodplain regulations and floodplain management, restoring natural and beneficial floodplain function, coordination with the national flood insurance program, and land development redirection. We also recommend limiting any new land drainage activities that could increase peak flows, unless the increase in peak flow could be offset through mitigation.
- 17. We also recommend that the non-structural alternative be modified to focus on future and ongoing activities instead of focusing on existing buildings with a high risk of flooding. How will the cities, towns and counties reduce or eliminate flood risk for new development, or major renovations of existing development?
- 18. The FEIS should also discuss how the flood diversion channel and non-structural alternatives will be implemented. Who will manage the diversion structures and channel? What will be the funding and organizational structure of this flood control district? Who will be maintaining the riparian habitat and flood carrying capacity of the existing floodplains of the Red River of the North and Fargo-Moorhead tributaries?
- 19. This project will provide one of the best opportunities to accelerate implementation of the objectives and recommendations of the International Red River Board (IRRB) ¹ in the Fargo-Moorhead Area. We suggest that the recommendations of the IRRB be more directly incorporated into the non-structural alternative. Of course, the proposed project will meet the International Joint Commission (IJC) Recommendation #4: to implement flood protection measures for the Fargo-Moorhead area. In particular, we recommend that the analysis of the non-structural alternative evaluate how well the proposed non-structural measures will achieve Recommendation 26:

Governments at all levels should undertake the following measures:

- Develop and implement comprehensive, multi-faceted plans for concurrently reducing flood damage and protecting and enhancing the natural environment; and
- h. Integrate floodplain management activities into the broader field of watershed and basin management.

Increased Downstream Flooding

Page 81 (alternatives comparison) and Section 5.2.1.4 –Downstream Water Quantity on Page 145 have placeholders for revising the analysis of downstream flooding impacts. It is unclear which flood discharge rates were used to determine the increase in flood stages caused by the proposed alternatives and the maps of the areas which will be affected by increased downstream flooding.

¹ "How Are We Living with the Red?", R. Halliday & Associates, June 2009, http://www.ijc.org/php/publications/pdf/ID1633.pdf; and "Living with the Red – A Report to the Governments of Canada and the United States on Reducing Flood Impacts in the Red River Basin", November 2000, http://www.ijc.org/php/publications/html/living.html

- 20. The increased downstream flooding impact analysis needs to be revised based on the recalculated flood flow rates as determined by the expert panel. The revised analysis should be released to the public and other agencies well before the FEIS is issued.
- 21. Mitigation should be developed to reduce the higher peak flows caused by either of the proposed diversion channels. This mitigation might include provisions such as leasing farm fields during the peak runoff or the use of recreation fields or golf courses to store flood waters and reduce peak flood flows.
- 22. The analysis in Section 5.2.1.4 Downstream Water Quantity should be expanded to include the impacts of the proposed project during a 500-year flood event for both alternatives.

Changes in Hydrology, Geomorphology

- The proposed flood diversion channel will greatly change the flow pattern and quantity of 23. flow for all the diverted or partially diverted rivers. The FEIS should add mitigation measures to compensate for the abandonment of 2.7 miles of the Rush River and 3 miles of the Lower Rush River (Table 46). Although the Rush and Lower Rush Rivers have lower quality aquatic habitat and less abundant aquatic life than more natural streams, the loss of 5.7 miles of aquatic/riparian habitat still needs to be mitigated. The proposal to offset the loss of these tributaries through a meandering channel at the bottom of the diversion channel (page 266) needs to be developed sufficiently to determine the potential aquatic life and riparian habitat functions and values of the channel. There is little information in the FR/DEIS about the design and biological functions of the North Dakota diversion channel after intercepting the Rush and Lower Rush Rivers. Based on that limited information (e.g., the cross-section view of the channel, vegetation restrictions and channel description), it appears that the aquatic habitat values of the diversion channel might be rather limited. Additional information is needed to determine if the diversion channel can compensate for the loss or part of the loss of the Rush and Lower Rush Rivers.
- 24. Additional mitigation options should be pursued for adverse effects on stream geomorphology. While the 50% and 20% flow events will maintain transport of finer sediments, larger flow events may be required to sustain long-term geomorphic channel functions. Monitoring and mitigation options that consider these long-term functions should be incorporated as part of any updated mitigation plan. Also, it is unclear why riparian buffer establishment and restoration is proposed as mitigation for stream geomorphic impacts. Proposed mitigation should offset the functions lost by the proposed action. Riparian buffers do little to transport instream sediments and maintain substrate heterogeneity in streams.
- 25. The FEIS should include mitigation measures to offset the impacts of reducing flood flows to the equivalent of the 2-year storm for the Sheyenne and Maple Rivers. For example, is it possible to convey the equivalent of the 100-year storm from the diversion channel through the Sheyenne and Maple Rivers to maintain the floodplain and potentially reduce

- downstream effects of the diversion channel? The purposes of the mitigation measures would be to maintain existing flood conveyance capacities of these rivers and consequent condition of riparian and wetlands habitat.
- 26. Significant geomorphic impacts are not anticipated for the Sheyenne and Maple Rivers and mitigation costs are not included in the cost estimates. We recommend modifying the cost estimates to include long-term monitoring of stream geomorphology and sediment movement, as these potential effects are likely to occur gradually and may not be detected for several years.
- 27. On page 108, first paragraph, the Wild Rice River is identified as having "a greater sediment transport capacity of coarser material that exerts a bigger control on channel morphology." However, the impacts of diverting a portion of the Wild Rice River and sediment were not included in the Environmental Consequences, Section 5.2.1.3 Sediment and Erosion. The FEIS should include a discussion of potential impacts of diverting a portion of the sediment load on the downstream stream morphology of the Wild Rice River and Red River.

Indirect Impacts of Reducing the Floodplain

The FR/DEIS indicate that all of the diversion channel alternatives are expected to have a beneficial effect on the growth and development of the Fargo-Moorhead Metropolitan area. This beneficial effect is expected to be greater for the North Dakota alignment because it removes a much larger area from the existing floodplain.

The FR/DEIS (Section 5.2.3.2.1, page213) also indicates that developable lands within the project area will retain or increase in property value through removal of flood risk damage, there would no longer be a need to raise or flood-proof new construction, and that new development or intensification of existing development should be pursued only in a manner that retains awareness and sensitivity to the residual flood threat.

This indirect impact analysis is important for two reasons. First, the environmental analysis (FEIS) should include a comprehensive analysis of indirect impacts to resources (i.e., wetlands) as a result of the proposed flood control project. The results obtained in this analysis will aid in identifying the resources of concern to concentrate on when preparing the cumulative impacts analysis for the proposed project. Secondly, this discussion is an important tool (i.e., land use planning, zoning, etc.) for presenting the entire array of flood control and protection measures that are available to protect the metropolitan area. This analysis should directly correlate with the non-structural alternative, taking into account the likelihood of implementation of the various measures under the non-structural alternative. Implementation of the various flood control measures may vary from area to area and jurisdiction to jurisdiction. In summary, we believe that the indirect impact analysis developed in conjunction with the implementation plans for the non-structural alternatives will provide important information to the decision maker and local communities to reduce both flood risks and environmental impacts.

- 28. The FEIS should disclose the impacts of new growth and particularly growth induced by improved flood protection. The issues or resources that that are most likely to be affected by growth are: additional wetland and riparian habitat losses, loss of prime farmland, increased peak flows from suburbanization, and loss of floodplain or floodwater storage areas.
- 29. More specifically, we recommend the FEIS disclose the potential indirect impacts associated with growth and development by addressing the following:
 - What, if any, measures have local communities implemented or plan to implement (i.e., land use plans, zoning, regulations, etc.) to protect and enhance resources of concern in their community and when are these measures expected to be implemented? We recommend that this type of information be included in the more fully developed non-structural alternative plans.
 - Types of new development (i.e., residential, commercial, industrial, recreational, etc.) that might take place in the more developable area;
 - Ordinances, etc. protective of natural resources located in the developable area(s); and
 - Whether existing public facilities (i.e., wastewater treatment plant, police and fire protection, etc.) will be able to handle proposed development.
- 30. The FEIS should also analyze the impacts of increased development in flood prone areas with potentially less flood protection than much of the existing development in Fargo and Moorhead. For example, we understand that new development will no longer be required to flood proof or elevate above the flood stage. If a flood event greater than the 1% probability (100-yr) occurs, then the new developments could be more likely to be flooded.
- 31. Looking at the backwater analysis, it appears that the 1% probability (100-year) flood stage elevation will decrease significantly as a result of constructing one of the proposed diversion channels. How will development be affected by the changes in flood elevations for FEMA flood insurance maps and local building and flood control ordinances?
- 32. The indirect impact analysis should also include impacts from the tributary diversions for the North Dakota alternative. The channel will divert most of the flood flow from the Maple and Sheyenne Rivers. Only the equivalent of the 50% (2-yr) to 33% (3yr) probability flood flows will continue downstream of the diversion channel. How will the diversion of peak flood flows affect development in the historic Sheyenne and Maple River floodplains? In particular, it appears that new development or expanded development could be built closer to the Maple River and Sheyenne River affecting floodplains and riparian areas. The new development may also be less protected from flooding due to changes in building codes and ordinances. Similarly, the Lower Rush and Rush Rivers will be completely diverted into the diversion channel with no downstream flow. From the FR/DEIS, it appears that much of the area between the Lower Rush and Rush Rivers is wetlands. How will the diversion of these two rivers affect potential development or farming practices in this area?

33. The indirect impact analysis should also include the provisions of Executive Order 11988. Using the procedures described in "Further Advice on Executive Order 11988 Floodplain Management", Interagency Task Force on Floodplain Management, 1987, the indirect impact analysis should address induced development in the floodplain and in flood storage areas.

Environmental Justice

- 34. The environmental justice (EJ) analysis should be expanded north to include the areas that will have increased flooding as a result of the proposed diversion channel. For example, are there any potential EJ communities in Harwood, Argusville or Georgetown?
- 35. The EJ analysis should also look in more detail at the areas identified as potential environmental justice communities illustrated in Figures 82, 84, 85 and 86. In particular, several areas have been identified as having higher than average percentages of minority populations compared to county averages along the Minnesota alignment. There are also two areas adjacent to the proposed diversion channel alignment in West Fargo with higher than average percentages of minority populations. We recommend that the FEIS look at these areas in more detail to determine the nature of the potential EJ community, the proximity of the potential EJ community to the proposed diversion channel, and how the project may impact the population. For example, looking at aerial photographs, it appears that there is a small subdivision located in the vicinity of 40th Street North and 70th Ave North (Co Hwy 95) in one of the potential EJ areas (Clay County). Other Minnesota areas identified as potential EJ communities appear to have only one or two dispersed farm houses. The more detailed analysis should identify if any special out reach measures are needed to explain the potential impacts of the proposed diversion channel such as construction disruption, noise and fugitive dust. The diversion channel may also adversely affect the mobility of these communities to connect to jobs, schools and other members of the community.

Additional Comments

- 36. We recommend adding plan views of the Wild Rice River diversion structure and channel for different flow scenarios to the FEIS. This information would be similar to the conceptual views shown in FR/DEIS Figures 17-23 for the Maple and Sheyenne Rivers.
- 37. We recommend expanding Table 38 -- Hydraulic data for the Wild Rice River tributary structure, on page 204 to include flood events greater than the 5-year flood event. We understand from discussions with the Corps, that the diversion channel will divert only a portion of flood flows and the Wild Rice River will continue to convey some flood flows.

- 38. Major construction projects such as the proposed diversion channels can have significant local air impacts from construction equipment diesel engines. We recommend that air quality mitigation measures such at the following, be incorporated into the construction contracts.
 - Prohibit unnecessary idling of construction equipment;
 - Require use of low-sulfur fuel;
 - Locate diesel engines as far away as possible from residential areas;
 - Locate staging areas as far away as possible from residential uses;
 - Require heavy construction equipment to use the cleanest available engines or be retrofitted with diesel particulate control technology;
 - Use alternatives to diesel engines and/or diesel fuels such as: biodiesel, liquid natural gas (LNG) or compressed natural gas (CNG), fuel cells, and electric engines;
 - For winter time construction, install engine pre-heater devices to eliminate unnecessary idling;
 - Prohibit tampering with equipment to increase horsepower or to defeat emission control devices effectiveness;
 - Require construction vehicle engines to be properly tuned and maintained; and
 - Use construction vehicles and equipment with the minimum practical engine size for the intended job.



United States Department of the Interior



OFFICE OF THE SECRETARY

Office of Environmental Policy and Compliance Denver Federal Center, Building 67, Room 118 Post Office Box 25007 (D-108) Denver, Colorado 80225-0007

July 26, 2010

9043.1 ER 10/512

Colonel Michael J. Price District Engineer U.S. Army Corps of Engineers St. Paul District 180 Fifth Street East, Suite 700 St. Paul, Minnesota 55101-1678 Attention: Aaron M. Snyder

Dear Colonel Price:

The Department of the Interior (Department) has reviewed Feasibility Report and Draft Environmental Impact Statement, **Fargo-Moorhead Metropolitan Area Flood Risk Management**, Cass County, North Dakota and Clay County, Minnesota, and offers the following comments:

GENERAL COMMENTS

The United States Fish and Wildlife Service (USFWS) is authorized under the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.) to provide recommendations to the Corps of Engineers on federally-funded water development projects. Based on information available at this time and the Impact Analysis outlined in its Draft Fish and Wildlife Coordination Act Report (May 2010), the USFWS recommends that, should the Corps of Engineers and the Local Project Sponsors proceed with the Fargo-Moorhead Metropolitan Flood Risk Reduction Project, the Minnesota 35,000 (MN 35K) Diversion Channel Alternative be the selected Alternative.

Adverse ecological impacts will occur with either of the Diversion Channel Alternatives. For the following reason, however, the MN 35K Alternative would result in less severe ecological impacts than the North Dakota 35,000 (ND 35K) Diversion Channel Alternative:

- 1. The ND 35K Alternative is anticipated to adversely impact approximately 88 more acres of wetland than the MN 35K Alternative;
- 2. The ND 35K Alternative, as proposed, would result in 29 more acres of adverse impacts to aquatic habitat than the MN 35K Alternative;

Colonel Michael J. Price 2

3. The ND 35K Alternative would adversely impact 5 rivers in addition to the main stem of the Red River;

4. Apart from the work that would occur within the Red River and the adjacent riparian habitat, the land uses that would be primarily affected by the MN 35K Alternative have limited wildlife habitat value.

For a complete list of fish and wildlife recommendations, please refer to the USFWS Draft Fish and Wildlife Coordination Act (FWCA) Report (Attachment 2) within the US Army Corps of Engineers Draft Feasibility Report and Environmental Impact Statement, Fargo – Moorhead Metropolitan Area Flood Risk Management.

SPECIFIC COMMENTS - Chapter 4.0 Affected Environments

Pg. 127: The document contains several statements that reference USGS 2009b; however, the list of citations does not include the reference. We suggest the Final EIS list of citations include the USGS 2009b reference.

Pg. 128 & 129: The document contains several statements that reference USGS 2009a; however, the list of citations does not include the reference. We suggest the Final EIS list of citations include the USGS 2009a reference.

Pg. 127: The document states that "In the 1940s, there were an estimated 21 whooping cranes left in the world." We suggest the Final EIS include a reference for the statement.

Pg. 127: The document states that "There are an estimated 7,000 to 9,000 wolves in Alaska and more than 3,500 in the lower 48 states. The main threats to the survival of the gray wolf were mainly due to the hunting and trapping of the wolf because it was thought of as a nuisance, and habitat loss due to human encroachment into wolf territories." We suggest the Final EIS include a reference for the statement.

We appreciate the opportunity to review the document and provide comments. If you have questions concerning USFWS's comments, please contact Tony Sullins, Field Supervisor of the Twin Cities Ecological Services Field Office, at phone 612-725-3548 extension 2201. If you have any questions concerning the U.S. Geological Survey comments, please contact Gary LeCain, USGS Coordinator for Environmental Document Reviews, at (303) 236-5050 (x229) or at gdlecain@usgs.gov

Sincerely,

Robert F. Stewart

Regional Environmental Officer

Attachment – Draft FWCA Report

DRAFT REPORT

Fish and Wildlife Coordination Act Report Fargo-Moorhead Metropolitan Area Flood Risk Management Project

May 27, 2010

INTRODUCTION

The Red River of the North and its associated watershed has experienced several large-scale flood events in the past decade. Significant financial damage resulting from these events has led to several coordinated local, state, and federal agency attempts to address flood-related impacts within the Red River Basin. In September 2008, officials from the City of Fargo, North Dakota and City of Moorhead, Minnesota along with the U.S Army Corps of Engineers (Corps) entered into a Feasibility Cost Share Agreement. The Corps then issued a Notice of Intent to complete an Environmental Impact Statement (EIS) in the May 5, 2009 Federal Register. Accordingly, the Fargo – Moorhead Metropolitan Area Flood Risk Management Feasibility Study focused on alternatives that would alter flood levels and/or protect the Cities of Fargo and Moorhead against elevated flood levels from the Red River.

The U.S. Fish and Wildlife Service (Service) is authorized under the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.) to provide reports on federally funded water development projects. The Fish and Wildlife Coordination Act (FWCA) states that fish and wildlife resources shall receive equal consideration with other project purposes in federal water resource development program activities. In accordance with the October 2009, Scope of Work (SOW) for this project, the Service agreed to provide continuous review of project details and documents and a FCWA report based on coordination efforts and final alternative designs provided by the Corps. The Service's February 1, 2010, project review and comment letter was provided to the Corps, which provides a review of fish and wildlife resources within the proposed project area, and potential environmental and ecological impacts associated the proposed project activities. The Service's February 1, 2010 letter satisfies the requirements of the Planning Aid Letter (PAL) per the FWCA. This report constitutes the report of the Secretary of the Interior as required by Section 2(b) of the FWCA and, when finalized, will fulfill the Service's commitment as outlined in the SOW.

The Minnesota Department of Natural Resources (MNDNR) provided valuable information regarding resources in the Red River and the Red River Valley and the project area for incorporation into this report. The MNDNR and the North Dakota Game and Fish Department participated in several joint agency discussions on project alternatives.

STUDY AREA

The rich soils and extremely flat terrain of ancient glacial Lake Agassiz located in and around Fargo and Moorhead supports a largely rural and agricultural community with the majority of development occurring in the metropolitan area. Human activities have induced significant environmental changes within the watershed, engineered by numerous drainage ditches, stream channelization, and subsurface tile drainage. The average annual precipitation for Fargo, North Dakota is 21.29 inches.

The proposed project could influence the following major watersheds in North Dakota: western Wild Rice River, Lower Sheyenne River, and the Maple River. The Marsh River and Red River major watersheds are in North Dakota and Minnesota, and could be influenced by the proposed project. The Buffalo River major watershed in Minnesota could also be influenced by the proposed project.

Large wetland complexes are rare within the proposed project area, and the affected portions of the surrounding watersheds. Smaller wetlands are scattered throughout the interior of the watershed and have been heavily impacted by human activities.

The main collection point for surface runoff and drainage in the project area is the Red River, which is also influenced by the in-flows of the Wild Rice (ND), Sheyenne (ND), Maple (ND), Lower Rush (ND), Rush (ND), and the Buffalo (MN) Rivers (Figure 1). The Red River originates at Lake Traverse to the south, and flows north where it enters Lake Winnipeg. The Red River and the associated Valley are generally flat with a south to north, channel gradient slope that averages a one-half foot fall per mile.

Stream flow measurements taken at a USGS gauge station in the Red River at Fargo, North Dakota show mean monthly flows in winter months (2009-2010) of 1,000 cubic feet per second (cfs). However, stream flow data collected in mid March of 2010 showed flows exceeding 20,000 cfs in the Fargo, ND area. Portions of the Red River and its tributaries, affected by this project, have been channelized or impacted by flood reduction and drainage improvement projects in the past which include bank armoring, floodplain levees, ditching, and tiling.

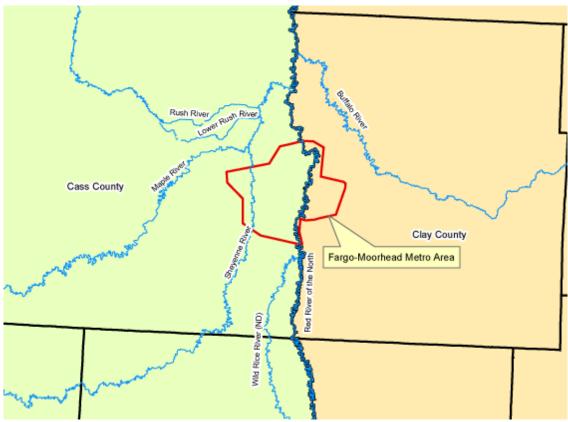


Figure 1. Rivers in close proximity to or within the Fargo-Moorhead Metropolitan Area.

FISH AND WILDLIFE RESOURCES

This section describes existing conditions for fish, wildlife, and habitat resources within the project area that may be either directly or indirectly impacted by the alternatives considered. This area includes the various diversion channel alternatives around Fargo/Moorhead (Figure 2) as well as the riparian corridors along the Red, Wild Rice (North Dakota), Sheyenne, Maple, Lower Rush, and the Rush River.

Riparian vegetation along the Red River and tributaries is heavily influenced by the extensive amount of agriculture in the area and the frequent flood events. Tree canopy and understory species typical of disturbed habitats are the primary dominates in the vegetated riparian zone. The riparian corridor provided by the Red River is the most protected method of travel for wildlife species in the project area. Wildlife capable of adapting to a variety of changing habitats, such as raccoon, skunk, and deer, are common closer to the metropolitan area. A list of wildlife species found through the project site is in Appendix 1.

The landscape surrounding Fargo/Moorhead, outside the Red River riparian zone, provides only small pockets wildlife habitat in the form of woods, wetlands, and grasslands. There are many agricultural fields that harbor important short-term open

water habitat for migratory birds in the spring. Although the extent of these ephemeral, open water areas has not been mapped, aerial photography suggests they are prevalent throughout the area. These areas provide critical feeding and resting areas for migratory birds, especially if precipitation or snowmelt has inundated other shallow water habitats in their migratory path.

The Red, Wild Rice (North Dakota), Sheyenne, Maple, Lower Rush, and Rush Rivers, support both game and non-game fish (Appendix 1). Diversity, abundance, and distribution are largely dependent upon existing barriers, water quality issues and winterkill due to low flow events. The Fargo/Moorhead area is known for its sport fishing opportunities, including channel catfish, walleyes, and northern pike. The sport fishery has benefited greatly from MNDNR efforts in removal of low head dams and stocking efforts.

Several mussel species have also been documented within the Red River and tributaries. Some survey work was completed in 2008, in the Fargo/Moorhead area, by the MNDNR, but minimal data currently exists for mussels species present within the Red, Wild Rice (ND), Sheyenne, Maple, Lower Rush, and Rush Rivers.

Biotic surveys within the Red, Wild Rice (ND), Sheyenne, Maple, Lower Rush, and Rush Rivers are currently underway or scheduled to occur in the Spring/Summer of 2010. Results of these surveys, as provided to the Service, will be incorporated into the Final FWCA Report for the Fargo/Moorhead Project.

Wetlands

The majority of the wetlands within the proposed project area are palustrine emergent, palustrine forested, and riverine wetlands. The majority of the wetlands within the project area are located along the river corridors. Many of the small isolated wetlands outside the riparian zone are influenced by agriculture activities (drainage, tillage, grazing, etc.). Temporarily flooded basins, including actively farmed basins, have the potential to provide excellent "stop-over" habitat for spring migrating birds.

Federal Candidate, Threatened, and Endangered Species

Four listed or candidate species under the Endangered Species Act of 1973 (ESA), as amended, occur within Clay County, Minnesota and Cass County, North Dakota. The Dakota skipper (Candidate) and western prairie fringed orchid (threatened) occur in Clay County, Minnesota, and the whooping crane (Endangered) and the gray wolf (Endangered) occur in Cass County, North Dakota.

Our current records do not indicate the presence of any individuals of the federally listed species within the proposed project area. If at any point during project planning, construction, or operation should additional information on listed species become available, or should a new species be listed, the Corps will reinitiate consultation with the Twin Cities Field Office of the USFWS.

Bald Eagle Nests

Bald eagles and their nests are protected from take and disturbance, respectively, per the Bald and Golden Eagle Protection Act. The Service verified the location of two bald eagle nests within the proposed project area. One nest is located on the northwest edge of the City of Fargo along the Sheyenne River in close proximity to a housing development. It was also verified with local private residents in the area that the nest was active and successful in 2009. The other nest is located north of the Cities of Fargo and Moorhead, close to the confluence of the Sheyenne River and the Red River. Verification of the second nest's 2009 activity was not possible at the time of the field visit. The Service will attempt to verify 2010 activity of both these nests, and include nest activity information in the Final FWCA Report.

During the planning and construction phases of the Fargo-Moorhead project the Service's National Bald Eagle Management Guidelines (May 2007) should be utilized to reduce impacts to any and all bald eagles nesting within the proposed project area. Because of the long timeline associated with this project (eight plus years) the Service recommends that raptor nest surveys be completed in all wooded areas potentially affected by this project. The raptor nest surveys should be completed at a minimum in the spring of the year proceeding construction within or near any affected wooded areas.

Migratory Bids

Due to the varied habitat and cover types throughout the project site, in both Minnesota and North Dakota, there is the potential to impact wetlands, grasslands, and woodlands during the construction or excavation phases necessary to complete this type of project. The aforementioned habitat types can provide preferred nesting habitat for a variety of migratory bird species. Upon final selection of a path for the diversion channel and levee alignments, mapping of significant migratory bird nesting areas should be coordinated with the Service.

Development of a construction timeline to minimize impacts to these areas during prime nesting times should be considered. The Service recommends that proposed construction and excavation within potential bird nesting habitat be completed outside of the primary nesting period (April 1st to August 31st) when possible and feasible. Attempts to minimize impacts to potential migratory bird nesting habitats should be made at all times during construction and excavation.

ALTERNATIVES

During the original screening process of the proposed project, 11 alternatives were evaluated to determine which would be most the implementable, and which alternatives would move forward for further analysis. The Corps Alternative Screening Document, December 2009, provides explanation of the screening process, and provided the

recommendation that the No Action and Diversion Channel alternatives should be carried forward for further evaluation as stand-alone alternatives.

No Action

This alternative represents future conditions without the project. Major flood events, such as 100-year events and higher, would continue to occur on a periodic basis. Land use in and surrounding the Cities of Fargo and Moorhead would remain the same. The alternative also anticipated that both Cities would continue to expand as population growth and economy allowed. The Cities would continue to rely on emergency flood protection measures; existing levee protection, temporary levees and floodwalls, and sand bagging activities that are completed as needed in response to flooding.

Flood Barriers

This alternative includes the use of permanent flood barrier measures such as levees, floodwalls, invisible floodwalls, gate closures, and pump stations. For analysis purposes the flood barriers alternative would have resulted in levees on both the Fargo and Moorhead sides of the Red River. Two levee top profiles were considered by the Corps, which could reliably contain the 2% chance and the 1% chance of flooding. This alternative was not pursued further as a stand-alone alternative by the Corps for the purposes of this project.

Diversion Channel

A diversion channel would direct flood waters from the Red River into a constructed channel around the Cities of Fargo and Moorhead, and eventually the diverted waters would enter back into the Red River downstream of Fargo/Moorhead. During early planning stages of the project the Corps developed multiple diversion channel alignments on both the Minnesota and North Dakota side of the Red River. Originally the Corps staff determined that the Minnesota 20,000 cubic feet per second (cfs) (MN 20K Alternative) was the National Economic Development (NED) plan, which had the best benefit: cost ratio. Hydraulics modeling was then updated and calibrated to the 2009 event, hydrology data was updated to include 2009, and the Expert Opinion Elicitation (EOE) Panel identified a distinct "wet" period of record. This combination of items led to an increase in anticipated annual damages, which in turn led to greater benefits resulting from a larger plan. At this point it was then determined that the 35,000 cfs (MN 35K Alternative) is the appropriate NED plan. The Corps recommended the Minnesota 35,000 cfs (MN 35K Alternative) to the local sponsor as the Preferred Alternative. The local sponsors of the Fargo/Moorhead project requested that the Corps move forward with the North Dakota 35,000 cfs (ND 35K Alternative). Both the MN 35K Alternative and the ND 35K Alternative would provide diversion of flood waters, around the metropolitan area, starting at a 5 year storm event. The local sponsors felt that the ND 35K Alternative provided more local flood reduction benefits then the MN 35K Alternative.

Under the MN 35K Alternative, the majority of the impacted lands along a diversion channel alignment in Minnesota would consist of agricultural lands. The ND 35K Diversion Channel Alternative will impact five tributaries to the Red River; the Wild Rice River (North Dakota), Sheyenne River, Maple River, Lower Rush River, and the Rush River. Common resource concerns between the Minnesota and North Dakota Alternatives include the Red River channel impacts, construction of a control structure within the Red River, loss of fish passage within the main stem of the Red River, sedimentation issues in the Red River, loss of riparian habitat, wetland impacts, and the fate of fish entering the diversion channel during flood events.

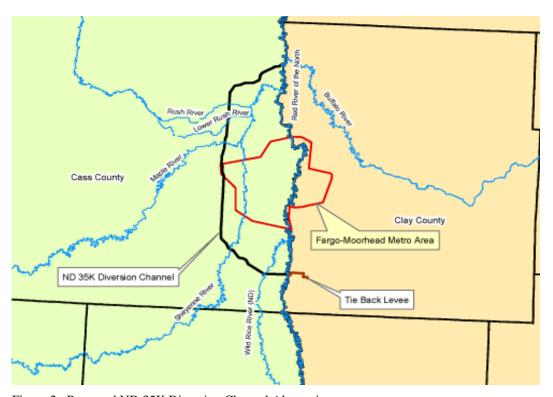


Figure 2. Proposed ND 35K Diversion Channel Alternative

ND 35K Diversion Channel (Locally Selected Alternative)

This alternative is located west of the Cities of Fargo and Moorhead, with an inlet planned to be constructed south of the Fargo/Moorhead metropolitan area on the Red River approximately 4 miles south of the confluence of the Red River and the Wild Rice River (North Dakota), see Figure 2. The outlet of the diversion channel into the Red River is planned to be constructed north of the Fargo/Moorhead metropolitan area on the Red River approximately 3.5 miles north of the confluence of the Red River and the Sheyenne River.

The diversion channel will have an average bottom width of 360 feet, and internal 1(vertical):7(horizontal) side slopes. The internal side slopes will be increased to 1:5 at

highway and railroad intersections. The peak of the spoil piles adjacent to the diversion channel will not exceed 15 feet above existing grade, and external side slopes of the diversion channel will range from 1:7 to 1:10. Total width of the diversion channel construction including; bottom width, internal slopes, and external side slopes will be approximately 2,150 feet. With a total length of approximately 36 miles, the total affected footprint of the diversion channel is approximately 9,382 acres.

The inlet of the diversion channel on the west bank of the Red River will consist of a metal sheet pile and rock weir structure. The inlet of the weir structure is set one foot above the 5 year storm event. A second weir structure will be constructed within the diversion channel on the east bank of the Wild Rice River (ND). This second weir structure will be over topped by diverted flows from the Red River once a 5 year storm event flow is exceeded. A gated control structure will be constructed in the Wild Rice River (ND), with two tainter gates (30 feet wide and 20 feet high). The gates will generally be fully open, but during large flow events the gates will be lowered to restrict the flow into the Fargo-Moorhead Metro to the 5 year storm event flows. Flows above the 5 year event would overtop a third weir, on the west bank of the Wild Rice River (ND) into the diversion channel. Diverted flood waters will flow west and north around the Fargo/Moorhead metropolitan area. The diversion channel will affect four additional tributaries rivers; the Sheyenne River, the Maple River, the Lower Rush River, and the Rush River. The diversion channel will outlet into the Red River over a weir and rip rap structure.

Concrete bypass structures will be built to convey waters within the diversion channel under the Sheyenne and Maple Rivers. The structures will allow the Sheyenne and Maple Rivers to flow through under normal conditions. However, flows exceeding the 2 year storm event within the Sheyenne and Maple will overtop small weir structures and flow through constructed channels into the main diversion channel. The Lower Rush and Rush Rivers will be routed, via drop structures, directly into the diversion channel. The channels of the Lower Rush and Rush Rivers between the diversion channel and downstream to their confluences with the Sheyenne River will be abandoned, and allowed to function as temporary flooded open ditches and as wetland habitat during the drier periods of the growing season.

A large control structure is proposed to be placed in the Red River channel, approximately 1,600 feet downstream of the diversion channel inlet. The concrete structure will have three gates, each 40 feet wide by 40 feet tall. During normal flows the control structure would be completely open, and during flow events exceeding the 5 year storm event the gates would close and the structure would act as a barrier that would back water into the diversion channel. A concrete fish ramp is proposed for construction to allow fish passage from during flows between the 5 year storm event and the 50 year storm event.

A three mile tie back levee will need to be constructed to connect the Red River control structure to high ground. The levee will prevent flood waters from flowing over land to north and east into the Fargo/Moorhead metropolitan area.

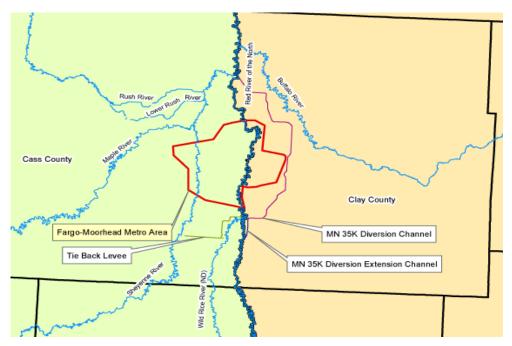


Figure 3. Proposed MN 35K Diversion Channel Alternative

MN 35K Diversion Channel (Corps Recommended Alternative)

This alternative is located east of the Cities of Fargo and Moorhead, with an inlet planned to be constructed south of the Fargo/Moorhead metropolitan area on the Red River north of the confluence of the Red River and the Wild Rice River (North Dakota), see Figure 3. The outlet of the diversion channel into the Red River is planned to be constructed north of the Fargo/Moorhead metropolitan area on the Red River, north of the confluence of the Red River and the Sheyenne River.

The diversion channel will have an average bottom width of 360 feet, and internal 1(vertical):7(horizontal) side slopes. The internal side slopes will be increased to 1:5 at highway and railroad intersections. The peak of the spoil piles adjacent to the diversion channel will not exceed 15 feet above existing grade, and external side slopes of the diversion channel will range from 1:7 to 1:10. Total width of the diversion channel construction including; bottom width, internal slopes, and external side slopes will be approximately 2,150 feet. With a total length of approximately 25 miles, the total affected footprint of the diversion channel is approximately 6,415 acres.

The inlet of the diversion channel on the east bank of the Red River will consist of a metal sheet pile and rock weir structure. Water from the Red River will begin to flow over the weir structure after a 5 year storm event flow is exceeded. Once the water has overtopped the weir structure the diversion channel will go east and north around the Fargo/Moorhead metropolitan area. The diversion channel will primarily bisect land

currently used for agricultural production. The diversion channel will outlet into the Red River over a rip rap structure.

The diversion channel will function as a temporary flooded open ditch during the conveyance of flood waters, and as mix of channel habitat and wetland habitat during low flow periods.

A large control structure is proposed to be placed in the Red River channel, approximately 1,600 feet downstream of the diversion channel inlet. The concrete structure will have three gates, each 40 feet wide by 40 feet tall. During normal flows the control structure would be completely open, and during flow events exceeding the 5 year storm event the gates would close and the structure would act as a barrier that would back water into the diversion channel. A concrete fish ramp is proposed for construction to allow fish passage during flows between the 5 year storm event and the 50 year storm event.

A 9.9 mile tie back levee will need to be constructed to connect the Red River control structure to high ground. The levee will prevent flood waters from flowing over land to the north and west into the Fargo/Moorhead metropolitan area.

In addition to the main diversion channel this alternative would include two smaller channels upstream of the Red River structure. A three mile long supplementary channel will run south parallel to the Red River to allow for additional capacity, see Figure 3. This channel will have a bottom width of 50 feet. A second supplementary channel, less then one mile long, is located near the intersection of I-29 and Cass County Highway 16, not shown in any Figures. This second supplementary channel also has a bottom width of 50 feet.

	ND 35K Diversion	MN 35K Diversion
Length of Channel	36 miles	25 miles
Total Width of Channel	2,150 feet	2,150 feet
Impact of Primary	9,382 acres	6,515 acres
Diversion Channel		
Secondary Diversion	0	2
Channels		
Length of Tie Back Levee	3.3 miles	9.9 miles

Table 1. Comparison of ND 35K and MN 35K Alternative specifics.

Non-structural Measures

This alternative encompasses various flood-proofing measures such as the relocation of businesses and residential structures to an area outside the floodplain, elevation of structures, land acquisition and buyouts, basement removals, dry and wet flood proofing, and additional flood preparedness plans and warnings. Due to highly negative social impacts and the extremely high costs associated with this alternative, non-structural measures were not further considered as a stand-alone alternative by the Corps for the

purposes of this project. The Corps did make the recommendation that the non-structural alternative should be considered for possible inclusion as a feature of the overall plan where it could be incrementally justified.

Flood Storage

The storage alternative would have involved preservation of natural floodplain, restoration of wetlands, and the construction of dams and other water retention facilities throughout the watershed. Utilization of agricultural fields for flood water retention would need to be a major component of this alternative. Through modeling the Corps determined that the storage alternative would have low effectiveness in larger flood events, but may be helpful in small flood events. Due to the low level of effectiveness during large flood events and the high costs associated with this alternative, flood storage was not further considered as a stand-alone alternative by the Corps for the purposes of this project. The Corps did make the recommendation that the flood storage alternative should be considered for possible inclusion as a feature of the overall plan where it could be incrementally justified, and it should be considered by the local communities within the basin.

Tunneling

This alternative would entail the construction of a series of tunnels under the Cities of Fargo and Moorhead to convey floodwaters, and reduce the water levels in the Red River. This alternative would provide similar benefits to the diversion channel alternatives, but with a much greater cost. There would also be significant negative impacts to aquatic habitats and fish passage associated with the tunneling alternative. Due to the high costs and uncertainties of long term maintenance associated with this alternative, tunneling was not further considered as a stand-alone alternative by the Corps for the purposes of this project.

Bridge Replacement or Modification

Bridge replacement or modification was considered because in some cases this can increase water conveyance and reduce flood stages within the river. However, in the case of Fargo/Moorhead and the Red River, the Corps determined that complete removal of the bridges had only a minor affect on flood levels. Due to the low level of effectiveness and the high costs associated with this alternative, bridge replacement or modification was not further considered as a stand-alone alternative by the Corps for the purposes of this project. The Corps did make the recommendation that the bridge replacement or modification alternative should be considered for possible inclusion as a feature of the overall plan where it could be incrementally justified.

Interstate 29 Viaduct

This alternative would involve reconstruction of the existing Interstate 29 corridor to function as an open viaduct during flood events. During non-flood times the corridor

would then function as an interstate highway. This alternative would have significant negative impacts for fish passage and sedimentation, and there would be minimal environmental benefit as the interstate corridor would function as a highway during non-flood periods. Due to the low level of cost effectiveness and unacceptable transportation impacts associated with this alternative, the Interstate 29 viaduct was not further considered as a stand-alone alternative by the Corps for the purposes of this project.

Dredging and Widening the River

An alternative to deepen and widen the Red River to accommodate great flow conveyance through the Fargo/Moorhead area was considered. This alternative would result in substantial environmental impacts including; increased sedimentation, loss of suitable fish and mussel habitats, riparian habitat loss, wildlife mortality during excavation activities, and a high likelihood of riverbank instability issues. There would also be social impacts as homes and property would need to be acquired to insure the Red River could be widened to accommodate the new river depths. This alternative would also violate a number of local and national policies. Due to associated policy violations and the high costs associated with long term maintenance of this alternative, dredging and widening of the Red River was not further considered as a stand-alone alternative by the Corps for the purposes of this project.

Wetland and Grassland Restoration

Wetland and grassland restoration areas could be established to provide flood storage and also reduce peak runoff. Costs of this alternative were anticipated to be high due to large land acquisition needs to implement restoration activities. The Corps staff determined that the benefits of wetland restoration would be localized, and the flood storage needs of the Fargo/Moorhead area would not be met. Due to the low level of effectiveness to offset flood damages, high costs, and the large land acquisitions associated with this alternative, wetland and grassland restoration was not further considered as a stand-alone alternative by the Corps for the purposes of this project. The Corps did make the recommendation that the wetland and grassland restoration alternative should be considered for possible inclusion as a feature of the overall plan where it could be incrementally justified.

Throughout the project and comment process the Service has recommended that the Corps consider the utilization of wetland restoration within the watershed of the project to increase flood water storage and attenuation.

Cut-off Channels

Cut-off channels would be excavated across meanders within the Red River channel in the Cities of Fargo and Moorhead. Straightening the channel would allow greater conveyance of water through the Cities, and potentially reduce peak flood stages. This alternative would impact riparian habitat, wetlands, and potentially fisheries resources that are adjacent to or utilize these meanders. According to Corps staff this alternative

would not provide substantial flood risk reduction. There would also be the potential for this alternative to violate state and federal policies. Due to the low reduction of flood risk and the environmental impacts associated with this alternative, cut-off channels was not further considered as a stand-alone alternative by the Corps for the purposes of this project. The Corps recommended that the cut-off channels alternative be considered for possible inclusion as a feature of the overall plan where it could be incrementally justified.

IMPACT ANALYSIS

This Report focuses on potential impacts that would result from the activities involved with the construction, excavation, and operation of the Locally Selected Alternative. Environmental impacts from the ND 35K Diversion Channel Alternative (the Locally Selected Alternative) and the MN 35K Diversion Channel Alternative, may be separated into two categories: direct impacts (those caused by project construction), and indirect impacts (those associated with project operation). Several resource concerns were detailed in the Service's February 1, 2010 letter.

Direct Impacts of the ND 35K Diversion Channel Alternative

Habitat Loss

Construction and excavation associated with the proposed project will result in the removal or degradation of riparian forests, wetlands (various types), grasslands, and riverine aquatic habitat. The current plan for structure placement and diversion channel route will result in the following impacts; 137 acres of forested habitat, 33 acres (direct) and 157 acres (indirect) of wetlands, and 39 acres of riverine aquatic habitat. Activities resulting in direct impacts include; diversion channel excavation, Red River control structure construction, weir construction, levee constructions, tributary crossing construction, and tributary flow diversion and abandonment (Lower Rush and Rush Rivers).

The exact acreage of the various habitats impacted by the project should be calculated once the extent and location of the alternatives are determined.

Fisheries

Construction and excavation within the riverine aquatic habitats could kill adult or juvenile fish. Sediment discharges caused by the aforementioned work could result in adult and juvenile individuals being killed if their gills become filled with sediment, spawn bed abandonment by adult fish, and also the covering of spawning beds with silts and fines resulting in the loss of eggs within the bed. Large sediment loads could also lead to disruptions in foraging success for fish directly downstream of excavation and construction areas within the rivers or areas of bank construction or excavation. Disruption of foraging success could result in the death of juvenile individuals, or prohibit adult fish from spawning due to malnutrition.

Wildlife

Excavation and construction within forested areas, wetlands, and grasslands may be expected to potentially kill or displace nesting adult birds if construction activities occur during the primary nest seasoning (April 1st – August 31st). Abandonment of nests and crushing of eggs within construction and excavation areas is also considered a direct wildlife impact.

Mammal species within the excavation and construction areas will be displaced or killed during project activities. The majority of adult individuals should be mobile enough to move out of the construction/excavation areas prior to being injured or killed by equipment. The exception may be borrowing species that may be injured or killed during excavation activities. Juvenile individuals may not be able to avoid construction and excavation activities resulting in injury or death of certain individuals.

Mussel species within the riverine aquatic habitats may be killed by direct construction or excavation activities within mussel beds. Feeding activities and gill function may be interrupted by large sediment loads during construction and excavation activities. This could result in the death of individuals, or a reduction in or lack of reproduction by adult individuals.

Indirect Impacts of the ND 35K Diversion Channel Alternative

Habitat Loss and Conversation

With additional sediment load and deposition occurring the Red, Wild Rice (ND), Sheyenne, and Maple Rivers will experience some alteration of their bed composition. Also, because of structure placement and reductions in the current regular flood flows through these Rivers, sediments could accumulate and alter the aquatic habitat. This could also result in the need for regular mechanical clean out, which would disturb riparian habitat, aquatic habitat, and fish and wildlife species in the area of the clean out.

Wetlands within the floodplains of the Red, Wild Rice (ND), Sheyenne, and Maple Rivers, and downstream of the proposed structures and diversion channel, may be converted to non-wetland or a drier hydrologic regime if they are heavily influenced hydrologically by regular flood events that currently occur. Wetlands found at the confluences of the Lower Rush and Rush Rivers with the Sheyenne River would likely be converted to non-wetland or a drier hydrologic regime once the Lower Rush and Rush River channels are abandoned.

Fisheries

Movement of fish species within the Red, Sheyenne, and Maple Rivers will be impeded by structures constructed within the river channels as part of this project. These fish passage impacts will be noticeable during larger flood flow events when the gates on the Red River control structure are closed, and when flow velocities through the structures on the Sheyenne and Maple Rivers become high enough to impede fish passage, primarily for smaller species.

Aquatic organisms displaced by flood events would also be affected by operation of a diversion channel. Fish carried into the diversion may be vulnerable to stranding during lower but more frequent flood events (e.g. 5 or 10 year event) if 1) they are unable to find their way back to the river as water levels recede or 2) the flow dissipates before reconnecting to the Red River. Flood-formed scour pools may provide refugia for these fish but they would not survive the winter in such habitat. During planning it has been mentioned that a base flow will be maintained throughout the entire diversion channel. A base flow would be beneficial, but larger species may not be able to effectively move even with a base flow channel.

Given the scenario above, it appears that a certain degree of fish mortality is unavoidable. The level of mortality is dependant upon the number of fish entering the diversion channel, abundance of water in the channel, and the life stage (juvenile or adult) of the affected individuals.

Wildlife

Once the project is in the operational phase mussels could be affected by additional direct impacts of operation. In large flood flows the gates on the Red River control structure will close, resulting in deposition of sediment on the upstream side of the structure. A large sediment load could bury and kill individuals. Sediment deposition will also occur on the Wild Rice River (ND) at the point of confluence with the proposed diversion channel and down stream of this point. The structures on the Sheyenne and Maple Rivers will restrict flows during flood events, and a portion of the water will be directed into the diversion channel. Water that remains within the river channels will continue to carry the bulk of the sediment load, however the quantity and flow of water will be diminished. This will result in additional sediment deposition downstream of the proposed structures. These areas of additional sediment deposition could bury and kill mussels if significant mussel beds are present.

Mussels infest host fish with glochidia, larval stage of mussel, which results in the host fish potentially transporting the glochidia to new suitable aquatic habitat. If fish passage is restricted during large flood events potentially infested fish will not be able to disperse the glochidia. Infested fish may also move up the diversion channel and become stranded, or the glochidia could drop off in the diversion channel in unsuitable permanent habitat. Infested fish moving in the diversion channel could result in the loss of larval stage mussels, and reduce the reproductive success and dispersion of various mussel species.

Direct Impacts of the MN 35K Diversion Channel Alternative

Habitat Loss

Construction and excavation associated with the proposed project will result in the removal or degradation of riparian forests, wetlands (various types), grasslands, and riverine aquatic habitat. The current plan for structure placement and diversion channel route will result in the following impacts; 75 acres of forested habitat, 17 acres (direct) and 85 acres (indirect) of wetlands, and 10 acres of riverine aquatic habitat. Activities resulting in direct impacts include; diversion channel excavation, Red River control structure construction, weir construction, and levee constructions.

The exact acreage of the various habitats impacted by the project should be calculated once the extent and location of the alternatives are determined.

Fisheries

Construction and excavation within the Red River could kill adult or juvenile fish. Sediment discharges caused by the aforementioned work could result in adult and juvenile individuals being killed if their gills become filled with sediment, spawn bed abandonment by adult fish, and also the covering of spawning beds with silts and fines resulting in the loss of eggs within the bed. Large sediment loads could also lead to disruptions in foraging success for fish directly downstream of excavation and construction areas within the rivers or areas of bank construction or excavation. Disruption of foraging success could result in the death of juvenile individuals, or prohibit adult fish from spawning due to malnutrition.

Wildlife

Excavation and construction within forested areas, wetlands, and grasslands may be expected to potentially kill or displace nesting adult birds if construction activities occur during the primary nest seasoning (April 1st – August 31st). Abandonment of nests and crushing of eggs within construction and excavation areas is also considered a direct wildlife impact.

Mammal species within the excavation and construction areas will be displaced or killed during project activities. The majority of adult individuals should be mobile enough to move out of the construction/excavation areas prior to being injured or killed by equipment. The exception may be borrowing species that may be injured or killed during excavation activities. Juvenile individuals may not be able to avoid construction and excavation activities resulting in injury or death of certain individuals.

Mussel species within the Red River may be killed by direct construction or excavation activities within mussel beds. Feeding activities and gill function may be interrupted by large sediment loads during construction and excavation activities. This could result in the death of individuals, or a reduction in or lack of reproduction by adult individuals.

<u>Indirect Impacts of the MN 35K Diversion Channel Alternative</u>

Habitat Loss and Conversation

With additional sediment load and deposition occurring, the Red River will experience some alteration of bed composition. Also, because of structure placement and reductions in the current regular flood flows through the Red River, sediments could accumulate and alter the aquatic habitat. This could also result in the need for regular mechanical clean out, which would disturb riparian habitat, aquatic habitat, and fish and wildlife species in the area of the clean out.

Wetlands within the floodplain of the Red River, and downstream of the proposed structures and diversion channel, may be converted to non-wetland or a drier hydrologic regime if they are heavily influenced hydrologically by regular flood events that currently occur.

Fisheries

Movement of fish species within the Red River will be impeded by the construction of the control structure within the river channel as part of this project. Fish passage impacts will be noticeable during larger flood flow events when the gates on the Red River control structure are closed.

Aquatic organisms displaced by flood events would also be affected by operation of a diversion channel. Fish carried into the diversion may be vulnerable to stranding during lower but more frequent flood events (e.g. 5 or 10 year event) if 1) they are unable to find their way back to the river as water levels recede or 2) the flow dissipates before reconnecting to the Red River. Flood-formed scour pools may provide refugia for these fish but they would not survive the winter in such habitat. During planning it has been mentioned that a base flow will be maintained throughout the entire diversion channel. A base flow would be beneficial, but larger species may not be able to effectively move even with a base flow channel.

Given the scenario above, it appears that a certain degree of fish mortality is unavoidable. The level of mortality is dependant upon the number of fish entering the diversion channel, abundance of water in the channel, and the life stage (juvenile or adult) of the affected individuals.

Wildlife

Once the project is in the operational phase mussels could be affected by additional impacts of operation. In large flood flows the gates on the Red River control structure will close, resulting in deposition of sediment on the upstream side of the structure. A large sediment load could bury and kill individuals. Sediment deposition may also occur downstream of the Red River control structure. Water that remains within the river

channel will continue to carry the bulk of the sediment load, however the quantity and flow of water will be diminished. These areas of additional sediment deposition could bury and kill mussels if significant mussel beds are present.

Mussels infest host fish with glochidia, larval stage of mussel, which results in the host fish potentially transporting the glochidia to new suitable aquatic habitat. If fish passage is restricted during large flood events potentially infested fish will not be able to disperse the glochidia. Infested fish may also move up the diversion channel and become stranded, or the glochidia could drop off in the diversion channel in unsuitable permanent habitat. Infested fish moving in the diversion channel could result in the loss of larval stage mussels, and reduce the reproductive success and dispersion of various mussel species.

PROPOSED MITIGATION ACTIVITIES

- 1. A constructed fish ramp, 50 feet wide, is proposed to improve fish passage around the Red River control structure during large flow events when the gates will be closed. (Both Alternatives)
- 2. A natural substrate will be maintained under the Red River control structure and the structures on the Sheyenne and Maple Rivers to allow for complex flow regimes, which will allow for better fish passage through the structures. (Both Alternatives)
- 3. Maintain a base flow channel within the diversion channel to assist in minimizing fish stranding. (Both Alternatives)
- 4. Allow the bottom of the diversion channel function as aquatic and seasonal wetland habitats to provide habitat to local wildlife. (Both Alternatives)
- The abandoned Lower Rush and Rush River channels to function as seasonal wetlands and aquatic habitats to benefit local wildlife species. (ND 35K Alternative Only)
- 6. All wetland impacts will be replaced at a ratio to meet or exceed the Compensatory Mitigation Standards of the Clean Water Act, Section 404 Permit Program. State wetland laws will also be satisfied. (Both Alternatives)
- 7. Impacted forested areas will replaced at a 1:1 ratio. (Both Alternatives)
- 8. Grassland habitat impacts will be offset by the reconstruction of native prairie on the inside slope of the diversion channel following construction. (Both Alternatives)

RECOMMENDATIONS

- 1. Determine wetland acreage to be impacted directly or indirectly by the proposed project, and assess the functions and values of individual wetlands with an established method of assessment, such as the Minnesota Rapid Assessment Method (MnRAM).
- 2. Provide compensatory mitigation for all wetland impacts in accordance with the standards specified for a Section 404 Permit under the Clean Water Act. A final

- wetland mitigation plan should be coordinated with the Service and Corps Regulatory Project Manager.
- 3. Wetlands within the currently active floodplains of the Red, Wild Rice (ND), Sheyenne, Lower Rush, and Rush Rivers, downstream of the proposed structures and the diversion channel crossings or channel abandonments should be monitored for a 10 year period following the beginning of project flood reduction operations. This monitoring should focus on hydrologic impacts to the wetlands, wetland type conversions, and loss of wetlands. (ND 35K Alternative Only)
- 4. Biotic surveys within the potentially affected reaches of Red, Wild Rice (ND), Sheyenne, Maple, Lower Rush, and Rush Rivers should be conducted to determine species presences and potential suitable habitat areas (i.e. mussel beds, spawning habitats, etc)
- 5. Utilize native plant species in all aspects of mitigation, reconstruction, and replanting involved with the project.
- 6. Avoid impacts to migratory bird nesting habitats (woodlands, grasslands, and wetlands) during the primary nesting season, April 1st to August 31st, to the greatest extent that is feasible.
- 7. Provide equal mitigation (1:1) for lands currently enrolled in state or federally funded restoration or conservation programs that will be impacted by the proposed project.
- 8. Raptor nest surveys should be conducted every spring to determine the presence of existing or new nests that may be affected by the project construction and excavation activities. Surveys should be completed annually prior to "leaf out" until the project construction is complete.
- 9. Follow the Service's National Bald Eagle Management Guidelines to minimize the likely-hood that the proposed project will affected any bald eagles nesting in the Fargo/Moorhead Project Area.

SUMMARY

River channel morphology is largely defined by the frequency and intensity of floods. Flood events and the intensity of their environmental effects are naturally unpredictable. The ND 35K Alternative and the MN 35K Alternative involve the construction and operation of a control structure within the Red River. Operation of the Red River control structure and the associated diversion channel would reduce the occurrence of flood flows, exceeding the 5 year storm event, into the Fargo – Moorhead Metro Area. This reduction in flood events could affect sediment loads and deposition within the Red River. The ND 35K Alternative also includes a second control structure within the Wild Rice (ND) River, diversion channel crossing structures on the Sheyenne and Maple Rivers, and the abandonment of portions of the Lower Rush and Rush Rivers.

Both diversion channel alternatives will result in direct and indirect wetland impacts. The ND 35K Alternative could potentially impact approximately 88 more acres then the MN 35K Alternative. There will be some wetland loss through direct excavation and/or fill of wetlands during channel, levee, and structure construction. Riparian wetlands

along the river corridors are likely to incur some indirect impacts as the change in flood elevations may result in changes to the hydrologic inputs to some of these wetlands. The exact extent of wetland impacts cannot be quantified at this time as the footprint and design of the project have not been finalized. Wetland mitigation needed to address these issues should be carried out concurrent with project construction.

Both alternatives may potentially impact fish passage, fish spawning areas, mussel beds, and terrestrial wildlife habitat during construction, excavation, operation, and maintenance of the proposed Fargo-Moorhead Flood Reduction Project. The ND 35K Alternative as proposed will result in greater ecological impacts, then the MN 35K Alternative, see Table 2 below. Alternative impacts are greater due to the higher number of rivers affected by the diversion channel and wildlife habitat disturbance. Outside of work within the Red River and the adjacent riparian habitat the MN 35K Alternative primarily affects agricultural lands.

The Service is authorized under the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.) to provide recommendations to the Corps on federally funded water development projects. Therefore, based on data available at this time, and the Impact Analysis outlined within this report the Service recommends, should the Corps and the Local Project Sponsors move forward with the Fargo-Moorhead Metropolitan Flood Risk Reduction Project, the MN 35K Diversion Channel Alternative should be the selected Alternative. Although ecological impacts will occur with either of the Diversion Channel Alternatives, the MN 35K Alternative would result in less ecological impact when compared to the ND 35K Diversion Channel Alternative.

	ND 35K Diversion	MN 35K Diversion
Direct Wetland Impacts	33 acres	17 acres
Indirect Wetland Impacts	157 acres	85 acres
Total Wetland Impacts	190 acres	102 acres
Forest Impacts	137 acres	75 acres
Aquatic Riverine Impacts	39 acres	10 acres
Red River Fish Passage	Yes	Yes
Impacts		
Red River Tributary Fish	Yes	No
Passage Impacts		
# of Rivers Impacted	6	1
Federal Threatened and	No	No
Endangered Species		
Impacted		
Bald Eagles Impacted	No	No
Red River Sedimentation	Yes	Yes
Impacts		
Red River Tributary	Yes	No
Sedimentation Impacts		

Table 2. Impact Analysis Comparison of ND 35K and MN 35K Alternatives.

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APPENDIX 1

FISH AND WILDLIFE RESOURCES OF THE RED RIVER

Table 1. Fish species present in the Red River drainage. (Aadland et al. 2005)

Table 1. Fish species present in the Red River drainage. (Aadland et al. 2005)		
Common Name	Scientific Name	
Chestnut lamprey	Ichthyomyzon castaneus	
Silver lamprey	Ichthyomyzon unicuspis	
White sucker	Catostomus commersoni	
Silver redhorse	Moxostoma anisurum	
Golden redhorse	Moxostoma erythrurum	
Shorthead redhorse	Moxostoma macrolepidotum	
Greater redhorse	Moxostoma valenciennesi	
Spotfin shiner	Cyprinella spiloptera	
Carp	Cyprinus carpio	
Brassy Minnow*	Hybognathus hankinsoni	
Common shiner	Luxilus cornutus	
Bowfin	Amia calva	
Emerald shiner	Notropis atherinoides	
Bigmouth shiner	Notropis dorsalis	
Blackchin shiner*	Notropis heterodon	
Blacknose shiner*	Notropis heterolepis	
Sand shiner	Notropis stramineus	
River shiner	Notropis blennius	
Spottail shiner	Notropis hudsonius	
Carmine shiner*	Notropis percobromus	
Northern redbelly dace*	Phoxinus eos	
Fathead minnow	Pimephales promelas	
Western blacknose dace*	Rhinichthys obtusus	
Longnose dace	Rhinichthys cataractae	
Creek chub	Semotilus atromaculatus	
Black bullhead	Ameiurus melas	
Yellow bullhead	Ameiurus natalis	
Brown bullhead	Ameiurus nebulosus	
Channel catfish	Ictalurus punctatus	
Tadpole madtom	Noturus gyrinus	
Central Mudminnow	Umbra limi	
Northern pike	Esox lucius	
Trout-perch	Percopsis omiscomaycus	
Rock bass	Ambloplites rupestris	
Pumpkinseed*	Lepomis gibbosus	
Bluegill	Lepomis macrochirus	
Largemouth bass*	Micropterus salmoides	
Black crappie	Pomoxis nigromaculatus	
White Crappie	Pomoxis annularis	
Johnny darter	Etheostoma nigrum	
Yellow perch	Perca flavescens	
Blackside darter	Percina maculata	
Logperch	Percina caprodes	
Sauger	Stizostedion canadense	
Walleye	Stizostedion vitreum	
Freshwater drum	Aplodinotus grunniens	

Table 1 cont'd. Fish species present in the Red River drainage. (Aadland et al. 2005)

Common Name	Scientific Name
Goldeye	Hiodon alosoides
Mooneye	Hiodon tergisus
Rainbow trout*	Oncorhynchus mykiss
Quillback	Carpiodes cyprinus
Bigmouth Buffalo	Ictiobus cyprinellus
Goldfish	Carassius auratus
Silver chub	Macrhybopsis margarita
Hornyhead chub	Nocomis biguttatus
Golden shiner	Notemigonus chrysoleucas
Bluntnose minnow	Pimephales notatus
Flathead chub	Platygobio gracilis
Stonecat	Noturus flavus
Muskellunge	Esox masquinongy
Rainbow smelt	Osmerus mordax
Banded killifish	Fundulus diaphanous
Burbot	Lota lota
White bass	Morone chrysops
Green sunfish	Lepomis cyanellus
Orangespotted sunfish	Lepomis humilis
Smallmouth bass	Micropterus dolomieu
Iowa Darter	Etheostoma caeruleum
Lake Sturgeon	Acipenser fulvescens

^{*}Found in the tributaries to the Red River, but not in the main stem of the Red River.

Table 2. Mammals of the Fargo-Moorhead Project Area.

Table 2. Maininals of the Pargo-Moorneau Project Area.		
Common Name	Common Name	
Grey fox	Fox squirrel	
Red fox	Red squirrel	
Raccoon	Northern flying squirrel	
Striped skunk	Beaver	
Coyote	Muskrat	
Masked shrew	Deer mouse	
Pygmy shrew	White-footed mouse	
Short-tailed shrew	Southern red-backed vole	
Star-nosed mole	Meadow vole	
Little brown myotis	Prairie vole	
Big brown bat	Norway rat	
Red bat	House mouse	
Eastern Cottontail Rabbit	Meadow jumping mouse	
White-tailed jackrabbit	Plains pocket mouse	
Eastern chipmunk	Ermine	
Least chipmunk	Long-tailed weasel	
Woodchuck	Least weasel	
Thirteen-lied ground squirrel	Gray wolf	
Franklin's ground squirrel	River otter	
Eastern gray squirrel	Mink	
White-tailed deer	Badger	
Opossum	-	

Table 3. Amphibians and Reptiles of Clay County, Minnesota.

Tuble of Timpingtons and Replines of City County, Timinesota.		
Common Name (Amphibians)	Common Name (Reptiles)	
Northern leopard frog	Common garter snake	
Wood frog	Redbelly snake	
Gray treefrog	Plains hog nosed snake	
Western chorus frog	Plains garter snake	
Boreal chorus frog	Smooth green snake	
American toad	Snapping turtle	
Canadian toad	Painted turtle	
Great plains toad	Prairie skink	
Tiger salamander		

Table 4. Mussels in the Fargo-Moorhead Area. (Sietman 2008)

Common Name	Scientific Name
Fatmucket	Lampsilis siliquoidea
Threeridge	Amblema plicata
Giant floater	Pyganodon grandis
Black Sandshell	Ligumia recta

Table 5. Breeding Birds of Clay County, Minnesota. (MN DNR)

Table 5. Breeding Birds of Clay County, Minnesota. (MN DNR)		
Common Name	Common Name	
Canada goose	Sedge wren	
Wood duck	Eastern bluebird	
Mallard	Veery	
Blue winged teal	American robin	
Ring necked duck	Gray catbird	
Pied billed grebe	Brown thrasher	
Red necked grebe	European starling	
Double crested cormorant	Cedar waxwing	
Great blue heron	Yellow warbler	
Northern harrier	Chestnut sided warbler	
Red tailed hawk	American redstart	
Killdeer	Ovenbird	
Upland sandpiper	Common yellowthroat	
Wilson's snipe	Scarlet tanager	
Black tern	Chipping sparrow	
Rock pigeon	Clay colored sparrow	
Mourning dove	Field sparrow	
Great horned owl	Vesper sparrow	
Chimney swift	Savannah sparrow	
Ruby throated hummingbird	Grasshopper sparrow	
Red bellied Woodpecker	Le Conte's sparrow	
Yellow bellied sapsucker	Song sparrow	
Downy woodpecker	Swamp sparrow	
Hairy woodpecker	Rose breasted grosbeak	
Northern flicker	Indigo bunting	
Eastern wood-pewee	Bobolink	
Alder flycatcher	Red winged blackbird	
Willow flycatcher	Western meadowlark	
Least flycatcher	Yellow headed blackbird	
Eastern phoebe	Brewer's blackbird	
Great crested flycatcher	Common grackle	
Western kingbird	Brown headed cowbird	
Eastern kingbird	Baltimore oriole	
Yellow throated vireo	American goldfinch	
Warbling vireo	Baird's sparrow	
Red eyed vireo	Bald eagle	
Blue jay	Burrowing owl	
American crow	Chestnut collared longspur	
Horned lark	Greater prairie chicken	
Tree swallow	Henslow's sparrow	
Bank swallow	Loggerhead shrike	
Barn swallow	Marbled godwit	
Black capped chickadee	Nelson's sharp tailed sparrow	
White breasted nuthatch	Sprague's pipit	
House wren	Trumpeter swan	
Wilson's phalarope	Yellow rail	
Northern cardinal		



August 9, 2010

Mr. Aaron Snyder U.S. Army Corps of Engineers St. Paul District 190 Fifth Street East, Suite 401 St. Paul, Minnesota 55101-1638

Re: Federal Emergency Management Agency's (FEMA) Comments on the *Integrated Draft Feasibility Report and Environmental Impact Statement Fargo-Moorhead Metropolitan Area Flood Risk Management*, May 2010

Dear Mr. Snyder:

FEMA received the *Integrated Draft Feasibility Report and Environmental Impact Statement Fargo-Moorhead Metropolitan Area Flood Risk Management* (Integrated Draft FR/EIS). The document has been reviewed by our Region V and Region VIII offices as well as our Headquarters office. FEMA offers the following comments for your consideration:

Downstream Impacts: As the *Integrated Draft FR/EIS* indicates, an analysis of the downstream impact is needed for this project. The National Flood Insurance Program (NFIP) regulations, applicable to Federal agencies through Section 3(a) of Executive Order 11988 – *Floodplain Management*, require:

- 1. An evaluation of alternatives that would not result in increases in the Base (1-percent-annual-chance) Flood Elevations (BFEs), with an explanation of why they are not feasible (44 Code of Federal Regulations (CFR) 65.12(a)(2)); and
- 2. Certification that no structures are located in areas that would be impacted by the increased BFEs (44 CFR 65.12(a)(5)).

Although the project itself is still in its feasibility evaluation stage, FEMA believes that these two requirements would have a direct impact on the analysis. These requirements may implicate additional alternatives, modifications to the alternatives, and may affect the National Economic Development, Regional Economic Development, and Other Social Effects accounts in your analysis. For example, the evaluation may show that acquisitions and other mitigation/minimization measures are required in order to comply

FEMA Comments on the Integrated Draft FR/EIR August 9, 2010 Page 2 of 3

with 44 CFR 65.12(a)(5), that there would be significant impact to existing infrastructure downstream, such as roads, buildings, and public services, that the

likelihood for disaster assistance may increase downstream, that flood insurance premiums would increase to communities downstream, that historic properties that have not been accounted for would be affected, or that there could be disproportionate adverse impact to low-income and minority communities downstream. Therefore, FEMA encourages you to revise the *Integrated Draft FR/EIS* to take into account these elements and provide FEMA an opportunity to review the revised version before it becomes final.

Minimization and Floodplain Development: The *Integrated Draft FR/EIS* contains a discussion of the responsibilities of the U.S. Army Corps of Engineers (USACE) under Executive Order 11988. The document can be improved by identifying those measures that would minimize the adverse impacts from the proposed floodplain modification. For example, consideration should be given to measures that put occupants of the base floodplain on notice of the residual risk associated with living in the area protected by these systems, and measures to minimize backflow impacts from the diversion channels.

In addition, the documents can be improved by identifying measures to reduce the alternatives' indirect support of future development in the floodplain. This is in the spirit of Section 10 of USACE Regulation No. 1165-2-26 (March 30, 1984), which provides, for example, that "consideration shall be given to deletion of separable segments of a plan when such segments protect undeveloped land and would likely induce development in the flood plain for which another practicable non-flood plain alternative may exist."

Other Factors to Consider: Although not critical for the *Integrated Draft FR/EIS* and for this early stage of the process, we wanted to keep you apprised of other requirements that should be taken into account before the project commences. 44 CFR 65.12(a) requires conditional approval from FEMA before the project is undertaken. The information that FEMA will request for this process includes:

- 1. Documentation of the legal notice to all impacted property owners, within and outside the community, explaining the impact of the proposed action on their property (44 CFR 65.12(a)(3));
- 2. Concurrence of the Chief Executive Officers of all communities impacted by the proposed action (44 CFR 65.12(a)(4));
- 3. A request for revision of the BFE determination (44 CFR 65.12(a)(6)); and
- 4. A request for floodway revision (44 CFR 65.12(a)(7)).

FEMA Comments on the Integrated Draft FR/EIR August 9, 2010 Page 3 of 3

I hope you find these comments helpful. If you have any questions, please contact me, by telephone at (202) 646-2741 or email at jomar.maldoando@dhs.gov, at your earliest convenience.

Sincerely,

Jømar Maldonado

FEMA Environmental Officer

cc:

Sandra Knight, Deputy Federal Insurance and Mitigation Administrator, Mitigation Andrew Velasquez III, Region V Regional Administrator
Amanda Ratliff, Regional Environmental Officer, Region V
Norbert Schwartz, Mitigation Division Director, Region V
Robin Finegan, Region VIII Regional Administrator
Steven Hardegen, Regional Environmental Officer, Region VIII
Jeanine Petterson, Mitigation Division Director, Region VIII
Pete Rabbon, Program Director, National Flood Risk Management Program, USACE
Zoltan Montvai, Chief, Planning Management Branch, USACE

United States Department of Agriculture



Natural Resources Conservation Service 375 Jackson Street, Suite 600 St. Paul, MN 55101-1854

August 4, 2010

Mr. Aaron Snyder USACE Planner and Project Manager 190 East Fifth Street, Suite 401 St. Paul, MN 55101

IN REPLY REFER TO: Draft EIS for Fargo-Moorhead Metropolitan Area Flood Risk Management

Dear Mr. Snyder:

The Minnesota Natural Resources Conservation Service (NRCS) has reviewed the above-referenced project. Our comments are as follows:

Because of the location and type of activity proposed, this project will impact agricultural lands. It is a requirement that a Farmland Policy Protection Act (FPPA) site assessment be appropriately filed. A review of Section 5.2.1.11 indicates that an AD-1006 has been filed for each of the North Dakota and Minnesota alternatives. Should the alternatives be modified to impact additional farmland, the FPPA review should be reinitiated.

The EIS has addressed both direct and indirect wetland impacts for both the North Dakota and Minnesota alternatives. It should be noted that upon determination of a final recommended plan, compensatory mitigation must meet the requirements of both Section 404 of the Clean Water Act and in the case of Minnesota alternatives, the requirements of the Minnesota Wetland Conservation Act (WCA).

The project sponsors are not USDA program benefit recipients, thus the wetland conservation (Swampbuster) provisions of the 1985 Food Security Act, as amended, are not applicable. It should be noted however, that actions by a non-USDA participant third party (project sponsor) which impact agricultural wetlands owned or operated by USDA participants, may jeopardize the owner/operators USDA eligibility. If such impacts are anticipated, the landowner/operator should contact the county Farm Service Agency (FSA) office to consider an application for a third party exemption.

The Draft Feasibility Report and EIS mention that flooding at Fargo has increased over recent decades based on a review of annual peak discharge data. However, results from the Expert Opinion Elicitation on page 85 state that revised flow frequency curves show 1 percent flows decreasing from 34,700 cfs (present) to 31,300 cfs (in 2060). Aren't these statements contradictory?

The document acknowledges that the Locally Preferred Plan will result in increased stages downstream of the project however potential economic impact and mitigation issues are not included in this Draft Feasibility Report and EIS. In Appendix B (Hydraulics) Section B.8.1.3 it states that more detail of downstream impacts is provided in Appendices D and E, however a search of those appendices did not provide that information.

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In past NRCS PL-566 planning experiences in the Red River Valley, project alternatives resulting in increased downstream stages can have significant social and economic issues. The draft document mentions that downstream impacts are currently being studied in detailed and will be presented in the Final Feasibility Report and EIS this. NRCS would be interested in reviewing this final analysis, mainly from the standpoint of impact on agricultural lands. Also, several working papers developed by the Red River Basin Flood Damage Reduction Work Group suggest that upland runoff reduction strategies in the form of wetland restoration/creation and small impoundments can reduce Red River flood flows. With the increasing level of participation in state and federal wetland-restoration programs, perhaps the impacts of upland storage could be considered in the analysis of the downstream impacts of the diversion.

Sincerely,

PAUL A. FLYNN

State Resource Conservationist







June 7, 2010

Terry J. Birkenstock, Chief Environmental and Economic Analysis Branch, 190 Fifth Street East St. Paul, MN 55101–1638

Via Fax: 651-290-5258

Dear Mr. Birkenstock:

On behalf of the National Wildlife Federation (NWF), I would like to make an official request for an extension of the 45-day comment period for the Draft Feasibility and Environmental Impact Statement of the Fargo-Moorhead Metropolitan Area Flood Risk Management report. The NWF has been intensely involved with this issue since the U.S. Army Corps of Engineers (USACE) started their scoping process and is deeply committed to ensuring a positive outcome for fish and wildlife species in the Red River basin.

The draft feasibility/EIS report (nearly 400 pages) warrants an extension simply because of its sheer length and intricacy. In order to formulate meaningful and scientific comments from stakeholders, farmers, citizens and conservationists, an extension is a necessity. We request 90 additional days to the comment period.

For a project with a price tag of more than \$1 billion, all alternatives and publics comments should be fully researched and exhausted before the USACE reaches a final decision. In this economy, haphazard spending for a diversion project is not only unwarranted, but also irresponsible management of resources, both economically and ecologically.

Thank you for considering our request.

Best regards.

Tom France, Regional Executive Director

National Wildlife Federation • Northern Rockies & Prairies Regional Center 240 North Higgins, Suite 2 • Missoula, MT 59802 406-721-6705 [phone] • 406-721-6714 [fax] • www.nwf.org



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June 22, 2009

Terry J. Birkenstock, Chief, Environmental and Economic Analysis Branch, 190 Fifth Street East, St. Paul, MN 55101–1638

Re: Scoping Comments on Proposed Flood Risk Management Project on the Red River of the North

Dear Mr. Birkenstock:

On behalf of the National Wildlife Federation, we offer these scoping comments on the Environmental Impact Statement being prepared by the Corps of Engineers on the Flood Risk Management Project on the Red River of the North.

In the Notice of Intent (74 Fed. Reg. 20684, May 5, 2009), the Corps of Engineers proposed to evaluate measures for reducing flood risk in the Fargo-Moorhead Metropolitan Study Area. Alternatives to be evaluated include, but are not limited to, levees and floodwalls, diversion channels, non-structural flood proofing, relocation of flood prone structures, and flood storage.

In order to evaluate a full range of alternatives, we urge the COE to 1) expand the study area to include all upstream watershed basins and 2) evaluate wetland restoration and other non-structural approaches as an alternative for flood control and protection.

In preparing this scoping letter, we have been impressed by the amount and quality of the literature available that evaluates wetland restoration and other non-structural mechanisms as an alternative to structural approaches to flood control. From our perspective, levee construction and diversions are very expensive, threaten downstream communities with additional flood hazard and offer no environmental benefits. In contrast, wetland restoration can reduce flood peaks and shift the timing of flood events even while providing a broad array of ancillary benefits including cleaner water, larger fish and wildlife populations and enhanced recreational opportunities. We note too, that such benefits have real economic value.

In addition to much research on the positive benefits of wetland restoration, related studies have also demonstrated that wetland drainage in the Red River basin have significantly increased both the timing and size of Red River floods and also that wetland drainage continues to effect thousands of acres annually. Wetland restoration will help offset these destructive land use practices that are so costly in terms of water quality, wildlife and flood costs.

Because wetland restoration and better watershed management are an economical, ecological and sustainable method for flood control, we strongly urge for the Army Crops of Engineers to go beyond the "quick-fix", expensive and finite solution of levees and diversions, and consider looking "upstream" to a watershed/wetland approach to managing flooding on the Red River.

A. The EIS Must Utilize a Larger Study Area and Evaluate the Impacts of Wetland Drainage on Flood Frequency, Flood Timing and Flood Severity.

The Notice of Intent suggests that the EIS being prepared by the Corps will only evaluate flood impacts and alternatives measures to prevent flooding within the Fargo-Moorhead Metropolitan Area. This limited study area will not allow the Corps to accurately evaluate the causes of increased flooding in the Red River Basin or the full range of alternative remedies, including wetland restoration and other watershed management possibilities. Ample evidence demonstrates that wetland drainage throughout the Red River basin has significantly contributed to increased flood frequencies and flood peaks.

The prairie pothole wetlands of the northern Great Plains are one of the world's great natural resource treasures. Within this 300,000 square mile area, retreating glaciers left tens of thousands of small depressions that seasonally fill with water and provide habitat for millions of waterfowl, shore birds and other wildlife species. Almost since farming began in this region in the mid 1800's, wetland drainage has been employed to increase tillable acreage and to facilitate other agricultural activities. The cumulative impacts of this wetland drainage have been staggering. Over the last 100 years, and especially since the end of the Second World War, over 50% of the region's wetlands have been drained with over 90% in some watershed basins.

In addition to the severe impacts to wildlife and water quality, wetland drainage has also impacted the timing, frequency and severity of floods throughout the region. Wetland drains and channels literally crisscross the entire region and dramatically accelerate spring run-off and reduce upstream, upland water storage capacity.

For example, much of the damage caused by the extensive flooding along the Mississippi River in 1993 resulted from levee failure as the river reestablished historic connections to the floodplain as well as the loss of upstream wetland storage and the alteration of the landscape that encouraged water to quickly drain into the nearest river or stream. Indeed, a recent study by The Wetlands Initiative noted that the wetlands lost in the upper Mississippi River had the capacity to retain all of the water that caused the 1993 flooding. Thus, although elaborate storage dam and levee systems can "reclaim" the floodplain for agriculture and human settlement in most years, the increasingly frequent and inevitable large floods the Great Plains and Midwest are seeing impose high disaster costs to society.

Evidence strongly suggests that wetland drainage has significantly impacted flooding in the Red river basin. In fact, the Red River basin has experience 8 of the 10 all time record flood crests in the past 30 years. One study dealing with watershed contributions to the Red River was published 28 years ago by soil scientists at North Dakota State University. It found an average 60% increase in stream flow rates and concluded that:

Significant increases in flow to the Maple, Wild Rice and Goose Rivers have occurred over the last 30 to 40 years. Flow rates were shown to be related to climate (precipitation), however, there appears to be no chance in precipitation patterns to account for increase in flow rates. Predicted flow rates were shown to be closely related to basin size due to land drainage in the Maple River and Goose River basins.

Since this study was published, wetland drainage has continued throughout the Red River.

Based on this information, the EIS should enlarge the study area to include all upstream river basins above Fargo-Moorhead. In taking this step, the EIS will necessarily have to evaluate the impacts on flood crests, flood frequencies and flood severity of wetland drainage. Through this evaluation, the EIS can then take the next and most critical step – evaluating the benefits of wetland restoration in terms of reducing these flood impacts.

B. The EIS Must Develop a Wetland Restoration Alternative

Restoring upstream storage capacity must be studied as an alternative to flood mitigation for the Red River. Several studies have demonstrated the effectiveness and feasibility of restoring wetlands or using upland depressions to temporarily store water during a flood event. One such study concluded that, "non-structural means as temporary storage of runoff on agricultural lands in the upland areas of the watershed during periods when flood risks are high, may provide ecological benefits...at the same time diminishing the threat of downstream flooding." Another study concluded that, "floodwater attenuation is one of the most widely recognized ecosystem services provided by restored wetlands..." The potential storage capacity on USDA program lands in the PPR alone is, conservatively, 56,513 ha-m (458,151 acre-feet) of water, if filled to maximum capacity. Additionally, restoring drained and farmed wetlands could increase the water retention capacity of a watershed in the PPR of Minnesota, "by up to 63%." Depressional wetlands in the Devils Lake basin of North Dakota have the potential to store around 72% of the total runoff volume from a 2-year frequency runoff event and 41% of a 100-year frequency runoff event.

1. The Restoration of Wetlands can significantly reduce flood frequency and severity while also providing vital ecosystem benefits.

The benefits of wetland restoration are numerous. Wetlands provide various ecosystem services to farmers and communities, recreational opportunities, global warming mitigation, and most importantly, flood control. One study concluded that, "wetlands on [USDA] program lands [in the PPR] have significant potential to intercept and store precipitation that otherwise might

contribute to "downstream" flooding.⁵ Additionally, the "conversion of cultivated cropland to grassland cover as part of conservation programs results in a reduction in surface runoff and, ultimately, reduces the rate at which a basin refills and overflows.⁶

An Army Corps study on the Charles River in Massachusetts concluded that the floodplain wetlands were so effective for flood control the Corps purchased the wetlands rather than drain them to build a levee system. Maintaining the 3,400 ha of wetlands in the Charles River basin rather than draining them saved Boston an additional \$17 million in flood damages per year. Another study looking at the relationship between upstream wetland drainage and downstream flooding concluded that, the increase in peak stream flow was significant for all sizes of streams when wetlands were removed. 8

Utilizing wetlands for flood protections provide a multitude of additional benefits. Increasing wetland habitat will provide stability to migrating and nesting bird habitats as well as numerous other species of wildlife. This in turn creates opportunities for hunting, fishing, bird watching, hiking and other types of recreation. Wetlands also serve as nature's kidneys, filtering polluted water and releasing cleaner water into both nearby ground and surface waters. This improves water quality. Wetlands further serve to recharge ground and surface waters, meaning that while they prevent flooding in wet times, they serve to replenish and retain adequate water supplies and stream flow during drier times. As climate change increases the severity and frequency of both floods and droughts, these functions will become crucial to maintaining healthy aquatic systems and to protecting communities from the impacts of climate change. Wetlands play at least two critical roles in mitigating the effects of climate change, "one in the management of greenhouse gases (especially carbon dioxide) and the other in physically buffering climate change impacts."9 Studies show the great potential for wetlands to act as carbon sinks to sequester carbon, thus mitigating the impacts of global warming. USGS data suggests that terrestrial carbon capture may be greater in wetlands over smaller acreage than the potential capture on a larger area of cropland. 10

Given the multitude of benefits in addition to flood protection that wetland restoration provides, especially in light of the many challenges presented by climate change, it is the most effective, affordable, and ecologically sound solution for the Red River basin, and must be given the full consideration of the Army Corps of Engineers, when preparing the EIS for the proposed flood protection plan, found at 74 FR 20684.

2. The Prairie Pothole Region (PPR) Provides Viable Wetland Restoration Opportunities

The prairie landscape, prior to major drainage and alteration after European settlement, was defined by its wetlands. ¹¹ This system of wetlands is still vitally important today, but in need of restoration to provide the functions it once provided. The significance of the prairie wetland landscape is exemplified in the Prairie Pothole Region (PPR) of the United States and Canada. This area extends over 300,000 square miles from north central Iowa and western Minnesota

through North and South Dakota, into eastern Montana and north into Canada. The unique Prairie Pothole ecosystem is the result of retreating glaciers, which left the landscape dotted with pothole wetlands. Despite the harsh climate of wet/dry cycles, winter freezing and varied salinity, "the PPR is an extremely productive area for both agricultural products and wildlife." The PPR ecosystem is of "unparalleled importance to breeding waterfowl and many other species of wetland wildlife," in addition to acting as a nutrient sink, storing runoff to reduce flooding, sequestering carbon and providing other "environmental and socio-economic values." The PPR hosts more than 300 species of birds which rely on this region – "177 species for breeding and nesting habitat and another 130 for feeding and resting during spring and fall migrations." The PPR is a vital resting and replenishing area for migratory birds. Waterfowl banded in the PPR have been found in 46 other states, 10 Canadian provinces and 23 other countries. In addition to birds, muskrats, foxes, deer and a variety of other wildlife rely on the PPR.

