



U.S. Army
Corps of
Engineers
St. Paul District

DEVILS LAKE STUDY NEWSLETTER

Issue #2, June 2008



North Dakota
State Water
Commission

Public Meetings Held in April, Next Round Scheduled for July

What We Learned

Thank you to everyone that participated in our public meetings held April 7 and 8. We appreciated your interest, your insightful comments, and your patience in listening to others' viewpoints.

What we heard:

- There is a lot of frustration with the continued flooding, and people would like the problem solved once and for all.
- There is interest in additional upper basin storage, and some feel strongly that this is the answer to the flooding.
- There is interest in releasing more water out of the lake.
- There are both pros and cons regarding releasing water out of Tolna Coulee.
- The Corps has not done a good job explaining the purpose of the current project and the limitations on the funding received.
- It was difficult to explain that modifying Tolna Coulee was used as an assumption in defining the "with out project condition" but DID NOT mean the Corps has any plans or intentions of doing so.

Where We're At

Since the meeting we have taken the following actions:

- Updated the screening matrix to include upper basin storage. The entire screening document will be available on our website by June 20th.
- Posted the PowerPoint presentation on our website www.mvp.usace.army.mil/devilslake.
- Discussed the comments provided at the public meetings and received since then. All comments received to date are posted on our website as a pdf file for all to view and review.
- Continued working towards screening out the alternatives.

Next Round of Public Meetings

Our next round of public meetings to discuss the draft screening document will be held in early July. At that time, we will have sufficient results to facilitate the most meaningful discussion.

Devils Lake Study Public Meetings			
Location	Date	Time	Meeting Place
Spirit Lake Casino	Tuesday, July 8, 2008	7 p.m.	Spirit Lake Casino & Resort 7889 Highway 57, St. Michael
Cooperstown, ND	Wednesday, July 9, 2008	noon	Cooperstown City Hall 611 9th Street NE, Cooperstown
Devils Lake, ND	Wednesday, July 9, 2008	7 p.m.	Ramsey County Courthouse 524 4th Ave, Devils Lake

The meetings are expected to last two hours or less. Individuals who need directions to the meeting place or who require an auxiliary aid or service, should contact Kevin Bluhm, with the Corps of Engineers, by July 1 at 651-290-5247.

Responses to Public Meeting Comments

Comment: We need a basin wide solution to address rising lake levels.

Response: Comments from public meetings indicated a desire by several interests to prevent future lake level rises and prevent an overflow from Devils Lake. Studies have shown that the climate condition affecting the lake is currently in a “wet state” and rising. Geological studies have shown that Devils Lake has spilled to Stump Lake at least five times and reached the natural spill elevation to the Sheyenne River twice in the past 2,500 years. Regardless of the water management measures implemented in the upper basin or the size of the outlet constructed to the Sheyenne River, Devils Lake could continue to rise and eventually overflow from the east end down Tolna Coulee, as identified to have occurred under pre-settlement conditions. While the current probabilities are low, the possibility of such conditions prevailing still exists.

Preventing future lake rises under all possible futures is beyond the scope of this effort. The fact that the Corps is involved at all is at the request of the City of Devils Lake and the State of North Dakota through the North Dakota Congressional delegation in Washington, D.C. The primary purpose of this project is to manage the risk to public safety and flood damages in the City of Devils Lake. The expected product of this effort is to have a defined implementable plan, including plans and specifications if necessary, that can be instituted once the lake reaches a set trigger elevation with a prediction to rise further. If the trigger elevation is never reached and the lake goes down, then no action would be required.

Question: How much evaporation is there on the lake now that it has such a large surface area?

Response: Precipitation and evaporation during 1980 – 2006 averaged 22.4 inches and 30.9 inches per year respectively, for a net loss of 8.5 inches per year. The current lake area (May 2008) is approximately 135,000 acres (210 square miles), which translates to an average of approximately 100,000 acre feet of net evaporation off the lake each year. However, losses due to net evaporation were more than offset by inflows from the upper basin, which during 1993 – 2006 averaged 244,200 acre feet per year.

