US Army Corps
of Engineers
St. Paul District

Devils Lake
North Dakota

Scoping Meetings

April 2-5, 2001

US Army Corps
of Engineers
St. Paul District

Purpose of this meeting is:

- To summarize the current status and direction of the Devils Lake study
- To identify new issues and concerns through scoping
- To inform you how to send the Corps your thoughts on issues you feel should be addressed in the EIS
- Listen to Comments/Answer Questions

US Army Corps
of Engineers
St. Paul District

Scoping

- **Scoping is "an early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to a proposed action." (40 CFR 1501.7)**

US Army Corps
of Engineers
St. Paul District

Scoping
(cont'd)

- Scoping must "determine … the significant issues to be analyzed in depth in the EIS"
- And "identify and eliminate from detailed study the issues which are not significant or which have been covered by prior environmental review." (40 CFR 1501.7)

US Army Corps
of Engineers
St. Paul District

Previously Identified Issues

General categories of issues that have been identified to date through previous scoping activities. Primarily the March 1998 Scoping meetings.

- **Natural resources including aquatic, wildlife, vegetation, wetlands, and riparian areas**
- **Cultural resources**
- **Water quality and quantity, groundwater, erosion, sedimentation, and induced flooding**
- **Federal- and State-listed threatened or endangered plant or animal species**
- **Social and economic resources, soils, and downstream users**
- **Downstream intrastate, interstate, and international resources**
- **Native American and Tribal Trust resources and responsibilities**

US Army Corps
of Engineers
St. Paul District

Identification of New Issues

- February 1999 Scoping Document and Handout on table summarize current list of issues
- Comment form on table can be used to submit additional issues and concerns by 20 April (Blue sheet)
- Although notes are being taken of meetings, comments must be submitted in writing to ensure consideration in EIS (Yellow sign-in sheet)
- If you want to be placed on mailing list use the sign-in sheet; include name and complete mailing address.
  - If you received a copy of the newsletter in the mail you are already on the mailing list

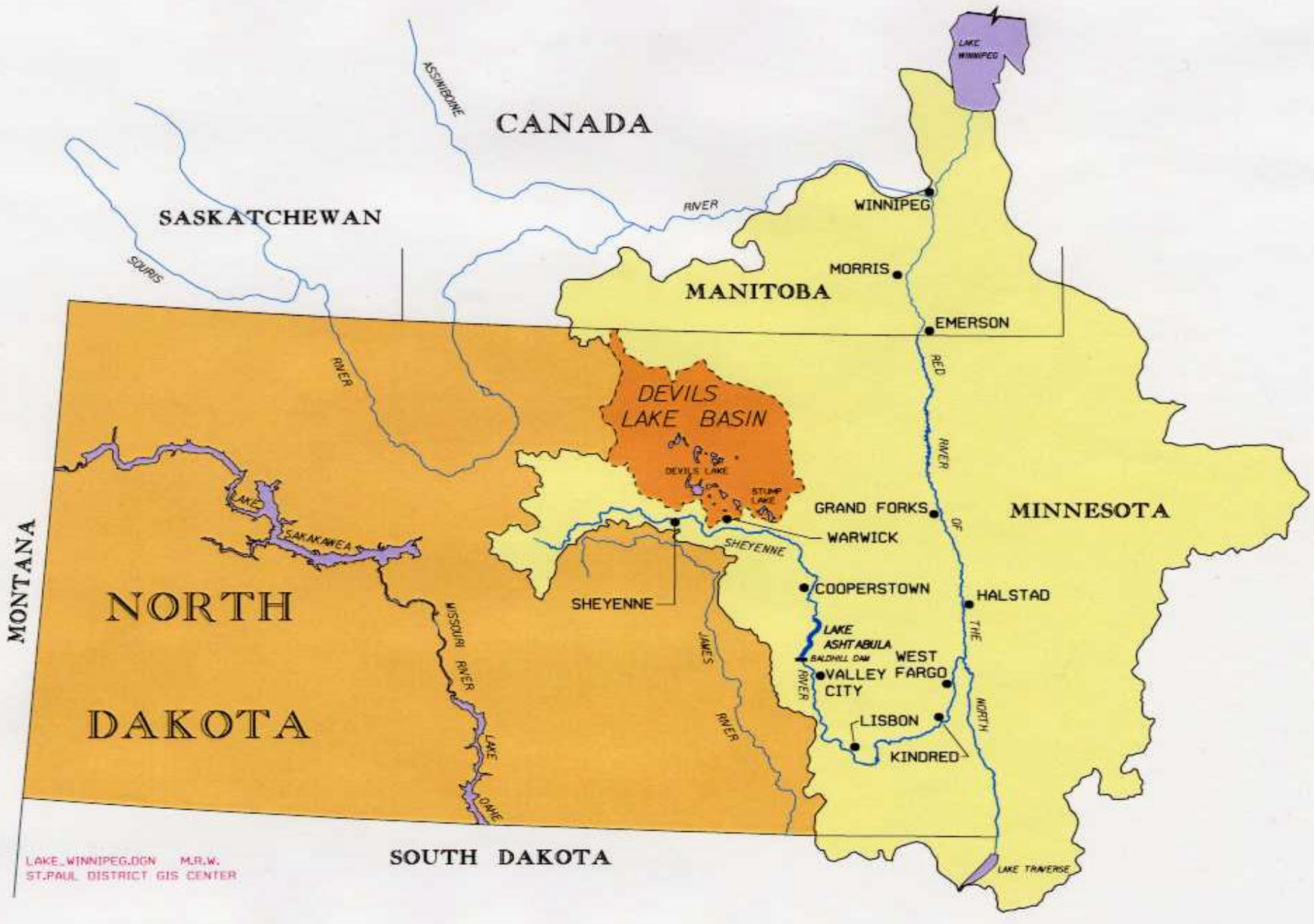

CANADA
SASKATCHEWAN
MANITOBA
MINNESOTA
NORTH DAKOTA
SOUTH DAKOTA
MONTANA
LAKE WINNIPEG
WINNIPEG
MORRIS
EMERSON
ASSINIBOINE
RIVER
SOURIS
RIVER
RED
RIVER
DEVILS LAKE BASIN
DEVILS LAKE
STUMP LAKE
GRAND FORKS
WARWICK
SHEYENNE
COOPERSTOWN
HALSTAD
LAKE ASHTABULA
BALDHILL DAM
WEST FARGO
VALLEY CITY
LISBON
KINDRED
THE NORTH
OF
LAKE SAKAKAWEA
MISSOURI RIVER
LAKE OAHE
JAMES RIVER
LAKE TRAVERSE
LAKE_WINNIPEG.DGN M.R.W.
ST.PAUL DISTRICT GIS CENTER