Besides a rich wildlife habitat, the PPR captures precipitation and mitigates flooding. Historically, over "80% of the land surface drained into potholes rather than streams and rivers," where the water would then evaporate or seep into the ground, recharging underground aquifers. ¹⁸ Grasslands further reduced the runoff of water and sediment, creating a more stable water level and enabled the area to host a diverse community of native grasses, sedges, rushes and other submersed vegetation. ¹⁹ Given the multitude of benefits provided by the PPR, the InterGovernmental Panel on Climate Change (IPCC) concluded in a special report that, "Any additional stress [to the PPR] would be of great concern and could be accommodated only through active programs to protect, enhance, and increase wetland areas in this region." ²⁰

3. The Waffle Project, combined with Wetland Restoration is also a viable alternative.

One effort currently being studied and potentially implemented in the Red River basin is called the Waffle Project. The Energy & Environmental Research Center (EERC) "recognized the need for alternative methods of flood protection to augment existing flood protection measures. This sentiment was mirrored by other major organizations and agencies in the Red River Basin, and it was determined that innovative concepts of nonstructural measures should be explored to augment the design capacities of structural measures planned to protect against future floods similar in scope to, or greater than, the 1997 flood."

As Minnesota Public Radio reported in 2006, "the waffle plan is simple. Existing roads serve as levees to store water in farmers' fields. The potential for storage is amazing. One square mile storing water a foot deep would hold more than 200 million gallons of water." Because this plan looks to slow the movement of water entering the system at any time, the chances of flooding are greatly minimized. The additional benefit of the plan would allow the retained water to recharge the aquifer and prevent droughts in the future. The Waffle Plan is also a more affordable solution to mitigating flood damage, with the pricetag to implement the Plan across the Red River basin "estimated at \$50 million. The protective dike system in Grand Forks cost \$397 million." And, the estimated cost of levees or a diversion channel along the Red River far exceed Grand Forks at \$625 million and \$909 million, respectively.

In this economy, haphazard spending for a levee or diversion project is not only unwarranted, but also irresponsible management of resources, both economically and ecologically. And the extraneous building costs are not a one-time expense. Levees will require continued spending for maintenance and upkeep, and they are uncertain to retain flood waters in our world of extreme weather patterns, so greater structures may have to be built in the future, at greater costs, in order to seize the swelling waters of the Red River.

When the Waffle Project is implemented in conjunction with continued wetland restoration, a successful and long-term flood protection plan results. Programs such as the Waffle Project, Wetland Reserve Program, and other studies and programs through Ducks Unlimited, US Fish & Wildlife, and numerous other agencies and organizations, provide ample data and opportunity to implement wetland restoration as a significant option to prevent flooding downstream.

C. The EIS Must Utilize a Larger Study Area and Consider Wetland Restoration Alternatives in Order to Comply With the National Environmental Policy Act.

An additional requirement for the Army Corps to consider in its EIS are the simultaneous actions of the Fargo-Moorehead Metro Project and the Southside Flood Control Project, which calls into question requirements under NEPA regarding connected actions. An assessment of cumulative impacts is required by the Council on Environmental Quality (CEQ) regulations under NEPA. Cumulative effects are defined as, "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions."

When considering whether there are cumulative effects or connected actions, an agency must look at the scope of the proposed project and must consider 3 types of actions: connected actions, cumulative actions and similar actions. A connected action means that there is a close relationship between actions which must be considered in a single EIS. Similarly, a single EIS must be prepared for cumulative actions, which when viewed with other actions "have cumulatively significant impacts and should therefore be discusses in the same impact statement." A similar action is one, when viewed with other proposed or reasonably foreseeable actions have similarities that would be reasonable to analyze together in a single impact statement. In the context of the Fargo-Moorhead and Southside Projects, given their timing, scope, relatedness, and proximity, the projects would be considered cumulative actions, and are required, by NEPA, to be considered under a single EIS.

Thank you for considering the comments on the Notice of Intent. Please feel free to contact any us if you would like additional information.

Momas trance

Thomas France, Regional Executive Director

Endnotes:

¹ A. Manale, (Summer 2000). Flood and Water Quality Management trough Targeted, Temporary Restoration of Landscape Functions: Paying upland farmers to control runoff, *Journal of Soil and Water Conservation 55.3*, 285.

² USGS, Robert A. Gleason & Brian A. Tangen, Ecosystem Services Derived from Wetland Conservation Practices in the United States Prairie Pothole Region with an Emphasis on the U.S. Department of Agriculture Conservation Reserve and Wetlands Reserve Programs ch. D: Floodwater Storage, http://pubs.usgs.gov/pp/1745/pdf/pp1745web.pdf (accessed June 10, 2009).

³ *Id*. ⁴ *Id*.

⁵ Gleason & Tangen, *supra* n. 2.

⁶ *Id*.

⁷ William J. Mitsch & James G. Gosseling, *Wetlands*, 347 (John Wiley & Sons, 2007).

⁸ *Id.*. at 349

⁹ The Ramsar Convention on Wetlands, *Wetland Values and Function: Climate Change Mitigation*, http://www.ramsar.org/info/values_climate_e.htm (last updated Dec. 21, 2000).

¹⁰ USGS, *Prairie Wetlands are Important for Carbon Storage*, http://biology.usgs.gov/cro/Fact%20Sheets/carbonnewban.pdf (last updated July 2002).

¹¹ Susan M. Galatowitsch & Arnold G. van der Valk, *Restoring Prairie Wetlands: An Ecological Approach*, vii (Iowa St. U. Press 1994).

¹² USGS, Wetlands of the Prairie Pothole Region: Invertebrate Species Composition, Ecology, and Management, http://www.npwrc.usgs.gov/resource/wetlands/pothole/prairie.htm (last updated Aug. 3, 3006). ¹³ *Id*.

¹⁴ Rex R. Johnson, Fred T. Oslund & Dan R. Hertel, (May/June 2008). The past, present and future of prairie potholes in the United States, *Journal of Soil and Water Conservation* 63(3), 85A.

¹⁵ U.S. Fish & Wildlife Service, Press Release: Prairie Pothole Region to Receive \$21 Million for Habitat Acquisition, http://www.fws.gov/mountain-prairie/PRESSREL/04-16.htm (March 8, 2004).

¹⁷ Gary L. Pearson, *Draining the Great Marsh*, USA Today (Nov. 1985).

¹⁸ Johnson, et. al., *supra* n. 14.

 $^{^{19}}$ *Id*

²⁰ InterGovernmental Panel on Climate Change, *The Regional Impacts of Climate Change* ch. 8: North America, http://www.ipcc.ch/ipccreports/sres/regional/202.htm (accessed June 22, 2009).

Bethany Bolles, Xixi Wang, Lynette de Silva, Heith Dokken, Gerald Groenewold,

Wesley Peck & Edward Steadman, An Innovative, Basinwide Approach to Flood Mitigation: The Waffle Project, http://www.undeerc.org/Waffle/info/pdfs/bb-floodmitigation.pdf (accessed June 4, 2009).

 $^{^{\}rm 22}$ Bob Reha, Waffle Plan researchers convinced they can lower flood levels, Minnesota NPR, http://minnesota.publicradio.org/display/web/2006/04/13/waffleredux/ (April 17, 2006). ²³ *Id*.

²⁴ See Council on Environmental Quality, Considering Cumulative Effects Under the National Environmental Policy Act (Jan. 1997).
²⁵ 40 CFR § 1508.7

²⁶ 40 C.F.R. § 1508.25 ²⁷ 40 C.F.R. § 1508.25(a)(2).

²⁸ 40 C.F.R. § 1508.25(a)(3). ²⁹ 42 USC §§ 4321, et. seq. *See also*, *Kleppe v. Sierra Club*, 427 U.S. 390, 96 S.Ct. 2718 (1976).

VIA U.S. MAIL AND E-MAIL (aaron.m.snyder@usace.army.mil)

Mr. Aaron Snyder Corps of Engineers Planner and Project Manager 180 E. Fifth Street East, Ste. 700 St. Paul. MN 55101–1638

Re: <u>Comments on Draft Feasibility Report and Environmental Impact Statement</u> on the Fargo-Moorhead Metropolitan Area Flood Risk Management Project on

the Red River of the North

Dear Mr. Snyder:

On behalf of the National Wildlife Federation, we offer these comments on the Draft Feasibility Report and Environmental Impact Statement (DEIS) on the Fargo-Moorhead Metropolitan Area Risk Management Flood Project on the Red River of the North.

The National Wildlife Federation recognizes the need for additional flood control for the Fargo-Moorhead area. Unfortunately, we cannot support moving forward with the U.S. Army Corps of Engineers' ("the Corps") preferred alternative in the DEIS, a massive and expensive diversion channel that will cause unacceptable environmental impacts and put downstream communities and landscapes at additional flood risk.

We are exceedingly disappointed that the Corps has proposed building "The Big Ditch" without a basin-wide analysis of how flood risk can best be managed and without more thoroughly considering other structural and non-structural alternatives that would not only reduce flood risk, but also provide additional environmental and economic benefits. From our analysis, it seems clear that a combination of wetland restoration and farm field storage projects could provide effective flood control and also provide significant benefits to fish and wildlife resources, water quality, and local economies.

We understand the Corps may not have the capacity or the desire to actually move forward with these greener alternatives. Nonetheless, to bring forward a proposal that is so expensive that it may never be funded and so controversial that it may never be built, does no good service to the people of Fargo-Moorhead. In contrast to the divisive ditching project proposed by the Corps, wetland restoration and farm field water storage would be broadly supported by a diverse public that includes farmers, conservationists, and those concerned with economically responsible public works projects.

We urge the Corps to enlist other partners, such as the Natural Resource Conservation Service, the U.S. Fish and Wildlife Service (USFWS), and state and local agencies, and to move forward with a supplemental environmental impact statement that includes a basin-wide assessment and that evaluates a full array of water management alternatives.

A. Introduction

Human activities and alterations in, and around, the Red River Basin (RRB) have led to significant environmental changes throughout the watersheds, including the metropolitan areas of Fargo, North Dakota and Moorhead, Minnesota and their surrounding rural and agricultural communities. Fargo-Moorhead has always been threatened by flooding from the Red River of the North. In the last two decades, however, floods have become more frequent and more severe because thousands of wetlands throughout the RRB have been drained and converted into farmland. Prairie wetlands that once soaked up thousands of acre feet of water have been ditched and drained, increasing both the amount of spring melt water and the rate at which it enters the Red River. North Dakota and Minnesota have lost several hundred thousand acres of wetlands since the establishment of agricultural communities beginning in the 1800s, and North Dakota's wetlands continue to be drained at a rate of 20,000 acres per year. Climate change has also led to earlier and more abundant springtime runoff into the RRB and will continue to do so for the unforeseeable future. As both flood peaks and floods have increased, so too has the cost of fighting floods. The communities of Fargo and Moorhead now spend more than \$195 million annually for flood damages.

In response to the threat of more severe and more frequent flooding, the Corps has evaluated a limited number of engineering alternatives to reduce the threat of flooding in the Fargo-Moorhead area. Based on this evaluation, the Corps now proposes to build a 36-mile-long diversion channel around the Fargo-Moorhead area. The Corps' preferred diversion channel alternative will cover 9,382 acres, and will impact 137 acres of forest habitat, 226 acres either directly or indirectly of wetlands, and 39 acres of riverine aquatic habitat. The diversion channel will span between 100 and 300 feet in width. The projected cost of the diversion channel construction is \$1.4 billion, although some believe this estimate understates the cost of the project. The Corps' DEIS fails to factor into its cost estimations the expense of potential downstream mitigation that may also be needed, as well as maintenance and operation costs in the future.

The National Wildlife Federation strongly opposes the Corps' proposed diversion channel, and disagrees with many assessments made in the DEIS. Not only will the project be a massive federal and state expenditure, but also does not even guarantee to solve the RRB's current catastrophic flooding problems. Furthermore, the diversion channel will offer no ecological benefits, and will almost certainly have large negative impacts on the region's fish and wildlife and their habitats.

B. The DEIS fails to adequately address the negative consequences of the Red River diversion channel options.

In the DEIS, the Corps has evaluated eight different diversion channel alternatives, including the MN20k, MN25k, MN30k, MN35k, MN40k, MN45k, ND30k, and the ND35k. The ND35k was chosen as the Corps' Locally Preferred Plan (LPP), the MN40k was chosen as the National Economic Development plan (NED), and the MN35k was chosen as the Federally Comparable Plan (FCP).

Under NEPA, it is "mandate[d] that federal agencies take a hard look at the environmental consequences of a major federal action before taking that action." *Mid States Coalition for Progress v. Surface Transp. Bd.*, 345 F.3d 520, 533 (8th Cir.2003). Listed below are several potentially damaging effects of the Corps' LPP, which seriously call into question the thoroughness of the Corps' DEIS.

1. Most damaging and expensive plan

The proposed LPP will result in greater ecological impacts than both the FCP and the NED. If More tributaries and roughly 120 more acres of wetlands, forests, aquatic riverine, and fish tributaries and passages will be affected from the LPP than the FCP. The LPP will have a greater impact on wildlife and fisheries than the FCP and the NED. Under the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.), the U.S. Fish and Wildlife Service (USFWS) is authorized to provide recommendations to the Corps on federally funded water development projects. For the reasons listed above, the USFWS has recommended the FCP alternative rather than the LPP. It comparable costs (in millions) of the LPP, FCP, and NED are \$1,462, \$1,236, and \$1,367, respectively. (DEIS-ES-11).

The Corps selected the LPP primarily because of political considerations. The primary impetus for the construction of the massive diversion channel being proposed has come from the North Dakota congressional delegation and the City of Fargo. Because of lukewarm support for the project by Moorhead and other Minnesota political entities, North Dakota supporters pressured the Corps and the Assistant Secretary for Civil Works to accept the LPP alternative. The result is that the DEIS has identified a preferred alternative that is the most ecologically harmful and the most expensive, the 36-mile North Dakota LPP.

2. More flooding downstream

The DEIS states that downstream effects of the diversion channel on social resources could be significant, but it fails to adequately measure these impacts. The Red River is more than 500 miles long, with Fargo and Moorhead being located very near its point of origin at the Bois de Sioux River. Downstream effects of a large diversion channel could impact virtually hundreds of river miles. For the ND35k plan (LPP), the Corps only analyzed 43.5 river miles downstream.

The Red River flows northward and eventually empties into Lake Winnipeg near Manitoba, Canada. The river's northward flow creates an increased possibility of ice downstream. Large pieces of ice in the Red River create an even greater risk of springtime flooding downstream of Fargo-Moorhead, making this region particularly sensitive to springtime runoff. Furthermore, the Fargo-Moorhead diversion channel will also increase water levels downstream because more natural floodplain storage will have been eliminated. In all flooding scenarios mentioned in

section 5.2.1.4.1 (10-percent, 2-percent, and 1-percent chance), it was determined that *more* acreage would be impacted than the amount of acreage that is currently being impacted. (DEIS-153). In July 2010, the Corps issued a Preliminary Downstream Impact Analysis that also demonstrated that that both the LPP and the FCP would cause more flooding downstream. The DEIS needs to provide supporting information that even more homes downstream of Fargo-Moorhead will not be lost due to the increased water levels from the diversion, and that costs of flood control and repairs for flood damage would not actually *increase* as a result of the diversion channel.

3. Changes in sediment distribution

Section 5.2.1.3 states that "the proposed diversion structures should not lead to an appreciable change in suspended sediment concentrations along the project area," but the DEIS fails to give any concrete sedimentation data. The Corps' diversion channel will substantially affect sedimentation in the Red River and other connected tributaries. Sedimentation is a major problem in many rivers and lakes, which can cause a reduction in storage capacity that can lead to flooding. A build up of sediment can also lead to many aquatic changes that could have negative impacts on aquatic life. As a result, fish may begin avoiding areas of heavy sedimentation, ultimately changing their migratory patterns, wintering grounds, nursery areas, or spawning habitat. Valuable fish spawning areas could be covered in silt, and the sediment increase could lead to adult and juvenile fish mortality if their gills become filled with sediment. Fish foraging success will decline, which could also lead to mortality, especially in younger fish, and adult fish could be kept from spawning due to malnutrition. Therefore, sedimentation impacts and sedimentation mitigation costs must be included in the final EIS.

4. Destruction of wetlands

The diversion channel will affect more than 200 acres of wetlands. The Corps has suggested that any wetland taken away or adversely affected by the diversion channel will be replaced with new wetlands within the diversion channel in a low flow channel. The DEIS describes the low flow channel as "a channel that is typically in the center of a larger channel which is sized to handle small flows from drains, ditches or groundwater." It will be approximately 10 feet wide and 3 feet deep. (DEIS-166). The National Wildlife Federation challenges the feasibility of the Corps' solution of simply "replacing" wetlands by simulating wetland conditions on the bottom of the diversion channel in a low flow channel. A strip of wetlands 10 feet wide does not provide the security and benefits that larger blocks of wetlands provide. The DEIS does not address how these wetlands will be comparable to the previously existing wetlands that were affected by the diversion and does not describe the diversion channel wetlands' functions for surrounding wildlife. In addition, many problems can arise with a low flow channel. The channel will need frequent maintenance and modifications to ensure that it is effective, and it can be very easily damaged in severe situations such as flooding or drought. Section 5.2.1.6.3 of the DEIS states that "wetlands near [the Lower Rush River and the Rush River] could be impacted by not getting the same recharge from overland flooding that they have received in the past," but there is nothing further discussing how those negative impacts will be mitigated and what mitigation efforts will cost. The final EIS must include projected mitigation costs for additional wetlands

that might be impaired such as those near the Lower Rush and Rush rivers. The Corps must also include in its final EIS exactly what function the low flow channel will serve and how it is guaranteed to adequately compensate for existing wetlands adversely affected by the diversion channel.

5. Diversion will affect multiple tributaries and potentially harm their fish and wildlife

The North Dakota diversion would cross five tributaries: Wild Rice River, Sheyenne River, Maple River, Lower Rush River, and Rush River. (DEIS-ES-15). In addition, the DEIS states that "[t]he channels of the Lower Rush and Rush Rivers between the diversion channel and downstream to their confluences with the Sheyenne River will be abandoned..." (DEIS-166).

On page 15 of their Draft Feasibility Report and EIS, the USFWS states that nesting birds, mammals, and mussel species could be displaced or killed during the project's construction, and nesting birds' eggs could be abandoned or crushed. The USFWS states on page 14 of their Draft Feasibility Report and EIS that "construction and excavation within the riverine aquatic habitats could kill adult or juvenile fish," and some fish mortality is unavoidable. The USFWS also states that the additional sediment load, deposition, and accumulation into the Red River could alter aquatic and riverine habitat.

The DEIS indicates that fish could use the diversion channel, but the diversion channel will not contain any meaningful fisheries. The DEIS continues on to state that fish ending up in the diversion channel without their natural habitat will not be a significant issue during the operation of the diversion channel. (DEIS-ES-14). Fish caught in the diversion channel during flooding, however, will be forced to use concrete fish ramps for passage. It is not known at this point whether certain sensitive fish species, such as the Lake Sturgeon, will be successful at using artificial passages. The DEIS also does not address how changing the velocity of water within the diversion might affect certain fish species. The velocity of the water within the diversion and downstream of the diversion could be too strong and prevent certain species and juvenile fish from traveling upstream.

The diversion channel will create numerous problems for multiple tributaries and wildlife and aquatic species. The final EIS must address the negative impacts to all tributaries and the specific adversities facing wildlife and aquatic life. A plan to mitigate these adversities must be identified and mitigation costs must be included in the final EIS.

C. The DEIS failed to analyze flood mitigation in the entire Red River Basin.

In a letter dated June 22, 2009 (attached), we urged the Corps to look for a flood mitigation plan that would alleviate flooding basin-wide rather than just the areas of Fargo and Moorhead. The limited study area of only Fargo-Moorhead does not allow the Corps to accurately evaluate the causes of increased flooding in the RRB or the full range of alternative remedies. In particular, the study would have needed to include the area above or upstream from Fargo-Moorhead. The entire Flood Risk Management study has been flawed from the beginning because the RRB was not analyzed in its totality.

According to the National Weather Service, the Red River of the North has exceeded the flood stage of 18 feet in 47 of the past 108 years, and every year from 1993 through 2010. (DEIS-5). The increased flooding over the past century has been a direct consequence of wetland loss in the interest of agricultural development. Studies have demonstrated that wetland drainage in the RRB has significantly increased both the timing and size of Red River floods and also that wetland drainage continues to affect thousands of acres annually. Wetland restoration throughout the RRB would help offset these destructive land use practices that are so costly in terms of water quality, wildlife and flood costs. Several studies have demonstrated the effectiveness and feasibility of restoring wetlands or using upland depressions to temporarily store water during a flood event. The restoration of wetlands can significantly reduce flood frequency and severity while also providing vital ecosystem benefits.

A possibility for wetland restoration lies in the Prairie Pothole Region's wetlands of the northern Great Plains, which span more than a 300,000-square-mile area. Almost since farming began in this region in the mid 1800s, wetland drainage has been employed to facilitate agricultural activities. According to the 1997 Minnesota Wetlands Conservation Plan, more than 95% of the native wetlands in the Minnesota portion of the RRB and upstream sub-basin have been lost. The cumulative impacts of this wetland drainage have been significant with more than 50% of the region's wetlands having been drained with more than 90% in some watershed basins. Wetlands in the Devils Lake basin of North Dakota have the potential to store approximately 72% of the total runoff volume from a 2-year frequency runoff event and 41% of a 100-year frequency runoff event. Restoring drained and farmed wetlands could increase the water retention capacity in the Prairie Pothole Region of Minnesota "by up to 63%." Furthermore, potholes are natural filters for nutrients such as sediments containing nitrogen and phosphorous, therefore, improving water quality. We recommended to the Corps in our June 22, 2009 letter that they explore and analyze this reasonable and logical alternative, however, the Corps' DEIS failed to do so.

Grasslands or grazing lands span approximately 600 million acres of the United States. Grasslands have proven to be a major source of watershed filtration, ground water recharge, and carbon sequestration. Grasslands have excellent potential to markedly improve water and air quality. Proper management of existing grasslands can enhance the land's ability to better reduce erosion and flooding by slowing and more evenly distributing surface waters. Grasslands also help the percolation of precipitation creating recharged groundwater aquifers. Conservation of grasslands can occur on private and public lands, and wildlife populations thrive with the availability of these habitats. Through cooperative efforts with agencies such as the Bureau of Land Management (BLM) and the Natural Resources Conservation Service (NRCS), private landowners can learn to maintain their property as grasslands in a manner that is most effective in preventing soil erosion and flooding in the Red River basin. Again, the Corps failed to explore this economically feasible and ecologically friendly alternative in its DEIS.

Based on this information, the Corps should enlarge its study area to include all upstream river basins above Fargo-Moorhead. As a result, the Corps will necessarily have to evaluate the impacts of flood crests, flood frequencies and flood severity of wetland drainage. It is only then

that the Corps can adequately evaluate the benefits of wetland and grassland restoration in terms of reducing these flood impacts.

D. The DEIS failed to adequately evaluate reasonable non-structural and flood storage alternatives.

Without the Corps' study of the entire RRB, it would be impossible to fully and accurately evaluate non-structural alternatives at scale because the study did not identify an analysis of an area that was properly scaled. The study only included Fargo-Moorhead, and for that area only, the DEIS identifies several measures retained for possible inclusion as features of the alternative plans. Those measures include: non-structural measures, flood storage, and wetland and grassland restoration. The DEIS provides an extensive analysis of a non-structural measure contained in Appendix P, which illustrates a very invasive and tedious process of raising and flood-proofing individual homes at a significant cost. However, all other measures, including wetland restoration, grassland restoration, and flood storage are dismissed as stand-alone plans with less than a page of justification in the DEIS.

1. The Corps must evaluate the Waffle Project.

The Energy & Environmental Research Center (EERC) of the University of North Dakota began conducting a four-year study on flood prevention in the wake of the devastating 1997 flood in the RRB. The goal of the study, beginning in 2002, was to see how a process referred to as the Waffle Project ("the Waffle") could mitigate the effects of mild to severe springtime flooding in the population center of Fargo-Moorhead, in addition to the surrounding areas of North Dakota, South Dakota and Minnesota. The Waffle uses micro-basins or preexisting areas, such as depressed agricultural lands bordered by raised roads, for short-term water storage. Agricultural areas make up approximately 74% of the land area in the RRB, making potentially 36,000 square miles of the RRB available for the Waffle Project. The study randomly selected 3,732 sections of land to use in evaluating water storage potential, and multiple scenarios were used due to nonuniformity of Waffle sizes. The sections showed that their storage volume estimate was 583,400 acre-feet, which includes a reduction for the freeboard between the stored water surface and the lowest point on the surrounding roads and a reduction to account for natural water storage. X1 The most significant impact shown in the study was a 7-foot decrease in the water level of the Red River in the Fargo-Moorhead area during floods. The study showed that the Waffle can successfully slow and significantly reduce the drainage of excess runoff before it enters water tributaries, most notably, the Red River of the North.

a. Costs associated with the Waffle

Costs associated with the Waffle were projected for a 50-year period. The Waffle would first involve finding landowners willing to enroll in the program, and then implementing the project by modifying existing culverts and installing new culverts and other water control mechanisms. There would also be costs associated with landowner payments and maintenance, and administrative overhead. Adjustments to cost projections were made for probability of flood occurrence, expected damage to residential and commercial properties and public infrastructure,

current economic conditions and value of real property, changes in flood protection, and future population changes. Waffle sizes were also divided into three categories: maximum, moderate and minimum, with costs projected as baseline, optimistic and pessimistic on full-scale and half-scale hypothetical models. Below are the results of this cost analysis.

Present Value of Projected Costs of the Waffle, 2006 through 2055 xii

Scale & Acreage Est.	Baseline	Optimistic	Pessimistic
Full-Scale			
Minimum	\$207,931,000	\$155,739,000	\$287,326,000
Moderate	\$362,191,000	\$269,537,000	\$494,872,000
Maximum	\$543,040,000	\$402,721,000	\$738,602,000
Half-Scale			
Minimum	\$107,964,000	\$80,915,000	\$149,494,000
Moderate	\$184,797,000	\$137,578,000	\$252,897,000
Maximum	\$275,505,000	\$204,386,000	\$375,132,000

The cost analysis table above illustrates that a plan for significant flood reduction on a full-scale effort can be implemented for between \$156 and \$739 million during the next 50 years. This is a stark contrast from the Corps' \$1.4 billion diversion channel, a price tag that only includes construction cost, and not operations and maintenance costs. The above table and the Waffle study's flood reduction results flatly contradict the Corps' conclusion that flood storage is cost prohibitive and less effective than a 36-mile diversion channel. The Waffle study suggests that significantly less storage than that determined by the Corps is needed to achieve a substantial flood level reduction. The numbers that the Corps lists in Section 3.4.6.2 of the DEIS were derived from a very preliminary modeling effort conducted through the Fargo-Moorhead Upstream Feasibility Study, which did not actually look at specific storage options in each of the tributaries of the Red River. Instead, the Corps estimated what the tributary flow reduction would be based on general assumptions. There is no rational explanation supporting the Corps' conclusion that doubling the storage volume from 200,000 acre-feet to 400,000 acre-feet only achieved another 0.2-feet stage reduction at Fargo.

b. Economic benefits from the Waffle

The Waffle Project studies show that net benefits of the Waffle could be significant over the next 50 years, with benefits being positive in 106 of the 108 scenarios that were evaluated. More than 85% of the scenarios indicated benefits in excess of \$300 million, and more than half of the scenarios had benefits in excess of \$500 million. Some scenarios showed economic benefits of up to \$700 million. xiii

2. The Corps must evaluate other flow reduction strategies.

Similar to the EERC's Waffle, the Red River Basin Commission (RRBC) also created a strategy that would decrease flood levels in the RRB. They simulated 1997 flood conditions (9.25" of

precipitation) and found that their storage areas could reduce flood levels in the Red River up to 20% in some areas. They found that the most significant reduction was a 20% peak flow reduction and 20% volume reduction at White Rock, South Dakota. The study demonstrates that storage areas built in river basins are 80% effective, and if all of the tributary basins upstream of the Red River do their share in flood storage, effects on Red River flood reduction can be substantial. XiV

There was no formal cost-benefit analysis done for this study. However, preliminary estimates showed that upstream storage competes very favorably with the Corps' diversion channel option because of the ratio based on the Fargo-Moorhead area damages alone. There would also be more widespread flood control benefits, in addition to a great potential for natural resource benefits under this program.

3. The Corps must evaluate an alternative that combines wetland and grassland restoration and other flow reduction strategies.

It is clear that the optimal strategy for minimizing flood risk, while also improving water quality and fish and wildlife habitat in the RRB, would involve a combination of wetland restoration and utilizing farm fields for temporary storage. The Corps, working with state fish and wildlife agencies and other federal agencies including the USFWS and the Natural Resources Conservation Service, should develop an alternative or alternatives that combine these approaches. The National Wildlife Federation urges the Corps to formulate an alternative that would include 500,000 acre-feet of storage through wetland and grassland restoration and an additional 500,000 acre-feet of storage through temporary storage utilizing farm fields.

In evaluating such an alternative, the Corps should consider the following costs and benefits.

- Flood control benefits
- Water quality benefits
- Fishery benefits
- Benefits to upland and migratory birds
- Recreational benefits, including increased hunting and fishing opportunities.

E. Wetland and grassland restoration, combined with flood storage, will have many positive impacts.

A successful and long-term flood protection plan results when flood storage concepts, such as those developed by EERC and RRBC, are implemented in conjunction with grassland and wetland restoration.

1. Protects more than just two cities

The Corps' diversion channel will only provide significant flood protection for two major metropolitan areas, Fargo and Moorhead. All other downstream cities and communities will not receive the benefited flood protection, and will likely see more flooding due to increased water

flow from the diversion channel. Should wetland and grassland restoration strategies be implemented along with flood-water-storage projects, not only will Fargo-Moorhead see decreased flooding, but downstream cities and communities will also experience flood relief. Flooding is also likely to be decreased upstream from Fargo and Moorhead, which only adds to the overall benefit of wetland and grassland restoration and flood storage efforts. Programs such as EERC's Waffle Project, RRBC's Flow Reduction Strategy, and concepts created by numerous other agencies and organizations, including Wetland Reserve Program and USFWS, provide ample data and opportunity to implement wetland and grassland restoration and flood storage as viable alternatives for flood prevention downstream.

2. Creates and enhances wildlife habitat and recreation, while also mitigating affects of climate change

Increasing wetland habitat will provide stability to migrating and nesting bird habitats, as well as numerous other species of wildlife. This in turn creates opportunities for hunting, fishing, bird watching, hiking and other recreation. Wetlands also play an important role in filtering polluted water and recharging the aquifer into both nearby ground and surface waters, greatly improving water quality. Grasslands further reduce the runoff of water and sediment, creating a more stable water level and providing an area to host a diverse community of native grasses, sedges, rushes and other submersed vegetation. xv

Wetlands play at least two critical roles in mitigating the effects of climate change, "one in the management of greenhouse gasses (especially carbon dioxide) and the other in physically buffering climate change impacts." Wetlands International, a global organization that works to sustain and restore wetlands, states that "inland wetlands in arid regions can play a very cost-effective role in attenuating the impacts of extreme weather events such as the impacts of extremes in precipitation and increases in evaporation due to higher temperatures." Wetlands serve to recharge ground and surface waters, meaning that while they prevent flooding in wet times, they serve to replenish and retain adequate water supplies and stream flow during drier periods.

The benefits of wetland and grassland restoration are numerous. Wetlands and grasslands provide various ecosystem services to farmers and communities, recreational opportunities, global warming mitigation, and most importantly, flood control. One study concluded that, "wetlands on [USDA] program lands [in the PPR] have significant potential to intercept and store precipitation that otherwise might contribute to downstream flooding." Additionally, the conversion of cultivated cropland to grassland cover as part of conservation programs results in a reduction in surface runoff and, ultimately, reduces the rate at which a basin refills and overflows.

3. Economic benefit to farmers

The preferred diversion plan (LPP) would eliminate approximately 5,400 acres of farmland from operation. (DEIS-ES-15). On the other hand, the Waffle or Flow Reduction Strategy would only "borrow" or "rent" land from willing landowners in the event of flooding. Even if the land was

used to store water, it would be done early enough in the spring so that the landowner would still be able to farm their crop in most years. Therefore, the payment from these flood storage programs would be a bonus above and beyond the farmer's "normal" agricultural income.

4. Set precedence for other green flood control solutions

As human activity continues to escalate and their harmful affects become increasingly evident through climate change, environmentally friendly alternatives will only gain in popularity. The states of North Dakota and Minnesota have a unique opportunity to show the rest of the nation a more natural and cost effective method of flood control. The precedent could be set for more ecologically favorable flood mitigation efforts rather than more expensive, concrete and environmentally damaging solutions. There has already been an international trend to move toward nonstructural flood control methods, and it is in our nation's best interest to closely follow in the same direction.

F. Conclusion

The U.S. Army Corps of Engineers is planning a 36-mile-long diversion channel around Fargo that will cost North Dakota and the Federal government \$1.4 billion to construct. The projected \$1.4 billion cost does not even include mitigation and maintenance expenses in the years after construction of the diversion channel has been completed. During this country's time of economic uncertainty, the Corps' project seems not only irrational and impractical, but also downright irresponsible when other green options to restore wetlands and grasslands along with creating flood storage have proven to be just as effective and a far less expensive means of flood mitigation. The Corps' colossal and esthetically displeasing diversion channel will be not only a massive state and federal expenditure, but also an ecological nightmare with resounding affects for centuries. If cities and communities within the Red River Basin do not want to face even bigger and more expensive problems combined with wildlife habitat destruction and decline a decade from now, the Corps must seriously reconsider their chosen diversion channel alternative.

Much of the Red River Basin flooding has been a direct result of wetland and grassland elimination during the past century for the sake of agricultural development. However, even though agricultural land is largely to blame for the present-day flooding predicament, it can now be used as temporary flood storage that would prevent dangerous flood levels. Grasslands and wetlands not only have remarkable abilities to store excess water runoff, but they are also attractive and provide much needed wildlife habitat in a region of the country that continues to have rapid human population increases. In its DEIS, however, the Corps all but completely ignores these environmentally friendly alternatives.

In recent case law, it is determined that "[w]hile the EIS need not be exhaustive, the existence of a viable but unexamined alternative renders an [EIS] inadequate." *Friends of the Boundary Waters Wilderness v. Dombeck*, 164 F.3d 1115, 1128 (8th Cir. 1999). There is no doubt that the Corps' DEIS leaves many alternatives largely unexamined. We strongly urge the Corps to fully address and consider the use of non-structural techniques for flood control. It is irresponsible for

the Corps not to consider more reasonable, but similarly effective solutions that do not have the long-term effects on the tributaries and streams of the Red River.

The National Wildlife Federation sincerely thanks you for considering these comments on the Draft Feasibility Report and Environmental Impact Statement on the Fargo-Moorhead Metropolitan Area Flood Risk Management Project on the Red River of the North. Please do not hesitate to contact us if you have questions or would like additional information.

Thomas France, Regional Executive Director National Wildlife Federation

Chris Hesla, Executive Director South Dakota Wildlife Federation

Gary Botzek, Executive Director Minnesota Conservation Federation

Cc; Senator Byron Dorgan
Senator Kent Conrad
Congressman Earl Pomeroy
Senator Amy Klobuchar
Senator Al Franken
Congressman Collin Peterson
Senator Tim Johnson
Senator John Thune
Congresswoman Stephanie Herseth Sandlin

Endnotes:

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ⁱⁱⁱ Id.

iv *Id.* at 14.

[∨] Id.

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xvi The Ramsar Convention on Wetlands, Wetland Values and Function: Climate Change Mitigation, http://www.ramsar.org/info/values climate e.htm (last updated July 2010).

xvii Moreno J. Garcia, Cost-effectiveness of maintaining and restoring wetlands as an adaptation measure against climate change, Wetlands International,

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xviii Gleason & Tangen, supra n. vi.

Kent Eken State Representative

District 2A Becker, Clearwater, Mahnomen, Norman and Polk Counties



Minnesota House of Representatives

August 6, 2010

Aaron Snyder US Army Corps of Engineers 180 East 5th Street, Suite 700 Saint Paul, MN 55101

Dear Mr. Snyder:

I am writing today regarding the draft Environmental Impact Statement (DEIS) and concerns I have regarding the Fargo-Moorhead Metropolitan Area Flood Risk Management project.

My concerns revolve around the effects a Fargo-Moorhead diversion channel will have on the communities and areas downstream from it. The DEIS clearly identifies there will be significant impacts downstream, which the recent preliminary downstream analysis of the preferred North Dakota 35K option projects to be anywhere from 7.6 to 22.2 inches of additional floodwaters (depending on the flood event) for the areas I represent.

Some of the current levies, ring dikes, and other protection methods will shelter people from this projected increase in flooding. However, it will still have negative effects on these folks. Communities and families will be stranded and cut off from their jobs, schools, medical care, grocery stores, and other essentials longer than in the past, since the additional waters will take more time to recede.

They will be the lucky ones, as others will not be able to protect against the higher waters or be under water for the first time ever because of failing levies/dikes or floodwaters reaching new areas. The result will be additional personal property damage, public infrastructure and asset loss, plus possible natural resource deterioration. There will also be increased economic loss with farmers' fields being under water for longer durations or for the first time, which will delay plantings and reduce yields. Since the region's economy is driven by agriculture, the effects will be felt beyond those that are actually flooded.



(218) 584-8109

Protecting the folks of the Fargo-Moorhead area is a laudable goal. While it is good the DEIS acknowledges there will be downstream impacts, the plan actually needs to include proposals to do something about it. In fact the current plan is likely in violation of federal Executive Order 11988 and FEMA regulations for just that reason. Under it federal projects need to avoid actions that adversely affect floodplains or take mitigation measures if avoidance is not practicable. The current Fargo-Moorhead diversion project does neither. The failure to include mitigation also puts it at risk of not receiving state permits and even funding.

It is for these reasons why the project and DEIS need to be amended to include mitigation efforts and a review of whether they cancel out the identified downstream impacts. Without these additional materials the DEIS is incomplete and the project does not have my support.

Thank you for taking public comment on the project and listening to my strong downstream concerns with the diversion.

Sincerely,

Kent Eken

State Representative



Protecting, maintaining and improving the health of all Minnesotans

June 23, 2010

Mr. Aaron M. Snyder Project Manager - St. Paul District of Corps of Engineers Sibley Square at Mears Park 190 Fifth Street East St. Paul, Minnesota 55101-1638

Dear Ms. Snyder:

Subject: Comments on Draft Feasibility Report and Environmental Impact Statement for Fargo-Moorhead Metropolitan Area Flood Risk Management

It is the responsibility of the U.S. Army Corps of Engineers (COE) to identify and protect well locations during construction of the potential Minnesota Diversion Channel. As described on pages 171 and 172 of the Draft Feasibility Report and Environmental Impact Statement, the COE will identify drinking water supply wells and have measures in-place during and after construction of the diversion channel to monitor groundwater levels in public and private supply wells and to protect the aquifer from anthropogenic impacts. The COE also should have a contingency plan in-place to protect the water supply wells in case of spills during construction of the diversion channel. Care should be taken to divert surface water flow during construction of the diversion channel away from well casings.

The enclosed map shows the locations of public water supplies and four Drinking Water Supply Management Areas (DWSMAs) that are in the area of the potential Minnesota Diversion Channel. The vulnerability of the two largest DWSMAs for the City of Moorhead public water supply wells is very high. The smaller DWSMA that is located closest to Moorhead has a vulnerability ranking that is listed as low. The DWSMA that is located farthest to the east is for the City of Glyndon public water supply wells. The vulnerability of that DWSMA also is low.

If you have any questions about these comments, please contact Sheila Grow by email or phone at sheila.grow@state.mn.us or 651-201-4692. Thank you for the opportunity to comment on the proposed flood Diversion Channel.

Sincerely,

John Linc Stine Assistant Commissioner Minnesota Department of Health P.O. Box 64975 St. Paul, Minnesota 55164-0975

Enclosure



Protecting, maintaining and improving the health of all Minnesotans

July 7, 2010

Mr. Aaron M. Snyder Project Manager - St. Paul District of Corps of Engineers Sibley Square at Mears Park 190 Fifth Street East St. Paul, Minnesota 55101-1638

Dear Ms. Snyder:

Subject: Comments on Draft Feasibility Report and Environmental Impact Statement for Fargo-Moorhead Metropolitan Area Flood Risk Management

Thank you for your June 3, 2010 letter to Commissioner Dr. Sanne Magnan regarding the above – referenced "Draft Feasibility Report and Environmental Impact Statement for Fargo-Moorhead Metropolitan Area Flood Risk Management." The MN Department of Health has primacy for implementation of the Safe Drinking Water Act in MN and, accordingly, we offer these comments.

It is the responsibility of the U.S. Army Corps of Engineers (COE) to identify and protect well locations during construction of the potential Minnesota Diversion Channel. As described on pages 171 and 172 of the Draft Feasibility Report and Environmental Impact Statement, the COE will identify drinking water supply wells and have measures in-place during and after construction of the diversion channel to monitor groundwater levels in public and private supply wells and to protect the aquifer from anthropogenic impacts. The COE also should have a contingency plan in-place to protect the water supply wells in case of spills or unintended releases that could contaminate drinking water sources during construction of the diversion channel. Care should be taken to divert surface water flow during construction of the diversion channel away from well casings.

The enclosed map shows the locations of public water supplies and four Drinking Water Supply Management Areas (DWSMAs) that are in the area of the potential Minnesota Diversion Channel. The vulnerability of the two largest DWSMAs for the City of Moorhead public water supply wells is very high. The smaller DWSMA that is located closest to Moorhead has a vulnerability ranking that is listed as low. The DWSMA that is located farthest to the east is for the City of Glyndon public water supply wells. The vulnerability of that DWSMA also is low.

Page 2 Mr. Aaron M. Snyder July 7, 2010

If you have any questions about these comments, please contact Sheila Grow by email or phone at sheila.grow@state.mn.us or 651-201-4692. Thank you for the opportunity to comment on the proposed flood Diversion Channel.

Sincerely,

John Line Stine

Assistant Commissioner

Minnesota Department of Health

P.O. Box 64975

St. Paul, Minnesota 55164-0975

Enclosure

July 2011



Minnesota Pollution Control Agency

520 Lafayette Road North | St. Paul, MN 55155-4194 | 651-296-6300 | 800-657-3864 | 651-282-5332 TTY | www.pca.state.mn.us

August 4, 2010

Mr. Aaron Snyder USACE Planner and Project Manager 190 East 5th Street, Suite 401 St. Paul, MN 55101

Re: Fargo-Moorhead Metropolitan Area Flood Risk Management Draft Feasibility Report and

Environmental Impact Statement

Dear Mr. Snyder:

Thank you for the opportunity to review and comment on the Draft Feasibility Report and Environmental Impact Statement (DEIS) for the Fargo-Moorhead Metropolitan Area Flood Risk Management project (Project) in Fargo, North Dakota and Moorhead, Minnesota. The Project consists of the construction of a 36 mile long diversion channel around the Fargo-Moorhead Metropolitan Area to reduce flood risk. Regarding matters for which the Minnesota Pollution Control Agency (MPCA) has regulatory responsibility and other interests, the MPCA staff has the following comments for your consideration.

MPCA staff believe that the DEIS adequately addresses the potential environment impacts that could occur as a result of the construction and operation of the diversion channel. The DEIS also adequately addresses the variety of means to mitigate those impacts if they were to occur. We acknowledge that during the construction of the diversion channel and control structures on the main stem of the Red River, there may be temporary impacts to impaired reaches (turbidity) of the Red River downstream. In order to minimize erosion and sedimentation caused by construction activities, a Stormwater Pollution Prevention Plan must be developed that addresses utilization of appropriate water quality Best Management Practices. It is not anticipated that the long term operation of the diversion channel and the control structures will have an adverse affect on the water quality of the Red River.

We appreciate the opportunity to review this project. Please be aware that this letter does not constitute approval by the MPCA of any or all elements of the Project for the purpose of pending or future permit action(s) by the MPCA. Ultimately, it is the responsibility of the Project proposer to secure any required permits and to comply with any requisite permit conditions. If you have any questions concerning our review of this DEIS, please contact me at 651-757-2508.

Sincerely,

Karen Woman

Karen Kromar Planner Principal Environmental Review and Feedlot Section Regional Division

KK.bt

cc: Craig Affeldt, MPCA, St. Paul
Jim Ziegler, MPCA, Detroit Lakes
John Frederick, MPCA, Detroit Lakes
Will Haapala, MPCA, Detroit Lakes

Minnesota Department of Natural Resources

REGIONAL OPERATIONS 2115 Birchmont Beach Road NE Bemidji MN 56601 218.308.2629



August 6, 2010

Aaron Snyder USACE Project Manager 190 East 5th Street Suite 401 St. Paul, MN 55101

RE:

Minnesota Department of Natural Resources (DNR) Comments

Fargo Moorhead Draft Feasibility Report and Environmental Impact Statement

(DEIS)

Dear Mr. Snyder,

For approximately the past 14 months, the Minnesota Department of Natural Resources (DNR) has been an active participant in the U.S. Army Corp of Engineers' (ACOE) efforts to develop a Scoping Document and Feasibility Study for flood risk management in the Fargo-Moorhead Metropolitan Area. The letter serves several purposes because the Feasibility Study is being conducted concurrently with Federal EIS preparation, and also due to the fact that the DNR has determined a Minnesota State EIS must be prepared for the tentatively preferred option. With this in mind, the letter addresses environmental effects and feasibility considerations, and can provide insight for the types of issues that the DNR would address as part of State environmental review and permitting. It is again important to place in context that our involvement to date does not constitute an endorsement for any one alternative, but rather provide design assistance and options for mitigation. Through multiple design concept changes, efforts have been made, that if implemented will help to reduce very certain impacts; however, significant resource concerns remain and must be addressed. Addressing these concerns early on will facilitate future State environmental review and permitting.

Past DNR correspondence remains relevant as many concerns remain unaddressed. Likewise, the following attachments are part of our DEIS comments and should be included in the record as such:

Attachments:

- 1. DNR comments January 14, 2010
- 2. DNR comments March 16, 2010
- 3. DNR informal scoping comments 2009

DNR comment topics remain consistent with past correspondence (attached) and include new topics. For each topic both general and, in some cases, specific comments (which reference specific areas in the DEIS) are provided. The DNR has the following comments:

Scope of Alternatives

General Comments:

The State of Minnesota has long been supportive of flood protection projects that utilize a comprehensive watershed approach to flood damage reduction. Such an approach integrates both flood damage reduction benefits and natural resource enhancements. This basin-wide approach is described in the 1998 Mediation Agreement and is supported by local sponsors that include the Red River Watershed Management Board, as well as the watershed districts in the Valley.

Flood storage, as a stand-alone plan, may not be a viable option able to meet both the sponsor's flood damage reduction goals and the ACOE feasibility planning objectives. Previous DNR scoping comments state that opportunities exist to increase and improve ecosystem and wetland restoration, wildlife habitat, and to provide recreational opportunities through the use of multipurpose water retention areas. Previous DNR scoping comments also indicated that water retention should be included in the mix of alternatives. The DEIS has not thoroughly included an evaluation of a comprehensive array of multi-faceted alternatives, such as upstream storage, flood barrier, floodway, and diversion combination alternatives. A comprehensive solution that includes storage options would provide needed mitigation for hydraulic impacts to downstream areas, be consistent with the comprehensive basin-wide approach, meet the feasibility study planning objectives, and have greater support.

Specific Comments:

Section 3.5.6 indicates that, "Following the development of the diversion alternatives, additional consideration was given to flood storage, wetland and grassland restoration... It was determined that these measures would not provide any additional justified increment. This is due to the fact that the diversion alternatives provided a very high level of flood risk reduction, and they captured a large portion of the benefits that could be captured by a project." This analysis assumes the diversion alternatives as proposed are acceptable stand alone projects.

Recommendation:

The EIS should include an alternative that is composed of a comprehensive array of multi-faceted alternatives, such as upstream storage, flood barrier, floodway, and diversion combination alternatives. Effects on the Study planning objectives (e.g. provide additional wetland habitat) and constraints (e.g. avoid downstream stage increases and loss of floodplain) must be part of the discussion in the EIS for all of the alternatives. Evaluation of the storage option with smaller diversion channels must be explored.

Hydrology

General Comments:

Section 3.9.1 in the DEIS indicates that, "In an effort to account for the uncertainty in climate variability, a non-traditional hydrologic analysis was used to ensure that the selected plan would perform in the future." Part of this non-traditional approach involves use of a truncated period of record. It is not clear why this shortened record is used. The Expert Opinion Elicitation (EOE) Panel concluded that a long-term gauge record

should be broken into a wet period and a dry period. The justification for this action is also not well documented in the DEIS.

Past land use changes, specifically accelerated drainage, may have also influenced the hydrology and flow record of the Study area, yet this does not appear to be taken into consideration when deciding to split the long-term record. If land use changes were partially responsible (and not likely to be reversed), then discarding the first 40 years of the record may be more justifiable.

Recommendation:

The Final EIS must justify the decision to split a long-term gage record into a wet and dry period. This should include an analysis of available climate records to show that such a climate cycle has occurred during the last 100 years. Without suitable justification and/or explanation of the non-homogeneous gage record, the full period of record should be used.

The use of the non-traditional hydrology has significant affect on the economic analysis among other potentially significant effects. A comparison of the benefits for the old and new hydrology at the 10, 50, 100, 500-year events must be provided. The non-traditional hydrology must be used consistently for the entire analysis in estimating potential impacts (e.g. fisheries), mitigation, and be applied for regulatory purposes (FEMA flood map revision). For example, this would require the communities of Fargo-Moorhead to use the 1% (100-year) elevation of 905.14 (gage elevation of 42.4) for the base flood elevation for floodplain zoning purposes. Without such consistency, the DNR cannot support the use of a non-traditional hydrologic analysis.

Downstream Hydraulic Effects

General Comments:

The DNR understands that for any properties deemed to have incurred a taking, compensation and mitigation is required. Furthermore, we understand the ACOE position that their regulations do not authorize the funding of compensation or mitigation for downstream hydraulic impacts unless the takings threshold is met.

The Council on Environmental Quality (CEQ) guidance titled "NEPA's Forty Most Asked Questions" indicates that, "All relevant, reasonable mitigation measures that could improve the project are to be identified, even if they are outside the jurisdiction of the lead agency or the cooperating agencies, and thus would not be committed as part of the RODs of these agencies." Sections 1502.16(h), 1505.2(c). This will serve to [46 FR 18032] alert agencies or officials who can implement these extra measures, and will encourage them to do so."

The alternatives proposed will result in significant downstream stage increases, yet there is no mitigation proposed in the DEIS. A July 210 report *Preliminary Downstream Impact Analysis* was received on August 3, 2010, six days before the end of the public comment period; we will evaluate those issues when the report is final. Initial review of the preliminary report verifies our concern about downstream stage increases as all flood frequencies. The DNR position remains (see *DNR 1-14-10 comments*) that any increases in downstream stage or discharge are unacceptable without mitigation and

losses of floodplain storage must be effectively replaced. For each alternative, costs associated with downstream mitigation must be included in the project cost. Regardless of USACE authority, the DNR views mitigation as the responsibility of USACE and the local sponsors to mitigate any increase in water levels and flood flows downstream. To date, no such commitments are in place. This will be a significant issue as it relates to permits and funding from our agency and will influence our input concerning flood map revision by FEMA.

Recommendation:

The final EIS should include a description of the takings analysis and be explicit as to why the project does or does not result in a taking. Inclusion of the taking analysis as an appendix would be useful. The EIS must include mitigation and its estimated cost for addressing the downstream stage and flow increases regardless of ACOE authority to fund such mitigation actions.

The DEIS has not identified how the ACOE has complied with Executive Order 11988 on floodplains. In addition, the DEIS has not discussed the compliance with FEMA standards relating to the stage increase. These deficiencies must be addressed in the EIS.

Specific Comments:

The DEIS clearly indicates that all alternatives as proposed will result in potentially significant downstream impacts. Specifically:

Section 3.7.3.4.2 indicates that, "All of the diversion channel alternatives will change the timing and flows of water, significantly reducing the quantity of water flowing through the communities of Fargo and Moorhead. As a result of the modifications to the timing of the flows, downstream impacts are anticipated."

Also, Sections 5.2.1.4.1 and 5.2.1.4.1 state that for both the MN35K and the ND35K plan "Increases in the level and duration of downstream flooding would have no appreciable effects on natural resources, but may result in significant adverse effects on social resources."

Lastly, Section 5.4.1.3 indicates that, "all diversion channel alternatives include anticipated impacts for the 10, 2 and 1-percent chance events." In addition, "would extend approximately 45 miles downstream."

Recommendation:

The EIS must document how it was determined that increases in downstream flooding "...will have no appreciable effects on natural resources". It is very likely that additional downstream stage increases will result in increased erosion, nutrient loading and other impacts.

It is unclear how plans that will result in downstream stage increases are consistent with the identified planning constraints (e.g. avoid increasing peak stages). This must be explained the EIS.

The DEIS only provides preliminary data. The full extent of downstream stage increase must be included in the final EIS.

Downstream impacts must be quantified downstream to a point where there is no increase in discharge or stage.

Geomorphic Processes and Aquatic Habitat

General Comments:

The DEIS drastically discounts the potential for impacts caused by changes in geomorphic processes.

Geomorphic effects of flood control projects have historically far exceeded anticipated effects. For example, the ACOE channelization of the Wild Rice River resulted in 12 feet of headward incision, 8 feet of downstream aggradation, and had a devastating impact to over 40 miles of river....these effects were not anticipated, and currently there are no plans in place to fix the problem. The EIS suggests that these effects will be small due to the relatively high contribution of suspended sediment load compared to sand and other bedload. This is also predicated on the assumption that sediments are uniformly distributed through the water column.

While the DEIS alludes to monitoring, no sediment data have been provided on which to base the above assumptions or the discounting of geomorphic effects. The very high total sediment load of the Red River and its tributaries contradict this assessment. DNR has observed major sedimentation along the Red following large events. The proposed project will significantly change the distribution of flow and sediment. Any alteration of the existing hydrologic and sediment regimes has the potential to result in sedimentation or incision. Either of these effects can adversely affect habitat quality. The structures will draw surface water that typically has relatively low sediment concentrations. This will send relatively high concentrations of sediment down the natural channel with less power to carry it.

The DEIS indicates that further evaluation will take place to verify potential impacts, including pre- and post-construction monitoring. The DNR believes that a robust monitoring program is needed, and we will continue to work with agencies and local sponsors in the development of such a program.

The DEIS also indicates that monitoring will be done in close coordination between agencies, and that coordination should include discussion as to whether future action would be needed if impacts were identified. Unless data is provided upon which comprehensive analysis and conclusions can be deducted; we have no reason to concur with the ACOE assumption that impacts are not likely and feel strongly that mitigation is necessary and warranted. The types of mitigation warranted, along with associated costs, should be included into the project cost. Increasing the amount of mitigation already proposed for footprint impacts associated with the Red River control structure would be meaningful and help to offset likely geomorphic impacts.

Recommendation:

There is no substantiation for the assumption of a uniform distribution of sediment particle sizes through the water column. A particle size analysis of total

sediment load of the Red River would provide the necessary basis for such a conclusion and should be included in the final EIS. Without this information, mitigation must be included for geomorphic impacts to the Red River.

The EIS should also discuss whether impacts associated with reduced flow from the confluences of the Rush and Lower Rush Rivers to a diversion outlet are anticipated. Flows will be further reduced along this reach creating opportunity for sedimentation that will, in turn impact aquatic habitat.

The EIS should include a determination whether additional debris and ice in the project area will impact channel stability in the portion of the Red River which will be diverted. Potential geomorphic impacts to Wolverton Creek and necessary mitigation must be included in the EIS.

Direct Habitat Loss

General Comments:

The DEIS acknowledges that mitigation will be provided for the Red River Structure footprint impacts of approximately .5 miles (10 acres). The DNR has been and will continue to work with the ACOE in identifying potential mitigation projects to be included in the Final EIS, that, when completed, will replace lost habitat function and value. The DNR supports mitigation projects where the effectiveness can be readily assessed (also see DNR Mitigation Comments below).

Wetland Impacts

General Comments:

According to the DEIS, the Minnesota diversion alignment would directly impact approximately17 acres of wetlands and could indirectly impact up to 85 acres of wetlands, while the North Dakota diversion alignment would directly impact approximately 33 acres of wetlands and could indirectly impact up to 193 acres of wetlands.

The DEIS goes on to state, "Either alternative would include <u>appropriate measures</u> to minimize or mitigate potential losses to wetland areas." In addition, impact "will be offset by the creation of wetlands within the diversion channel bottom." And finally, "The area available on the bottom of the diversion channel for all alternatives far exceeds the amount of wetland acres that would be impacted."

The DEIS lacks crucial information necessary to determine the appropriateness of wetland mitigation. While it may be true that replacement acreage far exceeds that of the acreage impacted, the DEIS does not describe how the mitigation will or will not replace the functions and values lost at the impact sites. This information is critical in determining whether the proposed mitigation will actually replace the loss of habitat and ecological function (i.e., whether it's appropriate). This information also relates to the planning objective of restoring or improving degraded riverine and riparian (including wetlands) habitat.

Recommendation:

The EIS must specifically discuss how the proposed wetland mitigation will replace the functions and values lost at the impact sites. The EIS must also discuss the potential for created channel-bottom wetlands to be influenced by aggressive non-native invasive plant species over time and subsequent impacts on function and value. This potential outcome must be discussed in context or in determining the appropriate replacement ratio.

Fish Passage and Biological Connectivity

General Comments:

The fish bypasses and other structures are necessary and helpful in minimizing potential impacts to fishes; however, they do not replace the function of the natural channel for flows higher than the 5-year event. While passage during the open gate condition is reasonably satisfied, the proposed fishways have not been detailed to the degree that effectiveness can be assessed.

The DEIS states minimum effects of the project on fish passage by giving percentages of blockage based on the entire record of daily values. There are several problems with this assumption:

- A. Fish migration is seasonal and for many species, spawning migration cues are associated with the spring flood. As a result, percentages would have greater relevance when put in the context of these migration periods.
- B. Currently, fish passage is least impeded during floods greater than the twoyear event as barrier structures are inundated and long migrations can only occur during these high flow events. The proposed project has the greatest affects during high flows when the river is most passable. Greater context would be provided by considering percentages of flows above the two-year event when the structure would block passage.
- C. Fish populations in rivers are often sustained by unusual events. Large floods often are associated with large year classes of some species. These unusual events may be responsible for sustaining populations.
- D. Spawning migrations are very sensitive to timing...fish cannot simply wait around for passage. A combination of day-length, water temperature, and hydrology all need to be appropriate. Blockage during the spawning run can result in egg absorption, stress-related disease and other mortality factors.
- E. Using USACE analysis of gauge data from 1942 to present, 13 of 68 years or 19% of years would have had fish migration limited (using the bypass channel) for one week or more during April, 4% of the years would have had fish migration limited for two weeks or more.

Fish are likely to be drawn into the diversion channel during operation. Since the duration of operation is short, there is potential for stranding and mortality of large numbers of migrating fishes. The impacts of this mortality could be substantial especially for long-lived and rare fishes like lake sturgeon. The ND diversion channel would have a fish bypass to get fish over the 20' head difference rather than the rock ramp proposed for a MN diversion. This will further increase the chances of stranding in the diversion channel and limit fish passage. Additional mitigation measures should be

considered such as operations that allow gradual reduction of water in the diversion channel.

It is the MN DNR Fisheries' experience that fish movement is substantially impeded within and through long, channelized river segments and ditches, such as those presented in all of the alternatives. This is likely due to homogeneous low value habitat conditions present in many ditches. This concern has been brought up repeatedly in discussions but is not addressed in the draft EIS, rather, it has been assumed that fishes will use the diversion channel in the same manner they would use natural channels.

The assumption throughout the DEIS is that fish passage on either the Red or its tributaries will not be significantly affected due to features built into the project that are intended to minimize impacts. No evidence, either empirical or from literature, is provided to support this position.

Recommendation:

The analysis provided by the EIS must rely on hydrologic data (updated data), empirical evidence, and peer-reviewed literature to draw conclusion pertaining to potential fish passage impacts. The EIS should attempt to address: to what extent the proposed passage facilitation measures will alleviate fish passage impacts; what species will utilize the proposed design based minimization efforts, and; what extent multiple restriction structures will compound passage impacts. The EIS must also place fish passage percentages in context of migration periods of various species in the Red River system rather than the entire record.

The EIS should utilize empirical evidence, peer reviewed literature and include a literature-cited section.

Specific Comments:

It is the DNR's understanding that a tieback levee associated with a Red River control structure will also cross Wolverton Creek.

Recommendation:

Impacts to fish passage at Wolverton Creek must be included in the EIS.

Section 5.2.1.8.1.4 indicates that a notched weir will be included. This is helpful in minimizing impacts associated with the stranding of fish; however, it is unclear if the notch effects are represented in the hydrographs (i.e. how fast will flows shut off in the diversion once the 20% event flows have passed).

Recommendation:

This EIS must indicate whether the notch effects are represented in the hydrographs.

Section 5.2.1.8.1.5.1, which discusses the Red River control structure effects on connectivity concludes that, "all diversion channel alternatives would largely avoid and minimize significant adverse impacts to fish migration...and have a small adverse effect

on biotic connectivity." In addition, "although connectivity would be slightly affected, it appears unlikely this effect would result in a detectable response in terms of a measurable population change by fish. Thus, any of the diversion channel alternatives would have a less-than-significant impact to fish population levels in the Red River basin as a result of slightly reduced connectivity." For reasons stated above, the DNR does not concur with these conclusions and believes mitigation is necessary (also see Mitigation General Comments section).

Debris and Ice

General Comments:

Widening the gates to 50' will reduce chance of debris blocking the structure resulting in a reduction in maintenance need (debris removal). It is likely that the Red River through the study area will have a reduced capacity to transport debris and ice. This may in turn result in changes in the flow dynamics and geomorphic processes. The effect of debris and ice on safety, flow, channel stability and habitat will extend beyond times of operation.

Recommendation:

The EIS must acknowledge that woody debris is an important component of many river systems providing fish habitat and channel stability. The final EIS should expand on the discussion of debris and ice as it relates to operation, maintenance, geomorphic processes and habitat.

State Environmental Review and Permitting

General Comments:

On July 19, 2010, it was determined that the tentatively preferred alternative requires preparation of a Minnesota State Environmental Impact Statement. The relationship between Federal and Minnesota state environmental review is addressed under Minnesota Rules 4410.3900, that requires, if a Federal draft or final EIS has been prepared for a project, the RGU must use the Federal EIS as the Minnesota State draft EIS provided it addresses the scoped issues and the State EIS content standards.

Minnesota has not initiated the State scoping process and many of the issues discussed to date will likely require additional analysis. Elimination or mitigation of downstream stage increases will also be required to secure the necessary DNR Division of Waters permit(s).

Specific Comments:

Section 3.12.4 titled "Permits" should include the need for a state EIS.

Safety

General Comments:

The Preliminary Section 404(b)(1) Evaluation indicates that, "During high flows when the control structures are under operation, recreational use (boaters, jet skis, canoes, kayaks, etc.) will not be allowed to pass through the structure due to safety concerns."

Recommendation:

Section 5.2.3.1.5 titled, "Public Health and Safety" should include a description of safety and operational measures proposed to ensure the safety of recreational users on the Red River and its tributaries.

As indicated in our January 2010 letter, diversion structures provide a barrier to flow during operation and have a risk of sudden and catastrophic failure presenting safety concerns for downstream habitants and recreational enthusiasts.

Recommendation:

The EIS should include an analysis of control structure catastrophic failure risk and provide loss of life estimates in the event of catastrophic failure.

According to Minnesota Rules, the proposed control structure on the Red River meets the definition of a high hazard dam. As such, preparation of Minnesota State EIS is mandatory. A Dam Safety Permit from the DNR Division of Waters will also be required.

Recommendation:

It is imperative that the federal and state EIS provide the safety information mentioned above as well as adequate information to inform the state permitting process. At a minimum, this information must include that described as required in a "Preliminary Report" under Division of Waters Rules 6115.0410 Sub. 3.

Mitigation

General Comments:

Based on case studies, peer reviewed literature, Minnesota Rules and professional experience; the DNR believes that the project has the potential to result in significant impacts to fish passage and biological connectivity, geomorphic impacts, and downstream stage increases. Unless data can be provided, upon which analysis and conclusion can be deducted that clearly show that impacts will be less than significant, our position remains that mitigation is required and cost estimates need to be included.

The DEIS appears to only offer or consider mitigation for impacts that the ACOE projects to be significant. The Council on Environmental Quality (CEQ) guidance titled "NEPA's Forty Most Asked Questions" indicates that, "mitigation must be considered for impacts that, by themselves would not be considered "significant". Once the proposal itself is considered as a whole to have significant effects, all of its specific effects on the environment (whether or not "significant") must be considered, and mitigation measures must be developed where it is feasible to do so. Sections 1502.14(f), 1502.16(h), 1508.14."

Recommendation:

The EIS must explicitly state why it is not feasible to provide mitigation for what the Corp's feels are less than significant impacts (i.e. fish passage, Red River and tributary geomorphology, and downstream stage increases).

The EIS must demonstrate that proposed mitigation measures ensure no loss of habitat function or values. Replacement of habitat, as a mitigation method, can replace lost functions and values. The success of habitat restoration or creation in replacing function and value can be estimated with the Habitat Evaluation Procedure (HEP), Habitat Equivalency Analysis (HEA) or other methods.

Specific Comments:

5.5.1.5 Stream Re-meandering

As previously indicated (March 16, 2010, DNR letter), the DNR believes that money targeted at pre-existing comprehensive ecosystem restoration initiatives will help ensure the most value for mitigation efforts. The DNR is aware of several restoration projects (e.g. Lower Wild Rice River, Buffalo River through Hawley) that if completed would restore stream or river habitat by recreating meanders and riparian habitat lost through channelization. The functions and values gained by these projects could be as mitigation for project-induced impacts.

5.5.1.6 Riparian Buffer Strips

The DNR questions the value of using riparian buffer strips along the Wild Rice River as mitigation for impacts likely to occur on the same stretch of river. The establishment of a riparian buffer in this area may be better suited as mitigation for riparian forest (wetland or upland) impacts elsewhere.

5.5.1.7 Fish Passage

DNR believes that improving fish passage as a systemic mitigation approach will improve connectivity in the Red River system as a whole. We also strongly believe this is required to offset project-induced impacts to fish passage and biological connectivity that will remain after minimization efforts.

We agree that completion of fish passage projects will open up previously unreachable habitats (of varying quality) for use. This will result in an overall increase in function and value for those habitats. However, the use of this approach as mitigation for measurable footprint impacts is questionable due to the difficulty in assessing effectiveness. While it "is possible fish passage could have broader and more meaningful benefits than site specific mitigation", the DNR does not support this approach as mitigation for habitat impacts. We support mitigation projects that are measurable and can be effectively assessed (i.e. can quantify functions and values gained and demonstrate that they replace function and value loss at impact locations).

If the ACOE proceeds with a systemic approach to mitigation for impacts other than those associated with the loss of connectivity, it will be necessary to increase the scope of planned pre- and post-construction monitoring to include the new "reachable" habitats.

Adaptive Management

General Comments:

In order for adaptive management to be successful, there must be identified indicators and criteria that reflect the desired conditions (e.g. what level of deviation from the existing condition is acceptable?); monitoring of the indicators and criteria for deviation; and implementation of management actions when the desired conditions are violated (or when conditions are deteriorating and preventive measures are available). At present, other than the commitment that pre- and post-construction monitoring will take place,

there are no identified criteria or indicators that reflect the desired condition or assurance (financial or agreements) that future management action will take place.

Specific Comments:

Section 5.5.3 provides no assurance of Federal funding if problems are found during post project monitoring (e.g. "could take action...could work with Corps to secure potential funding...could include seeking congressional action"). The Council on Environmental Quality (CEQ) guidance titled "NEPA's Forty Most Asked Questions" states that, "to ensure that environmental effects of a proposed action are fairly assessed, the probability of the mitigation measures being implemented must also be discussed. Thus, the EIS and the Record of Decision should indicate the likelihood that such measures will be adopted or enforced by the responsible agencies. Sections 1502.16(h), 1505.2."

Recommendation:

The EIS must discuss the likelihood of securing future funding and the probability of mitigation measures being implemented in the future. A commitment on behalf of the sponsors in the form of financial assurance and agreement to undertake future mitigation is necessary. Examples of how adaptive management has been used successfully on other ACOE projects would also provide greater assurance.

Invasive Species

General Comments:

The DEIS does not discuss the potential for invasive species transport during construction or how the operation of the project may potentially be affected. A zebra mussel veliger was recently discovered in the Red River. It is unknown whether zebra mussels will become established in the Red River. Regardless, maintenance associated with removal from infrastructure (to ensure smooth operation) can be costly and should be included in the analysis provided by the EIS.

Rare Species

General Comments:

Every state recently completed a "state wildlife action plan (SWAP)" which identifies conservation needs for species of concern, including threatened and endangered wildlife and other important wildlife species. Minnesota's SWAP titled, "Tomorrow's Habitat for the Wild and Rare" describes conservation concerns for species of greatest conservation need (SGCN) and their *key habitats* within various landscape settings.

Recommendation:

In the interests of providing a quantitative comprehensive analysis, the EIS, must describe whether key habitats and SGCN are present in the project area (Section 4) and whether they will be affected by the project (Section 5).

Specific Comments:

There appears to be inconsistency between the Minnesota Rare Species Guide, data provided in the DEIS main document, and Appendix F.

Section 4.2.1.9 and Table 25 implies that lake sturgeon no longer exist in the Red River basin. Although this was the assumption in the not so distant past, we now know that through our repopulation efforts and recapture records, including netting and angler accounts, lake sturgeon are now present in both lakes and streams in the basin, including the Red River.

Recommendation:

The EIS must rely on up to date accurate information. An updated table similar to that used in Appendix F should be included in Section 4.2.1.14.4 of the EIS. After Section 4 is updated, Section 5.2.1.10 must provide impact determinations for all state and federally listed species (this section only indicates that the Fish and Wildlife Service does not have records of federally listed species in the project area).

If rare species surveys are planned or have been completed, this information must be included in the EIS.

The EIS should document the known presence of lake sturgeon in the Red River basin.

Planning Objective and Constraints

General Comments:

The Feasibility Report planning objectives and constraints provide a template and parameters that, if adhered to, would likely result in a project that (as taken from the Feasibility Study):

- Reduces flood risk and flood damages in the Fargo-Moorhead metropolitan area.
- Restores or improve degraded riverine and riparian habitat in and along the Red River of the North, Wild Rice River (North Dakota), Sheyenne River (North Dakota), and Buffalo
 - River (Minnesota) in conjunction with other flood risk management features.
- Provides additional wetland habitat in conjunction with other flood risk management features, and
- Provides recreational opportunities in conjunction with other flood risk management features.
- Avoids increasing peak Red River flood stages, either upstream or downstream
- Minimizes loss of floodplain in accordance with Executive Order 11988, Floodplain Management

Such a project would better fit within the "basin-wide approach" as described in the 1998 Mediation Agreement. However, the tentatively preferred alternative drastically deviates from the Feasibility Study Planning Objectives and Constraints.

Conclusion

The DNR remains committed to flood protection efforts in the Red River Valley; however, the DNR is concerned that, if the locally preferred plan (ND 35) is selected, there will be significant impact to up to 58 miles of the Red River. In addition, fish passage and

biological connectivity will be degraded, and unacceptable stage increases extending more than 50 miles downstream would influence several communities. The final EIS must demonstrate how the ACOE and project sponsors will eliminate these significant environmental effects.

This project is estimated in excess of \$1.4 billion dollars and will be with us for a very long time. Accordingly, the Corps' and local sponsors must ensure on the front end, the best design possible that protects the Fargo-Moorhead Area, downstream communities, and addresses the array of environmental concerns; is the design selected.

Thank you for considering our input.

Sincerely,

Michael R. Carroll NW Regional Director mike.carroll@state.mn.us

Cc: Commissioner's Office

Red River Watershed Management Board

Red River Basin Commission

Kent Lokkesmoe, Director - Division of Waters

Steve Hirsch, Director - Division of Ecological Resources

City of Moorhead

FEMA Region V

FEMA Region VIII

Denver Federal Center Building 710, Box 25267

Denver, CO 80225-0267

EPA Region V

EPA Region VIII

Minnesota Department of Natural Resources





January 14, 2010

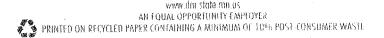
Col. Jon Christenson US Army Corps of Engineers Sibley Square at Mears Park 190 5th Street East, Suite 401 St. Paul, MN 55101-1638

RE: Fargo Moorhead Flood Reduction - MNDNR Comments

Dear Col. Christenson,

For approximately the last eight months the MN Department of Natural Resources has participated in the Corps' efforts to develop a Scoping Document and Feasibility Study for a flood mitigation project encompassing the Fargo-Moorhead metropolitan areas. In that time our agency has provided significant resource management expertise in an effort to develop options that maintain as much natural form and function of the impacted resources as is possible given the Corps' funding and project development constraints. As a result, our agency feels it is necessary to ensure that we place in context that our involvement to date has been to provide design assistance and not an endorsement of any one alternative or that all anticipated impacts have been mitigated through this process. In fact, it is anticipated that any preferred alternative will undergo significant additional review, design improvement and still require mitigation.

It is important to note that the State of MN is committed to flood protection in the Red River Valley. Significant financial resources have been expended to protect and mitigate flood damages to almost every Minnesota community along the river from Browns Valley in the south to St. Vincent in the north. Mitigation efforts also extend to agricultural areas through collaboration with local sponsors that include the Red River Watershed Management Board and the numerous watershed districts in the Valley. Water storage and natural resource enhancement is a significant component of this collaborative effort. Any project for the Fargo- Moorhead metropolitan area should remain consistent with these existing local efforts. It would be unacceptable to promote a project that negates efforts to store water or a project that increases flood levels and risk to a downstream community.



Following are concerns that the Department view as the primary issues that will need to be better addressed through improved design or mitigation.

DNR Comments:

Many agree that changes or regulation of flow in a river system have great potential to initiate a succession of changes and impacts. Some of these impacts are direct and measurable, while many occur over time and too slowly to be observed directly. Due to the ecological connectivity in rivers, impacts can be far reaching, result in loss of functions and values, and require mitigation. The environmental review document(s) and subsequent project design must give full consideration and analysis of the potential impacts associated with the following topics of concern:

Lost habitat:

The proposal to build the structure off channel and reroute the river through it while filling the existing channel will eliminate existing aquatic habitat. Changes in slope and geomorphologic issues may result. Maintaining the same channel length in a new armored channel will not directly replace this habitat. Also, re-routing of tributaries (Rush and Lower Rush) will involve abandonment of existing stream habitat requiring mitigation.

Accumulation of sediment in a riverbed can have a substantial impact on fish. Fish are highly susceptible to the changes in their aquatic environment and are uniquely connected to their environment. In response to accumulation of sediment, fish may begin to change their migratory patterns to avoid areas once used for habitat such as wintering grounds, nursery areas, or spawning areas.

Effective mitigation depends on replacement of lost functions of the impacted habitat. The integrity of mitigation projects is required to ensure effectiveness. In addition, it is imperative that mitigation project costs are included in the cost/benefit analysis and environmental review.

Downstream hydraulic effects: Any increase in downstream stage or discharge is unacceptable without efforts to mitigate these increases. This will be a significant issue as it relates to permits from our agency and will influence our agency's input concerning flood map revisions by FEMA. This concern is greatest where the impacts extend to downstream communities with detailed flood studies. These increases are primarily due to the loss of floodplain storage as a result of the operation of the diversion channel. This loss of floodplain storage needs to be effectively replaced through upstream storage options.

Debris and ice: Having larger and fewer openings in a diversion structure will decrease the potential for trees, ice, and other debris to create restrictions in flow, however; even full span bridges on the Red River have major debris and ice problems. Restrictions can create a host of problems with fish passage, safety, and other issues that would not be

restricted to just operational flow. It is preferable to pass rather than remove natural debris, as it serves an important role in the ecology of a river system. A thorough analysis of future operation and maintenance activities and associated potential impacts is needed.

Recreational analysis: A thorough analysis of the recreational uses of the Red River and its tributaries and how the various project proposal will impact those uses is needed. Project induced recreational opportunities should also be explored and pursued whenever possible.

Channel stability effects: The current Red River diversion structure will send surface waters into the diversion while water from the bottom of the water column will be sent down the natural channel. Although suspended load dominates the Red Rivers sediment load, the distribution of suspended materials is typically highest near the bed. As a result, a disproportionate sediment supply would potentially be routed down the natural channel with reduced stream power to carry it through resulting in sediment aggregation.

Minnesota currently has massive erosion and sedimentation problems resulting from flood control projects where sediment transport and channel stability were either ignored or misunderstood. The sediment load is variable across the tributaries of which a ND diversion alternative would cross. It is imperative that the potential for channel stability impacts associated with each alternative and associated project components (e.g. diversion structure, bypass structures and tributary crossings and bypasses) be fully analyzed.

Safety Issues: During operation, diversion structures provide a barrier to flow. Flood barriers have a risk of sudden and catastrophic failure presenting safety concerns for downstream habitants and recreational enthusiasts. Minnesota Rules, chapter 4410.4400, subpart 18 requires preparation of a State Environmental Impact Statement (EIS) for construction of a Class I dam. Whether or not a diversion structure alternative qualifies as a Class I dam is determined by a breech analysis. The DNR understands that the COE is conducting this analysis and will provide the results upon completion for our review. Shortly after review, we will provide a need determination regarding whether or not preparation of a EIS under Minnesota Rules, chapter 4410 is required. If required, the DNR (as the Responsible Government Unit) will consult with the COE to reduce duplication between Minnesota Statutes and the National Environmental Policy Act.

Floodplain Impacts: The flora and fauna within a floodplain depend on periodic inundation to maintain its existing ecology. The potential for impacts to floodplain wetlands and species using those habitats increases as flows are diverted more frequently. Over time, ecological changes may ensue. Having baseline data and then monitoring and measuring changes over time will provide a means to measure potential impacts and subsequent mitigation requirements. Our concern for potential impacts

greatly increases when passing flows less than a 5-year event, such as those associated with some of the ND tributary crossings. A thorough analysis of existing floodplain resources and estimates of potential impacts is needed.

Fish passage: Since the current Red River has unimpeded passage from Hickson to Drayton, and since the river currently has total passage at flows above the 2 year event, any lost reduction in passage is an environmental loss. Dealing with twelve feet of head loss at this site is no small task. It is our understanding that the current diversion structure design will allow for fish passage for up to a 5-year event, at which time fish ladders will become operational and potentially provide passage (for an unknown percentage the fish population) for up to 50 year events. Ideally, fish passage would be provided for all flood events, however; a loss in resilience would still be likely, as fish passage would be restricted.

An analysis of how accommodating fish passage at various flood events will potentially affect fish passage, resilience, project design, and the cost-to-benefit ratio is needed. The chosen alternative can then be based on the design which both minimizes the potential impacts and is still practicable. Diversion channels have the potential to cause fish stranding and increased predation. It is not likely that quality fish habitat can be provided in a diversion channel and fish usage of any diversion channel should be excluded when possible by design.

Land use and changes have and occurred progressively over time resulting in more rapid conveyance of water. Climate changes are occurring and basins response in not fully understood. Flood frequency estimation records encompass much of this period of change. Likewise, the records upon which flood frequency estimations are based upon may underestimate future flood potential.

Future flood frequency estimates based on a greater "look back" period may produce flood frequency estimates that are misleading. Using a shorter look back period, and actually accounting for anticipated future changes in land use and climate will result in the estimation of events that are not as rare as they would appear to be using the entire historic record. Fish passage design accommodations based on these adjusted estimates would further minimize potential impacts.

Conclusion

The DNR believes that the project alternatives under consideration have the potential to impact up to 58 miles of the Red River system. It is imperative that the Corps of Engineers continue to meet with DNR staff regularly to develop project designs that avoid and minimize identified potential impacts to the extent possible, however; even after these efforts, a loss in ecological function is still likely. These unavoidable losses will require mitigation. Mitigation projects must replace all project induced lost functions and values.

Finding balance between important economic, environmental and social consideration has and continues to be challenging in developing flood reduction projects. The DNR is committed to continued collaboration with the Corps of Engineers and other stakeholders in developing meaningful well-balanced flood reduction projects. The DNR would like to meet with the Corps of Engineers in the near future to discuss specific mitigation projects that when completed, provide the greatest value. Please contact Regional Environmental Review Ecologist Nathan Kestner at 218-308-2672 to set up a meeting with DNR staff to discuss these projects.

Thank you for considering our input.

Sincerely,

Michael R. Carroll Regional Director

mike.carroll@state.mn.us

cc: Aaron Snyder, COE

Red River Water Management Board

Red River Basin Commission

Kent Lokkesmoe, Director Division of Waters

City of Moorhead

FEMA Region VIII

Denver Federal Center Building 710, Box 25267

Denver, CO 80225-0267

Minnesota Department of Natural Resources

REGIONAL OPERATIONS 2115 Birchmont Beach Road NE Bemidji MN 56601 218.308.2629



March 16, 2010

Col. Jon Christenson US Army Corps of Engineers Sibley Square at Mears Park 190 5th Street East, Suite 401 St. Paul, MN 55101-1638

RE: Fargo-Moorhead Flood Reduction - MN DNR Project Mitigation Comments

Dear Col. Christenson,

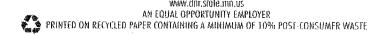
The Minnesota Department of Natural Resources (DNR) remains committed to flood protection efforts in the Red River Valley. Through multiple design concept changes, efforts have been made to reduce potential fish passage impacts associated with a Fargo Diversion; however, we do not share the conclusion that remaining impacts will be insignificant or that project design elements alone can bring impacts to a level not warranting mitigation. Any such conclusion prior to a thorough impact analysis is premature. Furthermore, efforts to mitigate direct and indirect impacts to habitat must replace lost functions. Focusing mitigation efforts on areas identified as impaired and in need of restoration will likely provide the most value. Following are some considerations regarding connectivity and habitat impacts:

Fish Passage Considerations in the Red River of the North System

For a Minnesota Diversion, the current proposed measures to help alleviate fish passage problems above the 5-year discharge include both a fish passageway around the restriction structure and fish passage provided over the spillway for the Diversion channel. It is not known; however:

- What extent the current proposed passage facilitation measures will alleviate fish passage impacts. It is widely know that fish bypass channels are not 100% effective.
- What species will utilize the proposed design-based minimization efforts (documentation on lake sturgeon using fish bypasses is limited).
- What extent multiple restriction structures and tributary crossings will compound passage impacts (e.g. a ND diversion alternative).

The following is information about connectivity impacts, values of the River system as a fishery, and a description of past efforts and ongoing initiatives to increase connectivity and enhance those values:



- Impacts remaining after minimization efforts cannot be mitigated onsite;
 therefore, off-site mitigation is necessary.
- Currently, Christine and Hickson dams are fish passage barriers up to approximately the 2-year recurrence discharge. The Fargo structure on mainstem Red River would be a fish passage barrier to some extent at the 5-year recurrence discharge and greater. Therefore, the unimpeded fish passage upstream from Fargo-Moorhead that currently exists for all flows above the 2-year discharge would become impaired to some degree above the 5-year discharge. For a Minnesota Diversion, the two proposed measures to permit fish passage above the 5 year discharge include both a by-pass fishway around the structure on the Red River and a rock arch rapids to provide a passable slope over the flood diversion channel weir. These fishways are considered essential with the existing project design. However, it is accepted among resource managers that fish by-pass channels are not 100% effective and it is not known to what extent the fish by-pass channel on the Red River structure will alleviate fish passage impacts.
- Corps of Engineers data indicates that Drayton Dam washes out and becomes passable to most fish species, including lake sturgeon, at approximately the 80% event. However, during critical times when many fishes are migrating to spawning habitats, passage has historically been limited to approximately 13% of the time in March, 50% in April, 35% in May, and 20% in June. Removal or modification of existing barriers increases overall net passage and connectivity and removal of downstream barriers will increase passage potential at existing and future upstream barriers.
- Connectivity of rivers and their associated tributaries is necessary to maintain ecological diversity and function.
- During floods, fishes use the inundated floodplain for a variety of reasons including, refuge from higher velocities, making use of additional food sources, and migrating upstream and downstream in the slower waters found in the floodplain. Diverting floodwaters to the diversion channel decreases existing higher quality floodplain habitat, diverts migrating fish into lower quality diversion channel habitat, and poses an impediment to the movement of fishes.
- Most of the 57 species known to inhabit the mainstem of Red River migrate throughout the system to one extent or another. Channel catfish and lake sturgeon are two species of particular concern. With channel catfish being present in high numbers, the presence of fish exceeding 40 inches, fishing effort exceeding 110,000 hours/year and harvest exceeding 43,000 lbs/ year, the Red River of the North arguably supports the best recreational channel catfish fishery in North America. The ability of channel catfish to migrate throughout the Red River basin is critical. Channel catfish have been shown to move long distances, both upstream and downstream, within and between the Red River and its tributaries as catfish seasonally migrate between summer, overwintering and spawning habitats (Hegrenes, 1992; Wendel, 1999; McDonald 1990).

