

Summary of Plan B discussions, Spring 2017

Purpose

DNR entered into “Plan B” discussions at the request of the FM Diversion Authority. The purpose was to engage in productive settlement discussions on a “Plan B” Project approach that can enhance flood protection while also meeting Minnesota standards.

Who and When

- Plan B discussions were conducted at 3 meetings in early 2017 and included the following;
 - DNR—Kent Lokkesmoe-DNR manager, Suzanne Jiwani-Floodplain Engineer, Jill Townley-EIS manager
 - F-M—Bob Zimmerman-Moorhead Engineer, April Walker-Fargo Engineer (replaced by Nathan Boerboom), Gregg Thielman-Diversion Authority Engineer
- In June, the DNR Commissioner canceled all future “Plan B” meetings due to ongoing Project legal matters and the USACE’s decision to continue construction of the Project “Plan A”.

What we discussed

Discussions focused on 4 high-level issues: transfer of flood risk; reasonable, practical, and minimal impact solutions; mitigation and monitoring; and land use requirements and plans. The group primarily discussed alternatives and modifications to the project design that might result in a more permissible Project. The DNR premise going into the discussions was that something needed to change. The group was not constrained by outside restrictions. Following is a list of the various Project modifications discussed by the group:

- a. Running more water through town prior to and during project operation.
 - i. Analysis was done on a targeted flood stage of 35 feet compared to 37 feet for flood events up through the 1-percent annual chance (100-year) flood. This was a potential change. Higher target flood stages above 37 feet were not evaluated.
- b. Considered a 100-year discharge of 33,000 cfs at the USGS Fargo stream gage using the full period of record. This was a potential change.
- c. Discussed consistency with land use requirements and plans.
- d. Downstream flood allowances
 - i. Discussed the 1-13-15 memorandum from the Office of the ND State Engineer that adopted a policy requiring property rights for any impact more than 0.1 feet. Also, discussed a 3-21-17 white paper about options supporting a 0.5 foot threshold for consideration.
 - ii. Impact limitations at the Canadian border.
- e. Expand internal storage in the South Fargo area.
 - i. There were options that had some promise.

- ii. Discussed restricting development between the Wild Rice and the Red and could increase floodplain storage at higher flows through town.
 - iii. Discussed storage along drain 27 by expanding the storage at 52nd avenue south to 64th avenue south and 57th street south.
- f. Move the Overflow Embankment further west.
 - i. The staging area's western boundary (i.e., the Overflow Embankment) could be moved further west to run along an existing ridge of higher ground. This change was going to be evaluated.
- g. Dam Breach analysis that looked at creating a restricted development zone downstream of the dam based on safety concerns during a dam breach – the “hydraulic shadow” of the dam
 - i. Discussed areas downstream of the high hazard dam that should have development restrictions applied to them. Immediately downstream of the entire dam for some distance and also determine the area with flow depth and velocity that should contain development restrictions. Preliminary dam breach analysis is done, but DNR suggested that at least two other breach locations be analyzed. This analysis was delayed when the group stopped meeting.
- h. Discussed other areas that should have development restrictions (e.g., the area below the dam and between the confluence of the Wild Rice River and Red River; areas requiring significant amounts of fill, river setbacks). Also discussed existing zoning restrictions being enforced by the City of Fargo and Cass County that further restrict development along the Red River, Wild Rice River, and Sheyenne River corridors that extend beyond the regulatory floodway. This area is referred to as the Limited Disturbance Zone (LDZ). No conclusion reached.
- i. Move alignment of the dam further north.
 - i. No specific locations were discussed. Although the state EIS did have a northern alignment studied.

Mitigation was brought up as a topic but was not discussed before the Plan B group stopped meeting. Note that acquisition or easements needed to develop the project including the staging area are permit requirements and not mitigation.

- j. Impacts from Wahpeton Breckenridge flood project as relates to mitigation.

This is a consensus document created by the Technical Advisory Group: