



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8**

1595 Wynkoop Street
DENVER, CO 80202-1129
Phone 800-227-8917
<http://www.epa.gov/region08>

June 20, 2011

Ref: 8EPR-N

Mr. Aaron Snyder
St. Paul District
U.S. Army Corps of Engineers
180 E. 5th St., Suite 700
St. Paul, Minnesota 55101-1678

Re: Fargo-Moorhead Metro Area, Flood Risk
Management, SDFR/DSEIS # 20110138

Dear Mr. Snyder:

The U.S. Environmental Protection Agency, Regions 8 and 5 (EPA) have reviewed the U.S. Army Corps of Engineers' (Corps) Supplemental Draft Feasibility Report and Environmental Impact Statement (SDFR/DSEIS) 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 SDFR/DSEIS analyzes a new locally preferred plan (LPP) – a 20,000 cfs diversion channel in North Dakota with upstream flood staging and storage. Previously, in the DEIS, the LPP was a North Dakota diversion channel with a capacity of 35,000 cfs (ND 35K). The new LLP generally follows the ND35K alignment except for a few modifications. The ND 35K alternative increased flooding downstream into Canada and was therefore deemed to no longer be a feasible alternative. The Minnesota alternative (MN 35K) is the same as in the DEIS and is referred to as the Federally Comparable Plan (FCP).

The following bullets summarize EPA's concerns about the revised project and our recommendations to improve the environmental analysis and mitigation measures. EPA's specific comments on the SDFR/DSEIS start on page 3 of this letter.

EPA Concerns and Recommendations:

- The information provided in the Clean Water Act (CWA) § 404(b)(1) analysis may not fully support the conclusion that the LPP alternative (the tentatively selected preferred alternative) is the least environmentally damaging practicable alternative (LEDPA). This alternative impacts more wetlands and riparian areas than the MN 35K alternative. We recommend adding more information to the analysis regarding the practicability of the alternatives after consideration of costs, existing technology, and logistics in light of the overall project purpose [40 C.F.R. § 230.10].

- We recommend incorporating local and regional planning efforts to control development in the Fargo-Moorhead metropolitan region's flood-prone areas and reduce flooding impacts. These efforts will be the main factor in sustaining the level of flood protection that will be provided by the proposed flood diversion channel. We understand that these measures will be implemented by others, but we think these local and regional planning efforts are an important consideration in the Corps' decision process.

Rating:

EPA's comments are based on the SDFR/DSEIS and appendices that we received in May 2011. The document is much improved from the FR/DEIS. The addition of the mitigation plans and the more in depth wetlands analysis have significantly improved the EIS. We were particularly pleased to see alternatives developed for some of the mitigation plans.

Pursuant to EPA policy and guidance, EPA rates the environmental impact of an action and the adequacy of the NEPA analysis. Because the Corps has "tentatively" identified a preferred alternative, EPA is rating each alternative presented in the SDFR/DSEIS. Based on our review of the SDFR/DSEIS and the CWA § 404 (b)(1) analysis, we are rating each alternative and the overall SDFR/DSEIS as "EC-2" (Environmental Concerns-Insufficient Information). The "EC" rating is based on impacts to wetlands, riparian areas and areas upstream of the diversion. The "2" rating is based on the need for clarification or disclosure of information in the Final EIS. A description of EPA's EIS rating system is also enclosed.

Thank you for considering our input. 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 Svoboda
Director, NEPA Program
Office of Ecosystems Protection and Remediation

**EPA's Comments on the
 Fargo-Moorhead Supplemental Draft Feasibility Report and
 Environmental Impact Statement (SDFR/DSEIS)
 June 20, 2011**

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 flood control measures have been successful, future average annual flood damages in the Fargo-Moorhead area 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 SDFR/DSEIS fully analyzes four alternatives: No Action – continue emergency measures, two North Dakota diversion channels one with flood storage and staging and a 35K channel without storage and staging, and a Minnesota diversion channel. The Locally Preferred Plan alternative, the North Dakota 20K diversion channel with flood storage and staging, has been identified by the Corps as the tentatively preferred alternative in the SDFR/DSEIS.

ND 20K, Upstream Storage & Staging	ND 35K	MN 35K
Locally Preferred Plan (LPP) DSEIS North Dakota, west of Fargo 36 miles long diversion channel 19 hwy bridges, 4 railroad bridges 5 control structures at: Red, Wild Rice, Sheyenne, Maple, Rush and Lower Rush Rivers + Wolverton Creek Culvert Storage Area 4,360 acres Staging Area in Floodplain	LPP in DEIS 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 + Wolverton Creek Culvert -- --	Federally Comparable Plan (FCP) Minnesota, east of Moorhead 25 miles diversion channel 20 hwy bridges, 4 RR bridges Red River control structure + Wolverton Creek -- --

Wetlands

Clean Water Act § 404(b)(1) Analysis

1. The SDFR/DSEIS includes a preliminary Clean Water Act (CWA) § 404(b)(1) Guidelines (Guidelines) Evaluation in Attachment 1. The CWA § 404 (b)(1) analysis is used to determine the Least Environmentally Damaging Practical Alternative (LEDPA) under the Guidelines. The 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).