The lake sturgeon is a member of the sturgeon family of fishes that are imperiled throughout the world. Overharvest and construction of dams are frequently cited as the causative factors of population declines. Construction of dams is widely believed to be one of the major factors that have led to the near extirpation of the lake sturgeon from the Red River Basin.

Efforts by state, federal and tribal agencies to re-establish lake sturgeon (a State designated species of special concern) in the Red River basin have been ongoing since the mid-1990's. As part of this effort, juvenile lake sturgeon were tagged in 1997 and 1998 and released in Detroit Lake, Otter Tail Lake, and the Otter Tail River to begin the restoration and to gather information on lake sturgeon movement through the basin. Subsequent recapture information showed that juvenile lake sturgeon migrated long distances within a year. including some that migrated hundreds of miles down and miles up tributary streams, even though the stocked sturgeon were not sexually mature. Male lake sturgeon reach sexual maturity in approximately 10-15 years, and females reach maturity in 20-25 years. The first large-scale reintroduction of lake sturgeon fry and fingerlings (first year fish) occurred in 1999, which means there are likely mature male sturgeon in Red River that are beginning to make upstream migrations associated with spawning behavior. Female lake sturgeon spawn once every six to ten years. The fact that lake sturgeon exhibit long-distance seasonal migrations, take a relatively long time to reach sexual maturity and spawn infrequently, emphasizes the need to provide uninhibited connectivity throughout the Red River and its tributaries in order to re-establish and sustain lake sturgeon in the Red River Basin. The long-range goal for lake sturgeon restoration in the Red River basin is to establish a self-sustaining population over the next 20 to 30 years (MN DNR, 2002).

In addition to catfish and sturgeon, Red River species such as walleye, sauger, goldeye, an others, also exhibit long-distance, season migration patterns. Spawning migrations by many species are initiated by an increase in discharge, most often associated with annual spring high discharges. This is the same relative time period when the Fargo structure would have the highest probability of being operated.

Significant energy has been put into restoring connectivity along the Red River and its tributaries with past project such as Riverside, Fargo North, Midtown, Fargo South, and Kidder on the Red River; and Point, Crookston, Heiberg, and at least 25 other fish passage projects on Red River Tributaries.

Given the facts described above, the DNR believes that any additional impedance to seasonal fish migration patterns may result in significant impacts to catfish, lake sturgeon and other species populations over time. It is imperative that any unavoidable impacts be mitigated. It may be possible to offset some project-induced impacts by improving fish and system connectivity.

Efforts are currently underway to alleviate or provide passage through these dams:

- Drayton Dam (Section 18, T 159 N, R 50 W)
- Christine (Section 18, T 136 N, R 48 W) and Hickson Dams (Section 19, T 137 N, R 48 W)

Ensuring that these projects are completed will go a long way to connecting the system and providing mitigation for passage impacts associated with a Fargo Diversion.

Direct and Indirect Habitat Mitigation Considerations

The DNR agrees that money targeted at pre-existing comprehensive ecosystem restoration initiatives will help ensure the most value for mitigation efforts. One such initiative that the DNR feel would go a long way in mitigating impacts associated with a Fargo diversion project is completion of an ecosystem restoration and flood damage reduction project on the lower Wild Rice River. Implementation of this project would restore wetland and aquatic habitat, restore form and function to the floodplain, and restore connectivity to segmented floodplain forest.

The MNDNR will continue to provide resource management expertise in an effort to develop options that maintain as much natural form and function of the impacted resources as is possible.

Thank you for considering our input.

Sincerely

Michael R. Carroll Regional Director

mike.carroll@state.mn.us

Cc:

Aaron Snyder, COE Elliot Stefanik, COE

Craig Evans, COE

Kent Lokkesmoe, Director Division of Waters

Sources:

Hegrenes, S.G. 1992. Age, growth and reproduction of channel catfish in the Red River of the North. Master's thesis. University of North Dakota, Grand Forks, ND.

McDonald, D. 1990. The channel catfish sport harvest of the lower Red River. Master's thesis. University of Manitoba, Winnipeg.

MN DNR. 2002. Restoration of extirpated lake sturgeon (Acipenser fulvescens) in the Red River of the North watershed. Minnesota Department of Natural Resources, Division of Fisheries, Bemidji, MN.

Wendel, J.L. 1999. Habitat use and movements of channel catfish in the Red River of the North. Master's thesis. University of North Dakota, Grand Forks, ND.

Fargo/Moorhead Feasibility Study Scoping Comments Bob Bezek [Bob.Bezek@dnr.state.mn.us]

Jon,

In response to the initial meeting you had in Fargo and your request for some input based on that meeting, comments were solicited from Department staff. While I did get some input back it was very general in nature. I think it would have been helpful to have a formal request to respond to. That being said, following is a summation of the comments we received.

- 1. Continue to consult Natural Heritage data.
- 2. It is anticipated that a channel diversion through agriculture land will not have significant impacts to wildlife resources for production or movement. Depending on the type of vegetation and management practices employed some benefits may be realized in a diversion channel.
- 3. Levees and floodwalls along the river may effect the movement of some species of wildlife such as geese, but would not be significant in either a negative or positive way.
- 4. The employment of water retention should be included in the mix of alternatives. Opportunities exist to increase and improve ecosystem and wetland restoration, wildlife habitat and provide recreational opportunities through the use of multipurpose water retention areas.
- 5. Attached for consideration is Technical Paper 12 (Wetland Hydrology & Biodiversity in the Red River Basin, Minnesota) developed by the Red River Flood Damage Reduction Work Group.
- 6. The potential for impacts to the Buffalo Aquifer need to be addressed in the consideration of alternatives.
- 7. Many regional flood mitigation efforts are either under way or planned by groups such as the Red River Water Management Board and the Red River Basin Commission. Every effort should be made to identify all possible partners to leverage money and benefits where ever possible.
- 8. It is recommended that structural flood control measures not be utilized to promote development in currently undeveloped areas prone to flooding.

Again, these are just some initial comments. Once you compile the comments you have received from others it might help to route those to our staff as well. Thanks for the opportunity to provide input Jon.

Best Regards, Bob Bezek

Robert J. Bezek NW Regional Hydrologist MN DNR Waters - Bemidji

- (o) 218-308-2621
- (c) 218-760-7096

From:

Nathan Kestner

To:

craig.o.evans@usace.army.mil

CC:

Bezek, Bob; Buesseler, Peter; Doneen, Randall; Groshens, Tom

Date:

8/27/2009 1:05 PM

Subject:

Fargo-Moorhead Metro Feasibility, Draft Scoping Document - DNR Comments Attachments: Wetland Hydrology and Bio.pdf; Wetland Restoration to.pdf; Nathan Kestner.v

Craiq,

It appears that all previous DNR comments and concerns have been included in either the Scope of Alternatives or Scope of Issues To Be Addressed in the EIS sections of the Draft Scoping Document.

Based on staff comments, it was suggested that additional emphasis be placed on wetland restoration as a flood storage alternative:

Wetland Restoration

The employment of water retention through wetland restoration has been included in the Scoping Document in both the scope of alternatives and in the scope of issues to be addressed section.

Wetland restorations have multi-purpose benefits (water quality, fish & wildlife habitat) that are not always captured in cost-benefit analysis. The restoration of wetland ecosystems can result in a change in one or more functions which include; water quality improvement, floodwater retention, fish and wildlife habitat, aesthetic and biological activity. The value (or estimate of the importance or worth) of one or more of these changes in function should be included in the cost benefit and impact analysis. Additionally, there will likely be many other agencies (MDNR, NDDNR, USFWS, MPCA, Watershed Districts) willing to partner on projects that would help distribute the cost this consideration should also be included in any cost benefit analysis.

Attached for consideration are two papers that provide recommendations and/or acknowledge that further study of wetland restorations for flood benefits is needed. These papers may be of value in preparing the EIS.

- Technical Paper 12 (Wetland Hydrology & Biodiversity in the Red River Basin, Minnesota) developed by the Red River Flood Damage Reduction Work Group).
- Agribusiness & Applied Economics Report No. 432a (The Feasibility of Wetland Restoration to Reduce Flooding in the Red River Valley: A Case Study of the Maple River Watershed, North Dakota).

It is our anticipation that the alternative of wetland restoration will be given thorough consideration and comprehensive review in the EIS. The DNR will be submitting more formal comments for the final document. Please call me with any questions.

Thank you

Nathan Kestner **Environmental Assessment Biologist** MN DNR Division of Ecological Resources 2115 Birchmont Beach Rd NE, Bemidji, MN 56601 218-308-2672, 218-755-4066 (fax)

From:

Nathan Kestner

To:

Sobiech, Jonathan J MVP

CC:

Bezek, Bob; Buesseler, Peter; Carlson, Thomas; Drewes, Henry; Groshe...

Date:

10/2/2009 3:18 PM

Subject:

Re: Diversion Channel Alternatives

Attachments: Nathan Kestner.vcf

Jon-

The DNR appreciates the opportunity to provide comments on the diversion channel alternatives being considered as part of the Phase 2 Feasibility study for the Fargo-Moorhead Metro Flood Risk Management Project. DNR staff did not review North Dakota diversion alternatives, however; we have given the Minnesota alternatives a preliminary review and offer the following comments:

Wildlife:

As far as Wildlife is concerned, there doesn't appear to be any issues or concerns with either alignment as both alternatives are located on tillable land. The DNR encourages a management scheme of the channel which provides wildlife habitat value.

Fisheries:

- 1. The DNR recommends setting inlet diversion crest elevations at the 10 year event level, allowing flows associated with less frequent events to continue to flow down Red River of the North.
- 2. Ensure all structures, including culverts and diversions, are designed to allow fish passage.
- 3.Design all structures and channels to ensure vertical and lateral stream channel stability, and maintain functionality.
- 4. Design the low-flow pilot channel within the diversion channel as a Rosgen E channel type to mimic natural stream morphology and functionality.
- 5. Establish project monitoring plan to identify stream, ditch and diversion channel adjustments over time, and design and implement maintenance activities as necessary.

Vegetation:

Other than what has already been stated (regarding a management scheme which provides habitat value), the DNR does not have further specific comments pertaining to the selection of vegetation species within the diversions. We will provide further input in the future if a diversion alternative is further pursued.

Thank you for the opportunity to provide these comments. The MnDNR looks forward to working with the Corps of Engineers in a collaborative manner. As the project moves forward the DNR will have more substantive and formalized comments. Please feel free to give me a call at 218-308-2672 with any questions.

Thank you.

Nathan Kestner **Environmental Assessment Biologist** MN DNR Division of Ecological Resources 2115 Birchmont Beach Rd NE, Bemidji, MN 56601 218-308-2672, 218-755-4066 (fax)

>>> "Sobiech, Jonathan J MVP" <<u>Jonathan.J.Sobiech@usace.army.mil</u>> 9/30/2009 4:20 PM >>> Hello,

I am writing to follow up with the diversion channel alternatives I sent out. I am looking for comments by the end of this week Oct 2nd if possible. I would also like to set up a meeting/workshop to discuss the comments and the impacts these alternatives will create. I was hoping to have a meeting the week of October 12th, but realize that is too soon and instead am shooting for the week of October 26th. Your input on this alternative is extremely important for this process, I look forward to hearing from all of you. Thanks for your hard work on this project I really appreciate it.

Jonathan Sobiech Forester US Army Corps of Engineers 190 East 5th St, Suite 401 St Paul, MN 55101 Office phone 651-290-5428 Cell 651-380-0979 fax 651-290-5258



ENVIRONMENTAL HEALTH SECTION
Gold Seal Center, 918 E. Divide Ave.
Bismarck, ND 58501-1947
701.328.5200 (fax)
www.ndhealth.gov

June 24, 2010

AARON M SNYDER USACE PLANNER AND PROJECT MANAGER ST PAUL CORPS OF ENGINEERS 190 EAST 5TH STREET SUITE 401 ST PAUL MN 55101

RE: Draft Feasibility Report and El Statement for Fargo-Moorhead Metro Area Cass County

Dear Mr. Snyder:

This department has reviewed the information concerning the above-referenced project submitted under date of June 3, 2010, with respect to possible environmental impacts.

This department believes that environmental impacts from the proposed construction will be minor and can be controlled by proper construction methods. With respect to construction, we have the following comments:

- 1. All necessary measures must be taken to minimize fugitive dust emissions created during construction activities. Any complaints that may arise are to be dealt with in an efficient and effective manner.
- 2. Care is to be taken during construction activity near any water of the state to minimize adverse effects on a water body. This includes minimal disturbance of stream beds and banks to prevent excess siltation, and the replacement and revegetation of any disturbed area as soon as possible after work has been completed. Caution must also be taken to prevent spills of oil and grease that may reach the receiving water from equipment maintenance, and/or the handling of fuels on the site. Guidelines for minimizing degradation to waterways during construction are attached.
- 3. Projects disturbing one or more acres are required to have a permit to discharge storm water runoff until the site is stabilized by the reestablishment of vegetation or other permanent cover. Further information on the storm water permit may be obtained from the department's website or by calling the Division of Water Quality (701.328.5210). Projects disturbing less than one acre also are required to have a permit if the project is part of a larger common plan of development or sale, and the larger common plan ultimately disturbs one or more acres. A temporary dewatering permit may be required in order to discharge water from sources other than storm water runoff and uncontaminated groundwater.

Environmental Health Section Chief's Office 701.328.5150 Division of Air Quality 701.328.5188 Division of Municipal Facilities 701.328.5211 Division of Waste Management 701.328.5166

Division of Water Quality 701.328.5210 Projects that have a discharge point located within 2,000 feet of, and flow to, a water body listed as impaired due to sediment, suspended solids or turbidity under section 303(d) of the Federal CWA (see the department's 303(d) List) should use caution to prevent impacts to the water body and water quality monitoring projects. If a project discharges to a water body with a total maximum daily load (TMDL) allocation of sediment, suspended solids or turbidity, the storm water pollution prevention plan for the project must be consistent with the assumptions, allocations and requirements of the TMDL.

In addition, cities or counties may impose additional requirements and/or specific best management practices for construction affecting their storm drainage system. Check with local officials to be sure any local storm water management considerations are addressed.

4. Noise from construction activities may have adverse effects on persons who live near the construction area. Noise levels can be minimized by ensuring that construction equipment is equipped with a recommended muffler in good working order. Noise effects can also be minimized by ensuring that construction activities are not conducted during early morning or late evening hours.

The department owns no land in or adjacent to the proposed improvements, nor does it have any projects scheduled in the area. In addition, we believe the proposed activities are consistent with the State Implementation Plan for the Control of Air Pollution for the State of North Dakota.

These comments are based on the information provided about the project in the above-referenced submittal. The U.S. Army Corps of Engineers may require a water quality certification from this department for the project if the project is subject to their Section 404 permitting process. Any additional information which may be required by the U.S. Army Corps of Engineers under the process will be considered by this department in our determination regarding the issuance of such a certification.

If you have any questions regarding our comments, please feel free to contact this office.

Sincerely,

L. David Glatt, P.E., Chief Environmental Health Section

LDG:mjm

Attach. (as stated)

P.S. The department will send separate review of this EIS.



ENVIRONMENTAL HEALTH SECTION Gold Seal Center, 918 E. Divide Ave. Bismarck, ND 58501-1947 701.328.5200 (fax) www.ndhealth.gov

Construction and Environmental Disturbance Requirements

These represent the minimum requirements of the North Dakota Department of Health. They ensure that minimal environmental degradation occurs as a result of construction or related work which has the potential to affect the waters of the State of North Dakota. All projects will be designed and implemented to restrict the losses or disturbances of soil, vegetative cover, and pollutants (chemical or biological) from a site.

Soils

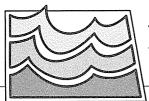
Prevent the erosion of exposed soil surfaces and trapping sediments being transported. Examples include, but are not restricted to, sediment dams or berms, diversion dikes, hay bales as erosion checks, riprap, mesh or burlap blankets to hold soil during construction, and immediately establishing vegetative cover on disturbed areas after construction is completed. Fragile and sensitive areas such as wetlands, riparian zones, delicate flora, or land resources will be protected against compaction, vegetation loss, and unnecessary damage.

Surface Waters

All construction which directly or indirectly impacts aquatic systems will be managed to minimize impacts. All attempts will be made to prevent the contamination of water at construction sites from fuel spillage, lubricants, and chemicals, by following safe storage and handling procedures. Stream bank and stream bed disturbances will be controlled to minimize and/or prevent silt movement, nutrient upsurges, plant dislocation, and any physical, chemical, or biological disruption. The use of pesticides or herbicides in or near these systems is forbidden without approval from this Department.

Fill Material

Any fill material placed below the high water mark must be free of top soils, decomposable materials, and persistent synthetic organic compounds (in toxic concentrations). This includes, but is not limited to, asphalt, tires, treated lumber, and construction debris. The Department may require testing of fill materials. All temporary fills must be removed. Debris and solid wastes will be removed from the site and the impacted areas restored as nearly as possible to the original condition.



North Dakota State Water Commission

900 EAST BOULEVARD AVENUE, DEPT 770 • BISMARCK, NORTH DAKOTA 58505-0850 701-328-2750 • TDD 701-328-2750 • FAX 701-328-3696 • INTERNET: http://swc.nd.gov

August 9, 2010

Mr. Jonathan Sobiech U.S. Army Corps of Engineers - St. Paul District 180 Fifth Street East, Suite 700 St. Paul, MN 55101-1678

Dear U.S. Army Corps of Engineers - St. Paul District:

Thank you for the opportunity to review the May 2010, Fargo-Moorhead Metro Area Flood Risk Management, Draft Feasibility Report and EIS.

As we are all too aware, flooding in the F-M area has been a habitual problem that needs resolution. We are optimistic that through this study, and ultimately through the resulting alternative(s), a long term solution to the F-M area's flood-related issues can be advanced. For that reason, we applied your efforts, and encourage your aggressive time schedule to move this effort forward in a timely, and environmentally sound manner.

The following include State Water Commission staff comments related to specific sections of the report:

Section 1.5.2, Page 7

There are also several non-federal studies ongoing in the watershed upstream of the study area for the Fargo-Moorhead proposed project. This includes studies of potential flood storage on the Wild Rice River, Sheyenne River, Maple River, and Rush River.

Section 1.5.3, Page 8

There are several other projects in the watershed upstream of the study area for the Fargo-Moorhead proposed project that deserve mention. These include:

- Three dams constructed on the upper portion of the Wild Rice River in Sargent County with flood storage of 1,523 acre-feet, 253 acre-feet, and 1,225 acre-feet. These dams were constructed through the Natural Resource Conservation Service (NRCS).
- Dead Colt Creek Dam, which is located on a tributary of the Sheyenne River in Ransom County, has 4,935 acre-feet of flood storage.
- The T-180 dam on a tributary of Maple River in Cass County (immediately downstream of the A-170 dam) provides 2,890 acre-feet of flood storage.

- Three dams on tributaries of the Maple River: Absaraka Dam, 895 acre-feet; Garsteig Dam, 1,380 acre-feet; and Embden Dam, 2,610 acre-feet. These dams were constructed through the NRCS.
- Erie Dam, located on the upper portion of the Rush River, with about 300 acre-feet of flood storage.
- Three dams on Elm River have flood storage of 2,641 acre-feet, 3,983 acre-feet, and 424 acre-feet. These were constructed through the NRCS.

Section 1.5.3.10, Page 10

It is stated that the Maple River Dam was proposed with 35,000 acre-feet of flood storage. However, it does not go on to say that it was actually constructed to provide 60,000 acrefeet of storage.

Section 3.12.4, Page 99

Sovereign land permits are provided through North Dakota's Office of the State Engineer, not through the State Water Commission. In addition, a construction permit would also be required from the Office of the State Engineer.

Section 4.2.1.9.1, Page 120 [Paragraph 3]

There are channel weirs on the Maple and Wild Rice Rivers. The channel weir on the Wild Rice River is located near the town of Wild Rice, a short distance upstream of the confluence with the Red River. A channel weir is located on the Maple River within 1 mile of the confluence of the Sheyenne River. There is another structure between there and the City of Mapleton. There may be some form of material extending downstream of this structure, at a flatter slope. There is also another channel weir located upstream of Mapleton, about 1 mile south of I-94.

Regarding general comments on the Draft EIS, we offer the following:

As stated previously, we absolutely agree that the Fargo-Moorhead area is vulnerable to floods, and is in need of permanent protection. We also concur with the decisions being made by the Fargo-Moorhead Metro Flood Committee.

We are, however, concerned with potential impacts that the proposed project would have on downstream areas. And, it is our understanding that a study of those impacts is currently being extended downstream of Halstad. (The unincorporated town of Caledonia may also have some impacts that deserve consideration.)

We agree to comments made at recent public meetings that farmsteads, and other sites, need to be reviewed individually in order to determine the extent of impacts to them from any selected alternative(s). Please note that the State Water Commission does have cost-share programs available for farmstead ring dikes and storage sites that could provide funding assistance toward protecting downstream areas from additional damages.

There are also concerns for landowners along the route of the proposed diversion channel. This is a major disruption to those individuals. Some will be forced to move, and others, at

the very least, will be negatively impacted in one way or another. Therefore, it is important that they receive fair compensation. More recently, there has been discussion that a slight change in the alignment of the channel may reduce the amount of farmsteads that would need to be moved, while not compromising the effectiveness of the project. We would support those changes.

Generally speaking, the State Water Commission is supportive of this F-M Metro Area project effort. And, we are committed to assisting the Corps of Engineers in any way we can to find a viable solution to the serious flooding problems that have plagued the F-M area for decades. In support of this pledge and of the project, the Commission has already obligated a substantial financial contribution for North Dakota's share.

In closing, we sincerely appreciate the professionalism and extra effort Corps staff have shown in advancing this critically important project to meet the Congressional approval deadline of December 2010.

If you have any questions or would like clarification on any of the above comments, please contact Randy Gjestvang at our Red River office at 701-282-2318, or email him at rgjestvang@nd.gov.

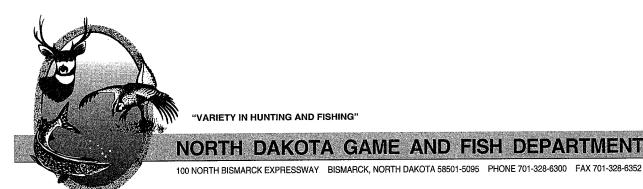
Thank you for your consideration of our comments.

Sincerely,

Todd Sando, P.E. State Engineer

Lele Select

TS:rg:lw:pmf/1955



August 9, 2010

Aaron Snyder USACE Planner and Project Manager 190 East 5th Street Suite 401 St. Paul, MN 55101

Re: Fargo/Moorhead Metropolitan Area Flood Risk Environmental Impact Statement

Dear Mr. Snyder:

The North Dakota Game and Fish Department has received a copy of the Draft Environmental Impact Statement (DEIS) for Fargo/Moorhead Metropolitan Area Flood Risk Management. The scope of the DEIS is to evaluate flood risk management measures that could be implemented as a Federal project in the Fargo-Moorhead Metropolitan Area. Department personnel have worked closely with the Corps of Engineers and the local sponsors to assure adequate flood protection is implemented in the Fargo/Moorhead area while minimizing impacts to fish and wildlife resources.

Although the COE and the local sponsors have worked diligently to assure an environmentally friendly project is implemented, we have the following concerns in the DEIS that should be addressed:

- 5.5.1.3 The Department has considerable concern regarding the functionality of the fish passage channel at the Wild Rice River. It appears the fish passage channel will only allow fish to enter the diversion channel and not directly back into the Wild Rice River. Fish passage will be severely limited during any event greater than a 5-year event under this scenario.
- 5.5.1.6 Given the geomorphic impacts to the Wild Rice River, the Department encourages the COE to consider utilizing the Emergency Watershed Protection (EWP) program administered by the Natural Resource Conservation Service (NRCS) or acquire riparian corridors in fee title to mitigate these impacts.
- 5.5.1.7 Fish passage is being considered for three dams on the Red River. The Department believes Drayton Dam is a higher priority than Christine and Hickson Dams. Drayton Dam currently acts as the largest obstacle to establishing connectivity to the Red River and its tributaries upstream of the dam. It is a shared resource between the States of North Dakota and Minnesota in which mitigation credits could also be shared.

5.5.1.8 – There are considerable wetland acres affected by the diversion channel impacting numerous types of wetlands. The DEIS indicates these wetlands will be mitigated within the diversion channel. The Department is concerned this type of mitigation will neither replace the form nor function of the impacted wetlands; therefore, alternative mitigation may need to be considered.

5.5.1.9 – The Department prefers mitigation for the riparian forest impacts include acquisition of mitigation lands. The Department's philosophy is if public dollars are being utilized for the project then the mitigation should be available for public use. The Department would also consider entering into a MOU to manage these properties if they are of adequate size and habitat quality.

5.5.2.1 – As part of the post construction monitoring and concerns for fish passage at the structures, the Department requests actual velocities be collected at various river stages to assure adequate velocity gradients are available to the fish communities. There is a great deal of uncertainty if the structures will function as modeled. If an adequate velocity gradient is not available to the aquatic community, modifications to the project will need to occur.

5.5.3 – There are numerous impacts that can be readily mitigated, however there are also numerous unknowns regarding fish passage and geomorphic impacts that are going to be very difficult to quantify. The Department has voiced concern numerous times regarding the need to assure funding is available to allow for future modification of the project or additional mitigation to offset those unidentified impacts. The local sponsor and COE should be responsible for developing a trust fund or other mechanism during the initial financial planning stages to account for the development of this fund. If modifications to the project have large costs associated with them that the trust fund could not fund, then the Corps's Continuing Authorities Program could be utilized.

Another component of the project not addressed are indirect impacts. Due to the design of the various gates and structures, the Department is concerned with the potential for increased grubbing and clearing of the Red River and the five tributaries. Although woody debris (both in channel and the riparian corridor) may increase maintenance at the various structures, it also provides important habitat for both aquatic and terrestrial organisms. The Department does not support the wholesale removal of woody debris or removal of live trees immediately adjacent to the rivers. Additionally, the probability of increased drainage (i.e. tile or surface drains) is likely. How will indirect impacts such as the previously mentioned impacts be addressed?

Sincerely,

Michael G. McKenna

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Chief

Conservation & Communication Division

blk



North Dakota Department of Transportation

Francis G. Ziegler, P.E. Director

John Hoeven
Governor

August 5, 2010

Aaron M. Snyder, Project Manger St. Paul Corps of Engineers Sibley Square at Mears Park 190 Fifth Street East St. Paul, MN 55101-1638

DRAFT FEASIBILITY REPORT AND ENVIRONMENTAL IMPACT STATEMENT FOR FARGO-MOORHEAD METROPOLITAN AREA FLOOD RISK MANAGEMENT FARGO, NORTH DAKOTA AND MOORHEAD, MINNESOTA

We have reviewed your June 3, 2010, letter.

The project referenced above will have no adverse effect on the North Dakota Department of Transportation highways.

However, if any work needs to be done on highway right-of-way, appropriate permits and risk management documents will need to be obtained from the Department of Transportation District Engineer, Robert Walton at 701-239-8903.

RONALD J. HENKE, P.E., DIRECTOR - OFFICE OF PROJECT DEVELOPMENT

57: rjh:js

c: Robert Walton, Fargo District Engineer



John Hoeven Governor of North Dakota

North Dakota State Historical Board

> Chester E. Nelson, Jr. Bismarck - President

Gereld Gerntholz Valley City - Vice President

> Richard Kloubec Fargo - Secretary

Albert I. Berger Grand Forks

Calvin Grinnell New Town

Diane K. Larson Bismarck

A. Ruric Todd III Jamestown

Sara Otte Coleman Director Tourism Division

> Kelly Schmidt State Treasurer

Alvin A. Jaeger Secretary of State

Mark A. Zimmerman Director Parks and Recreation Department

> Francis Ziegler Director Department of Transportation

Merlan E. Paaverud, Jr. Director

Accredited by the American Association of Museums since 1986 June 14, 2010

Mr. Aaron M. Snyder, Project Manager Department of the Army St. District Corps of Engineers 190 Fifth Street East Suite 401 St. Paul, Minnesota 55101-1638

ND SHPO REF:09-1166 COE Draft Feasibility Report and Environmental Impact Statement: Fargo-Moorhead Metropolitan Area Flood Risk Management

Dear Mr. Snyder:

We have received and reviewed correspondence and documentation for : "COE Draft Feasibility Report and Environmental Impact Statement: Fargo-Moorhead Metropolitan Area Flood Risk Management," (May 2010).

As outlined and discussed in various sections of the document (e.g., 4.2.2, 4.2.3, 5.4.2), cultural resource protocols will be treated with respect to a Programmatic Agreement. Further, identification efforts for cultural resources that may be impacted by the project remain to be undertaken. Finally, we look forward to continuing consultation on this project, and to the review of forthcoming documentation regarding it.

Thank you for the opportunity to review the project. If you have any questions please contact either Susan Quinnell at (701) 328-3576 or squinnell@nd.gov or Paul Picha at (701) 328-3574.

Sincerely,

Merlan E. Paaverud, Jr.

State Historic Preservation Officer (North Dakota)

and

Director, State Historical Society of North Dakota

NORMAN COUNTY BOARD OF COMMISSIONERS

RESOLUTION NO. <u>CR 01-06-10-3</u>

Commissioner Theo bear introduced the following resolution and moved it's adoption:
WHEREAS, The United States Army Corps of Engineers, (USACE) has proposed constructing flood water diversion channels around the cities of Fargo, ND and Moorhead MN.
WHEREAS, The proposed diversion channel redeposits the floodwater back into the Red River in northern Clay County of MN or Northern Cass County of ND.
WHEREAS, Norman County is situated directly north and downstream from the point at which the proposed diversion channels reenter the Red River.
WHEREAS, The proposed flood diversion channels will change the flow regime of the Red River during flood events and is estimated to cause an adverse impact of as much as seventeen inches of additional crest elevation to western Norman County.
WHEREAS, Increased flood crest of the magnitude envisioned by the USACE will adversely impact roads, bridges, utilities, farms, personal property, commerce, public safety, and personal well being to those downstream of the proposed diversion.
WHEREAS, A change in flow regime that results in adverse impacts to Norman County and its residents and or others situated downstream from the proposed diversion projects is not acceptable.
NOW THEREFORE, To preserve the interests of Norman County and its people, the Norman County Board of Commissioners do hereby go on record of opposing the FM diversion project as it is now proposed.
The motion for adoption of the forgoing resolution was duly seconded by commissioner of some and upon vote being taken thereon, Av voted in favor thereof; and Nove voted against the same: whereupon said resolution was declared duly passed and adopted
Adopted this 6 day of July, 2010
By Orn Hall, Chair
Attest Richard Munter Auditor Treasurer

NORMAN COUNTY BOARD OF COMMISSIONERS

RESOLUTION NO. CR 07-22-10-1

Commissioner Heu introduced the following resolution and moved it's adoption:
WHEREAS, The United States Army Corps of Engineers, (USACE) has determined that impacts are expected north of Halstad, MN. as a result of construction of the proposed Fargo Moorhead diversion.
WHEREAS, The USACE has just recently released this information.
WHEREAS, The USACE has not indicated to citizens north of Halstad the magnitude of the expected impacts.
WHEREAS, The citizens situated north of Halstad, MN. are unable to determine their situation as a result of impacts of the FM diversion due to lack of information.
WHEREAS, The USACE has set August 9, 2010 as the deadline for public comment on the proposed FM diversion.
WHEREAS, An August 9 th deadline does not provide sufficient time for residents situated north of Halstad to determine how the impacts of the proposed FM diversion will affect them and submit comment.
NOW THEREFORE, To preserve the interests of Norman County and its people, the Norman County Board of Commissioners do hereby go on record of requesting the USACE to extend the time frame of public comment in regard to the proposed FM diversion to accommodate the needs and rights of citizens situated north of Halstad, MN.
The motion for adoption of the forgoing resolution was duly seconded by commissioner <u>Cunders m</u> and upon vote being taken thereon, <u>5</u> voted in favor thereof: and <u>voted against the same</u> : whereupon said resolution was declared duly passed and adopted
Adopted this 27 day of Tuly, 2010
By Lee Ann Hall, Chair
Attest Richard Munter, Auditor Treasurer



Norman County
Auditor/Treasurer Office
PO Box 266

Ada MN 56510-0266

Phone 218 784-5473 Fax 218 784-4531

Fax 218 784-4531 Web: www.co.norman.mn.us

Email: rick.munter@co.norman.mn.us

August 3, 2010

Terry J Birkenstock St. Paul District, Corps of Engineers 180 Fifth Street East, Suite 700 St. Paul MN 55101-1678

Dear Mr. Birkenstock,

The Norman County Board of Commissioners respectfully requests that you reconsider our resolution to extend the comment period of the Draft Feasibility Report and Environmental Impact Statement For The Fargo-Moorhead Metropolitan Area Flood Risk Management Report.

At issue is the fairness to the citizens in Northwestern Norman County and areas north of there – at this point in time they have no idea how the proposed diversion will impact them.

Please reconsider our request to extend this time frame.

On behalf of the Norman County Board of Commissioners Sincerely,

Richard Munter

Norman County Auditor/Treasurer

Running Munte

cc: Amy Kolbuchar, Al Franken, Collin Peterson, Craig Evans



NORMAN COUNTY SOIL & WATER CONSERVATION DISTRICT

100 Main Avenue East – PO Box 60 Twin Valley Minnesota 56584 Phone (218) 584-5169 Fax (218) 584-5667 E-Mail – swcd@tvutel.com

August 2nd, 2010

US Army Corps of Engineers Headquarters St. Paul District 190 Fifth Street East St. Paul, MN 55101-1638

Subject: Soil Erosion issues related to Fargo-Moorhead diversion and flooding of the Red River of the North.

The Norman County Soil and Water Conservation District would like to request that the USACE determine and quantify the costs of erosion and associated sedimentation caused by the increased flood crest elevations from the proposed Fargo-Moorhead diversion. We would like to see this done at various crest elevations, before and after the proposed diversion, at locations downstream of the proposed diversion.

Soil erosion and sedimentation has become a common occurrence and serious problem in the Red River Basin as a result of flooding. Soil erosion removes several inches to several feet of top soil and redeposit's it downstream as sedimentation. This has resulted in reduced crop production capacity, lost revenue to landowners and growers and increased flooding, thereby reducing the economic vitality of our communities.

The proposed Fargo Moorhead diversion is estimated to cause as much as seventeen inches of additional flood crest elevations in areas downstream of the proposed diversion. We assume this additional crest elevation, due to the Fargo-Moorhead diversion, will exacerbate the erosion and sedimentation problem and its' associated costs.

Erosion and sedimentation, as a consequence of flooding, has been overlooked by many over the years. This issue may be the largest, in terms of cost, to our communities and the environmental impacts of the proposed Fargo-Moorhead diversion. We look forward to your reply.

Sincerely.

Ron Thorsaud

Chairman, Norman County Soil and Water Conservation District

CC:

MN State and Federal elected officials

MNDNR

MN Pollution Control

MN Center for Environmental Advocacy

Red River Basin Commission

Red River Watershed Management District

Red River Watershed FDR

NRCS

Clay SWCD

Polk SWCD

NORMAN COUNTY WEST

ISD #2527

EQUAL OPPORTUNITY EMPLOYER

WEST ELEMENTARY PO Box 39, Hendrum, MN 56550 (218) 861-5800 FAX (218) 861-6223 **WEST HIGH**PO Box 328, Halstad, MN 56548
(218) 456-2151 FAX (218) 456-2193

Board Members

Diane Brommenschenkel, Jamie Hennen, Anita Olson, Craig Steen, Chris Strand, Ann Tommerdahl

NCW Mission Statement

To build caring and contributing members of a community

RESOLUTION FROM THE NORMAN COUNTY WEST SCHOOL BOARD, REGARDING THE PROPOSED DIVERSION PROJECT IN FARGO, NORTH DAKOTA AND MOORHEAD, MINNESOTA.

Be is resolved that the Norman County West School District #2527, has some major concerns with the proposed Flood Diversion Project being discussed for Fargo and Moorhead. Our school district has students attending school from the communities of; Georgetown, Perley, Hendrum, Halstad, Shelly, and Nielsville. We also have a large percentage of our students living on farms near these communities. We also currently have 13 students attending our schools from the North Dakota side of the Red River.

The Norman County West School District is in opposition to the current proposed project, because it does not include any proposed retention components to the project. We're in opposition for the following reasons;

- ➤ The Diversion will get the water through the Fargo/Moorhead area very quickly, and as a result, will compound our already existing flood problem.
- ➤ Our students suffer every year, because of the continued flood problem. Two years ago, our students missed nine student days, due to the flood. When you add the extra days that the High School students had to sand bag to save the farms up and down the district, it's probably closed to 15 days of instruction. Even last year, when we lucked out, our High School students were released for 2 days to sand bag. It's predicted that the diversion could raise the flood levels as much at 17 inches. This will only mean additional student days lost.

It is the policy of this school district not to discriminate on the basis of race, color, national origin, sex or disability in its educational programs, activities, or employment policies. Inquiries regarding compliance may be directed to the elementary school at Hendrum, Minnesota, at 218-861-5800, or the Director of the Office for Civil Rights, Department of Health, Education, and Welfare,

➤ Bussing gets to be a major headache both during and after the flood. Roads become impassable, and after the flood waters recede, it takes weeks to get some of them repaired. A 6 mile bus trip between the two schools at Hendrum and Halstad, have increased to a 21 mile trip, with Highway 75 under water.

We are not in opposition to the idea of a diversion in Moorhead and Fargo. We are in opposition to fact that our flood problem will get worse, without some type of retention put in place.

Respectfully,

Craig Steen, Chair

Anita Olson

Jamie Hennen

Chris Strand

Diane Brommenschenkel

Diane Brom merocher &

Ann Tommerdahl

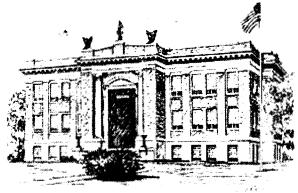
Ollen Church, Superintendent

PEMBINA COUNTY North Dakota

OFFICES OF AUDITOR/TREASURER SUPT OF SCHOOLS DESIGNEE

Linda Schlittenhard

Dawn Useldinger-Menzies Deputy Auditor/Treasurer Renee L Lunde Deputy Auditor/Treasurer



Pembeus County Courthouse Counties Veret Taluta

Telephone 701-265-4231 Fax 701-265-4876 301 Dakota Street West #1, Cavalier, ND 58220 Email: Ischlitt@nd.gov www.pembinacountynd.gov

August 4, 2010

Aaron Snyder St Paul District, Corps of Engineers 180 Fifth St E, Ste 700 St Paul, MN 55101-1678

Dear Mr. Snyder,

The Pembina County Board of Commissioners respectfully requests that you reconsider our resolution to extend the comment period for the Draft Feasibility Report and Environmental Impact Statement for the Fargo-Moorhead Metropolitan Area Flood Risk Management Report.

At this point in time we are uncertain how the proposed diversion will impact our community and surrounding communities, therefore, please reconsider our request for an extension to this time frame.

On behalf of the Pembina County Board of Commissioners

Genda Schlöttenhard

Sincerely,

Linda Schlittenhard

Pembina County Auditor/Treasurer

Enc

PEMBINA COUNTY BOARD OF COMMISSIONERS

RESOULUTION NO. <u>#108-03-</u>10

Commissioner Ralston introduced the following resolution and moved it's adoption:

WHEREAS, the United States Army Corps of Engineers, (USACE) has determined that impacts are expected north of Grand Forks, ND as a result of construction of the proposed Fargo Moorhead diversion.

WHERAS, The USACE has just recently released this information.

WHEREAS, The USACE has not indicated to citizens north of Grand Forks, ND the magnitude of the expected impacts.

WHEREAS, The citizens situated north of Grand Forks, ND are unable to determine their situation as a result of the FM diversion due to lack of information.

WHEREAS, The USACE has set August 9, 2010 as the deadline for public comment on the proposed FM diversion.

WHEREAS, An August 9, 2010 deadline does not provide sufficient time for residents situated north of Grand Forks, ND to determine how the impacts of the proposed FM diversion will affect them and submit comment.

NOW THEREFORE, To preserve the interests of Pembina County and its people, the Pembina County Board of Commissioners do hereby go on record of requesting the USACE to extend the time frame of public comment in regard to the proposed FM diversion to accommodate the needs and rights of citizens situated north of Grand Forks, ND

The motion for adoption of the forgoing resolution was duly seconded by Commissioner Adamson and upon vote being taken theron, $\underline{5}$ voted in favor thereof; and $\underline{0}$ voted against the same: whereupon said resolution was declared duly passed and adopted.

Adopted this 3rd day of August, 2010

Hetty Walker, Chairman

Pembina County Board of Commission

Linda Schlittenhard, Auditor/Treasurer

PEMBINA COUNTY BOARD OF COMMISSIONERS

RESOULUTION NO. <u>#108-03-</u>10

Commissioner Raiston Introduced the following resolution and moved it's adoption:

WHEREAS, the United States Army Corps of Engineers, (USACE) has determined that impacts are expected north of Grand Forks, ND as a result of construction of the proposed Fargo Moorhead diversion.

WHERAS, The USACE has just recently released this information.

WHEREAS, The USACE has not indicated to citizens north of Grand Forks, ND the magnitude of the expected impacts.

WHEREAS, The citizens situated north of Grand Forks, ND are unable to determine their situation as a result of the FM diversion due to lack of Information.

WHEREAS, The USACE has set August 9, 2010 as the deadline for public comment on the proposed FM diversion.

WHEREAS, An August 9, 2010 deadline does not provide sufficient time for residents situated north of Grand Forks, ND to determine how the impacts of the proposed FM diversion will affect them and submit comment.

NOW THEREFORE, To preserve the interests of Pembina County and its people, the Pembina County Board of Commissioners do hereby go on record of requesting the USACE to extend the time frame of public comment in regard to the proposed FM diversion to accommodate the needs and rights of citizens situated north of Grand Forks, ND

The motion for adoption of the forgoing resolution was duly seconded by Commissioner Adamson and upon vote being taken theron, $\underline{5}$ voted in favor thereof; and $\underline{0}$ voted against the same: whereupon said resolution was declared duly passed and adopted.

Adopted this 3rd day of August, 2010

Herty Walker, Chairman

Pembina County Board of Commission

Linda Schlittenhard, Auditor/Treasurer

RESOLUTION OF THE POLK COUNTY BOARD OF COMMISSIONERS

The following resolution (2010-7-41) was offered by Commissioner Buness:

WHEREAS, The United States Army Corps of Engineers, (USACE) has proposed constructing flood water diversion channels around the cities of Fargo, ND and Moorhead, MN; and

WHEREAS, The proposed diversion channel re-deposits the floodwater back into the Red River in northern Clay County of MN or Northern Cass County of ND; and

WHEREAS, The proposed flood diversion channels will change the flow regime of the Red River during flood events and is estimated to cause an adverse impact of as much as seventeen inches of additional crest elevation to western Polk County; and

WHEREAS, Increased flood crest of the magnitude envisioned by the USACE will adversely impact roads, bridges, utilities, farms, personal property, commerce, public safety, and personal well being to those downstream of the proposed diversion; and

WHEREAS, The comment period is to be closed on August 9, 2010.

THEREFORE BE IT RESOLVED, That to preserve the interests of Polk County and its people, the Polk County Board of Commissioner do hereby go on record of opposing the closure of the comment period on the Fargo-Moorhead diversion prior to flood crest impact data being provided to Polk County for points downstream of Halstad, Minnesota.

Commissioner Diedrich seconded the foregoing resolution and it was declared adopted upon the following vote. YEAS: Buness, Montague, Affeldt, Diedrich. NAYS: None.

STATE OF MINNESOTA)	
)	SS
COUNTY OF POLK)	

I, John P. Schmalenberg, County Coordinator to and Clerk of the Polk County Board of Commissioners do hereby certify that I have compared the foregoing resolution with the original resolution filed in my office on the 20th day of July, 2010 and that the same is a true and correct copy of the whole thereof.

WITNESS my hand and Official Seal of Polk County at Crookston, Minnesota this 20th day of July 2010.

John P. Schmalenberg County Coordinator Clerk of the Board

JUL 2010

PO Box 429 Hillsboro ND 58045-0429 Phone: 701-636-4458 Fax: 701-636-5418 Email: rebecca.braaten@co.traill.nd.us

August 4, 2010

US Army Corps of Engineers St Paul District 190 Fifth Street East St. Paul, MN 55101-1638

To Whom It May Concern:

At their regular meeting on August 3, 2010 the Traill County Board of Commissioners unanimously adopted the enclosed resolutions and would like the Army Corps of Engineers to consider the impact that the Fargo/Moorhead diversion will have on the citizens downstream of the proposed diversion on both the North Dakota and Minnesota sides of the Red River.

RBicale

Thank you.

Traill County Auditor

RESOLUTION #1

Commissioner Larson introduced the following resolution and moved its adoption, which was seconded by Commissioner Elliott:

WHEREAS, the United States Army Corps of Engineers, (USACE) has proposed constructing flood water diversion channels around the cities of Fargo, ND and Moorhead, MN.

WHEREAS, The proposed diversion channel redeposit's the floodwater back into the Red River in Northern Clay County of MN or Northern Cass County of ND.

WHEREAS, The proposed flood diversion channels will change the flow regime of the Red River during flood events and is estimated to cause an adverse impact of as much as seventeen inches of additional crest elevation to eastern Traill County.

WHEREAS, Increased flood crest of the magnitude envisioned by the USACE will adversely impact roads, bridges, utilities, farms, personal property, commerce, public safety and personal well being to those downstream of the proposed diversion.

WHEREAS, A change in flow regime that results in adverse impacts to Traill County and its residents and others situated downstream from the proposed diversion projects is not acceptable.

NOW THEREFORE BE IT RESOLVED, to preserve the interests of Traill County and its citizens, the Traill County Board of Commissioners do hereby go on record of opposing the FM diversion project.

Upon roll call vote being taken thereon, the following voted in favor: Commissioners Eblen, Elliott, Larson and Osland

the following voted against the same: Commissioner Peterson and the following were absent: None whereupon said resolution was declared duly passed.

Dated this 3rd day of August, 2010

Attest:

Thomas Eblen, Chairman

RESOLUTION #2

Commissioner Peterson introduced the following resolution and moved its adoption, which was seconded by Commissioner Elliott:

WHEREAS, The United States Army corps of Engineers, (USACE) has determined that impacts are expected north of Halstad, MN as a result of construction of the proposed Fargo Moorhead diversion.

WHEREAS, The USACE has just recently released this information.

WHEREAS, The USACE has not indicated to the citizens north of Halstad the magnitude of the expected impacts.

WHEREAS, The citizens situated north of Halstad, MN are unable to determine their situation as a result of impacts of the FM diversion due to lack of information.

WHEREAS, The USACE has set August 9, 2010 as the deadline for public comment on the proposed FM diversion.

WHEREAS, An August 9, 2010 deadline does not provide sufficient time for residents situated north of Halstad to determine how the impacts of the proposed FM diversion will affect them and submit comment.

NOW THEREFORE IT BE RESOLVED, To preserve the interests of Traill County and its citizens, the Traill County Board of Commissioners do hereby go on record requesting the USACE to extend the time frame of public comment to regard the proposed FM diversion to accommodate the needs and rights of citizens situated north of Halstad, MN.

Upon roll call vote being taken thereon, the following voted in favor: Commissioners Eblen, Elliott, Peterson, Larson and Osland

the following voted against the same: None and the following were absent: None whereupon said resolution was declared duly passed.

Dated this 3rd day of August, 2010.

Attest:

Thomas Eblen, Chairman

Rebecca M Braaten, County Auditor





July 15, 2010

Colonel Michael J. Price District Engineer, Corps of Engineers 180 East 5th Street, Suite 700 St. Paul. MN 55101-1678

Dear Colonel Price:

The cities of Fargo, North Dakota and Moorhead, Minnesota offer continued support for the North Dakota Diversion alternative of the Fargo Moorhead Metropolitan Flood Risk Management Project.

Through hours of work on the Fargo Moorhead Metropolitan Area Flood Risk Management Study, local, state staff and elected officials as well as Corps of Engineers staff has produced a locally preferred plan (LPP) to divert water around the Fargo-Moorhead metropolitan area in rural Cass County, North Dakota. This 35,000 cfs LPP diversion plan will reduce the flooding potential in the communities to manageable levels in the Red River of the North as it winds its way through the cities. Current estimates of the project first costs are \$1,272,108,000 with federal and non-federal shares estimated at \$710,666,000 and \$561,442,000, respectively.

The states of Minnesota and North Dakota have agreed to consider funding a portion of the local share. Affected governmental entities within the protected areas of the diversion have also agreed to consider the funding of design, construction and other local costs.

This request is from Moorhead, Minnesota and Fargo, North Dakota to be recognized as the non-federal sponsors to continue the planning, design and construction of the North Dakota diversion plan for Fargo-Moorhead and Cass and Clay counties. This letter, while not legally binding on the sponsors of Fargo and Moorhead or the states of Minnesota or North Dakota as an obligation of future funds, does declare our full support of the diversion project.

Accordingly, the Sponsors recognize that the project requires the non-Federal sponsor to contribute 35% of the Federally Comparable Plan (FCP) total project costs and 100% of the incremental cost between the FCP and the LPP, including all rights-of-way acquisition, relocation, bridge construction, and any improvements to support this

project that is not federally eligible for funding. Moreover, it is recognized the Sponsors will be responsible to operate, maintain, rehabilitate, repair and/or replace project components if necessary. The Self-Certification of Financial Capability, approved by our governing bodies and fully executed, is enclosed.

The cities of Fargo and Moorhead are pleased to offer continuing support of this project and specifically for the locally preferred plan. We appreciate the hard work that has been put in to date allowing the team to arrive at an implementable plan that provides a great number of benefits for over 200,000 residents of two major cities in our region, two states and the nation. We look forward to the continued cooperation and partnership with the Corps, state and local entities as we move forward with the FM Metro Flood Risk Management Project.

Dennis R. Walaker

Mayor

City of Fargo, North Dakota

Sincerely,

Mark Voxland

Mayor

City of Moorhead, Minnesota

so enclosure mfsponsoralt

NON-FEDERAL SPONSOR'S SELF-CERTIFICATION OF FINANCIAL CAPABILITY FOR DECISION DOCUMENTS

We, Dennis R. Walaker and Mark Voxland, do hereby certify that we are the Mayors of the cities of Fargo, North Dakota and Moorhead, Minnesota, respectively (jointly referred to as the "Non-Federal Sponsor"); that we are aware of the financial obligations of the Non-Federal Sponsor for the Fargo Moorhead Metropolitan Area Flood Risk Management Project; and that the Non-Federal Sponsor will have the financial capability to satisfy the Non-Federal Sponsor's obligations for that project. We understand that the Government's acceptance of this self-certification shall not be construed as obligating either the Government or the Non-Federal Sponsor to implement a project.

IN WITNESS WHEREOF, we have made and executed this certification this 15th day of July, 2010.

BY: Alalaha

Dennis R. Walaker, Mayor
City of Fargo, North Dakota

DATE: 15 July, 2010

Attest: Steven Sprague City Auditor

DATE: 15 July, 2010

BY: Man Voyel

Mark Voxland, Mayor City of Moorhead, Minnesota

DATE: 15 July 2010

BY: Michael J. Redlinger, City Manager

DATE: 7/15/10

RESOLUTION NO. 2010-08-01

A RESOLUTION REGARDING FARGO-MOORHEAD DIVERSION PROJECT

WHEREAS, There is proposed a Fargo-Moorhead Diversion Project which will have dramatic impact upon down stream property, including land in Norman County

AND WHEREAS, Said Diversion Project may have significant impact upon tributaries to the Red River of the North, including the Wild Rice River which has had a significant impact upon the City of Ada.

AND WHEREAS, The City of Ada has deep concerns about the proposed Project and the potential for disastrous consequences to down stream property owners and the residents of Ada.

NOW, THEREFORE, It is hereby resolved that the City of Ada requests that the Cities of Fargo and Moorhead and the Counties of Cass County, North Dakota, and Clay County, Minnesota, and the Army Core of Engineers and all other government agencies involved in said project, provide more time for public input on the Fargo-Moorhead Diversion Project and more study and discussion of the downstream effect.

BE IT FURTHER RESOLVED That the period allowed for public input be extended a reasonable period of time for further input.

Upon above Resolution being put to the vote, the above Resolution was passed by the following vote:

Ayes:	es: Pinsonneault, Hansen, Edwards, Peterson, Austinson					
Nayes:	Roux, Robertson.					
Dated:	<u>August 4, 2010</u>	Jim Ellefson				
ATTEST:		Jim Ellefson, Mayor				
	Kappes Kappes, City Clerk					
W:8/10)					

City of Drayton

August 5, 2010

PO Box 280 Drayton ND 58225 701-454-3590

United States Army Corps of Engineers St. Paul District Attention: Colonel Price 180 5th Street East, Suite 700 St. Paul, Minnesota 55101-1678

Dear Colonel Price:

The City of Drayton, ND, expresses concern about the proposed Fargo Diversion. We are very anxious to hear how the diversion might affect the Thompson Bridge area. We ask that further study be completed to determine what effect such a project will have on Drayton and other cities in the northern Red River Valley. Until that information is available, we ask that the project be put on hold.

The City of Drayton cannot withstand any additional flood water. It would also be detrimental to us if flood waters from the south reach us quicker. Because the river flows north, the river at Drayton is still frozen when Fargo is cresting. Sending flood waters to us faster is a recipe for disaster.

Thank you for allowing us to comment on this matter. Please keep us informed on further developments.

Sincerely,

Ardis J. Olson

Mayor, City of Drayton

Ardis Olson, Mayor Mark Prigge, Council Michael Larson, Council Randy Schuster, Council Paul Deubner, Council Scott Kraft, Council Jason Woinarowicz, Council

RESOLUTION NO. 10 – 08 - 85

Council Member Pokrzywinski, supported by Council Member Leigh, introduced the following resolution and moved its adoption:

WHEREAS, The City of East Grand Forks is not opposed to the Fargo-Moorhead Diversion Project, and supports it's timely completion.

WHEREAS. The City of East Grand Forks supports basin wide retention to help mitigate the impacts.

WHEREAS, The United States Army Corps of Engineers, (USACE) has determined that impacts are expected north of Halstad, MN as a result of construction of the proposed Fargo-Moorhead diversion.

WHEREAS, The USACE has just recently released this information.

WHEREAS, The USACE has not indicated to citizens north of Halstad, including East Grand Forsk, the magnitude of the expected impacts.

WHEREAS. The citizens situated north of Halstad, MN are unable to determine their situation as a result of impacts of the FM diversion due to lack of information.

WHEREAS, The USACE has set August 9, 2010 as the deadline for public comment on the proposed FM diversion.

WHEREAS, an August 9th deadline does not provide sufficient time for residents of East Grand Forks to determine how the impacts of the proposed FM diversion will affect them and submit comment.

NOW THEREFORE, to preserve the interests of East Grand Forks, the City Council requests the USACE to extend the time frame of public comment in regard to the proposed FM diversion to accommodate the needs and rights of East Grand Forks citizens.

Voting Aye: Buckalew, Tweten, Gregoire, Leigh, Pokrzywinski, DeMers, and Grassel.

Voting Nay:

None.

Absent:

None.

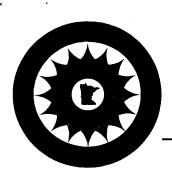
The President declared the resolution passed.

Passed: August 3, 2010

Ruhard F.

Attest:

I hereby approve the foregoing resolution this 3 rd of A	ugust, 2010. 🧷		
· · · · · · · · · · · · · · · · · · ·	Aym	House	
	-0//	/\	Mayor



City of East Grand Forks

600 DeMers Ave • P.O. Box 373 • East Grand Forks, MN 56721 218-773-2483 • 218-773-9728 fax www.eastgrandforks.net

August 6, 2010

Mr. Aaron Synder USACE Planner and Project Manager, PTAP Chief Project Manager Branch (PM-B) 180 East 5th Street, Suite 700 St. Paul, MN 55101

RE: Draft Feasibilty Report and Environmental Impact Statement - FM Metropolitan Area

Dear Mr. Snyder:

The City of East Grand Forks supports flood control projects for the entire Red River Valley, including the Fargo-Moorhead area. Our elected officials have invited State and Federal officials to our community during the past two seasons of spring flood events so that they could see the differences and the benefits to our flood protection along the Red River; and to encourage our representatives to assist other communities.

With that in mind the following are the comments from the City of East Grand Forks pertaining to the above draft report for the Fargo-Moorhead Flood Control Project.

- The cities of Grand Forks/East Grand Forks just completed a \$400 million flood control project to a 210-year design. We expect our flood control project to retain that level of protection when the Fargo-Moorhead project is completed. In other words, we expect to be kept whole.
- Given the data to date, summer floods would also be more likely to reach flood stage and could impact our state campground and the underpass on 4th Ave NW. This is unacceptable. The City of East Grand Forks and the State of Minnesota have a large investment in the campground. We do not want to lose any future revenues or positive community impacts due to the to the proposed Fargo-Moorhead project. The campground was protected by a small levee before the main Citywide levee project was completed. The Corps asked us to remove the levee because it caused a 0.10 foot rise in the computed water surface elevation near the Sorlie bridge. The impacts of the proposed project far exceed that rise given the currently-available information.
- The City of East Grand Forks recently submitted a project to the USCOE for review. The City was told by the Corps that the City could not raise the floodway elevation by more than *one-hundredth* (0.01) of one foot. Therefore, we cannot understand how the USCOE can propose a project that raises our flood profiles by *over one foot* without a proposed mitigation plan.

The City of East Grand Forks is an Affirmative Action Equal Opportunity Employer.

• During the design of the GF/EGF project, we understood that we could not negatively impact areas upstream or downstream of our project, and a detailed study was undertaken to determine the impacts of the GF/EGF system. Therefore, again, we cannot understand the reported impacts of the system without some form of mitigation for other areas of the Red River Valley.

We are saddened that the Corps has opted not to extend its public comment period so that we could better understand and comment fully on the potential impacts of the proposed project. The City simply requests that a mitigation plan be a part of the proposed project so that other areas of the valley, including East Grand Forks, are not negatively affected by the project.

The City of East Grand Forks continues to support Fargo-Moorhead in its flood protection efforts with such a mitigation plan in place. The City of East Grand Forks will continue to weigh all of its options, including, but not limited to, a formal protest of the project, if the concerns listed above are not addressed.

If you have any questions, or if additional information is needed, please contact our office.

Sincerely

ynn Stauss

Mayor



City of Grand Forks

(701) 746-2607 FAX # (701) 787-3773

255 North Fourth Street · P.O. Box 5200 · Grand Forks, ND 58206-5200

August 9, 2010

Mr. Aaron Snyder Corps of Engineers, Project Manager 190 East 5th St., Suite 401 St. Paul, MN 55101-1638

RE: Comments on Draft Feasibility Report & Metro Environmental Impact Statement

The City of Grand Forks offers the following comments for the EIS:

- > Grand Forks supports flood protection as a vital part of community life in the Red River Valley, including the timely completion of a project that helps to provide necessary security for the residents of the Fargo-Moorhead area.
- The latest analysis of the F-M Area Flood Protection Project by the Corps of Engineers indicates downstream impacts to the limits of the study area that is the Thompson Station.
- > Although not defined at this time, it is likely that stage increases will occur at the Grand Forks Station.
- The local, state and federal governments have over 400 million dollars invested in the Grand Forks/East Grand Forks flood project that needs to be protected and maintained. Currently the City of Grand Forks has a flood protection system that provides flood protection to approximately a 210-year frequency event. The City desires to maintain this 210-year frequency level of protection.
- ➤ Identified downstream impacts need to be clarified and the appropriate mitigation be INCLUDED as part of the project and project development.
- Downstream studies in the Grand Forks area should discuss the impacts of changes in the timing of the crest on the Red River. It should identify how those may relate to the Red Lake River crest and identify if there are increased risks for concurrent crests. Analysis should also be made regarding expected ice conditions and impacts with an accelerated crest.
- A specific study needs to be initiated for the Grand Forks/East Grand Forks flood protection system to identify how best to maintain or increase the current level of protection. The study should include basin-wide storage, levee raises, and diversion alternatives.

Sincerely,

Michael R. Brown, Mayor

City of Grand Forks

Ce: City Council

Mayor Dennis Walaker

Governor John Hoeven

Congressman Earl Pomeroy

Senator Kent Conrad

Senator Byron Dorgan

Todd Sando – State Engineer

and the second of the second o

City of Halstad

404 5th Avenue East Halstad, Minnesota 56548

RECEIVED

JUL 20 200

July 20, 2010

RE: Fargo/Moorhead Red River Diversion Plan

Enclosed you will find two resolutions, one from the City of Halstad and the other from the Halstad Township.

These are resolutions of **non-support** the current Fargo/Moorhead planned diversion. This plan as projected will increase water depths in our communities that will have the following effects:

- Up to seventeen (17) inches of additional water during peak flooding events.
- Increasing the flow of the Red River during what would have been moderate flooding will now causes major flooding problems.
- Highway 75 will be closed sooner and possibly longer with increased levels of water causing more damage to the roadway. When Highway 75 is closed, transportation of goods and services is impaired, school need to be closed, fire and medical services are limited.
- County and township roads will flood more often, causing increased damages with increased costs to repair. Rural roadways that have never flooded before will now become impassable during events.
- The current levy system in Halstad will need additional improvements. We would be looking at increasing the height of highway 75 at the north and south entrances of town. We would need additional pumping on our north levy. We would need to look at increasing the height of the levy and placing a hard surface on the top for safety.
- The rural areas would lose population with buyouts and with the frustration of fighting water year after year. This has a rippling effect to all business and residents of Halstad and Halstad Township.
- Property values will decrease. We are already noticing home sales are difficult with just the planning stage of the diversion receiving so much press. Property taxes will more than likely be increased to offset additional costs of flood protection.
- Talk of a greenway in the valley will decrease the tax base of the area.
- Retention projects that have been talked about will be very difficult to complete with having property owners unwilling to hold additional water, with all the rules and regulations necessary for such projects, and with wildlife organizations fighting such projects. As planned these projects will be a 50/50 cost share which means we spend more local dollars with no gain in reducing current levels, just money spent to offset increased levels of the diversion project.

These are just a **few** of the reasons for why Halstad City and Halstad Township are opposed to having additional water levels on the Red River. We would more than welcome a chance to express these concerns in person at any time.

AN EXCELLENT COMMUNITY IN WHICH TO LIVE AND WORK!

Acting Mayor Shane Carlson Clerk-Treasurer Ron Gotteberg Councilmember Renae Horning Councilmember Tom Maroney

Email <u>halstad@rrv.net</u> www.halstad.com

CITY OF HALSTAD RESOLUTION NO.07-19-2009

Ron Gotteberg introduced the following resolution and moved its adoption:

WHEREAS, The United States Army Corps of Engineers, (USACE) has proposed constructing flood water diversion channels around the cities of Fargo, North Dakota and Moorhead Minnesota.

WHEREAS, The proposed diversion channel re-deposits the floodwater back into the Red River in northern Clay County of Minnesota or Northern Cass County of North Dakota.

WHEREAS, The City of Halstad is situated directly north and downstream from the point at which the proposed diversion channels reenter the Red River.

WHEREAS, The proposed flood diversion channels will change the flow regime of the Red River during flood events and is estimated to cause an adverse impact of as much as seventeen inches of additional crest elevation to the City of Halstad.

WHEREAS, Increased flood crest of the magnitude envisioned by the USACE will adversely impact, roads, bridges, utilities, farms, personal property, commerce and public safety to those downstream of the proposed diversion.

WHEREAS, A change in flow regime that results in adverse impacts to the residents of the City of Halstad and others situated downstream from the proposed diversion projects is not acceptable.

NOW THEREFORE, The Halstad City Council Members do hereby go on record of opposing the Fargo/Moorhead diversion project as it is now proposed.

Shane Carlson seconded the motion.

Adopted this 19th Day of July, 2010

Ron Gotteberg, Clerk/Treasurer

HALSTAD TOWNSHIP RESOLUTION NO. 2010-1

Rodney Olson introduced the following resolution and moved its adoption:
WHEREAS, The United States Army Corps of Engineers, (USACE) has proposed constructing flood water diversion channels around the cities of Fargo, North Dakota and Moorhead, Minnesota.
WHEREAS, The proposed diversion channel re-deposits the floodwater back into the Red River in northern Clay County of Minnesota or northern Cass County of North Dakota.
WHEREAS, Halstad Township is situated directly north and downstream from the point at which the proposed diversion channels reenter the Red River.
WHEREAS, The proposed flood diversion channels will change the flow regime of the Red River during flood events and is estimated to cause an adverse impact of as much as seventeen inches of additional crest elevation to Halstad Township.
WHEREAS, Increased flood crest of the magnitude envisioned by the USACE will adversely impact, roads, bridges, utilities, farms, personal property, commerce and public safety to those downstream of the proposed diversion.
WHEREAS, A change in flow regime that results in adverse impacts to the residents of Halstad Township and others situated downstream from the proposed diversion projects is not acceptable.
NOW THEREFORE, The Halstad Township Board does hereby go on record of opposing the Fargo/Moorhead diversion project as it is now proposed.
Philip Hellerud seconded the motion.
Adopted this 15th day of July, 2010
By Beary Christianson, Chairman
Attest Sary Shulstab Gary Shulstad, Clerk



P.O. Box 65 108 Main Street **Harwood, ND 58042-0065** Email: auditor@cityofharwood.com (701) 281-0314 (Phone) (701) 282-0543 (Fax) www.cityofharwood.com

August 2, 2010

Aaron Synder USACE Planner and Project Manager 180 East 5th Street, Suite 700 St. Paul, MN 55101

Subject: Fargo-Moorhead Metro Flood Risk Management Project

Draft Feasibility Report and Environmental Impact Statement (DEIS)

Dear Mr. Synder,

As requested in your June 25th, 2010 letter, the city of Harwood has no comment regarding the referenced project DEIS at this time. Nonetheless, the city of Harwood would like to be on record of being in favor of the concept of a North Dakota Diversion. However, the city would like one of its elected officials to be part of the process to insure that the method of paying for a North Dakota Diversion is fair and equitable to the citizens of Harwood and that the projected downstream effects of a North Dakota diversion are mitigated in a responsible and cost effective manner.

As you are aware, the city of Harwood is involved in flood fighting and experiences flood impacts nearly every spring runoff. (The city experiences flooding from the Sheyenne River, the Red River and overland flooding.) It appears from the project report that a North Dakota diversion provides the most benefit to the city of Harwood; a diversion on the Minnesota side, on the other hand, provides no benefit to the city. Further, residents of the rural areas surrounding the city of Harwood frequent Harwood businesses and participate in community activities. As such, the city can bring a valuable prospective to the diversion discussion process.

Thank you for an opportunity to comment.

Sincerely,

City of Harwood

Bill Rohrich, Mayor

CITY OF HENDRUM

A Small City with Big Dreams

RESOLUTION #2010-08

RESOLUTION OPPOSING THE FM DIVERSION

Council Member Milton Alm introduced the following resolution and moved it's adoption:

WHEREAS, the United States Army Corps of Engineers, (USACE) has proposed constructing flood water diversion channels around the cities of Fargo, ND and Moorhead MN.

WHEREAS, the proposed diversion channel re-deposits the floodwater back into the Red River in northern Clay County of MN or Northern Cass County of ND.

WHEREAS, the City of Hendrum is situated directly north and downstream from the point at which the proposed diversion channels reenter the Red River.

WHEREAS, the proposed flood diversion channels will change the flow regime of the Red River during flood events and is estimated to cause an adverse impact of as much as seventeen inches of additional crest elevation to western Norman County and the City of Hendrum.

WHEREAS, increased flood crest of the magnitude envisioned by the USACE will adversely impact roads, bridges, utilities, farms, personal property, commerce, public safety, and personal well being to those downstream of the proposed diversion.

WHEREAS, a change in flow regime that results in adverse impacts to the City of Hendrum and its residents and or others situated downstream from the proposed diversion projects is not acceptable.

NOW THEREFORE, to preserve the interests of the City of Hendrum and its people, the City of Hendrum Council does hereby go on record as opposing the FM diversion project as it is now proposed.

The motion for adoption of the forgoing resolution was duly seconded by council member <u>Mike Smart</u> and upon vote being taken thereon, <u>M. Alm, C. Johannsen, K. Kjersten, M. Person, and M. Smart</u> voted in favor Thereof, and <u>None</u> voted against the same, whereupon said resolution was declared duly passed and adopted:

Adopted this 12th day of July 2010

Karen E. Sip, Clerk

Seal

LINDQUIST&VENNUM

Julie M. Duckstad 612-371-5784 jduckstad@lindquist.com www.lindquist.com 4200 IDS Center 80 South Eighth Street Minneapolis, MN 55402-2274 Phone: (612) 371-3211 Minneapolis370e8207

August 4, 2010

Mr. Aaron Snyder USACE Project Manager 190 East 5th Street Suite 401 St. Paul, MN 55101

VIA CERTIFIED MAIL RRR & EMAIL (Aaron.M.Snyder@usace.army.mil)

Re: Request for Time Extension on Comments – Draft Feasibility Report and Environmental Impact Statement – Fargo-Moorhead Metropolitan Area Flood Risk Management Report

Dear Mr. Snyder:

We represent the City of Hendrum, Minnesota with respect to the review and comment on the Draft Feasibility Report and Environmental Impact Statement (DEIS) for the Fargo-Moorhead Metropolitan Area Flood Risk Management report. The current comment period expires August 9, 2010.

On August 3, 2010, the US Army Corps of Engineers (USACE) made available to the public a Preliminary Downstream Impact Analysis (PDIA), containing substantial new information on the downstream flood impacts of the proposed project, including impacts to Hendrum.

Based on this PDIA, we hereby request an extension of the comment period for an additional fourteen (14) days from the expiration of the current comment period, until August 23, 2010. Such an extension would be consistent with the USACE's own NEPA regulations on time extensions for comments. 33 CFR Section 230.19(a) provides that "[d]istrict commanders will consider and act on requests for time extensions to review and comment on an EIS based on timeliness of distribution of the document..." (italics added).

In the alternative, and in light of the statement in the last paragraph on page 2 of the PDIA that: "[t]he Corps will continue to analyze the impacts downstream of Thompson and will report these findings as they become available...," we would request that the comment period be extended until fourteen (14) days after the date on which all Corps findings and analyses on downstream impacts are completed and made available to the public.

Thank you for your consideration. We look forward to hearing from you soon.

Very truly yours,

LINDQUIST & VENNUM PLLI

finie in Dunsta

Julie M. Duckstad

JMD/lng

cc: Diane Ista

Curt Johannsen Howard Kenison Thomas Pursell Jonathan Scoll

City of Hendrum

A Small City with Big Dreams

PO Box 100 308 Main Street East Hendrum, MN 56550-0100 Telephone: 218-861-6210 Fax: 218-861-6210

e-mail: hendrum@loretel.net

August 9, 2010

US Army Corps of Engineers C/O Aaron Snyder St. Paul District 190 Fifth Street East St. Paul, MN 55101-1638

Dear Aaron Snyder,

The proposed Fargo/Moorhead Diversion, which the Army Corps of Engineers has developed, if built, will be devastating to the community of Hendrum as well as all other communities and citizens living downstream from the proposed diversion.

The diversion is expected to dump anywhere from 8 to 25 inches additional water on communities downstream during a flood event. The excess water, with its increased flow from the FM Diversion, will threaten not only the protective levees of many communities and farms, but will also do excessive damage to roads, bridges and other infrastructure. If the communities and farmsteads can protect themselves from the additional water, they still will have to live with the fact that they will be isolated from emergency services for long periods of time during a flood event. Furthermore, the additional flow of water will be devastating to wildlife and the environment. Erosion will be become a huge issue destroying farmland which is considered by many to be the most productive in the world.

Therefore, the City of Hendrum has passed the enclosed resolution opposing the Fargo/Moorhead Diversion. The residents of Hendrum are not against Fargo/Moorhead receiving flood protection; however, all citizens in the Red River Valley deserve and need flood protection. We feel that retention, detention, and gated storage which is proposed in the "Mike 11 Model" developed by Charlie Anderson of JOR Engineering is a better solution to solving the flooding problems in the Valley. This will protect everyone in the Red River Valley and not just one localized area.

Solving the flooding issues in one localized area and passing the problem on to someone else is not morally correct, nor is it neighborly!

Curt H. Johannsen

Hendrum Mayor

COMMENTS OF

CITY OF HENDRUM, MINNESOTA

on

U.S. Army Corps of Engineers

Fargo-Moorhead Metropolitan Area
Flood Risk Management
Draft Feasibility Report and Environmental Impact Statement
dated as of May, 2010

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August 9, 2010

VIA COURIER & U.S. MAIL

Aaron M. Snyder Project Manager U.S. Army Corps of Engineers, St. Paul Division 190 East 5th Street, Suite 401 St. Paul, MN 55101

Re: Comments on Fargo-Moorhead Metropolitan Area Flood Risk Management Draft Feasibility Report and Environmental Impact Statement – May 2010

Dear Mr. Snyder:

On behalf of the City of Hendrum, MN ("City"), Lindquist & Vennum PLLP submits the following comments to the Fargo-Moorhead Metropolitan Area Flood Risk Management Draft Feasibility Report and Environmental Impact Statement dated as of May, 2010 ("DEIS") prepared by St. Paul District, U.S. Army Corps of Engineers ("Corps"). These comments are furnished pursuant to the Corps' "Notice of Intent to Prepare a Draft Environmental Impact Statement for a Proposed Flood Risk Management Project on the Red River of the North in Fargo, ND & Moorhead, MN" dated April 22, 2009, and published in the *Federal Register* Volume 74, Number 85, on May 5, 2009, as required by regulations of the President's Council on Environmental Quality ("CEQ") at 40 CFR 1503 et seq. and Corps regulations at 33 CFR 230.19 et seq.

Since the Corps has failed to provide critical technical information in the DEIS, failed to adequately consider a reasonable range of alternatives to, and all environmental effects of, the Preferred Alternative described in the DEIS, among other inadequacies in the DEIS, the City respectfully requests that the Corps prepare a Supplemental Draft EIS that addresses the issues raised in these comments, and, once complete, provide a notice and comment period for the Supplemental Draft EIS.

Further, the Corps made additional downstream flood stage information available to the public on August 3, 2010, a mere six (6) days before the expiration of the DEIS comment period. This information was provided to supplement the DEIS and to extend the downstream study area for environmental impacts. See Section 4.2, below. Because the City, its counsel and experts have had little or no opportunity to fully review and consider this new information, the City also requests a 14 day extension of time to and including either (i) August 23, 2010; or, in the

alternative (ii) 14 days from the date the Corps provides for public review and comment on all information which the Corps states is still missing in the DEIS.

1. In General

These comments address the inadequacies of the DEIS under the National Environmental Policy Act ("NEPA"), including (i) the unduly narrow definition of the "purpose and need" for the Proposed Action, (ii) the inadequate consideration of upstream flood management alternatives and (iii) the incompleteness of data on and analysis of downstream environmental effects, including cumulative effects.

Attached as Appendix I are executive summaries of certain study documents concerning Red River Basin ("RR Basin") flood issues; to avoid undue paper bulk, and improve readability of our comments, we have attached only these summaries. These studies constitute important illustrations of the broader scope of alternatives analysis that is missing from the DEIS. See Sections 3.4 and 3.5 of these comments. The City requests that these studies and reports be considered by the Corps decision-maker in their entirety, and that the full text of these studies and reports, and any other studies, reports or documents referenced in these comments, including their respective appendices, be included in the Corps' administrative record for the final Record of Decision and EIS.

Attached as Appendix II is the text of an extract of the minutes of a Board of Governors meeting of the Red River Water Management Board of June 10, 2010, affirming its policy regarding upstream flood water retention, as evidence of the ongoing study and implementation at the local governmental level of an alternative inadequately considered in the DEIS. See Section 3.5 of these comments.

Attached as Appendix III are comments of the Mayors of Perley and Hendrum, Minnesota, evidencing the concerns of these cities regarding negative economic, social and environmental impacts to them and to their residents from construction of the Preferred Alternative. See Section 4.5(h) of these comments.

2. <u>Unreasonably narrow definition of Purpose and Need of the Proposed Action</u>

The DEIS defines the Purpose and Need of the proposed action ("Proposed Action") as "to reduce flood risk, flood damages and flood protection costs related to the flooding in the Fargo-Moorhead Metropolitan Area." DEIS, Section 2.5. By limiting the Purpose and Need solely to the Fargo-Moorhead Metropolitan Area ("F-M Metro"), the Corps' definition of the project Purpose and Need unreasonably downplays the hydrologically interdependent nature of the RR Basin – upstream and downstream, an interdependence that requires the NEPA analysis to be cast in terms of this basin as a whole. The result is a DEIS with an unduly narrow focus through which both final alternatives and downstream impacts are evaluated.

One result of this narrow focus is inadequate consideration by the DEIS of alternatives involving projects, or project components, upstream of the F-M Metro. Prior studies indicate certain upstream flood management measures may have potential to significantly reduce flood risks across the RR Basin, including the F-M Metro. This is discussed in more detail in Section 3 of

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these comments, below. Another result is inadequate analysis of impacts to downstream communities north of the F-M Metro. This is discussed in more detail in Section 4 of these comments, below.

Even assuming that the Purpose and Need is reasonable in light of the proposed project, the implementation of the Corps' Preferred Alternative, the ND 35K diversion channel, will result in construction of a massive project that will render subsequent consideration of other alternatives, such as upstream retention, on any significant scale, largely moot. After spending over \$1 billion on the ill conceived Preferred Alternative, it is highly unlikely the Corps or the federal government, would consider studies or funding for such other alternatives.

2.1 Need for regional, basin-wide purpose and need

The City believes that a more accurate statement of Purpose and Need would reference a regionally-focused basin-wide set of projects to reduce flood damage at and downstream of the F-M Area through flood flow reductions on both the Red River main stem and tributaries upstream of the F-M Area.

The DEIS expressly acknowledges the basin-wide nature of the problem by stating that DEIS study objectives include "[t]o develop a *regional* system to reduce flood risk." DEIS, Section 1.2.

2.2 Corps involvement in current basin-wide planning

A basin-wide approach would not be inconsistent with the Corps' existing policies and efforts in the RR Basin. For example, the Corps is a signatory to a December, 1998, agreement establishing the Red River Basin Flood Damage Reduction Working Group, a non-binding agreement among Minnesota stakeholders in the RR Basin, whose members (the "Flood Damage Reduction Work Group") acknowledge certain goals and principles for flood damage reduction. Among these principles are that "[p]rojects should be consistent with comprehensive watershed management planning," including planning across "all tributary watersheds" affected by a project" [emphasis added]. See, in this regard, the comment below regarding the inconsistency of Preferred Alternative with local, regional, and state flood control policies, section 3.5.

Similarly, the Corps is an active participant in the Red River Basin Commission ("RRBC"). The RRBC is an intergovernmental planning group comprised of federal, state and Canadian provincial officials, whose approach to flood control is likewise regionally focused. Thus, the Corps is fully aware of the need for – indeed, participates in -- a basin-wide approach to Red River flooding and its impacts.

3. <u>Failure to adequately consider upstream storage alternatives and to evaluate the Preferred Alternative in light of existing local / regional flood management policies</u>

Even assuming that the formulation of Purpose and Need in the DEIS is proper, the DEIS fails to adequately consider a reasonable range of alternatives to the Preferred Alternative. Under NEPA and CEQ regulations, this consideration must include (i) appropriate initial screening of such alternatives, (ii) in-depth analysis of the environmental impacts of alternatives that survive

screening and (iii) comparison of these impacts to anticipated impacts from the Preferred Alternative. CEQ regulations also require the DEIS to reconcile the Preferred Alternative with existing local or regional flood management policies, as required by NEPA, CEQ regulations thereunder, and Corps NEPA regulations, including the Corps' own regulations, Regulation ER 1105-2-100.

3.1 The Corps' preliminary screening unreasonably eliminated two forms of upstream storage as feasible alternatives for detailed consideration in the DEIS.

The Corps' Alternatives Screening Document, December, 2009, prepared as a foundation for its NEPA analysis ("Screening Document"), considered and then eliminated five alternatives as separate ("stand-alone") plans, i.e. plans that would be completely effective by themselves. Among these stand-alone alternatives were two forms of upstream flood storage: distributed storage in flood retention ponds and the "waffle," the use of the existing road network with additional water control structures. Both were eliminated because the Corps believed they would be less physically effective and less cost-effective than the various diversion channel plans, and thus did not meet the purpose and need of the study. Screening Document, Section 2.5.

The Screening Document consideration of these alternatives was inadequate, in light of the substantial evidence, some of which is referred to in Section 3.3 of these comments, below, of their potential feasibility, so that the DEIS, in turn, failed to properly evaluate them , not only as stand-alone alternatives but also, potentially, as components of, or in tandem with, other downstream measures. For this reason, the City believes the Corps' elimination of these alternatives was unreasonable, arbitrary and capricious and violates NEPA and CEQ requirements.

3.2 The principal study on which the DEIS bases its screening rejection of upstream storage is as-yet incomplete.

The Corps relies heavily for its elimination of upstream storage alternatives on the "Fargo Moorhead and Upstream Study," a study being jointly carried out by the Corps and by the Cities of Fargo and Moorhead. This study is as yet incomplete, and, according to a Corps web page, will not be completed until December, 2010. See http://www.mvp.usace.army.mil/fl damage reduc/default.asp?pageid=1455.

Phase I of this study, completed in June 2005, showed that "distributed flood storage could provide significant economic benefits, but that additional study of environmental benefits [would be] needed to justify a Federal project." DEIS, Section 1.5.2.1. Despite the incomplete status of this study, the Screening Document uses it to screen the upstream storage alternative, as discussed in more detail in Section 3.3 of these comments, below. Screening Document, Section 2.5.7.

To the extent the Corps' analysis rests on partial or incomplete study data, its alternatives analysis must be considered correspondingly incomplete, and as such, inadequate under NEPA.

3.3 Inadequate basis to eliminate upstream retention pond storage in Screening Document

The Screening Document, Section 2.5, makes a series of assertions reach its decision to eliminate upstream storage alternatives in the "final round" alternatives analysis in the DEIS itself. These include the following:

• Retention pond flood storage, on a standalone basis, "would provide [only] a moderate level of risk reduction," Screening Document, Section 2.5.8.

Comment: State, regional and local agencies with flood control responsibility in the RR Basin have determined, on the basis of both technical study and experience with existing facilities in the RR Basin, that upstream flood retention storage may be an effective means of flood flow reduction. See the discussion of studies and reports in Section 3.4 of these comments, below. The assertions in the Screening Document are unsupported by study data or rigorous analysis.

• There is "insufficient national economic interest to support Federal involvement" in flood storage, Screening Document, Section 2.5.2.

Comment: The absence of a "national economic interest" does not, by itself, justify eliminating an alternative which would resolve the RR Basin flood impacts on a regional basis. Indeed, the national economic interest would seem to require that the Corps consider basin-wide and regional alternatives. Further, NEPA requires consideration of all viable alternatives to the Proposed Action, regardless of local, regional or national interest, implementing agency or funding source.

• Studies show that retention pond storage alone cannot provide an acceptable level of flood protection to the F-M Metro. The Screening Document notes that a recent Fargo-Moorhead and Upstream Study estimates that a system providing 200,000 to 400,000 acre feet of upstream storage would cost between \$160 million and \$400 million. Stage reductions at Fargo-Moorhead for a hundred-year flood (1% chance) would range from less than 1.6 feet to 4.4 feet. Screening Document, Section 2.5.2.