Figure 1

US Army Corps
of Engineers
St. Paul District

Background

- Since 1993 lake levels have risen 25 feet
- $300 million expended on relocations, and emergency measures
- Highest stage in July 1999 – 1447.2
- Now at 1446.2
- Saturated conditions in basin

US Army Corps
of Engineers
St. Paul District

Background
(cont'd)

- Feasibility Studies (started in '93)
- In response to rising lake levels, redirected efforts in '95 to an emergency outlet
- Much work since '95 investigating outlet options, evaluating impacts and economic viability
- Little progress from summer of '99 to Aug. '00
- Now funded for PED and EIS work ($6 million of estimated $7.7 million appropriated)

US Army Corps
of Engineers
St. Paul District

Background
(cont'd)

- Construction Funding language of '98, '99, and '00 makes construction start subject to number of conditions:
  - Economic justification
  - NEPA compliance
  - Compliance with Bound. Water Treaty of 1909
  - Technical soundness
  - Also, can not use funds for any activity that would permit water transfer from MO Rvr.

US Army Corps
of Engineers
St. Paul District

Background
(cont'd)

- Current effort culminates in an initial set of plans and specifications, which could lead to construction, assuming:
  - That flood conditions continue to exist
  - All legal requirements have been met
  - Record of Decision supports construction and operation

US Army Corps
of Engineers
St. Paul District

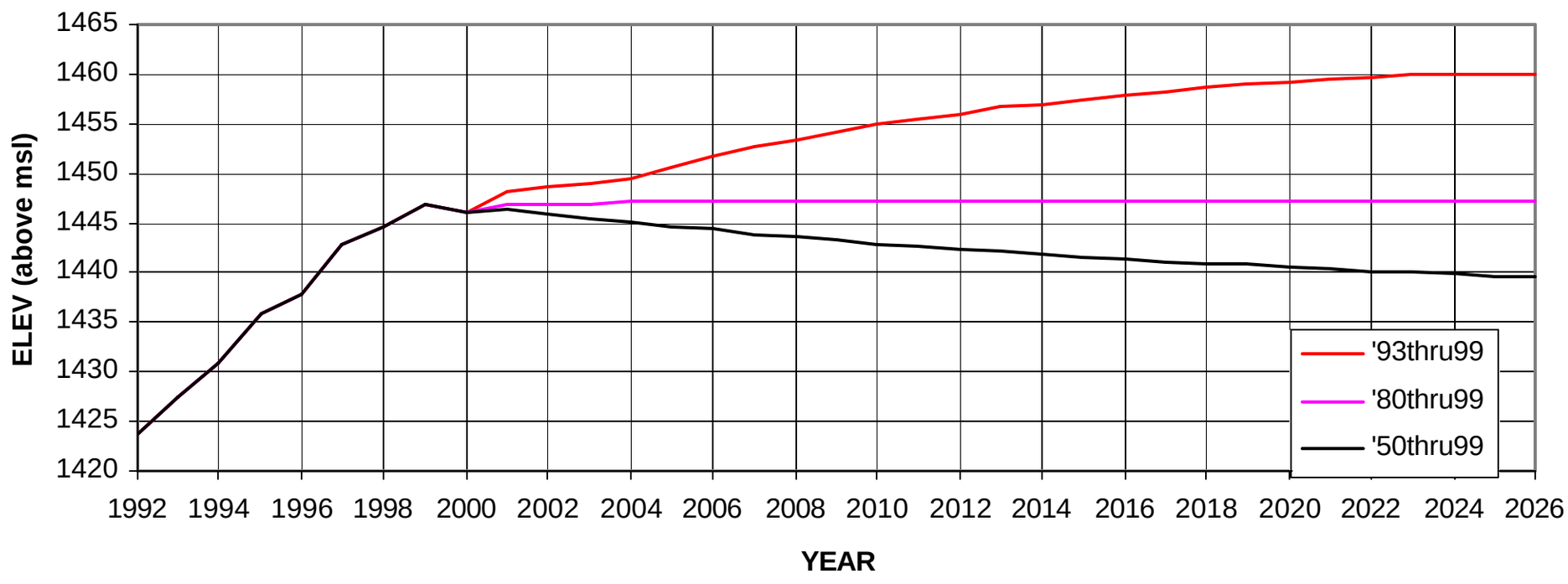
Key Elements of Current Studies

- **This plan is St. Paul District - COE proposed approach (subject to revisions from HQ)**
- **Re-evaluating alternatives prior to PED**
- **Concurrent PED with EIS (proceeding with design of a preliminarily recommended plan ahead of NEPA completion)**
- **Cost effectiveness bracketed with traditional COE methods and scenario-based futures**

US Army Corps
of Engineers
St. Paul District

DEVILS LAKE STAGE PROJECTIONS

Based on average inflow and net evaporation for 1993-99, 1980-99, and 1950-99 data



US Army Corps
of Engineers
St. Paul District

Proposed Purpose and Need Statement

The purpose of the proposed action is to reduce the flood damages related to the rising lake levels in the flood-prone areas around Devils Lake and to reduce the potential for a natural overflow event.

US Army Corps of Engineers
St. Paul District

Base Condition for Re-evaluation of Alternatives

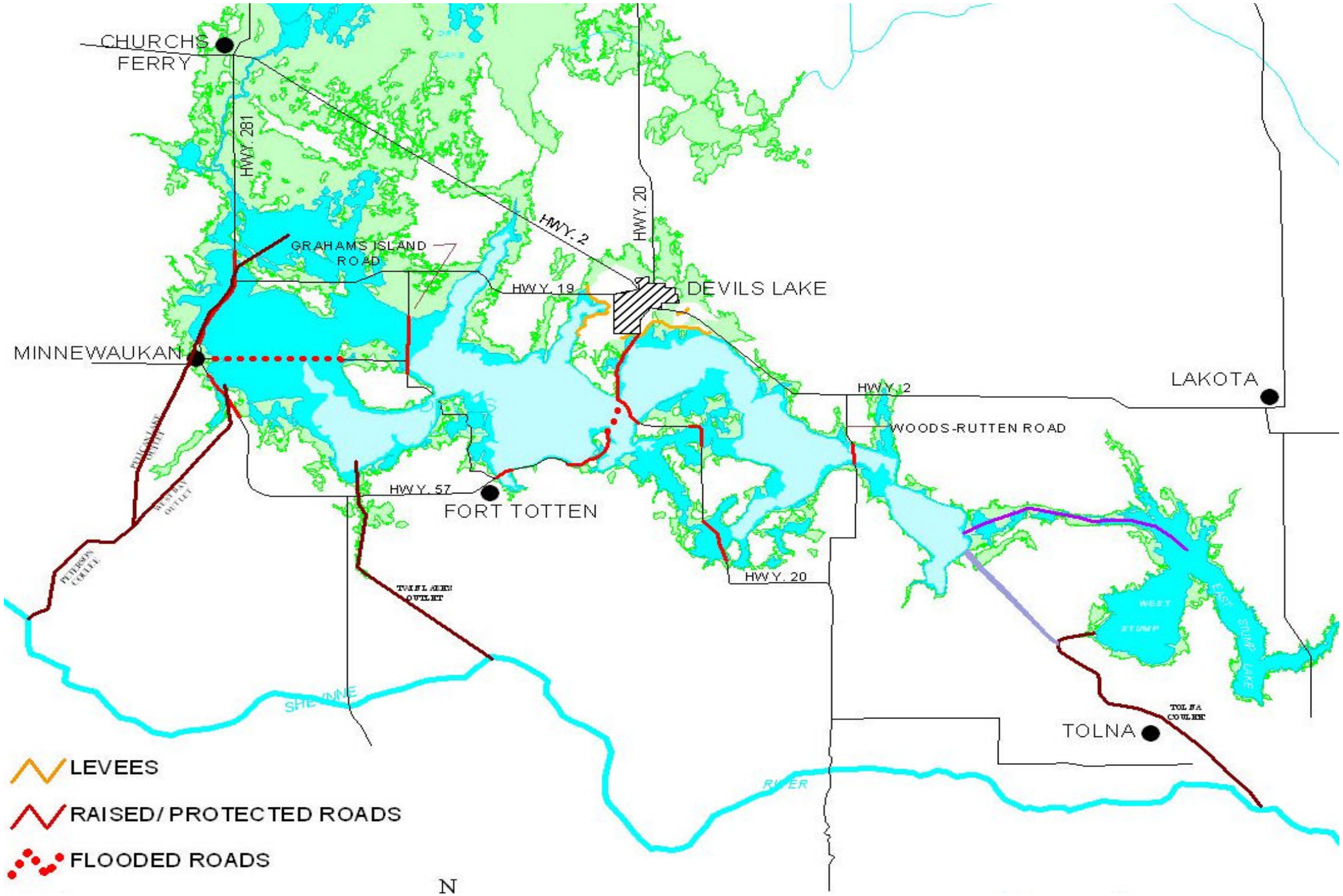
- Assumes continuation of current level of emergency measures
- Assumes wet cycle continues resulting in a natural overflow to the Sheyenne River
- Assumes measures to minimize erosion at natural overflow location
- Assumes neither Stump Lake channel or temporary outlet in place

  (other base conditions looked at as part of sensitivity analysis)

US Army Corps
of Engineers
St. Paul District

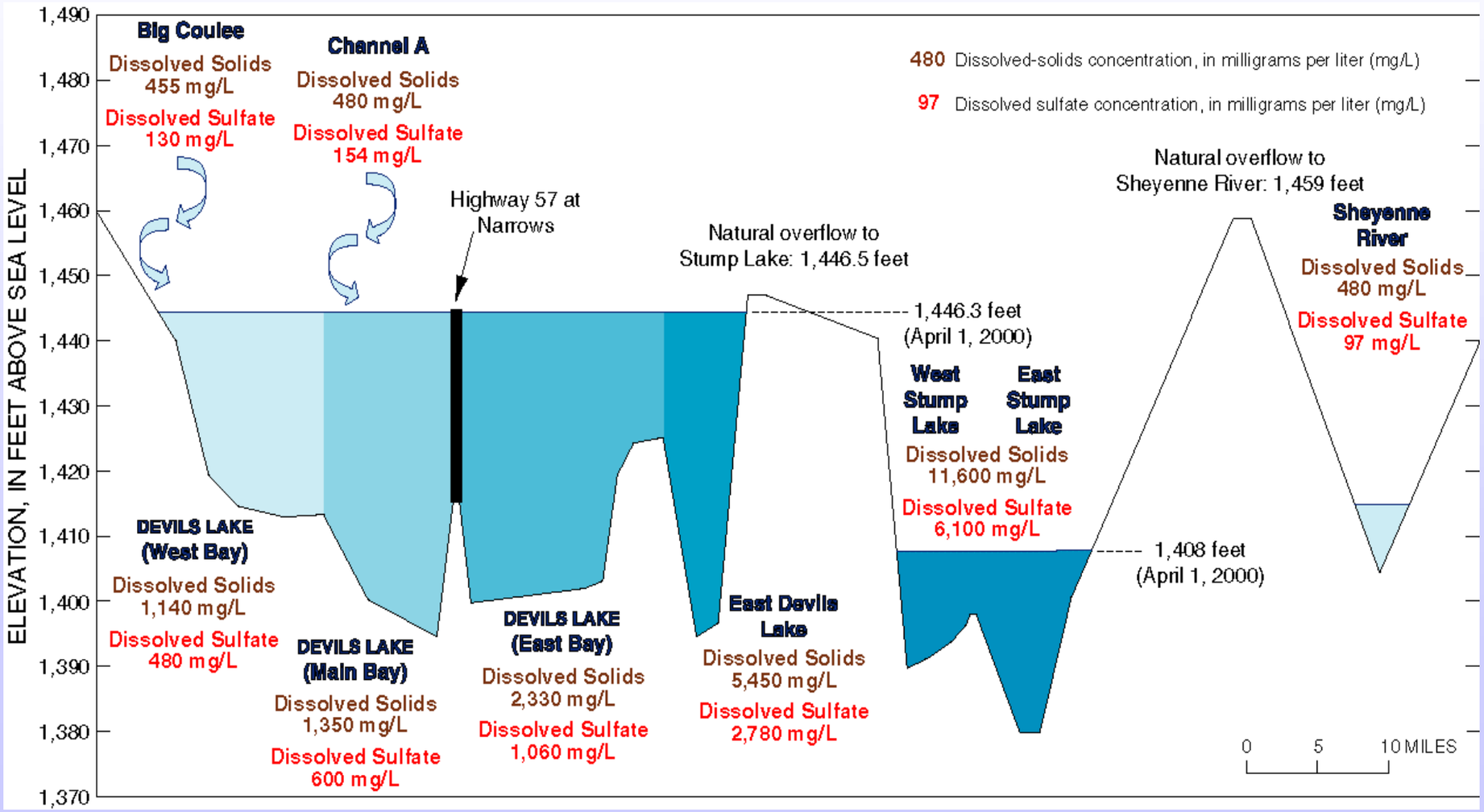
Re-evaluation of Alternatives (3 Steps)

1) **Review Outlet Alignments/Configurations**
   - **300 cfs constrained flow design**
   - **Bring 1 to 3 outlets to Step 2**
   - **Several west bay pumped and gravity alter-natives (Peterson Coulee & Twin Lakes Rte)**
   - **Pelican Lake**
   - **East Devils Lake (Gravity flow – w/ and w/o water treatment)**


CHURCHS FERRY
HWY. 281
HWY. 2
HWY. 20
GRAHAMS ISLAND ROAD
HWY. 19
DEVILS LAKE
MINNEWAUKAN
LAKOTA
HWY. 2
WOODS-RUTTEN ROAD
HWY. 57
FORT TOTTEN
HWY. 20
WEST STUMP
EAST STUMP LAKE
TOLNA
LEVEES
RAISED/ PROTECTED ROADS
FLOODED ROADS
N

US Army Corps of Engineers
St. Paul District

Devils Lake Basin Dissolved Solids and Sulfate Concentrations



US Army Corps
of Engineers
St. Paul District

Re-evaluation of Alternatives (3 Steps)

2) Formulation

- Upper Basin Storage
- Expanded Infrastructure
- 1 to 3 Outlet alternatives (300 cfs constrained and 480 unconstrained operating plans)
- Combinations of above

US Army Corps
of Engineers
St. Paul District

Upper Basin Storage Assessment

- West Consulting, Inc. performing assessment
- Using data from past studies
- Looking at total depressional areas available for storage
- Evaluating effect various levels of storage in these areas on Devils Lake stages
- Looking at as stand-alone alternative and in combination with other measures

US Army Corps
of Engineers
St. Paul District

Expanded Infrastructure

- **Additional levees and road raises within the Devils Lake basin**
- **Evaluated as a stand-alone alternative and in combination with other measures**

US Army Corps
of Engineers
St. Paul District

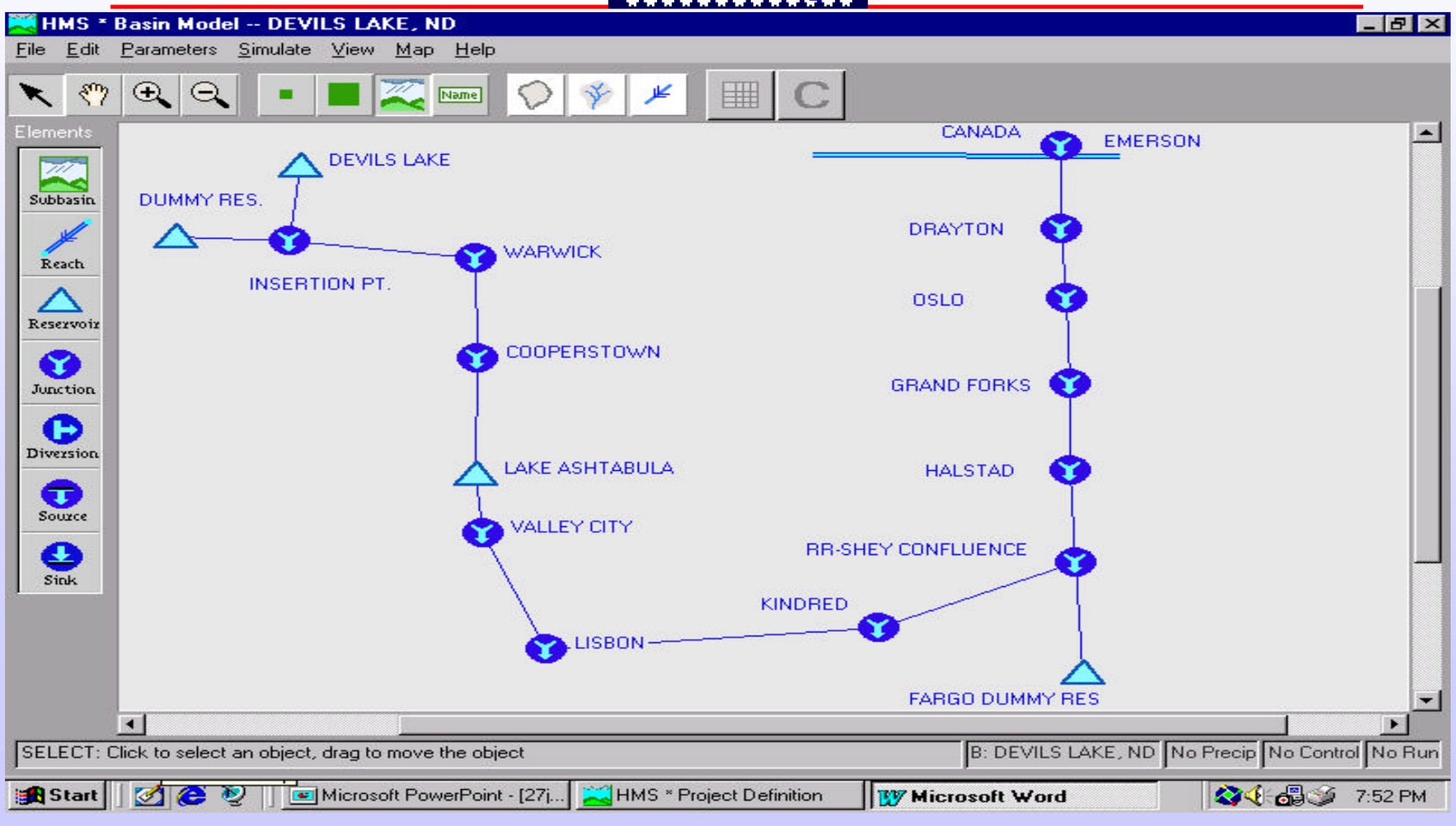
Re-evaluation of Alternatives (3 Steps)

3) Sensitivity of varied base condition

- No emergency measures
- More moderate lake rise (max. elev. 1455)
- Even more moderate lake rise (max. elev. 1450)
- Will measure these against only single alternative from step 2

US Army Corps
of Engineers
St. Paul District

Schematic of Model for Downstream Outlet Impacts



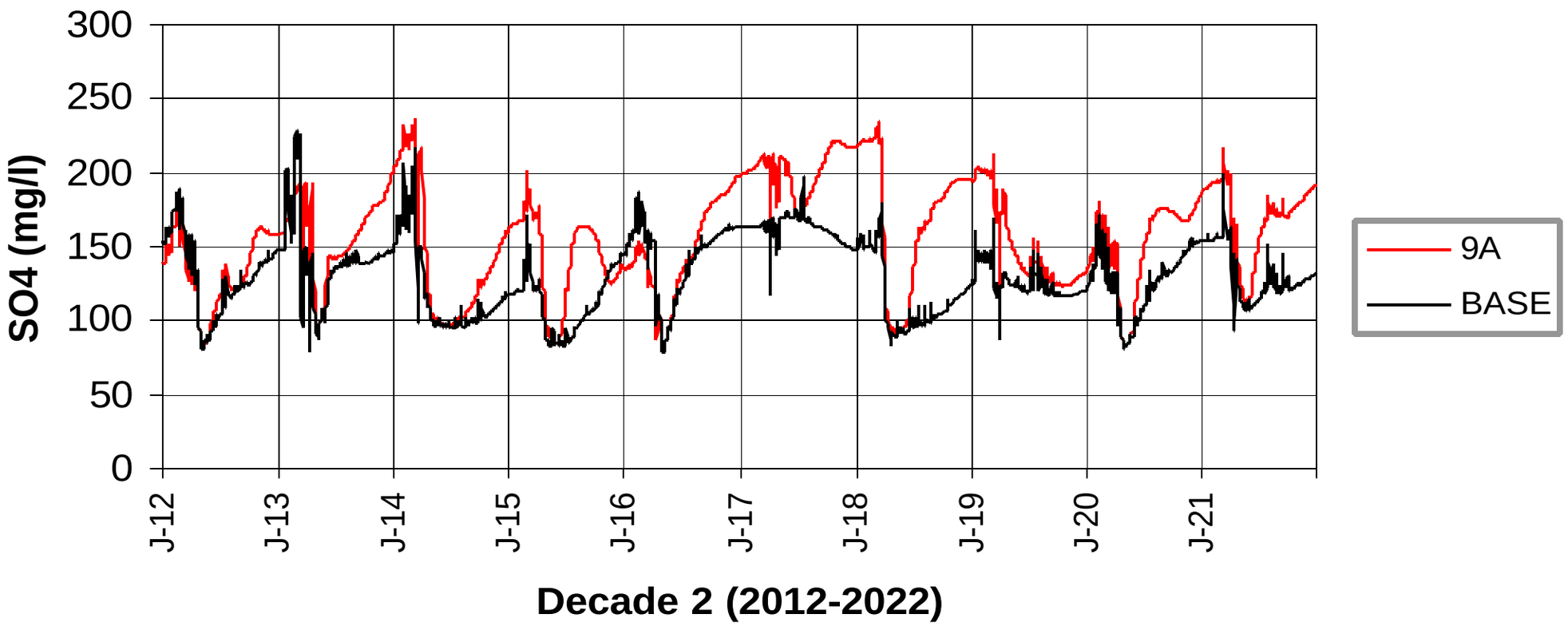
US Army Corps
of Engineers
St. Paul District

Water Quality Constraints

- Sheyenne River
  - Sulfate 450 mg/l
- Red River of the North
  - Sulfate 250 mg/l
  - TDS 500 mg/l

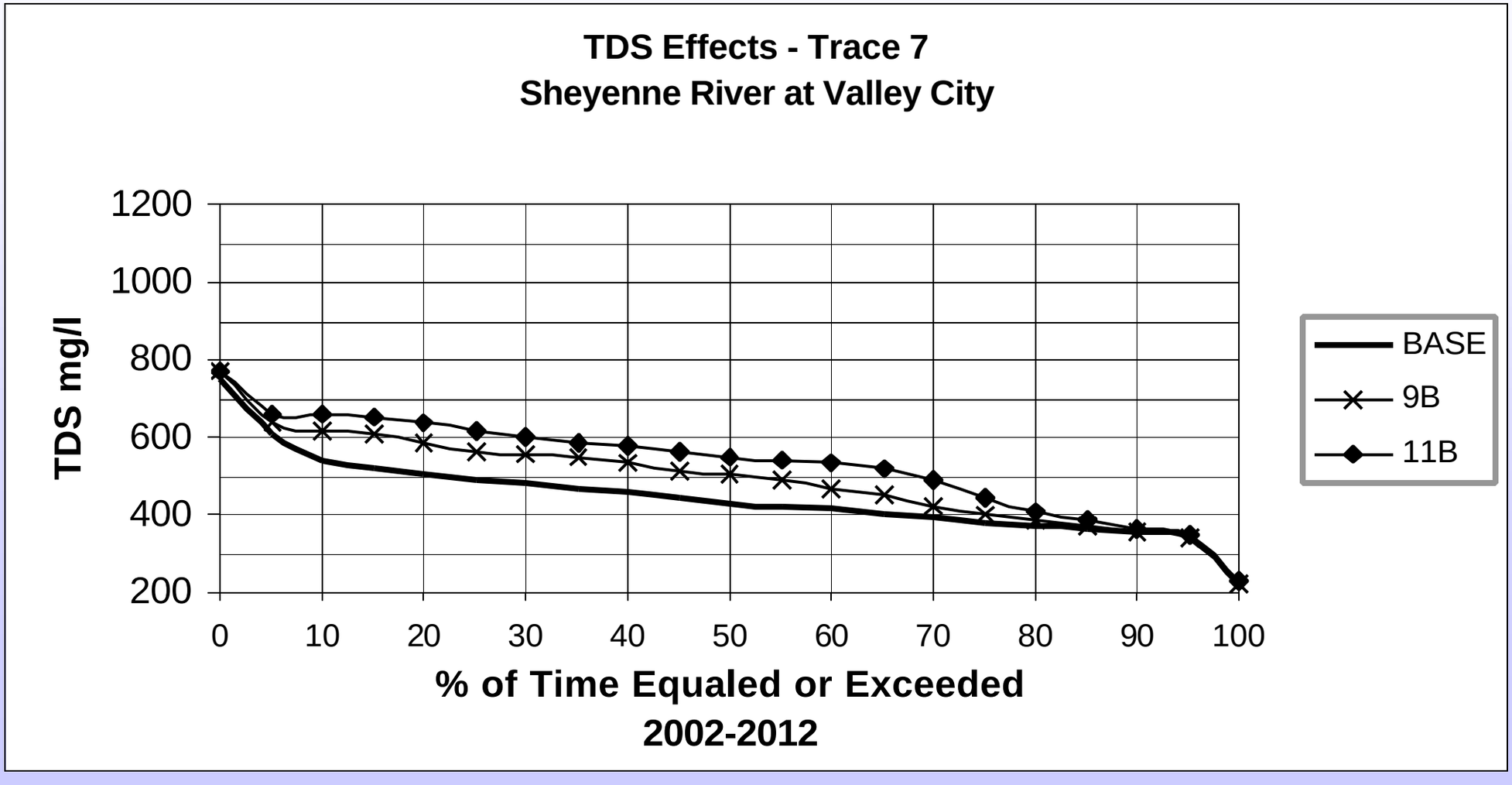
US Army Corps of Engineers
St. Paul District

300 cfs (constrained) Pelican Lake Outlet



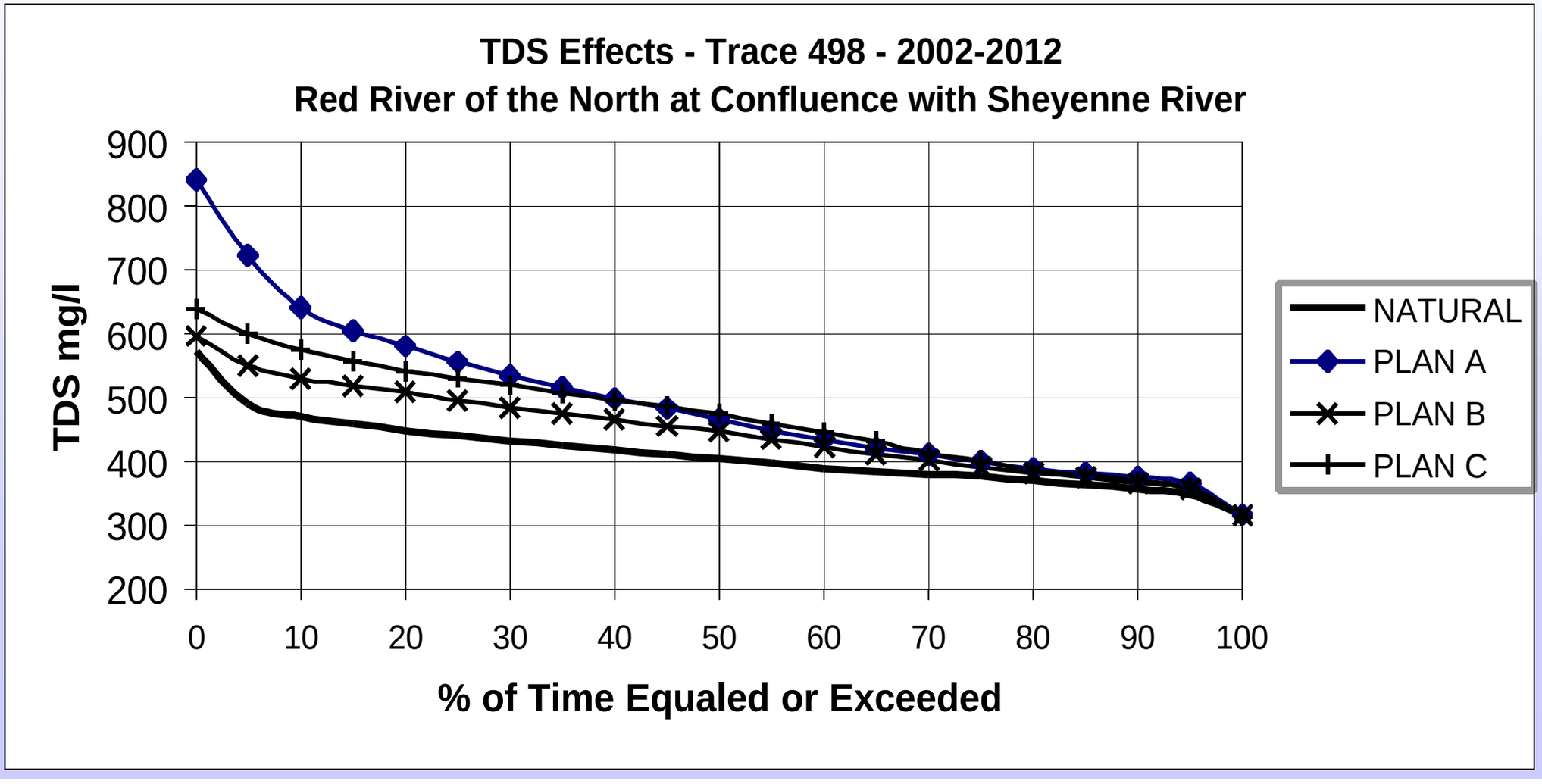
US Army Corps
of Engineers
St. Paul District

300 cfs (constrained) Pelican Lake Outlet



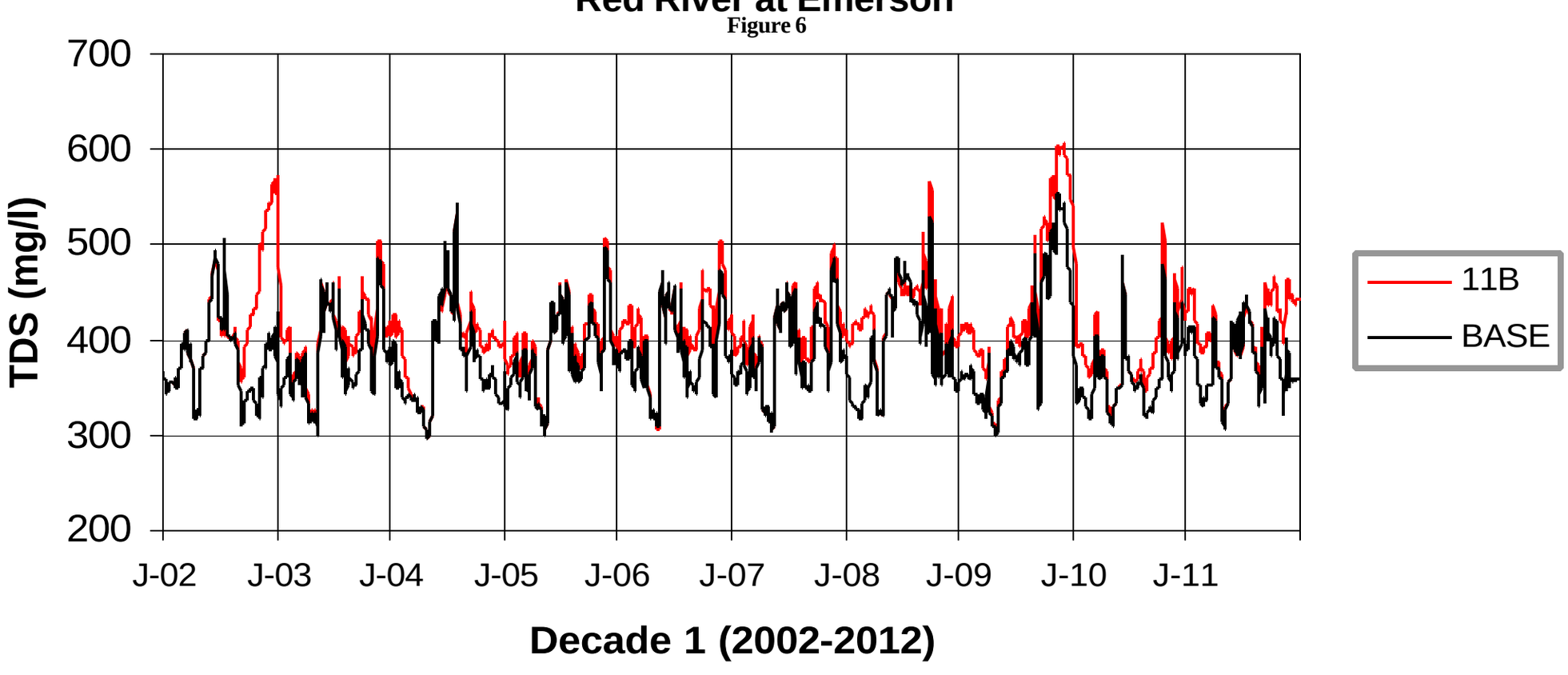
US Army Corps of Engineers
St. Paul District