While we acknowledge the Corps’ guidance on the interpretation of the (Guidelines, we still have concerns regarding the use of a modified purpose and need for the CWA § 404(b)(1) analysis. We recommend that the same purpose and need be used for the both the SFR/DSEIS and the CWA § 404(b)(1) analysis.

The regulations at 40 CFR 230.10 do allow for the selection of an alternative with more aquatic resource impacts, if the alternative with lesser aquatic resource impacts is determined to be “impracticable”. The term *practicable* means available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes [40 CFR § 230.3(q)].

We recommend adding a paragraph(s) discussing each of the three criteria for practicability to the CWA § 404 (b)(1) analysis for each alternative. We would anticipate the cost and existing technology discussions would be short summaries of the information in the SDFR/DSEIS such as Table 11 -- Final Comparison of Alternative Plan Costs. The technologies for the SDFR/DSEIS are well-established flood protection measures. We recommend that that the revisions concentrate on the logistical constraints of the LPP and FCP alternatives.

2. We note an inconsistency in the 2:1 mitigation ratio for forested areas between different plans. The proposed mitigation activities in the draft report on "Fish and Wildlife Coordination Act" (Attachment 2 of SDFR/DSEIS) on page 27, # 10 lists a 1:1 replacement ratio while the "Discussion of Habitat Loss, Mitigation Needs and Adaptive Management" (Attachment 6) on page 30, 1st paragraph recommends a 2:1 replacement ratio. We recommend the 2:1 ratio.
3. We note some inconsistencies in the discussion of wetlands mitigation and channel design. The design plans in Appendix K – Civil Engineering show a traditional trapezoidal channel with a hardened pilot channel. The cross-section on plan CS313, shows a 32-foot wide and 2-foot deep rip rap lining of the pilot channel. This pilot channel design appears to conflict with the discussion in the mitigation plan and on page 346, Section 5.5.2.3, which discusses the creation of wetlands within the diversion channel, stating: "Features that will be used to facilitate the creation of wetlands will include meandering the low flow channel; constructed rock riffles applications to create ponding; and other features developed during the design of the project. Vegetative species would be planted that are appropriate to temporarily flooded wetlands. A low flow channel is a channel that is typically in the center of a larger channel which is sized to handle small flows from drains, ditches or ground water the low flow channel will be approximately 10 feet wide; 3 foot deep channel located in the middle of the larger diversion channel and could meander back and forth within the 250-400 foot wide diversion channel bottom”

We recommend that the mitigation features be formally incorporated into the design. The hardened pilot channel appears to be incompatible with the proposed wetlands mitigation features and meandering channel bottom. An initial meandering low flow channel should be included in the design including the appropriate riffles and ponding areas.

4. On page 53, the SDFR/DSEIS states that "[t]here would also be opportunities to incorporate wetland creation into the bottom of other portions of the channel. These features could be added at little to no cost". This "passive mitigation" is also discussed on page 361, in answer to recommendation 2 from the Fish and Wildlife Coordination Act Report. The Corps anticipates that the diversion channel will eventually develop sufficient wetlands to offset wetland losses for the project (except for forested wetlands). The wording describes the process as "self mitigation." We recommend including seeding and planting of appropriate wetland species in the design plans and costs. This will restore wetland values much more quickly, reduce the potential for invasive wetland species and potentially enhance the design and stability of the meandering low flow channel.
5. On page 346, Section 5.5.2.3, the Corps description appears to anticipate the entire length of the diversion channel will contain a low flow channel with flow to sustain wetland mitigation. Other parts of the SDFR/DSEIS seem to anticipate flow only below the diversion of the Rush and Lower Rush Rivers. Please clarify if there will be enough water to sustain the wetlands mitigation throughout the diversion channel and where the water sources will enter the channel.

Sustainability of Flood Control Measures

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. The flooding this year throughout the Midwest also serves as a reminder of the importance of local and regional planning in sustaining flood control measures. 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.

6. Even with the new flood diversion channel the Fargo-Moorhead area will continue to experience some flooding due the topography of the Red River Basin. As shown on the maps delineating the areas of existing flooding and flooding with the LPP there are still substantial areas of Fargo that will be flooded during the 1% (100-year) and 0.2% (500-year) chance events (pages 310 and 311). We therefore recommend that the local and regional flood-risk reduction efforts be fully integrated into the flood diversion channel project. These efforts include the control of development in flood-prone areas; the use of construction requirements to avoid damage to properties, etc., as described in Appendix P; and other activities. We understand that the Corps will not be implementing and funding these activities; however, the long-term success of the Corps' flood control project will be dependent on successful implementation of these plans, ordinances and practices.

Environmental Justice

7. The legend and alternative labels for the environmental justice (EJ) mapping on pages 319-330 should be corrected. The labels do not identify mapping for the DSEIS LPP and the cross hatching for "induced flooding" looks like it may be for the existing flooding data layer for some areas. It may be useful to show the both the existing floodplain and the induced flooding on these maps.