Comment: That retention pond storage by itself does not furnish a total solution likewise does not justify its elimination from further detailed study as an effective alternative. Consistent with a basin-wide approach, the Corps' DEIS should have analyzed such storage in conjunction with other measures, as a viable alternative that would meet its Purpose and Need.

• "Large amounts of land" would be needed, and "most of that land would need to be taken out of agricultural production, potentially impacting rural communities. Transportation impacts could result because roads may need to be relocated. * * ". Screening Document, Section 2.5.4.

Comment: No assumed upstream project scale is provided as a benchmark for such assertions; nor is any study or other documentation provided to support them. Potential rural "transportation impacts" are not compared to the massive urban transportation and infrastructure impacts detailed for the Preferred Alternative in the DEIS (See Appendix L, Cost, Project Cost Summary Sheet – ND 35K, p.2, "Relocations").

A large-scale retention pond project (whose parameters are not defined in the Screening Document) would be "difficult to implement in a reasonable amount of time, less than 10 years." Screening Document, Section 2.5.6.

Comment: The DEIS provides no foundation for the statement that an adequatelyscaled distributed flood retention program could not feasibly be constructed in a decade. The Preferred Alternative is estimated to take 8.5 years to complete. A difference of 1.5 years on a project of this scale is not material and does not justify eliminating a thoroughly-researched, technically credible alternative at the screening stage of the EIS process. See DEIS, Section 3.5.4.2.

Site acquisition would have "legal issues," (the nature of which are unspecified in the Screening Document). Screening Document, Section 2.5.6.

Comment: The Screening Document and the DEIS fail to identify the legal issues that would provide a reasonable basis, or any basis, for removing retention pond storage from the alternatives to be considered in the DEIS.

"Appropriate and economical" retention pond sites are scarce in the watershed upstream of Fargo-Moorhead. Screening Document Section 2.5.6.

Comment: Neither the Screening Document nor the DEIS provides any factual or technical basis for the assertion that there is a "scarcity" of sites for upstream retention. Information in Technical Paper 11 suggests the very opposite. Twenty six (26) sites are identified in it as viable for retention in the Bois de Sioux watershed, one of which has already been constructed and others are currently under development as does the recently completed study "Application of the Flow Reduction Strategy in the Bois de Sioux Watershed." These twenty-six sites would, cumulatively, provide about half of the upstream storage required to reduce flows by 20% on the Red River at the F-M Metro. Planning is underway to identify sites in the Wild Rice (North Dakota) watershed, which is the other major contributor to flood flows on the Red River at the F-M Metro.

The City believes that the Corps' elimination of upstream flood storage alternatives in the Screening Document was arbitrary and capricious, as was the consequent failure of the Corps to consider any of these alternatives among the range of true alternatives selected for detailed environmental analysis in the DEIS itself.

3.4 Inadequate consideration in DEIS of upstream retention pond flood storage alternative

With the foundation for elimination of this alternative thus laid in the Screening Document, the DEIS itself, Section 2.3.4, unreasonably dispatches upstream storage pond retention stating (i) the inability to assume such facilities will be built on a scale sufficient to significantly reduce flood risk; (ii) that USACE (and other) studies as indicating stage reductions at the F-M Metro of only up to 1.6 feet in a 100-year (1% chance) event, and (iii) that "the economic benefits would likely not support federal participation."

As to (i), NEPA does not require statistical certainty for an alternative to be studied in an EIS, rather only that it be a reasonable alternative in light of the Project Purpose and Need. Under NEPA, as an otherwise implementable alternative with potentially lower downstream environmental effects, upstream retention qualifies as such an alternative, not to be discarded on the basis of benefit / cost comparisons alone. As to (ii), the Corps' position is belied by a considerable body of study data to the contrary, some of which is described below and none of which the DEIS cites or discusses. As for reason (iii), the degree of economic benefits, as measured using federal or Corps methodology (e.g., measurement under National Economic Development (NED) criteria using the 1983 principles established by the Water Resources Council methodology, see DEIS, Section 3.7.2.1), while furnishing a basis for selection among federally implementable alternatives themselves, is not a NEPA criterion for comparison of federal and otherwise feasible non-federal alternatives.

Significantly, none of the reasons cited in the DEIS for elimination of upstream storage include adverse or beneficial environmental effects. The DEIS contains no discussion of the environmental effects of these alternatives, either singly or in comparison to the Preferred Alternative. NEPA requires that each reasonable alternative be "rigorously" explored and its environmental effects identified and evaluated. CEQ Regulations, 40 CFR Sections 1502.14(a). The environmental effects of the respective alternatives must then be compared, as between the particular alternatives. 40 CFR Section 1502.16.

Several recent studies and reports show that upstream retention and basin wide strategies would be equally effective as the Preferred Alternative, and would have positive environmental effects. The Corps ignored these studies, both in its overall alternatives screening process and in the DEIS discussion of alternatives, DEIS Section 3, including its comparison of alternatives, DEIS Section 3.7.

Among these studies is Technical Paper No. 11, dated May, 2004, by the Technical and Scientific Advisory Committee of the Flood Damage Reduction Work Group ("Technical Paper 11") online at http://www.rrwmb.org/files/FDRW/TP11.pdf, an executive summary of which is included in Appendix I hereto. Technical Paper 11 evaluates and recommends an array of alternatives, including upstream impoundments along with downstream urban measures, such as removal of channel and floodway obstructions, each contributing to flood prevention in its own way, in tandem with others. This paper ranks the Corps' diversion channel Preferred Alternative as medium to low in appropriateness for implementation in F-M Metro portion of the RR Basin. (Table 1, p. 36).

Similarly, the RRBC, a basin-wide planning organization in which the Corps participates, published in January 15, 2010 a "Progress Report to the Minnesota Legislature," executive summary included in Appendix 1 hereto, also available at http://www.redriverbasincommission.org/Long_Term_Flood_Solutions/2-3-2010_MN_Leg_Rpt.pdf ("RRBC Progress Report"). The RRBC Progress Report sets out a detailed flood damage reduction / project identification strategy calling for reduction in Red River and tributary flood flows by a target percentage (currently set at 20 percent), through a mix of RR Basin-wide approaches, including retention dams, wetland creation/ restoration, impoundment, etc.

Among the findings in the Progress Report is an estimate that a million acre-feet of storage would be sufficient to provide basin-wide protection from a flood similar to that of 1997. Using current costs of \$1000 per acre-foot, a basin-length project would cost in the range of \$1 billion. RR Basin Progress Report, Appendix 4.

The Corps Planning Guidance Notebook ER 1105-2-100, contains, in Appendix H, a "Project Study Issue Checklist" ("Corps Issue Checklist") that includes the following planning checklist item (No. 26): "Was the planning effort *conducted in a systems/ watershed context* and was this reflected in the presentation of the without-project conditions, problem and opportunity statements, and the plan formulation, evaluation and selection?" (Italics added.)

Failure of the DEIS to consider – or even mention – Technical Paper 11, the RR Basin Progress Report, or the substantial technical literature of which these important studies are a part, evidences the Corps' intent to arbitrarily limit consideration of alternatives, to an extent that not only renders the DEIS seriously inadequate under NEPA but also patently nonconforming with the Corps' own regulations and guidance.

3.5 Failure to evaluate the Proposed Action and the Preferred Alternative in light of existing local / regional flood management policies

CEQ Regulations require that an EIS "discuss any inconsistency of a proposed action with any approved State or local plan and laws (whether or not federally sanctioned). Where an inconsistency exists, the statement should describe the extent to which the agency would reconcile its proposed action with the plan or law." 40 CFR Section 1506.2.

The DEIS wholly fails to address local plans and policies, including the regional flood reduction policy of the Red River Watershed Management Board (RRWMB), a joint-powers agency comprised of Minnesota watershed districts within the RR Basin. This policy, called the "20% Reduction Policy," developed for the entire RR Basin by the RRBC, centers on the concept of flood flow reduction on the Red River main stem and its tributaries by altering the hydrology of the contributing watersheds on a basin-wide effort. It is described in detail in Appendix 4 to the RRBC Progress Report.

On June 14, 2010, the Board of Managers of the RRWMB formally adopted the 20% Reduction Policy. A copy of the minutes of this Board of Managers meeting is attached as Appendix II hereto. These minutes note, in their words, the Corps' "disagreement" on the benefits of such

policy. That the Corps might disagree with a local policy is not a sufficient reason to ignore the policy in the DEIS or to fail to study the alternatives on which the policy is based.

In this case, the 20% Reduction Policy has been developed by the RRBC and adopted by the RRWMB as a policy direction for itself and its constituent watershed districts. As noted throughout these comments, the Corps' planning approach to flood protection in the F-M Metro, as set forth in the DEIS, materially conflicts with the 20% Reduction Policy. The DEIS fails to squarely address and analyze the conflict of this policy with both the Proposed Action as well as with the Preferred Alternative itself. See also 40 CFR 1502.6(c) (need to discuss possible conflicts between the Preferred Alternative and objectives of Federal, regional, State and local land use plans, policies and controls).

Funding for development of the 20% Reduction Strategy has included \$1 million in funding from the North Dakota and Minnesota legislatures (\$500,000 from each); to the extent both states have encouraged, and funded this policy development and are receiving progress reports on it, including the RRBC Progress Report, the work of the RRBC and the 20 % Reduction Policy may also be considered policies of the States of Minnesota and North Dakota. Moreover, the State of Minnesota, through its Flood Damage Reduction program administered by the Department of Natural Resources, has invested heavily in storage projects in the Red River Basin. These projects are consistent with the 20% Reduction Strategy.

The Corps Issue Checklist requires response to the following checklist item (No. 28): "Did the planning effort collaborate with other Federal, state, Tribal, and local entities to develop solutions that integrate expertise, policies, programs, and projects across public entities?" (Italics added.) Failure of the DEIS to consider, and either integrate or explicitly justify non-integration of the 20% Reduction Policy, or similar state or regional watershed policies, with the Proposed Action and the with the Preferred Alternative not only contravenes NEPA, as discussed above, but the Corps' own guidance as well.

3.6 Mischaracterization of research findings on the "waffle" micro storage alternative

The Screening Document also considers and summarily rejects the "waffle" storage alternative, Section 2.5.2. The Screening Document cites a December, 2007 paper by the Energy and Environmental Research Center (EERC) at the University of North Dakota, for the proposition that "flood stages in Fargo-Moorhead during the 1997 flood (nearly a 1-percent chance flood event) could have been reduced by 3.3 to 4.4 feet if the Waffle Project had been in place" and on this basis states that "this alternative would have a low level of effectiveness." The "waffle" discussion is thus screened out and never carried forward; it goes unmentioned in the DEIS itself.

Both the Screening Document and the DEIS omit mention entirely of a later EERC report, "Cost-Benefit Analysis of the Waffle: Initial Assessment," July, 2008 ("EERC Report), available online at http://ageconsearch.umn.edu/bitstream/42216/2/AAE603.pdf, summarized in an EERC newsletter included in Appendix I. In actuality, this report, and extensive, and long-term, EERC research overall, come to the entirely opposite conclusion.

The EERC Report estimates that had some form of "waffle" been in place upstream in 1997, it would have reduced the crest height at Fargo/ Moorhead by between 3.91 feet to as much as 6.17

feet, depending on the scale on which it were deployed. The EERC Report concludes that "[i]n the case of Fargo/Moorhead, the anticipated crest height reductions appear to be substantial." EERC Report, p. 40. Overall, the analysis concludes that "the Waffle appears to be capable of generating around \$200 million to \$600 million in net benefits over a 50-year period." EERC Report, p. 56.

Failure to accurately characterize and soundly analyze research studies and data on the "waffle" renders the DEIS' lack of consideration of this alternative incomplete, misleading and in violation of NEPA.

3.7 Cost-benefit analysis ignores upstream benefits and is an improper means of comparing the merits of upstream storage to the Preferred Alternative

Section 2.5.10 of the Screening Document states that only preliminary economic benefits of upstream storage were assessed for the F-M Metro and that these results showed that the "National Economic Development" benefits would equal less than one-third of the cost of an effective upstream storage project. Similarly, Section 3.3. of DEIS Appendix C, Economics, concludes that "there is not a practicable amount of upstream storage volume to adequately reduce flood damage at the F-M Metro in an economically feasible manner."

The Corps' limited assessment focused only on the benefits to the F-M Metro and fails to account for the benefits of upstream storage to persons or properties upstream of the F-M Metro. For example, benefit computations in the DEIS include no benefits to upstream farmers from flood water retention.

More importantly for EIS analysis, CEQ regulations, 40 CFR Section 1502.23, provide that "[f]or purposes of complying with [NEPA] the weighing of the merits and drawbacks of various alternatives need not be displayed in a monetary cost-benefit analysis and *should not be when there are important qualitative considerations*." (emphasis added.) In the present instance, "important qualitative considerations" include the environmentally positive *or negative* effects of upstream flood retention, as to which, a purely numerical cost-benefit analysis is not, under the regulation cited, a substitute for comparative analysis of environmental impacts themselves under NEPA.

Stated otherwise, the environmental impacts – positive or negative -- of upstream flood retention may add to, or possibly detract from, the greater cost of installing or operating such retention systems. A decision-maker cannot tell, since no "weighing" of the relative environmental "merits and drawbacks" of upstream storage, in relation to the Preferred Alternative, is undertaken in the DEIS, as NEPA requires.

3.8 The DEIS should evaluate an alternative comprising a mix of distributed storage and other flood control techniques

Alternatives incorporating upstream storage as a large – possibly even principal – component of the Proposed Action should have been considered in the DEIS alongside the diversion channel alternatives. To do so is required by NEPA and, as noted above, is supported by considerable technical opinion, some of which is cited here. Without a detailed analysis in the Feasibility

Report and the DEIS of the upstream retention alternative, it is not possible to know whether, as the City believes, upstream retention might potentially eliminate or at minimum scale back the need for, and the size of, the Preferred Alternative and if so, what the environmental impacts, beneficial or detrimental, of such a combination of components might be.

3.9 Final alternatives considered are only engineering design variations of the same project

The final six alternative designs evaluated by the Corps in the DEIS are not true alternatives and do not constitute a reasonable range of alternatives within the spirit of NEPA. Rather, they are design iterations of a single engineering solution. While engineering variables like anticipated load or demand, projected capacity and ultimate location might define a normal range of design alternatives in, e.g., an EIS for an Interstate highway project, the region-wide and historical flooding of the Red River Basin demand a much broader and flexible approach to potential solutions and alternatives. The regional nature and greater complexity of the causes of basin-wide flooding require, under NEPA and the Corps own regulations, a correspondingly widergauge approach to alternatives analysis than that employed in the DEIS.

The Corps' failure to fully describe and seriously evaluate, as one of the DEIS alternatives, upstream retention measures to reduce flood volume and/ or beneficially alter flood timing in the F-M Metro, and to compare the environmental merits of such measures to the Preferred Alternative, renders the DEIS inadequate, unreasonable, arbitrary and capricious and requires that the Corps prepare a supplemental DEIS for public notice and comment and ultimate consideration by the Corps' decision makers.

- 4. Inadequate analysis of downstream impacts, including cumulative impacts
 - 4.1 Data and analysis on immediate downstream impacts is incomplete and too narrow in geographic scope.

The DEIS expressly admits that analysis of downstream impacts is incomplete: "[a]dditional analysis will be completed on the downstream impacts. * * * Updated downstream impact information will be fully quantified in the final feasibility report and environmental impact statement." Section 3.7 and Section 5.2.1.4. [all italics in original]. Downstream impacts from the Preferred Alternative will likely have foreseeable significant adverse effects on the environment. This information is essential to a "reasoned choice among alternatives" and the cost of obtaining the information are not exorbitant. Pursuant to CEQ Regulations the Corps "shall include the information in the environmental impact statement." See Regulations, 40 CFR Section 1502.22(b). The Corps' failure to include the downstream impact information or to explain the basis for the incomplete information violates NEPA and renders the DEIS inadequate.

Equally serious as these "gaps" in its DEIS impacts analysis is the Corps' limitation of the study area downstream only as far as Halstad (approximately ten river miles downstream from the City). DEIS, Section 5.2.1.4. The DEIS indicates that the Corps modeled flood flows only as far upstream as Hickson, MN (river mile 485) and downstream to Halstad (river mile 375). Appendix B, Hydraulics, Section 8.1.1. Given the incomplete nature of the Corps' modeling, it

appears pointless for the City, through its engineering consultant, to attempt evaluation and meaningful comment on, e.g. the Downstream Water Quantity comparisons, Table 32. Therefore, the Corps should prepare a supplemental DEIS that contains all required alternatives and studies of adverse effects.

4.2 New Corps modeling data released August 3, 2010 shows substantial downstream impacts, contrary to results anticipated in DEIS itself

On Tuesday, August 03, 2010, the Corps released a document entitled ""Preliminary Downstream Impact Analysis" dated as of "July 2010," ("Preliminary Downstream Analysis") containing analysis of anticipated impacts downstream of the two "final" diversion alternatives considered in the DEIS, the North Dakota 35K and the Minnesota 35K. This information is substantial in nature, and includes, for example, specific information as to structures at risk downstream of the project area in 10 year, 50 and 100 year flood events, as well as flood stage information at a number of cities in this study area, from Georgetown, just downstream of the diversion, to other cities not previously included in the model. In essence, the Corps has extended its impact model further downstream from Halstad, practically to Grand Forks.

This 11th-hour information now shows, for the first time, that flood stages below Halstad, instead of diminishing, remain substantial, because of the shift in timing of flood flow increases from the F-M Metro and the diversion project. This is contrary to the expectation of the DEIS itself that flood stages would be reduced at downstream locations, DEIS Tables 32-34, pp. 147-150.

The study does not as yet extend to Grand Forks, but the Corps notes that it "will continue to analyze the impacts downstream of Thompson and will report these findings as they become available. The Corps will also complete economic and takings analyses for the area downstream of Halstad and eventually Thompson in the future."

This latest data further reinforces the position taken in these comments that both data on downstream flood flows and analysis of the impacts of such increased flows are incomplete and inadequate bases for an informed decision under NEPA and that the Corps should supplement the DEIS and resubmit the Supplemental DEIS for public comment.

4.3 Mitigation discussion too limited in geographic and economic scope

As with downstream impacts, the DEIS consideration of downstream mitigation measures is unduly limited in geographic and economic scope. The DEIS limits its consideration of such measures only as far downstream as "Economic Area 2," the Sheyenne River outlet at approximately river mile 427, DEIS, Figure 24, p. 60. No mitigation to areas below "Economic Area 2" is discussed, except for the cursory statement, in DEIS Section 5.2.3.2.1 that "[f]or landowners outside the project area that experience increased flood stages when compared to the current without project condition, further analysis will be undertaken to determine if there has been a taking. For any properties that are deemed to have incurred a taking, compensation would be required."

As a practical matter, "takings" claims (sometimes called "inverse condemnation" claims) initiated by private persons – as opposed to eminent domain proceedings brought by

governmental units – are slow, uncertain and expensive. The promise of the DEIS of an unspecified "analysis" of damage to downstream residents and communities rings hollow.

More broadly, however, mitigation comprises much more than payments for land deemed "taken" for a project. As further discussed under "cumulative impacts," below, the Corps' narrow treatment of downstream economic mitigation is wholly inadequate under NEPA standards.

4.4 Inadequate treatment of environmental justice

The DEIS considers environmental justice at Section 5.2.3.3. While it correctly notes that the Corps, as a federal agency, must comply with Title VI of the Civil Rights Act, 42 U.S.C., Sec. 2000 et seq., and Executive Order (EO) 12898, February 11, 1994, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," its consideration of environmental justice ("EJ") is entirely deficient.

CEQ's guidance "Environmental Justice Guidance under the National Environmental Policy Act," online at http://ceq.hss.doe.gov/nepa/regs/ej/justice.pdf ("CEQ NEPA Guidance") calls for environmental justice to be addressed in the EIS scoping phase. An agency "should preliminarily determine whether an area potentially affected by a proposed agency action may include low-income populations, minority populations, or Indian tribes, and seek input accordingly." When, as here, scoping is used, the agency should seek input from such populations "as early in the process as information becomes available." CEQ NEPA Guidance, pp. 10-11. The Scoping Document for the DEIS (September, 2009) includes no scoping of – nor indeed any mention of – EJ.

The DEIS confines its EJ analysis to the project area itself, i.e., portions of Cass County, ND, and Clay County, MN along the route of the Preferred Alternative. See Figures 83-86, DEIS, pp. 239-242. It evaluates previous environmental degradation as well as project-related impacts including residential and business displacement, changes in accessibility and mobility afforded by the project, and noise. DEIS, p. 243. It concludes that none of the proposed diversion channel alignments disproportionately impact only areas with minority or low-income populations in either State, and that "all communities in the project area are expected to experience the beneficial impact of a reduction in future flood events * * *," DEIS Section 5.2.3.3.8.

The Corps was required to scope and include in its DEIS EJ consideration potential project impacts to minority or low income persons and communities area-wide, including not only the F-M Metro but downstream. EJ analysis, under NEPA, must be conducted for the entire "affected environment." Agencies should first "identify a geographic scale for which they will obtain demographic information on the potential impact area," CEQ Guidance, p. 14, following which they should analyze how environmental effects "are distributed within the affected community." Id.

The DEIS assumes, without discussion, that the relevant geographic scale for EJ analysis is the project area. Yet it is clear from the DEIS itself that the Preferred Alternative generates significant benefits and burdens, over a wider geographic area than this Corps-defined project

area. Low income people, e.g., senior citizens, in small communities downstream of the F-M Metro may very likely be disproportionately affected by future flood effects from the Preferred Alternative. The potential for disproportionate impact is real. While median household income reported in the 2000 Census for Cass County, North Dakota and Clay County, Minnesota, cited in the DEIS, Table 42, is \$38,147 and \$37,889, median household income from the same source for Norman County, Minnesota, not mentioned in the DEIS, is only \$32,535.

Since no effort has been made by the Corps to identify an appropriate geographic scale for EJ analysis, the issue has not been addressed in the way NEPA and the EO require. The DEIS must be supplemented to correct this deficiency.

4.5 Incomplete analysis of cumulative impacts

Cumulative impacts analysis is a central, and critical, component of NEPA, as recognized by the CEQ, in its guidance document "Considering Cumulative Effects" (January, 1997) ("CEQ CE Guidance"), online at http://ceq.hss.doe.gov/nepa/ccenepa/ccenepa.htm. Incomplete modeling of flood impacts downstream from the study area, for each of the final alternatives, and failure of the DEIS to consider anything beyond possible "taking" of real property, make a meaningful evaluation of cumulative effects on downstream communities impossible. Based on the incomplete information in the DEIS, there is no way for the City, or any other commenter for that matter, to evaluate the effect, over time, of an increased flood stage at or near Hendrum on, for example:

- (a) Impacts to agricultural land.
- (b) Damage to improvements, including residential and commercial properties.
- (c) Additional economic and psychological burden to local residents from increased flood fighting efforts.
- (d) Economic damage to residents, including reduced farm or business income.
- (e) Increased flood insurance expense.
- (f) Increased risk to persons and property resulting from flood-delayed response by law enforcement and other emergency responders, such as fire and ambulance.
- (g) Damage to public infrastructure, such as roads, bridges, culverts, levees and utilities, and correspondingly higher fiscal burdens to residents for maintenance, repair or replacement of such infrastructure.
- (h) Accelerated migration of rural residents, particularly younger people, to the safety of a Fargo Moorhead metropolitan area protected from floods, an island of privilege surrounded by smaller, unprotected communities. These communities, left with declining and aging populations, and vulnerable to flood, as much or more than they are today, may suffer irreversible decay. NEPA requires analysis of this socioeconomic degeneration. CEQ CE Guidance, Appendix A, Section 11,

"Social Impact Analysis." But the DEIS is silent on it and on this basis alone is inadequate and must be supplemented before it is presented to Corps' final decision maker.

As illustrations of this very real future, in plain language, see the Comments of the Mayors of the Cities of Perley and Hendrum, MN, in Appendix III

Cumulative effects are not limited to effects over time but also includes contemporaneous effects of other projects on the Preferred Alternative. CEQ CE Guidance, Section 2. Nowhere in its cumulative effects analysis, DEIS, Section 5.4, does the Corps consider the cumulative effects of the Preferred Alternative in conjunction with other recent or proposed diversion and levee projects in the RR Basin, whether of the Corps or other units of government. To illustrate: existing flood levees in the F-M Metro have the effect of raising the stage at Hendrum by "X" inches. The Preferred Alternative, as analyzed by the Corps, has, by itself, the effect of raising the stage at Hendrum by "Y" inches, and this "Y" figure is presented in the DEIS. But no data is provided for the cumulative effect of both the Preferred Alternative and the existing F-M Metro levees on flood stage at Hendrum, which would, in reality, equal "X" plus "Y."

Downstream communities, including the City, confront the same risks, and bear the same burdens, as are graphically (and pictorially) depicted for the F-M Metro. See Section 2.3.3 of the DEIS. These downstream communities and people are owed a detailed analysis and explanation of the impacts, including cumulative impacts listed above, under and each of the final alternatives. Without such analysis, the DEIS is inadequate and must be supplemented.

5. Conclusion

Red River flooding has, over the years, generated a wealth of information, project ideas and experience with functioning projects, including retention projects. This knowledge base is now shaping new policies and directions, focused to an increasing degree on flood flow reduction, through, among other solutions, various forms of upstream retention. The body of knowledge, critical to NEPA analysis of a project of this scale, is largely missing from the DEIS. The reader is offered instead a compendious display of technical data which masks the evident disinterest of the Corps in anything other than a diversion channel.

The absence of substantial and significant information regarding the environmental and other impacts of the Preferred Alternative likewise renders the DEIS inadequate on its face and requires that the Corps prepare an updated Supplemental DEIS to include all information on which the Corps based its decision to adopt the Preferred Alternative. The Corps' failure to include critical impact information in the DEIS violates NEPA and its own NEPA regulations, is arbitrary and capricious as well as unreasonable.

The last-minute publication by the Corps on August 3, 2010, six days before the comment deadline, of new flood information showing significantly higher downstream flood stages than anticipated in the DEIS itself, and unaccompanied by any updated interpretive analysis of impacts of such higher stages, requires that a reasonable extension of time be granted for review and comment on this supplemental information. Under the Corps NEPA regulations, 33 CFR Section 230.19(a), the District Commander will consider and act on requests for time extensions

based on, among other factors, the timeliness of distribution of material. We would request the extension of the comment period for 14 days from either (i) August 9, 2010; or (ii) such later date as the Corps considers submission of all information and analysis on downstream impacts to be complete.

The City reserves the right to provide additional comments at such time as any further "update" information is provided by the Corps to the public for comment.

Respectfully Submitted

LINDQUIST & VENNUM PLLP

Jonathan P. Scoll

Julie M. Duckstad

cc: The Hon. Curt Johannsen, Mayor, City of Hendrum, Minnesota

The Hon. Ann Manley, Mayor, City of Perley, Minnesota

Diane Ista, Manager, Wild Rice Watershed District

APPENDIX I

EXECUTIVE SUMMARIES OF TECHNICAL DOCUMENTS

1. Sandy Van Eck, "Waffle® Final Report Puts Benefits Near 800 Million," University of N. Dakota Energy & Environmental Research Center, "Edge", Newsletter, P. 1 (Jan.-Feb. 2009)

Waffle plan economic benefits for larger communities could exceed \$800 million

The Energy & Environmental Research Center (EERC) has announced the release of the final results and conclusions for the Waffle® Flood Mitigation Project, a multiyear effort to evaluate the technical, social, and economic feasibility of a basinwide, distributed water storage strategy. Temporarily storing springtime runoff in existing "depressions" within the basin, primarily ditches and low-lying fields bound by roads, would create a distributed network of channels and control structures for the temporary storage and controlled release of the retained water to reduce peak flood crests.

The results of the project indicate that the Waffle concept is a viable means of preventing damage from large springtime floods.

"This approach is particularly effective as a means of intercepting, controlling, and reducing overland runoff and, as such, offers an excellent augment to conventional flood mitigation efforts," said Senior Research Manager Beth Kurz.

"If the Waffle concept would have been in place in 1997, this would have augmented the dikes in place, and we would not have had a flood," said EERC Director Gerald Groenewold, who worked diligently in 1997 to initiate the Waffle project. "There are two types of dikes: those that have been breached and those that will be. The only way to provide real, economically viable security against flooding in this region is by augmenting the current dike systems."

According to the 523-page report, the estimated flood mitigation benefits of the Waffle approach for large communities up and down the Red River Valley are on the order of hundreds of millions of dollars. Some scenarios show that Waffle implementation would save more than \$800 million in flood damage over the next 50 years (this is a net benefit, meaning the costs of implementing the Waffle were already subtracted). The cost of flood-related damage from the 1997 flood, a modestly-sized flood compared to other historically documented floods, topped \$2 billion throughout the Red River Valley.

The economic analysis was conducted by agronomists at North Dakota State University in Fargo. The economic evaluation included enrollment costs, landowner payments, infrastructure modifications and installations, maintenance, and administrative overhead for landowners who would participate in the Waffle.

Using hydrologic and hydraulic modeling, the study also shows that, if implemented, the Waffle would reduce peak flooding by as much as 6.2 feet along the Red River during a 1997-type event.

"These results are absolutely tremendous," said Groenewold. "Given the history of severe and very frequent flooding in the region, a basinwide flood mitigation approach like this must be implemented to provide long-term security from floods to safeguard the economic vitality of the

region. The results show that coordinated, basinwide water management is viable and the Waffle is an excellent example of an option available right now for implementation," he said.

The Waffle approach would also provide unquantified benefits to areas with limited or no flood protection measures, such as agricultural lands, farmsteads, smaller communities, and rural infrastructure. It would also reduce soil erosion and increase soil moisture and groundwater recharge during periods of draught.

"A key factor that makes the Waffle approach such an effective flood mitigation measure is its ability to reduce the overall volume of floods. During field trials of the concept, because of evaporation and infiltration into the soil, we saw an average water loss of about 38% of the total storage volume. Rather than allowing that water to rapidly drain and overwhelm nearby streams and rivers, we were able to slow it down and let a portion evaporate and infiltrate," Kurz said. "To achieve all of the benefits the Waffle has to offer, less than 5 percent of the total Red River Basin land area would have to be used for temporary water storage during the spring."

Article online at http://www.undeerc.org/news/pdfs/EERCNewsletter2009JanuaryFebruary.pdf

2. E.A. DeVuyst, D.A. Bangsund, and F.L. Leistritz, "An economic analysis of the Waffle," 64, Journal of Soil and Water Conservation, 7 (JAN/FEB 2009)

The Red River of the North has a long history of flooding. A host of physical characteristics and man-made factors contribute to widespread flooding in the basin. Attempts to mitigate flood damage in the basin have been limited to using dikes/levees and waterways/diversions. Other flood mitigation strategies are insufficient by themselves to make meaningful reductions in flood damages, and spring flooding continues to cause damage. Another option to mitigating flood damages in the Red River basin is the concept of using hundreds or thousands of 'micro-basin' storage areas, called the Waffle, comprised of roads and adjacent lands throughout the region. This study employs net present value analysis to evaluate the economic feasibility of using the Waffle to reduce flood damages in the basin. Net benefits are positive in 130 of the 132 scenarios evaluated. Eighty-five percent of the scenarios resulted in over \$300 million in net benefits, and nearly 68% have net benefits in excess of \$400 million. The large positive net benefits from the Waffle suggest that policy makers should compare the cost-effectiveness of Waffle-type and structural flood protections. There are likely flood-prone areas that nonstructural flood protection alone or in combination with structural measures will be economically preferred to structural measures alone.

3. Charles L. Anderson, P.E., "Application of the Flow Reduction Strategy in the Bois de Sioux Watershed," Bois de Sioux Watershed District/Red River Basin Commission (June 4, 2010)

The Red River basin is developing a strategy that would reduce flood damages throughout the basin by reducing the flood volume enough to reduce peak flows along the entire length of the River by 20%. This strategy is known as the "Flow Reduction Strategy." Flow would be reduced primarily by storing flood water within the contributing watersheds. The amount of flow reduction required was estimated by the Basin Commission using a Mike 11 hydrodynamic model of the 1997 spring flood. The goal of the study was to identify, if possible, storage sites within the Bois de Sioux Watershed with the cumulative capacity to provide the Bois de Sioux's allocated portion of the required Red River flow reduction.

Storage sites were identified and their impact to the Red River modeled. The identified storage sites, including storage sites in South Dakota, are essentially able to meet Bois de Sioux Watershed's allocated share of the RRBC Flow Reduction Strategy requirements. The most significant difference is related to White Rock Discharges. The RRBC Mike 11 modeling effort assumed a 20% peak flow reduction at White Rock and a 20% reduction in volume. The achieved results at White Rock were a 13% reduction in peak flow and a 16% reduction in volume. The difference in volume reduction is that a large part of the flow reduction, 27,622 ac ft or approximately 30% of the storage allocated to the Traverse Basin, was in breakout flows from the Mustinka to the Rabbit, that occur in the area along the Mustinka River where the river comes down out of the beach ridge and enters the lake plain. Therefore, storage in the Mustinka (Traverse) Basin reduces flows on the Rabbit River.

The hydrographs from HMS for White Rock and the Rabbit River were used as input to the Mike 11 model, to model the affects of the Bois de Sioux Watershed's flow reduction at Breckenridge, Fargo, Halstad, and Grand Forks. The model was run with just the Bois de Sioux reduction and with proposed reductions for each tributary. Bois de Sioux Basin reductions result in 20.8% and 9.3% peak flow reduction on the Red River at Wahpeton and Fargo, respectively, in the model of the 1997 flood. Including reductions in the Mike 11 model from the other Red River Tributaries, the peak flow reduction is 20.9% and 21.8%, respectively, which exceeds the 20% flow reduction goal.

4. Charles L. Anderson, P.E., "Appendix 4—MIKE 11 Mainstem Model: 20 Percent Flow Reductions" Red River Basin Commission Progress Report to the Minnesota Legislature (January 15, 2010)

Flood damage reduction efforts have often focused on individual communities or interests and taken the form of a protection strategy. Commonly implemented protection measures include levees and diversion channels. While these measures are effective, can be implemented in a relatively short time frame and provide a necessary degree of flood damage reduction protection for urban areas and farmsteads, they do little to reduce the overall flood problem. In fact, they simply move excess flood water from one area of the basin to another. This forces basin planners to allocate protection on some basis of need. Determining in essence whether it is ok to protect large communities at the expense of small communities; small communities at the expense of farmsteads; farmsteads at the expense of farmland; and farmland at the expense of natural land (or vice versa). A comprehensive approach that considers flood flow reduction as the primary protection strategy complimented with the levees, floodway improvements, and diversions should be the preferred strategy.

The flow reduction strategy reduces flows on the mainstem by altering the hydrology of the contributing watersheds as a basin wide effort. The benefits of reduced flooding would be distributed along the entire length of the Red River, not just to targeted communities. Equally important, the benefits would extend far upstream into the tributary watersheds to the benefit of agriculture, farmsteads, roads & bridges & other infrastructure, water quality, flow augmentation and the natural environment. Implementing this strategy requires allocating the necessary flow reductions to each contributing watershed.

To assist in the flow reduction allocation process, the Red River Basin Commission developed a Red River Mainstem model. The model was based on Mike 11 software developed by DHI Water and Environment Inc, Denmark. It has been calibrated to simulate the 1997 spring flood. Physical features of the Red River and its flood plain are represented in the model as cross-

section data. Hydrologic inputs are the measured flows from the main tributaries and derived flows from the ungaged tributary areas. This model can now be used to simulate the mainstem response to reduced flows from tributary areas.

As a preliminary exercise, the tributary flows were reduced in the model to meet a peak flow reduction goal of 20% along the entire length of the Red River Mainstem. A factor in selecting 20% reduction as an initial goal was the effect it would have had at Grand Forks in 1997. That amount would have reduced the flood to a level that the (then existing) levees would have been expected to withstand. A 20% peak flow reduction would also reduce 100 year flood peaks along the mainstem to those that now correspond to about a 50 year flood. The modeled results are shown on the attached figures. The flow reduction required from each subwatershed is illustrated as the difference between the existing and altered tributary hydrographs.

Tributary reduction strategies were based on timing, by targeting waters contributing the most to mainstem peaks. Other factors considered include tributary damage reduction and the practicality of achieving specific flow reductions. Tributary peak flow reductions ranged from 0 to 50%. Peak flow reductions on strategic tributaries were about 35%. The combined flow reduction on all tributaries upstream from Emerson totaled 885,000 acre-feet, which is about 13% of the total 1997 flood volume at Emerson. A 35% peak flow reduction on tributaries would roughly correspond to reducing 100 year flood flows to those currently associated with 25 year floods.

The amount of constructed storage required to achieve a 20% peak flow, reduction on the mainstem would likely be greater than 885,000 acre-feet depending on the quality (efficiency) of storage provided. Flow reduction can be achieved by implementing a wide variety of measures including on-channel or off-channel impoundments; culvert sizing or waffle storage; wetland restoration or land use change. Gate controlled flood storage impoundments are the most efficient measure to reduce flood flows. Strategically located and precisely operated, they may have close to 100% efficiency in meeting the flow reduction goal. That is, the amount of constructed storage required to meet the 20% peak flow reduction goal would not be much greater than 885,000 acre-feet. On the other hand, flood specific factors such as variability in runoff will likely leave some constructed storage underutilized. Other measures, such as culvert sizing, provide only short term storage. Short term storage, in the right location, can reduce peak flows, but in the wrong location, it can actually increase peak flows. A mix of measures may be the best approach. The combined efficiency of the mix in meeting the tributary flood flow reduction goal would have to be determined locally.

The modified tributary hydrographs from the 1997 flow reduction model will serve as a starting point for an allocation process. The allocation goal should be to distribute to each watershed a fair share of the responsibility to manage its flood flows and the local benefits that can be realized by doing so. Each watershed would determine, through the use of its own models, what would be required to modify its outflow hydrograph to approximate the flow reduction shown. They would be encouraged to do so in ways that also meet local flood control goals, so the resulting reduced outflow hydrographs may vary more or less from that originally allocated and thus result in more or less benefits on the mainstem. Some watershed areas may be unwilling or unable to meet their allocation goal. Their share may then be reallocated to another area. The model would be used to determine the most effective ways to reallocate tributary flow reductions to achieve the mainstem goal.

Implementing basin wide flood flow reduction will require significant investments over a relatively long time frame. The cost of gate controlled flood storage has recently been about

\$1,000 per acre-foot. At that price, 1 million acre-feet of gate controlled storage would cost about \$1 billion. The most cost effective projects tend to get constructed first, so it is probable that the costs of later projects will be higher. This, along with inflation, will likely increase the final cost of implementation. Flood flow reduction projects can present great opportunities for multipurpose benefits such as water supply, water quality and other water related natural resources. Including these benefits will add to the overall costs. Those additional costs should not be allocated to flood damage reduction, but they do need to be considered in estimating the total amount of public (local, regional, state & federal) investment and benefit that may be desired. Although the time frame for implementation is highly dependent on the availability of funding, it is also influenced by public acceptance and resolve. Historic construction rates of about 10,000 acre-feet per year have not been particularly difficult to maintain. At that rate it would take 100 years to construct 1,000,000 acre-feet. Given a very high priority of support, it could possibly be accomplished within 25 years.

Unlike localized quick fix strategies, flood flow reduction will provide a foundation for long term resolution of the persistent and widespread flooding problems that plague the entire Red River Basin.

5. Charles Anderson and Al Kean, "Red River Basin Flood Damage Reduction Framework," Technical Paper No. 11, Red River Basin Flood Damage Reduction Work Group Technical and Scientific Advisory Committee (May 2004)

Flooding is a major problem within much of the Red River Basin. This problem is primarily related to geology, topography, weather, and land use. The Flood Damage Reduction Work Group in Minnesota seeks to provide Project Teams, Watershed Districts and others with science-based and consensus-based tools to enable more effective flood damage reduction within the basin.

A fundamental premise of this technical paper is that flood damage reduction (FDR) along the main stem of the Red River and the lower reaches of its major tributaries (glacial lakebed region) is substantially dependent on the types and locations of FDR and related measures implemented upstream. Flooding in the glacial lakebed region of the basin is substantially affected by runoff timing and volume from upstream areas. Runoff timing and volume are, in turn, substantially affected by the topography, soils, precipitation and land use within different regions of the basin, as well as by the types and locations of FDR and natural resource enhancement (NRE) measures that may be implemented. A basin-wide FDR framework will better enable a coordinated approach to integrate various FDR and associated NRE measures that are most effective for achieving the overall goals envisioned by the Red River Basin Mediation Agreement adopted in December 1998.

The goal of this framework is to implement various types of FDR measures individually, or in concert, at locations for which they are best suited to achieve FDR benefits locally and in the watershed, while also contributing to reduction of main stem flooding risk. This framework includes FDR measures that are also NRE measures, and promotes multi-purpose projects.

This technical paper presents critical concepts about runoff timing and volume in relation to flood peaks on the main stem of the Red River, and facts about variations in topography, soils, precipitation and evaporation within the Minnesota portion of the basin, as foundations for defining the expected peak flow reduction effects of implementing various FDR measures within different areas of the basin. Available geologic, topographic, meteorologic and historical flood

data, as well as computed runoff travel times, are used to illustrate these concepts and to define "early", "middle", and "late" runoff areas within the basin relative to the downstream limit of the Red River Basin in Minnesota at the U.S./Canada border.

A wide array of alternative FDR measures are identified, categorized and discussed, including pros, cons, and general recommendations for the best areas in which to implement these measures to optimize overall FDR benefits. A summary table is presented for the identified array of FDR measures with ratings of potential for peak flow reduction on the main stem when these measures are implemented in early, middle, or late runoff areas relative to the main stem.

This technical paper stresses the importance of using multiple types of FDR measures in a strategic manner to achieve local, watershed, and main stem flood damage reduction. It presents a framework for creating policies and trends that will help to achieve basin-wide FDR goals, as well as NRE goals outlined in the Red River Basin Mediation Agreement.

This technical paper includes a multi-measure example of the Red River Basin, utilizing various types of flood volume reduction and temporary storage measures to reduce local, watershed and main stem flood peaks, and to provide NRE benefits. For this example, it is estimated that the collective effects could reduce the 100-year peak flood flow at the U.S./Canada border by approximately 20%.

A spreadsheet method is provided to assess and document the expected peak flow reductions on the Red River main stem at the U.S./Canada border of flood volume reduction and temporary storage measures implemented upstream. This method uses ratios of "implemented storage" (at a project location) to "ideal storage" (effect on main stem peak flood volume and flow) for different types of flood volume reduction and temporary storage measures located in early, middle and late areas relative to the main stem. These effectiveness ratios are based on flood routing and other experience of Technical and Scientific Advisory Committee (TSAC) members, including TSAC Technical Paper No. 10, "Basin Strategy Hydrologic Analysis," and other previous studies. This method could be used to track progress toward achieving long-term FDR and NRE goals.

It is intended that this technical paper be used in conjunction with other TSAC technical papers and the "User's Guide to Natural Resource Efforts in the Red River Basin," published in 2001, to give decision makers additional tools to assess and achieve basin-wide FDR and NRE goals.

APPENDIX II

MINUTES OF RED RIVER WATERSHED MANAGEMENT BOARD, JULY 14, 2010

Project Coordinator Report

R. Harnack reported that he attended the Long Term Flood Solutions (LTFS) Advisory Committee meeting of the RRBC. Discussions occurred on the storage allocation strategy. Concern regarding disagreement on the benefits of the proposed storage and the requirements to achieve the 20-30% mainstem reduction was addressed. An engineering firm retained by the RRBC has been advocating the U.S. Army Corps of Engineers (USACE) perspective on storage, and not necessarily the adopted policy of the RRBC. The RRWMB representatives on various RRBC committees agreed to monitor this issue during the upcoming months.

Following discussion, the Board of Managers adopted a policy to support efforts to achieve a 20% flow reduction on the mainstem of the Red River of the North. <u>Motion</u> by Manager Money to adopt the aforementioned policy to support efforts to achieve a 20% flow reduction on the mainstem of the Red River of the North, <u>Seconded</u> by Manager Miller, <u>Carried</u>.

APPENDIX III

COMMENTS OF MAYORS OF CITIES OF PERLEY AND HENDRUM, MINNESOTA

CITY OF PERLEY PO BOX 437 PERLEY, MN 56574 PHONE 218-861-6170

July 23, 2010

Dear Concerned Citizens and Elected Officials

At the City of Perley Council meeting on July 13, 2020 the City fathers adopted the following Resolution to show our support against the F-M Diversion and the terrible impact that this proposal will have on the citizens of Perley and all surrounding communities. This is a small but sincere gesture that we all feel very strongly about. My colleagues feel that this process is futile but with the support of all of the Townships, Cities, and County Commissions I feel someone will have to listen to our cries for help.

Attached you will find a copy of our resolution and a letter of comment to the USACOE.

Sincerely

Ann Manley Mayor of Perley

Ann Manley

City of Perley Comment for EIS

I am the Mayor of a small town downstream of the proposed FM diversion. Perley is 23 miles north of Moorhead, located on HWY 75 and within one mile from the Red River of the North. Our community is approximately 100 people of which 50% of the population is retired. We have 17 children in our community. Our sign indicates that we have 124 but we have decreased in population steadily since 2000. Many of our residents where born here and plan to die here. It's the young that move away. The elderly don't want a buy-out, but they are so tired of fighting floods they can't imagine that the community of Fargo and Moorhead would delibertly cause us more problems. Their property values are decreasing and the chance of their children or grandchildren taking over their homes in the event of their death is never going to happen.

This is a farming community. Our whole community owns land or farms land in the Valley. Many work for or retired from the American Crystal Sugar Co. What will happen if the whole Valley becomes a greenway or if all are bought out and forced to leave? These residents are scared to death of the future. What will become of their church, our local businesses, schools, or their homes?

I have been the Mayor since 2004 and I have dealt with 3 major floods in this town that FEMA was a part of. I have seen 78 year old men sandbagging and manning pumps to protect our City. Women in their 80's cooking meals for the National Guard. Opening their homes so the Guard could clean up. Our major well is located west of our town and took a hit from ice. We were without sufficient water supply for over two months. We had students from over 100 miles away come to our assistance.

Our infrastructor is in poor shape. Just recently we began construction on our secondary lagoon. This is 1.3 million dollar project. Our community had to take out a loan of 366,000 for our share. This will run over a 40 year period. What happens if our community leaves or is bought out or worse, we just drown? Who will pay this loan off? We are already dropping in numbers.

I don't only worry about Perley, I worry about my sister communities of Hendrum, Georgetown, Kragnes, Halstad, Shelly, Gardner, Grandin, Argusville, Nielsville, Climax, Harwood, Oslo etc.

I know that I am very emotional about my community, It would be easier to just move, but my husband and I bought here to retire and die here. We joined the church and have our lots picked out to be buried on.

I know that we are scheduled for a Levee project. We appreciate the help but this doesn't even take into consideration the diversion impact on our community. We don't need more water to deal with.

I speak for my whole community when I say we are here to stay no matter what our outcome will be. I guess we are old and stubborn.

Respectfully submitted Ann Manley Mayor of Perley

City of Hendrum

A Small City with Big Dreams

PO Box 100 308 Main Street East Hendrum, MN 56550-0100 Telephone: 218-861-6210 Fax: 218-861-6210 e-mail: hendrum@loretel.net

August 4, 2010

To Whom It May Concern:

The leaders of Fargo/Moorhead have asked the Army Core of Engineers to develop a plan for flood protection to alleviate the cities Fargo/Moorhead from flooding from the Red River. The Army Core of Engineers suggests that the best solution for flood control for the cities of Fargo/Moorhead is to construct a diversion channel around the cities. The 36 mile long and ½ mile wide channel will redirect floodwaters, from the Red River, around Fargo/Moorhead on the North Dakota side of the cities and redeposit the water downstream from the cities of Fargo/Moorhead. The proposed channel will carry water at a maximum of 35,000cfs. This is 6,000cfs faster then the water flowed through Fargo/Moorhead during the record flood of 2009, which flowed through the city at 29,000cfs. This increase in speed of the water will cause additional water levels downstream from Fargo/Moorhead during a flood event; therefore, resulting in much more severe flooding for everyone who lives downstream from the cities of Fargo/Moorhead. As a result, throughout the following narrative, I will explain why the construction of the Fargo/Moorhead Diversion will be devastating to all people downstream from the proposed diversion, and will destroy their way of life, communities, and homes, as they now know them.

When the idea of a diversion was first pitched to the Fargo/Moorhead, the Army Core of Engineers had not yet studied downstream impacts; in fact, it wasn't even brought up until downstream people asked about it. Their first response was that they did not expect any negative downstream impacts because when the water from the diversion enters back into the Red River it would spread out rapidly; therefore, not resulting in any major downstream impacts. Many downstream citizens did not believe this idea and pushed for the downstream impacts to be studied.

Once the Core started studying downstream impacts, they found that there would be additional water levels downstream from the diversion. At the time, they claimed that they only studied as far north as Halstad, MN. Their initial findings were that there would be additional water levels, during a flood event on the Red River, for the communities of Georgetown, Perley, Hendrum, and Halstad. Even though the water levels varied for each community, the first over all consensus was that there would be about 2-4 inches additional water during a 100yr flood event for these communities to deal with. Overtime, these reports of additional water went to 6-8 inches, 10 inches, and then 12-17

inches of additional water that these communities would have to deal with during a flood event. Please refer to the Environmental Impact Statement and Feasibility Study for the FM Diversion for the exact numbers.

After much pressure from downstream citizens, the Army Core of Engineers released on August 3rd their finding for downstream communities north of Halstad. They have found that there will be additional levels as far north as Thompson, maybe further north as well, but claim that they have only studied the models this far. Every community further north of Halstad will see higher water levels on the Red River during a flood event. One example is that Climax, MN will receive an additional 25 inches during a major flood event. Unfortunately, the final results still have not been released which is unfair to all people north of Halstad who will not have a chance to comment on the findings before the August 9th deadline.

What do these additional water levels during a flood event mean to the communities and people downstream from the Fargo/Moorhead diversion? To begin with, these communities downstream from Fargo/Moorhead have experienced the same severe, record setting flooding that the FM Metro area has experienced since 1997 and have had to fight just as hard to save their communities and homes as Fargo/Moorhead has had to do. With the difference being that these small communities do not have the resources to fight a major flood like the FM area does. Our populations are getting older and no longer can continue to do what is necessary to fight a flood. For the people living in the small communities downstream from Fargo/Moorhead, they don't have the choice whether or not to volunteer on a daily basis; instead, they must fight the flood everyday or lose their homes or maybe even their lives. People work all hours around the clock filling and throwing sandbags in the rain, snow, and freezing temperatures. Throughout the three week fight of the 2009 flood, as Mayor, I went many nights without receiving sleep, if I did get some sleep, it was only for a few hours. This was true for many people. Citizens have to take time off from work, which they might not get compensated for, school gets interrupted, and businesses lose thousands in dollars because they basically have to shut down during the flood event. Not to mention the clean up afterwards. A community looks like a war zone after fighting a flood and takes several months to get it cleaned up. These floods are not only very hard on people physically, but also emotionally. Many people report suffering from depression after a major flood event; in fact after the flood of 1997, Hendrum lost a resident due to suicide. It gets to a point where people can't handle anymore and move away; thus, resulting in declining populations that eventually will close our schools, churches, businesses, and turn our towns into ghost towns.

These same small communities also do not have the finances to fight a major flood like the Fargo/Moorhead does. The cost of fighting a flood often surpasses or consumes much of the yearly budget for a small town. For example, the record setting 2009 flood cost Hendrum around \$200,000 and our yearly budget is only around \$330,000. Fortunately, we were re-reimbursed from FEMA for all but a few thousand; however, if that did not happen, it would take us years to pay this off!

In addition, many small communities downstream from Fargo/Moorhead, including farmsteads, simply do not have high enough dikes or levee systems to protect them from these additional water levels. The record setting flood of 2009 came within a few inches

of overtopping Hendrum's ring dike as well as many area farmsteads' ring dikes. Over the last year, Hendrum has worked with the Wild Rice Watershed District to improve our levee system. We have been approved to receive funding from the State of Minnesota, with local contributions as well, to aid us in raising our dike to a 100yr level plus 3 feet of freeboard. However, this increased protection will NOT be enough protection to protect us from the increased water levels that the proposed FM Diversion will dump on us. Hendrum could not have afforded to raise our dike if it wasn't for the state's assistance. If we need to raise it again will we be able to receive assistance from the state again? Eventually, the state of Minnesota is going to get tired of shelling out money for ring dikes and then what will we and other small communities as well as farmers do?

The additional water will also isolate our communities. Many towns will be cut off from the rest of the world for long periods of time. This means no one in and no one out. When I refer to the City of Hendrum as a community, I not only take it to account who lives inside the city limits but also who lives in the rural areas. The people in the rural areas will be cut off from emergency services. If they have a house fire or need medical assistance, these people will be on their own.

The severe flooding events that we have been experiencing also is very hard on the environment and wildlife in the region, and the additional water from the diversion will only make this much worse. Floods cause severe erosion problems in the Red River Valley destroying what some believe to be the most productive farm ground in the world The additional water, along with its increase speed, will only make this much worse destroying our farmer's way of life. As the minerals from our soil wash downstream, they deposit in Lake Winnipeg resulting in a huge algae problem, which is destroying the lake and its fish. However, the Army Core of Engineers does not take damage to farm ground into consideration when determining negative downstream impacts. During a major flood event; wildlife along the Red River, including 1,000 of deer, get displaced and end up dying. Again, this will all be made much worse with the additional water levels that the Army Core of Engineers is proposing that we will receive from the development of a diversion around Fargo/Moorhead.

Residents downstream from Fargo/Moorhead are not against Fargo/Moorhead receiving flood protection; however, we all need flood protection in the Red River Valley. We all are tired of fighting floods! Why can't we work together and find a solution that will benefit the entire Red River Valley and not one localized area? It is not neighborly nor is morally right to protect one area and make flooding that much worse for others. It should not matter what your population is to determine if one receives flood protection. Leaders in Fargo/Moorhead have said that people in small communities should be willing to be "collateral damage" to protect the greater good. I disagree! We all have a right to live in the Red River Valley and succeed economically. Besides that, Fargo/Moorhead cannot survive without its neighbors. Many people who live downstream from the FM area work in the Metro as well as do business there. The businesses in Fargo/Moorhead need us to survive just as much as we need them.

So what is my alternative solution for flood protection for the Fargo/Moorhead area other than building a diversion? For the same amount of money that it will cost to fund the diversion, I believe that one can protect the entire Red River Valley, not just one

localized area, through the construction of a series of retention, detention, and gated storage projects. One example of this is the Mike 11 model developed by Charlie Anderson of JOR Engineering. It consists of building a series of dry or wet dams throughout the entire Red River Valley on the tributaries feeding into the Red River. By holding the water at its source and releasing it though timed intervals, it is believed that the flow on the Red River can be reduced by 20% during a flood event. It has been suggested that if the Mike 11 model were in place during the 1997 flood, the reduced in flow on the Red River would have kept Grand Forks from flooding.

In conclusion, if the Fargo/Moorhead diversion is built, it will negatively change the landscape of the Red River Valley, as we know it forever. A project, that could have such negative effects on the Valley and the people living either upstream or downstream from the diversion, needs to be fully studied carefully with no stone unturned. However, the Army Core of Engineers is rushing this project with unprecedented speed; therefore, not allowing enough time for proper modeling and for comments to be made on the results. A rushed project is a poor product!

Flooding of the Red River negatively affects everyone in the Red River Valley in so many ways; as a result, a solution needs to be found that will benefit everyone in the Valley and not just for one localized are. Especially, when the solution for the one localized area results in more severe flooding for others either upstream or downstream. This is not morally correct nor is it neighborly!

Comments submitted by,

Curt H. Johannsen Hendrum Mayor

Maggied, Troy MVP

From: Snyder, Aaron M MVP

Sent: Monday, August 16, 2010 11:42 AM

To: Beauchamp, Francis MVP; Maggied, Troy MVP **Cc:** Evans, Craig O MVP; Sobiech, Jonathan J MVP

Subject: FW: Comments by US ACE as indicating potential "predetermination" of project alternative

Attachments: atta633c.jpg; atta633d.jpg

FYI - See below.

Aaron M. Snyder USACE Planner and Project Manager, PMP Chief, Project Management Branch (PM-B) 651-290-5489 612-518-0355 (Cell) Aaron.M.Snyder@usace.army.mil

----Original Message----

From: Jonathan P. Scoll [mailto:jscoll@lindquist.com]

Sent: Monday, August 09, 2010 6:02 PM

To: Snyder, Aaron M MVP

Cc: Howard Kenison; Julie M. Duckstad; Thomas F. Pursell; Diane Ista; Curt Johannsen

Subject: Comments by US ACE as indicating potential "predetermination" of project alternative

August 9, 2010

Aaron M. Snyder UASCE St Paul Division St. Paul, MN

Re: Draft EIS on Fargo Moorhead Flood Control Project Supplemental Comment of City of Hendrum

Dear Mr. Snyder:

A broadcast story on Minnesota Public Radio today, audio available online at http://minnesota.publicradio.org/display/web/2010/08/06/red-river-diversion/ http://minnesota.publicradio.org/display/web/2010/08/06/red-river-diversion/ quotes a Corps official, Project Manager Craig Evans, as saying:

that "valid concerns will be considered and included in the final project proposal. 'We feel like we have a pretty good plan, so I'm not expecting any drastic changes,' Evans said. 'But we do consider people's views, and if there are things we can improve in the project we're very open to doing that.'

Our client, the City of Hendrum, regards this statement as proof that the Corps has already pre-determined the project alternative, and that it is, and has been, unwilling to consider any feasibile alternatives, or their impacts, as required by NEPA.

Please add this e-mail, and the MPR news story referenced -- full text below -- to our comments submitted last Friday.

Sincerely

Jonathan P. Scoll

Jonathan P. Scoll Lindquist & Vennum PLLP Suite 4200 IDS Center 80 South 8th Street Minneapolis, MN 55402

612-371-3546

Full Text of MPR News Story:

Opposition to Red River diversion project growing

by Dan Gunderson
<http://minnesota.publicradio.org/about/people/mpr_people_display.php?aut_id=25> , Minnesota
Public Radio

August 9, 2010

Moorhead, Minn. - A \$1.4 billion Red River diversion plan to ease flooding in Fargo-Moorhead is on a fast track, with a schedule that is one of the most aggressive ever undertaken by the U.S. Army Corps of Engineers.

But there is growing opposition to the project, with critics lining up to submit comments to the Corps of Engineers by Monday's deadline.

"For a Corps project with a \$1.4 billion pricetag, it sure seems to us like it's moving pretty quick," said Kit Fischer, an outreach coordinator for the National Wildlife Federation. "A lot of us are sort of left scratching our heads, wondering 'how can this thing go through?'"

Fischer said the project should include wetland restoration and upstream water storage to reduce flows on the river.

The National Wildlife Federation also has concerns about how the diversion will affect downstream areas where flooding will worsen because of the diversion. Fischer said other than a 36-mile diversion channel, the Corps of Engineers did not adequately study options.

"There are solutions that will protect Fargo and Moorhead, but also protect downstream impacts and upstream impacts and have a positive impact on wildlife," he said.

Several national and regional environmental groups also are raising questions about the diversion project.

Larger view <http://images.publicradio.org/content/2010/07/08/20100708_riverdiversion2 33.jpg>

Map of diversion http://images.publicradio.org/content/2010/07/08/20100708_river-diversion2_33.jpg

Henry Van Offelen, a natural resource scientist for the Minnesota Center for Environmental Advocacy, said the Red River has one of the longest stretches without barriers to migrating fish anywhere in the country. He worries the diversion and gate structures built in the river will affect the movement of species like sturgeon and catfish.

But Van Offelen said the greatest concern with the project is that it simply moves the flooding problem downstream.

"We're trying to move water faster downstream to get rid of the problem," he said. "We need to start looking at mitigating the effects downstream, and the environmental effects also."

Van Offelen said increased flows downstream will worsen erosion and damage the river channel and adjacent farmland.

The likely downstream effects of the diversion are causing fear and anger for people living downstream. An analysis released just last week by the Corps of Engineers show the diversion will worsen flooding as far as 50 or 60 miles downstream.

Larger view <http://images.publicradio.org/content/2010/07/08/20100708_riverdiversion3 33.jpg>

Flood gates in Fargo-Moorhead http://images.publicradio.org/content/2010/07/08/20100708_river-diversion3_33.jpg

Flood levels downstream will increase by as little as a few inches to as much as two feet after the diversion is built.

Hendrum Mayor Curt Johannsen said the late release of that downstream data gives people little time to prepare comments.

The Corps rejected a request to extend the comment period.

Johannsen said a downstream impact working group he helped create is growing every day, as opposition to the Fargo-Moorhead diversion increases. The group has hired an attorney and an engineer.

A handful of counties and cities have passed resolutions to slow the project and allow more time for study. Johannsen said they want the diversion project to include the cost of mitigating increased flooding downstream.

"If mitigation isn't included with the pricetag of the project, who says we're going to get it?" Johannsen said. "If it's considered an add on, how many years down the road until we get it? The hazard mitigation needs to be included in the funding of the diversion, because I honestly feel if it isn't we won't see it."

Johannsen said he doubts the concerns raised in public comments about the project will derail the diversion from its fast track.

"I personally feel that if they see any comments that get in the way of building their diversion, they're going to throw them out. It's not fair to these people," he said. "They have a right to comment.

"The comment period should be extended until all downstream impacts have been studied, all the way to Lake Winnipeg," Johannsen said.

The Corps of Engineers is required by law to respond to any comments received by the Monday deadline.

Project Manager Craig Evans said valid concerns will be considered and included in the final project proposal.

"We feel like we have a pretty good plan, so I'm not expecting any drastic changes," Evans said. "But we do consider people's views, and if there are things we can improve in the project we're very open to doing that."

The project schedule calls for a final plan to be sent to Congress by the end of the year.

Downstream residents say they are considering all options to slow the project, including legal action.

NOTICES

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CITY OF HILLSBORO, NORTH DAKOTA RESOLUTION NO. 2010-0816

Commissioner Tibert introduced the following resolution and moved its adoption:

WHEREAS, the United States Army Corps of Engineers, (USACE) has proposed constructing flood water diversion channels around the cities of Fargo, North Dakota and Moorhead, Minnesota.

WHEREAS, the proposed diversion channel re-deposits the floodwater back into the Red River in northern Clay County of Minnesota or Northern Cass County of North Dakota.

WHEREAS, the City of Hillsboro is situated *directly* north and downstream from the point at which the proposed diversion channels reenter the Red River.

WHEREAS, the proposed flood diversion channels will change the flow regime of the Red River during flood events and is estimated to cause an adverse impact of as much as seventeen inches of additional crest elevation to the City of Halstad.

WHEREAS, increased flood crest of the magnitude envisioned by the USACE will adversely impact, roads, bridges, utilities, farms, personal property, commerce and public safety to those downstream of the proposed diversion.

WHEREAS, a change in flow regime that results in adverse impacts to the residents of the City of Hillsboro and others situated downstream from the proposed diversion projects is not acceptable.

NOW THEREFORE, the Hillsboro City Commission Members do hereby go on record of opposing the Fargo/Moorhead diversion project as it is now proposed.

Commissioner Sather seconded the motion. On roll call vote, the following Commissioners voted yes: Tibert, Stock, Kaufman, Sather and Forseth. None voted no. Motion carried.

Adopted this 16th Day of August, 2010/

Mark Forseth, Commission President

madionessa. Apal

Attest: Lesley Connelly, City Auditor

NOM TIPERONATION PRESENTATION CONTREPOND FOR A SUPERIOR BUT ON TOWARD AND SUPERIOR SUPERIORS.

City of Horace

Box 99 Horace, North Dakota 58047 **Phone: 701-282-9727**

July 26, 2010

Mr. Aaron Snyder USACE Planner and Project Manager 180 East 5th Street, Suite 700 St. Paul, MN 55101

RE: DRAFT FEASIBILITY REPORT AND ENVIRONMENTAL IMPACT STATEMENT

[Fargo-Moorhead Metropolitan Area Flood Risk Management]

Dear Project Manager Snyder:

I am writing as the Mayor of Horace, Cass County, North Dakota. A copy of this letter is being sent to the cities of Fargo and Moorhead, as well as the counties of Cass and Clay.

We have received the Draft Feasibility Report and Environmental Impact Statement which identifies the Locally Preferred Plan as being the North Dakota 35K diversion as being the "tentatively selected plan." The City of Horace is not a sponsor, nor was it invited to participate as a voting member in the local group that apparently made such suggestion.

The City of Horace has passed a resolution of vigorous opposition to the North Dakota 35K diversion as it is presently proposed to exist within, and adjacent to, our community.

The actual location of the diversion – in any portion of its presently identified route within the boundaries of the City of Horace, and also, its extra-territorial zoning area(s) – is antagonistic to the long-term interests of the City of Horace, its residents, and area landowners.

The proposed route of any North Dakota diversion [a "36 mile long diversion channel that would start approximately four miles south of the confluence of the Red and Wild Rice Rivers and would re-enter the Red River north of the confluence of the Red and Sheyenne Rivers"; ES-9] should be located further south so as to allow proper development of the entire area, not just the area directly south of Fargo. The City of Horace is also convinced that siting any new North Dakota diversion parallel to the existing Sheyenne River Diversion ["The LPP would incorporate the existing Horace to West Fargo Sheyenne River diversion channel"; ES-9] is an unacceptable siting of the proposed diversion, and may well constitute an unacceptable "taking" of an existing project. The diversion, if built in North Dakota, must be located further west for its entire route so as to eliminate the stifling of growth in Horace and West Fargo, North Dakota.

The City of Horace is located upon the higher ground in this area, and has already taken steps for its flood protection, in conjunction with the City of West Fargo, by participation in the existing diversion of the Sheyenne River. While the funding of the local share may not be of immediate concern to the Army Corp of Engineers, please be advised that the City of Horace will likely oppose any attempt to use special assessment funding for any portion of this project, particularly when an existing project already paid for by special assessments is attempted to be enveloped.

The City of Horace is opposed to the North Dakota East 35,000 cfs diversion channel [with its current siting as a "36 mile long diversion channel that would start approximately four miles south of the confluence of the Red and Wild Rice Rivers and would re-enter the Red River north of the confluence of the Red and Sheyenne Rivers"] and its associated features described in the DRAFT FEASIBILITY REPORT AND ENVIRONMENTAL IMPACT STATEMENT [Fargo-Moorhead Metropolitan Area Flood Risk Management]. Such a siting will have many adverse effects upon the City of Horace, its residents and landowners, and also, many adverse effects upon our neighbors to the north, West Fargo, North Dakota.

We look forward to possible resolution of these concerns, but absent a change in the siting of the diversion channel further west and south, the City of Horace will oppose this project.

If you have any questions concerning this matter, please feel free to contact me at any time.

Very truly yours,

Mayor Shane Walock

JTG:j

cc: Fargo

Moorhead

Cass County, ND

Clay County, MN

July 20, 2010

Mr. Aaron Snyder Corps of Engineers Planner and Project Manager U.S. Army Corps of Engineers 190 East Fifth Street, Suite.401 St. Paul. MN 55101-1638

RE: Minnesota Flood Diversion Impact of Buffalo Aquifer

Dear Mr. Snyder:

The draft Feasibility Report and Environmental Impact Statement (EIS) for the proposed Fargo, N.D.-Moorhead, Minn., Metropolitan Area Flood Risk Management Project was released in early June 2010. The 45-day comment period is in effect until July 26, 2010, according to the U.S. Army Corp of Engineers' Web site. In this letter, we are providing official comments regarding concerns about the alignment of the Minnesota diversion option in relation to the Buffalo Aquifer (Aquifer) located in Clay County, Minnesota.

Currently, the North Dakota 35k (ND35k) plan is the locally preferred plan (LPP), while the Minnesota 35k (MN35k) plan is the federally comparable plan (FCP). Moorhead Public Service (MPS) views the ND35k as a better option for ensuring that the Aquifer remains protected. The Aquifer serves approximately 70 percent of the population in Clay County, including the city of Moorhead and the city of Dilworth. The Aquifer is a long-term drought supply for the area and is too valuable of a resource to risk damaging.

The Minnesota flood diversion option may potentially have an impact on static water levels in the Aquifer. This flood diversion option runs parallel with the Aquifer for approximately ten miles. The current proposed alignment for the diversion would be within one-half mile of the estimated west boundary of the Aquifer. In the flood diversion option, the bottom of the diversion ditch could be as deep as 30 feet below the existing land surface. MPS has concerns regarding the potential impacts. At a minimum, there should be 20 feet of solid clay vertical separation between the bottom of the diversion ditch and any sand lenses below it that may be connected to the Aquifer. MPS would defer to local hydrogeologists as to the minimum horizontal separation that would act as a barrier between the diversion and the sands within the Aquifer.

500 Center Avenue P.O. Box 779 Moorhead, MN 56561-0779

> phone: 218.299.5400 fax: 218.299.5193

necting our community

www.mpsutility.com www.gomoorhead.com

July 2011

The areal extent and boundary of the Aquifer were studied by the U. S. Geological Survey (USGS) during the late 1970s. MPS and other local units of government have used the boundaries and other characteristics of the Aquifer established during this study to develop wellhead protection measures to minimize the impacts of land use above the Aquifer. However, sand and silt lenses do occur outside the boundary of the Aquifer, which were established during the USGS study. These sand lenses may be hydraulically connected to the Aquifer. If the excavation for the diversion channel intersects these sand lenses, there is a real chance that the sand lenses will drain water from the Aquifer into the diversion channel. This would remove water stored in the Aquifer and lower static water levels.

The City of Dilworth has searched for additional sources of water. They had two test wells drilled in the southwest corner of Section 31 of Moland Township. These test wells were drilled less than 2,000 feet from the west boundary of the Aquifer. Sand was encountered at 34 feet in one of the holes and at 45 feet in the other hole. This data indicates the potential for a sand lense that may be connected to the Aquifer. The Moorhead wells located along Highway 10 have sand starting at 36 feet.

MPS began pumping from the Aquifer in 1948. Static water levels in the Aquifer steadily declined in the area of the Moorhead wells. In 1960, Moorhead began using water from the Red River of the North (Red River) as its primary water supply. The Aquifer's static levels began to recover as the result of the reduced pumping from the Aquifer. As Moorhead grew and water demand increased, the static levels in the Aquifer began to decline again. During the drought of 1988-1989, Moorhead decided it must look for additional water supply because the Red River was not a reliable supply during long-term droughts.

MPS began the design of a new water treatment plant in 1990 and made a large capital investment to maximize the use of the Red River. The new facility was completed in early 1995. The new water treatment plant is capable of utilizing a larger percentage of water from the Red River to provide high-quality drinking water for our customers. Moorhead's water supply plan reserved the Aquifer as a resource to be used in the event of contamination of the Red River and for use as water supply during a long-term drought.

Historically, Moorhead used 40 percent of groundwater for its water supply. Since 1995, Moorhead has reduced the percentage of its water supply to 15 percent groundwater. The new water treatment plant's technology allowed Moorhead to reduce its dependence on groundwater by 60 percent. The static water levels in the Aquifer have risen by 15 feet since construction of the new water treatment plant. The static levels in the Aquifer have returned to 1950s level. Since 1995, Moorhead has reduced withdrawals from the Aquifer by a total of 5 billion gallons. This is equivalent to almost two-thirds of the water that Moorhead will need to supplement the Red River during a 1930s-type drought. MPS is concerned that a 30-foot deep diversion adjacent to the Aquifer could deplete 15 feet of water, which would be most, if not all, of the water added during the past 16 years.

Moorhead has invested millions of dollars to protect and reserve the Aquifer as a long-term drought water supply. Moorhead cannot afford to risk lowering the Aquifer and reducing the volume of water in storage by constructing a 30-foot deep diversion in close confluence with such an important water supply. It will take many months to study the potential impacts that a diversion channel would have on the water levels in the Aquifer. This study should take place before a determination is made that the Minnesota flood diversion option is the one that should be used for flood control. Aquifer water users should not be required to risk their water supply.

In closing, it is our desire that the ND35k plan remains the LPP and is the project that is selected for flood control in the Fargo-Moorhead area, as well as ensuring that the Buffalo Aquifer is not damaged by the diversion channel.

If you have any questions, please feel free to contact MPS' Water Division Manager Troy Hall at 218.299.5471 or e-mail thall@mpsutility.com. Thank you.

Sincerely/

Kenneth J. Norman, President

Moorhead Public Service Commission

Kelli Poehls, Commissioner

Moorhead Public Service Commission

Les Bakke, Secretary

Moorhead Public Service Commission

Corinne Stefanson, Commissioner

Moorhead Public Service Commission

Robert Swenson, Commissioner

Moorhead Public Service Commission

F:\A A A\Troy\US Corps of Engineers Diversion Comment Letter - 7 10.doc



City of Pembina 152 W. Rolette St. Pembina, ND 58271 pcityofc2@invisimax.com 701-825-6819

City of Pembina

August 12, 2010

Aaron Snyder St Paul, Corps of Engineers 180 Fifth St E, Suite 700 St Paul, MN 55101-1678

Dear Mr. Snyder,

The Pembina City Council respectfully requests that you reconsider our resolution to extend the comment period for the Draft Feasibility Report and Environmental Impact Statement for the Fargo-Moorhead Metropolitan Area Flood Risk Management Report.

At this point in time we are uncertain how the proposed diversion will impact our community and surrounding communities, therefore, please reconsider our request for an extension to this time frame.

On behalf of the Pembina City Council

Sincerely,

Nancy Thompson
Pembina City Auditor/Administrator

Enc

http://cityofpembina.org

PEMBINA CITY COUNCIL

RESOLUTION NO. 2010-3

Mayor Hillukka introduced the following resolution and moved its adoption:

WHEREAS, the United States Army Corps of Engineers, (USACE) has determined that impacts are expected north of Grand Forks, ND as a result of construction of the proposed Fargo-Moorhead diversion.

WHEREAS, The USACE has just recently released this information.

WHEREAS, The USACE has not indicated to citizens north of Grand Forks, ND the magnitude of the expected impacts.

WHEREAS, The citizens situated north of Grand Forks, ND are unable to determine their situation as a result of the FM diversion due to lack of information.

WHEREAS, The USACE has set August 9, 2010 as the deadline for public comment on the proposed FM diversion.

WHEREAS, An August 9, 2010 deadline does not provide sufficient time for residents situated north of Grand Forks, ND to determine how the impacts of the proposed FM diversion will affect them and submit comment.

NOW THEREFORE, To preserve the interests of Pembina City and its people, the Pembina City Council do hereby go on record of requesting the USACE to extend the time from of public comment in regard to the proposed FM diversion to accommodate the needs and rights of citizens situated north of Grand Forks, ND

The motion for adoption of the foregoing resolution was made by Feldman, and 2nd by Dorion all present voted aye, nays: none, absent and not voting Wilmer and Burton, whereupon said resolution was declared duly passed and adopted.

Adopted this 10th day of Avgust/2010

Warren Hillukka, Mayor

City of Pembina

Nancy Thompsoh, City Auditor/Adminstrator

City of Pembina

CITY OF PERLEY PO BOX 437 PERLEY, MN 56574 PHONE 218-861-6170

July 23, 2010

Dear Concerned Citizens and Elected Officials

At the City of Perley Council meeting on July 13, 2020 the City fathers adopted the following Resolution to show our support against the F-M Diversion and the terrible impact that this proposal will have on the citizens of Perley and all surrounding communities. This is a small but sincere gesture that we all feel very strongly about. My colleagues feel that this process is futile but with the support of all of the Townships, Cities, and County Commissions I feel someone will have to listen to our cries for help.

Attached you will find a copy of our resolution and a letter of comment to the USACOE.

Sincerely

Ann Manley

Mayor of Perley

Ann Manley

City of Perley Comment for EIS

I am the Mayor of a small town downstream of the proposed FM diversion. Perley is 23 miles north of Moorhead, located on HWY 75 and within one mile from the Red River of the North. Our community is approximately 100 people of which 50% of the population is retired. We have 17 children in our community. Our sign indicates that we have 124 but we have decreased in population steadily since 2000. Many of our residents where born here and plan to die here. It's the young that move away. The elderly don't want a buy-out, but they are so tired of fighting floods they can't imagine that the community of Fargo and Moorhead would delibertly cause us more problems. Their property values are decreasing and the chance of their children or grandchildren taking over their homes in the event of their death is never going to happen.

This is a farming community. Our whole community owns land or farms land in the Valley. Many work for or retired from the American Crystal Sugar Co. What will happen if the whole Valley becomes a greenway or if all are bought out and forced to leave? These residents are scared to death of the future. What will become of their church, our local businesses, schools, or their homes?

I have been the Mayor since 2004 and I have dealt with 3 major floods in this town that FEMA was a part of. I have seen 78 year old men sandbagging and manning pumps to protect our City. Women in their 80's cooking meals for the National Guard. Opening their homes so the Guard could clean up. Our major well is located west of our town and took a hit from ice. We were without sufficient water supply for over two months. We had students from over 100 miles away come to our assistance.

Our infrastructor is in poor shape. Just recently we began construction on our secondary lagoon. This is 1.3 million dollar project. Our community had to take out a loan of 366,000 for our share. This will run over a 40 year period. What happens if our community leaves or is bought out or worse, we just drown? Who will pay this loan off? We are already dropping in numbers.

I don't only worry about Perley, I worry about my sister communities of Hendrum, Georgetown, Kragnes, Halstad, Shelly, Gardner, Grandin, Argusville, Nielsville, Climax, Harwood, Oslo etc.

I know that I am very emotional about my community, It would be easier to just move, but my husband and I bought here to retire and die here. We joined the church and have our lots picked out to be buried on.

I know that we are scheduled for a Levee project. We appreciate the help but this doesn't even take into consideration the diversion impact on our community. We don't need more water to deal with.

I speak for my whole community when I say we are here to stay no matter what our outcome will be. I guess we are seasoned and maybe a little too stubborn.

Respectfully submitted

Ann Manley

Mayor of Perley

USACE-MVP-0000088009
DEIS Public and Private Comments Received

Final Feasibility Report and Environmental Impact Statement Fargo-Moorhead Metro Feasibility
July 2011

City of Perley Resolution of July 13, 2010

Mayor Ann Manley introduced the following resolution and moved it's adoption:

WHEREAS, The United States Army Corps of Engineers, (USACE) has proposed constructing flood water diversion channels around the Cities of Fargo, ND and Moorhead, MN.

WHEREAS, The proposed diversion channel redeposits the floodwater back into the Red River in Northern Clay County of MN or Northern Cass County of ND.

WHEREAS, The City of Perley is situated directly north and downstream from the point at which the proposed diversion channels reenter the Red River.

WHEREAS, The proposed flood diversion channels will change the flow regime of the Red River during flood events and is estimated to cause an adverse impact of as much as seventeen inches of additional crest elevation to western Norman County, and specifically the City of Perley.

WHEREAS, Increased flood crest of this magnitude envisioned by the USACE will adversely impact roads, bridges, utilities, farms, personal property, commerce, public safety, and personal well being to those downstream of the proposed diversion.

WHEREAS, A change in flow regime that results in adverse impact to the City of Perley and its residents and or others situated downstream from the proposed diversion projects is not acceptable.

NOW THEREFORE, To preserve the interests of the City of Perley and its people, the City Council of Perely, MN do hereby go on record of opposing the FM diversion project as it is now proposed.

The motion for adoption of the forgoing resolution was duly seconded by Council and upon wote being taken thereon,	cilman
Evoted in favor thereof: and voted against the same. Whereupon said	
resolution was declared duly passed and adopted	
Adopted this day of 2010	
By Barbara J. Newlows Barb Newburgh, City Clerk	
Barb Newburgh, City Clerk	



LEE TOWNSHIP BOARD NORMAN COUNTY PERLEY, MN

RESOLUTION NO. 124

Supervisor Marvis Thompson introduced the following resolution and moved its adoption:

WHEREAS, The United States Army Corps of Engineers, (USACE) has proposed constructing flood water diversion channels around the cities of Fargo, ND and Moorhead, MN. The proposed diversion channel redeposits the floodwater back into the Red River in northern Clay County of MN or Northern Cass County of ND.

WHEREAS, Norman County is situated directly north and downstream from the point at which the proposed diversion channels reenter the Red River. The proposed flood diversion channels will change the flow regime of the Red River during flood events and is estimated to cause an adverse impact of as much as seventeen inches of additional crest elevation to western Norman County. Increase flood crest of the magnitude envisioned by the USACE will adversely impact roads, bridges, utilities, farms, personal property, commerce, public safety, and personal well being to those downstream of the proposed diversion.

WHEREAS, a change in flow regime that results in adverse impacts to Norman County and its residents and or others situated downstream from the proposed diversion projects is not acceptable.

THEREFORE, to preserve the interest of Norman County and its people, the Lee Township Board does hereby go on record of opposing the FM diversion project as it is now proposed.

The motion for adoption of the forgoing resolution was duly seconded by Supervisor Paul Houglum and upon vote being taken thereon, unanimous voted in favor thereof; and none voted against the same; whereupon said resolution was declared duly passed and adopted.

Adopted this 20th day of July, 2010

Paul Houglum, Chair

Merle W. Gullekson Clark

July 21, 2010

Mary Township

Resolution

Mary Township is located in Norman County, MN, from approximately 5 to 11 miles east of Perley, MN. The Wild Rice River flows through the middle of this township; the South Branch of the Wild Rice River also meets the main stem in the center of this township.

The Wild Rice River enters the Red River of the North 2 miles north of Hendrum, MN. If the construction of the Fargo Diversion does indeed add another 17 inches more to the Red River in that particular area, as the USACE has indicated to the public, the potential impact would be terrible. More water would be held back onto the Wild Rice River for a longer period of time, flooding more homes, flooding more roads in the township. This would, no doubt, place an increased burden on the residents and other taxpayers in Mary Township.

NORMAN COUNTY - MARY TOWNSHIP

RESOLUTION NO.
Supervisor Blair Tuffe introduced the Following resolution and moved it's adoption:
WHEREAS, The United States Army Corps of Engineers, (USACE) has proposed constructing flood water diversion channels around the cities of Fargo, ND, and Moorhead, MN.
WHEREAS, The proposed diversion channel redeposits the floodwater back into the Red River in northern Clay County of MN or Northern Cass County of ND.
WHEREAS, Mary Township is situated on the Wild Rice River upstream of the Red River and downstream from the point at which the proposed diversion channels reenter the Red River.
WHEREAS, The proposed flood diversion channels will change the flow regime of the Red River during flood events and is estimated to cause an adverse impact of as much as seventeen inches of additional crest elevation to western Norman County of MN.
WHEREAS, Increased flood crest of the magnitude envisioned by the USACE will adversely impact roads, bridges, utilities, farms, personal property, commerce, public safety, and personal well-being to those downstream of the proposed diversion.
WHEREAS, A change in flow regime that results in adverse impacts to Mary Township of Norman County in MN and its residents and or others situated downstream from the proposed diversion project is not acceptable.
NOW THEREFORE, To preserve the interests of Mary Township and it's people, the Mary Township Supervisors do hereby go on record of opposing the FM diversion project as it is now proposed.
The motion for adoption of the foregoing resolution was duly seconded by Supervisor Lewis Audulu and upon vote being taken thereon,
Adopted this 2/5 day of July, 2010. By Richard Ambuehl, Chairman Roger Myers, Supervisor Attest Level Course Gerald Arends, Clerk Wayne Lee, Treasurer Adopted this 2/5 day of July, 2010. Blair Tufte, Supervisor Attest Gerald Arends, Clerk Wayne Lee, Treasurer

NORMAN COUNTY - MARY TOWNSHIP

RESOLUTION NO. _____



Supervisor Blair Tuffe introduced the Following resolution and moved it	's adoption:
WHEREAS, The United States Army Corps of Engineers, (USACE) has proposed of flood water diversion channels around the cities of Fargo, ND, and Moorhead, MN.	onstructing
WHEREAS, The proposed diversion channel redeposits the floodwater back into the in northern Clay County of MN or Northern Cass County of ND.	e Red River
WHEREAS, Mary Township is situated on the Wild Rice River upstream of the Redownstream from the point at which the proposed diversion channels reenter the Re	d River and d River.
WHEREAS, The proposed flood diversion channels will change the flow regime of River during flood events and is estimated to cause an adverse impact of as much as inches of additional crest elevation to western Norman County of MN.	the Red seventeen
WHEREAS, Increased flood crest of the magnitude envisioned by the USACE will impact roads, bridges, utilities, farms, personal property, commerce, public safety, well-being to those downstream of the proposed diversion.	adversely and personal
WHEREAS, A change in flow regime that results in adverse impacts to Mary Town Norman County in MN and its residents and or others situated downstream from the diversion project is not acceptable.	iship of e proposed
NOW THEREFORE, To preserve the interests of Mary Township and it's people, township Supervisors do hereby go on record of opposing the FM diversion project proposed.	the Mary as it is now
The motion for adoption of the foregoing resolution was duly seconded by Supervi Lichard Amark, and upon vote being taken thereon,	ed in favor
Adopted this 2/5t day of July, 2010. By Ruhan Gull Blain Blain Richard Ambuehl, Chairman Roger Myers, Supervisor Roger Myers Blair Tufte, Supervisor Attest Gerald Arends, Clerk Wayne Lee, Treasurer	

July 21, 2010

Mary Township

Resolution



Mary Township is located in Norman County, MN, from approximately 5 to 11 miles east of Perley, MN. The Wild Rice River flows through the middle of this township; the South Branch of the Wild Rice River also meets the main stem in the center of this township.