300 cfs (constrained) West End Outlet



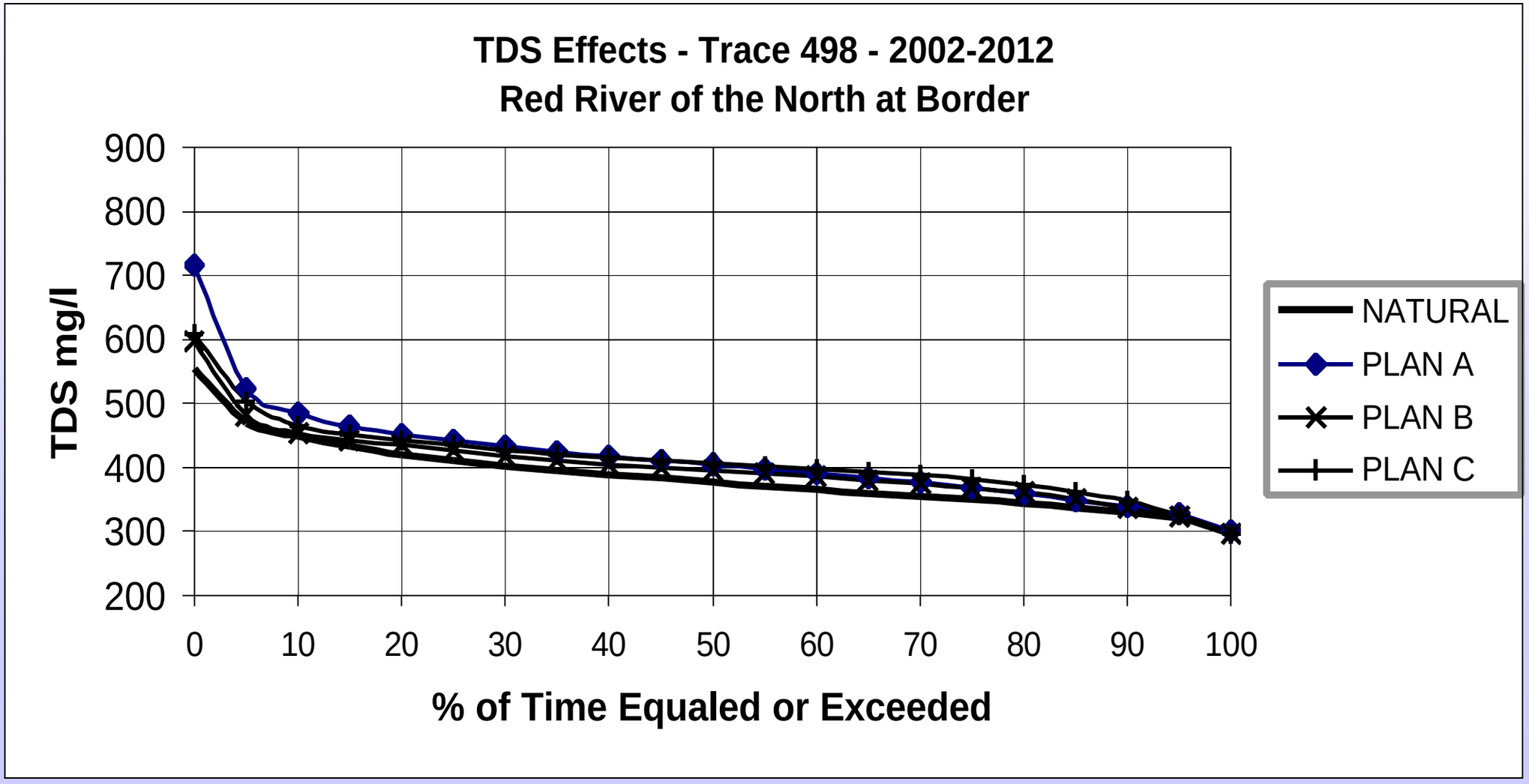
US Army Corps of Engineers
St. Paul District

300 cfs (constrained) Pelican Lake Outlet



US Army Corps
of Engineers
St. Paul District

300 cfs (constrained) West End Outlet



US Army Corps
of Engineers
St. Paul District

Ongoing Studies

- Alternative Re-Evaluations
- Hydrologic and Water Quality Modeling
- Mapping along Sheyenne River (LIDAR – 1-foot contours)
- Upper Basin Storage
- Ground Water monitoring
- Cultural Resource Investigations
- Downstream Water Users Evaluation
- Environmental Impact Evaluations (Aquatic, Invertebrate, Biota Risk Analysis, Soil Salinity, etc.)
- Downstream Streambank Erosion Analysis
- Long Term Monitoring Plan
- Traditional Cultural Properties
- Scoping/Public Involvement

US Army Corps
of Engineers
St. Paul District

Technical Representatives

- USGS – Greg Wiche
- Environmental Protection Agency - Gene Reetz
- US Fish and Wildlife Service - William Pearson
- Federal Emergency Management Agency - Simon Cardenas
- Bureau of Indian Affairs - Diane Mann-Klager
- North Dakota State Water Commission - Bruce Engelhardt
- North Dakota Department of Health - Mike Sauer
- North Dakota Fish and Game Department - Terry Steinwand
- Minnesota Department of Natural Resources - Don Buckhout
- Minnesota Pollution Control Agency - Molly MacGregor
- Minnesota Department of Health - Beth Kluthe
- Environment Canada – Richard Kellow
- Manitoba Conservation Department – Dwight Williamson
- Canadian Department of Fisheries and Oceans - Dennis Wright
- Spirit Lake Tribe – Jerry Cudworth
- Red River Basin Board - TBD
- Lake Emergency Management Committee - Joe Belford
- Barnes County Emergency Manager – Norma Duppler

US Army Corps
of Engineers
St. Paul District

Proposed Schedule

- Scoping Meetings (Apr. 01)
- Compl. Re-Evaluat. of Alternatives (Jun. 01)
- Prel. Planning Report (Jul. 01)
- 2nd Round of Public Meetings (Aug. 01)
- Initiate Design of Prel. Plan (Aug. 01)
- Draft EIS (Feb. 02)
- 3rd Round of Public Meetings (Mar. 02)
- Final EIS (Jul. 02)
- Record of Decision (Sep. 02)
- Potential Construction Start (Oct. 02)

US Army Corps
of Engineers
St. Paul District

Open meeting to Questions and Answers

- Please make any comments or questions by using the microphone in the audience.
- Please state your name, and be sure to hand-in a copy of any comments that you wish to make part of the record.
- Any questions about this project will be answered if possible.
  - Any question not answered at the meeting will be answered after the meetings are over by the best representative
- Please limit statements and comments to five minutes, so everyone has a chance to be heard.
- To ensure any issues you identify are addressed in the EIS, they must be submitted in writing (use blue comment form on table).