The Wild Rice River enters the Red River of the North 2 miles north of Hendrum, MN. If the construction of the Fargo Diversion does indeed add another 17 inches more to the Red River in that particular area, as the USACE has indicated to the public, the potential impact would be terrible. More water would be held back onto the Wild Rice River for a longer period of time, flooding more homes, flooding more roads in the township. This would, no doubt, place an increased burden on the residents and other taxpayers in Mary Township.

Aug 3, 2010

Aaron M. Snyder **USACE** Planner and Project Manager 180 East 5th Street, Suite 700 St. Paul, MN 55101

Dear Mr. Snyder,

RE: Fargo/Moorhead Metropolitan Flood Risk Management Project Draft Feasibility Report and Environmental Impact Statement

I am a supervisor in Warren Township in Cass County, North Dakota. The Warren Township Board of Supervisors would support the proposed diversion project if the project can provide flood control and drainage benefits to Warren Township. However, there are many features of the project that could impact Warren Township that we would like the USACE to address:

- USACE should consider the previously proposed western alignment alternative of the diversion in Warren Township. The western alignment could easily intercept Sheyenne River breakout water flowing north in Drain 21C in Section 23 of Warren Township. This alignment could improve drainage in the township during a summer storm and would minimize diagonal crossings of property and roads that could make future section line bridge crossings expensive and impractical. This western alignment would have less disruption on township roads, especially the road on the border between Warren and Stanley Townships.
- USACE should investigate using Cass County Drain 35 in Normanna Township as a way to collect Sheyenne River breakout water in Drain 14 and deliver that water into the diversion in Section 2 of Normanna Township. A diversion crossing of the Sheyenne in Sec 2 of Normanna Township could pick up Sheyenne breakouts from the south and protect Cass County Hwy 16 which is overtopped and damaged during most Sheyenne River floods.
- Whichever channel alignment is used the channel design should allow for Sheyenne River breakout water that is carried north in Warren Township in Drain 21C and Drain 50 to enter the diversion at the furthest south location possible to eliminate the current situation of the breakout water topping roads all the way north to Interstate 94 on the west side of the river and pooling south of the Drain 50 inlet on the east side of the river.
- USACE should develop a process to regularly communicate with and get input from township officials regarding diversion alignment, road crossings and road realignments, and drainage inlet capacities and location.

Sincerely,

∄ary Jącnim Warren Township Supervisor



Cass County Joint Water Resource District

August 4, 2010

Thomas Fischer Chairman Fargo, North Dakota

Mark Brodshaug Manager Fargo, North Dakota

Rodger Olson Manager Leonard, North Dakota

Michael Buringrud Manager Gardner, North Dakota

Raymond Wolfer Manager Argusville, North Dakota Aaron M. Snyder USACE Planner and Project Manager 180 East 5th Street, Suite 700 St. Paul, MN 55101

Dear Mr. Snyder:

RE: Fargo-Moorhead Metropolitan Flood Risk Management Project Proposed channel realignment

The Cass County Joint Water Resource District supports the review of the concerns set out in the enclosed correspondence. Thank you.

Thank you.

Sincerely,

CASS COUNTY JOINT WATER RESOURCE DISTRICT

Thomas L. Fischer

Chairman

Carol Harbeke Lewis Secretary-Treasurer

1201 Main Avenue West West Fargo, ND 58078-1301

> 701-298-2381 FAX 701-298-2397 wrd@co.cass.nd.us casscountygov.com



Greetings:

August 2, 2010

(See attached list of recipients.)

RE: Proposed realignment of the Red River Diversion

Rush River Water Resource District

Raymond Wolfer Manager Argusville, North Dakota

William A. Hejl Manager Amenia, North Dakota

Keith Monson Manager Harwood, North Dakota

The Rush River Water Resource District proposes a realignment of the Red River Diversion. The objective of the proposed realignment is to maintain Drain #13 as a legal drain by moving the route 1/2 or 1 mile east. The benefits of this change are as follows:

- 1) The drainage area of the Red River Diversion would be reduced by approximately 29 square miles:
- 2) The number of inlets into the project would be reduced by about 4 large inlets and 6 field inlets;
- 3) The cost of the project would be reduced approximately \$30 million, as indicated by the Corps of Engineers;
- 4) No negative effect on families, as there are no families living in the proposed alignment area; and
- 5) The change would increase the volume of water by installing a bridge on I-29 for the diversion. In addition, this change would have a positive effect on downstream elevations on the Red River at Georgetown.

Drain #13 was installed over 100 years ago to provide drainage for local farmers. Special assessments were used to build and maintain the drain. The crosshatched area on the enclosed map represents the drainage area for Drain #13. The map also contains the current diversion proposal and the proposed change explained above.

Also enclosed is a copy of a petition signed by residents and landowners in the affected Drain #13 drainage area. The 50 signatures on this petition represent 95% of the residents living in the drainage area of Drain #13. These residents, along with the affected landowners, are in support of maintaining Drain #13 as a legal drain and excluding it from the Red River Diversion.

The proposed realignment was approved by the Rush River Water Resource District Board at its July 17, 2010, meeting. The Water Resource District would appreciate your review of the proposed realignment and requests that you support the implementation of this plan.

Carol Harbeke Lewis Secretary-Treasurer

1201 Main Avenue West West Fargo, ND 58078-1301

701-298-2381 FAX 701-298-2397 wrd@casscountynd.gov www.casscountynd.gov

If you have any questions, please feel free to contact us. Thank you.

Sincerely,

RUSH RIVER WATER RESOURCE DISTRICT

Raymond Wolfer Chairman

Enclosures (2)

List of recipients:

Metro Flood Study Work Group:

- Tim Mahoney
- Brad Wimmer
- Dan Hunt
- Nancy Otto
- Diane Wray-Williams
- Scott Wagner
- Darrell Vanyo
- Kevin Campbell
- Gerald VanAmburg
- Grant Weyland
- Tom Fischer

Cass County Commissioners:

- Robyn Sorum
- Darrell Vanyo
- Vern Bennett
- Ken Pawluk
- Scott Wagner

Mark Bittner, Fargo City Engineer
April Walker, Fargo Senior Engineer
Bob Zimmerman, Moorhead City Engineer
Craig Evans, US Army Corps of Engineers Project Manager
Bonnie Johnson, Cass County Administrator
Lance Yohe, Red River Basin Commission Executive Director
Chad Olson, Mayor of Dilworth
Jim Brownlee, West Fargo City Administrator



Petition summary and background	The plans for the ND diversion is to use drain 13 as part of the diversion.
Action petitioned for	We, the undersigned, are concerned citizens who urge our leaders to act now to retain drain 13 as a legal drain removing it from the plan to use drain 13 as part of the diversion.

Printed Name	Signature	Address	Phone	Date
Ray Wolfer	Say Wolfer			6/11/10
DennisKelly	DennoKelly			9/19/10
Chanles Sono am	Claus &			6/14/20
POBE BYMAIZH	4N Robert man	la.		-6/19/20
HERMAN PABANUS				6/22/10
PERRY Rust	ENT	4		8-27-10
Kapen Kenninger	Karm Kenny			6-28-10
Pedipo delson	Loday below	_		6-25-10
Tim Springer		_		6-28-10
Ethalh	hat			5-28-10
Bettokalberh	Betle Kombhenhall			6/29/10
JEKRABBENHOT	He Xabberhof			63010
Nathan Ekstrom	No			6-30-10



Petition summary and	The plans for the ND diversion is to use drain 13 as part of the diversion.
background	
Action petitioned for	We, the undersigned, are concerned citizens who urge our leaders to act now to retain drain 13 as a legal drain removing it
	from the plan to use drain 13 as part of the diversion.

Printed Name	Signature		Address		Phone	Date	
Dan Zinnerman	Am Zu	····				6-5-10	
Jay Zimmerman	953					6-15-10	
Gene Caderben	Sem C	idarly				6-23-12	δ
MARK ERICKSON	mark	brickson				6-2340	7
I pedia Epickso	1 ' Z .	Cuchser				6-27-40	S
lafut Ent	Met &	int-				6-23-18	
Randal & Mayer	Randal	Mayer				6-26-10	
Survivant	Souther	west				6/26/10	
Much Lawren	Max K	exercue				6-26-200	
Charle's Jones	Charley					6-27-2010	
JAred McKinnon	and.	M				6-28=	ا رون
Carl R. Peterson	147) (A) D				6-29-20	0/0



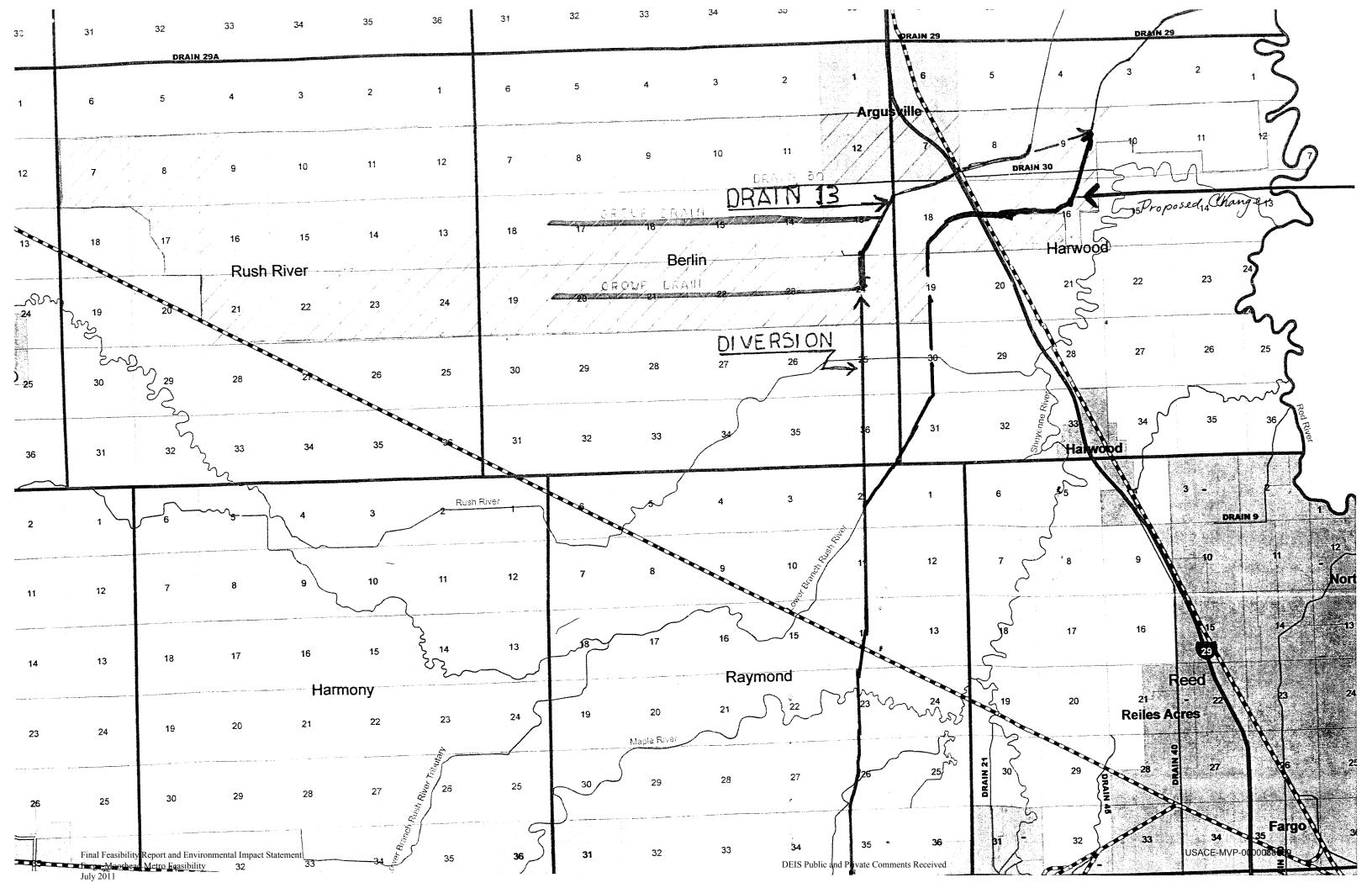
Petition summary and	The plans for the ND diversion is to use drain 13 as part of the diversion.
background	
Action petitioned for	We, the undersigned, are concerned citizens who urge our leaders to act now to retain drain 13 as a legal drain removing it
	from the plan to use drain 13 as part of the diversion.

Printed Name	Signature	Address	Phone	Date
DENNIS RUST	Cours June			6-11-10
, , , , , , , , , , , , , , , , , , , ,		-		>
LASIY Wipers	Tany Win	_		6-11-10
TON RODEN	The floor	_		Willio.
Daly Point	Dole Rust	_		6/11/10
Keith Monson	Judalon	_		6/u/co
Karl Langsoth	Sal-forgo	•		6-11-10
James Claland	James Clelas	_		6-11-10
RUSS Ruliffson	Pad Phys	_		6-11-10
Wayne Hoglun	Mayelachen	_		6-11-10
VAOCE JOHNS				6-11-10
Janes Gust	A A			6-11-10
DEANRUSO BEARNEUS	Dean A Rus	-		6-11-10



Petition summary and	The plans for the ND diversion is to use drain 13 as part of the diversion.
background	
Action petitioned for	We, the undersigned, are concerned citizens who urge our leaders to act now to retain drain 13 as a legal drain removing it
	from the plan to use drain 13 as part of the diversion.

Printed Name	Signature		Address	Phone	Date
Richard L Sork	Lichova	Slyak			6-11/2010
Laura Bortous	I GUN	Thertust			6/14/10
Havey Pearson					6-12/10
John McConnell	John Ma	onell			6-12-10
Carol Nilles	Carol n	iller)			6-12-10
KAN Caman	The second				6-12-10
gle Hagmeste,	Ilen Ha	gomaste,			6-13-6
Larry Gangues	i _ /	(c)			6-13-10
Dawayne Nitschl	e Juy	Jull			6-14-10
DALLAS LEGINA	I = I	U n			G13 10
KENT SMITH	Kent Som	the			6-14-10
Donald Cramer	DONALD	raner			6-15-10





Cass County Joint Water Resource District

August 4, 2010

Thomas Fischer Chairman Fargo, North Dakota Aaron M. Snyder USACE Planner and Project Manager 180 East 5th Street, Suite 700 St. Paul, MN 55101

Mark Brodshaug Manager Fargo, North Dakota

Dear Mr. Snyder:

Rodger Olson Manager Leonard, North Dakota RE: Fargo-Moorhead Metropolitan Flood Risk Management Project Process for commenting on the project alignment

Michael Buringrud Manager Gardner, North Dakota Property owners have contacted the Cass County Joint Water Resource District (WRD) with concerns about having an opportunity to comment on the channel alignment for the Red River Diversion. We would appreciate it if you would outline this process for us so we may properly advise them. The WRD believes property owners need and deserve the right to comment on the project alignment as it changes.

Raymond Wolfer Manager Argusville, North Dakota

Thank you.

Sincerely,

CASS, COUNTY, JOINT WATER RESOURCE DISTRICT

Carol Harbeke Lewis Secretary-Treasurer Thomas L. Fischer

Chairman

1201 Main Avenue West West Fargo, ND 58078-1301 cc: Dean Rust

701-298-2381 FAX 701-298-2397 wrd@co.cass.nd.us casscountygov.com



Cass County Joint Water Resource District

August 4, 2010

Thomas Fischer Chairman Fargo, North Dakota

Mark Brodshaug Manager Fargo, North Dakota

Rodger Olson Manager Leonard, North Dakota

Michael Buringrud Manager Gardner, North Dakota

Raymond Wolfer Manager Argusville, North Dakota Aaron M. Snyder USACE Planner and Project Manager 180 East 5th Street, Suite 700 St. Paul, MN 55101

Dear Mr. Snyder:

RE: Fargo-Moorhead Metropolitan Flood Risk Management Project Draft Feasibility Report and Environmental Impact Statement

The Cass County Joint Water Resource District (WRD) supports the above referenced project, which is an integral part of permanent flood control for the Fargo-Moorhead metropolitan area. However, the WRD is concerned about the people they serve and downstream impacts. The WRD urges the Corps of Engineers to consider participation in the cost of mitigation in those areas.

Thank you.

Sincerely,

CASS COUNTY JOINT WATER RESOURCE DISTRICT

Carol Harbeke Lewis Secretary-Treasurer Thomas L. Fischer Chairman

1201 Main Avenue West West Fargo, ND 58078-1301

> 701-298-2381 FAX 701-298-2397 wrd@co.cass.nd.us casscountygov.com



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Dale Frink
Dave Glatt
Jake Gust
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Genevleye Thompson

North Dakota

South Dakota Roger Navratil

Ben Varnson

Hetty Walker Shane Walock

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Red River Basin Commission

Manitoba • Minnesota • North Dakota • South Dakota

Moorhead Office: 119 5th St. S. • PO Box 66 • Moorhead, MN 56561-0066 Phone 218-291-0422 • FAX 218-291-0438 • staff@redriverbasincommission.org

Winnipeg Office: Suite 206 309 Hargrave Street • Winnipeg, MB R3B 2J8 Phone 204-982-7250 • FAX 204-982-7255 • staff@redriverbasincommission.org

www.redriverbasincommission.org

August 2, 2010

U.S. Army Corps of Engineers 190 E. 5th St., Ste. 401 St. Paul, MN 55101

Dear Mr. Snyder:

Please accept this correspondence for public comment on the Fargo-Moorhead flood risk management project draft EIS and feasibility report. The Red River Basin Commission (RRBC) is an international organization with offices in Moorhead, Minnesota and Winnipeg, Manitoba. We are concerned with water management in this basin from a holistic, basin-wide approach that traverses three states, a province and two countries.

The RRBC Vision is: a Red River Basin where residents, organizations and governments work together to achieve basin-wide commitment to comprehensive integrated watershed stewardship and management.

The RRBC Mission is: to develop a Red River Basin integrated natural resources framework plan; to achieve commitment to implement the framework plan; and to work toward a unified voice for the Red River Basin.

The Red River Basin Natural Resources Framework Plan (RRB - NRFP) has been developed and at this time over half the basin local units of government have agreed to do their part in helping achieve the goals in the NRFP. The NRFP has 13 basin-wide goals and two of them have direct relevance to the proposed Fargo-Moorhead area diversion project and the draft EIS and feasibility report.

Goal # 1: Manage natural resources in the Red River Basin by watershed boundaries rather than political boundaries. This has relevance to the project because flood solutions with watershed and basin-wide focus need to address not only needs of one area of the basin, but other areas as well. We therefore ask that the USACE consider the full impacts of the proposed diversion project on all upstream and downstream interests, so that we move toward a final solution to the Fargo–Moorhead flooding situation that will result in no adverse impacts on others.

Goal # 6: Reduce the risk of flood damages for people, property and the environment in the mainstem floodplain and in tributary watersheds. This has relevance to the proposed project because flood solutions need to consider all options in a comprehensive integrated manner to get the greatest benefits for the Fargo-Moorhead area without creating adverse impacts on other areas. We therefore ask that the USACE consider a blending of options that include diversion, levees, and storage for the Fargo – Moorhead area and other flood-prone communities upstream and downstream.

In addition, the RRBC Long Term Flood Solutions (LTFS) Project has revealed that there is strong support for and interest in storage as a primary flood reduction tool throughout the basin. This information was gathered through over 20 public meetings around the basin. In addition the LTFS Project is utilizing a Red River mainstem model developed by RRBC to target mainstem flow reductions to reduce flood damages. Our initial effort at a 20 percent flow reduction at several mainstem locations provides targeted reductions for each sub-watershed to achieve that goal. Modeling of actual storage sites built since 1997, sites in progress, or potential sites will provide information on where actual storage can be achieved to reduce flood damages.

We commend the project's primary objective to remove thousands of people and properties from harm's way of the chronic flooding that has afflicted the Fargo - Moorhead region year after year. Reducing flood damages is one of the important goals in the RRB-NRFP. Reducing flood damages is also critical for the population's safety and quality of life, as well as the economic vitality not only for this immediate region, but for the states of Minnesota, North Dakota, South Dakota, and our respective countries. We urge you to advance such permanent protection for this metropolitan area while mitigating any negative impacts to surrounding communities and residents as identified above.

Please feel free to contact us if you have any questions or we can provide any assistance in this endeavor. Thank you.

Sincerely,

Herm Martens

Chair

Red River Basin Commission



Red River Watershed Management Board

August 6, 2010

Mr. Aaron Snyder U.S. Army Corps of Engineers 180 East 5th Street Suite 700 St. Paul, MN 55101

Dear Mr. Snyder:

RE: Review Comments, Draft Feasibility Report and Environmental Impact Statement (EIS), Fargo-Moorhead Metropolitan Area Flood Risk Management

Thank you for the opportunity to review the Draft Feasibility Report and Environmental Impact Statement for Fargo-Moorhead Metropolitan Area Flood Risk Management prepared by the U.S. Army Corps of Engineers (USACE). The Red River Watershed Management Board (RRWMB) offers the following comments on the document in recognition of our shared interest in flood damage reduction within the Red River Basin.

Our primary concern is that a comprehensive evaluation of alternatives be performed that fully assess all downstream impacts so that the greatest common good can be realized from a basin-wide perspective. Toward that end, the following comments focus on areas where we believe a more comprehensive assessment and evaluation are required:

<u>Comment 1</u>: It is stated in Appendix B; page B-12, that an unsteady HEC-RAS model was developed from Hickson to Halstad to assess downstream impacts. The model shows significant peak flood flow increases at Halstad on the order of 20%. Impacts must be quantified further downstream, beyond Halstad, until a point where no increase in stage or discharge exists.

Comment 2: Table 30, page 147, shows a 5.5 inch downstream impact at Halstad for the MN Short 35k alternative, 10% chance event. Table 32, page 155, shows a 24.7 inch impact for the same event for the ND East 35k alternative. This is a 1.6 foot difference for a relatively frequent event, yet the difference is characterized in Section 3.6.7, page 66, as relatively similar when the two alternatives are compared. We disagree.

<u>Comment 3</u>: Impacts of increased flows on completed flood protection measures downstream, such as the levee for the communities of Grand Forks and East Grand Forks, are not discussed. Similarly, potential downstream implications for flood insurance and levee certification requirements are also not addressed.

Comment 4: The impacts of stage and flow increases on private agricultural lands and public infrastructure such as roads and bridges are, in general, insufficiently assessed in the document.

Review Comments, Draft Feasibility Report and Environmental Impact Statement (EIS) Page 2

<u>Comment 5</u>: The document does not differentiate between the significantly different impacts that spring and summer flood events have on affected agricultural lands. An assessment of the impacts of each event should be included in a comprehensive evaluation of downstream impacts.

<u>Comment 6</u>: The document does not include evaluations of various multi-faceted alternatives, such as combining upstream storage with flood barriers or other combination approaches.

Unless plans for the proposed diversion project incorporate sufficient measures to mitigate any associated downstream stage and discharge increases, the burden of those impacts will be imposed on others. It is our hope that the project sponsors will recognize their share of responsibility to the basin by adequately assessing the project's storage, stage and discharge impacts and incorporating within the project sufficient measures to mitigate their effects.

Thank you again for considering our comments as you prepare the final Feasibility Report and EIS. We appreciate your efforts and value the opportunity to participate and partner with you and other stakeholders toward our shared interest of flood damage reduction within the Red River Basin.

Sincerely yours.

John Finney President

c: Minnesota Department of Natural Resources

Red River Basin Flood Damage Reduction Work Group

Red River Basin Commission

at of Fine

Minnesota Red River Basin State and Federal Delegations

Minnesota Association of Watershed Districts

Member Watershed Districts

Metro Flood Study Work Group

Ron Harnack, RRWMB Project Coordinator

P.O. Box 763 • Detroit Lakes, MN 56502-0763 www.rrwmb.org • PH: (218) 844-6166 • FAX: (218) 844-6167



Rush River
Water Resource
District

Raymond Wolfer Manager Argusville, North Dakota

William A. Hejl Manager Amenia, North Dakota

Keith Monson Manager Harwood, North Dakota

Carol Harbeke Lewis Secretary-Treasurer

1201 Main Avenue West West Fargo, ND 58078-1301

701-298-2381 FAX 701-298-2397 wrd@casscountynd.gov www.casscountynd.gov August 2, 2010

(See attached list of recipients.)

Greetings:

RE: Proposed realignment of the Red River Diversion

The Rush River Water Resource District proposes a realignment of the Red River Diversion. The objective of the proposed realignment is to maintain Drain #13 as a legal drain by moving the route 1/2 or 1 mile east. The benefits of this change are as follows:

- 1) The drainage area of the Red River Diversion would be reduced by approximately 29 square miles;
- 2) The number of inlets into the project would be reduced by about 4 large inlets and 6 field inlets:
- 3) The cost of the project would be reduced approximately \$30 million, as indicated by the Corps of Engineers;
- 4) No negative effect on families, as there are no families living in the proposed alignment area; and
- 5) The change would increase the volume of water by installing a bridge on I-29 for the diversion. In addition, this change would have a positive effect on downstream elevations on the Red River at Georgetown.

Drain #13 was installed over 100 years ago to provide drainage for local farmers. Special assessments were used to build and maintain the drain. The cross-hatched area on the enclosed map represents the drainage area for Drain #13. The map also contains the current diversion proposal and the proposed change explained above.

Also enclosed is a copy of a petition signed by residents and landowners in the affected Drain #13 drainage area. The 50 signatures on this petition represent 95% of the residents living in the drainage area of Drain #13. These residents, along with the affected landowners, are in support of maintaining Drain #13 as a legal drain and excluding it from the Red River Diversion.

The proposed realignment was approved by the Rush River Water Resource District Board at its July 17, 2010, meeting. The Water Resource District would appreciate your review of the proposed realignment and requests that you support the implementation of this plan.

If you have any questions, please feel free to contact us. Thank you.

Sincerely,

RUSH RIVER WATER RESOURCE DISTRICT

Raymond Wolfer Chairman

Enclosures (2)

List of recipients:

Metro Flood Study Work Group:

- Tim Mahoney
- Brad Wimmer
- Dan Hunt
- Nancy Otto
- Diane Wray-Williams
- Scott Wagner
- Darrell Vanyo
- Kevin Campbell
- Gerald VanAmburg
- Grant Weyland
- Tom Fischer

Cass County Commissioners:

- Robyn Sorum
- Darrell Vanyo
- Vern Bennett
- Ken Pawluk
- Scott Wagner

Mark Bittner, Fargo City Engineer
April Walker, Fargo Senior Engineer
Bob Zimmerman, Moorhead City Engineer
Craig Evans, US Army Corps of Engineers Project Manager
Bonnie Johnson, Cass County Administrator
Lance Yohe, Red River Basin Commission Executive Director
Chad Olson, Mayor of Dilworth
Jim Brownlee, West Fargo City Administrator



Action petitioned for We, the undersigned, are concerned cuizens who urge from the plan to use drain 13 as part of the diversion.	We, the undersigned, are concerned citizens who urge our leaders to act now to retain drain 13 as a legal drain removing it from the plan to use drain 13 as part of the diversion.

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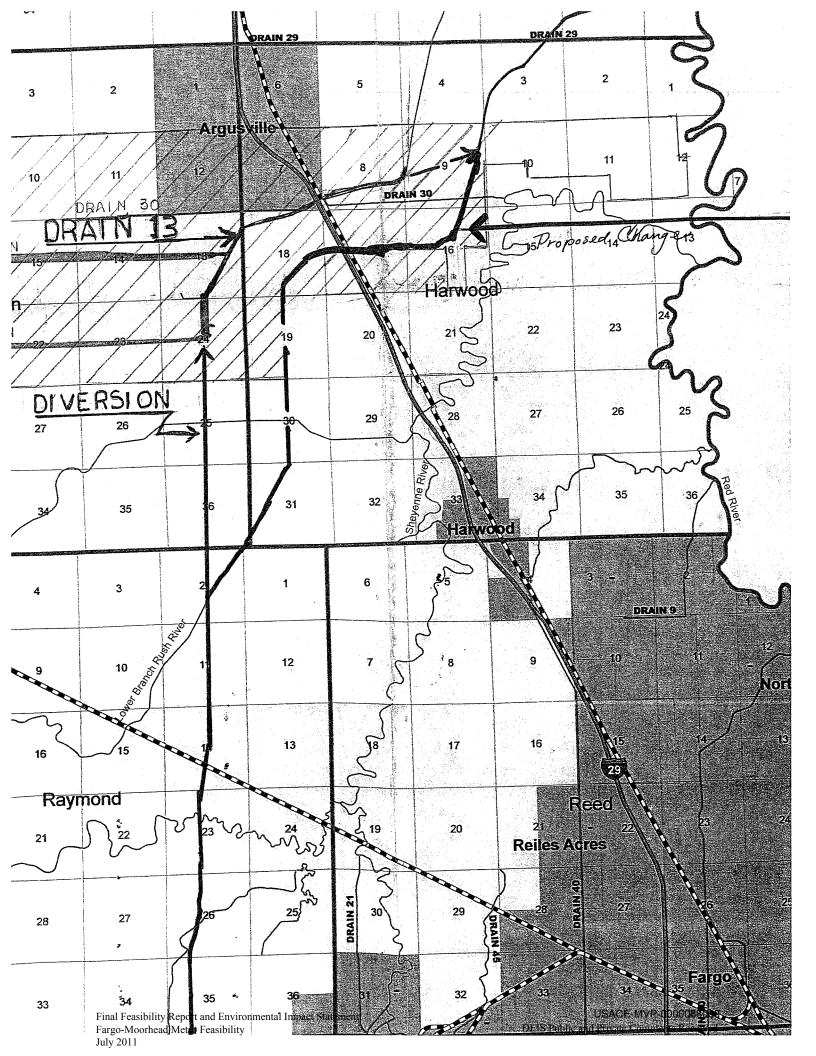


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Action petitioned for	We, the undersigned, are concerned citizens who urge our leaders to act now to retain drain 13 as a legal drain removing it from the plan to use drain 13 as part of the diversion.

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Two Rivers Watershed District



In Roseau, Kittson, & Marshall Counties

Board of Managers:

Roger Anderson, O'Neil Larson, Richard Novacek, Jim Kukowski, Jon Vold, Mike Ratzlaff, Darrel Johnson Staff: Dan Money, District Administrator; Matt Thompson, District Technician

410 5th Street S., Suite 112, Hallock, MN 56728 - Phone (218) 843-3333 - Fax (218) 843-2020 - Email: daniel.money@mn.nacdnet.net

August 5, 2010

Aaron Snyder U.S. Army Corps of Engineers Project Manager 180 East 5th Street, Suite 700 St. Paul. MN 55101

Dear Sir:

The Two Rivers Watershed District is a local unit of government authorized under Minnesota Statute 103D, with jurisdiction in Kittson, Roseau, and Marshall Counties in northwestern Minnesota. Powers of watershed districts under this statute include projects involving flood control, water quality, and water quantity. The Two Rivers Watershed District was established in 1958 and to date has constructed several flood control projects.

As an agency involved with flood control and potentially affected by the proposed Fargo Moorhead diversion, we appreciate the opportunity to provide comment on the Draft Feasibility Report and Environmental Impact Statement. We respectfully offer the following comments:

- Significant stage increases at several downstream locations as far north as Halstad have been identified. However, numerous locations further downstream to the north of Halstad most certainly will also be impacted. The extent of downstream impacts needs to be quantified all the way to the location on the river where there will be no impacts or where impacts will be negligible. Only when this is done can there be a quantification of the cost versus benefits of the plan.
- 2. Because downstream areas will have higher stages after the project is constructed, we believe that water retention areas need to be constructed as a part of the project in order to mitigate the increased stages downstream. In other words, it is not acceptable to simply transfer the water that is now stored in the Fargo Moorhead floodplain to areas downstream, thereby increasing the flooding that occurs in downstream areas. The project that is constructed should have no significant impact to downstream or upstream areas. This is a basic water management guideline. The impacts of the project must be mitigated.
- 3. Project alternatives should be addressed. These can include projects such as impoundments, wetland restorations, or other upstream storage projects. Other types of project alternatives to consider could involve flood barriers alone or in combination with the diversion. Upstream storage options not only will help prevent flooding in the Fargo Moorhead area, it will reduce the size and cost of the proposed diversion, and could possibly provide

other opportunities such as water supply in times of drought.

- 4. Impacts to public infrastructure such as roads and bridges needs to be quantified. In addition, impacts to agricultural and private lands also should be quantified.
- 5. The deadline to provide comments as we understand it is August 9, 2010. We do not feel that this is enough time for all agencies and members of the public to review the 280 page document and its appendices, digest the information contained within it, and provide well educated comments. We respectfully request that the time line to provide comments be extended.

In summary, the Two Rivers Watershed District supports a diversion project only if the project includes mitigation for the negative impacts it surely will impose on others. This mitigation should include flood storage and impoundment options, or some combination of structural measures that collectively mitigate the transfer of flood damages to others.

Thank you for the opportunity to provide comment.

Sincerely,

Dan Money

District Administrator

In Thoney

-Wild Rice-Wateershed District

11 5th Ave East · Ada MN 56510 · Phone (218) 784-5501 · Fax (218) 784-2459 · www.wildricewatershed.org

August 2, 2010

Mr. Aaron Snyder U.S. Army Corps of Engineers 180 E. 5th Street Suite 700 St. Paul, MN 55101

Dear Mr. Snyder:

RE: Review Comments, Draft Feasibility Report and Environmental Impact Statement (EIS), Fargo-Moorhead Metropolitan Area Flood Risk Management

The Wild Rice Watershed District encompasses an area of approximately 2080 square miles. It includes the drainage basin of the Wild Rice River and its South Branch, which is a direct tributary to the Red River of the North in northwestern Minnesota. The District also includes the watershed of the Marsh River and other small contiguous areas directly tributary to the Red River of the North. The Wild Rice Watershed District comprises portions of Norman, Mahnomen, Clay, Clearwater, Becker, and Polk Counties in Minnesota.

The WRWD would like to provide the following comments on the Draft Feasibility Report and Environmental Impact Statement for Fargo-Moorhead Metropolitan Area Flood Risk Management prepared by the U.S. Army Corps of Engineers (USACE). As a member of the Red River Watershed Management Board (RRWMB), many of the comments that we provide are common to the comments provided by the RRWMB.

Comment 1: It is stated in Appendix B; page B-12, that an unsteady HEC-RAS model was developed from Hickson to Halstad to assess downstream impacts. The model shows significant peak flood flow increases at Halstad on the order of 20%. Impacts must be quantified further downstream, beyond Halstad, until a point where no increase in stage or discharge exists.

<u>Comment 2</u>: Table 30, page 147, shows a 5.5 inch downstream impact at Halstad for the MN Short 35k alternative, 10% chance event. Table 32, page 155, shows a 24.7 inch impact for the same event for the ND East 35k alternative. We don't agree that a 1.6 foot difference in flood elevation is negligible

<u>Comment 3:</u> Impacts to downstream flood protection projects (ex. Perley, Hendrum, Halstad, and Shelly, MN agricultural levees, farmstead ring dikes, etc) from potentially increased flows and stages as a result of a change in hydrology and a diversion of flows are not discussed, nor are potential implications involving reduced flood protection, flood insurance map implications for homeowners and/or levee certification and re-certification requirement implications discussed. The above examples of impacts to downstream communities and private lands are consistently not accounted for in the EIS. We believe these are critical assessments that the EIS needs to address.

<u>Comment 4</u>: The impacts of stage and flow increases on private agricultural lands and public infrastructure such as roads and bridges are, in general, insufficiently assessed in the document.

<u>Comment 5</u>: The document does not differentiate between the significantly different impacts that spring and summer flood events have on affected agricultural lands. An assessment of the impacts of each event should be included in a comprehensive evaluation of downstream impacts.

<u>Comment 6</u>: The document does not include evaluations of various multi-faceted alternatives, such as combining upstream storage with flood barriers or other combination approaches. A combination project could reduce or potentially eliminate the downstream impacts.

Unless plans for the proposed diversion project incorporate sufficient measures to mitigate any associated downstream stage and discharge increases, the burden of those impacts will be imposed on others. It is our hope that the project sponsors will recognize their share of responsibility to the basin by adequately assessing the project's storage, stage and discharge impacts and incorporating within the project sufficient measures to mitigate their effects.

The WRWD is a willing and able partner to help the project succeed as it is an important protection measure for the Fargo-Moorhead communities and the residents of the basin. However the WRWD would find it difficult to support a project that passes the flood burden downstream when there are potentially reasonable and practical storage options to eliminate those downstream impacts while providing necessary protection to the Fargo-Moorhead communities. The EIS needs to better assess the integration of flood water storage and to better assess the downstream impacts to public and private infrastructure and downstream communities.

We appreciate the opportunity to provide these comments on the draft EIS. If you have any questions please do not hesitate to contact us.

WILD RICE WATERSHED DISTRICT

Greg Holmvik Chairman

C:

Norman County Commissioners

American Rivers * Coalition for Alternative Wastewater Treatment Clean Water Network * Colorado Watershed Assembly Corps Reform Network * Institute for Agriculture and Trade Policy Minnesota Ornithologists' Union * National Wildlife Federation

August 9, 2010

Aaron Snyder Corps of Engineers Planner and Project Manager 180 E. Fifth Street, Ste. 700 St. Paul, MN 55101

Re: Comments on Draft Feasibility Report and Environmental Impact Statement on the Fargo-Moorhead Metropolitan Area Flood Risk Management Project on the Red River of the North. These comments are in addition to comments that organizations may be sending individually.

Dear Mr. Snyder:

The Corps of Engineers, in its efforts to identify and implement a solution to flooding of Fargo, ND and Moorhead, MN, has a tremendous opportunity that could change the very direction of water management in the Sheyenne and Red River Valley, and potentially catapult U.S. Water policy out of the 19th century and into the 21st century. By departing from the traditional structural approach diversion canal favored in the draft EIS, and instead fully-evaluating and implementing a more modern restoration solution, such as the Waffle approach developed by the University of North Dakota's Energy Environmental Research Center, the Corps of Engineers can solve the flooding issues in these communities at a fraction of the cost, while generating ancillary social, economic, environmental and public health benefits.

Fargo, North Dakota and Moorhead, Minnesota have always been threatened by flooding from the Red River of the North. In the last two decades, however, floods have become more frequent and more severe because of a combination of a changing climate and the drainage of thousands of wetlands throughout the Red River Basin. The traditional approach of mitigating this flooding recommended in the draft EIS would ditch and move water off the land as fast as possible, only to create more problems down-stream. The DEIS recommends building a 36-mile-long, 100 – 300 ft. wide, \$1.4 billion diversion canal around Fargo/Moorhead.

The undersigned organizations have serious concerns about this currently-recommended approach because the diversion canal will change sedimentation in the 5 rivers it would cross, including the North Branch, Rush, Maple, Sheyenne and Wild Rice, adversely affect fish spawning and impact more than 200 acres of wetlands, while only providing an inadequate measure of flood protection for Fargo and Moorhead. All other downstream cities and communities will not receive flood protection, and will likely see more flooding due to increased water flow from the diversion channel.

Rather than mitigating flooding through the construction of yet another traditional, structural approach, the undersigned organizations urge the Corps to fully analyze upper basin storage options, like the Waffle approach. The plan is simple – the Waffle uses micro-basins or preexisting areas, such as depressed agricultural lands bordered by raised roads, for short-term water storage. One square mile, one foot deep, would store more than 200 million gallons of water. The combination of the waffle concept and wetland restoration would provide a long - term, environmentally beneficial flood protection plan. This watershed approach would provide basin-wide flood protection, produce positive environmental benefits, recharge the aquifer, improve water quality, and create recreation opportunities. According to EERC (http://www.undeerc.org/waffle/), not only would such a system reduce the flood crests by as much as seven feet, it would also provide sustaining economic benefits to participating landowners, while also improving water quality and providing fish and wildlife habitat. Wetland restoration will provide important habitat for migratory birds, improve water quality, and increase recreational opportunities.

We therefore urge the Corps, in a Supplemental Draft EIS, to:

- Develop an integrated, basin wide evaluation of flood damage reduction and better water management strategies;
- Develop an alternative that evaluates the use of wetland restoration as a primary tool for flood management this evaluation should consider various levels of wetland restoration, including restoring 100,000 acres and 250,000 acres;
- Develop an alternative that combines wetland restoration with other water retention strategies, such as the Waffle concept and the other watershed approaches, such as the Red River Basin Commission Flow Reduction Strategy.

Supplementing the DEIS with this information is also required by the National Environmental Policy Act, which requires the Corps to adequately evaluate reasonable alternatives, which include the aforementioned and other non-structural and flood storage project alternatives. *See* 42 U.S.C. § 4332(C) and (E) (federal agencies must "study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves conflicts concerning alternative uses of available resources").

This project, if designed properly, could be the pivotal point in a transition to a real watershed and integrated approach to our water resources challenges. Getting this project right can make the way for other enlightened solutions to the nation's water resource challenges that meet the classic triple bottom line of sustainability: social, economic and environmental performance.

Sincerely,

Shana Udvardy Director, Flood Management Policy American Rivers Natalie Roy Executive Director Clean Water Network

Valerie Nelson Director Coalition for Alternative Wastewater Treatment

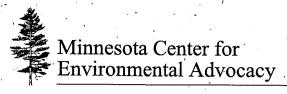
Jeff Crane Executive Director Colorado Watershed Assembly

George Sorvalis Coordinator Corps Reform Network

Julia Olmstead Policy Analyst Institute for Agriculture and Trade Policy

Tom Bell Minnesota Ornithologists' Union

David Conrad Senior Water Resources Specialist National Wildlife Federation



The legal and scientific voice protecting and defending Minnesota's environment

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Founding Director Sigurd F. Olson (1899-1982)

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Merritt Clapp-Smith Vice Chair

Kent White Treasurer

Bridget A. Hust Secretary

Peter Bachman

Kim Carlson John Helland Cecily Hines Douglas A: Kelley Michael Kleber-Diggs

Mehmet Konar-Steenberg

Matt Samuel

Gene Merriam

Steve Piragis Irene Qualters

Executive Director Scott Strand

August 5, 2010

Mr. Terry J. Birkenstock, Chief Environmental and Economic Analysis U.S. Army Corps of Engineers Branch, 190 Fifth Street East St. Paul, MN 55101-1638 Via U.S. Mail and Fax: 651-290-5258

Request for extended comment period, Fargo Moorhead Flood Risk Re: **Management DEIS**

Dear Mr. Birkenstock:

I write on behalf of the Minnesota Center for Environmental Advocacy (MCEA) to request that the U.S. Army Corps of Engineers either extend the public comment period for the Fargo-Moorhead Flood Risk Management Draft Feasibility Report and Environmental Impact Statement (EIS) or clarify that it will issue a supplemental or second draft EIS with a subsequent public comment period that allows the public, including MCEA, to interpret, review and comment on new information the Corps has released and intends to release regarding potential downstream impacts of the project.

On May 5, 2009, the U.S. Army Corps of Engineers published notice of its intent to prepare a draft EIS for the proposed Fargo Moorhead Flood Risk Management Project. The notice indicated the Corps would be the lead agency in completing a full EIS as required under NEPA. 74 Fed. Reg. 20684 (May 5, 2009).

The draft EIS and Feasibility Report was issued for public comment beginning June 11, 2010. The original comment period was 45 days, but the Corps granted a 14-day extension and public comments are now due August 9, 2010.

On August 3, 2010, the Corps issued a report providing important new information, including hydrological modeling, on the extent to which the proposed project and alternatives will affect downstream communities, agricultural land, and natural resources. In addition to providing this new data for the more immediate downstream area, the Corps indicated that additional study of downstream impacts was on-going and yet to be completed: "The Corps will

Mr. Terry J. Birkenstock, Chief August 5, 2010 Page 2

continue to analyze the impacts downstream of Thompson and will report these findings as they become available. The Corps will also complete economic and takings analyses for the area downstream of Halstad and eventually Thompson in the future."

The Corps' August 3 news release instructed interested parties where on the internet to access the new information -- ftp://ftp.usace.army.mil/pub/mvp/FMM Downstream/ -- but the public comment period deadline was not amended to allow interested parties the opportunity to review and offer substantive comments on the new information. (It is also not clear whether the new report was made part of the hard copy draft EISs that are available at public libraries.)

The newly reported information is fundamental to an adequate NEPA analysis and feasibility report. The draft EIS and Feasibility Report purports to "describe[] the predicted impacts of the alternatives . . . on relevant environmental resources..." and to "evaluate[] direct, indirect, and cumulative effects, and quantif[y] these effects whenever possible." DEIS, p. 141. Without the information provided August 3 (and the as-yet not disclosed information on impacts further downstream), the Corps cannot predict effects on environmental resources or evaluate the direct, indirect, and cumulative effects of the proposals. This information is required for the Corps' feasibility report, which must "describe, with reasonable certainty, the economic, environmental, and social benefits and detriments of the recommended plan and alternative plans." 33 U.S.C. § 2282. It is likewise essential to the Corps' ability to fulfill NEPA's requirement that is take a "'hard look' at the environmental consequences" of its decision. *Mid States Coalition for Progress v. Surface Transportation Board*, 345 F.3d 520, 533 (8th Cir. 2003).

Because the Corps has supplemented the draft EIS and feasibility report with important information on the extent of additional flooding that will result downstream from the proposed project and alternatives, it should offer the public additional time to consider and evaluate this new information in formulating their comments. Six days is not sufficient. Moreover, MCEA is pleased to see that additional information regarding impacts further downstream is being developed and will be provided later, but notes that the Corps has an obligation to provide for public comment when the completed study is released, either through extension of the existing comment period or by issuance of a supplemental EIS. See 40 C.F.R. § 1502.9(c)(1)(ii).

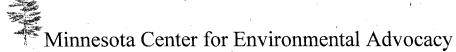
Under the circumstances, the Corps should extend the existing comment period until 45 days following the release of a completed study on downstream impacts or commit to providing a supplemental EIS with a public comment period as required by the NEPA regulations.

I appreciate your consideration of MCEA's concerns and request. Please feel free to contact me if you have any questions.

Sincerely,

Kevin Keuther Legal Director

cc: Henry VanOffelen



26 East Exchange Street • Suite 206 • Saint Paul, MN 55101-1667 • 651.223.5969

August 9, 2010

Terry Birkenstock USACE Project Manager 190 East 5th Street St. Paul, MN 55101

Dear Mr. Birkenstock:

The following are comments from the Minnesota Center for Environmental Advocacy (MCEA) on the Draft Feasibility Report and Environmental Impact Statement for the Fargo-Moorhead Metropolitan Area Flood Risk Management study (DEIS). MCEA has been actively engaged in flood damage reduction and natural resource enhancement projects in the Red River basin for more than 12 years. We were a signatory on the Red River Mediation Agreement, we have been a continuous member of the Flood Damage Reduction Work Force and its Technical and Scientific Advisory Committee, and we have participated in numerous watershed-based project work teams and comprehensive planning processes. As outlined in the comments below, we do not believe the draft report is adequate under the National Environmental Policy Act (NEPA) and we have numerous concerns with the Fargo-Moorhead project ("project").

Planning Objectives:

Four planning objectives were identified in the study.

- Reduce flood risk and flood damages in the Fargo-Moorhead metropolitan area.
- Restore or improve degraded riverine and riparian habitat in and along the Red River of the North, Wild Rice River (North Dakota), Sheyenne River (North Dakota), and Buffalo River (Minnesota) in conjunction with other flood risk management features.
- Provide additional wetland habitat in conjunction with other flood risk management features, and
- Provide recreational opportunities in conjunction with other flood risk management features.

The evaluation of alternatives in the DEIS focused only on the first objective listed. The alternatives selected do not measurably achieve any of the other objectives.

Planning Constraints

Similar to the planning objectives, the following two planning constraints were disregarded in this DEIS.

- Avoid increasing peak Red River flood stages, either upstream or downstream
- Minimize loss of floodplain in accordance with Executive Order 11988, Floodplain management

Related Current Studies:

The DEIS lists the Fargo-Moorhead and Upstream Feasibility Study as a current study; this study's limited scope did not, however, evaluate flood water storage opportunities in the basin such as those on-channel and off-channel flood water detention projects being planned and constructed in Minnesota. These "North Ottawa" type of projects have the potential to store significant quantities of flood water upstream of Fargo-Moorhead and can be planned and designed to also provide considerable natural resource benefits.

Public Concerns:

The public is clearly concerned about the downstream impacts of any proposed project. Addressing these concerns and providing assurances that all downstream impacts will be avoided or mitigated should be included as part of any proposed project alternative. There has not been sufficient time to evaluate the new information USACE provided and we therefore renew our request for an extension of time to comment.

Hydrology:

The DEIS does not explain why this study breaks from traditional flood frequency analysis and uses a "wet" period of record based analysis. It is our understanding that this wet period approach was not used in previous studies of the region such as the Fargo-Moorhead and Upstream Feasibility study. Its use now clearly makes the benefit cost ratios higher and its use may set a precedent for evaluation of future projects. The use of the "wet period" and its potential future application throughout the basin needs further discussion and justification in the report.

While the evidence suggests that all flooding events and major flood events in particular are occurring on a more frequent basis (Figure 7) there is no assessment or analysis presented to describe the root cause or causes of this clear trend. While precipitation patterns since 1990 have contributed to this trend in flood frequency, other factors such as land use and drainage patterns are also likely to have played a role and are also likely to continue to play a role in modifying the hydrology of the basin. The study assesses the effects of the diversion if climatic conditions stay the same (i.e. "what if it stays wet") but makes no predictions about the effectiveness of the diversion if future drainage and land use changes continue, e.g. if subsurface tile is installed on 20, 40, or 60% of the landscape in the next 20 years. The long list of prior reports and existing projects makes it clear that the Corps of Engineers has invested a significant amount of public resources into flood damage reduction in the Red River Basin, yet significant flood damage still occurs. The preferred alternative in this study proposes another \$1.4 billion expenditure but there is no discussion of the effects that future land use changes or additional drainage may have on the effectiveness of any proposed alternative. For example, a recent study conducted by the University of Minnesota suggests that tile drainage in the basin could increase water yield by 20% in April and May. This type of information must be considered in this study and avoiding, minimizing, and/or mitigating the results should be included in the evaluation of alternatives.

The proposed alternatives in this study will result in significant downstream stage increases, but there is no mitigation proposed in the DEIS. For more than a hundred years, the primary approach to flood damage reduction in the Red River basin has been to increase conveyance and, in effect, move the problem downstream. The results of modeling of the various diversion alternatives in the DEIS make this fact clear. Increased conveyance around Fargo-Moorhead, and especially, the loss of floodplain storage in the North Dakota options, moves the problem downstream. It is unfortunate that mitigation for these effects is not seriously considered in the DEIS. This simply perpetuates the errors of the past and is not reasonable given our understanding of the impacts of the proposed project. The Council of Environmental Quality (CEQ) guidance titled "NEPA's Forty Most Asked Questions" states that: "All relevant, reasonable, mitigation measures that could improve the project are to be identified, even if they are outside the jurisdiction of the lead agency or the cooperating agencies. Sections 1502.16(h), 1505(c). This will serve to [46FR 18032] alert agencies or officials who can implement these extra measures, and will encourage them to do so."

Alternatives

Again, more consideration needs to be given to upstream storage options. These options would better meet the stated objectives than the current preferred alternative. At a minimum, significant upstream storage similar in nature and scope to the storage that Charlie Anderson has found in the Bois de Sioux watershed to meet a 20% peak flow reduction on the mainstem of the Red River needs to be presented and evaluated in the DEIS. The DEIS should then apply this approach to all tributary watersheds upstream of Fargo-Moorhead.

Environmental Effects

The proposed alternatives are all likely to have significant effects on the geomorphology and sediment dynamics of the Red River. The DEIS needs to more completely assess the effects that this diversion will have on geomorphology and sediment dynamics. Experiences with diversions within the basin (e.g. Cheyenne diversion) make it clear that large changes in sediment dynamics are likely to occur.

The proposed alternatives will have direct wetland impacts and merely stating that "either alternative would include appropriate measures to minimize or mitigate potential losses to wetland areas" does not meet NEPA's adequacy standard. Kicking the can down the road is not sufficient. The DEIS needs to tell us now what will be done to minimize or more specifically to mitigate wetland losses.

The proposed alternatives will have direct impacts on fish passage and connectivity of the Red River and its tributaries. The DEIS does not adequately assess these issues. Further work is needed to describe the effectiveness of proposed fish passage mitigation measures and a more complete picture of what species are going to be affected and when critical passage issues are likely to occur. Minnesota, North Dakota, and local communities have invested a substantial amount of resources into modifying and removing fish passage barriers on the Red River and its tributaries to improve the function of the aquatic system. A new structure on the Red that acts as an effective fish

barrier is a significant step backwards that must be avoided. Impassable structures on the tributaries also will result in lost functions for the aquatic system.

The stream habitat losses evident in the proposed alternatives will have to be mitigated. Similar to wetland impacts, the DEIS needs to tell us now what will be done to minimize or more specifically to mitigate stream habitat losses.

The locally preferred alternative (ND 35K) appears to have the most potential for significant environmental effects. If selected, this plans will limit fish passage and connectivity, have direct wetland and riverine habitat effects, and will increase stage far downstream.

Thank you for the opportunity to submit these comments. We look forward to further review and comment in this process. Please feel free to contact me if you have any questions.

Sincerely

Henry VanOffe

Natural Resource Scientist

Minnesota Center for Environmental Advocacy

50785 Bucks Mill Rd.

Detroit Lakes, MN 56501

(218) 849-5270

hvanoffelen@mncenter.org

GEORGETOWN/PERLEY FARMERS ELEVATOR

The Georgetown/Perley Farmers Elevator Board of Directors introduced the following resolution and moved it's adoption:

WHEREAS, The United States Army Corps of Engineers, (USACE) has proposed constructing flood water diversion channels around the cities of Fargo, ND and Moorhead, MN.

WHEREAS, The proposed diversion channel redeposit the floodwater back into the Red River in northern Clay County of MN or Northern Cass County of ND.

WHEREAS, The proposed flood diversion channels will change the flow regime of the Red River during flood events and is estimated to cause an adverse impact of as much as seventeen inches of additional crest elevation to western Norman County.

WHEREAS, Increased flood crest of the magnitude envisioned by the USACE will adversely impact county and township roads as well as state highways, including U.S. highway 75, which would be detrimental to our existence. This will also effect bridges, utilities, farms, personal property, commerce, public safety, and personal well-being to those downstream of the proposed diversion.

WHEREAS, A change in flow regime that results in adverse impacts to Norman County and its residents and or others situated downstream from the proposed diversion projects is not acceptable.

NOW THEREFORE, To preserve the interests of Norman and Clay counties and its people, the Georgetown/Perley Elevator Board of Directors do hereby go on record of opposing the FM diversion project as it is now proposed.

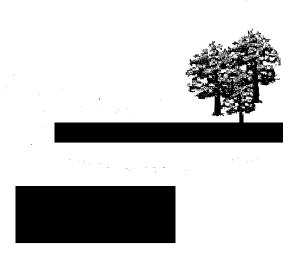
The motion for adoption of the forgoing resolution was unanimous with no Board members voting against: whereupon said resolution was declared duly passed and adopted.

Adopted this 21st day of July, 2010

Mark Maring, Board President

Attest

John David Lee, Board Secretary/Treasurer



August 7, 2010

RE: Fargo, ND /Moorhead, MN Diversion

Dear Corps of Engineers;

We are currently developing a area that could be greatly affected by the rise of the Red River from the effects of the Fargo, ND / Moorhead, MN diversion project.

We would like to request the Corps of Engineers conduct hydrological test in our area to measure the potential impact and come up with a suitable solution.

We look forward to hearing from your office regarding this matter.

Sincerely;

Michael Marcotte

President

Corp of Engineers

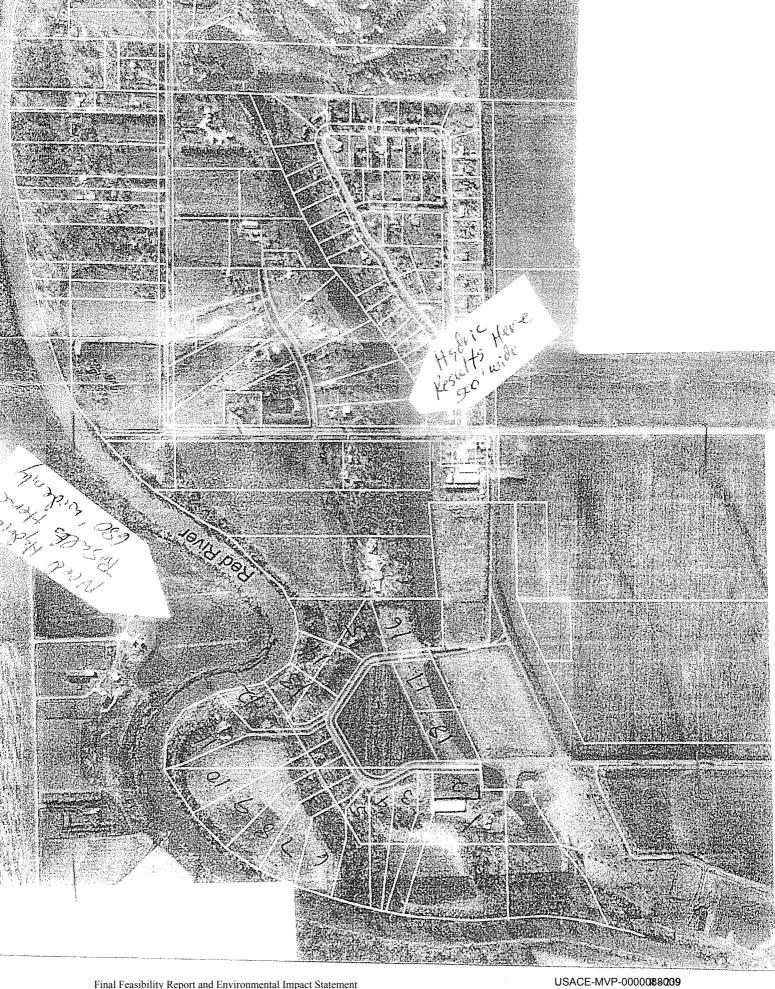
RE: River Impact Study

I live at	and as a
resident of which is located I am requesting a Hydrology Test be	done
here to determine the river level. The river narrows to 680' thus the readings downtown Grand	Forks
and/or Thompson Bridge impact may not be accurate for our area.	

Dated 8/5/10

Sincerely,

Romer DIPAULT



Final Feasibility Report and Environmental Impact Statement Fargo-Moorhead Metro Feasibility July 2011

USACE-MVP-0000088009
DEIS Public and Private Comments Received

Grand Forks County, Corp of Engineers

RE: River Impact East Lake Estates/Shady Ridge Estates

resident of which is located just: I am requesting a Hydrology Test be done here to determine the river level. The rive narrows to 680' thus the readings downtown Grand Forks and/or Thompson Bridge impact ma	
accurate for our area.	
Dated 8-6-10	
Karen Bohnsack	

Grand Forks County, Corp of Engineers

RE: River Impact East Lake Estates/Shady Ridge Estates

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narrows to 680' thus the readings downtown Gran	d Forks and/or Thompson Bridge impac	t may not be
accurate for our area.		

Dated 7 AUGUST 2010

Katherine Carptell

Sincerely,

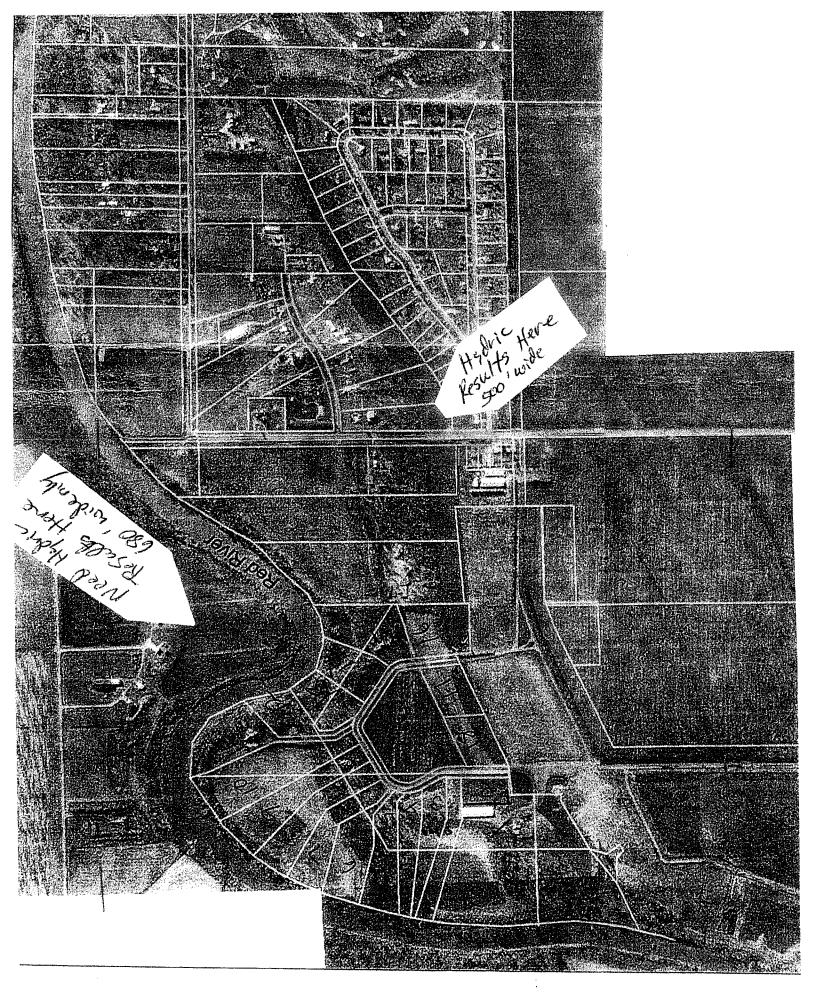
Grand Forks County, Corp of Engineers

RE: River Impact East Lake Estates/Shady Ridge Estates

I live at		and as a
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I am requesting a Hydrology Test be don	e here to determine the river level. Th	e river
narrows to 680' thus the readings downtown Grand	d Forks and/or Thompson Bridge impac	t may not be
accurate for our area.		

Dated 6 August 2010

James R. Bradshaw



Grand Forks County, Corp of Engineers

RE: River Impact East Lake Estates/Shady Ridge Estates

I live at	and as a
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narrows to 680' thus the readings downtown Grand	l Forks and/or Thompson Bridge impact may not be
accurate for our area.	

Dated 7 August 2010

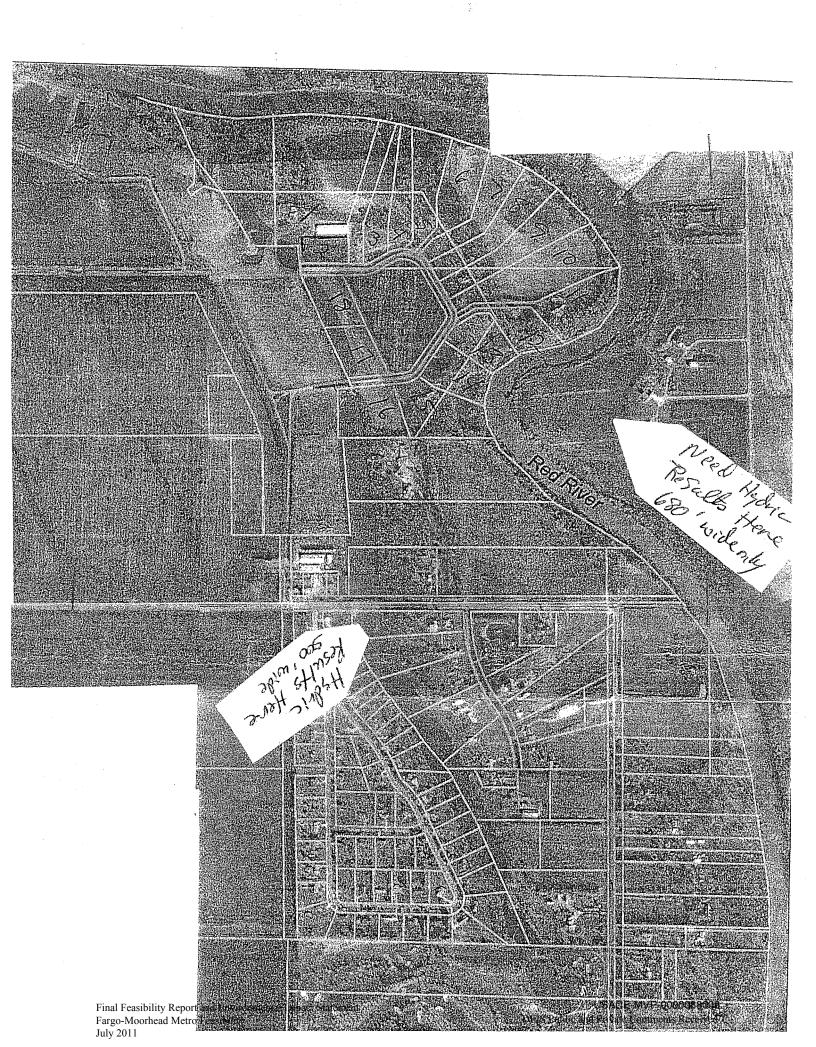
Katherine Corptell

Sincerely,

Grand Forks County, Corp of Engineers

RE: River Impact East Lake Estates/Shady Ridge Estates

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accurate for our area.		
Dated August 6,2010		
Sincerely,		
Kallu O. Kal		
Rosald a feather		
Karen A. Katrinak and 1	Ronald K. Matheney	



Grand Forks County, Corp of Engineers

RE: River Impact East Lake Estates/Shady Ridge Estates

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l am r	requesting a Hydrology Test be done here to determine the river level. The	river
narrows to 680' thus the readings downtown Grand Forks and/or Thompson Bridge impact may not be		
accurate for our	r area.	

Dated 8-5-10

Sincerely.



Maggied, Troy MVP

From: Snyder, Aaron M MVP

Sent: Monday, August 16, 2010 11:13 AM

To: Maggied, Troy MVP; Beauchamp, Francis MVP **Subject:** FW: Petition for FM Hydro Diversion Study

Attachments: FM Diverson Study Petition.pdf

Probably already have this. See attached.

Aaron M. Snyder USACE Planner and Project Manager, PMP Chief, Project Management Branch (PM-B) 651-290-5489 612-518-0355 (Cell) Aaron.M.Snyder@usace.army.mil

----Original Message---<u>--</u>

From: Bill Noyes [mailto

Sent: Tuesday, August 10, 2010 2:20 PM
To: Evans, Craig O MVP; Snyder, Aaron M MVP
Subject: Petition for FM Hydro Diversion Study

Mr. Evans and Mr. Snyder;

I am writing and attaching a letter requesting special consideration when performing the Fargo-Moorhead Hydrology Test.

We live in a neighborhood along the Red River located on the outskirts of Grand Forks which may be affected by any diversion.

This neighborhood has a long history of being impacted the Red River Floods.

Consequently, we are concerned if any projects would further increase the river elevations north of the diversion.

Thank you in advance for your assistance in these matters.

Bill

William Noyes, MD

Grand Forks County, Corp of Engineers

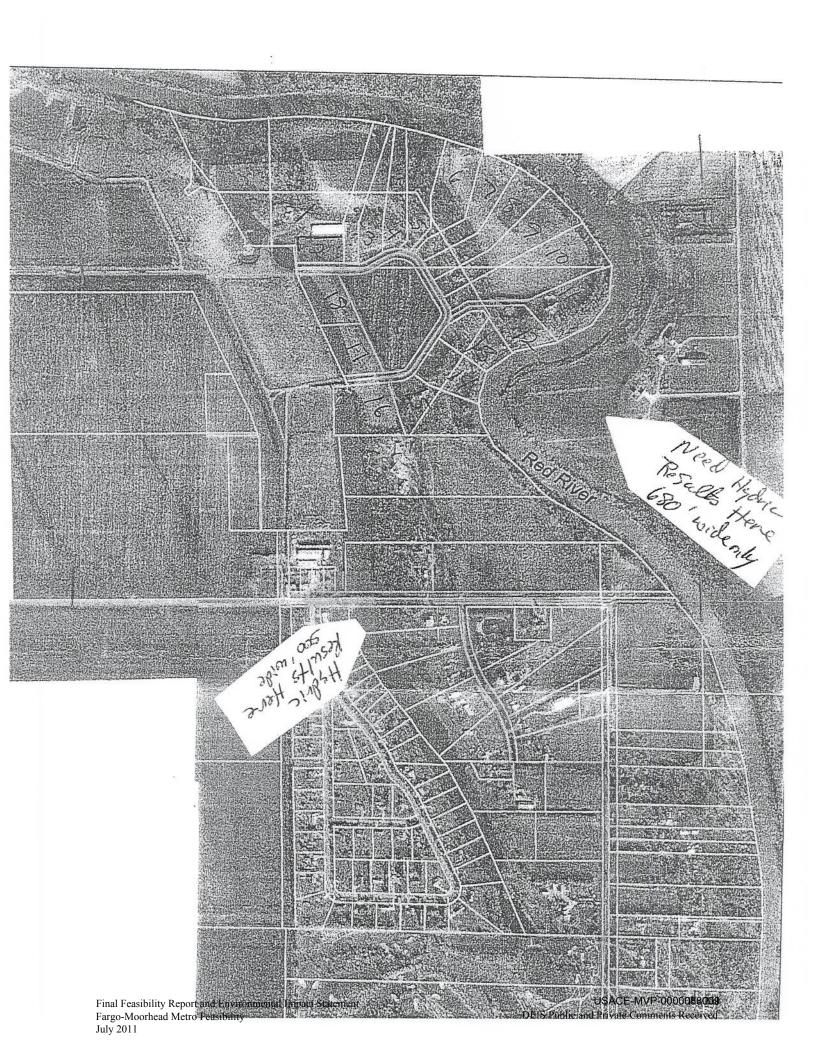
RE: River Impact East Lake Estates/Shady Ridge Estates

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Dated 8-10-10

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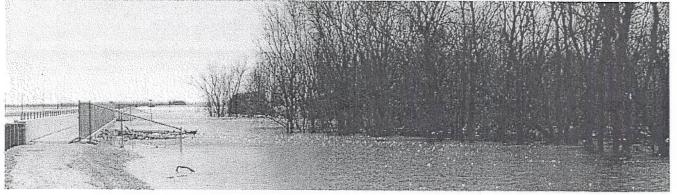
William Noyes











Fargo-Moorhead Feasibility Study

About **Project Goals Project Description Upcoming Meetings Past Meetings** Contacts/Comments



Project Managers:

Craig Evans

email: craig.o.evans@usace.army.mil phone: 651-290-5594, fax: 651-290-5258

Aaron Snyder

email: aaron.m.snyder@usace.army.mil phone: 651-290-5489, fax: 651-290-5258

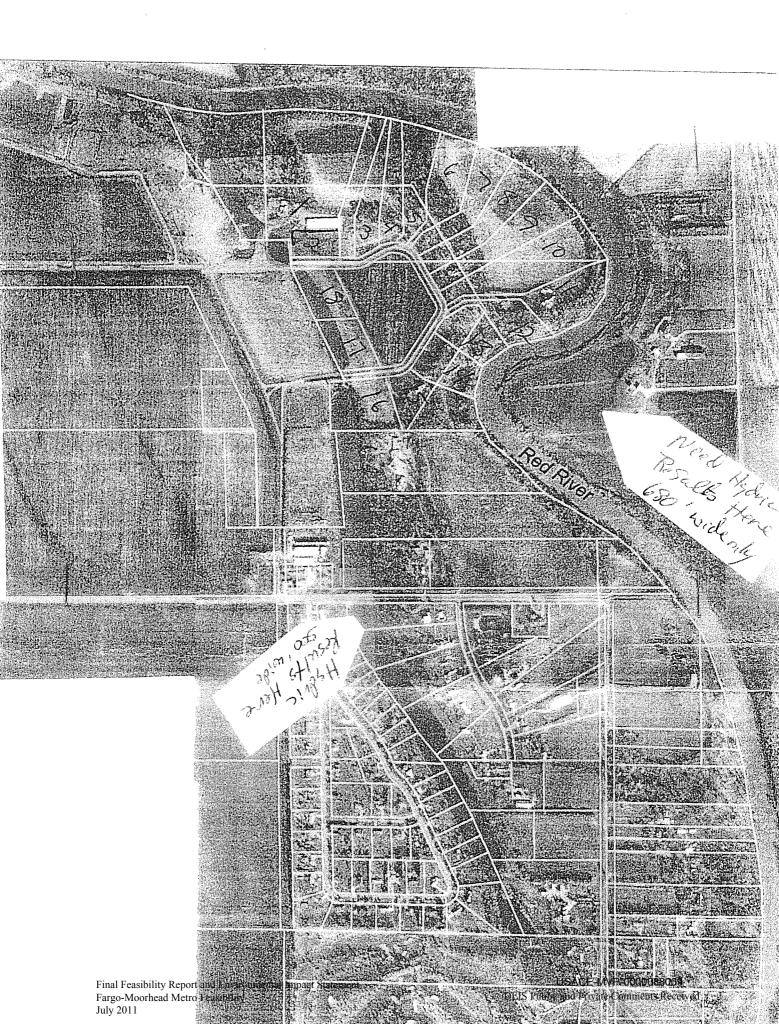
Add a Comment to the Draft Feasibility Report and Environmental Impact Statement

website questions: contact grit.may@ndsu.edu

Grand Forks County, Corp of Engineers

RE: River Impact East Lake Estates/Shady Ridge Estates

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Sincerely, Michellune	



Grand Forks County, Corp of Engineers

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narrows to 680' thus the readings downtown Gran	d Forks and/or Thompson Bridge impact may not be
accurate for our area.	

Dated 8-5-10

Robert J. Rolle Vannie Rolle.

Sincerely,

FARGO DIVERSION CONCERNS

RIVER LEVEL IMPACT STUDY

Grand Forks County, Corp of Engineers

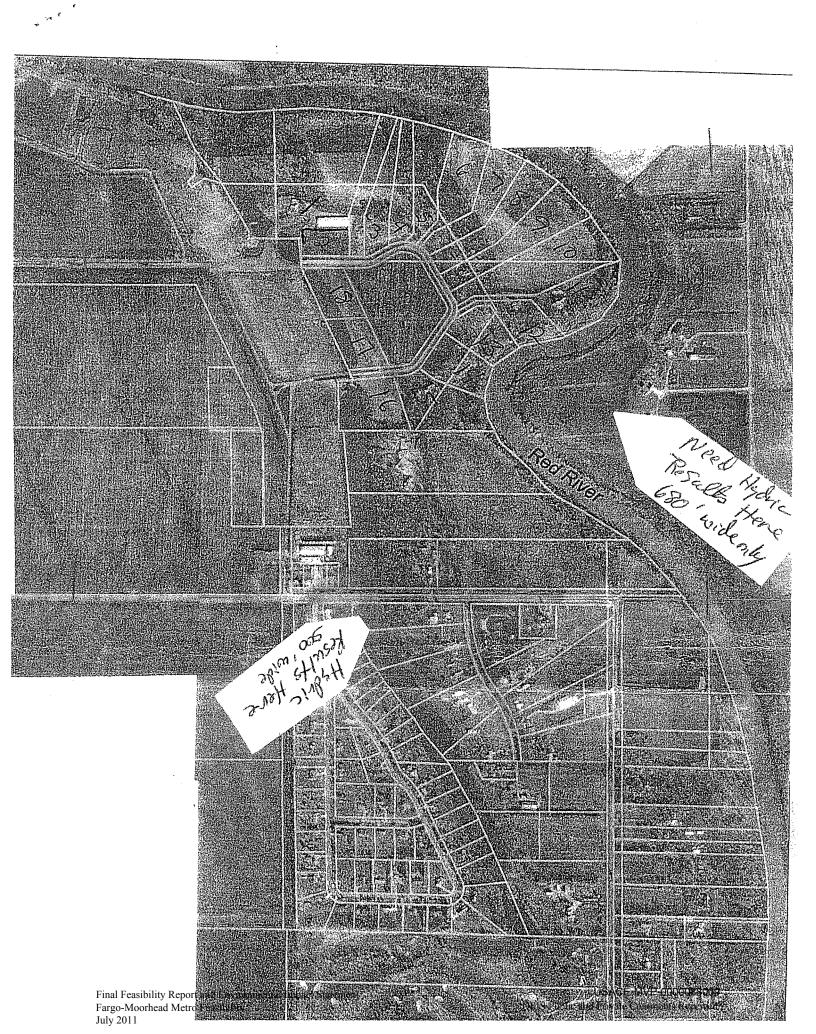
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narrows to 680' thus the readings downto	wn Grand Forks and/or Thompson Bridge ir	npact may not be
accurate for our area.		

Dated 8/5/2010

Sincerely,

Michael L. Sailer, CPA



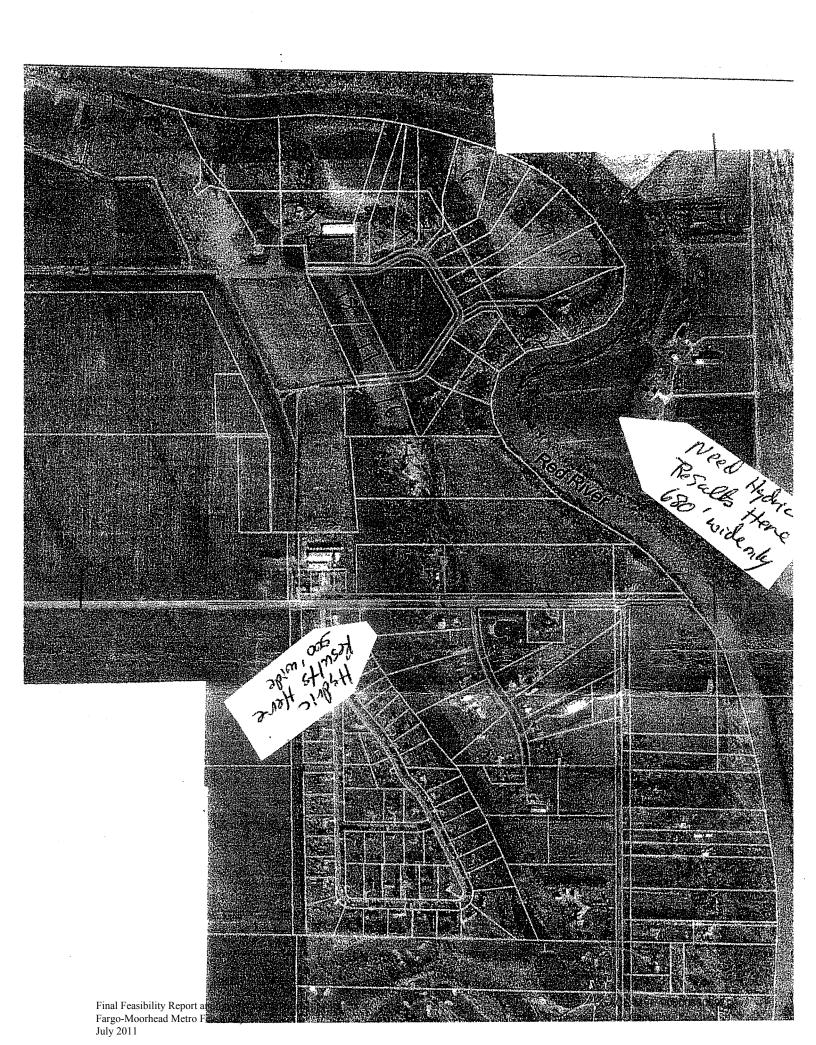
Grand Forks County, Corp of Engineers

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Dated 8/5/10.

Sincerely, Mark Suth



Grand Forks County, Corp of Engineers

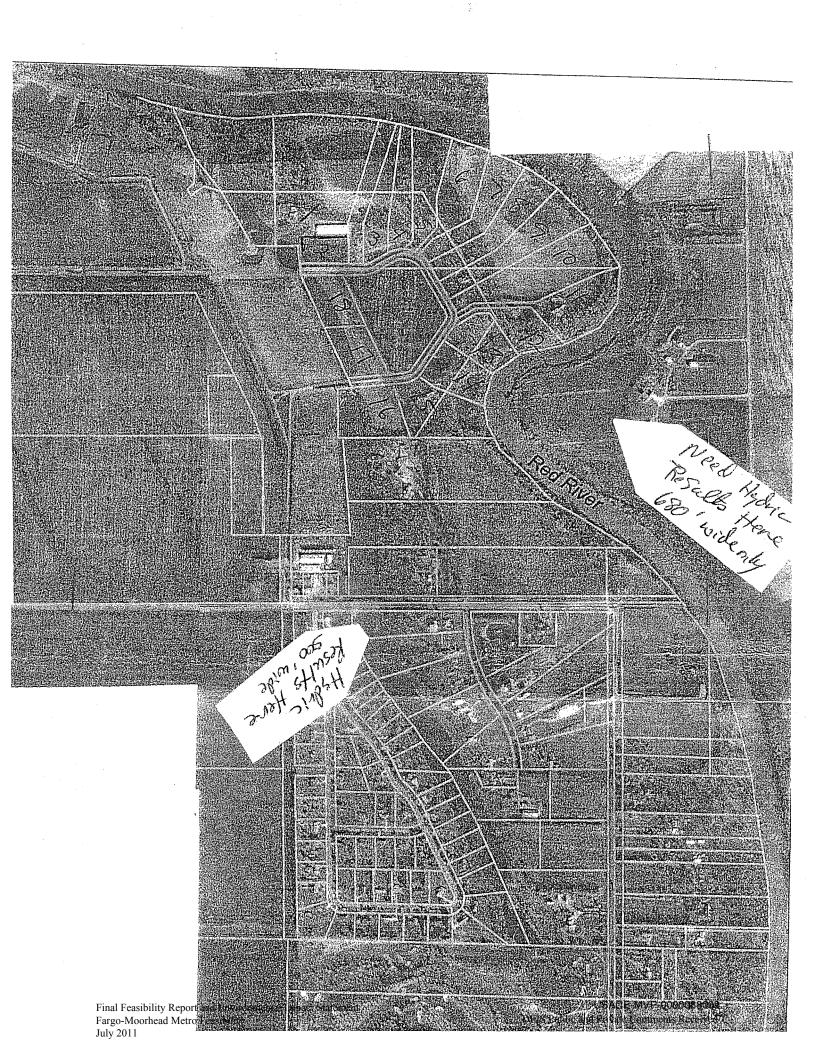
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Toger W Shawer Junit B. Schauer

Sincerely,

USACE-MVP-00000880069
DEIS Public and Private Comments Received



Grand Forks County, Corp of Engineers

RE: River Impact East Lake Estates/Shady Ridge Estates

I live at		and as a
resident of	which is located just	

I am requesting a Hydrology Test be done here to determine the river level. The river narrows to 680' thus the readings downtown Grand Forks and/or Thompson Bridge impact may not be accurate for our area.

Dated 8-12-10

Sincerely,

LARRY P. YOUNG

Jonathan P. Scoll

From:

Sent: Friday, July 09, 2010 3:33 PM

To:

Thomas F. Pursell

Cc:

; Howard Kenison; Jonathan P. Scoll

Subject: Re: (no subject)

Tom,

I will forward the thoughts I have to Diane, I but wanted to sneak this one in on the top of the pile as I thought it was important.

As we had our conference call, it occurred to me one of the hooks we may have is the fact this project is on an extraordinary fast track. When you mentioned we may want them to switch from their preferred plan to their plan b......well no. because plan A is a 35K cfs North Dakota diversion. their plan B is a 35Kcfs Minnesota diversion. Then the USACOE always says they have to study the NED plan, the 20Kcfs MN diversion which in this case is their plan C. All diversions. The corp has openly admitted many times, this is an unprecedented rush job. They are rushing this to meet a Dec. 2010 deadline for funding. They have said, if not for that, they would not be done by Dec 2011.

My view is a rushed project will lend to a poor product, actually the wrong project.

In actuality, they have been brought to town to build a diversion, period. They say they have studied retention, but we have followed their work quite closely and we see no evidence of more than a minor show of effort towards retention study. They have farmed out some of that to local engineering firms who are licking their chops to pick the low hanging fruit they will pick as they tie into their slice of the diversion pie.

To exemplify how woefully short of detail they have been, when they started the study for the Minnesota side, they forgot to invite a stakeholder to the table.......the city of Dilworth. Wow. When questioned by people who are affect by this diversion about where and how many bridges there would be for access to farmers fields, they had no clue. When asked if they had built a diversion under a river before, they said the corp has never taken on that huge a project, but the preferred ND plan calls for crossing FIVE rivers.

Yet they can come up with a projected cost? My guess is they are about half of what it will actually cost, and thats in todays dollars, not 2022 dollars when the project is finished. So I believe part of the EIS should state that this is too rushed, and not all the alternatives have been studied, and Charlie Anderson whom has done a 20% mainstem flow reduction study and modeling can attest to that. I have contacted him and am awaiting his answer.

Thank you for your time.
Terry Guttormson

Jonathan P. Scoll

Subject: (no subject)

I would like to take this opportunity to refute, bullet point by bullet point, the disingenuous comments by the "bully pulpit" Forum, printed in there op ed on Wednesday, July 14, 2010: First Bullet point:

The Us Army Corp of Engineers have said frequently that they will not approve a project that causes sigificant harm.

The truth:

I have been to almost as many USACOE meetings as has been offered, including the one in Hendrum, MN. They are not vague. They tell us they have been brought to Fargo for one purpose and one purpose only. To build a diversion. Period.

At Hendrum, they listened to 27 commentors on why the diversion is the worst flood damage reduction possible. They ended the night with their comments that they were here to build a diversion. We could try to mitigate the damage brought by it, but there was no money in their budget to help, nor did they know if any money in any program to mitigate the effects down stream. This meeting was not even a "speed bump" for their reason to be in Fargo. And an additional 17 inches upon us, the number they reported lately, is not significant harm? Second bullet point:

Mayor Walaker said the city has talked about downstream mitigation since the planning began. This nearly brought a tear to my eye.

The truth:

I attended the first offered public meeting about the diversion at Moorhead State (I know, its MN State University, Moorhead, but I attended in the 70's). When it came time for Q & A I asked if there had been a downstream impact study and if so, what were the findings. Craig Evans fielded that question. I hope they taped it. He answered and told the auditorium full to standing room only capacity, that there had been no down stream impact study. Further, he said, the corp felt no need for such a study because once the water hits the mouth of the diversion, it has a tendency to dissipate rapidly. (I'm not kiddint, he actually said that). No one in Fargo, or the corp was even going to offer a look at down stream impacts untill they were forced to do it by public comments. Now, after being forced to do more study on the affects down stream, they say close to 2 feet additional water will hit us when we are already fighting a flood? Is this significant yet? Nice.

Third bullet point:

Collins Peterson's plan for a million acre feet of storage.

The Truth:

God speed Collin. I hope you can do it. We are counting on you. I know you are a good sincere man and mean what you say. But I have not talked to one person, engineer, attorney, layperson or otherwise, for or against the diversion, for or against retention, that will agree that the aggressive time schedule of 10 years to build above mentioned storage can be met. They say 25 years would be about a 4 times faster than historic construction of such projects. But lets say we get a million acre feet of storage in ten years. Down stream of Fargo, we are supposed to give up the gain that Collins plan achieves for us when the diversion dumps their 2 feet back on us? What

did we gain? Nothing. Why can't we benefit from Collins plan? Forth Bullet Point:

Down stream cities wont have representation on the joint powers board but *likely* will have representation on the technical advisory board.

The truth:

The three biggest lies ever.

- 1. The checks in the mail.
- 2. I'm from the government and I'm here to help you and
- 3. You can't be on the joint powers board that decides everything about the diversion but you *likely* will be on the technical advisory committee. And this will save your towns, schools, churches, farms, farmers, farm land and a complete way of life from at least 17 more inches of water we are sending you at a time when you are fighting your flood fight.

The fact is, we have had one of our members of the Down Stream Impact Work Group ask to be on the joint powers board because we are the ones who will suffer the down stream dump of our water. This person was shut our of any joint powers planning. Further, it has been leaked that much of the planning for the joint powers board has been done behind closed doors at a local engineering firm. I don't think they want us there.

There is so manythings wrong with this diversion and the underhanded way it has come about. We could spend less money on retention, detention and gated storage and protect the entire basin. But that doesn't have the low hanging fruit (at this point) that the local engineering firms are grabbing for and pushing for in their UNBIASED reports on why we need the diversion.

Terry Guttormson Hendrum, MN.

Linda Gavel

From: Sent: To: Cc:	Thursday, July 29, 2010 2:17 PM
Subject:	(no subject)

Kevin.

I was not able to meet you in Hendrum today, my apologies. My cell number is live near Hendrum and my home, my farmland, my business will be wiped out by the Fargo Diversion. But so will at least the first four cities of Georgetown, Perely, Hendrum, and Halstad as well as dozens of other farmers and dozens of small businesses. The city of Hendrum, just prior to all the diversion news, had spent hundreds of thousands developing infrastructure to build a new residential addition to the town. Now, not only can they not sell lots, they cant give them away. People are looking to sell, but cant all because of all the negative news about the diversion and the additional 17 inches of water that the diversion will send our way in a 100 year flood event. Keep in mind, we will be fighting our own 100 year flood event fight as Fargo dumps all their water down stream so they can still golf and use their walking paths. It will kill us down stream.

- * Emergency egress for ambulances, rescue squads, and fire trucks will be cut off for weeks.
- * Businesses will be cut out of normal commerce for weeks.
- * Farmers will be kept from their usual task of spring seeding until too late to try.
- * The school district will have to call off school for weeks because of student safety and bus routes will be under water. It will kill off our school
- * Farm land will be destroyed as the sheet erosion will be enormous as the diversion will send what amounts to another flooding river on top of us when we are already at high levels.
- * The tax base of the western 1/5th of Norman county will dry up.
- * Cities, townships, and counties will be bankrupt as the millions of dollars of infrastructure is destroyed by the excess water sent down stream from the diversion.

The United States Army Corp of Engineers makes no bones about the fact that this is not only the biggest project they have taken on but that the diversion is on the fastest track of any project in the corps history. They have estimated they have cut their normal time to study the project by not months, but years. They have no clear picture of how many bridges they are going to end up with crossing the diversion. They have never crossed a river with a diversion before, but in this project they will cross five rivers. SO HOW CAN THEY COME UP WITH A COST OF 1.5 BILLION FOR THE PROJECT?

Fargo went to DC fully expecting to be successful in leap frogging their 1.5 billion dollar project ahead of some 500 other projects that are on the books waiting for 68 billion for needs in other parts of the country, including New Orleans. Thats arrogance at its finest.

In closing, the one point I would like Grand Forks and East Grand Forks to consider.

-All water retention projects have a comulative affect- if we spend the same amount of money in retention projects, gated storage, on and off channel empoundments to slow the excess flood water untill the Red River can handle it, GF and EGF gets an "add on" to their protection, without adding to their dikes. Up stream flow management could increase their protection from 500 years to 700 year protection. AND more importantly the converse is true. All diversion projects dump some else's problem down stream and your 500 year protection could decrease to 200 year protection, and GF and EGF may be forced to add to their walls.

A Fargo Diversion is the wrong way to manage excess flood water for ALL of us down stream, including Grand Forks and East Grand Forks.

It will only cost more in years to come for down stream folks to mitigate their damages.

Terry Guttormson

Hendrum, MN.

ps: you can use this as an interview to your article, a letter to the editor or how ever you wish. But please use the above facts in some form.

contact numbers:

Mayor of Hendrum, Curt Johanason	
Norman County Commissioner, Steve Jacobson	
Wild Rice Watershed Manger, Diane Ista	
Down Stream Impact Work Group, Terry Guttormson	

Linda Gavel

From:

Thomas F. Pursell

Sent: To: Friday, July 30, 2010 8:34 AM Julie M. Duckstad; Linda Gavel

Subject: Attachments:

FW: (no subject) (no subject)

Another comment.

From:

Sent: Thursday, July 29, 2010 5:51 PM

To: Thomas F. Pursell **Subject:** Fwd: (no subject)

i dont know if this is anymore comment that you need, but its what i sent to the Grand Forks Herald.

Terry Guttormson

Date:

August 2, 2010

To:

USACE

From:

Diane Ista

Re:

Comments to the USACE Fargo-Moorhead Metro Feasibility Report and Environmental

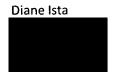
Impact Statement

I am a manager on the Minnesota Wild Rice Watershed District (WRWD) board. The WRWD is made up of all or part of 6 counties, namely, Norman, Mahnomen, Clay, Becker, Clearwater and Polk. Parts of our watershed are located on the Red River about 30 miles north of Fargo-Moorhead. The proposed diversion, according to incomplete modeling of the impacts downstream north of Fargo-Moorhead will divert 12-17 inches of flood waters on the communities, residents, businesses, farmland north of the Metro area to the Halstad MN area.. Houston Engineering, Inc. has completed the downstream impacts to the Red River beyond Halstad, but the USACE has not released this information.

The negligible information provided to the public in order for them to make an intelligent decision on a project, which will impact the lives of those downstream for the rest of their lives and for generations to come, is incomprehensible. The time period allowed for the public to read and comprehend 700 pages of the USACE EIS document, which has not been prepared in "layman's terms", as the Supreme Court has stated as a law, cannot be accomplished with the general public's work and family obligations. This arbitrary deadline was put into effect because of Sen. Byron Dorgan's impending retirement from the Senate and Sen. Dorgan's powerful position as chairman of the water resource committee, which would provide the funds for this project. The Metro Group have set a December 31, 2010 deadline in order to present this to the U.S. House and Senate for funding. The USACE has NEVER in their history pushed a project through in this short timeline. Any rushed project results in a poor product. The USACE also has related that they have never worked on a project where they will be intersecting 5 tributaries draining into a river. Their lack of experience and expertise in this complex project is another point as to why the USACE will deliver a poor product under the self imposed time restraints. If the USACE F-M Metro project proves through thorough, scientific, technical and legal research that this is a worthy project for the benefit of all in the Red River Valley, the funding will be there!

As a water manager I am involved with the USACE projects on a regular basis. The usual professional response to the timeline to complete the feasibility study and environmental statement is 2 years. The USACE F-M Metro project timeline is a disaster waiting to happen. The present feasibility and EIS study they have presented for comments is severely lacking in technical research for alternatives to the diversion, which are readily available through the water management groups active in the Red River Valley Basin over the years.

The WRWD Water Management Plan states that any water project must meet the criteria of benefit for all the public in the WRWD. The USACE F-M Diversion is a benefit for a very small percentage of those living in the Red River Valley. This project MUST meet the criteria to fairly benefit all not a few.



S Johnson Mark 3618 19th Ave. NW West Fargo, ND 58078

CETO Dianelete

To Whom It May Concern

My name is Sandy Johnson-Mark, my life is in the path of the Fargo-Moorhead Diversion. Thirty-one years ago we built our home by our selves with five children underfoot. We planted every tree on the 5.5 acres. The land was given to us by my father, it's connected to the land my family has farmed since my great-grand parents came here from Sweden. We are a six experation family connected to this

are a six generation family connected land.

The diversion will go through And it, eliminate my home brothers farmstead, and put the sitting on the west edge of it the farming operation out of DAST 15 years have week At North Dakota State A green house technition in the Aq A5 for my home which I tought+ very hasty divorce,

Jur Story is one of many that will whether the Diurrsion, Red River or either side the 0+ down Stram Stopped to teal needs to be Diversion need 40 realize there are U.D 4 Mr. than people rust We work and Where as well. We can't destroyed or gone. Thank

USACEMYP-0100038069/

My father's parents purchased our farm in 1933. My father was born and raised on the farm, where my mother and he have resided since they were married. I was born in and my sister and I were also raised here.

Yes, I have several childhood memories from the farm, like most people do of their childhood home. Memories of fun times, climbing trees, mud pies, learning to ride bike, holidays with relatives...etc. But more importantly, I have memories of growing up as a farmer's daughter. The values I have been taught and the dedication and hard work my parents instilled in me are incorporated in my daily life. I have grown up respecting nature and my community. I know the value of being dependable worker and the value of family.

Unlike my sister, I have decided not to take on farming as a profession. I have since moved to Fargo where I work and my husband and I raise our three boys. Since my husband also grew up on an agricultural farm in western North Dakota, we have similar values. These are values we are instilling in our children to make them respectful and great citizens of this community.

Everything I am, everything I want my children to be, could not exist if I was not raised on the farm I still call my home. My children, ages and, have more farm tractors as toys then my sister and I had Barbie dolls growing up. They beg to go out to the farm, to ride in the tractors, to watch grandpa work in the shop, to ride in the combine for hours during harvest. If one or more of my children decide they would like to assist their aunt in farming, they deserve the chance. They deserve for the land to be there to farm. They deserve to continue the legacy their great-grandfather started in 1933 when he began the homestead.

There are so many stories like this, of hard working farmers who have given their lives to the land as my parents have done. This way of life for several families in our community will be destroyed. No one has the right to take that away from them, or from my children.

Thank you,
Tami Richards Nester
Fargo, ND (Formerly Argusville, ND)

In 1933, my father and mother, Robert and Agnes Richards, purchased the farm, of which I have resided my entire life. I have two daughters, Sharla and Tami, and three grandsons. As a farmer, I want to pass the farm on to the next generation. My oldest daughter, Sharla, is going to take over our family farm next year, in 2011. But there is no way she will be able to continue farming without the land. My wife, Liz, and I also need not only the land, but our equipment, to continue with our way of life. And with the planned location of the diversion to date, our entire farm is at jeopardy. The diversion will meet back up with the Red River a half mile south of our farm. No amount of ring dikes can protect us.

My grandfather, Rudolf Sebestl, purchased his home farm in 1896 for \$2300 and began farming. My grandparents' home farm is across the road, to the north, of our current farmstead. At that time, the bridge connecting North Dakota to Minnesota had just been completed. In fact, my grandfather was the last man to operate the ferry on the Red River prior to the completion of the bridge. After the passing of my mother's brother, my wife and I purchased some of the land that had belonged to my grandfather.

As I mentioned before, the land that I have, I would like to pass on to my children, which, in turn, would be passed on to theirs; however, none of this is possible if the diversion goes through. We are not capable of surviving if we are given more water. Our entire farm, our way of life, will be swallowed up by the Red River. In 2009, our well, which supplies our entire farm with water, was broken due to the amount of overland flooding. If the diversion dumps into our back yard, we will have no choice but to dig a new well. And where shall I send the bill once that is completed? Surely the City of Fargo will pick up the tab. After all, we are told to "trust" them!

There is also proof that many Native Americans lived and camped on the ground surrounding the Red River. The Sioux Tribe is believed to have lived in the area where the Sheyenne River meets the Red. That is only a few miles south of our farmstead. Over the years, we have found numerous hammers, stones, and arrow heads. Several other people along the river have found similar items.

This is a family farm. My father worked his entire life – and died – on this very farm. I was born and raised here, as were my children. There are three generations of family that call this farm home. But it goes back even further. My grandfather, although born in Austria, died on this land. And my mother was born here and died here. This is our family's history. This is who we are. We were born here. We farm here. We live here. And now my daughter wants to have the same opportunity. She wants to farm here. She wants to live here. How can you take that opportunity away from her? How can you look her in the eye and tell her that she doesn't matter, that she doesn't get that chance?

With the proposed sales tax, I have decided to begin removing my business from Fargo and taking it to other cities. Why in God's name would I give money to a city that could care less what happens to me and my family, not to mention all the other affected farms and communities downstream? And with all of this water, there is bound to be needed

repair to the hundreds of bridges and roads necessary to make this work. The county will no doubt have to pay for that. And is that fair to pay again?

And what about the people and communities who live in the western part of North Dakota? It is not their responsibility to pay for this. They are making all the money. They deserve to spend it on what they need. And dumping more water on farms and communities downstream is not what we need.

Thank you, Charles Richards Argusville, North Dakota My mother-in-law, Agnes (Sebestl) Richards, married Robert Richards and they bought the farm I have lived on since I married my husband, Charlie, in 1971. The farm is located on the Red River, across from the old which is northwest of

Charlie's dad farmed, first with horses, then with tractors. Robert was also one of the first farmers to raise sugarbeets in the Red River Valley. The beets were hoed, harvested, and topped by hand. He was a very hard worker and quite proud of his farming operation. He also raised live stock until they did not have an adequate supply of water. (How quickly we forget there are dry years, too.)

Charlie and his brother, Leonard, both farmed together with their father until his passing in May, 1965. Then Leonard and Charlie took over the family farm, which continued to grow. The two of them farmed together until Leonard's death in 1994. Leonard's sons chose not to farm at that time. Charlie, however, wanted to keep farming and wanted to keep, not only what his parents created, but also his grandparents, going. Both my husband and I worked very hard to get to where we are today. As a family, we have fought together, worked together, and stayed together. We have loved every minute of our life, together on this farm. Sure, there have been trying years, but in the end, we always survive. We have been able to raise our two daughters here, Sharla and Tami. Next year, Sharla is planning to take over our family farm. She has been farming on and off since high school.

I'm writing this to give you a picture because, to be frank, Fargo-Moorhead has no idea the history of our farm, the families, the towns and businesses, the roads, the farmlands, the homes and most importantly, our hearts that will be destroyed. We have been here for many, many years. I continue to get angered because they are building on land that they know will flood, like WalMart, the new high school, houses, churches and other businesses. It's no wonder why the streets flood, basements flood, the dome floods – they build streets and use them as ditches and build roads and use them as dikes. We were here, established first, yet Fargo continues to expand on an area that is a known flood plane with no protection. Yet once it floods, FEMA buys them out. We had to build and pay for our protection.

They always complain about the farmers and the chemicals they are dumping into the Red River. Well, all I have to do is drive around and look at the lawns in Fargo-Moorhead. I guarantee they are being fertilized and sprayed to kill weeds. And how often are they spraying? Not only that, but Fargo-Moorhead dumps their sewage into the river. We see the effects of that. We see plugs and foam floating by our farm on the river. Fargo-Moorhead needs to take a long, hard look in the mirror.

Then they have the audacity to want to put a city tax in place to pay for this diversion. And for what? So we can pay this tax and then take all your water, just dump it on us? They need to put the cart in front of the horse. They should tax the people that are getting the greatest benefit from the diversion and break it down from there – taxing people according to their benefit. There should also be funding in place for the maintenance and

upkeep of the diversion, but also all of the bridges, culverts, and roads. And this funding should be considered for the lifetime of the diversion, not just for the next five, ten, or 15 years. The diversion should never start until they have the money needed from Fargo-Moorhead, secured.

Both in 1997 and 2009, we were stranded out here for a month. We had no way in and no way out. It is our experience that people think it is our own fault that we have to fight a flood. After all, we chose to live here. Well, it wasn't until the "powers-that-be" decided to start moving the natural course of the water that we had a problem. And you know what, we pay taxes, too. When do we get our say? When do people start protecting us?

We have decided to start taking our business outside of Fargo-Moorhead. We recently purchased a vehicle in Grand Forks, ND. And we will continue to do so until this is stopped.

Interesting to note, during all of the floods, the F-M area has relied on the thousands of college students to help with sandbagging. Where, exactly, do you think these individuals have come from? Oh yes, they come from the very rural communities that they are going to destroy with this diversion. Fargo-Moorhead would not be the community it is today if it weren't for the rural communities. We are volunteers in their hospitals, in their schools.

After the flood of 1975, my husband and brother-in-law put up a ring dike around our farm. And since then, we have had to go through thunderstorms, boats, gas pumps and so much more. But we did it, just like everyone before us did. And we paid for it ourselves, and have maintained it ourselves. We lost our driveway in 1997 and 2009. And we repaired it. I truly believe those individuals who are benefiting the most from this diversion should be the ones who are taxed the most, all the way down the line. Those of us outside the diversion, we should not be taxed at all. Why should we be?

There are several suggestions I have that would be much better suited for an entire Red River basin solution:

- 1) put holding ponds in upstream, the middle, and downstream
- 2) Fargo-Moorhead needs to stop building in the flood plane. Instead, start building holding ponds on the land. Make them hold some of their own water.
- 3) Let water out of the dams and keep the levels lower so if we do get a heavy rain, we are able to handle it.
- 4) Devils Lake was dry at one time. Then, they drained all the small ponds. Now they have a mess and want to dump it on someone else. Make them clean up their own mess.
- 5) But if the diversion goes through, then I believe those benefiting from the diversion need to be taxed. They also need to pay for the maintenance indefinitely. And, for those of us losing land, the value of it needs to be valued at a lifetime of profits lost, not just the current, one-year-only value of the land.

I am writing to ask Fargo-Moorhead to truly consider what they are planning to do. This will affect our livelihood in a huge way, and not only because my husband's family purchased this farmstead in 1933. They are destroying all of the memories we have instilled in us. They are destroying our sense of community and working for the greater good. We have both learned, and taught our daughters that through hard work, crop failures, homestead damage, sickness, and even death, you never give up. We always kept working, even when things were not at their best, we never gave up.

So, we will not give up and let the people who are unfamiliar with a farmer's work ethic come and take away our home. If you work as a family, you will succeed. God did not give us this land so we could destroy it. He put us here to protect it so we can feed mankind.

Thank you for your time.

Sincerely, Elizabeth Richards Argusville, North Dakota My name is Sharla Richards. The purpose of this letter is to hopefully convey how this diversion will affect me, not only as a farmer, but as a person.

Where do I even begin? I guess the beginning is always good. In 1933, my grandfather purchased the farm that I have called home for 34 years. He purchased this farm with a dream – one that he and my grandmother raised a family of four on, a farm that he passed down to his sons after his death, a farm that my uncle, until his death in 1994, and my father dreamed they would pass to their children, a farm that my father still farms today. But now, all of that is in jeopardy. As the plan is currently designed, the diversion is set to meet up with the Red River a half mile south of my farm, the farm I hoped to someday leave to my children. But this farm means so much more to me than a paycheck, it is my home.

When I was in college, (I graduated from the with a degree in one of my assignments for my writing class was to write a paper about my home, what it meant to me. I so struggled with this assignment because my home wasn't about the structure, but my home, to me, was my farm, the land on which my house resided. I had a very difficult time discerning between the two. I couldn't picture one without the other. To me, they are one in the same. For without my farm, I would have no home. I know, people always comment on how wherever your family is, you are home. But to me, that is an impossible task – to see my family any place other than on this very farm. Maybe it is the farmer in me, but it is this very farm that makes up my home.

Growing up, my younger sister and I had an amazing life. We were given the freedom to explore this farm, every inch of it. We would climb trees all summer long. We made mud pies and stayed up until the sun set. We would laugh and dream and share our secrets. Individually, we would come to create our own version of our futures.

I always knew I wanted to farm. From an early age, I begged my dad to let me accompany him to the field. I can remember driving a combine at the age of ten. I can remember digging fields in the summer, after wheat harvest. And even as children, my sister and I spent all day in the combine with my dad. All of our memories of growing up are in that combine. As I got older, I took such pride in knowing that I was farming — that I was helping create a way of life.

I would find ways to leave high school early so I could be out in the field. To me, working in the field meant freedom. It meant connecting with a greater part of myself. Sure, getting out of Advanced Algebra was a short term solution, but the greater goal I envisioned for myself never left my sight. I was born to farm.

Over the years, I have had the privilege to travel, and sometimes live, in various parts of the country. You see, there were moments in my early adult life in which I questioned if farming was truly my dream. I knew I wasn't like other girls. I didn't long to graduate from college and work in the corporate world. But as an impressionable young girl, I thought maybe I could fit in if I took their path. It's not common for young girls to come

back and take over the family farm. And with no brothers, I knew my dad would have no one to leave the farm to. So I wanted to make sure that farming was something I wanted to do, not something I did for my dad. My parents have always been quite frank when it came to my decision. Never once did they make me feel that farming was something I had to do for my father. They truly want me to be happy. But no matter where I went, or where I lived, I always, always missed my home. I always came back. Something always drew me in. I never could put in words what it was, until someone has decided to take it away. Now please don't misinterpret my words. It is not because of the diversion that I have now decided to farm. This realization came to me a few years back. But over the course of the last seven months, I have come to see what, exactly, I stand to lose.

My farm is a beautiful haven on which all of my hopes and dreams are built. It is the place where I seek answers. It is where I look up at the cloudless sky and see the entire universe of stars. It is where I find peace in an otherwise chaotic world. It is where I come after a broken heart. It is where I wonder, with all the openness of the world, what I am going to do next. It is my sanctuary. It is my safe haven. It is my home.

Fall is my absolute favorite time of year. Fall means beautiful foliage. Fall means cool nights with crisp air. It means smelling the dust of combines. It means harvest. Typically, we raise wheat and soybeans. But for many years, we also raised sugarbeets. I love harvest. I love combining the crop. Having watched the crop mature all season, it is ready to be harvested. And with me, I have grown and matured.

Every year, the cycle is the same. And every year, a piece of me grows. And with that growth comes a stronger connection to my farm. Next year, I plan to take over my dad's farm and make it my own. And with that comes all of my hopes and dreams for continuing on with something I could never live without.

Farming isn't just a way to make a living or something I have chosen to do because I can't do anything else. Farming is the only way I know how to live. It is the very reason for my being. It is truly my life. I hope to expand my farm into vegetables. It is my vision to feed people of my community with home-grown, chemical-free vegetables. It is my vision to not only feed the world, but to heal it.

There are many ways to farm, but to me, the only way is to do it with your heart. And how can I be asked to sacrifice my heart? How can I dare leave a place that has provided me with an education never to be found in books? There is no place in the world that I would rather be, and trust me, I have searched. This farm is me. Every time a rain destroys our crops, I realize what it takes to survive. Every year that is filled with a bountiful harvest, I see what it means to be truly grateful. Every flood that surrounds my farm with water makes me see what hard work and tenacity teaches. This farm has taught me respect. It has taught me how to work hard and never, no matter what happens, to give up. It was taught me to see beauty in something so simple as a field of golden wheat on a hot August day. This farm has taught me that a way of life doesn't mean sacrificing your values or who you are. This farm has taught me who I am.

As individuals, we create a family. And as a family, we create a community. And as a community, we create mankind. I ask you, how can my community disregard me, my family, and the many individuals and families that live downstream to separate ourselves from the greater whole. How can one group of individuals completely disregard those that help create their community? My farm has taught me that no matter what, we are in this together. And all I ask is that Fargo-Moorhead stop and think about those of us who truly believe that we are, after all, one.

Thank you very much for your time.

Sincerely, Sharla Richards Argusville, North Dakota

Julie M. Duckstad

From:

Thomas F. Pursell

Sent:

Thursday, July 22, 2010 9:06 AM

To:

Jonathan P. Scoll; Julie M. Duckstad

Cc:

Linda Gavel

Subject: FW: Fargo-Moorhead Diversion

From:

Sent: Thursday, July 22, 2010 1:37 AM

To: Thomas F. Pursell

Subject: Fargo-Moorhead Diversion

To: Lindquist Law Firm From: Dean A. Rust

I am a landowner in the path of infamous Diversion located four miles west of Harwood ND. Having met along with the Hendrum MN group I will give my opinion on this morally wrong project. It is wrong to permanently take over 6000 acres out of annual crop production. The Diversion of water during major flood events will actually be needed only 2% of the time. Usually around 20-30 days once in every four years on average. The Forum indicated there were 10 such flood occasions in the last 41 years. It is also wrong to ask the Federal Government to fund such an enormous and costly project in these perilous economic times. I have been reading that this project will in itself promote economic good times for the city of Fargo. Those comments truly are wrong. Public announcements broadcast on local TV have indicated that we here in the Red River Valley have not participated in the economic downturn of the Nation. That statement is followed by "Invest In Your Valley". Farm owners and operators bring plenty of business to the two Cities of Fargo and Moorhead. To ask them to invest there most valuable asset to this Diversion is very hard to take. I feel it is wrong to only protect the Two Cities and leave the down stream citizens, towns, and other subdivisions with the extra burden of higher flood levels that this Diversion will cause. The Army Corps of Engineers have conducted a soil boring near my land on the County Right of Way nearly a month ago and now are asking me to allow two more soil core samples. I have to believe this request is not valid. The legal course of action against me and other preliminary costs are being wasted in my opinion. This Diversion is much too distant from the course of the Red River and therefore crosses five other Rivers. Not to mention Interstate 94 & 29, Railroads, Power Lines, Telephone & Fibre Optics, Rural Water Systems, County and Township Roads, and several Legal Drains. The worst of all is the problem of flood water backing up inside the Diversion Protection Area. This project has many more flaws that could make it the folly of the century.

From: <u>National Wildlife Federation</u> on behalf of <u>Guy Bateman</u>

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Date: Tuesday, August 03, 2010 6:05:36 PM

Aug 3, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

I urge you to find an alternative to the proposed \$1.4 billion diversion channel to divert Red River flows around Fargo and Moorhead, by evaluating less expensive, longer-term solutions. Specifically, I urge you to:

- develop an integrated, basin wide evaluation of flood damage reduction and better water management strategies before committing more than one billion dollars to the construction of "The Big Ditch";
- develop an alternative that evaluates using wetland restoration as a primary tool for flood management this evaluation should consider various levels of wetland restoration, including restoring 100,000 acres and 250,000 acres; and
- develop an alternative that combines wetland restoration with other water retention strategies, including the "Waffle"® proposal and the Red River Basin Commission Flow Reduction Strategy.

Before investing huge amounts of money in an environmentally destructive project, I urge you to fully address the potential for flood damage reduction through strategic water storage in the form of wetland restoration, waffling, and other water retention systems.

Sincerely,

Dr. Guy Bateman

From: <u>National Wildlife Federation</u> on behalf of <u>Richard Berg</u>

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Date: Tuesday, August 03, 2010 6:05:35 PM

Aug 3, 2010

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Sincerely,

Mr. Richard Berg

From: <u>National Wildlife Federation</u> on behalf of <u>Danielle Billington</u>

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Date: Tuesday, August 03, 2010 5:35:32 PM

Aug 3, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

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Sincerely,

Ms. Danielle Billington

From: <u>National Wildlife Federation</u> on behalf of <u>Dean Borgeson</u>

To: <u>Snyder, Aaron M MVP</u>

Subject: Please develop an alternative for flood control in the Red River basin

Date: Tuesday, August 03, 2010 7:35:45 PM

Aug 3, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

I urge you to find an alternative to the proposed \$1.4 billion diversion channel to divert Red River flows around Fargo and Moorhead, by evaluating less expensive, longer-term solutions. Specifically, I urge you to:

- develop an integrated, basin wide evaluation of flood damage reduction and better water management strategies before committing more than one billion dollars to the construction of "The Big Ditch";
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- develop an alternative that combines wetland restoration with other water retention strategies, including the "Waffle" ® proposal and the Red River Basin Commission Flow Reduction Strategy.

Before investing huge amounts of money in an environmentally destructive project, I urge you to fully address the potential for flood damage reduction through strategic water storage in the form of wetland restoration, waffling, and other water retention systems.

Sincerely,

Mr. Dean Borgeson

National Wildlife Federation on behalf of Alice Bowron From:

Snyder, Aaron M MVP To:

Subject: Please develop an alternative for flood control in the Red River basin

Tuesday, August 03, 2010 6:35:39 PM Date:

Aug 3, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

I urge you to find an alternative to the proposed \$1.4 billion diversion channel to divert Red River flows around Fargo and Moorhead, by evaluating less expensive, longer-term solutions. Specifically, I urge you to:

- develop an integrated, basin wide evaluation of flood damage reduction and better water management strategies before committing more than one billion dollars to the construction of "The Big Ditch":
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Before investing huge amounts of money in an environmentally destructive project, I urge you to fully address the potential for flood damage reduction through strategic water storage in the form of wetland restoration, waffling, and other water retention systems.

Sincerely,

Ms. Alice Bowron

USACE-MVP-00000880289

From: <u>National Wildlife Federation</u> on behalf of <u>Leslie Brown</u>

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Date: Tuesday, August 03, 2010 6:05:38 PM

Aug 3, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

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Sincerely,

July 2011

Mrs. Leslie Brown

From: <u>National Wildlife Federation</u> on behalf of <u>Kathleen Burek</u>

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Date: Tuesday, August 03, 2010 5:35:36 PM

Aug 3, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

I urge you to find an alternative to the proposed \$1.4 billion diversion channel to divert Red River flows around Fargo and Moorhead, by evaluating less expensive, longer-term solutions. Specifically, I urge you to:

- develop an integrated, basin wide evaluation of flood damage reduction and better water management strategies before committing more than one billion dollars to the construction of "The Big Ditch";
- develop an alternative that evaluates using wetland restoration as a primary tool for flood management this evaluation should consider various levels of wetland restoration, including restoring 100,000 acres and 250,000 acres; and
- develop an alternative that combines wetland restoration with other water retention strategies, including the "Waffle" ® proposal and the Red River Basin Commission Flow Reduction Strategy.

Before investing huge amounts of money in an environmentally destructive project, I urge you to fully address the potential for flood damage reduction through strategic water storage in the form of wetland restoration, waffling, and other water retention systems.

Sincerely,

Ms. Kathleen Burek

From: <u>National Wildlife Federation</u> on behalf of <u>Robyn Carmichael</u>

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Date: Tuesday, August 03, 2010 4:35:25 PM

Aug 3, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

I urge you to find an alternative to the proposed \$1.4 billion diversion channel to divert Red River flows around Fargo and Moorhead, by evaluating less expensive, longer-term solutions. Specifically, I urge you to:

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Sincerely,

Ms. Robyn Carmichael

National Wildlife Federation on behalf of Melissa Cathcart From:

Snyder, Aaron M MVP To:

Subject: Please develop an alternative for flood control in the Red River basin

Tuesday, August 03, 2010 8:06:05 PM Date:

Aug 3, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

I urge you to find an alternative to the proposed \$1.4 billion diversion channel to divert Red River flows around Fargo and Moorhead, by evaluating less expensive, longer-term solutions. Specifically, I urge you to:

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Sincerely,

Ms. Melissa Cathcart

USACE-MVP-00000880289

From: <u>National Wildlife Federation</u> on behalf of <u>Cher Johnson</u>

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Date: Tuesday, August 03, 2010 6:05:36 PM

Aug 3, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

I urge you to find an alternative to the proposed \$1.4 billion diversion channel to divert Red River flows around Fargo and Moorhead, by evaluating less expensive, longer-term solutions. Specifically, I urge you to:

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Sincerely,

Ms. Cher Johnson

From: <u>National Wildlife Federation</u> on behalf of <u>Pamela Clinton</u>

To: <u>Snyder, Aaron M MVP</u>

Subject: Please develop an alternative for flood control in the Red River basin

Date: Tuesday, August 03, 2010 9:06:22 PM

Aug 3, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

I urge you to find an alternative to the proposed \$1.4 billion diversion channel to divert Red River flows around Fargo and Moorhead, by evaluating less expensive, longer-term solutions. Specifically, I urge you to:

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Sincerely,

Ms. Pamela Clinton

From: <u>National Wildlife Federation</u> on behalf of <u>Richard Cunningham</u>

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Date: Tuesday, August 03, 2010 6:36:02 PM

Aug 3, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

I urge you to find an alternative to the proposed \$1.4 billion diversion channel to divert Red River flows around Fargo and Moorhead, by evaluating less expensive, longer-term solutions. Specifically, I urge you to:

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Sincerely,

Mr. Richard Cunningham

From: <u>National Wildlife Federation</u> on behalf of <u>Susan Dzieweczynski</u>

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Date: Tuesday, August 03, 2010 7:35:45 PM

Aug 3, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

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Sincerely,

Ms. Susan Dzieweczynski

From: <u>National Wildlife Federation</u> on behalf of <u>Sue Eastling</u>

To: <u>Snyder, Aaron M MVP</u>

Subject: Please develop an alternative for flood control in the Red River basin

Date: Tuesday, August 03, 2010 7:05:41 PM

Aug 3, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

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Sincerely,

Mrs. Sue Eastling

From: <u>National Wildlife Federation</u> on behalf of <u>Erica Johnson</u>

To: <u>Snyder, Aaron M MVP</u>

Subject: Please develop an alternative for flood control in the Red River basin

Date: Tuesday, August 03, 2010 6:05:35 PM

Aug 3, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

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Sincerely,

Ms. Erica Johnson

From: <u>National Wildlife Federation</u> on behalf of <u>BRANDON Evans</u>

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Date: Tuesday, August 03, 2010 6:35:42 PM

Aug 3, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Mr. BRANDON Evans

From: <u>National Wildlife Federation</u> on behalf of <u>dwight fellman</u>

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Date: Tuesday, August 03, 2010 6:05:38 PM

Aug 3, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Mr. dwight fellman

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Richard Fish

Sent: Tuesday, August 03, 2010 6:36 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 3, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Mr. Richard Fish

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Michael

Gilgosch

Sent: Tuesday, August 03, 2010 6:06 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 3, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Mr. Michael Gilgosch

From: National Wildlife Federation [National Wildlife Federation @nwf.org] on behalf of Vincent

Gormley

Sent: Tuesday, August 03, 2010 5:36 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 3, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Mr. Vincent Gormley

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Ron Haglind

Sent: Tuesday, August 03, 2010 6:06 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 3, 2010

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Sincerely,

Mr. Ron Haglind

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Nancy Hale

Sent: Tuesday, August 03, 2010 9:06 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 3, 2010

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Sincerely,

Ms. Nancy Hale

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Nancy Hart

Sent: Tuesday, August 03, 2010 6:06 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 3, 2010

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Sincerely,

Ms. Nancy Hart

From: National Wildlife Federation [National Wildlife Federation@nwf.org] on behalf of Cathleen

Hauenstein

Sent: Tuesday, August 03, 2010 5:36 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 3, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Ms. Cathleen Hauenstein

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Jon Hayenga

Sent: Tuesday, August 03, 2010 8:06 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 3, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Mr. Jon Hayenga

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of K Helms

Sent: Tuesday, August 03, 2010 9:06 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 3, 2010

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Sincerely,

Ms. K Helms

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Fran Hormel

Sent: Tuesday, August 03, 2010 6:36 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 3, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Ms. Fran Hormel

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of serena howe

Sent: Tuesday, August 03, 2010 6:36 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 3, 2010

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Sincerely,

Miss serena howe

From: National Wildlife Federation [National Wildlife Federation@nwf.org] on behalf of Rose Hughes

Sent: Tuesday, August 03, 2010 5:35 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 3, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Ms. Rose Hughes

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Caitilin F.

Kane Caitilin F. Kane Tuesday, August 03, 2010 5:36 PM Sent:

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 3, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Ms. Caitilin F. Kane Caitilin F. Kane

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Dorothy

Karlsen

Sent: Tuesday, August 03, 2010 6:36 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 3, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Ms. Dorothy Karlsen

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Lubes

Khazanovich

Sent: Tuesday, August 03, 2010 7:06 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 3, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

I urge you to find an alternative to the proposed \$1.4 billion diversion channel to divert Red River flows around Fargo and Moorhead, by evaluating less expensive, longer-term solutions. Specifically, I urge you to:

- develop an integrated, basin wide evaluation of flood damage reduction and better water management strategies before committing more than one billion dollars to the construction of "The Big Ditch";
- develop an alternative that evaluates using wetland restoration as a primary tool for flood management
- this evaluation should consider various levels of wetland restoration, including restoring 100,000 acres and 250,000 acres; and
- develop an alternative that combines wetland restoration with other water retention strategies, including the "Waffle" proposal and the Red River Basin Commission Flow Reduction Strategy.

Before investing huge amounts of money in an environmentally destructive project, I urge you to fully address the potential for flood damage reduction through strategic water storage in the form of wetland restoration, waffling, and other water retention systems.

Sincerely,

Ms. Lubes Khazanovich

From: National Wildlife Federation [National Wildlife Federation@nwf.org] on behalf of Margaret

Klette

Sent: Tuesday, August 03, 2010 8:36 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 3, 2010

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Sincerely,

Ms. Margaret Klette

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Karl Knutsen

Sent: Tuesday, August 03, 2010 5:36 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 3, 2010

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Sincerely,

Mr. Karl Knutsen

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Randall

Kroening

Sent: Tuesday, August 03, 2010 9:06 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 3, 2010

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Sincerely,

Mr. Randall Kroening

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Laura

Kroeten-Bue

Sent: Tuesday, August 03, 2010 7:06 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 3, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Dr. Laura Kroeten-Bue

From: National Wildlife Federation [National WildlifeFederation@nwf.org] on behalf of Lewis

Kuhlman

Sent: Tuesday, August 03, 2010 7:36 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 3, 2010

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Sincerely,

Mr. Lewis Kuhlman

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Brian Kummer

Sent: Tuesday, August 03, 2010 6:36 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 3, 2010

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Sincerely,

Mr. Brian Kummer

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Louann

Lanning

Sent: Tuesday, August 03, 2010 9:06 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

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Sincerely,

Ms. Louann Lanning

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Elaine Leach

Sent: Tuesday, August 03, 2010 8:36 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

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Sincerely,

Dr. Elaine Leach

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Janice Leafer

Sent: Tuesday, August 03, 2010 6:06 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

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Sincerely,

Ms. Janice Leafer

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Kathy Lee

Sent: Tuesday, August 03, 2010 6:36 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

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Sincerely,

Ms. Kathy Lee

From: National Wildlife Federation [National Wildlife Federation@nwf.org] on behalf of Joan Leonard

Sent: Tuesday, August 03, 2010 8:36 PM

To: Snyder, Aaron M MVP

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Sincerely,

Mrs. Joan Leonard

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Jan LeVesque

Sent: Tuesday, August 03, 2010 7:06 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

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Sincerely,

Ms. Jan LeVesque

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Crys Lundberg

Sent: Tuesday, August 03, 2010 6:06 PM

To: Snyder, Aaron M MVP

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Sincerely,

Ms. Crys Lundberg

From: National Wildlife Federation [National Wildlife Federation@nwf.org] on behalf of Hermine

Lustig

Sent: Tuesday, August 03, 2010 5:35 PM

To: Snyder, Aaron M MVP

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Sincerely,

Mrs. Hermine Lustig

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Lori Manning

Sent: Tuesday, August 03, 2010 9:06 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

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Sincerely,

Ms. Lori Manning

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Elaine

Matthew

Sent: Tuesday, August 03, 2010 5:36 PM

To: Snyder, Aaron M MVP

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Sincerely,

Mrs. Elaine Matthew

From: National Wildlife Federation [National WildlifeFederation@nwf.org] on behalf of Noelle

McCleaf

Sent: Tuesday, August 03, 2010 7:06 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

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Sincerely,

Miss Noelle McCleaf

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Carol Mellom

Sent: Tuesday, August 03, 2010 8:06 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 3, 2010

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Sincerely,

Ms. Carol Mellom

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Bill Merrill

Sent: Tuesday, August 03, 2010 7:06 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

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Sincerely,

Mr. Bill Merrill

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Carol Mitchell

Sent: Tuesday, August 03, 2010 6:36 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

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Sincerely,

Ms. Carol Mitchell

From: National Wildlife Federation [National Wildlife Federation@nwf.org] on behalf of Raechel

Murphy

Sent: Tuesday, August 03, 2010 9:06 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

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Sincerely,

Mrs. Raechel Murphy

From: Snyder, Aaron M MVP

Sent: Monday, August 16, 2010 1:37 PM

To: Maggied, Troy MVP; Beauchamp, Francis MVP

Subject: FW: Please develop an alternative for flood control in the Red River basin

FYI - See below.

Aaron M. Snyder USACE Planner and Project Manager, PMP Chief, Project Management Branch (PM-B) 651-290-5489 612-518-0355 (Cell) Aaron.M.Snyder@usace.army.mil

----Original Message----

From: National Wildlife Federation [mailto:NationalWildlifeFederation@nwf.org] On Behalf Of Roger

Nelson

Sent: Tuesday, August 03, 2010 7:36 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 3, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

Let me say that I endorse the boiler plate message that follows. I also have some personal observations. It appears that the Corps has had a poor reputation for decades in many circles...in that they are engineers and ex army that do the bidding of politicians to expediently solve relatively, narrow, short-term problems while failing to look at the big picture...thus not solving, or creating even greater, long term problems. It's like, "We don't care. The environment is not our problem" Is there any hope? We need a more comprehensive mandate for the Corps: Restore wetlands and natural flood plains on the Mississippi/Missouri...not just keep building dikes higher. Phase out channel and lock and dam maintenance that acommodates barge traffic so that we can get back the quite, deep and clear backwater areas we had prior to the 1950's...when everything was silted in by the sloshing caused by the "draw" of barge screws. Its not a road, a sluice, or a storm drain...it's a river system, dammit! Divert flood water as you must, but while you're at it, why not also provide wildlife habitat, bring back some natural beauty, create green recreational opportunities, and help replenish aquifers.

I urge you to find an alternative to the proposed \$1.4 billion diversion channel to divert Red River flows around Fargo and Moorhead, by evaluating less expensive, longer-term solutions. Specifically, I urge you to:

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Sincerely,

Mr. Roger Nelson

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Jan Olsen

Sent: Tuesday, August 03, 2010 6:06 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

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Sincerely,

Ms. Jan Olsen

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Alan Pachter

Sent: Tuesday, August 03, 2010 8:36 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 3, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

I urge you to find an alternative to the proposed \$1.4 billion diversion channel to divert Red River flows around Fargo and Moorhead, by evaluating less expensive, longer-term solutions. Specifically, I urge you to:

- develop an integrated, basin wide evaluation of flood damage reduction and better water management strategies before committing more than one billion dollars to the construction of "The Big Ditch";
- develop an alternative that evaluates using wetland restoration as a primary tool for flood management
- this evaluation should consider various levels of wetland restoration, including restoring 100,000 acres and 250,000 acres; and
- develop an alternative that combines wetland restoration with other water retention strategies, including the "Waffle" proposal and the Red River Basin Commission Flow Reduction Strategy.

Before investing huge amounts of money in an environmentally destructive project, I urge you to fully address the potential for flood damage reduction through strategic water storage in the form of wetland restoration, waffling, and other water retention systems.

Sincerely,

Mr. Alan Pachter

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Meghan Porter

Sent: Tuesday, August 03, 2010 7:06 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

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Sincerely,

Mrs. Meghan Porter

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Jennifer

Prettyman-Hall

Sent: Tuesday, August 03, 2010 7:06 PM

To: Snyder, Aaron M MVP

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Sincerely,

Ms. Jennifer Prettyman-Hall

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Karen Raccio

Sent: Tuesday, August 03, 2010 8:06 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

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Sincerely,

Mrs. Karen Raccio

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Marcia Reiter

Sent: Tuesday, August 03, 2010 7:06 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

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Sincerely,

Ms. Marcia Reiter

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Margaret

richardson

Sent: Tuesday, August 03, 2010 5:36 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

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Sincerely,

Ms. Margaret richardson

From: National Wildlife Federation [National Wildlife Federation@nwf.org] on behalf of Juleen

Schaefer

Sent: Tuesday, August 03, 2010 6:36 PM

To: Snyder, Aaron M MVP

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Sincerely,

Ms. Juleen Schaefer

From: National Wildlife Federation [NationalWildlifeFederation@nwf.orq] on behalf of Jennifer

Schally

Sent: Tuesday, August 03, 2010 8:06 PM

To: Snyder, Aaron M MVP

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Sincerely,

Ms. Jennifer Schally

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of bradley

schmidt

Sent: Tuesday, August 03, 2010 6:06 PM

To: Snyder, Aaron M MVP

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Sincerely,

Mr. bradley schmidt

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of nan stevenson

Sent: Tuesday, August 03, 2010 6:36 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

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Sincerely,

Ms. nan stevenson

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Edward

Stewart

Sent: Tuesday, August 03, 2010 5:36 PM

To: Snyder, Aaron M MVP

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Sincerely,

Dr. Edward Stewart

From: National Wildlife Federation [National Wildlife Federation@nwf.org] on behalf of Theresa

Terhark

Sent: Tuesday, August 03, 2010 7:36 PM

To: Snyder, Aaron M MVP

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Sincerely,

Mrs. Theresa Terhark

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Melissa

Thomason

Sent: Tuesday, August 03, 2010 6:36 PM

To: Snyder, Aaron M MVP

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Sincerely,

Mrs. Melissa Thomason

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Cheryl Tregillis

Sent: Tuesday, August 03, 2010 8:36 PM

To: Snyder, Aaron M MVP

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Sincerely,

Mrs. Cheryl Tregillis

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Martha Vest

Sent: Tuesday, August 03, 2010 5:36 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

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Sincerely,

Ms. Martha Vest

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of John Viacrucis

Sent: Tuesday, August 03, 2010 6:36 PM

To: Snyder, Aaron M MVP

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Thank you for your time and consideration.

Sincerely,

Mr. John Viacrucis

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Judith

Webster

Sent: Tuesday, August 03, 2010 7:36 PM

To: Snyder, Aaron M MVP

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Sincerely,

Mrs. Judith Webster

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Kay Westby

Sent: Tuesday, August 03, 2010 5:36 PM

To: Snyder, Aaron M MVP

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Sincerely,

Ms. Kay Westby

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of gina wiese

Sent: Tuesday, August 03, 2010 9:06 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

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Sincerely,

Ms. gina wiese

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Terry J.

Williams

Sent: Tuesday, August 03, 2010 7:36 PM

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Sincerely,

Mr. Terry J. Williams

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Charles Wirth

Sent: Tuesday, August 03, 2010 5:35 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

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Sincerely,

Mr. Charles Wirth

From: National Wildlife Federation [National Wildlife Federation@nwf.org] on behalf of Ann Galbraith

Miller

Sent: Wednesday, August 04, 2010 9:55 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Mrs. Ann Galbraith Miller

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Marisol Arita

Sent: Wednesday, August 04, 2010 4:20 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

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Sincerely,

Ms. Marisol Arita

From: National Wildlife Federation [National Wildlife Federation@nwf.org] on behalf of Anthony

Stanton

Sent: Wednesday, August 04, 2010 9:50 AM

To: Snyder, Aaron M MVP

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Sincerely,

Mr. Anthony Stanton

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Roger Aus

Sent: Wednesday, August 04, 2010 4:20 AM

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Sincerely,

Dr. Roger Aus

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Wanda

Ballentine

Sent: Wednesday, August 04, 2010 4:20 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

I urge you to find an alternative to the proposed \$1.4 billion diversion channel to divert Red River flows around Fargo and Moorhead, by evaluating less expensive, longer-term solutions. Specifically, I urge you to:

- develop an integrated, basin wide evaluation of flood damage reduction and better water management strategies before committing more than one billion dollars to the construction of "The Big Ditch";
- develop an alternative that evaluates using wetland restoration as a primary tool for flood management
- this evaluation should consider various levels of wetland restoration, including restoring 100,000 acres and 250,000 acres; and
- develop an alternative that combines wetland restoration with other water retention strategies, including the "Waffle" proposal and the Red River Basin Commission Flow Reduction Strategy.

Before investing huge amounts of money in an environmentally destructive project, I urge you to fully address the potential for flood damage reduction through strategic water storage in the form of wetland restoration, waffling, and other water retention systems.

Sincerely,

Ms. Wanda Ballentine

From: National Wildlife Federation [National Wildlife Federation@nwf.org] on behalf of Christine

Barnes

Sent: Wednesday, August 04, 2010 9:20 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Ms. Christine Barnes

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Jerry Bloomer

Sent: Wednesday, August 04, 2010 7:49 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

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Sincerely,

Mr. Jerry Bloomer

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Elaine Born

Sent: Wednesday, August 04, 2010 11:26 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

I urge you to find an alternative to the proposed \$1.4 billion diversion channel to divert Red River flows around Fargo and Moorhead, by evaluating less expensive, longer-term solutions. Specifically, I urge you to:

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Sincerely,

Miss Elaine Born

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Ann K Brady

Sent: Wednesday, August 04, 2010 9:20 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Ms. Ann K Brady

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Craig Brown

Sent: Wednesday, August 04, 2010 7:19 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Mr. Craig Brown

From: National Wildlife Federation [National Wildlife Federation@nwf.org] on behalf of George

Burtness

Sent: Wednesday, August 04, 2010 6:49 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Mr. George Burtness

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of scott cady

Sent: Wednesday, August 04, 2010 4:20 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Mr. scott cady

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Bruce D

Chambers

Sent: Wednesday, August 04, 2010 4:19 AM

To: Snyder, Aaron M MVP

Subject: Please develop a natural alternative for flood control in the Red River basin

Aug 4, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

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Sincerely,

Mr. Bruce D Chambers

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of gene

christenson

Sent: Wednesday, August 04, 2010 8:19 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Mr. gene christenson

From: National Wildlife Federation [National Wildlife Federation@nwf.org] on behalf of Joel

Clasemann

Sent: Wednesday, August 04, 2010 4:19 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Mr. Joel Clasemann

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Carrie Nelson

Sent: Wednesday, August 04, 2010 9:56 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Ms. Carrie Nelson

From: National Wildlife Federation [National Wildlife Federation@nwf.org] on behalf of Ginamarie

Colorio

Sent: Wednesday, August 04, 2010 8:49 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Mrs. Ginamarie Colorio

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Pat Combs

Sent: Wednesday, August 04, 2010 8:19 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

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Sincerely,

Ms. Pat Combs

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Beth Cook

Sent: Wednesday, August 04, 2010 4:19 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

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Sincerely,

Ms. Beth Cook

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Kathy Curtiss

Sent: Wednesday, August 04, 2010 8:49 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

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Sincerely,

Ms. Kathy Curtiss

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Peggy

Detmers

Sent: Wednesday, August 04, 2010 4:20 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

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Sincerely,

Ms. Peggy Detmers

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Bob Douglas

Sent: Wednesday, August 04, 2010 9:50 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Mr. Bob Douglas

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Kay Drache

Sent: Wednesday, August 04, 2010 12:25 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Ms. Kay Drache

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Kari Dyrdahl

Sent: Wednesday, August 04, 2010 11:25 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Ms. Kari Dyrdahl

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Elisabeth

Johnson

Sent: Wednesday, August 04, 2010 4:20 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Dr. Elisabeth Johnson

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Eileen Levin

Sent: Wednesday, August 04, 2010 2:55 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Ms. Eileen Levin

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Shirley

Espeland

Sent: Wednesday, August 04, 2010 8:26 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Mrs. Shirley Espeland

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Shay Forstrom

Sent: Wednesday, August 04, 2010 1:25 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

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Sincerely,

Mrs. Shay Forstrom

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Sharon

Fortunak

Sent: Wednesday, August 04, 2010 8:49 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Ms. Sharon Fortunak

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Mari Freeman

Sent: Wednesday, August 04, 2010 10:56 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

I urge you to find an alternative to the proposed \$1.4 billion diversion channel to divert Red River flows around Fargo and Moorhead, by evaluating less expensive, longer-term solutions. Specifically, I urge you to:

- develop an integrated, basin wide evaluation of flood damage reduction and better water management strategies before committing more than one billion dollars to the construction of "The Big Ditch";
- develop an alternative that evaluates using wetland restoration as a primary tool for flood management
- this evaluation should consider various levels of wetland restoration, including restoring 100,000 acres and 250,000 acres; and
- develop an alternative that combines wetland restoration with other water retention strategies, including the "Waffle" proposal and the Red River Basin Commission Flow Reduction Strategy.

Before investing huge amounts of money in an environmentally destructive project, I urge you to fully address the potential for flood damage reduction through strategic water storage in the form of wetland restoration, waffling, and other water retention systems.

Sincerely,

Ms. Mari Freeman

From: National Wildlife Federation [National WildlifeFederation@nwf.org] on behalf of Cathy

Gagliardi

Sent: Wednesday, August 04, 2010 4:19 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Mrs. Cathy Gagliardi

From: National Wildlife Federation [National Wildlife Federation@nwf.org] on behalf of Michelle

Gobely

Sent: Wednesday, August 04, 2010 10:55 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Ms. Michelle Gobely

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Cheryl Hagen

Sent: Wednesday, August 04, 2010 8:19 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Ms. Cheryl Hagen

From: National Wildlife Federation [National Wildlife Federation@nwf.org] on behalf of Cassandra

Hager

Sent: Wednesday, August 04, 2010 12:55 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Ms. Cassandra Hager

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Mary Jo

Hamann

Sent: Wednesday, August 04, 2010 9:50 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Ms. Mary Jo Hamann

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of David

Hamburger

Sent: Wednesday, August 04, 2010 1:25 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Mr. David Hamburger

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Lynn

Hargreaves

Sent: Wednesday, August 04, 2010 4:20 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Mrs. Lynn Hargreaves

From: National Wildlife Federation [National Wildlife Federation@nwf.org] on behalf of DOUGLAS

Harkins

Sent: Wednesday, August 04, 2010 11:25 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Mr. DOUGLAS Harkins

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Janice Hayne

Sent: Wednesday, August 04, 2010 11:25 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Ms. Janice Hayne

From: National Wild<u>life Federation [NationalWildlife</u>Federation@nwf.org] on behalf of Brian

Hemmelman

Sent: Wednesday, August 04, 2010 8:49 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Dr. Brian Hemmelman

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Warren High

Sent: Wednesday, August 04, 2010 9:56 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

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Sincerely,

Mr. Warren High

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Richard Hjort

Sent: Wednesday, August 04, 2010 5:49 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

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Sincerely,

Mr. Richard Hjort

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Kristy Hovde

Sent: Wednesday, August 04, 2010 4:19 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

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Sincerely,

Mrs. Kristy Hovde

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Sherina Hume

Sent: Wednesday, August 04, 2010 9:56 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

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Sincerely,

Ms. Sherina Hume

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Rollo Hysom

Sent: Wednesday, August 04, 2010 4:19 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

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Sincerely,

Mr. Rollo Hysom

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Karen Ihli

Sent: Wednesday, August 04, 2010 4:20 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

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Sincerely,

Ms. Karen Ihli

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Jean Johnson

Sent: Wednesday, August 04, 2010 9:50 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

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Sincerely,

Ms. Jean Johnson

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of SANDY

KELLER

Sent: Wednesday, August 04, 2010 8:19 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

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Sincerely,

Ms. SANDY KELLER

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Ann Kinney

Sent: Wednesday, August 04, 2010 2:25 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

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Sincerely,

Ms. Ann Kinnev

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Pamela Kjono

Sent: Wednesday, August 04, 2010 7:49 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

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Sincerely,

Ms. Pamela Kjono

From: National Wildlife Federation [National Wildlife Federation @nwf.org] on behalf of Benjamin

Krohling

Sent: Wednesday, August 04, 2010 11:25 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

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Sincerely,

Mr. Benjamin Krohling

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Kim Stanton

Sent: Wednesday, August 04, 2010 7:19 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

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Sincerely,

Ms. Kim Stanton

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Jennifer Lang

Sent: Wednesday, August 04, 2010 4:20 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

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Sincerely,

Ms. Jennifer Lang

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Scott Mace

[ssmace@earthlink.net]

Sent: Wednesday, August 04, 2010 2:25 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

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Sincerely,

Mr. Scott Mace

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Dawn Mantei

Sent: Wednesday, August 04, 2010 4:20 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

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Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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I urge you to find an alternative to the proposed \$1.4 billion diversion channel to divert Red River flows around Fargo and Moorhead, by evaluating less expensive, longer-term solutions. Specifically, I urge you to:

- develop an integrated, basin wide evaluation of flood damage reduction and better water management strategies before committing more than one billion dollars to the construction of "The Big Ditch";
- develop an alternative that evaluates using wetland restoration as a primary tool for flood management
- this evaluation should consider various levels of wetland restoration, including restoring 100,000 acres and 250,000 acres; and
- develop an alternative that combines wetland restoration with other water retention strategies, including the "Waffle" proposal and the Red River Basin Commission Flow Reduction Strategy.

Before investing huge amounts of money in an environmentally destructive project, I urge you to fully address the potential for flood damage reduction through strategic water storage in the form of wetland restoration, waffling, and other water retention systems.

Sincerely,

Ms. Dawn Mantei

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Harriet

McCleary

Sent: Wednesday, August 04, 2010 4:19 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Dr. Harriet McCleary

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of MARY E

MCGILLIGAN

Sent: Wednesday, August 04, 2010 11:26 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

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Sincerely,

Ms. MARY E MCGILLIGAN

From: National Wildlife Federation [National Wildlife Federation@nwf.org] on behalf of Cheryl

McKiernar

Sent: Wednesday, August 04, 2010 4:19 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

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Sincerely,

Mrs. Cheryl McKiernan

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of tina miranda

Sent: Wednesday, August 04, 2010 3:25 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Miss tina miranda

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of shari

mleczewski

Sent: Wednesday, August 04, 2010 4:20 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

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Sincerely,

Ms. shari mleczewski

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Martha Miller

Sent: Wednesday, August 04, 2010 8:49 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

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Sincerely,

Ms. Martha Miller

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Sue Morem

Sent: Wednesday, August 04, 2010 2:55 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

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Sincerely,

Ms. Sue Morem

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Karl Mueller

Sent: Wednesday, August 04, 2010 12:55 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

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Sincerely,

Mr. Karl Mueller

From: National Wildlife Federation [National Wildlife Federation@nwf.org] on behalf of Adnan

Mustafa

Sent: Wednesday, August 04, 2010 12:55 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

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Sincerely,

Mr. Adnan Mustafa

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of David Nickel

Sent: Wednesday, August 04, 2010 11:25 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

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Sincerely,

Mr. David Nickel

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of carolyn

novotnyreich

Sent: Wednesday, August 04, 2010 4:20 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

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Sincerely,

Ms. carolyn novotnyreich

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of William

Nusbaum

Sent: Wednesday, August 04, 2010 9:20 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

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Sincerely,

Mr. William Nusbaum

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Chris Parker

Sent: Wednesday, August 04, 2010 10:55 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

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Sincerely,

Mr. Chris Parker

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Susanna

Patterson

Sent: Wednesday, August 04, 2010 8:19 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

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Sincerely,

Ms. Susanna Patterson

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Melodie

Paulsen

Sent: Wednesday, August 04, 2010 7:49 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

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Sincerely,

Ms. Melodie Paulsen

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Betsy Perkins

Sent: Wednesday, August 04, 2010 9:26 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

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Sincerely,

Ms. Betsy Perkins

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Jeanne Piehl

Sent: Wednesday, August 04, 2010 7:49 AM

To: Snyder, Aaron M MVP

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Sincerely,

Mrs. Jeanne Piehl

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Robin Poppe

Sent: Wednesday, August 04, 2010 9:20 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

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Sincerely,

Ms. Robin Poppe

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Betsey Porter

Sent: Wednesday, August 04, 2010 10:55 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

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Sincerely,

Miss Betsey Porter

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Barb and Phil

Powell

Sent: Wednesday, August 04, 2010 4:20 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

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Sincerely,

Mrs. Barb and Phil Powell

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Linda Ritter

Sent: Wednesday, August 04, 2010 9:55 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

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Sincerely,

Ms. Linda Ritter

From: National Wildlife Federation [National Wildlife Federation@nwf.org] on behalf of Roberta

Nelson

Sent: Wednesday, August 04, 2010 4:55 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

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Sincerely,

Mrs. Roberta Nelson

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Shawn Roed

Sent: Wednesday, August 04, 2010 8:49 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

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Sincerely,

Mr. Shawn Roed

From: National Wildlife Federation [National Wildlife Federation @nwf.org] on behalf of Earl

Rosenwinkel

Sent: Wednesday, August 04, 2010 1:25 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

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Sincerely,

Dr. Earl Rosenwinkel

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of susan rowe

Sent: Wednesday, August 04, 2010 6:49 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

I urge you to find an alternative to the proposed \$1.4 billion diversion channel to divert Red River flows around Fargo and Moorhead, by evaluating less expensive, longer-term solutions. Specifically, I urge you to:

- develop an integrated, basin wide evaluation of flood damage reduction and better water management strategies before committing more than one billion dollars to the construction of "The Big Ditch";
- develop an alternative that evaluates using wetland restoration as a primary tool for flood management
- this evaluation should consider various levels of wetland restoration, including restoring 100,000 acres and 250,000 acres; and
- develop an alternative that combines wetland restoration with other water retention strategies, including the "Waffle" proposal and the Red River Basin Commission Flow Reduction Strategy.

Before investing huge amounts of money in an environmentally destructive project, I urge you to fully address the potential for flood damage reduction through strategic water storage in the form of wetland restoration, waffling, and other water retention systems.

Sincerely,

Mrs. susan rowe

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Mike Sackman

Sent: Wednesday, August 04, 2010 7:19 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Mr. Mike Sackman

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Ed Salter

Sent: Wednesday, August 04, 2010 7:49 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Mr. Ed Salter

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Jamie Scheffel

Sent: Wednesday, August 04, 2010 9:20 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Ms. Jamie Scheffel

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of jim scheidt

Sent: Wednesday, August 04, 2010 4:20 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Mr. jim scheidt

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Mollie

Schierman

Sent: Wednesday, August 04, 2010 8:19 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

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Sincerely,

Ms. Mollie Schierman

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Sarah

Sederstrom

Sent: Wednesday, August 04, 2010 2:25 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Ms. Sarah Sederstrom

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Corinne Segal

Sent: Wednesday, August 04, 2010 11:55 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Ms. Corinne Segal

From: National Wildlife Federation [National Wildlife Federation@nwf.org] on behalf of George

Shanks

Sent: Wednesday, August 04, 2010 7:19 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Mr. George Shanks

From: National Wildlife Federation [National Wildlife Federation@nwf.org] on behalf of Shaun Marie

Levin

Sent: Wednesday, August 04, 2010 4:20 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Ms. Shaun Marie Levin

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Mary Smith

Sent: Wednesday, August 04, 2010 12:25 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

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Sincerely,

Ms. Mary Smith

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of George

Sorvalis

Sent: Wednesday, August 04, 2010 8:49 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Mr. George Sorvalis

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Doug

Stepanek

Sent: Wednesday, August 04, 2010 7:19 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

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Sincerely,

Mr. Doug Stepanek

From: National Wildlife Federation [National Wildlife Federation@nwf.org] on behalf of Denise

Sterling

Sent: Wednesday, August 04, 2010 6:25 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

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Sincerely,

Ms. Denise Sterling

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Wayne E.

Stiefvater

Sent: Wednesday, August 04, 2010 4:20 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

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Sincerely,

Mr. Wayne E. Stiefvater

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Michael Tezla

Sent: Wednesday, August 04, 2010 4:19 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

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Sincerely,

Mr. Michael Tezla

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Terry Johnson

Sent: Wednesday, August 04, 2010 11:25 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

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Sincerely,

Ms. Terry Johnson

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Steven

Usdansky

Sent: Wednesday, August 04, 2010 7:19 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

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Sincerely,

Dr. Steven Usdansky

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Michele

Vaillancourt

Sent: Wednesday, August 04, 2010 10:55 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

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Sincerely,

Ms. Michele Vaillancourt

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Dawnielle

Voegele

Sent: Wednesday, August 04, 2010 4:20 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

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Sincerely,

Miss Dawnielle Voegele

From: National Wildlife Federation [National WildlifeFederation@nwf.org] on behalf of Sidney

Wechsler

Sent: Wednesday, August 04, 2010 9:50 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

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Sincerely,

Dr. Sidney Wechsler

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Kimerly Wilcox

Sent: Wednesday, August 04, 2010 10:25 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

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Sincerely,

Dr. Kimerly Wilcox

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Art Wilkinson

Sent: Wednesday, August 04, 2010 4:19 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

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Sincerely,

Mr. Art Wilkinson

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of pauline wolf

Sent: Wednesday, August 04, 2010 1:55 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 4, 2010

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Sincerely,

Ms. pauline wolf

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Ellen Woodruff

Sent: Wednesday, August 04, 2010 4:20 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

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Sincerely,

Mrs. Ellen Woodruff

From: National Wildlife Federation [National Wildlife Federation@nwf.org] on behalf of Ran Zirasri

Sent: Wednesday, August 04, 2010 11:55 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

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Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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I urge you to find an alternative to the proposed \$1.4 billion diversion channel to divert Red River flows around Fargo and Moorhead, by evaluating less expensive, longer-term solutions. Specifically, I urge you to:

- develop an integrated, basin wide evaluation of flood damage reduction and better water management strategies before committing more than one billion dollars to the construction of "The Big Ditch";
- develop an alternative that evaluates using wetland restoration as a primary tool for flood management
- this evaluation should consider various levels of wetland restoration, including restoring 100,000 acres and 250,000 acres; and
- develop an alternative that combines wetland restoration with other water retention strategies, including the "Waffle" proposal and the Red River Basin Commission Flow Reduction Strategy.

Before investing huge amounts of money in an environmentally destructive project, I urge you to fully address the potential for flood damage reduction through strategic water storage in the form of wetland restoration, waffling, and other water retention systems.

Sincerely,

Miss Ran Zirasri

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of heidi lynn

ahlstrand

Sent: Thursday, August 05, 2010 10:57 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 5, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Ms. heidi lynn ahlstrand

From: National Wildlife Federation [National Wildlife Federation@nwf.org] on behalf of Mary Ann

Dailey

Sent: Thursday, August 05, 2010 2:50 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 5, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Ms. Mary Ann Dailey

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Deb Ellis

Sent: Thursday, August 05, 2010 3:50 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 5, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Ms. Deb Ellis

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Robert

Fitzgerald

Sent: Thursday, August 05, 2010 9:20 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 5, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Mr. Robert Fitzgerald

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Gretchen

Goodman

Sent: Thursday, August 05, 2010 12:26 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 5, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Ms. Gretchen Goodman

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Rebecca Hall

Sent: Thursday, August 05, 2010 1:57 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 5, 2010

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Sincerely,

Mrs. Rebecca Hall

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Kirk Johnson

Sent: Thursday, August 05, 2010 11:20 PM

To: Snyder, Aaron M MVP

Subject: alternative for flood control in the Red River basin

Aug 5, 2010

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Sincerely,

Mr. Kirk Johnson

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of clayton

knoshaug

Sent: Thursday, August 05, 2010 7:26 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 5, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Mr. clayton knoshaug

From: <u>National Wildlife Federation [National Wildlife Federation @nwf.org]</u> on behalf of Ed Kouba

Sent: Thursday, August 05, 2010 10:20 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 5, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Mr. Ed Kouba

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Justin Maddox

Sent: Thursday, August 05, 2010 1:27 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 5, 2010

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Sincerely,

Mr. Justin Maddox

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of karen merrill

Sent: Thursday, August 05, 2010 3:49 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 5, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Mrs. karen merrill

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Craig Olawsky

Sent: Thursday, August 05, 2010 2:49 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 5, 2010

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Sincerely,

Mr. Craig Olawsky

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Rose Palm

Sent: Thursday, August 05, 2010 1:27 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 5, 2010

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Sincerely,

Ms. Rose Palm

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Judi Poulson

Sent: Thursday, August 05, 2010 5:56 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 5, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Ms. Judi Poulson

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of carol schaaf

Sent: Thursday, August 05, 2010 9:57 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 5, 2010

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Sincerely,

Ms. carol schaaf

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Debra Schmid

Sent: Thursday, August 05, 2010 12:27 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 5, 2010

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Sincerely,

Ms. Debra Schmid

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of maggie

shermock

Sent: Thursday, August 05, 2010 8:50 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 5, 2010

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Sincerely,

Ms. maggie shermock

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Kristi Tillery

Sent: Thursday, August 05, 2010 8:26 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 5, 2010

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Sincerely,

Ms. Kristi Tillery

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Josey Warren

Sent: Thursday, August 05, 2010 11:27 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 5, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Dr. Josey Warren

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Lynne Banta

Sent: Friday, August 06, 2010 2:21 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 6, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

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Sincerely,

Ms. Lynne Banta

From: National Wildlife Federation [National Wildlife Federation@nwf.org] on behalf of Deanna

Jessup

Sent: Friday, August 06, 2010 7:51 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 6, 2010

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Sincerely,

Ms. Deanna Jessup

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Michael

Merenda

Sent: Friday, August 06, 2010 10:22 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 6, 2010

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Sincerely,

Mr. Michael Merenda

From: National Wildlife Federation [National WildlifeFederation@nwf.org] on behalf of Gary

Rehmann

Sent: Friday, August 06, 2010 11:52 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 6, 2010

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Sincerely,

Mr. Gary Rehmann

From: National Wildlife Federation [National Wildlife Federation@nwf.org] on behalf of Barbara

Stamp

Sent: Friday, August 06, 2010 2:51 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 6, 2010

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Sincerely,

Ms. Barbara Stamp

From: National Wildlife Federation [National WildlifeFederation@nwf.org] on behalf of Janette

Yaeger

Sent: Friday, August 06, 2010 7:52 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

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Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

I urge you to find an alternative to the proposed \$1.4 billion diversion channel to divert Red River flows around Fargo and Moorhead, by evaluating less expensive, longer-term solutions. Specifically, I urge you to:

- develop an integrated, basin wide evaluation of flood damage reduction and better water management strategies before committing more than one billion dollars to the construction of "The Big Ditch";
- develop an alternative that evaluates using wetland restoration as a primary tool for flood management
- this evaluation should consider various levels of wetland restoration, including restoring 100,000 acres and 250,000 acres; and
- develop an alternative that combines wetland restoration with other water retention strategies, including the "Waffle" proposal and the Red River Basin Commission Flow Reduction Strategy.

Before investing huge amounts of money in an environmentally destructive project, I urge you to fully address the potential for flood damage reduction through strategic water storage in the form of wetland restoration, waffling, and other water retention systems.

Sincerely,

Ms. Janette Yaeger

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Andrew Cook

Sent: Saturday, August 07, 2010 1:54 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 7, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

I urge you to find an alternative to the proposed \$1.4 billion diversion channel to divert Red River flows around Fargo and Moorhead, by evaluating less expensive, longer-term solutions. Specifically, I urge you to:

- develop an integrated, basin wide evaluation of flood damage reduction and better water management strategies before committing more than one billion dollars to the construction of "The Big Ditch";
- develop an alternative that evaluates using wetland restoration as a primary tool for flood management
- this evaluation should consider various levels of wetland restoration, including restoring 100,000 acres and 250,000 acres; and
- develop an alternative that combines wetland restoration with other water retention strategies, including the "Waffle" proposal and the Red River Basin Commission Flow Reduction Strategy.

Before investing huge amounts of money in an environmentally destructive project, I urge you to fully address the potential for flood damage reduction through strategic water storage in the form of wetland restoration, waffling, and other water retention systems.

Sincerely,

Mr. Andrew Cook

From: National Wildlife Federation [National Wildlife Federation@nwf.org] on behalf of Peter Glick

Sent: Saturday, August 07, 2010 2:24 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 7, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

I urge you to find an alternative to the proposed \$1.4 billion diversion channel to divert Red River flows around Fargo and Moorhead, by evaluating less expensive, longer-term solutions. Specifically, I urge you to:

- develop an integrated, basin wide evaluation of flood damage reduction and better water management strategies before committing more than one billion dollars to the construction of "The Big Ditch";
- develop an alternative that evaluates using wetland restoration as a primary tool for flood management
- this evaluation should consider various levels of wetland restoration, including restoring 100,000 acres and 250,000 acres; and
- develop an alternative that combines wetland restoration with other water retention strategies, including the "Waffle" proposal and the Red River Basin Commission Flow Reduction Strategy.

Before investing huge amounts of money in an environmentally destructive project, I urge you to fully address the potential for flood damage reduction through strategic water storage in the form of wetland restoration, waffling, and other water retention systems.

Sincerely,

Mr. Peter Glick

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Julie Nevill

Sent: Saturday, August 07, 2010 12:22 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 7, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

I urge you to find an alternative to the proposed \$1.4 billion diversion channel to divert Red River flows around Fargo and Moorhead, by evaluating less expensive, longer-term solutions. Specifically, I urge you to:

- develop an integrated, basin wide evaluation of flood damage reduction and better water management strategies before committing more than one billion dollars to the construction of "The Big Ditch";
- develop an alternative that evaluates using wetland restoration as a primary tool for flood management
- this evaluation should consider various levels of wetland restoration, including restoring 100,000 acres and 250,000 acres; and
- develop an alternative that combines wetland restoration with other water retention strategies, including the "Waffle" proposal and the Red River Basin Commission Flow Reduction Strategy.

Before investing huge amounts of money in an environmentally destructive project, I urge you to fully address the potential for flood damage reduction through strategic water storage in the form of wetland restoration, waffling, and other water retention systems.

Sincerely,

Ms. Julie Nevill

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Mitchel

Pilipovic

Sent: Saturday, August 07, 2010 4:54 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 7, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

I urge you to find an alternative to the proposed \$1.4 billion diversion channel to divert Red River flows around Fargo and Moorhead, by evaluating less expensive, longer-term solutions. Specifically, I urge you to:

- develop an integrated, basin wide evaluation of flood damage reduction and better water management strategies before committing more than one billion dollars to the construction of "The Big Ditch";
- develop an alternative that evaluates using wetland restoration as a primary tool for flood management
- this evaluation should consider various levels of wetland restoration, including restoring 100,000 acres and 250,000 acres; and
- develop an alternative that combines wetland restoration with other water retention strategies, including the "Waffle" proposal and the Red River Basin Commission Flow Reduction Strategy.

Before investing huge amounts of money in an environmentally destructive project, I urge you to fully address the potential for flood damage reduction through strategic water storage in the form of wetland restoration, waffling, and other water retention systems.

Sincerely,

Mr. Mitchel Pilipovic

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of James Rickard

Sent: Saturday, August 07, 2010 5:53 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 7, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

I urge you to find an alternative to the proposed \$1.4 billion diversion channel to divert Red River flows around Fargo and Moorhead, by evaluating less expensive, longer-term solutions. Specifically, I urge you to:

- develop an integrated, basin wide evaluation of flood damage reduction and better water management strategies before committing more than one billion dollars to the construction of "The Big Ditch";
- develop an alternative that evaluates using wetland restoration as a primary tool for flood management
- this evaluation should consider various levels of wetland restoration, including restoring 100,000 acres and 250,000 acres; and
- develop an alternative that combines wetland restoration with other water retention strategies, including the "Waffle" proposal and the Red River Basin Commission Flow Reduction Strategy.

Before investing huge amounts of money in an environmentally destructive project, I urge you to fully address the potential for flood damage reduction through strategic water storage in the form of wetland restoration, waffling, and other water retention systems.

Sincerely,

Mr. James Rickard

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Gerry Winter

Sent: Saturday, August 07, 2010 12:52 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 7, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

I urge you to find an alternative to the proposed \$1.4 billion diversion channel to divert Red River flows around Fargo and Moorhead, by evaluating less expensive, longer-term solutions. Specifically, I urge you to:

- develop an integrated, basin wide evaluation of flood damage reduction and better water management strategies before committing more than one billion dollars to the construction of "The Big Ditch";
- develop an alternative that evaluates using wetland restoration as a primary tool for flood management
- this evaluation should consider various levels of wetland restoration, including restoring 100,000 acres and 250,000 acres; and
- develop an alternative that combines wetland restoration with other water retention strategies, including the "Waffle" proposal and the Red River Basin Commission Flow Reduction Strategy.

Before investing huge amounts of money in an environmentally destructive project, I urge you to fully address the potential for flood damage reduction through strategic water storage in the form of wetland restoration, waffling, and other water retention systems.

Sincerely,

Mr. Gerry Winter

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Shary Bozied

Sent: Sunday, August 08, 2010 2:26 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 8, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

I urge you to find an alternative to the proposed \$1.4 billion diversion channel to divert Red River flows around Fargo and Moorhead, by evaluating less expensive, longer-term solutions. Specifically, I urge you to:

- develop an integrated, basin wide evaluation of flood damage reduction and better water management strategies before committing more than one billion dollars to the construction of "The Big Ditch";
- develop an alternative that evaluates using wetland restoration as a primary tool for flood management
- this evaluation should consider various levels of wetland restoration, including restoring 100,000 acres and 250,000 acres; and
- develop an alternative that combines wetland restoration with other water retention strategies, including the "Waffle" proposal and the Red River Basin Commission Flow Reduction Strategy.

Before investing huge amounts of money in an environmentally destructive project, I urge you to fully address the potential for flood damage reduction through strategic water storage in the form of wetland restoration, waffling, and other water retention systems.

Sincerely,

Ms. Shary Bozied

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Heidi Conrad

Sent: Sunday, August 08, 2010 7:26 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 8, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

I urge you to find an alternative to the proposed \$1.4 billion diversion channel to divert Red River flows around Fargo and Moorhead, by evaluating less expensive, longer-term solutions. Specifically, I urge you to:

- develop an integrated, basin wide evaluation of flood damage reduction and better water management strategies before committing more than one billion dollars to the construction of "The Big Ditch";
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- this evaluation should consider various levels of wetland restoration, including restoring 100,000 acres and 250,000 acres; and
- develop an alternative that combines wetland restoration with other water retention strategies, including the "Waffle" proposal and the Red River Basin Commission Flow Reduction Strategy.

Before investing huge amounts of money in an environmentally destructive project, I urge you to fully address the potential for flood damage reduction through strategic water storage in the form of wetland restoration, waffling, and other water retention systems.

Sincerely,

Miss Heidi Conrad

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Joline Gitis

Sent: Monday, August 09, 2010 11:26 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 9, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

I urge you to find an alternative to the proposed \$1.4 billion diversion channel to divert Red River flows around Fargo and Moorhead, by evaluating less expensive, longer-term solutions. Specifically, I urge you to:

- develop an integrated, basin wide evaluation of flood damage reduction and better water management strategies before committing more than one billion dollars to the construction of "The Big Ditch";
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- this evaluation should consider various levels of wetland restoration, including restoring 100,000 acres and 250,000 acres; and
- develop an alternative that combines wetland restoration with other water retention strategies, including the "Waffle" proposal and the Red River Basin Commission Flow Reduction Strategy.

Before investing huge amounts of money in an environmentally destructive project, I urge you to fully address the potential for flood damage reduction through strategic water storage in the form of wetland restoration, waffling, and other water retention systems.

Sincerely,

Ms. Joline Gitis

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Stephanie Lof

Sent: Tuesday, August 10, 2010 5:58 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 10, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

I urge you to find an alternative to the proposed \$1.4 billion diversion channel to divert Red River flows around Fargo and Moorhead, by evaluating less expensive, longer-term solutions. Specifically, I urge you to:

- develop an integrated, basin wide evaluation of flood damage reduction and better water management strategies before committing more than one billion dollars to the construction of "The Big Ditch";
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- this evaluation should consider various levels of wetland restoration, including restoring 100,000 acres and 250,000 acres; and
- develop an alternative that combines wetland restoration with other water retention strategies, including the "Waffle" proposal and the Red River Basin Commission Flow Reduction Strategy.

Before investing huge amounts of money in an environmentally destructive project, I urge you to fully address the potential for flood damage reduction through strategic water storage in the form of wetland restoration, waffling, and other water retention systems.

Sincerely,

Miss Stephanie Lof

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Ingrid Roed

Sent: Tuesday, August 10, 2010 4:27 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 10, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

I urge you to find an alternative to the proposed \$1.4 billion diversion channel to divert Red River flows around Fargo and Moorhead, by evaluating less expensive, longer-term solutions. Specifically, I urge you to:

- develop an integrated, basin wide evaluation of flood damage reduction and better water management strategies before committing more than one billion dollars to the construction of "The Big Ditch";
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- develop an alternative that combines wetland restoration with other water retention strategies, including the "Waffle" proposal and the Red River Basin Commission Flow Reduction Strategy.

Before investing huge amounts of money in an environmentally destructive project, I urge you to fully address the potential for flood damage reduction through strategic water storage in the form of wetland restoration, waffling, and other water retention systems.

Sincerely,

Mrs. Ingrid Roed

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Juliann Rule

Sent: Tuesday, August 10, 2010 11:57 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 10, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

I urge you to find an alternative to the proposed \$1.4 billion diversion channel to divert Red River flows around Fargo and Moorhead, by evaluating less expensive, longer-term solutions. Specifically, I urge you to:

- develop an integrated, basin wide evaluation of flood damage reduction and better water management strategies before committing more than one billion dollars to the construction of "The Big Ditch";
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- this evaluation should consider various levels of wetland restoration, including restoring 100,000 acres and 250,000 acres; and
- develop an alternative that combines wetland restoration with other water retention strategies, including the "Waffle" proposal and the Red River Basin Commission Flow Reduction Strategy.

Before investing huge amounts of money in an environmentally destructive project, I urge you to fully address the potential for flood damage reduction through strategic water storage in the form of wetland restoration, waffling, and other water retention systems.

Sincerely,

Ms. Juliann Rule

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of jeff stromgren

Sent: Tuesday, August 10, 2010 10:57 AM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 10, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

I urge you to find an alternative to the proposed \$1.4 billion diversion channel to divert Red River flows around Fargo and Moorhead, by evaluating less expensive, longer-term solutions. Specifically, I urge you to:

- develop an integrated, basin wide evaluation of flood damage reduction and better water management strategies before committing more than one billion dollars to the construction of "The Big Ditch";
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- develop an alternative that combines wetland restoration with other water retention strategies, including the "Waffle" proposal and the Red River Basin Commission Flow Reduction Strategy.

Before investing huge amounts of money in an environmentally destructive project, I urge you to fully address the potential for flood damage reduction through strategic water storage in the form of wetland restoration, waffling, and other water retention systems.

Sincerely,

Mr. jeff stromgren

Diaz, Jessie C MVP

From: National Wildlife Federation [National WildlifeFederation@nwf.org] on behalf of dave

councilman

Sent: Wednesday, August 11, 2010 10:30 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 11, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

I urge you to find an alternative to the proposed \$1.4 billion diversion channel to divert Red River flows around Fargo and Moorhead, by evaluating less expensive, longer-term solutions. Specifically, I urge you to:

- develop an integrated, basin wide evaluation of flood damage reduction and better water management strategies before committing more than one billion dollars to the construction of "The Big Ditch";
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- develop an alternative that combines wetland restoration with other water retention strategies, including the "Waffle" proposal and the Red River Basin Commission Flow Reduction Strategy.

Before investing huge amounts of money in an environmentally destructive project, I urge you to fully address the potential for flood damage reduction through strategic water storage in the form of wetland restoration, waffling, and other water retention systems.

Sincerely,

Mr. dave councilman

Diaz, Jessie C MVP

From: National Wildlife Federation [National Wildlife Federation@nwf.org] on behalf of Karin Cudd

Sent: Wednesday, August 11, 2010 7:30 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 11, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

I urge you to find an alternative to the proposed \$1.4 billion diversion channel to divert Red River flows around Fargo and Moorhead, by evaluating less expensive, longer-term solutions. Specifically, I urge you to:

- develop an integrated, basin wide evaluation of flood damage reduction and better water management strategies before committing more than one billion dollars to the construction of "The Big Ditch";
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- this evaluation should consider various levels of wetland restoration, including restoring 100,000 acres and 250,000 acres; and
- develop an alternative that combines wetland restoration with other water retention strategies, including the "Waffle" proposal and the Red River Basin Commission Flow Reduction Strategy.

Before investing huge amounts of money in an environmentally destructive project, I urge you to fully address the potential for flood damage reduction through strategic water storage in the form of wetland restoration, waffling, and other water retention systems.

Sincerely,

Ms. Karin Cudd

Diaz, Jessie C MVP

From: National Wildlife Federation [NationalWildlifeFederation@nwf.org] on behalf of Brenda Nelson

Sent: Friday, August 13, 2010 1:28 PM

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Aug 13, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

I urge you to find an alternative to the proposed \$1.4 billion diversion channel to divert Red River flows around Fargo and Moorhead, by evaluating less expensive, longer-term solutions. Specifically, I urge you to:

- develop an integrated, basin wide evaluation of flood damage reduction and better water management strategies before committing more than one billion dollars to the construction of "The Big Ditch";
- develop an alternative that evaluates using wetland restoration as a primary tool for flood management
- this evaluation should consider various levels of wetland restoration, including restoring 100,000 acres and 250,000 acres; and
- develop an alternative that combines wetland restoration with other water retention strategies, including the "Waffle" proposal and the Red River Basin Commission Flow Reduction Strategy.

Before investing huge amounts of money in an environmentally destructive project, I urge you to fully address the potential for flood damage reduction through strategic water storage in the form of wetland restoration, waffling, and other water retention systems.

Sincerely,

Mrs. Brenda Nelson

From: <u>National Wildlife Federation</u> on behalf of <u>Day Breitag</u>

To: <u>Snyder, Aaron M MVP</u>

Subject: Please develop an alternative for flood control in the Red River basin

Date: Wednesday, August 04, 2010 9:19:50 AM

Aug 4, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

Haven't we learned yet that channelizing and diversion is not always the answer to flooding, and is more expensive in the long run? Please promote alternatives that utilize the natural flood-control values of wetlands. Specifically, I urge you to:

- develop an integrated, basin wide evaluation of flood damage reduction and better water management strategies before committing more than one billion dollars to the construction of "The Big Ditch";
- develop an alternative that evaluates using wetland restoration as a primary tool for flood management this evaluation should consider various levels of wetland restoration, including restoring 100,000 acres and 250,000 acres; and
- develop an alternative that combines wetland restoration with other water retention strategies, including the "Waffle" ® proposal and the Red River Basin Commission Flow Reduction Strategy.

Before investing huge amounts of money in an environmentally destructive project, I urge you to fully address the potential for flood damage reduction through strategic water storage in the form of wetland restoration, waffling, and other water retention systems.

Sincerely,

July 2011

Ms. Day Breitag

From: <u>National Wildlife Federation</u> on behalf of <u>Steve & Lynn Carnes</u>

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Date: Wednesday, August 04, 2010 7:19:46 AM

Aug 4, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

I urge you to find an alternative to the proposed \$1.4 billion diversion channel to divert Red River flows around Fargo and Moorhead, by evaluating less expensive, longer-term solutions. Specifically, I urge you to:

- develop an integrated, basin wide evaluation of flood damage reduction and better water management strategies before committing more than one billion dollars to the construction of "The Big Ditch";
- develop an alternative that evaluates using wetland restoration as a primary tool for flood management this evaluation should consider various levels of wetland restoration, including restoring 100,000 acres and 250,000 acres; and
- develop an alternative that combines wetland restoration with other water retention strategies, including the "Waffle"® proposal and the Red River Basin Commission Flow Reduction Strategy.

Before investing huge amounts of money in an environmentally destructive project, I urge you to fully address the potential for flood damage reduction through strategic water storage in the form of wetland restoration, waffling, and other water retention systems.

The best possible solution will be one that reestablishes the natural ecosystem that was in place before we unbalanced it. I truly appreciate the need to abate the flooding, but I urge you to think creatively to find ways to restore the balance to the benefit of all the creatures that call this area home.

Thank you for caring.

Sincerely,

Mr. Steve & Lynn Carnes

From: <u>National Wildlife Federation</u> on behalf of <u>Kyle R. Crocker</u>

To: <u>Snyder, Aaron M MVP</u>

Subject: Please develop an alternative for flood control in the Red River basin

Date: Wednesday, August 04, 2010 10:54:59 AM

Aug 4, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

Industrial agriculture in the upper midwest has already taken an enormous toll on migratory birds.

I urge you to find an alternative to the proposed \$1.4 billion diversion channel to divert Red River flows around Fargo and Moorhead, by evaluating less expensive, longer-term solutions. Specifically, I urge you to:

- develop an integrated, basin wide evaluation of flood damage reduction and better water management strategies before committing more than one billion dollars to the construction of "The Big Ditch":
- develop an alternative that evaluates using wetland restoration as a primary tool for flood management this evaluation should consider various levels of wetland restoration, including restoring 100,000 acres and 250,000 acres; and
- develop an alternative that combines wetland restoration with other water retention strategies, including the "Waffle"® proposal and the Red River Basin Commission Flow Reduction Strategy.

Before investing huge amounts of money in an environmentally destructive project, I urge you to fully address the potential for flood damage reduction through strategic water storage in the form of wetland restoration, waffling, and other water retention systems.

Sincerely,

Dr. Kyle R. Crocker

From: <u>National Wildlife Federation</u> on behalf of <u>Sandy Dvorsky</u>

To: <u>Snyder, Aaron M MVP</u>

Subject: NEEDED: an less destructive alternative for flood control in the Red River basin

Date: Tuesday, August 03, 2010 5:35:41 PM

Aug 3, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

The proposed \$1.4 billion diversion channel to divert Red River flows around Fargo and Moorhead would be terribly destructive to the environment. Please reconsider this proposal and evaluate less expensive, longer-term solutions.

Please take the following actions:

- develop an integrated, basin wide evaluation of flood damage reduction and better water management strategies before committing more than one billion dollars to the construction of "The Big Ditch";
- develop an alternative that evaluates using wetland restoration as a primary tool for flood management this evaluation should consider various levels of wetland restoration, including restoring 100,000 acres and 250,000 acres; and
- develop an alternative that combines wetland restoration with other water retention strategies, including the "Waffle"® proposal and the Red River Basin Commission Flow Reduction Strategy.

Investing huge amounts of money in an environmentally destructive project would be a terrible mistake. The potential for flood damage reduction through strategic water storage in the form of wetland restoration, waffling, and other water retention systems is high...and deserves your full focus and priority. Thank-you.

Sincerely,

Mrs. Sandy Dvorsky

From: <u>National Wildlife Federation</u> on behalf of <u>Diane Fortney</u>

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Date: Wednesday, August 04, 2010 4:19:29 AM

Aug 4, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

I urge you to find an alternative to the proposed \$1.4 billion diversion channel to divert Red River flows around Fargo and Moorhead, by evaluating less expensive, longer-term solutions. Specifically, I urge you to:

- develop an integrated, basin wide evaluation of flood damage reduction and better water management strategies before committing more than one billion dollars to the construction of "The Big Ditch";
- develop an alternative that evaluates using wetland restoration as a primary tool for flood management this evaluation should consider various levels of wetland restoration, including restoring 100,000 acres and 250,000 acres; and
- develop an alternative that combines wetland restoration with other water retention strategies, including the "Waffle"® proposal and the Red River Basin Commission Flow Reduction Strategy.

Before investing huge amounts of money in an environmentally destructive project, I urge you to fully address the potential for flood damage reduction through strategic water storage in the form of wetland restoration, waffling, and other water retention systems.

We know from experience that messing with mother nature by ditch diversions has NOT worked. Don't do it again!

Sincerely,

Mrs. Diane Fortney

From: <u>National Wildlife Federation</u> on behalf of <u>Florence Gleason</u>

To: <u>Snyder, Aaron M MVP</u>

Subject: Please develop an alternative for flood control in the Red River basin

Date: Wednesday, August 04, 2010 3:57:57 PM

Aug 4, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

I urge you to find an alternative to the proposed \$1.4 billion diversion channel to divert Red River flows around Fargo and Moorhead, by evaluating less expensive, longer-term solutions. Specifically, I urge you to:

- develop an integrated, basin wide evaluation of flood damage reduction and better water management strategies before committing more than one billion dollars to the construction of "The Big Ditch";
- develop an alternative that evaluates using wetland restoration as a primary tool for flood management this evaluation should consider various levels of wetland restoration, including restoring 100,000 acres and 250,000 acres; and
- develop an alternative that combines wetland restoration with other water retention strategies, including the "Waffle"® proposal and the Red River Basin Commission Flow Reduction Strategy.

Before investing huge amounts of money in an environmentally destructive project, I urge you to fully address the potential for flood damage reduction through strategic water storage in the form of wetland restoration, waffling, and other water retention systems.

I know that the Corp has great expertise in digging ditches and building dams. I am sure you can also develop the expertise needed to find better solutions to environmental problems. The people of Minnesota would appreciate it.

Sincerely,

Ms. Florence Gleason

From: <u>National Wildlife Federation</u> on behalf of <u>Barbara Harvey</u>

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Date: Tuesday, August 03, 2010 7:05:41 PM

Aug 3, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

I urge you to find an alternative to the proposed \$1.4 billion diversion channel to divert Red River flows around Fargo and Moorhead, by evaluating less expensive, longer-term solutions. Historically, past risks of flooding were much lower than they are now until developers and others, including the Army Corps of Engineers, began draining and modifying this once-rich, wildlife-supporting area, eliminating much of the wildlife habitat areas as well as increasing flooding risks due to their destruction of the natural environment which once served to protect the surrounding lands from floods. Your proposed "Big Ditch" will only increase and exacerbate the problem even further, by destroying even more wildlife support and naturally-occurring grasslands and wetlands.

Specifically, I urge you to:

- develop an integrated, basin wide evaluation of flood damage reduction and better water management strategies before committing more than one billion dollars to the construction of "The Big Ditch";
- develop an alternative that evaluates using wetland restoration as a primary tool for flood management this evaluation should consider various levels of wetland restoration, including restoring 100,000 acres and 250,000 acres; and
- develop an alternative that combines wetland restoration with other water retention strategies, including the "Waffle"® proposal and the Red River Basin Commission Flow Reduction Strategy.

Before investing huge amounts of money in an environmentally destructive project, I urge you to fully address the potential for flood damage reduction through strategic water storage in the form of wetland restoration, waffling, and other water retention systems.

Sincerely,

Ms. Barbara Harvey

From: <u>National Wildlife Federation</u> on behalf of <u>Lucy Knoll</u>

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Date: Wednesday, August 04, 2010 4:19:53 AM

Aug 4, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

You to find an alternative to the proposed \$1.4 billion diversion channel to divert the Red River flows around Fargo and Moorhead, by evaluating less expensive, longer-term solutions. Specifically, I urge you to:

- 1. develop an integrated, basin wide evaluation of flood damage reduction and better water management strategies before committing more than one billion dollars to the construction of "The Big Ditch";
- -2. develop an alternative that evaluates using wetland restoration as a primary tool for flood management this evaluation should consider various levels of wetland restoration, including restoring 100,000 acres and 250,000 acres; and
- 3. develop an alternative that combines wetland restoration with other water retention strategies, including the "Waffle" ® proposal and the Red River Basin Commission Flow Reduction Strategy.

Before investing huge amounts of money in this environmentally destructive project, I urge you to fully address the potential for flood damage reduction through strategic water storage in the form of wetland restoration, waffling, and other water retention systems.

Sincerely,

Dr. Lucy Knoll

From: <u>National Wildlife Federation</u> on behalf of <u>Corinne Livesay</u>

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Date: Wednesday, August 04, 2010 4:20:14 AM

Aug 4, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

I urge you to find an alternative to the proposed \$1.4 billion diversion channel to divert Red River flows around Fargo and Moorhead, by evaluating less expensive, longer-term solutions. Specifically, I urge you to:

- develop an integrated, basin wide evaluation of flood damage reduction and better water management strategies before committing more than one billion dollars to the construction of "The Big Ditch";
- develop an alternative that evaluates using wetland restoration as a primary tool for flood management this evaluation should consider various levels of wetland restoration, including restoring 100,000 acres and 250,000 acres; and
- develop an alternative that combines wetland restoration with other water retention strategies, including the "Waffle"® proposal and the Red River Basin Commission Flow Reduction Strategy.

Before investing huge amounts of money in an environmentally destructive project, I urge you to fully address the potential for flood damage reduction through strategic water storage in the form of wetland restoration, waffling, and other water retention systems. WE MUST CONSIDER WILDLIFE AS IMPORTANT AS OURSELVES.

Sincerely,

Mrs. Corinne Livesay

From: <u>National Wildlife Federation</u> on behalf of <u>Linda Peck</u>

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Date: Saturday, August 07, 2010 1:24:37 PM

Aug 7, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

Now is the time to find alternatives to the proposed \$1.4 billion diversion channel which will divert Red River flows around Fargo and Moorhead, by evaluating less expensive, longer-term solutions. Specifically, I urge you to:

- develop an integrated, basin wide evaluation of flood damage reduction and better water management strategies before committing more than one billion dollars to the construction of "The Big Ditch";
- develop an alternative that evaluates using wetland restoration as a primary tool for flood management this evaluation should consider various levels of wetland restoration, including restoring 100,000 acres and 250,000 acres; and
- develop an alternative that combines wetland restoration with other water retention strategies, including the "Waffle"® proposal and the Red River Basin Commission Flow Reduction Strategy.

Before investing huge amounts of money in an environmentally destructive project, I urge you to fully address the potential for flood damage reduction through strategic water storage in the form of wetland restoration, waffling, and other water retention systems.

Sincerely,

Mrs. Linda Peck

From: <u>National Wildlife Federation</u> on behalf of <u>LaNelle Schaffhauser</u>

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Date: Thursday, August 05, 2010 7:26:34 AM

Aug 5, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

Growing up in WestFargo, ND I have experienced flooding first hand and understand the complications of finding a solution but building a channel is one that has to many negative effects for everyone.

I urge you to find an alternative to the proposed \$1.4 billion diversion channel to divert Red River flows around Fargo and Moorhead, by evaluating less expensive, longer-term solutions. Specifically, I urge you to:

- develop an integrated, basin wide evaluation of flood damage reduction and better water management strategies before committing more than one billion dollars to the construction of "The Big Ditch":
- develop an alternative that evaluates using wetland restoration as a primary tool for flood management this evaluation should consider various levels of wetland restoration, including restoring 100,000 acres and 250,000 acres; and
- develop an alternative that combines wetland restoration with other water retention strategies, including the "Waffle"® proposal and the Red River Basin Commission Flow Reduction Strategy.

Before investing huge amounts of money in an environmentally destructive project, I urge you to fully address the potential for flood damage reduction through strategic water storage in the form of wetland restoration, waffling, and other water retention systems.

Sincerely,

Mrs. LaNelle Schaffhauser

From: <u>National Wildlife Federation</u> on behalf of <u>Roslyn Abramovitch Smith</u>

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Date: Thursday, August 05, 2010 10:26:58 AM

Aug 5, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

I urge you to find an alternative to the proposed \$1.4 billion diversion channel to divert Red River flows around Fargo and Moorhead, by evaluating less expensive, longer-term solutions. Specifically, I urge you to:

- develop an integrated, basin wide evaluation of flood damage reduction and better water management strategies before committing more than one billion dollars to the construction of "The Big Ditch";
- develop an alternative that evaluates using wetland restoration as a primary tool for flood management this evaluation should consider various levels of wetland restoration, including restoring 100,000 acres and 250,000 acres; and
- develop an alternative that combines wetland restoration with other water retention strategies, including the "Waffle"® proposal and the Red River Basin Commission Flow Reduction Strategy.

Before investing huge amounts of money in an environmentally destructive project, I urge you to fully address the potential for flood damage reduction through strategic water storage in the form of wetland restoration, waffling, and other water retention systems.

NOTE: I live in this area of concern and hope a positive solution can be determined for both humans and all migratory birds!!

Sincerely,

Mrs. Roslyn Abramovitch Smith

From: <u>National Wildlife Federation</u> on behalf of <u>patricia thomas</u>

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Date: Friday, August 06, 2010 10:51:39 AM

Aug 6, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

I urge you to find an alternative to the proposed \$1.4 billion diversion channel to divert Red River flows around Fargo and Moorhead, by evaluating less expensive, longer-term solutions. Specifically, I urge you to:

- develop an integrated, basin wide evaluation of flood damage reduction and better water management strategies before committing more than one billion dollars to the construction of "The Big Ditch";
- develop an alternative that evaluates using wetland restoration as a primary tool for flood management this evaluation should consider various levels of wetland restoration, including restoring 100,000 acres and 250,000 acres; and
- develop an alternative that combines wetland restoration with other water retention strategies, including the "Waffle"® proposal and the Red River Basin Commission Flow Reduction Strategy.

Before investing huge amounts of money in an environmentally destructive project, PLEASE fully address the potential for flood damage reduction through strategic water storage in the form of wetland restoration, waffling, and other water retention systems.

You are in a position of power to affect good change. We can no longer abuse our land and water. Please, please act in the right way. Thank you for reading this and following your heart.

Sincerely,

Dr. patricia thomas

From: <u>National Wildlife Federation</u> on behalf of <u>Dolores Vinson</u>

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Date: Wednesday, August 11, 2010 3:59:41 PM

Aug 11, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

We have done this before remember and it caused terrible consequences I urge you to find an alternative to the proposed \$1.4 billion diversion channel to divert Red River flows around Fargo and Moorhead, by evaluating less expensive, longer-term solutions. Specifically, I urge you to:

- develop an integrated, basin wide evaluation of flood damage reduction and better water management strategies before committing more than one billion dollars to the construction of "The Big Ditch":
- develop an alternative that evaluates using wetland restoration as a primary tool for flood management this evaluation should consider various levels of wetland restoration, including restoring 100,000 acres and 250,000 acres; and
- develop an alternative that combines wetland restoration with other water retention strategies, including the "Waffle"® proposal and the Red River Basin Commission Flow Reduction Strategy.

Before investing huge amounts of money in an environmentally destructive project, I urge you to fully address the potential for flood damage reduction through strategic water storage in the form of wetland restoration, waffling, and other water retention systems.

Sincerely,

Ms. Dolores Vinson

From: <u>National Wildlife Federation</u> on behalf of <u>Laurie Walters</u>

To: Snyder, Aaron M MVP

Subject: Please develop an alternative for flood control in the Red River basin

Date: Tuesday, August 03, 2010 6:05:37 PM

Aug 3, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

Please consider alternatives presented by the NWF. The environment is being destroyed in so many areas by accidents and events that are out of our control. In this case, it is possible to choose an environmentally responsible option.

I urge you to find an alternative to the proposed \$1.4 billion diversion channel to divert Red River flows around Fargo and Moorhead, by evaluating less expensive, longer-term solutions. Specifically, I urge you to:

- develop an integrated, basin wide evaluation of flood damage reduction and better water management strategies before committing more than one billion dollars to the construction of "The Big Ditch":
- develop an alternative that evaluates using wetland restoration as a primary tool for flood management this evaluation should consider various levels of wetland restoration, including restoring 100,000 acres and 250,000 acres; and
- develop an alternative that combines wetland restoration with other water retention strategies, including the "Waffle"® proposal and the Red River Basin Commission Flow Reduction Strategy.

Before investing huge amounts of money in an environmentally destructive project, I urge you to fully address the potential for flood damage reduction through strategic water storage in the form of wetland restoration, waffling, and other water retention systems.

Sincerely,

Ms. Laurie Walters

Concerned Citizens of the Wild Rice Watershed District

P.O. Box 135, Ada Post Office Lower Level Ada, MN 56510

Phone: 218-784-3900

Fax: 218-784-2013

Email: ccwrwd@loretel.net

To: US Army Corps of Engineers Headquarters St. Paul District

From: CCWRWD Date: 07-29-2010

Subject: Norman County Board of Commissioners Resolution # CR-07-06-10-3

The Concerned Citizens at their July 28, 2010, board meeting have gone on record to fully support Norman County Board of Commissioners Resolution # CR-07-06-10-3. Please see attached copy of said resolution.

Curt Jacobson, Chairman

Concerned Citizens of the Wild Rice Watershed District

CWRWD Board members:

(LISTED)

Curt Jacobson, Chairman

Perry Ellingson, Secretary-Treasurer

Dave Haugo, Director

Sam Larson, Director

Paul Houglum, Director

Terry Guttormson, Director

Bruce Tufte, Director

NORMAN COUNTY BOARD OF COMMISSIONERS

RESOLUTION NO. CR 0-06-10-3

Commissioner The blow introduced the following resolution and moved it's adoption:
WHEREAS, The United States Army Corps of Engineers, (USACE) has proposed constructing flood water diversion channels around the cities of Fargo, ND and Moorhead MN.
WHEREAS, The proposed diversion channel redeposits the floodwater back into the Red River in northern Clay County of MN or Northern Cass County of ND.
WHEREAS, Norman County is situated directly north and downstream from the point at which the proposed diversion channels reenter the Red River.
WHEREAS, The proposed flood diversion channels will change the flow regime of the Red River during flood events and is estimated to cause an adverse impact of as much as seventeen inches of additional crest elevation to western Norman County.
WHEREAS, Increased flood crest of the magnitude envisioned by the USACE will adversely impact roads, bridges, utilities, farms, personal property, commerce, public safety, and personal well being to those downstream of the proposed diversion.
WHEREAS, A change in flow regime that results in adverse impacts to Norman County and its residents and or others situated downstream from the proposed diversion projects is not acceptable.
NOW THEREFORE, To preserve the interests of Norman County and its people, the Norman County Board of Commissioners do hereby go on record of opposing the FM diversion project as it is now proposed.
The motion for adoption of the forgoing resolution was duly seconded by commissioner Olson and upon vote being taken thereon, Au voted in favor thereof: and Nove voted against the same: whereupon said resolution was declared duly passed and adopted
Adopted this 6 day of July, 2010
By Con Hall Lee Ann Hall, Chair
Attest Capacif Musical Richard Municer, Auditor Treasurer

Concerned Citizens of the Wild Rice Watershed District

P.O. Box 135, Ada Post Office Lower Level Ada, MN 56510

Phone: 218-784-3900

Fax: 218-784-2013

Email: ccwrwd@loretel.net

Board member Perry Ellingson introduced the following resolution and moved its adoption:

The United States Army Corps of Engineers, (USACE) has determined that impacts are expected north of Halstad, MN as a result of construction of the proposed Fargo Moorhead diversion.

The USACE has just recently released this information.

The USACE has not indicated to the citizens north of Halstad the magnitude of the expected impacts.

The citizens situated north of Halstad, MN are unable to determine their situation as a result of impacts of the FM diversion due to lack of information.

The USACE has set August 9th, 2010 as the deadline for public comment on the proposed FM diversion.

An August 9th, 2010 deadline does not provide sufficient time for residents situated north of Halstad to determine how the impacts of the proposed FM diversion will affect them and to submit comment.

To preserve the interests of Norman County and its people, the CCWRWD Board of Directors do hereby go on record of requesting the USACE to extend the time frame of public comment in regard to the proposed FM diversion to accommodate the needs and rights of citizens situated north of Halstad, MN

The motion for adoption for the forgoing resolution was duly seconded by board member Paul Houglum, and upon vote being taken thereon, 7 voted in favor thereof: and 0 voted against the same: whereupon said resolution was declared duly passed and adopted.

Adopted this 28th day of July, 2010

Curt Jagobson, Chairman

Aaron Snyder Corps of Engineers Planner and Project Manager 190 E. 5th St., Ste. 401 St. Paul, MN 55101-1638

Dear Mr. Snyder:

This letter communicates concerns of members of the Willow Creek Homeowners Association as to plans presented by the Corps in its *Draft Feasibility Report and Environmental Impact Statement Fargo-Moorhead Metropolitan Area Flood Risk Management May 2010.*

Figure 3 of the report, "LPP Diversion Alignment," depicts the route of the proposed diversion. According to this plan, it would join the Sheyenne diversion at a point not far north of Horace and follow it to a point just south of I-94. There it would swing west of the Sheyenne diversion, thence north to cross I-94 in the area of interchange 342. This plan presents serious problems for our neighborhood, as well as all the homes and farms in the area.

- 1. The report does not address how the project will deal with break-out water that comes out of the Sheyenne River at just about the point where the proposed Red River diversion crosses the Sheyenne. Currently, such break-out water, after leaving the Sheyenne, is held to the west of the Sheyenne diversion; the Sheyenne diversion prevents it from following its natural drainage back to the river. Consequently, homes and farms are flooded for extended periods. The proposed Red River diversion, it appears, will only exacerbate this problem; moreover, it will bring the problem closer, and likely into, the concentration of residences in our neighborhood.
- 2. Drainage and flood problems in our neighborhood will become much more severe if the proposed Red River diversion is built, because the new diversion will block the egress of water north. The water that currently pools up on the west side of the Sheyenne diversion eventually flows north; it crosses I-94 when it reaches an elevation of 904 feet. The place where it crosses to move north is precisely the place where the new Red River diversion would cross I-94. This situation means that currently, flood levels in our neighborhood are essentially capped at 904 feet. With the new construction, they would go to 906 feet, a crucial and catastrophic difference.

cont.

- 3. Representatives of the Corps have stated at local hearings that there will be no mitigation actions or funding for localities adversely affected that is, flooded due to its construction of the Red River diversion. This leaves our neighborhood with the prospect of recurrent flooding induced by construction of the new diversion, with no assistance to deal with it.
- 4. The proposed Red River diversion appears to threaten the continued operation of interstate exchange 342. This will adversely affect all properties in the locality.

If the proposed diversion is to be built, there are alternatives for routing that would alleviate the severe problems inflicted by the current plan. For reasons unknown, the Corps has rejected a plan to route the diversion somewhat to the west of the projected route. Even if, however, the construction adhered generally to the current proposal, there are ways in which the impacts on properties in the neighborhood might be lessened.

For instance, there is no stated reason why the proposed diversion would have to depart from the Sheyenne diversion at the point where proposed and swing west, thereby stopping the northern egress of flood waters from our neighborhood. It appears that the Red River diversion might just as well follow the Sheyenne diversion across the interstate and north.

Finally, we feel it necessary to call into question the wisdom of any plan that routes a Red River diversion along the channel of the present Sheyenne diversion. There is an alarming likelihood that before construction of the Red River diversion, or worse yet, during its construction, water from the Devils Lake basin will break into the Sheyenne River drainage. Uncontrolled flows of Devils Lake water will require continuous use of the Sheyenne diversion to handle the flow. Thus construction of the Red River diversion would be disrupted, perhaps prevented. Such a contingency, increasingly likely, is not accounted for in Corps proposals, and presents the whole project with an alarming scenario.

Sincerely,

Ann Hopp, President

Willow Creek Homeowners Association

3846 Willow Rd

West Fargo, ND 58078-6700

MARK BRODSHAUG

July 27, 2010

Aaron M. Snyder USACE Planner and Project Manager 180 East 5th Street, Suite 700 St. Paul, MN 55101

Dear Mr. Snyder,

I own and operate a grain farm along the route of the proposed diversion in North Dakota and serve on the Cass County Joint Water Resource District board. I support the project because I recognize the huge benefits that the proposed diversion could bring to the region. However, farmers along the route of the project, in addition to the loss of part of their farming operation, could potentially have other unnecessary negative impacts on their farms. I am writing to state my support of the project and to comment on the Draft Feasibility Report and Environmental Impact Statement.

Section 5.2 of the EIS details the project's effects on significant resources which includes socioeconomic resources. Section 5.2.3.1.9 specifically talks about existing and potential land use and impacts upon the primary current land use of farming. This section ends with the sentence "Mitigation measures would be incorporated into the final design to minimize impacts to farmland." I would like to outline several suggestions for the USACE that could minimize the negative impacts to farming from the proposed diversion and have a mitigating positive impact to remaining farmland:

- Utilize North-South or East-West alignments of the channel as much as possible to minimize diagonal crossings of farmland. Triangular shaped pieces are inefficient to farm with large equipment and waste inputs because of overlap of seed, fertilizer, and herbicides.
 - Design and build the channel to carry 100 year flood flows with the surface elevation inside the channel below the outside ground elevation where possible to ensure positive drainage from surrounding farm land under most conditions.
 - Design and build drainage channels outside of the spoil banks to ensure surface water can get to the diversion inlets.
 - Design and build gravel roads along the diversion between bridge crossings to allow movement of local traffic and farm equipment.
 - Design and build tile drainage inlets into the diversion at the locations of the surface drainage inlets to allow for development of gravity tile drainage systems into the diversion over time.
 - Allow landowners to retain ownership of land not needed for the flood control or recreation parts of the project. Perhaps most of the spoil area could just have a construction easement rather than outright purchase and allow the landowners to retain ownership and use of the land after the spoil is leveled.
 - USACE should get input from local farmers and township officials regarding diversion alignment, spoil location, and drainage inlet locations.

hand the second of the second

Sincerely.

Mark Brodshaug

Maggied, Troy MVP

From: Snyder, Aaron M MVP

Sent: Monday, August 16, 2010 1:40 PM

To: Beauchamp, Francis MVP; Maggied, Troy MVP

Subject: FW: The BIG DITCH is a bad idea for so many reasons

FYI - See below.

Aaron M. Snyder
USACE Planner and Project Manager, PMP
Chief, Project Management Branch (PM-B)
651-290-5489
612-518-0355 (Cell)
Aaron.M.Snyder@usace.army.mil

----Original Message----

From: National Wildlife Federation [mailto:NationalWildlifeFederation@nwf.org] On Behalf Of

Carolyn C

Sent: Tuesday, August 03, 2010 5:36 PM

To: Snyder, Aaron M MVP

Subject: The BIG DITCH is a bad idea for so many reasons

Aug 3, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

Really? Have we learned nothing from the many environmental disasters of late, like KATRINA for example, on how important it is to preserve wetlands?

Do we have to wreck the environment more for another stupid quick fix?

Honestly, you need to come up with something better than this big ditch!

Wetlands are a great tool for flood management. And what about the "Waffle" proposal? The Red River Basin Commission Flow Reduction Strategy?

The big ditch is such a poorly thought out solution. You can do better!!!

Sincerely,

Ms. Carolyn C

Maggied, Troy MVP

From: Snyder, Aaron M MVP

Sent: Monday, August 16, 2010 1:25 PM

To: Beauchamp, Francis MVP; Maggied, Troy MVP **Subject:** FW: Flood control in the Red River basin

FYI - See below.

Aaron M. Snyder
USACE Planner and Project Manager, PMP
Chief, Project Management Branch (PM-B)
651-290-5489
612-518-0355 (Cell)
Aaron.M.Snyder@usace.army.mil

----Original Message-----

From: National Wildlife Federation [mailto:NationalWildlifeFederation@nwf.org] On Behalf Of

Karen Erickstad

Sent: Thursday, August 05, 2010 1:56 AM

To: Snyder, Aaron M MVP

Subject: Flood control in the Red River basin

Aug 5, 2010

Aaron Snyder Branch, 190 Fifth Street East, Ste. 401 St. Paul, MN 551011638

Dear Snyder,

As a North Dakota native, current Moorhead resident, and advocate of the environment and its wildlife I strongly urge you to find an alternative to the channel proposed for diverting the Red River around Fargo-Moorhead. Please consider less expensive, longer-term solutions that are less harmful to the natural landscape. Instead of spending more than one billion dollars to construct what is simple a gigantic ditch, I urge you to:

- develop an integrated, basin-wide evaluation of flood damage reduction
- design better water management strategies
- develop an alternative plan that utilizes wetland restoration as a primary tool for flood management **This would be a "win-win" solution it would control flooding and restore precious wetlands that have been lost due to development along the Red River**

Rather than investing vast sums of money in an environmentally destructive project that will destroy the natural landscape and thereby the natural habitats of a variety of plant and animal species, please evaluate the potential for flood damage reduction through strategic water storage in the form of wetland restoration, waffling, and other water retention systems.

Sincerely,

US Army Corps of Engineers Headquarters St. Paul District 190 fifth street east St. Paul, MN. 55101-1638

Dear Sirs,

This letter is in reference to the proposed Red River Diversion being studied and planned by the United States Army Corp of Engineers around the Fargo-Moorhead area.

Recently, local FM area officials were in Washington, D.C. testifying in favor of building the diversion as well as lobbying for federal financing. It was reported in the local news media that those lobbying for the diversion were reported as testifying that everyone was in favor and on board with the building of the FM area diversion. This is blatantly not true.

There was no representation from downstream interests:

- * Hundreds of people owning thousands of acres of the most productive land in world were not allowed to be in attendance to tell how their property will be ruined for ever as the excess water will erode and destroy land and keep farmers out of the fields for weeks, possibly months making timely planting impossible.
- * Thousands of small town residences were not invited to tell how even just the talk of the FM diversion has already had a negative affect on their home values,
- -that they feel their homes soon will be unsalable if they are not already, how their towns will be cut off from commerce for 6 weeks of more because of the added water
- -how they may lose their entire town to the excess water being dumped on them when they are already fighting high water
- -how they will lose their small business' how they will lose their churches because of people leaving and no new families looking to relocate there as they used too to raise their kids in a small town atmosphere.
 - -and how they will be cut off from emergency services for weeks on end.
- * The local school district was not allowed to be in attendance to testify how more water equates to unsafe conditions for the children and more days of no school due to high flood waters. Further putting pressure on enrollment and ever falling state aid.
- * Downstream counties were not allowed to be in attendance to tell how they cant afford the added loss of infrastructure as the diversion will ruin more roads, bridge, culverts, and the like.
- * Down stream townships were not invited to tell how they cant afford the similar damage the counties will be experiencing.
- * People who are in Northwestern Clay County and Northeastern Cass County were not invited and feel totally unrepresented as none of their issues were brought forward.
- * Grand Forks, ND and East Grand Forks, MN were not allowed to speak of the concerns that the FM diversion allows less freeboard of their recent flood prevention efforts.
- * Experts on retention, detention, gated storage to slow water (water that causes the flooding) and other such less expensive measures that can benefit the entire Red River Valley were not allowed to be in attendance.

These are some but not all the reasons hundreds, if not thousands of people down stream feel left out, run over, and that the group that testified in Washington, D.C. were very disingenuous when they testified that "everyone" was in favor of the FM diversion, whether it be built in North Dakota or Minnesota.

Recently, Norman County unanimously passed a resolution against the proposed FM diversion. Soon many small towns, townships, EDA's, and a school district have indicated to me, they will pass similar resolutions.

I attended the first meeting offered about the diversion. I asked if there was a down stream impact study done and if so, what did it reveal. Craig Evans answered and told the crowd there was no such study done, nor did he see the need for one because as the water hits the mouth of the diversion, it has a tendency to disperse rapidly and he and the corp saw no reason to do a study. (I would like to request a copy of the tape of that meeting) since then your position has morphed to 17 inches. I don't believe you have hit the number it will reach yet. Have you taken into affect what the man made or nature made release of Devils Lake water will do to the area down stream of the Sheyenne? Probably another 17 inches of more. Have you studied what these two events will do to the Grand Forks and East Grand Forks flood prevention measures? Please, make this part of your study down stream.

Its unconscionable to me how a government agency, such as the USACE can build a 2 billion-dollar project that will ruin hundreds of thousands of dollars of donwstream infrastructure, commerce, farmland and homes. It surreal to me how you can be commissioned to ruin peoples homes, business, farms, and way of life. Especially when retention, gated storage, etc has not been fully implemented. This diversion is the biggest waist of taxpayer money in history.

I am an affected downstream landowner, taxpayer, member of Long Term Flood Solutions Committee of the Red River Basin Commission, member of the Concerned Citizens of the Wild Rice Watershed, as well as just a very concerned citizen of this community of which this diversion will kill.

Terry Guttormson

Sincerely

July 12, 2010

Aaron M. Snyder USACE, St. Paul District 180 5th St. E. Suite 700 St. Paul, MN 55101-1678

Dear Aaron,

I e-mailed the enclosed request for an extension to you and it seems the e-mail address I used is undeliverable.

We would greatly appreciate an extension to the end of September if possible. The short comment time, even with the two week extension is not acceptable. The USACE 1.5 billion diversion will be life changing for all of us downstream and I hope we will be shown respect for the overwhelming concerns we have. Any project this huge and with the possible ramifications to the downstream should without question allow adequate time for comments considering the changes that will be ours downstream in the future.

Congratulations on your prestigious new job. It does give me more respect for the decision making of the USACE as they chose well in appointing you for the position!

I would appreciate an e-mail of who we can now contact concerning the USACE Fargo-Moorhead Protection Project. Should we be contacting Craig Evans? We know for sure we will never have anyone who was more respectful then you to answer our e-mails in a timely manner and with good information.

Respectfully,

Diane J. Ista

August 2, 2010

Aaron Snyder, USACE Planner and Project Manager 180 East 5th Street, Suite 700 St Paul, MN 55101

Subject: Review of the Draft Feasibility Report and Environmental Impact Statement for Fargo-Moorhead Metropolitan Area Flood Risk Management.

Dear Mr. Snyder,

I have reviewed your subject Draft Feasibility Report and Environmental Impact Statement. Although now residing in Colorado, I am a native of the Red River Valley area and own interest in family farmland in the Hendrum-Perley area that will be impacted by the proposed Fargo-Moorhead Diversion, if constructed.

In the short time frame allowed for review, I submit the following concerns and comments:

- 1. The report states that downstream water quantity with a diversion will cause flood stage depth increases of 2 feet or more at the Halstad Gage, 16.7 inches near Hendrum and 10.9" at Perley. How will the downstream impacts with increased depths of water be mitigated?
- 2. I question the accuracy of the areas shown in red on Figs 39 and 41, (pages 158 & 160) that delineates additional flood area with the diversion project and existing for 50 and 100 yr events. Along the east side between Hendrum and Perley, virtually no additional flood area appears shown with stage increases of 6.8" at Hendrum and 3" at Perley for a 2 percent (50 yr) chance event. Likewise for stage increases of 10.4" at Hendrum and 5.4" at Perley for a 1 percent (100 yr) chance event, virtually no additional flood area appears shown. What detail ground surface topography is currently available that will accurately delineate the extent of the additional flood area
- 3. The report does not list downstream impacts north of Halstad, MN. When will that area be studied and the impacts reported?
- 4.Under discussion of Alternatives Considered, the Report and EIS appears much too brief on studies for a Flood Storage alternative. I only find mention of it in a short paragraph in Attachment 2, (page 12) which states in part "Through modeling the Corps determined that the storage alternative would have low effectiveness in larger flood events, but may be helpful in small flood events". It would seem that this Report and EIS should have contained a much greater amount of information on what studies or models have been performed for flood storage, particularly as to where and how many tributaries and drainages; location, number, and sizes of storage reservoirs; methods of storage; storage costs vs. diversion costs, etc. Considering that the downstream folks favor flood storage as a better alternative than a diversion, why is there not more detailed information on storage or retention alternatives?

5. It is interesting to note that your Report and EIS cites the Final Environmental Impact Statement for the Red River Valley Water Supply Project (page 7) published by the Bureau of Reclamation, December 21, 2007. The executive summary of that report states: "The Red River Valley faces a potential water supply crisis. Most of the people living in the Red River Valley rely on the drought-prone Red River of the North and its tributaries as their primary or sole source of water. For this reason the Project (Red River Valley Water Supply Project) is being proposed." In view of that finding, why would the Army Corps of Engineers and the leaders of Fargo-Moorhead be planning a diversion project instead of water storage or retention projects? In my opinion, the proposed Fargo-Moorhead Diversion Project does not provide a solution that will help to solve both floods and droughts.

Sincerely,

James H. Jacobson, PE

Mailing Address:

FARGO DIVERSION PLAN--OBJECTIONS, REPRESENTATIONS ETC

US Army Corps of Engineers ATTN: Aaron Snyder 190 5th St. East (PM-A) St. Paul, MN 55101

July 14, 2010

Aaron Snyder:

At the meeting held June 16, 2010, at Hedrum MN, I gave you some documents in regards to the above issue. I wish herein to point what and the why for those documents.

Fargo represents the diversion is in the best interest of the public. This is false. Fargo has a consistent practice of acting in an arbitrary, unreasonable, and illegal manner. Examples:

<u>City of Fargo, Cass County v. Harwood Township</u>, 256 N.W. 2d 694 (1977), the State Supreme Court held that [Fargo/Cass County] had no more right than any other corporation to condemn property.

<u>Litten v. City of Fargo</u>, 294 N. W. 2d 628 (1980), the State Supreme Court held that [Fargo] a home rule city does not have the authority to select any form of government it may desire.

<u>Wild Rice River Estates v. City of Fargo</u>, 705 N. W. 2d 850 (2005) Fargo was accused of "tortious interference with contract" and bad faith "to prevent construction on Wild Rice's previously platted real property during unsuccessful attempt to secure Federal funding to purchase Wild Rice's real property at a lower price (a price without need for compensation for new construction).

<u>Sauby v. City of Fargo</u>, 747 N. W. 2d 65, (2008) the Supreme Court [in answer to a certified question from the U.S. District Court], held that [Fargo] could not impose penalties, for non-criminal traffic offenses, that exceeded state statutory limits on penalties for equivalent offenses. Based on that decision, the U.S. District Court ordered the City of Fargo to refund million(s) of dollars illegally collected.

State of South Dakota v Ubbelohde, [US Army Corps of District Engineer, Omaha District] 330 F. 3d 1014 (8th Cir. 2003). The Court noted that the government [US Army Corps] "must represent the interests of all of its citizens". *Id.* page 1025. The Fargo Diversion plan does not do that. As the Plan represents, it actually doesn't even represent the interest of those it is proposed to represent. E.g., the diversion will not eliminate flood risk. The city will continue to have to use "emergency flood measures".

As I pointed out, deepening the Red River channel is an option that will benefit all

citizens. I also informed you of the Colorado River project, where the federal government deepened that River. The case was <u>State of Arizona v. State of California</u>, 283 U. S. 423, 51 S. Ct. 522 (1931) [Boulder Canyon Project Act-43 U.S. C. A. sections 617-617t-42 Stat. 171]. I note that the "navigability of river" and the Cities proposal of diversion, could raise an issue. *Cf.* <u>Bonelli Cattle Co. v. State of Arizona</u>, 414 U. S. 313, 94 S. Ct. 517 (1973) [Federal Government, which holds a paramount navigable servitude in the river, determined that it was too wide and shallow to permit navigation and therefore the river needed to be deepened].

The deepening of the Red River, would serve legitimate State interest, provide better and more effective flood protection to all of its citizens [North Dakota and Minnesota]. The Red River simply is not large enough to handle the waters of all the rivers, streams, creeks and ditches that drain into it.

I am unsure whether the proposed plan, or the Corps, takes into consideration of other factors, as presented at the Hedrum meeting, e.g., that the various water districts are implementing new and larger retention facilities along the various tributaries that empty into the Red River. With them in place, it becomes questionable, that a diversion would be anything more than a waste of tax payer money. Is this wet cycle at or nearing its end? Would the Red River even flood again? Neither the Corps can predict it would, with these retention facilities in place.

Fargo, could still erect dikes and levees, whether permanent or temporary, to protect it from flooding at a far less costs. It is disputed it would cost as much as you represented to me in view of the emergency temporary dikes cost in 2009, were supposed to be 30 million.

The Plan represents that they [Fargo] has experienced flooding every year since 1993.

This in essence, admits to poor leadership, poor management, poor judgment, poor planning and poor engineering. Fargo, has continued to build in the Red River flood plain, without implementing any form of preventative flood control measures.

Fargo has known from the beginning that the Red River floods, yet fails to take affirmative permanent protective action.

In 2009, they represented it cost 30 million dollars to erect temporary dikes. If they would have built permanent dikes, since being flooded in 1993, they probably wouldn't even have costs 30 million. Now they estimate 196 million annually for flood damage. See Feasibility Study.

If this matter is taken to Federal Court, those figures will be challenged, they are most likely false and/or misleading. See cases cited above, involving the City of Fargo actions.

In sum, the Diversion Plan should be scrapped. Either deepen the Red River, to serve all citizens interest, or do nothing. Fargo has a more economical solution. Permanent dikes and levees. They've already wasted millions and millions of tax payer dollars, through their poor judgment, etc.

While I also take note to the many landowner objections, Fargo/Moorhead is not the cause of their flooding problems. By the same token, the Diversion Plan is not the solution to anyone's flood related problem. It merely shifts an even greater flood problem upon those already affected by flooding, at the same time, not providing permanent flood protection for those it is alleged to be protecting. In essence, a waste of tax payer money. It will be challenged also, under the North Dakota Constitution. Said Constitution prohibits "special privileges" not accorded to all of its citizens equally. All towns, cities, citizens, would be entitled to "a diversion" to control flooding on their property.

The Diversion Plan, is simply a mentality thing. Similar to the case <u>State of South</u> <u>Dakota v. Ubbelohde</u>, cited above. Only looking out for their own selfish interests.

The Flooding problem is a combination of several factors. 1st the United States Government; 2nd the various water districts; 3rd, the people and finally 4th, mother nature.

The US Government, I believe it was in the 1970's, the government got the farmers to "drain their wet-lands" farm that land. This started the problem. The Water districts, continues to build large drainage ditches to "get the water off the land so it can be farmed". The people don't want any water to be allowed to stand on their land, so they either dig ditches, or tile the land, as a result it all winds up in the various rivers at the wrong time. Then of course, Mother Nature has the final say, How much! When! And the Where! We can't control that.

The Red River is simply not large enough to handle all of the water coming into it at the same time. Deepening it will alleviate the problem more adequately than diverting it, ever will. It will also provide navigation, serve the citizens interest equally and with the undertakings of the various water districts, of building water retention ponds, may eliminate any major flooding for anyone, except in times of severe rainfall. Similar to what happened in Nashville, Tennessee, receiving 13 inches in a short period of time.

I should note here, under federal law, once a river has been found to be [or have been] navigability, it always remains that way. <u>United States v. Appalachian Electric Power</u>, 311 U. S. 377, 61 S. Ct. 291 1940); <u>State of Arizona av. State of California</u>, 283 U. S. 423, 51 S. Ct. 522 (1931).

I believe the Corps should scrap the diversion plan(s) and implement a deepening of the Red River plan, to serve all citizens equally.

As I also informed you, a Federal Class action will be undertaken, by the taxpayers, to stop this diversion plan. The above Federal Court cases, will be some of the cases relied upon to do that.

Thank you! If you wish to contact me, call me at

La Verne Koenig

Maggied, Troy MVP

From: Snyder, Aaron M MVP

Sent: Monday, August 16, 2010 1:22 PM

To: Maggied, Troy MVP; Beauchamp, Francis MVP

Subject: FW: North Dakota Diversion Project

FYI - See below.

Aaron M. Snyder
USACE Planner and Project Manager, PMP
Chief, Project Management Branch (PM-B)
651-290-5489
612-518-0355 (Cell)
Aaron.M.Snyder@usace.army.mil

----Original Message----

From: Glen Libbrecht

Sent: Thursday, August 05, 2010 12:00 PM

To: Snyder, Aaron M MVP

Subject: North Dakota Diversion Project

As a landowner and farmer of rural West Fargo, I am very concerned about the proposed Red River diversion project. Some of my concerns include the overall project cost and cost overrun, local effects in my local farm community, economic cost to local governments and local business due to loss of revenue, and a lack of willingness to explore other options fully. First let me begin with a concern that is on everyone's mind; the cost.

It seems local city leaders want a North Dakota diversion at considerable more cost than a Minnesota diversion or any other alternatives. Many of these costs are associated with complicated issues that are full of unknowns. The North Dakota diversion has more rivers to cross and more environmental issues than a Minnesota diversion. These environmental issues include fish migration and shifting soil. If a Minnesota diversion will provide protection at much less cost for the community, why choose a North Dakota diversion? Why should the people of Fargo and Moorhead pay more to get the same level of protection? The larger proposed Minnesota diversion that the US Army Corps of Engineers favors is cheaper and will provide a better cost/benefit ratio for Fargo/Moorhead. Having attended several meetings, I have seen the budget numbers changed to favor a North Dakota diversion. Is the US Army Corps trying to please local officials who want a North Dakota diversion? I know Minnesota landowners and rural residents don't want this project on their side either. However, Minnesota residents are not already burdened by a different diversion project.

I have had experience with a diversion project since the early 1990's. I am still seeing the affects it has on my land more than a decade later. The Sheyenne diversion, when full, has caused water to pond in the spring on land I farm, delaying planting and drowning crops during high rainfall events in the summer. In addition to delayed planting, water standing on fields takes a toll on nutrients such as nitrogen, causing loss in fertility. These fields have to be replenished with fertilizer to bring them back to previous levels. Last year several of my neighbors were not able to get a crop planted in multiple wet fields due to water standing on land because it was unable to drain into the Sheyenne diversion. His land never flooded prior to the Sheyenne diversion project. There are no guarantees that the

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proposed diversion project will mitigate any of these problems or not make any of them worse. It is easy to say that the water levels outside the diversion won't get any higher, and then amend that statement down the road. This diversion project will adversely affect more than just me or my neighbors. The negative effects of a North Dakota diversion will extend beyond my local farming community to the local city and government communities as well.

I am concerned that the US Army Corps of Engineers has not taken into consideration all of the negative economic factors and has focused too much energy on trying to come up with economic benefits. Depreciation of land values outside any diversion project is a concern for landowners. It should also be a concern for local governments. Area townships and county revenues will be reduced significantly due to the loss of thousands of taxable acres. Local communities will also lose business revenue due to the loss of farm income on those thousands of acres. This affects banks, retailers, seed companies, car and equipment dealerships and many others local businesses. This effect will be a permanent loss year after year, as compared to the few days every few years that businesses have to close their doors due to flood concerns. There are other alternatives possible that should be explored to help mitigate these negative consequences.

Local leaders should spend more time looking at other options for the FM area's flood protection. Instead of taking more than 5,000 acres of irreplaceable farmland for a diversion, Fargo can continue to build flood walls and/or levees through town as they are doing now. Relocating residents and businesses that have built too close to the river is wiser than taking our valuable farmland, which cannot be picked up and moved elsewhere. Grand Forks' model is a successful solution at a fraction of the cost. Also, retention of water upstream of Fargo has been talked about as was dry dams on the Red River tributaries. Why have local officials deemed these unacceptable? It seems to me like the local city leaders have rushed to set in stone that a diversion is their only option with total disregard for anyone else's property or livelihoods. Some members of the local commissions don't like the idea of flood walls or levees through Fargo because their backyard views of the river would be spoiled. Do you think we want to look at a mound of dirt either? There are other options out there that could help everyone and should include more than just Fargo/Moorhead.

After voicing my concerns about the proposed North Dakota diversion, I hope you can see my point of view and take time to truly consider some of the concerns I have. There are other better options for the FM area's flood protection. A North Dakota diversion of the Red River is not the right choice.

Glen Libbrecht

July 21, 2010



To Whom It May Concern:

I, Wayne Lee, am opposed to the Fargo Diversion Project. My personal feeling is that it does not provide any solutions if water is pushed onto someone else.

The USACE has not completed studies on what the downstream effect would be in areas north of Fargo.

I reside along the Wild Rice River in rural Perley, MN. If, during major flood events, the Red River does indeed rise an extra 17 inches or more at Hendrum, MN, it could hold more water back onto the Wild Rice and flood an increased number of homes and businesses than it already does now. Our county roads are flooded and destroyed to the extent that many have become impassable. If we have any extra water held back because the Red River is almost 2 feet higher, the damage costs and FEMA requests for assistance will only go higher.

US Army Corps of Engineers Headquarters St. Paul District 190 Fifth Street East St. Paul, MN 55101-1638

RECEIVED

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Dear Sirs,

I am writing this letter to you today to express some of my concerns with the proposed FM diversion being considered here in the Red River Valley.

I'm a lifelong resident of Norman and Clay counties of Minnesota. I grew up on a farm between Felton and Borup. Over the years we had our share of flooding events. Living with high water for a couple of weeks a year was just a way of life. We were able to handle our "fair share" of whatever waters were headed our way. In 1997, my home in Ada was severely damaged by the spring flood. I had my home inundated by flood waters that threatened to wash away the city of Ada. The emotional toll on family and friends is something I'll never forget.

Now, almost 14 years later we are again worrying and wondering what the future will hold for our small communities. I manage the Perley Community Co-op in Perley, MN. Every year we are putting our lives on hold for what seems like months at a time. The last 2 flood events in 2009 and again in 2010 were the toughest on us. We have had temporary dikes built and have had permanent dikes installed on our properties. The look of defeat on the residents north of the FM area in these times is truly disheartening. Now, as we have come to the finish line on the FM diversion, we are once again faced with the promise of even higher water north of Fargo-Moorhead. We hear from different sources that the impact to us will be in the 11" to 17" range. We cannot

handle one more inch of water, let alone the threat of over a foot more of water headed our way.

Our business has suffered because of the flooding. In 2009 our temporary dikes did not get taken down until the first week of June. When you consider they were up for approximately 2 months and that we were basically shut off from the rest of the country, we lost a lot of business. Our sales at our store went from 35,000 gallons a month, down to next to nothing. About the only fuel we sold was for generators that our people had to use because we were without power. Now with the threat of even higher water, how can we possibly protect ourselves? We all realize that something has to be done, but to compound the water trouble by funneling more than our "fair share" onto us is just not right.

The communities of Kragnes, Georgetown, Perley, Hendrum, and Halstad are great places to live and work. Putting more water on us would kill these smaller communities. We need to address other issues such as water retention up and down the valley. We feel these are issues that need addressing. Our schools, businesses, and livelihoods depend on a practical solution to these problems.

Yours truly,

Craig Renfrew

Manager, Perley Comm. Co-op

US Army Corps of Engineers Attention: A. Snyder 190 5th St. East (PM-A) St. Paul, MN 55101

Dear Mr. Snyder,

I'm writing in regards to the alignment of the proposed Fargo Red River Diversion in the area between Interstate Highway 94 south to Horace. After viewing multiple diversion proposals, the Eastern most route, along the existing diversion, seems like the best option for flood control, without distorting the project goals.

The main goal the Diversion project is to provide flood control for the cities of Fargo and Moorhead. The idea of providing West Fargo and Horace with many more additional sections of land by moving further west is strictly a land grab by these cities and a windfall for the property owners to the east of the diversion. The Mayor of West Fargo is on record saying this would be great, not for himself, but for his great grandchildren possibly 50 or more years from now. This is not the basis of need, but strictly of Want. He admits it would be far into the future before West Fargo or Horace would need or could afford any additional development to the west, in this proposed area. The cities of Horace and West Fargo asking for the new diversion to be as far west as possible is just politicians doing their jobs hoping to make themselves look better. It is absolutely not necessary for a successful project.

The new channel should be incorporated into the existing Sheyenne diversion with the basis being, the corridor is already established and some property and easements are already in place. It would not cut Mapleton Township in two, or disrupt a whole new set of landowners. If the new diversion is moved further west, it will also put land that has not had flooding problems before at new risk to backup flooding. The proposed western routes are not necessary for the new diversion; they are only wants, not needs.

The Corp of Engineers should not support the alignment in this area to be moved west on the basis of political wants by local politicians and officials for the sake of future development and growth. This is not flood control, it's hijacking true and honest flood control with future development. To the people that have the authority on the alignment, please remember that just because you can, does not make it right, necessary, or legal to take property for future growth and development.

Your consideration of this matter would be greatly appreciated.

Thank_lyou,

John W. Rutten



To Whom It May Concern:

As a homeowner and landowner in North Dakota along the Elm River, close to the Red River, downstream from Fargo, I am opposed to the Fargo Diversion plan as it is written.

The roads in Elm River Township go under water now in a flood event. Another 17 inches or more of water will only increase the depth of the existing water and the length of time the roads are flooded. This will present a greater hazard to the public as they travel these roads. It will also present a financial burden on the local townships and counties; and potentially taxpayers nationwide if FEMA ends up coming in with assistance.

Taxpayer dollars would be better spent holding water back in key areas, as opposed to pushing more water at a faster pace onto individuals who are already inundated.

I repeat; I am opposed to the Fargo Diversion project. It is an irresponsible use of taxpayer dollars.

Thuly Schol



IN REPLY REFER TO: GP-1000

PRJ-1.10

United States Department of the Interior

BUREAU OF RECLAMATION Great Plains Region P.O. Box 36900

Billings, Montana 59107-6900

AUG 2 3 2010

Colonel Michael J. Price U.S. Army Corps of Engineers St. Paul District 190 5th St. E. Saint Paul, MN 55101

Dear Colonel Price:

Enclosed is a letter from Mr. Douglas H. and Mrs. Margaret Sillers regarding a North Dakota diversion for the Red River. The White House forwarded this letter to the Bureau of Reclamation for response. However, Reclamation believes that the U. S. Army Corps of Engineers (Corps) is the appropriate entity to respond to flood control concerns in the Fargo, North Dakota, and Moorehead, Minnesota area.

As authorized by Congress, Reclamation recently completed an environmental document for a proposed project called the Red River Valley Water Supply project that, if constructed, would supply water to meet water quality and quantity needs of the Red River Valley. However, this proposed project would not address the Sillers' flood control concerns. Enclosed for your reference is the letter Reclamation sent to the Sillers explaining the transfer of their letter to the Corps for response.

Thank you very much for your attention to this matter. If you have any questions, please call me at 406-247-7600.

Sincerely,

Michael J. Ryan Regional Director

Enclosures – 2

cc: See next page.

cc: Mr. Aaron Snyder U.S. Army Corps of Engineers St. Paul District 190 5th St. E. Saint Paul, MN 55101 A Torrest

March 10, 2010

The Honorable Barrack Obama President of the United States The White House Washington, D.C. 20500

Dear President Obama:

We are writing to ask that you consider supporting a North Dakota diversion for the Red River as a solution for the flooding problem in the Fargo, North Dakota and Moorhead, Minnesota area. While it is critically important that some kind of long-term flood protection be developed, the final decision must be one that is the best for all concerned.

Rationale for placing the diversion in North Dakota include:

1. Long-term, the North Dakota diversion will be less expensive.

2. The Minnesota diversion could damage the Buffalo River aquifer, which is the back-up water supply for this area.

3. The North Dakota diversion will offer protection to a larger area in northern Cass County, North Dakota, as well as to additional acres in the southern part of the county. The Minnesota diversion does not protect those areas.

4. A North Dakota diversion will improve the drainage for thousands of acres in North Dakota and will make those acres more productive.

5. North Dakota derives about 90% of the benefit from either diversion, since Minnesota does not have the same risk for flooding, because of its higher elevation, and because of the drainage and the building removal issues that have been addressed in the past.

Margaret and I have a very long history with the Red River Valley. We have farmed here for over 65 years. We are concerned about the risk that a Minnesota diversion places on the rich farm land of the entire valley and on the economy of this area. As a past Minnesota Legislator, I am also very aware of how important it is to consider flood protection, not only for Fargo-Moorhead, but for all of the farms and communities along the Red River. It is our hope that those involved with the decision-making, at every level, will take the time to understand the rationale for building the diversion in North Dakota, be sensitive to flood problems in the entire Red River Valley and make the best decision for today and for future generations.

Sincerely,

Margaret and Douglas H. Sillers Douglas Siller

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The Honorable Barrack Obama President of the United States 1600 Pennsylvania Ave. Washington, D.C. 20500





United States Department of the Interior

BUREAU OF RECLAMATION

Great Plains Region
P.O. Box 36900
Billings, Montana 59107-6900



GP-1000 PRJ-1.10

AUG 2 4 2010

Mr. and Mrs. Douglas H. and Margaret Sillers 5555 45th Street S. Moorehead, MN 56560

Dear Mr. and Mrs. Sillers:

Thank you for your letter on March 10, 2010, concerning the North Dakota diversion for the Red River. The White House forwarded your letter to the Bureau of Reclamation. As authorized by Congress, Reclamation recently completed an environmental document for a proposed project called the Red River Valley Water Supply Project that, if constructed, would supply water to meet water quality and quantity needs of the Red River Valley. However, this proposed project would not address flood control concerns.

We will be forwarding your letter to the U.S. Army Corps of Engineers (Corps) in St. Paul, Minnesota. The Corps has the authority to respond to flood control concerns in the Red River Valley and the Corps' office in St. Paul has a flood control program for the Red River Valley which it actively manages.

Sincerely,

Michael J. Ryan Regional Director

cc: U.S. Army Corps of Engineers St. Paul District 190 5th St. E. Saint Paul, MN 55101





August 3, 2010

US Army Corps of Engineers Headquarters St. Paul District 190 Fifth Street East St. Paul, MN 55101-1638

RE: Opposition to Fargo-Moorhead Red River Diversion channel

Dear US Army Corps of Engineers,

We as residents, property and landowners, and taxpaying citizens of Norman County are adamantly opposed to the proposed Locally Preferred Plan of the ND 35K diversion channel set forth by The United States Army Corps of Engineers. Recently released, was the information that the diversion of flood waters around the cities of Fargo and Moorhead and channeling it back into the Red River in northern Clay County of MN or northern Cass County of ND, is estimated to cause as much as seventeen inches of additional crest elevation to western Norman County.

An increased flood crest of this magnitude in addition to the predicted prolonged duration of the crest would be detrimental to our farming business. We would have 1250 acres of farmland that would be affected. The flood waters not only erode the valuable top soil and bring in undesirable weeds and diseases, but the prolonged high water levels also delay spring planting which results in lower yields and our ability to continue farming and make a profit.

We currently have a dike protecting our farmstead including our home, shop, and grain bins, but with the increased water inundated on us because of the Fargo-Moorhead Diversion, our current dike would be inadequate and the county roads and MN State Highway 75 would be closed for an extended period of time preventing access to our farm and the ability to operate our business including transporting products to market.

We are not opposed to flood protection for the cities of Fargo and Moorhead but it should not come at the expense of individuals and communities downstream. The LPP of the ND 35 K diversion channel would have a huge adverse impact on our communities, businesses, schools, farms and roads. The new information about the increased crests downstream is an example that more studying needs to be done about this proposal, and that the August 9th deadline for public comment on the Feasibility Report/Environmental Impact Statement should be extended.

Thank you for your consideration of our concerns and assistance in seeking a solution which benefits everyone.

Sincerely,

Thomas and Christine Strand

May 4, 2010

Aaron Snyder United States Army Corps of Engineers Suite 401 190 5th St E St. Paul, MN 55101

Dear Sir:

SUBJECT: REALIGNMENT OF FARGO DIVERSION

After I reviewed the proposed diversion channel, I found out that by changing the route 1 mile east or ½ mile east you could reduce the drainage area by about 29 sq. miles and reduce the number of inlets into the diversion by about 4 large inlets and about 6 field inlets. This change would not affect any families. There are no families living in the proposed change areas. This change would have a positive effect on downstream elevations on the Red River at Georgetown. The cost benefit for this proposal is very positive.

By using Drain 13 for the diversion, this would destroy the intent of the drain. This drain has worked very well for over 100 years. Farmers paid taxes to develop and maintain this drain and are not happy to have it taken over for another purpose. See attached map of drainage area for Drain 13. This map contains the current diversion proposal and the proposed change explained above.

I have 42 years of experience working for the NRCS (Natural Resource Conservation Services) designing and staking field drainage, working with water resource districts, surveying for design and construction of legal drains. I also have experience with construction inspection of erosion control structures. I have lived in Berlin township for the last 42 years.

I expect to receive a return message from you regarding this issue. I feel it would be appropriate to set up a meeting with yourself and the individuals affected by Drain 13. I'd like to thank you in advance for your attention regarding this matter.

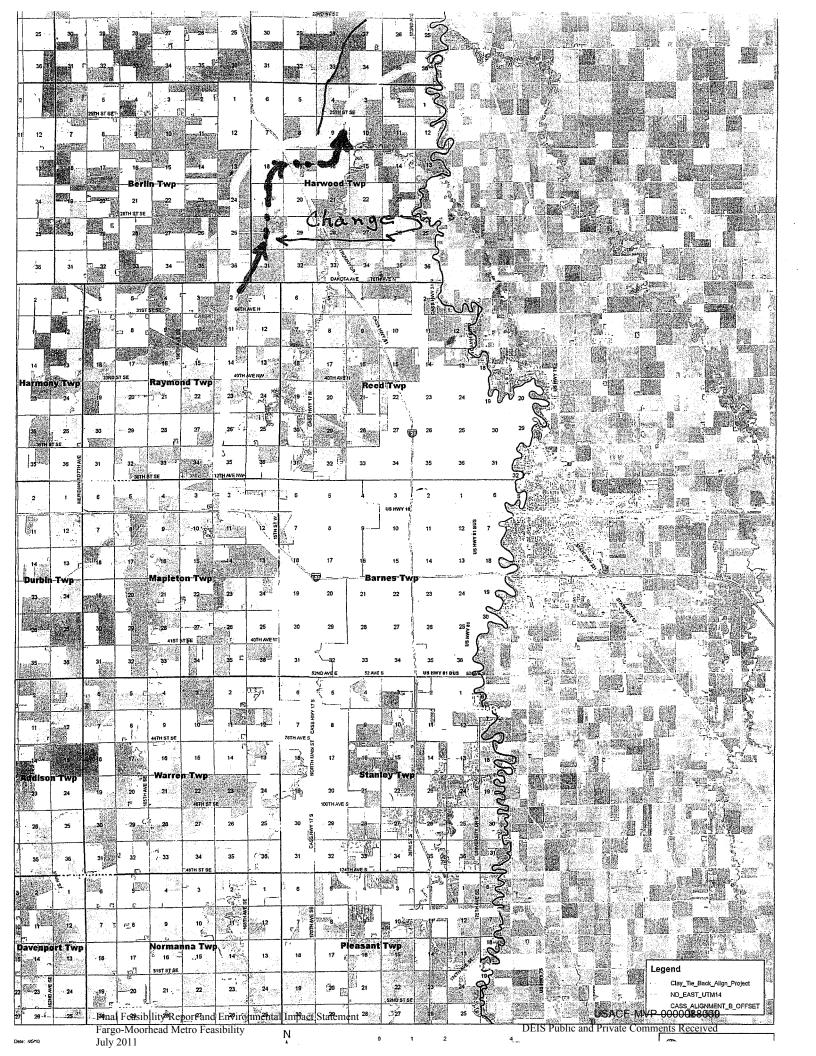
Sincerely,

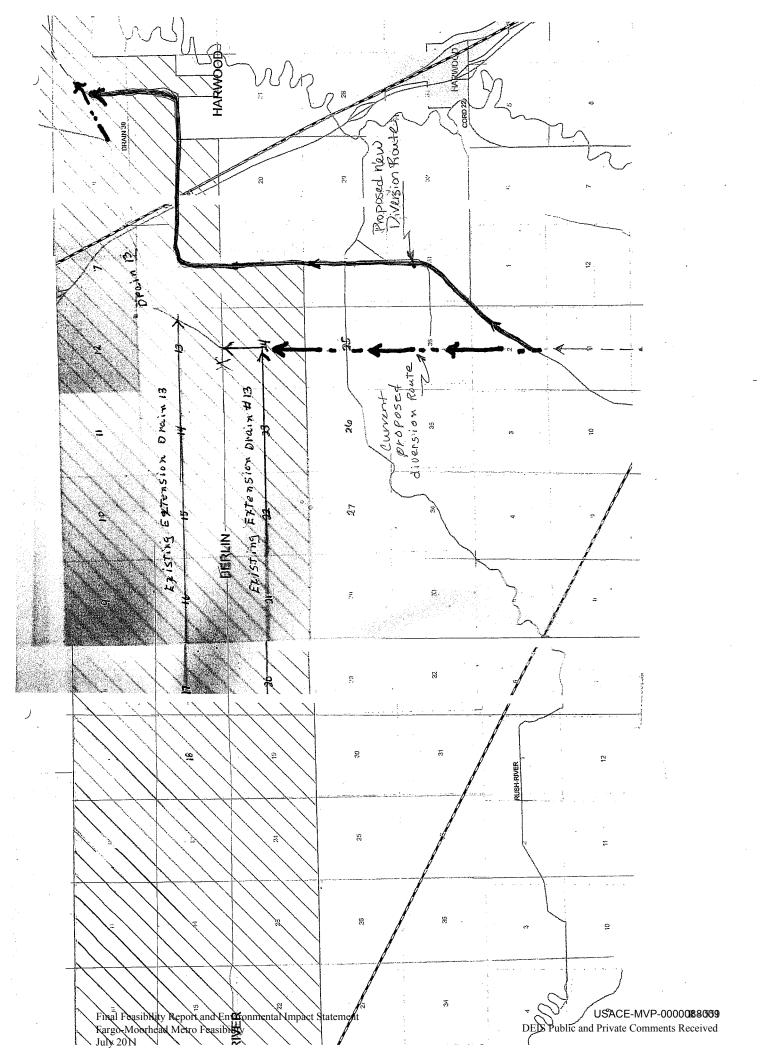
Ray Wolfer

May Wolfer

cc: Craig Evans
United States Army Corps of Engineers
Suite 401
190 5th St E
St. Paul, MN 55101

Called an May 6 2010 @ 12:45





July 8, 2010

Aaron Snyder United States Army Corps of Engineers Suite 401 190 5th St E St. Paul, MN 55101

Dear Aaron Snyder,

SUBJECT: SIGNED PETITION TO MAINTAIN DRAIN 13 AS A LEGAL DRAIN

I have enclosed a copy of a petition signed by residents and landowners affected by Drain 13. The 50 signatures on this petition represent 95% of the residents living near Drain 13. These residents, along with affected landowners, are in support of maintaining Drain 13 as a legal drain. This petition is in response to the question you raised regarding support of the changes outlined in my letter sent May 2, 2010.

I would request that you enter the May 2, 2010 letter, including the proposed realignment document attached to the letter, along with this letter and signed petition as comments to the Environmental Impact Statement (EIS).

Thank you for your attention to this matter. If you have any questions or concerns, I may be contacted at

Sincerely,

Raymond Wolfer

cc: Craig Evans
United States Army Corps of Engineers
Suite 401
190 5th St E

St. Paul, MN 55101

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6-11-10	6-11-10	6-11-10	6-11-10	6-11-10	6/11/10	Colid 10	6-11-18	Phone Date	ur leaders to act now to retain drain 13 as a legal drain removing it	of the diversion.



Reservation Submitted to the profession of the submitted to the submitted
Our leaders to act
from the plan to use drain 13 as part of the diversion.

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August 8, 2010

Aaron Snyder United States Army Corps of Engineers Suite 401 190 5th St E St. Paul, MN 55101

Dear Sir:

SUBJECT: STRUCTURES DIVERTING SHEYENNE AND MAPLE RIVERS

The structures that will be used to divert the waters from the Sheyenne and Maples Rivers into the Fargo Diversion have not been proven in temperatures that could reach 40 degrees below zero. If these structures do not operate properly, severe flooding could occur in areas that previously were not impacted by flooding. This could impact residents and result in structure and property damage.

The threat of upstream flooding from the Fargo Diversion on the two south branches of the Rush Rivers and the Rush River have not been recognized by the Corps. This is of great concern for the residents of this area.

Please address these concerns and include as comments to the Environmental Impact Statement (EIS).

Sincerely,

Raymond Wolfer

Roymond Wolfer

100601_Kathy Sullivan – While a permanent solution is the best option its important to inform the public of the many products on the market that can help them now. We have sold our WIPP Flood Barriers (www.wippsystem.com) to some residents already and have a GSA contract in place as well

100603_Michelle McGowan – Dear Mr. Snyder, I am writing in hopes that you will have some time to meet with me. I am a Fargo resident and a college graduate that has survived through many overwhelming water situations in this area. I have created a power point presentation as well have done extension research on the possibilities of the water solution. Please feel free to email me or call me at your earliest convenience, I am the Secretary/Treasurer of my district and am also very concerned about the issue. Thank you for your time; as I look forward to hearing from you Sincerely, Michelle M

100610_Matt Chambers – It is distracting that most of the maps are at slightly different scales and positions. Maps are useful for making side-by-side comparisons (or back and forth in a PDF). Similar maps could have easily been aligned and scaled appropriately to make study and analysis of the PDF easier.

100611_Scott Beaton – Why do you now list wildlife habitat, and wetlands development as one of the goals of the diversion project, along with recreation and repairing the riparian habitat along different rivers? This has nothing to do with flood control and looks like a way to buff up your plan to help make your case better for congress.

100706_Tom and Rachelle Schmitz - We are looking into possibly buying a property in Christine, ND. The address is _____. We want to know if any new diverson plans will affect that area as far as flooding, dike structures, etc.

100707_Jeffrey R. Davis (BIA) – I have no comments to add to the Draft Feasibility Report and Environmental Impact Statement (DEIS) for the Fargo-Moorhead Metropolitan Flood Risk Management project.

100709_James Jacobson – Question- Do the 10yr, 50yr and 100yr flood areas as delineated on Figs 37, 39 and 41 include a similar yr type flood event also occurring at the same time on the MN Wild Rice, Buffalo and other tributaries of the Red River? I would like a copy of this subject feasibility study for the Fargo/Moorhead Diversion. Thank you.

100723_Ron Gotteberg – As a resident of Halstad, MN I would like to express my concerns of what effects the currently planned Fargo/Moorhead Red River Diversion will have on our communities. Additional protection and in writing agreements have to be in place with the downstream communities prior to any approval of a diversion. ? I could give us up to seventeen (17) inches of additional water during peak flooding events. ? It will increasing the flow of the Red River during what would have been moderate flooding and will now causes major flooding problems. ? Highway 75 will be closed sooner and possibly longer with increased levels of water causing more damage to the roadway. When Highway 75 is closed, transportation of goods and services is impaired, school need to be closed, fire and medical services are limited. ? County and township roads will flood more often, causing increased damages with increased costs to repair. Rural roadways that have never flooded before will now become impassable during events. ? The current levy system in Halstad will need additional improvements. We would be looking at increasing the height of highway 75 at the north and south entrances of town. We would

need additional pumping on our north levy. We would need to look at increasing the height of the levy and placing a hard surface on the top for safety. ? The rural areas would lose population with buyouts and with the frustration of fighting water year after year. This has a rippling effect to all business and residents of Halstad and Halstad Township. ? Property values will decrease. We are already noticing home sales are difficult with just the planning stage of the diversion receiving so much press. Property taxes will more than likely be increased to offset additional costs of flood protection. ? Talk of a greenway in the valley will decrease the tax base of the area. ? Retention projects that have been talked about will be very difficult to complete with having property owners unwilling to hold additional water, with all the rules and regulations necessary for such projects, and with wildlife organizations fighting such projects. As planned these projects will be a 50/50 cost share which means we spend more local dollars with no gain in reducing current levels, just money spent to offset increased levels of the diversion project

100723_Terry Guttormson – A rushed project will yield a poor product. I agree; Fargo needs flood protection. But so does the downstream communities. There are downstream areas that are being studied today, that most likely will not have an impact statement to even review before the deadline for open comment closes August 9, 2010. Retention, detention, gated storage, timed releases to lower peak flows, flow reduction models that are now available, flood walls and levies were not given anywhere near the same attention the big flush diversion has been given.

This diversion project is wrong for all the right reasons. When the diversion is built and in operation, water will hit the downstream schools, towns, townships, farms, farmsteads, farmers, and business at a time when they are already fighting high water. It will come earlier and stay longer, contrary to the modeling, which in this case does not transfer from the lab to the field. Citizens in the downstream area in their rural homes as well as entire towns will be cut off of emergency egress and emergency vehicles such as fire and ambulance travel will be impossible lending to high risk of human life.

There are alternatives to the diversion. None have been studied to the extent the diversion has been studied. If the same amount of money was spent on basin wide retention, the entire basin could benefit, including Fargo. Unlike the narrow scope of flood fighting remedy the Fargo diversion offers, a basin wide retention solution could be taxed on millions of acres and thousand more homes. There is a 20% main stem flow reduction study which in this case means 20% flow reduction on the Red River. To get to that level of reduction, the tributaries have to average approximately 35% flow reduction which not only Fargo Moorhead huge benefits, but also all the towns up and down the river from the Fargo Moorhead are, including the cities of Grand Forks, ND and East Grand Forks, MN. The author of the above mentioned flow reduction study stated that the 20% flow reduction could be pushed to as much as 30% to 50%. Those benefits to the entire basin would be huge. Not just Fargo, but the entire basin would benefit.

Also, Fargo has in the works, plans to get water from out west, piped in from as far as the Missouri River for water needs for future growth. Why not set up a two part plan. Retain the water, not get rid of it forever with a multibillion dollar diversion. Then recharge aquifers with the retained water. Also, isn't there room for power generation from these dams that would be needed for retention? Shouldn't we explore all the above options, take our time to build a multi faceted plan to save our entire basin, save water for future growth, and possible generate some green power as well as spend less federal dollars? A rushed project will yield a poor product. Hendrum, MN

100723_Ron Gotteberg –Below is a resolution passed by the Halstad City Council. CITY OF HALSTAD RESOLUTION NO.07-19-2009 WHEREAS, The United States Army Corps of Engineers, (USACE) has

proposed constructing flood water diversion channels around the cities of Fargo, North Dakota and Moorhead Minnesota. WHEREAS, The proposed diversion channel re-deposits the floodwater back into the Red River in northern Clay County of Minnesota or Northern Cass County of North Dakota. WHEREAS, The City of Halstad is situated directly north and downstream from the point at which the proposed diversion channels reenter the Red River. WHEREAS, The proposed flood diversion channels will change the flow regime of the Red River during flood events and is estimated to cause an adverse impact of as much as seventeen inches of additional crest elevation to the City of Halstad. WHEREAS, Increased flood crest of the magnitude envisioned by the USACE will adversely impact, roads, bridges, utilities, farms, personal property, commerce and public safety to those downstream of the proposed diversion. WHEREAS, A change in flow regime that results in adverse impacts to the residents of the City of Halstad and others situated downstream from the proposed diversion projects is not acceptable. NOW THEREFORE, The Halstad City Council Members do hereby go on record of opposing the Fargo/Moorhead diversion project as it is now proposed.

100724_Paul Baukol – I am against the Fargo Moorhead Diversion Plan. I live in Hendrum, MN and this diversion will have a substantial negative impact on me, my town and all of the other affected communities downstream of the diversion. The plan has no requirement to mitigate increased crests downstream. The only remaining work or efforts defined in the plan for downstream areas is that more will be done to "Quantify downstream impacts." The study of downstream impacts is also incomplete at this stage. Downstream effects have only been projected to Halstad, MN. The reason for this is that the study has been hastily performed with new data. My concerns regarding current projected increases are that they are incomplete and quite possibly wrong due to the fact that this project has been pushed through to its current stage on incomplete analysis that has not had proper time for review. In my view, this is an incomplete plan that is being pushed forward without full consideration of how it will affect other communities, families and businesses. Flood protection for Fargo Moorhead should not come at the expense of downstream communities. At its best the Fargo Moorhead Diversion will be a hardship that downstream communities will have to bear, at its worst it will be the end of those communities.

100726_Troy Hall – I have a letter in electronic PDF form signed by my utility commission. Since this site does not appear to allow upload of electronic files, I will email it directly to Mr. Aaron Snyder. Our comments are regarding the potential impacts of a Minnesota diversion option on the Buffalo Aquifer in Clay County.

100726_Ollen Church – I am Superintendent of the Norman County West Schools. Our school district has students that live south of Georgetown all the way north to Neilsville. The flooding issue gets to be an annual event for our school district. The Moorhead/Fargo Diversion, the way it is currently proposed, will only get the water to us quicker. With the water from the Wild Rice and the Marsh Rivers joining the water from the Red, we are going to end up being the retention area that is so badly needed. You add the fact that with the increased water we will get, more of our roads will be under water, and make our job of getting our kids to school, that much more difficult. We are not opposed to the Moorhead/Fargo Diversion, as long as some type of retention is in place.

100728_Bob Pickle – I attended our recent Halstad Township Board meeting (Norman County) where a resolution was voted opposing the diversion as it is now planned. I support that resolution. Plans should be laid before the diversion goes forward to ensure that water levels are not increased downstream. I am interested in knowing whether potential water from the flooding at Devils Lake has been taken into account at all in the plans for a diversion around Fargo, or whether only more typical sources of water in

the Red River have been taken into account. The main body of the Draft Feasibility Report and Environmental Impact Statement makes no mention of water from Devils Lake.

100728 Wayne M. Hoglund – All the talk of the proposed Fargo Diversion ditch is very upsetting to me and my family. If this Fargo Diversion gets built I will have to give up part of two quarters of land that has been in the family for a long time. I do not feel it is right to have to sell it by the acre to make the land inside of the diversion saleable by the square foot. The Fargo Diversion will also take about 300 acres of land that I rent. My income from that land totally disappears forever. My day to day operations are going to also be negatively affected. Moving large farm machinery around this big ditch and having to cross long bridges to get where my cut up fields are located, will be costly and dangerous. I am told that drainage on the west side will not be negatively affected. This is the same thing people on the west side of the Sheyenne Diversion were told, yet after 17 years they still are having big problems. The downstream effects of the Fargo Diversion also are concerning me. If the people of Fargo were told that they could have up to two more feet of water coming at them without any solid plans to deal with the extra water, how anxious would Fargo be to go along with that project? I believe that is just plain morally wrong! It is my hope that people that have been supporting this Fargo Diversion would slow down and look at the negative effects and find solutions before we spend almost one and a half billion dollars on this project. It is my view that water retention, along with dikes and levees similar to the Grand Forks flood project, would be much less expensive and affect less people, except maybe people that made the poor decision to build in flood prone areas. Sincerely, Wayne M. Hoglund Landowner

100803_Tom Linnertz – Fargo, as any other community, must be responsible for the results of its actions. The plans being proposed indicate they will cause what I perceive as severe consequences for people and communities downstream. It is only reasonable and ethical to expect that as a part of this action Fargo will be held responsible monetarily for flood protection of those who will be harmed by the actions of Fargo and the Corps. A real and legal means to do this must be a part of this plan. It must be action not promises. Personally I will benefit from the ND diversion, I am in favor of the same; but [I'm not in favor] if proper just & fair compensation and protection for those outside the diversion is not a REAL part of the plan. Passing the problem to those downstream is not a solution.

100804 Anonymous – As a farmer that farms land just west of the proposed diversion as well as farming five quarters of land where the diversion will dump its water near Georgetown, I will be affected in many ways. The proposed route indicates it will incorporate into the design, legal drain 13. I complete oppose the taking of a drain that benefits a large agricultural watershed. Drain 31 has been in place for over 100 year that was paid for by tax assessments from farmers and landowners. To blatantly take the drain and use it for other purposes other than the initial intended purpose causes much uncertainty of water dynamics. No study of the entire watershed affects of using drain 13 has been presented to the public. Access will be diminished greatly by the building of the proposed Fargo Diversion. Bridges will be long and very difficult to transport our agricultural equipment across without the inevitable traffic jam half way across. We will lose a lot of rural access by dead end road and our rural township, already poorly maintained by few taxpayer dollars, will lose more tax base. Rural businesses in and around the path of the diversion, will lose access during the building of it and certainly suffer economic impact. We constantly see this with road construction projects. Agricultural land that will have the diversion water dumped on it will take longer to drain in any event that allows water to flow thru the proposed diversion. This land will flood. The area where the diversion will dump already has many legal drains that run through it and terminate at the Red River. In farming lost planting time causes yield losses. Flooding events occurring after planting cause crops to die. Farmers use crop insurance to ease their risk with regard to natural events, but in this case, if farm land that is repeatedly flooded and loss claims made

over several years, it is entirely possible that Federal Crop Insurance may deem the land uninsurable and not allow the farmer to purchase crop insurance. Should this happen, the value of the land will diminish even more. Federal Crop loss claims do occur frequently there now. In this scenario it is as possible to have the land uninsurable to happen as a 500 year flood. Downstream communities will be affected greatly. A newly released report (August 3) indicates it. Now the public comment period should be extended even longer due to the impact much further downstream. The proposed Fargo Diversion is a big mistake.

100804_Kevin Reitmeier – I own and live on a small farmstead along the red river just a few miles north of the climax area. My property ends in the red river on the west side and is separated from the highway on the east by a small creek that is also a shortcut for the Red River during higher water levels. During the past few years the flooding has been a serious concern, in the flood of 2009 my wife and I even sandbagged to ensure the safety of our home. I feel lucky to say that the river crested a few feet away from our sandbag dike. I must state that I am very much in favor of the FM area having a flood protection system, but I am very concerned with the well-being of my own home and fear that the implementation of certain proposed plans may change my home from a relatively flood safe category to a most likely in danger of flooding category. I wonder if this does become the case will there be a process in place for homeowners in my situation to have flood protection made for them as well? My fear is that people in my situation will be forgotten when calculating the expenses of this diversion project.

100805_Anonymous – The public comment period should be extended until the full impact statements are released.

100805 Glen Libbrecht – As a landowner and farmer of rural West Fargo, I am very concerned about the proposed Red River diversion project. Some of my concerns include the overall project cost and cost overrun, local effects in my local farm community, economic cost to local governments and local business due to loss of revenue, and a lack of willingness to explore other options fully. First let me begin with a concern that is on everyone's mind; the cost. It seems local city leaders want a North Dakota diversion at considerable more cost than a Minnesota diversion or any other alternatives. Many of these costs are associated with complicated issues that are full of unknowns. The North Dakota diversion has more rivers to cross and more environmental issues than a Minnesota diversion. These environmental issues include fish migration and shifting soil. If a Minnesota diversion will provide protection at much less cost for the community, why choose a North Dakota diversion? Why should the people of Fargo and Moorhead pay more to get the same level of protection? The larger proposed Minnesota diversion that the US Army Corps of Engineers favors is cheaper and will provide a better cost/benefit ratio for Fargo/Moorhead. Having attended several meetings, I have seen the budget numbers changed to favor a North Dakota diversion. Is the US Army Corps trying to please local officials who want a North Dakota diversion? I know Minnesota landowners and rural residents don't want this project on their side either. However, Minnesota residents are not already burdened by a different diversion project. I have had experience with a diversion project since the early 1990's. I am still seeing the affects it has on my land more than a decade later. The Sheyenne diversion, when full, has caused water to pond in the spring on land I farm, delaying planting and drowning crops during high rainfall events in the summer. In addition to delayed planting, water standing on fields takes a toll on nutrients such as nitrogen, causing loss in fertility. These fields have to be replenished with fertilizer to bring them back to previous levels. Last year several of my neighbors were not able to get a crop planted in multiple wet fields due to water standing on land because it was unable to drain into the Sheyenne diversion. His land never flooded prior to the Sheyenne diversion project. There are no guarantees that the proposed

diversion project will mitigate any of these problems or not make any of them worse. It is easy to say that the water levels outside the diversion won't get any higher, and then amend that statement down the road. This diversion project will adversely affect more than just me or my neighbors. The negative effects of a North Dakota diversion will extend beyond my local farming community to the local city and government communities as well. I am concerned that the US Army Corps of Engineers has not taken into consideration all of the negative economic factors and has focused too much energy on trying to come up with economic benefits. Depreciation of land values outside any diversion project is a concern for landowners. It should also be a concern for local governments. Area townships and county revenues will be reduced significantly due to the loss of thousands of taxable acres. Local communities will also lose business revenue due to the loss of farm income on those thousands of acres. This affects banks, retailers, seed companies, car and equipment dealerships and many others local businesses. This effect will be a permanent loss year after year, as compared to the few days every few years that businesses have to close their doors due to flood concerns. There are other alternatives possible that should be explored to help mitigate these negative consequences. Local leaders should spend more time looking at other options for the FM area's flood protection. Instead of taking more than 5,000 acres of irreplaceable farmland for a diversion, Fargo can continue to build flood walls and/or levees through town as they are doing now. Relocating residents and businesses that have built too close to the river is wiser than taking our valuable farmland, which cannot be picked up and moved elsewhere. Grand Forks' model is a successful solution at a fraction of the cost. Also, retention of water upstream of Fargo has been talked about as was dry dams on the Red River tributaries. Why have local officials deemed these unacceptable? It seems to me like the local city leaders have rushed to set in stone that a diversion is their only option with total disregard for anyone else's property or livelihoods. Some members of the local commissions don't like the idea of flood walls or levees through Fargo because their backyard views of the river would be spoiled. Do you think we want to look at a mound of dirt either? There are other options out there that could help everyone and should include more than just Fargo/Moorhead. After voicing my concerns about the proposed North Dakota diversion, I hope you can see my point of view and take time to truly consider some of the concerns I have. There are other better options for the FM area's flood protection. A North Dakota diversion of the Red River is not the right choice

100806_Kelli Poehls, PA Coordinator for COC Fargo-Moorhead – Please accept the following comment from the Chamber of Commerce of Fargo Moorhead, in support of the flood control project currently under review. The Chamber of Commerce of Fargo Moorhead supports building a 35K CFS diversion project that maximizes state and federal funding. The Chamber supports including mitigations of downstream impact, where an how cost-effective and feasible. The Chamber of Commerce of Fargo Moorhead is a bi-state, regional federation of nearly 1,900 private, public and non-profit sectors. Our mission is unifying and advancing business and community interests in our region. Kelli Poehls Public Affairs Coordinator Fargo Moorhead Chamber of Commerce 218.359.0511 (p) | 218.233.1200 (f)

100806_Grand Forks County Commission – Diane Knauf, Commission Chair 151 S. 4th St. P.O. Box 5294 Grand Forks, ND 58206 Phone Number: (701) 787-5671 Fax:(701) 780-8212 E-mail: dknauf@gra.midco.net To Whom It May Concern: This letter is written to you on behalf of the Grand Forks County Commission. On August 6, 2010 a motion was passed requesting the United States Army Corps of Engineers (USACE) to consider the following comments on the Fargo-Moorhead Flood Diversion proposal. The County Commission acknowledges and supports the need for the Fargo-Moorhead metropolitan area to protect itself from Red River flooding events. However, the comment timeline is preventing us from receiving all of the information necessary to form a position on mitigation for downstream impacts. Grand Forks County is requesting spatial GIS data showing the impacts of the increased crest predictions for the 100 year flood event in Grand Forks County. Specifically, a product

we could compare to FEMA's digital Flood Insurance Rate Map (FIRM). This would enable us to analyze potential impacts in more detail rather than only having information at gauging station locations. We would also like you to comment on how the increased crest numbers would affect the newly adopted FIRM map. Without this information we are unable to comment on mitigation for downstream impacts and are unable to inform the citizens of Grand Forks County how the proposed diversion would affect rural residences, agricultural property, and County infrastructure. Flood protection is critical for the entire Red River Valley. In turn, one project should not have disproportional negative impacts on others downstream. Significant private and public funding has been spent in Grand Forks County for flood protection. We only wish to protect our past investment and maintain our current level of protection. The Grand Forks County Commission is respectfully requesting the above information to analyze the real downstream impacts of a diversion, inform the residents of our County, and then provide our final input to the USACE. Thank you for your time and consideration. Sincerely, Diane Knauf Grand Forks County Commission Chair

100806 Lane Magnuson - Grand Forks County County Commission Diane Knauf, Commission Chair 151 S. 4th St. P.O. Box 5294 Grand Forks, ND 58206 Phone Number: (701) 787-5671 Fax: (701) 780-8212 E-mail: dknauf@gra.midco.net To Whom It May Concern: This letter is written to you on behalf of the Grand Forks County Commission. On August 6, 2010 a motion was passed requesting the United States Army Corps of Engineers (USACE) to consider the following comments on the Fargo-Moorhead Flood Diversion proposal. The County Commission acknowledges and supports the need for the Fargo-Moorhead metropolitan area to protect itself from Red River flooding events. However, the comment timeline is preventing us from receiving all of the information necessary to form a position on mitigation for downstream impacts. Grand Forks County is requesting spatial GIS data showing the impacts of the increased crest predictions for the 100 year flood event in Grand Forks County, Specifically, a product we could compare to FEMA?s digital Flood Insurance Rate Map (FIRM). This would enable us to analyze potential impacts in more detail rather than only having information at gauging station locations. We would also like you to comment on how the increased crest numbers would affect the newly adopted FIRM map. Without this information we are unable to comment on mitigation for downstream impacts and are unable to inform the citizens of Grand Forks County how the proposed diversion would affect rural residences, agricultural property, and County infrastructure. Flood protection is critical for the entire Red River Valley. In turn, one project should not have disproportional negative impacts on others downstream. Significant private and public funding has been spent in Grand Forks County for flood protection. We only wish to protect our past investment and maintain our current level of protection. The Grand Forks County Commission is respectfully requesting the above information to analyze the real downstream impacts of a diversion, inform the resident?s of our County, and then provide our final input to the USACE. Thank you for your time and consideration. Sincerely, Diane Knauf Grand Forks **County Commission Chair**

100807_Nancy Yon — To whom it may concern, I understand that comments need to be given to the Army Corps by Monday August 6, 2010. With the little information that has been provided thus far with respect to what impact the diversion will have, it is hard to know how to respond. What I do know is that my home is located? of a mile North of the Thompson bridge, right on the red river, in Grand Forks County. My husband and I live there with our three young boys, ages 7, 6, and 3. We love our home and have enjoyed raising our children in the Thompson community. When I hear that the diversion could increase water levels by 20 inches, it is hard not to be fearful of what would happen to our home. I object to the diversion without being provided further information and I object to the very short period of time we have been given to respond with comments. We should be able to provide an educated opinion, based on all information. It makes me wonder: why the rush? Please contact me if you have any

questions about my comments above. My number at work is Grand Forks County Assistant State's Attorney Grand Forks County resident

100806 Richard Betting - NEPA Review From what I have read recently about downstream impacts from the Red River Diversion project around Fargo/Moorhead individuals and cities will have to deal with from seven inches to more than a foot and a half of water more than they would have before the diversion project. My question is has the Corps taken into consideration the water that will be added by what is being added to the Sheyenne River from Devils Lake? Right now the Devils Lake outlet is pumping at 250 cfs and plans to for up to seven months per year, April to November. Some have suggested operating the outlet year around. In addition to the current outlet, the North Dakota congressional delegation is planning to add more water to the Sheyenne from Devils Lake, either through the East End Outlet or more from the West End Outlet. Some have suggested as much as 1000 cfs from the West. Another question concerns water quality, of course. The water in Devils Lake will degrade the Sheyenne River and water from Stump Lake will be even worse. How will water of that quality affect downstream residents, owners and users? If the Devils Lake water were not enough, has the Corps taken into consideration the addition of water through the Sheyenne bringing water from the Missouri to supply the Red River Valley Water Supply Project? Of course, that should only run when there is a drought, but what if the Red River Valley is dry and Devils Lake is still wet? Then what? How can such a project be considered without taking into consideration these possible additions?

100807_William & Mary Lisburg — The proposed route of the diversion will directly and adversely impact our farming operation and home. Two thirds of the land that we farm under the proposed route will be taken. Since the land the diversion is projected to go through is rented, we would not receive any compensation for this loss. It would put us out of business. The remaining land will be on the wrong side of the diversion. The result will be a loss in value of the property. It is possible we might not even be able to sell it if need be. Not only will it affect our present way of life but also our retirement years. It would destroy our township roads and bridges so our access route to town would be difficult and lengthy. It would be a hardship especially in the case of fire or other emergency. We just put in a ring dike around our farm home because of flooding brought on by the West Fargo diversion. We are concerned that our ring dike will not be adequate because of the proposed Fargo diversion. When the West Fargo diversion went in they said there would not be any over flow, but there have been times it has. We were never compensated for our loss of crops, i.e. income. We can't get any answers on how high the water will be on the west side of the proposed diversion so we are very concerned with the over flow impact. This diversion is being rushed through. The total impact is not known and has caused us emotional distress and anxiety before it has even begun.

100807_Anonymous – I am opposed to the diversion route to the west Side of West Fargo. The West Fargo Diversion has been a absolute success, I have the Sheyenne River in my backyard. 1. I am concerned about the impact on the WF diversion and the levels of the Sheyenne River such a diversion intercepting would have. 2. Increasing the flow will undoubtedly impact our neighbors to the north. Solutions: 1. Control the release of water into the Wild Rice and Red River by means of gates in their tributaries which collect the runoff. 2. Possibly look at diverting the Wild Rice into the Sheyenne downstream (west of I29). Restrict the flow into the Red River.

100807_Warren Strandell – This project is being pushed way too fast... and too hard. Downstream from Fargo-Moorhead shouldn't become the NEXT big flood problem. A question: Why is the Fargo-Moorhead project being designed for a 500-year flood when the Grand Forks-East Grand Forks flood protection system was designed for a 300-year flood? As a Polk County Commissioner I know that you

don't put a 48-inch culvert in the upper reaches of a ditch and a 30-inch culvert downstream. This rationale makes no sense to me.

100807 Karl Langseth - The proposed Fargo diversion project is, by the Army Corps Of Engineers St. Paul office statement, the biggest project that office has ever attempted. I would venture to guess that it is also the least planned, least studied, and most quickly pushed through project in the entire ACOE history. DOWNSTREAM IMPACTS; Downstream impacts have, at public meetings, been said to be negligible. I cannot see where, by the Corps numbers, a 24.7" rise in water depth during a 10 year flood event is a negligible issue downstream from the diversion. The lives, livelihoods, and property values of numerous towns and farmers and their farmsteads is put at substantial risk with that kind of increase. I have seen nothing of the study that the Corps said was to be done on what additional depths would constitute a taking. Has that been done? The original impact study stopped at Halstad, MN. On Aug. 4, 2010 the new study about impacts further north was released. During a 50 year event a 29.4" rise in Climax, MN; 20.9" rise in Thompson, ND; as of yet unknown effects to Grand Forks, ND. How much rise in depth does it take for the Corps to say that this project is causing harm? Is the Corps willing to potentially put one of their \$400 million projects just completed within Grand Forks and East Grand Forks for flood protection, in jeopardy to get this project pushed through? RURAL INFRASTRUCTURE; Nowhere in the feasibility study do I see rural infrastructure concerns addressed. Adding frequency and depth of water to the rural road system downstream and west could be catastrophic. In the cover letter to the feasibility study it is mentioned that in 2009 there were over 1000 damage sites to township roads in Cass County. I would agree with that. The township in which I reside had 36 of them. Not 1 of these sites would have been inside of and protected by this project. I fear that we would have had a greater number of sites in my township if this had been in place. Does the infrastructure outside of Fargo count for nothing and not deserve a study to determine affects upon it? Emergency travel within all affected townships whether be it from roads dead ending at the diversion, or roads flooded because of additional water being pushed on them will be adversely affected. PRESERVATION OF LAND AND HERITAGE FARMS; Property forcibly taken to construct this project will destroy farms and farm sites that have taken generations to build. The project will take over 6500 acres. People forced to sell will be paid basically the price established between a willing buyer and willing seller. The problem is most of these people will not be willing sellers and will have to buy land back to replace what was taken. Farm land is not like a house, there are always local houses for sale. In my search of the 3 largest local land brokering companies, the local newspapers, and the internet, as of 7-28-10 I can find under 1500 acres for sale in all of Cass County. This project will have the affect of artificially raising the value of any future sales substantially. That is a simple supply- demand equation. I would dare say it will be impossible for these people to make themselves whole again. There is no way for someone who loses a farm site that has been in the family for over 100 years to ever make themselves whole. ANNUAL NEGATIVE ECONOMIC IMPACTS; Negative economic impacts will occur from this project every year whether it ever sees a drop of protective water or not. Taking 6500 acres which will not need seed, fertilizer, chemical or machines to work upon them combined with the potential yearly profit upon those acres it is very easy to come up with a \$20 million negative impact every year. Add that to a possible \$5million negative for affected

downstream acres that suffer loss due to late planting or not planting because of additional waters being forced upon them. It becomes very easily foreseen a \$25 million negative yearly impact. This will be borne basically by small rural towns and businesses. ADDITIONAL CONCERNS; West side drainage into the diversion has not been studied since the soils were found to be unstable and the depth of the project was altered to be 3 - 5 feet shallower than originally planned. The area cannot afford to have this project negatively affect West side drainage into it or take over legal established drains (Drain 13) that have been built and maintained by assessments on farmland to control drainage in defined watershed areas. It is unacceptable to have this drain taken over and potentially become non functional for its original purpose. West side drainage into the channel needs to be assured. With the soils in the area, if you dig a hole in this country it fills with water. A study of what impact a 30' deep, 36 mile long hole dug into the ground will have on the subsoil moisture and potential aquifer depletions is needed.

100808_Del Schnabel – Given the same drop in elevation, one would think the deeper the water, the faster the flow. The faster the flow, the more erosion to roads, fields, dikes, etc. Simply expressing downstream impact in how many additional inches of water is not telling the whole story. You may build a protective dike high enough, but can it withstand the additional pressure and erosion? Downstream impact should also report the additional potential of ice damage due to the crest coming higher and sooner than it would be without the diversion. It is logical to assume the sooner you get the crest, the more ice will be present and consequently the more ice damage will occur. Due to the above, it is logical to assume that damage to infrastructure - roads, power lines, phone and data cables, bridges, etc. - would be far more extensive than the expression of additional inches is telling us. The ever-changing downstream impact reports of the Fargo diversion are woefully inadequate and misleading. Are these assumptions correct? Please provide us with information pertaining to the above downstream impact concerns.

100808 Harold Brattland - The EIS may seem complete for the area of the diversion, however the effects of the project are to be literally projected to the remainder of the Red River channel, and the farms, the townships, the counties, the cities, and the economies of those areas including real estate tax bases. In effect, this EIS is ignoring the value and impacts to the region along the Red River north of the diversion construction. I grew up on the Red River between Perley and Hendrum, MN, and still am part owner of lands that was settled by my Great Grandfather. They endured the 1897 flood directly, but with changes to drainage in the basin over the last thirty years all three farmsteads along the river have been abandoned. The future holds little possibility of being able to once again placing a resident household on our land. Further, it would be foolish trying to have animals using grazing land next to the river that sustained my ancestors enterprise. And now we are told that the diversion will make floods worse by another foot or two feet!! Items of concern: 1- The design criterion for an engineering project of this scope must include a do-no-further-harm policy. I am also an old engineer that can-not understand engineers designing a flood project that MAKES FLOODS WORSE FOR EVERYONE DOWNSTREAM EXCEPT A FEW IN THE FARGO-MOORHEAD FLOOD PLAIN! THE DESIGN MUST BE CHANGED SO THAT DOWN STREAM EFFECTS ARE NEUTRAL TO DOWNSTREAM AREAS. 2- The inclusion of downstream effects in the design is needed to obtain the accurate total cost of this endeavor. A systems approach to the whole Red River Basin is needed otherwise one project will be followed by a series of additional projects to correct damage county by county, city by city, township by township, farmstead by farmstead, to the Canada border. 3- The total economic damage done by increased flooding is not included in the EIS. It seems that the idea is that it is only farm land and what could possibly hurt to have little water for a few days. In reality, there is considerable damage because it is sometimes weeks instead of days where the region is held hostage, roads are closed, working people are prevented from working, time-sensitive work can not be done, land is damaged with debris in

addition to erosion of vital rich topsoil which is a cost rarely included in the impact statement. In conclusion, there is much that is good and factual included in the EIS, however, without an accounting of the real impacts to the downstream effects on land and infrastructure, it must be rejected and sent back for expansion and rework.

100808_Anonymous – If my neighbor and I were both fighting a tremendous flood, and I alleviate some of my problems by digging a ditch from my property to his making his situation worse, two things will happen. First the sheriff will come to see me and then he would probably sue me for additional damages. It is not legal and not morally right to harm some people to help others. A diversion does not solve a flooding problem, it just moves it. The recent downstream impact numbers that were released proves severe damages and additional hardship for all of who liove north of Fargo-Moorhead. Will the impact eventually prove to threaten what Grand Forks / EGF has accomplished to lessen their flooding problems? Nothing should move forward until the impact all the way to Winnipeg is done and concrete plans are in place to totally mitigate any and all downstream impacts. Fargo-Moorhead is important to this region and needs long term flood protection. But my home and family are as equally important in my eyes.

100808_Russel & Marilyn Nelson – The diversion will harm our property. We live 2 1/2 miles south of the Thompson Bridge. In the 1997 flood we had water 8 feet deep in our barn. In 2009 the water was 4 feet deep in the barn. In 2010 the water came within an inch of covering the floor. We are VERY concerned about the impact of the Fargo/Moorhead diversion.

along the Sheyenne river on along the PROPOSED NEW DIVERSION and we are against this diversion project. The reason we are against it is because of the many unanswered questions. 1. How can you possibly mitigate the amount of water that the new Corp numbers say will be put on the downstream residents all the way to Grand Forks, and maybe beyond, who knows? 2. How can 6500 hundred acres of farm land be replaced to the farmers and at what cost and where will this land be found. 3. How can you justify taking 6500 hundred acres out of the tax base. 4. Who is and at what cost is going to maintain the project forever including the 800-1000 foot bridges (only on county roads). In our opinion this entire project is being rammed thru at a much too fast pace mainly for political reasons. We do not feel that this area can ever be flood proof. Face it, we live in the bottom of a big lake. We think that protecting the city to a safe level can be done with a retaining structures and much less expensive retention projects. I don't think the people of Fargo understand the horrible scar that this project will put on the landscape forever.

100808_Kevin Heidn — I hope this not too late, I am also sending to international water institute. Why I am opposed to the proposed Fargo Diversion. It will take away the place where my son learned how to hunt. He shot his first deer there, I was so proud. This is special place to wildlife deer, fox, coyotes, pheasants and all sorts of small animals a special place. The Native Americans must have thought this was a special place for all the artifacts we have found over the years until we realized we should just leave them were they were left. We've kept the fact of all the artifacts secret because we didn't want people out there looking around, but now we can't anymore. If this project goes through my son will never have the opportunity to show his children this special place. How can you put a value on this, how can you replace this? When you farm you learn to love and respect the land. All land has unique features; these things can never be replaced. The loose of land will greatly affect our farming operation; this will take away approximately 25 % of the land Our Family owns. How would you feel if someone would take away 25 % of you and your families earning potential for generations? Our operation will be

changed forever. Fargo has flooded for years and the city has never been lost. They put up dikes and keep the city safe and then take the dikes down. Why not leave the dikes up? Where is the common sense in that? Where are the numbers from your study showing dikes won't work? Or don't you want them to work? You talk about green space along the proposed channel. Why not keep the green space along the river where it belongs? You know that a river is the lowest part of a drainage system, there shouldn't be houses there. Where are your numbers showing the loss of income to all the farmers along the proposed path, forever? The loss to the seed dealer, the elevator, the machinery dealer, the furniture store, the car dealer, etc. when farmers have a good year, everybody has a good year. Do your numbers show the loss of tens of millions of dollars every year! We have a moral objection to taking one's own problem and passing it on to someone else. Example the Sheyenne Diversion! The poor people living on the north end (downstream) will suffer as a result of this. If this project has so much merit why not add downstream flood mitigation to it? Is funding going to be there to finish the project or will it be another Garrison Diversion? I believe a basin wide solution is needed and should be considered before a 36 mile long scare on the face of the earth is constructed. Kevin Heiden,

100809 David Gust - I am deeply concerned about the proposed Fargo Diversion. There seems to be a rush forward without thorough review. Comment period is being cut off August 9th and the design is not final, the route is not final, and all of the effects downstream have not been calculated. There seems to be political pressure to get this project funded before Senator Byron Dorgan leaves office. This is not going through the Corp of Engineer's normal procedures. The result is a lack of concrete information about all aspects of the diversion. The Corp claims 195 million in yearly benefits yet I can't find where Fargo has spent 195 million total to fight floods. The Corp claims 13.8 million in yearly recreation benefit yet it doesn't calculate economic loss of taking 6500 acres of prime Red River Valley farmland out of production. The Metro Flood Study Work Group claims they are "concerned" about downstream impacts. They claim 50 million dollars will mitigate all impacts. Representative Colin Peterson of Minnesota says it will take 500 million to a billion dollars to counter the impacts of the Fargo diversion. None of these proposed solutions have even started the study phase. There is no funding in place and no guarantee projects could be completed before the diversion goes into operation. Impacts of up to two feet should be considered a "taking". Yet this term seems to be subjective and the USACE seems to be interpreting data to benefit the project. This project is moving forward at a break neck speed simply for political expediency. This does not properly serve our region or our country. Therefore I respectfully submit my opposition to the Fargo Diversion project. David Gust

100809_Anonymous — More impact studies need to be done to determine the TOTAL downstream impact from the F-M Diversion. Downstream impacts need to be mitigated befor proceeding with the project. Climax residents were told, in April and May, that the impact of the diversion would be in the areas of 3", but recent news releases put that number at almost 2.5 feet. Are the recent projections correct? The Sand Hill River in Climax is also impacted by a large ditch that brings water in from the east, and backwater from the Red River, compounding our flooding. This project needs to SLOW down and the timeline for public comment advertised better and extended.

100809_Steve Jacobson – July 27,2010 US Army Corps of Engineers Headquarters St. Paul District 190 Fifth Street East St. Paul, MN 55101-1638 Subject: Farmland erosion issues as related to flooding of the Red River of the North. Sheet erosion of agricultural land has become a common occurrence in the Red River basin as a result of flooding. Sheet erosion removes the top several inches of top soil and redeposits it downstream This has resulted in adverse impacts of reduced crop production capacity, lost revenue to landowners and growers, and thereby reducing the economic vitality of communities. The

proposed Fargo Moorhead diversion is estimated to cause as much as seventeen inches of additional flood crest elevations in areas downstream of the proposed diversion. I assume this additional crest elevation, due to the Fargo-Moorhead diversion, will exacerbate the sheet erosion problem and it's associated costs. I ask that the USACE determine and quantify the costs of increased flood crest elevations due to the proposed FM diversion, in regard to farmland sheet erosion. This should be done at various crest elevations, before and after the proposed diversion, at locations downstream of the proposed diversion. Farmland sheet erosion, as a consequence of flooding, has been overlooked by many. This issue may be the the largest, in terms of cost to communities and our environment, impact of the proposed FM diversion. I look forward to your reply. Steve Jacobson

CC: MN State and Federal elected officials MN DNR MN Pollution Control MN Center for Environmental Advocacy Red River Basin Commission Red River Watershed Management Dist.

100809 Nicholas Snavely – Due to the recent findings of additional downstream impacts caused by the proposed ditch diversion around the Fargo-Moorhead area, it is imperative that the money that was proposed to be used for a ditch diversion around these towns instead be used to restore drained wetlands in neighboring ditched and drained tiled farm fields within the Red River watershed, as well as utilizing managed drainage systems in existing tile lines during the peak flooding season. This would provide the additional benefit of much needed wildlife habitat in the area and a true solution to the problem of excess water flow from upland areas surrounding the area that once had a much greater water storage capacity before ditching and tile lines were installed in agricultural fields, thus preventing the flash flooding we currently see today. Ditch diversions should be eliminated as valid alternatives, as they will likely result in pushing flooding and negative economic impacts downstream. The Wetland Restoration Alternative within the Red River watershed would have the least ecological impacts when compared to the MN 35K or ND 35K Diversion Channel Alternatives. This EIS should consider the Wetland Restoration Alternative as a valid alternative and reject diversion ditching as valid alternatives. Work towards restoring the over 95 percent of lost wetlands in the area should be a main alternative to installing a diversion ditch around these towns. This would meet the purpose and need of reducing flood risk, flood damages and flood protection costs related to the flooding in the Fargo-Moorhead Metropolitan Area. As stated in the EIS, ?The Red River basin lies within the Prairie Pothole Region, which has been dramatically affected by drainage and tillage predominantly related to this region's urban development and agriculture-based economy. According to the 1997 Minnesota Wetlands Conservation Plan, over 95 percent of the native wetlands in the Minnesota portion of the Fargo-Moorhead and upstream sub-basin have been lost. The North Dakota portion of the study area has also experienced a similar amount of lost wetlands. The resulting habitat loss has caused a dramatic decline in wetland-dependent wildlife populations. Because the Red River basin lies within a major waterfowl and shorebird migration route, the loss of permanent and seasonal wetlands has had a measurable adverse impact on migratory success.? ?Wetland restoration provides flood storage, improves water quality, and increases wildlife and recreation opportunities.? Wetland impacts in the EIS should be based on all wetlands that historically existed in the area, not on just those existing today. As previous ditch diversions and river dredging projects done by the U.S. Army Corps of Engineers in the past have shown us, it is in our best economic and environmental interest to restore wetlands that once existed in a watershed to deal with long term flooding issues, not installing ditch diversions.

100809_Two Rivers Watershed District - August 5, 2010 Aaron Snyder U.S. Army Corps of Engineers Project Manager 180 East 5th Street, Suite 700 St. Paul, MN 55101 Dear Sir: The Two Rivers Watershed District is a local unit of government authorized under Minnesota Statute 103D, with jurisdiction in Kittson, Roseau, and Marshall Counties in northwestern Minnesota. Powers of watershed districts under this statute include projects involving flood control, water quality, and water quantity. The Two Rivers

Watershed District was established in 1958 and to date has constructed several flood control projects. As an agency involved with flood control and potentially affected by the proposed Fargo Moorhead diversion, we appreciate the opportunity to provide comment on the Draft Feasibility Report and Environmental Impact Statement. We respectfully offer the following comments: 1. Significant stage increases at several downstream locations as far north as Halstad have been identified. However, numerous locations further downstream to the north of Halstad most certainly will also be impacted. The extent of downstream impacts needs to be quantified all the way to the location on the river where there will be no impacts or where impacts will be negligible. Only when this is done can there be a quantification of the cost versus benefits of the plan. 2. Because downstream areas will have higher stages after the project is constructed, we believe that water retention areas need to be constructed as a part of the project in order to mitigate the increased stages downstream. In other words, it is not acceptable to simply transfer the water that is now stored in the Fargo Moorhead floodplain to areas downstream, thereby increasing the flooding that occurs in downstream areas. The project that is constructed should have no significant impact to downstream or upstream areas. This is a basic water management guideline. The impacts of the project must be mitigated. 3. Project alternatives should be addressed. These can include projects such as impoundments, wetland restorations, or other upstream storage projects. Other types of project alternatives to consider could involve flood barriers alone or in combination with the diversion. Upstream storage options not only will help prevent flooding in the Fargo Moorhead area, it will reduce the size and cost of the proposed diversion, and could possibly provide other opportunities such as water supply in times of drought. 4. Impacts to public infrastructure such as roads and bridges needs to be quantified. In addition, impacts to agricultural and private lands also should be quantified. 5. The deadline to provide comments as we understand it is August 9, 2010. We do not feel that this is enough time for all agencies and members of the public to review the 280 page document and its appendices, digest the information contained within it, and provide well educated comments. We respectfully request that the time line to provide comments be extended. In summary, the Two Rivers Watershed District supports a diversion project only if the project includes mitigation for the negative impacts it surely will impose on others. This mitigation should include flood storage and impoundment options, or some combination of structural measures that collectively mitigate the transfer of flood damages to others. Thank you for the opportunity to provide comment. Sincerely, Dan Money District Administrator

100809_Anonymous – The proposed Fargo Diversion will remove many acres of fertile Red River Valley farm land. The intended path of this proposed diversion needs to be studied more as farmers are always uncovering Native American artifacts. This area of land was considered important to native people for hundreds of years. Thousands of acres of historical land containing information of past cultures will be lost for the proposed diversion.

100809_Tom Beaton — We are affected by your proposed diversion by loosing our farmstead It consists of our house, a heated shop, 2 large storage buildings, 2 grain bins, and another smaller storage shed. We also have a 7 row shelter belt, plus an additional 2 rows of Colorado spruce and Norway pines as a secondary tree planting. How do we or you plan to put a market value on the place that we do all of our farming operation out of? I'm 61 yrs. old and don't want to start a new building site to keep our operation going. There are no other farmsteads to buy in our area. How far do we plan to have to move? We will also loose the township road to the east to a main paved road. NOW WE ARE 5 MINUTES FROM A FIRE STATION, AFTER THAT IT WOULD BE 20 MINUTES. We would affected greatly. We would also loose 450 acres of rented farmland to the diversion. That would mean about a 20% lose of our income. That would be a significent amount to loose each year to pay our bills. Why can't Fargo put up flood walls like the city of Grand Forks did? They have about 10-15 feet more water going through their city

than Fargo does and have no problem with them Fargo is spending \$24 million this year for projects that protect them to 44 ft. why spend \$1.4 billion for a diversion that takes about 7000 acres of farmland from us farmers. That equeates to millions of lost income to area farmers. Alot of that money is spent in Fargo for our neccesities. To sum this upWE DO NOT WANT THE FARGO DIVERSION TO COME OUT TO THE RURAL AREA. IT IS NOT OUR PROBLEM OUT HERE. kEEP IT IN FARGO!!!!!!!!!

100809_Dale Rust – Flood control is what it is called but the Fargo diversion does not solve anything. It makes it worse. Fargo has the problem and to solve it they want to push it somewhere else and make it a bigger problem. First of all the project is way to big. The nation, Minnesota, North Dakota and the people in Cass county can not affort a project this size. This will be a unknown expense for eternity. Projects this size normally takes years to plan but this one for some reason has to to be done before we even know what it will cost. 1.5 billion is a number were are told. I would like to see a itemized list of where this number came from. Who is going to pay for all the roads that will be washed out. Who is going to pay me for my economic engine that will be affected? Who is going to pay for my lost crops? They also want to tie into Drain 13. We have been paying for this drain for years and now Fargo is just going to take it. Who is going to pay for all the bridges when they need to be replaced. I would guess this would be the landowners. This project is way to big. It benefits the people who knew when they built their homes that they were in flood plane. "Love your neighbors as you love yourself," Do unto others as you would like them to do to you". I am having a hard time living by this fundamental law of the Bible when my neighbor doesn't care about me.

100809 Allen Grasser-Grand Forks City Engineer – The City of Grand Forks offers the following comments for the EIS: ?? Grand Forks supports flood protection as a vital part of community life in the Red River Valley, including the timely completion of a project that helps to provide necessary security for the residents of the Fargo-Moorhead area. ?? The latest analysis of the F-M Area Flood Protection Project by the Corps of Engineers indicates downstream impacts to the limits of the study area that is the Thompson Station. ?? Although not defined at this time, it is likely that stage increases will occur at the Grand Forks Station. ?? The local, state and federal governments have over 400 million dollars invested in the Grand Forks/East Grand Forks flood project that needs to be protected and maintained. Currently the City of Grand Forks has a flood protection system that provides flood protection to approximately a 210-year frequency event. The City desires to maintain this 210-year frequency level of protection. ?? Identified downstream impacts need to be clarified and the appropriate mitigation be INCLUDED as part of the project and project development. ?? Downstream studies in the Grand Forks area should discuss the impacts of changes in the timing of the crest on the Red River. It should identify how those may relate to the Red Lake River crest and identify if there are increased risks for concurrent crests. Analysis should also be made regarding expected ice conditions and impacts with an accelerated crest. ?? A specific study needs to be initiated for the Grand Forks/East Grand Forks flood protection system to identify how best to maintain or increase the current level of protection. The study should include basin-wide storage, levee raises, and diversion alternatives.

100809_John Schmalenberg – We believe that Moorhead and Fargo need flood protection. The City of East Grand Forks and Grand Forks have just completed their Corp projects resulting from the devastation that occurred in 1997, so we are not insensitive to the community needs. However, we were always told, that any stage increase on the 100 year flood greater than six inches needed to be mitigated. There has been, as far as I know, no mitigation plans initiated for any of the downstream cities and the downstream stage increases have not all been modeled. I believe that the comment period should at least be left open until additional downstream modeling has been completed.

100809 Dennis J. Novacek - I am writing in opposition of the proposed Red River diversion project. I manage an agricultural based Cooperative with locactions in Harwood, west Fargo and Kindred North Daktoa. Over the last ten years our Cooprative has invested more than 16 million dollars in brick and mortar assets to gear up our facilities to handle grains, fertilizer, seed and herbicides in an efficient manor that puts this cooperative in a position to pay the best price possiable for producers grain production and offer the most competitive price on crop inputs. These investments were made, and our business model is structured, based on the number of acres farmed within our trade territory. The proposed diversion is slated to reduce the amount of agricultural land available for production, in the heart of our trade territiory, by some 6,500 acres. This reduction of critical acres would be very devastating to our Coopetatives ability to continue to offer competitive prices on grain production and Ag supplies. The proposed diversion would also split areas of land, resulting in additional expeses to traveltime and man hours for our spreaders and sprayers to get from one side of the diversion to the other. Based off 6,500 acres being taken out of production, I can project that our annual sales of farm inputs would be reduced by more than a million dollars. Our bushel handle of grain would drop by over 600,000 bushels per year. If you take into consideration the amount of land that would be covered with water for an extended time frame on the unprotected side of the diversion, one could estimate the amount of land taken out of production for any given year to be three to four times the 6,500 acres consumed by the channel itself. It is rather easy to calculate the negative economic devastation that the proposed diversion would have on our Coopertive and the investments made to provide a competitive market for grain production and sales of goods and services to our producers. But there are many other businesses that would be also negatively affected by these productive acres being taken out of production as well. There have been millions of dollars spent and more allocated to be spent on property buy outs along the Red River. I would think the responsible thing to do would be to follow through with those dollars invested in flood control and control the water at the river with flood walls as have been erected in Grand Forks. Respectfully; Dennis J Novacek

100809_Stuart Johnson - I am writing to you in regards to the Fargo Diversion which will have a devastating impact to me and my family members. I have not had one good night sleep since learning of this plan which means my family hasn't either. We learned it will sacrifice almost everything that our family and four generations have worked for. Two farms completely gone and another under water and 80% of the land totally changed, millions of adult trees uprooted, wetlands carefully preserved over four generations will be wiped out, mature habitat for hundreds of different wildlife species completely removed, Indian relic searching ground never to be explored again and needless to say some of the best farmland in the world never to produce for the hungry again. With the world growing at an estimated 85 million mouths to feed every year we should be studying ways to utilize this water to increase food production instead of flooding our neighbors on the wrong side of the diversion taking even more land out of production. We have never farmed land more than two miles away in our lives - can you guarantee this to continue? Hundreds of extra hours per year spent on roads around the diversion costing tens of thousands of dollars in productivity and machinery costs per year - who pays for this? I have a relationship with this land that cannot be duplicated anywhere else with any amount of time or money spent. Our livelihood will be completely turned upside down as well as our piece of mind. One of my biggest concerns is what will happen to the aquifers. Clean drinking water is the most priceless asset we have. With my water table so close to ground level we could pollute our ground waters forever. Who would start a project of this magnitude without a long-term study on the effects of clean water which will have more of an effect on the population growth than a diversion with so many hidden costs. The rule of unintended consequences will forever change this area of the country. No young farm family will ever be able to compete and start their dream of land ownership, the great American dream I might

add, because a handful of landowners inside the diversion will trade for all the land up and down the valley for generations to come. This cannot be allowed to happen.

100809 Phil Gerla - Downstream effects of the diversion plan are critical and involve hundreds of homes and other structures, along with thousands of acres of farmland. The EIS was submitted incomplete because some of these most important data were not available until the end of July. I, and no one else, have had sufficient time to review and check the work before the end of the comment period. The comment period, therefore needs to be reopened and extended. 2. The EIS does not address problems with the current local, state, and federal regulations related to land drainage in the Red River basin. To keep up with our current wet cycle and to mitigate local flooding, ditches continue to be cleaned and improved at a rapid pace. Small culverts are being replaced by large culverts, regardless of downstream consequences. New ditches above Fargo continue to be proposed and installed. For example, a nine-mile drainage ditch through the Sheyenne sand hills is proposed as a way to mitigate a high water table in McLeod, North Dakota (population 28). Excavation on this ditch has begun. How will this, along with literally tens of thousands of other cleanouts, field scrapes, and other new ditches affect the model results and performance of the diversion? More importantly, how will downstream locations be influenced by continued expansion of drainage in the mid- to upper parts of the watershed, when combined with the diversion? 3. Recently, the conveyance of water from the Devils Lake basin was increased five-fold to 250 cfs. This is a small amount, but has the prediction of an increasingly elevated Devils Lake been included in the model and assessment? This possible continued rise in lake level will effectively decrease the storage in Ashtabula Reservoir, thereby increasing the height of the downstream flood peak. What happens downstream if Devils Lake continues to rise as it has for the last 15 years and the natural outlet is re-established? 4. Even a simple task such as carefully sizing culverts throughout the Red River basin above Fargo could help meter water and control the downstream flood peak. Has this been explored and investigated? Have the culverts even been mapped? Future conditions that consider drainage regulation and climate variability MUST be included in the model assumptions and results. Obviously, we cannot see into the future, but the uncertainty of the diversion performance and downstream effects must be reported before a risk assessment can be completed. In conclusion, the EIS as it stands is not acceptable. It was hastily written and incomplete when submitted for public comment. Phil Gerla, PhD Associate Professor of Geology and Geological Engineering University of North Dakota Grand Forks

100809 Ericka Schmidt on behalf of Henry VanOffelen and Minnesota Center for Environmental Advocacy (MCEA) - August 9, 2010 Terry Birkenstock USACE Project Manager 190 East 5th Street St. Paul, MN 55101 Dear Mr. Birkenstock: The following are comments from the Minnesota Center for Environmental Advocacy (MCEA) on the Draft Feasibility Report and Environmental Impact Statement for the Fargo-Moorhead Metropolitan Area Flood Risk Management study (DEIS). MCEA has been actively engaged in flood damage reduction and natural resource enhancement projects in the Red River basin for more than 12 years. We were a signatory on the Red River Mediation Agreement, we have been a continuous member of the Flood Damage Reduction Work Force and its Technical and Scientific Advisory Committee, and we have participated in numerous watershed-based project work teams and comprehensive planning processes. As outlined in the comments below, we do not believe the draft report is adequate under the National Environmental Policy Act (NEPA) and we have numerous concerns with the Fargo-Moorhead project (?project?). Planning Objectives: Four planning objectives were identified in the study. ? Reduce flood risk and flood damages in the Fargo-Moorhead metropolitan area. ? Restore or improve degraded riverine and riparian habitat in and along the Red River of the North, Wild Rice River (North Dakota), Sheyenne River (North Dakota), and Buffalo River (Minnesota) in conjunction with other flood risk management features. ? Provide additional wetland habitat in

conjunction with other flood risk management features, and ? Provide recreational opportunities in conjunction with other flood risk management features. The evaluation of alternatives in the DEIS focused only on the first objective listed. The alternatives selected do not measurably achieve any of the other objectives. Planning Constraints Similar to the planning objectives, the following two planning constraints were disregarded in this DEIS. ? Avoid increasing peak Red River flood stages, either upstream or downstream? Minimize loss of floodplain in accordance with Executive Order 11988, Floodplain management Related Current Studies: The DEIS lists the Fargo-Moorhead and Upstream Feasibility Study as a current study; this study?s limited scope did not, however, evaluate flood water storage opportunities in the basin such as those on-channel and off-channel flood water detention projects being planned and constructed in Minnesota. These ?North Ottawa? type of projects have the potential to store significant quantities of flood water upstream of Fargo-Moorhead and can be planned and designed to also provide considerable natural resource benefits. Public Concerns: The public is clearly concerned about the downstream impacts of any proposed project. Addressing these concerns and providing assurances that all downstream impacts will be avoided or mitigated should be included as part of any proposed project alternative. There has not been sufficient time to evaluate the new information USACE provided and we therefore renew our request for an extension of time to comment. Hydrology: The DEIS does not explain why this study breaks from traditional flood frequency analysis and uses a ?wet? period of record based analysis. It is our understanding that this wet period approach was not used in previous studies of the region such as the Fargo-Moorhead and Upstream Feasibility study. Its use now clearly makes the benefit cost ratios higher and its use may set a precedent for evaluation of future projects. The use of the ?wet period? and its potential future application throughout the basin needs further discussion and justification in the report. While the evidence suggests that all flooding events and major flood events in particular are occurring on a more frequent basis (Figure 7) there is no assessment or analysis presented to describe the root cause or causes of this clear trend. While precipitation patterns since 1990 have contributed to this trend in flood frequency, other factors such as land use and drainage patterns are also likely to have played a role and are also likely to continue to play a role in modifying the hydrology of the basin. The study assesses the effects of the diversion if climatic conditions stay the same (i.e. ?what if it stays wet?) but makes no predictions about the effectiveness of the diversion if future drainage and land use changes continue, e.g. if subsurface tile is installed on 20, 40, or 60% of the landscape in the next 20 years. The long list of prior reports and existing projects makes it clear that the Corps of Engineers has invested a significant amount of public resources into flood damage reduction in the Red River Basin, yet significant flood damage still occurs. The preferred alternative in this study proposes another \$1.4 billion expenditure but there is no discussion of the effects that future land use changes or additional drainage may have on the effectiveness of any proposed alternative. For example, a recent study conducted by the University of Minnesota suggests that tile drainage in the basin could increase water yield by 20% in April and May. This type of information must be considered in this study and avoiding, minimizing, and/or mitigating the results should be included in the evaluation of alternatives. The proposed alternatives in this study will result in significant downstream stage increases, but there is no mitigation proposed in the DEIS. For more than a hundred years, the primary approach to flood damage reduction in the Red River basin has been to increase conveyance and, in effect, move the problem downstream. The results of modeling of the various diversion alternatives in the DEIS make this fact clear. Increased conveyance around Fargo-Moorhead, and especially, the loss of floodplain storage in the North Dakota options, moves the problem downstream. It is unfortunate that mitigation for these effects is not seriously considered in the DEIS. This simply perpetuates the errors of the past and is not reasonable given our understanding of the impacts of the proposed project. The Council of Environmental Quality (CEQ) guidance titled ?NEPA?s Forty Most Asked Questions? states that: ?All relevant, reasonable, mitigation measures that could improve the project are to be identified, even if they are outside the jurisdiction of the lead

agency or the cooperating agencies. Sections 1502.16(h), 1505(c). This will serve to [46FR 18032] alert agencies or officials who can implement these extra measures, and will encourage them to do so.? Alternatives Again, more consideration needs to be given to upstream storage options. These options would better meet the stated objectives than the current preferred alternative. At a minimum, significant upstream storage similar in nature and scope to the storage that Charlie Anderson has found in the Bois de Sioux watershed to meet a 20% peak flow reduction on the mainstem of the Red River needs to be presented and evaluated in the DEIS. The DEIS should then apply this approach to all tributary watersheds upstream of Fargo-Moorhead. Environmental Effects The proposed alternatives are all likely to have significant effects on the geomorphology and sediment dynamics of the Red River. The DEIS needs to more completely assess the effects that this diversion will have on geomorphology and sediment dynamics. Experiences with diversions within the basin (e.g. Cheyenne diversion) make it clear that large changes in sediment dynamics are likely to occur. The proposed alternatives will have direct wetland impacts and merely stating that ?either alternative would include appropriate measures to minimize or mitigate potential losses to wetland areas? does not meet NEPA?s adequacy standard. Kicking the can down the road is not sufficient. The DEIS needs to tell us now what will be done to minimize or more specifically to mitigate wetland losses. The proposed alternatives will have direct impacts on fish passage and connectivity of the Red River and its tributaries. The DEIS does not adequately assess these issues. Further work is needed to describe the effectiveness of proposed fish passage mitigation measures and a more complete picture of what species are going to be affected and when critical passage issues are likely to occur. Minnesota, North Dakota, and local communities have invested a substantial amount of resources into modifying and removing fish passage barriers on the Red River and its tributaries to improve the function of the aquatic system. A new structure on the Red that acts as an effective fish barrier is a significant step backwards that must be avoided. Impassable structures on the tributaries also will result in lost functions for the aquatic system. The stream habitat losses evident in the proposed alternatives will have to be mitigated. Similar to wetland impacts, the DEIS needs to tell us now what will be done to minimize or more specifically to mitigate stream habitat losses. The locally preferred alternative (ND 35K) appears to have the most potential for significant environmental effects. If selected, this plans will limit fish passage and connectivity, have direct wetland and riverine habitat effects, and will increase stage far downstream. Thank you for the opportunity to submit these comments. We look forward to further review and comment in this process. Please feel free to contact me if you have any questions. Sincerely, Henry VanOffelen Natural Resource Scientist Minnesota Center for Environmental Advocacy 50785 Bucks Mill Rd. Detroit Lakes, MN 56501 (218) 849-5270 hvanoffelen@mncenter.org

100809_Ron Bergan — 8-9-10 I have spent a lot of time studying the diversion starting with the 2009 flood. I went along with the engineers on the bus trip to Winnipeg, attended most of the meetings and talked to many local officials, engineers, and planners who are knowledgeable about and or working on flood protection. Some of the earlier information that was generated can be seen on FMfloodcontrol.com. The diversion on the ND side is the correct answer to FM flood problems but here are some improvements that should be made to the proposed diversion: ? Move the inlet south of Oxbow. Calculations show that if head is increased by four feet (four miles to the south) the bottom width of the channel can be reduced by 12?. A line drawn from this point to the point of crossing the Sheyenne shows the length of the diversion to be approximately the same. This could be a \$50 million reduction, not an increase in cost. This may protect more total dollars of property values than the current downstream concerns. Not flooding Oxbow would also make it easier to allow backup onto farm land instead of sending the water faster through the diversion and flooding the downstream areas. ? Reduce the size of the diversion at the outlet from the approximately 50,000 cfs to 35,000 cfs and also reduce the size along the route as appropriate. A 15,000 cfs reduction at the peak flow of the diversion

could reduce and possibly eliminate the downstream concerns and would allow for a significant cost reduction. ? Improve farm drainage around the diversion by putting teeth (many openings) in the outside spoil bank like Winnipeg did when they improved and expanded their diversion. This allows the water to easily flow into the diversion providing farm drainage in flood years up to maybe the 100 year level and for 100 plus year events more backup onto farm land than the current design. This area would be flooded in most floods anyway. A large drainage ditch (which the diversion is) will move any water from the west side and the Red River out real fast until the Red River and the outlet are at the same level. The farmers? belief that the current design will hold water in many areas and take many days to drain their land is correct I believe. In a large rain event their crop may be killed by only a couple days of standing water which could easily be drained if the diversion allowed easy flow into it through the outside bank. ? Incorporate the optimized route that Moore Engineering uses for their NW mini diversion which reduced the length by approximately 2? miles (study paid for by Fargo this year). This also removed one bridge and could reduce the cost by \$50 mm. It would use a little less land and may reduce the downstream effects slightly. This mini diversion was to have been included with a MN diversion to benefit the NW (Harwood) area. ? Incorporate the Winnipeg construction methods: Include winter dirt moving as they did in Winnipeg and Wahpeton? substantial cost reduction and it shortens the time to complete the project. Do not save the black dirt. Seed directly on top of clay and spoil banks. Use mix of grasses for a hay crop and cover. Rent the land for haying and have the farmer maintain it? lower cost to seed and maintain. There is no need to compact the spoil pile. The downstream people should be like FM and Winnipeg and be concerned about the possibility of ten feet above the largest flood we have ever seen - 40? to 50?, the approximate 700 year flood level. In Canada most of the cities and farms from the border to Winnipeg are protected by a ring dike. I believe the Corps reported at the first meeting on methods they studied for FM flood protection that water retention would not work. I believe in very large floods (over 100 year level) that retention does not work and may increase the peak flow. It does work for smaller floods. Ron Bergan

100809_Anonymous – The proposed Fargo Diversion path in its big wide sweeping design clearly will be challenged by the North Dakota Eminete Domain laws. 32-15-01 item 4 of the Law states "Notwithstanding any other provision of law, a public use or a public purpose does not include public benefits of economic development, including an increase in tax base, tax revenues, employment, or general economic health." The City of Fargo has seen that the design be pushed west to allow future growth. The current design path would clearly allow future growth....the "including an increase in tax base...."

100809_Thomas France - August 9, 2010 VIA U.S. MAIL AND E-MAIL (aaron.m.snyder@usace.army.mil) Mr. Aaron Snyder Corps of Engineers Planner and Project Manager 180 E. Fifth Street East, Ste. 700 St. Paul, MN 55101?1638 Re: Comments on Draft Feasibility Report and Environmental Impact Statement on the Fargo-Moorhead Metropolitan Area Flood Risk Management Project on the Red River of the North Dear Mr. Snyder: On behalf of the National Wildlife Federation, we offer these comments on the Draft Feasibility Report and Environmental Impact Statement (DEIS) on the Fargo-Moorhead Metropolitan Area Risk Management Flood Project on the Red River of the North. The National Wildlife Federation recognizes the need for additional flood control for the Fargo-Moorhead area. Unfortunately, we cannot support moving forward with the U.S. Army Corps of Engineers? (?the Corps?) preferred alternative in the DEIS, a massive and expensive diversion channel that will cause unacceptable environmental impacts and put downstream communities and landscapes at additional flood risk. We are exceedingly disappointed that the Corps has proposed building ?The Big Ditch? without a basin-wide analysis of how flood risk can best be managed and without more thoroughly considering other structural and non-structural alternatives that would not only reduce flood risk, but

also provide additional environmental and economic benefits. From our analysis, it seems clear that a combination of wetland restoration and farm field storage projects could provide effective flood control and also provide significant benefits to fish and wildlife resources, water quality, and local economies. We understand the Corps may not have the capacity or the desire to actually move forward with these greener alternatives. Nonetheless, to bring forward a proposal that is so expensive that it may never be funded and so controversial that it may never be built, does no good service to the people of Fargo-Moorhead. In contrast to the divisive ditching project proposed by the Corps, wetland restoration and farm field water storage would be broadly supported by a diverse public that includes farmers, conservationists, and those concerned with economically responsible public works projects. We urge the Corps to enlist other partners, such as the Natural Resource Conservation Service, the U.S. Fish and Wildlife Service (USFWS), and state and local agencies, and to move forward with a supplemental environmental impact statement that includes a basin-wide assessment and that evaluates a full array of water management alternatives. A. Introduction Human activities and alterations in, and around, the Red River Basin (RRB) have led to significant environmental changes throughout the watersheds, including the metropolitan areas of Fargo, North Dakota and Moorhead, Minnesota and their surrounding rural and agricultural communities. Fargo-Moorhead has always been threatened by flooding from the Red River of the North. In the last two decades, however, floods have become more frequent and more severe because thousands of wetlands throughout the RRB have been drained and converted into farmland. Prairie wetlands that once soaked up thousands of acre feet of water have been ditched and drained, increasing both the amount of spring melt water and the rate at which it enters the Red River. North Dakota and Minnesota have lost several hundred thousand acres of wetlands since the establishment of agricultural communities beginning in the 1800s, and North Dakota?s wetlands continue to be drained at a rate of 20,000 acres per year. Climate change has also led to earlier and more abundant springtime runoff into the RRB and will continue to do so for the unforeseeable future. As both flood peaks and floods have increased, so too has the cost of fighting floods. The communities of Fargo and Moorhead now spend more than \$195 million annually for flood damages. In response to the threat of more severe and more frequent flooding, the Corps has evaluated a limited number of engineering alternatives to reduce the threat of flooding in the Fargo-Moorhead area. Based on this evaluation, the Corps now proposes to build a 36-mile-long diversion channel around the Fargo-Moorhead area. The Corps? preferred diversion channel alternative will cover 9,382 acres, and will impact 137 acres of forest habitat, 226 acres either directly or indirectly of wetlands, and 39 acres of riverine aquatic habitat. The diversion channel will span between 100 and 300 feet in width. The projected cost of the diversion channel construction is \$1.4 billion, although some believe this estimate understates the cost of the project. The Corps? DEIS fails to factor into its cost estimations the expense of potential downstream mitigation that may also be needed, as well as maintenance and operation costs in the future. The National Wildlife Federation strongly opposes the Corps? proposed diversion channel, and disagrees with many assessments made in the DEIS. Not only will the project be a massive federal and state expenditure, but also does not even guarantee to solve the RRB?s current catastrophic flooding problems. Furthermore, the diversion channel will offer no ecological benefits, and will almost certainly have large negative impacts on the region?s fish and wildlife and their habitats. B. The DEIS fails to adequately address the negative consequences of the Red River diversion channel options. In the DEIS, the Corps has evaluated eight different diversion channel alternatives, including the MN20k, MN25k, MN30k, MN35k, MN40k, MN45k, ND30k, and the ND35k. The ND35k was chosen as the Corps? Locally Preferred Plan (LPP), the MN40k was chosen as the National Economic Development plan (NED), and the MN35k was chosen as the Federally Comparable Plan (FCP). Under NEPA, it is ?mandate[d] that federal agencies take a hard look at the environmental consequences of a major federal action before taking that action.? Mid States Coalition for Progress v. Surface Transp. Bd., 345 F.3d 520, 533 (8th Cir.2003). Listed below are several potentially damaging effects of the Corps? LPP, which seriously call

into question the thoroughness of the Corps? DEIS. 1. Most damaging and expensive plan The proposed LPP will result in greater ecological impacts than both the FCP and the NED. More tributaries and roughly 120 more acres of wetlands, forests, aquatic riverine, and fish tributaries and passages will be affected from the LPP than the FCP. The LPP will have a greater impact on wildlife and fisheries than the FCP and the NED. Under the Fish and Wildlife Coordination Act (16 U.S.C. 661 et seq.), the U.S. Fish and Wildlife Service (USFWS) is authorized to provide recommendations to the Corps on federally funded water development projects. For the reasons listed above, the USFWS has recommended the FCP alternative rather than the LPP. The comparable costs (in millions) of the LPP, FCP, and NED are \$1,462, \$1,236, and \$1,367, respectively. (DEIS-ES-11). The Corps selected the LPP primarily because of political considerations. The primary impetus for the construction of the massive diversion channel being proposed has come from the North Dakota congressional delegation and the City of Fargo. Because of lukewarm support for the project by Moorhead and other Minnesota political entities, North Dakota supporters pressured the Corps and the Assistant Secretary for Civil Works to accept the LPP alternative. The result is that the DEIS has identified a preferred alternative that is the most ecologically harmful and the most expensive, the 36-mile North Dakota LPP. 2. More flooding downstream The DEIS states that downstream effects of the diversion channel on social resources could be significant, but it fails to adequately measure these impacts. The Red River is more than 500 miles long, with Fargo and Moorhead being located very near its point of origin at the Bois de Sioux River. Downstream effects of a large diversion channel could impact virtually hundreds of river miles. For the ND35k plan (LPP), the Corps only analyzed 43.5 river miles downstream. The Red River flows northward and eventually empties into Lake Winnipeg near Manitoba, Canada. The river?s northward flow creates an increased possibility of ice downstream. Large pieces of ice in the Red River create an even greater risk of springtime flooding downstream of Fargo-Moorhead, making this region particularly sensitive to springtime runoff. Furthermore, the Fargo-Moorhead diversion channel will also increase water levels downstream because more natural floodplain storage will have been eliminated. In all flooding scenarios mentioned in section 5.2.1.4.1 (10-percent, 2-percent, and 1-percent chance), it was determined that more acreage would be impacted than the amount of acreage that is currently being impacted. (DEIS-153). In July 2010, the Corps issued a Preliminary Downstream Impact Analysis that also demonstrated that that both the LPP and the FCP would cause more flooding downstream. The DEIS needs to provide supporting information that even more homes downstream of Fargo-Moorhead will not be lost due to the increased water levels from the diversion, and that costs of flood control and repairs for flood damage would not actually increase as a result of the diversion channel. 3. Changes in sediment distribution Section 5.2.1.3 states that ?the proposed diversion structures should not lead to an appreciable change in suspended sediment concentrations along the project area,? but the DEIS fails to give any concrete sedimentation data. The Corps? diversion channel will substantially affect sedimentation in the Red River and other connected tributaries. Sedimentation is a major problem in many rivers and lakes, which can cause a reduction in storage capacity that can lead to flooding. A build up of sediment can also lead to many aquatic changes that could have negative impacts on aquatic life. As a result, fish may begin avoiding areas of heavy sedimentation, ultimately changing their migratory patterns, wintering grounds, nursery areas, or spawning habitat. Valuable fish spawning areas could be covered in silt, and the sediment increase could lead to adult and juvenile fish mortality if their gills become filled with sediment. Fish foraging success will decline, which could also lead to mortality, especially in younger fish, and adult fish could be kept from spawning due to malnutrition. Therefore, sedimentation impacts and sedimentation mitigation costs must be included in the final EIS. 4. Destruction of wetlands The diversion channel will affect more than 200 acres of wetlands. The Corps has suggested that any wetland taken away or adversely affected by the diversion channel will be replaced with new wetlands within the diversion channel in a low flow channel. The DEIS describes the low flow channel as ?a channel that is typically in the center of a larger channel which is sized to handle

small flows from drains, ditches or groundwater.? It will be approximately 10 feet wide and 3 feet deep. (DEIS-166). The National Wildlife Federation challenges the feasibility of the Corps? solution of simply ?replacing? wetlands by simulating wetland conditions on the bottom of the diversion channel in a low flow channel. A strip of wetlands 10 feet wide does not provide the security and benefits that larger blocks of wetlands provide. The DEIS does not address how these wetlands will be comparable to the previously existing wetlands that were affected by the diversion and does not describe the diversion channel wetlands? functions for surrounding wildlife. In addition, many problems can arise with a low flow channel. The channel will need frequent maintenance and modifications to ensure that it is effective, and it can be very easily damaged in severe situations such as flooding or drought. Section 5.2.1.6.3 of the DEIS states that ?wetlands near [the Lower Rush River and the Rush River] could be impacted by not getting the same recharge from overland flooding that they have received in the past,? but there is nothing further discussing how those negative impacts will be mitigated and what mitigation efforts will cost. The final EIS must include projected mitigation costs for additional wetlands that might be impaired such as those near the Lower Rush and Rush rivers. The Corps must also include in its final EIS exactly what function the low flow channel will serve and how it is guaranteed to adequately compensate for existing wetlands adversely affected by the diversion channel. 5. Diversion will affect multiple tributaries and potentially harm their fish and wildlife The North Dakota diversion would cross five tributaries: Wild Rice River, Sheyenne River, Maple River, Lower Rush River, and Rush River. (DEIS-ES-15). In addition, the DEIS states that ?[t]he channels of the Lower Rush and Rush Rivers between the diversion channel and downstream to their confluences with the Sheyenne River will be abandoned?? (DEIS-166). On page 15 of their Draft Feasibility Report and EIS, the USFWS states that nesting birds, mammals, and mussel species could be displaced or killed during the project?s construction, and nesting birds? eggs could be abandoned or crushed. The USFWS states on page 14 of their Draft Feasibility Report and EIS that ?construction and excavation within the riverine aquatic habitats could kill adult or juvenile fish,? and some fish mortality is unavoidable. The USFWS also states that the additional sediment load, deposition, and accumulation into the Red River could alter aquatic and riverine habitat. The DEIS indicates that fish could use the diversion channel, but the diversion channel will not contain any meaningful fisheries. The DEIS continues on to state that fish ending up in the diversion channel without their natural habitat will not be a significant issue during the operation of the diversion channel. (DEIS-ES-14). Fish caught in the diversion channel during flooding, however, will be forced to use concrete fish ramps for passage. It is not known at this point whether certain sensitive fish species, such as the Lake Sturgeon, will be successful at using artificial passages. The DEIS also does not address how changing the velocity of water within the diversion might affect certain fish species. The velocity of the water within the diversion and downstream of the diversion could be too strong and prevent certain species and juvenile fish from traveling upstream. The diversion channel will create numerous problems for multiple tributaries and wildlife and aquatic species. The final EIS must address the negative impacts to all tributaries and the specific adversities facing wildlife and aquatic life. A plan to mitigate these adversities must be identified and mitigation costs must be included in the final EIS. C. The DEIS failed to analyze flood mitigation in the entire Red River Basin. In a letter dated June 22, 2009 (attached), we urged the Corps to look for a flood mitigation plan that would alleviate flooding basin-wide rather than just the areas of Fargo and Moorhead. The limited study area of only Fargo-Moorhead does not allow the Corps to accurately evaluate the causes of increased flooding in the RRB or the full range of alternative remedies. In particular, the study would have needed to include the area above or upstream from Fargo-Moorhead. The entire Flood Risk Management study has been flawed from the beginning because the RRB was not analyzed in its totality. According to the National Weather Service, the Red River of the North has exceeded the flood stage of 18 feet in 47 of the past 108 years, and every year from 1993 through 2010. (DEIS-5). The increased flooding over the past century has been a direct consequence of wetland loss in the interest of agricultural development. Studies have demonstrated

that wetland drainage in the RRB has significantly increased both the timing and size of Red River floods and also that wetland drainage continues to affect thousands of acres annually. Wetland restoration throughout the RRB would help offset these destructive land use practices that are so costly in terms of water quality, wildlife and flood costs. Several studies have demonstrated the effectiveness and feasibility of restoring wetlands or using upland depressions to temporarily store water during a flood event. The restoration of wetlands can significantly reduce flood frequency and severity while also providing vital ecosystem benefits. A possibility for wetland restoration lies in the Prairie Pothole Region?s wetlands of the northern Great Plains, which span more than a 300,000-square-mile area. Almost since farming began in this region in the mid 1800s, wetland drainage has been employed to facilitate agricultural activities. According to the 1997 Minnesota Wetlands Conservation Plan, more than 95% of the native wetlands in the Minnesota portion of the RRB and upstream sub-basin have been lost. The cumulative impacts of this wetland drainage have been significant with more than 50% of the region?s wetlands having been drained with more than 90% in some watershed basins. Wetlands in the Devils Lake basin of North Dakota have the potential to store approximately 72% of the total runoff volume from a 2-year frequency runoff event and 41% of a 100-year frequency runoff event. Restoring drained and farmed wetlands could increase the water retention capacity in the Prairie Pothole Region of Minnesota ?by up to 63%.? Furthermore, potholes are natural filters for nutrients such as sediments containing nitrogen and phosphorous, therefore, improving water quality. We recommended to the Corps in our June 22, 2009 letter that they explore and analyze this reasonable and logical alternative, however, the Corps? DEIS failed to do so. Grasslands or grazing lands span approximately 600 million acres of the United States. Grasslands have proven to be a major source of watershed filtration, ground water recharge, and carbon sequestration. Grasslands have excellent potential to markedly improve water and air quality. Proper management of existing grasslands can enhance the land?s ability to better reduce erosion and flooding by slowing and more evenly distributing surface waters. Grasslands also help the percolation of precipitation creating recharged groundwater aquifers. Conservation of grasslands can occur on private and public lands, and wildlife populations thrive with the availability of these habitats. Through cooperative efforts with agencies such as the Bureau of Land Management (BLM) and the Natural Resources Conservation Service (NRCS), private landowners can learn to maintain their property as grasslands in a manner that is most effective in preventing soil erosion and flooding in the Red River basin. Again, the Corps failed to explore this economically feasible and ecologically friendly alternative in its DEIS. Based on this information, the Corps should enlarge its study area to include all upstream river basins above Fargo-Moorhead. As a result, the Corps will necessarily have to evaluate the impacts of flood crests, flood frequencies and flood severity of wetland drainage. It is only then that the Corps can adequately evaluate the benefits of wetland and grassland restoration in terms of reducing these flood impacts. D. The DEIS failed to adequately evaluate reasonable non-structural and flood storage alternatives. Without the Corps? study of the entire RRB, it would be impossible to fully and accurately evaluate non-structural alternatives at scale because the study did not identify an analysis of an area that was properly scaled. The study only included Fargo-Moorhead, and for that area only, the DEIS identifies several measures retained for possible inclusion as features of the alternative plans. Those measures include: non-structural measures, flood storage, and wetland and grassland restoration. The DEIS provides an extensive analysis of a non-structural measure contained in Appendix P, which illustrates a very invasive and tedious process of raising and flood-proofing individual homes at a significant cost. However, all other measures, including wetland restoration, grassland restoration, and flood storage are dismissed as stand-alone plans with less than a page of justification in the DEIS. 1. The Corps must evaluate the Waffle Project. The Energy & Environmental Research Center (EERC) of the University of North Dakota began conducting a four-year study on flood prevention in the wake of the devastating 1997 flood in the RRB. The goal of the study, beginning in 2002, was to see how a process referred to as the Waffle Project (?the Waffle?) could mitigate the effects of mild to severe springtime

flooding in the population center of Fargo-Moorhead, in addition to the surrounding areas of North Dakota, South Dakota and Minnesota. The Waffle uses micro-basins or preexisting areas, such as depressed agricultural lands bordered by raised roads, for short-term water storage. Agricultural areas make up approximately 74% of the land area in the RRB, making potentially 36,000 square miles of the RRB available for the Waffle Project. The study randomly selected 3,732 sections of land to use in evaluating water storage potential, and multiple scenarios were used due to non-uniformity of Waffle sizes. The sections showed that their storage volume estimate was 583,400 acre-feet, which includes a reduction for the freeboard between the stored water surface and the lowest point on the surrounding roads and a reduction to account for natural water storage. The most significant impact shown in the study was a 7-foot decrease in the water level of the Red River in the Fargo-Moorhead area during floods. The study showed that the Waffle can successfully slow and significantly reduce the drainage of excess runoff before it enters water tributaries, most notably, the Red River of the North. a. Costs associated with the Waffle Costs associated with the Waffle were projected for a 50-year period. The Waffle would first involve finding landowners willing to enroll in the program, and then implementing the project by modifying existing culverts and installing new culverts and other water control mechanisms. There would also be costs associated with landowner payments and maintenance, and administrative overhead. Adjustments to cost projections were made for probability of flood occurrence, expected damage to residential and commercial properties and public infrastructure, current economic conditions and value of real property, changes in flood protection, and future population changes. Waffle sizes were also divided into three categories: maximum, moderate and minimum, with costs projected as baseline, optimistic and pessimistic on full-scale and half-scale hypothetical models. Below are the results of this cost analysis. Present Value of Projected Costs of the Waffle, 2006 through 2055 Scale & Acreage Est. Baseline Optimistic Pessimistic Full-Scale Minimum \$207,931,000 \$155,739,000 \$287,326,000 Moderate \$362,191,000 \$269,537,000 \$494,872,000 Maximum \$543,040,000 \$402,721,000 \$738,602,000 Half-Scale Minimum \$107,964,000 \$80,915,000 \$149,494,000 Moderate \$184,797,000 \$137,578,000 \$252,897,000 Maximum \$275,505,000 \$204,386,000 \$375,132,000 The cost analysis table above illustrates that a plan for significant flood reduction on a full-scale effort can be implemented for between \$156 and \$739 million during the next 50 years. This is a stark contrast from the Corps? \$1.4 billion diversion channel, a price tag that only includes construction cost, and not operations and maintenance costs. The above table and the Waffle study?s flood reduction results flatly contradict the Corps? conclusion that flood storage is cost prohibitive and less effective than a 36-mile diversion channel. The Waffle study suggests that significantly less storage than that determined by the Corps is needed to achieve a substantial flood level reduction. The numbers that the Corps lists in Section 3.4.6.2 of the DEIS were derived from a very preliminary modeling effort conducted through the Fargo-Moorhead Upstream Feasibility Study, which did not actually look at specific storage options in each of the tributaries of the Red River. Instead, the Corps estimated what the tributary flow reduction would be based on general assumptions. There is no rational explanation supporting the Corps? conclusion that doubling the storage volume from 200,000 acre-feet to 400,000 acre-feet only achieved another 0.2-feet stage reduction at Fargo. b. Economic benefits from the Waffle The Waffle Project studies show that net benefits of the Waffle could be significant over the next 50 years, with benefits being positive in 106 of the 108 scenarios that were evaluated. More than 85% of the scenarios indicated benefits in excess of \$300 million, and more than half of the scenarios had benefits in excess of \$500 million. Some scenarios showed economic benefits of up to \$700 million. 2. The Corps must evaluate other flow reduction strategies. Similar to the EERC?s Waffle, the Red River Basin Commission (RRBC) also created a strategy that would decrease flood levels in the RRB. They simulated 1997 flood conditions (9.25? of precipitation) and found that their storage areas could reduce flood levels in the Red River up to 20% in some areas. They found that the most significant reduction was a 20% peak flow reduction and 20% volume reduction at White Rock, South

Dakota. The study demonstrates that storage areas built in river basins are 80% effective, and if all of the tributary basins upstream of the Red River do their share in flood storage, effects on Red River flood reduction can be substantial. There was no formal cost-benefit analysis done for this study. However, preliminary estimates showed that upstream storage competes very favorably with the Corps? diversion channel option because of the ratio based on the Fargo-Moorhead area damages alone. There would also be more widespread flood control benefits, in addition to a great potential for natural resource benefits under this program. 3. The Corps must evaluate an alternative that combines wetland and grassland restoration and other flow reduction strategies. It is clear that the optimal strategy for minimizing flood risk, while also improving water quality and fish and wildlife habitat in the RRB, would involve a combination of wetland restoration and utilizing farm fields for temporary storage. The Corps, working with state fish and wildlife agencies and other federal agencies including the USFWS and the Natural Resources Conservation Service, should develop an alternative or alternatives that combine these approaches. The National Wildlife Federation urges the Corps to formulate an alternative that would include 500,000 acre-feet of storage through wetland and grassland restoration and an additional 500,000 acre-feet of storage through temporary storage utilizing farm fields. In evaluating such an alternative, the Corps should consider the following costs and benefits. ? Flood control benefits ? Water quality benefits? Fishery benefits? Benefits to upland and migratory birds? Recreational benefits, including increased hunting and fishing opportunities. E. Wetland and grassland restoration, combined with flood storage, will have many positive impacts. A successful and long-term flood protection plan results when flood storage concepts, such as those developed by EERC and RRBC, are implemented in conjunction with grassland and wetland restoration. 1. Protects more than just two cities The Corps? diversion channel will only provide significant flood protection for two major metropolitan areas, Fargo and Moorhead. All other downstream cities and communities will not receive the benefited flood protection, and will likely see more flooding due to increased water flow from the diversion channel. Should wetland and grassland restoration strategies be implemented along with flood-water-storage projects, not only will Fargo-Moorhead see decreased flooding, but downstream cities and communities will also experience flood relief. Flooding is also likely to be decreased upstream from Fargo and Moorhead, which only adds to the overall benefit of wetland and grassland restoration and flood storage efforts. Programs such as EERC?s Waffle Project, RRBC?s Flow Reduction Strategy, and concepts created by numerous other agencies and organizations, including Wetland Reserve Program and USFWS, provide ample data and opportunity to implement wetland and grassland restoration and flood storage as viable alternatives for flood prevention downstream. 2. Creates and enhances wildlife habitat and recreation, while also mitigating affects of climate change Increasing wetland habitat will provide stability to migrating and nesting bird habitats, as well as numerous other species of wildlife. This in turn creates opportunities for hunting, fishing, bird watching, hiking and other recreation. Wetlands also play an important role in filtering polluted water and recharging the aquifer into both nearby ground and surface waters, greatly improving water quality. Grasslands further reduce the runoff of water and sediment, creating a more stable water level and providing an area to host a diverse community of native grasses, sedges, rushes and other submersed vegetation. Wetlands play at least two critical roles in mitigating the effects of climate change, ?one in the management of greenhouse gasses (especially carbon dioxide) and the other in physically buffering climate change impacts.? Wetlands International, a global organization that works to sustain and restore wetlands, states that ?inland wetlands in arid regions can play a very cost-effective role in attenuating the impacts of extreme weather events such as the impacts of extremes in precipitation and increases in evaporation due to higher temperatures.? Wetlands serve to recharge ground and surface waters, meaning that while they prevent flooding in wet times, they serve to replenish and retain adequate water supplies and stream flow during drier periods. The benefits of wetland and grassland restoration are numerous. Wetlands and grasslands provide various ecosystem services to farmers and communities, recreational opportunities, global warming mitigation, and most importantly, flood control. One study concluded that, ?wetlands on [USDA] program lands [in the PPR] have significant potential to intercept and store precipitation that otherwise might contribute to downstream flooding.? Additionally, the conversion of cultivated cropland to grassland cover as part of conservation programs results in a reduction in surface runoff and, ultimately, reduces the rate at which a basin refills and overflows. 3. Economic benefit to farmers The preferred diversion plan (LPP) would eliminate approximately 5,400 acres of farmland from operation. (DEIS-ES-15). On the other hand, the Waffle or Flow Reduction Strategy would only ?borrow? or ?rent? land from willing landowners in the event of flooding. Even if the land was used to store water, it would be done early enough in the spring so that the landowner would still be able to farm their crop in most years. Therefore, the payment from these flood storage programs would be a bonus above and beyond the farmer?s "normal" agricultural income. 4. Set precedence for other green flood control solutions As human activity continues to escalate and their harmful affects become increasingly evident through climate change, environmentally friendly alternatives will only gain in popularity. The states of North Dakota and Minnesota have a unique opportunity to show the rest of the nation a more natural and cost effective method of flood control. The precedent could be set for more ecologically favorable flood mitigation efforts rather than more expensive, concrete and environmentally damaging solutions. There has already been an international trend to move toward nonstructural flood control methods, and it is in our nation?s best interest to closely follow in the same direction. F. Conclusion The U.S. Army Corps of Engineers is planning a 36-mile-long diversion channel around Fargo that will cost North Dakota and the Federal government \$1.4 billion to construct. The projected \$1.4 billion cost does not even include mitigation and maintenance expenses in the years after construction of the diversion channel has been completed. During this country?s time of economic uncertainty, the Corps? project seems not only irrational and impractical, but also downright irresponsible when other green options to restore wetlands and grasslands along with creating flood storage have proven to be just as effective and a far less expensive means of flood mitigation. The Corps? colossal and esthetically displeasing diversion channel will be not only a massive state and federal expenditure, but also an ecological nightmare with resounding affects for centuries. If cities and communities within the Red River Basin do not want to face even bigger and more expensive problems combined with wildlife habitat destruction and decline a decade from now, the Corps must seriously reconsider their chosen diversion channel alternative. Much of the Red River Basin flooding has been a direct result of wetland and grassland elimination during the past century for the sake of agricultural development. However, even though agricultural land is largely to blame for the present-day flooding predicament, it can now be used as temporary flood storage that would prevent dangerous flood levels. Grasslands and wetlands not only have remarkable abilities to store excess water runoff, but they are also attractive and provide much needed wildlife habitat in a region of the country that continues to have rapid human population increases. In its DEIS, however, the Corps all but completely ignores these environmentally friendly alternatives. In recent case law, it is determined that ?[w]hile the EIS need not be exhaustive, the existence of a viable but unexamined alternative renders an [EIS] inadequate.? Friends of the Boundary Waters Wilderness v. Dombeck, 164 F.3d 1115, 1128 (8th Cir. 1999). There is no doubt that the Corps? DEIS leaves many alternatives largely unexamined. We strongly urge the Corps to fully address and consider the use of non-structural techniques for flood control. It is irresponsible for the Corps not to consider more reasonable, but similarly effective solutions that do not have the long-term effects on the tributaries and streams of the Red River. The National Wildlife Federation sincerely thanks you for considering these comments on the Draft Feasibility Report and Environmental Impact Statement on the Fargo-Moorhead Metropolitan Area Flood Risk Management Project on the Red River of the North. Please do not hesitate to contact us if you have questions or would like additional information. Thomas France, Regional Executive Director National Wildlife Federation Chris Hesla, Executive Director South Dakota Wildlife Federation Cc; Senator Byron Dorgan Senator Kent Conrad Congressman Earl Pomeroy Senator Amy Klobuchar Senator

Al Franken Congressman Collin Peterson Senator Tim Johnson Senator John Thune Congresswoman Stephanie Herseth Sandlin

100809_Anonymous — It is interesting that the Corps did not calculate the stage increase to Grand Forks. While the City is protected as are some other communities upstream (and downstream), the stage increase will decrease the freeboard. The cost to restore/ mitigate this damage of 1- 1 1/2 feet would be substantial (\$10's M.). I will be paying my last flood assessment shortly and do not expect my investment to be damaged by the F-M project. While I fully support the project, it must be built without damae to others. Reading the Sunday Herald, the paper quoted Mike Lesher, a COE hydraulic engineer, as stating the GF/EGF project design increased the river stage 1.6" immediately downstream from Grand Forks. This is a stage-design that would be reasonable. It is interesting that one hears about the "waffle plan". What would happen if the State decided to restrict the flows in legal drains entering the Red and secondary streams till a period after the crest had passed.

100809_Les Staples – Far too many questions remain for this diversion project to be advanced. The economic and cultural impacts of taking ten sections of Cass County farmland out of production have barely been addressed. The proposed compensation to landowners has never been clearly stated. Downstream residents have been given a bagful of promises, but no real plan as to mitigation of the sizable impact this diversion would have. The Draft Feasibility Report seems short on facts, long on conjecture. \$195 million estimated annual flood cost for the metro area? Fargo and Moorhead haven't spent half that much combined in the past 14 years that includes the 1997, 2009, and 2010 flood events. These figures coming from a proposed project that six months ago couldn't generate a 1.0 benefit/cost ratio? This project should be put on a much slower track.

100819 Julie Letourneau - I am extremely upset with the recent set-back regarding a possible delay regarding the Fargo-Moorhead diversion feasibility study due to public comments received. I have lived in the community my entire life and can not believe that a long-term solution has taken this long to possibly happen. Due to the extreme increase of flooding in the area it is unfair for outlying towns and farmers to reject and condemn a project that is so very needed to protect the cities and livelihood of the Fargo-Moorhead area. We may have a wet cycle to deal with however we also have to acknowledge the drainage of farmer's fields and natural wetlands as a primary contributor to the spring water problems we are faced with. This field drainage system has drastically increased over the years as a common practice and in turn has increased the spring flooding issues as well. I also feel that the Lake Traverse outlet and the Breckenridge flood control project only contributes to the problem. The City of Grand Forks received their floodwall project with no objections from other cities, it is unfortunate they had to receive the severe damage and loss in order to solve their issues. I also believe the Grand Forks project impacts our increase in water being held back and staying in the Fargo-Moorhead area for a longer amount of time. My family suffered and survived the 2009 Record Flood. We lost our home and experienced a very difficult past 2 years to recover, relocate and move on with our lives. Unless someone actually experiences the impact flooding has on so many individuals lives, work, school,transporation issues they can not fully understand how extrememly important a long-term solution must be completed for the increased flooding we are forced to deal with.