Comment: There wouldn't be flooding at Devils Lake if upper basin storage was more fully utilized.

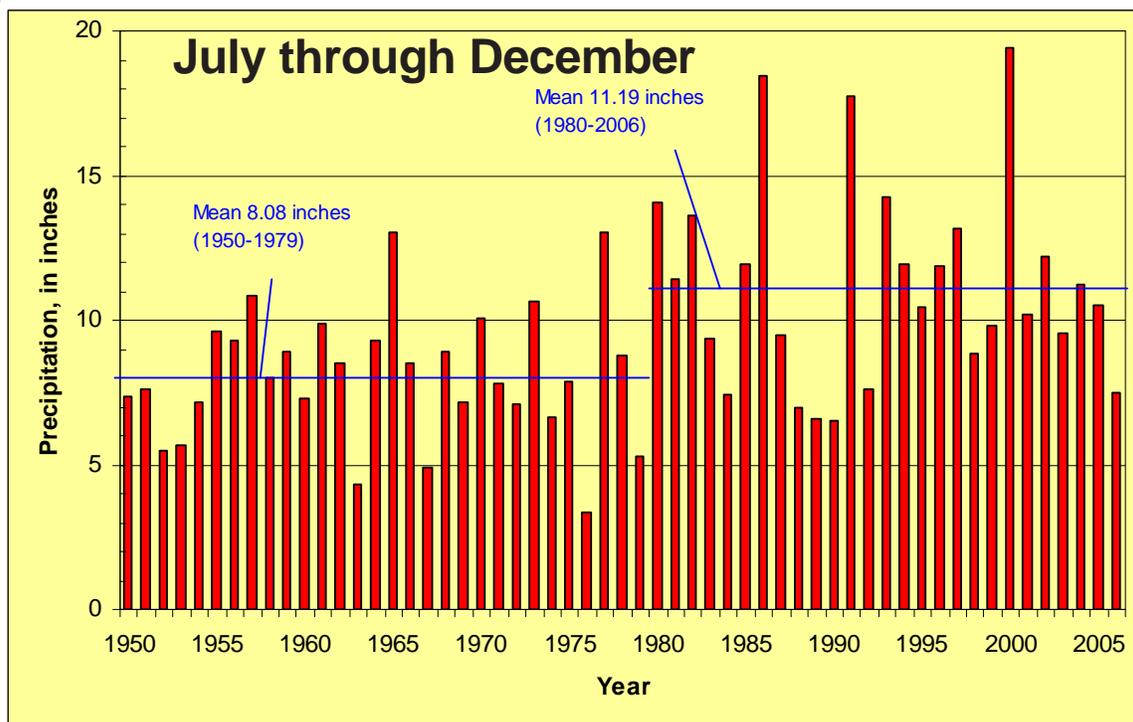
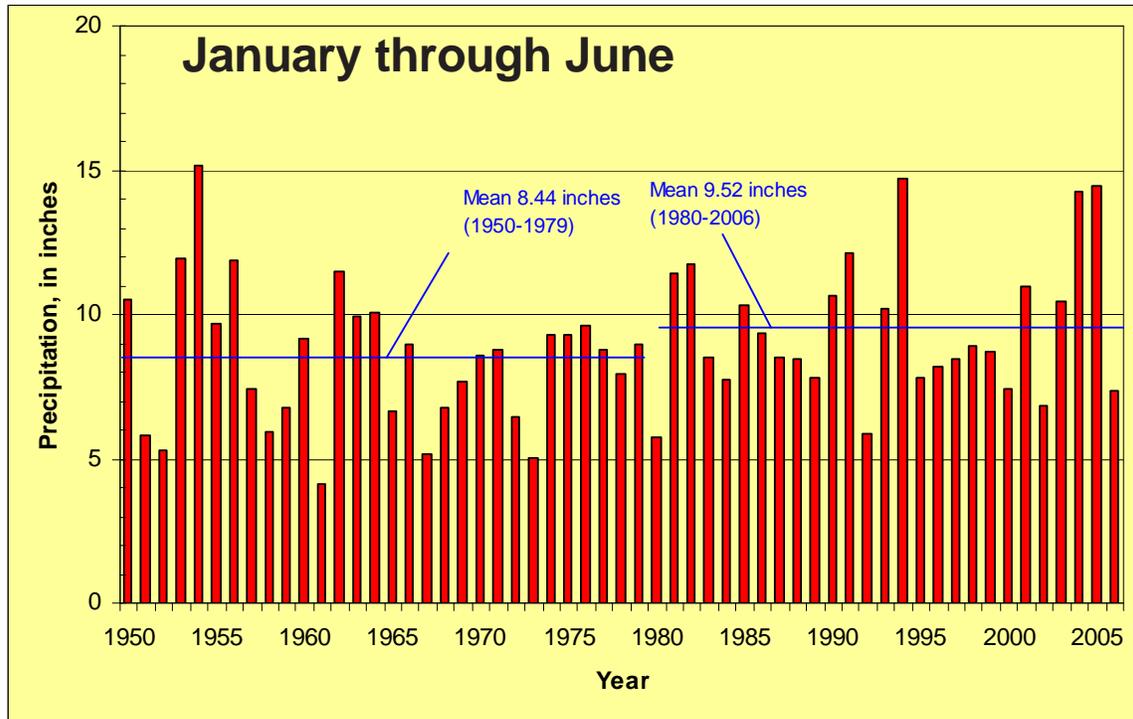
Response: Fundamentally, one must understand that Devils Lake has overflowed numerous times prior to European settlement and its landscape changes. Numerous programs have been used to pursue storage in the upper basin with various degrees of success from year to year. These include programs by the United States Fish & Wildlife Service (USFWS), Natural Resources Conservation Service (NRCS), and various State programs. In 2003, these programs restored/protected/enhanced about 14,000 acres of wetlands and provided about 10,000 acre feet of storage. In addition, an experimental irrigation program to utilize water before it reaches Devils Lake has been ongoing for the last several years. Their effect on runoff into Devils Lake varies, depending on the prevailing conditions going into winter and the amount of storage available in any given basin during storm events. In any event, Devils Lake did continue to rise and eventually equalize with Stump Lake. The effectiveness of this alternative is dependent on the amount of drained depressions that could be enrolled in an upper basin storage program. The Devils Lake Upper Basin Storage Evaluation of 2001 (also known as the WEST Study) that was completed as part of the Devils Lake Integrated Planning Report and Environmental Impact Statement estimated that the restoration of 39,000 acres would provide 63,600 acre feet of storage. The study concluded that under a Wet Scenario, the result would be an average annual runoff reduction of almost 16,000 acre feet. The scope of work required to provide that amount of storage would encompass restoration of approximately 6,700 drained depressions through the construction of berms, gated structures, and tie backs to high ground. (For modeling purposes, the Wet Scenario was defined as a repetition of the climatic and hydrologic conditions of the seven highest inflow years in recent history (1993-1999) over the period from 2003-2035.)

Preliminary analyses indicate the City of Devils Lake embankments will need to safely contain over 1.4 million acre feet of storage to meet dam safety criteria. For comparison purposes, the increase in lake volume between 1993 and 1999 was approximately 1.9 million acre feet. Hypothetically, if 40,000 acres of drained depression restoration were doubled to 80,000 acres, and the effectiveness of reducing average annual runoff were doubled (resulting in an average annual runoff reduction of 64,000 acre feet), the reduction in required storage to meet dam safety criteria would be less than 5 percent.

Upper basin storage does have the potential to change the timing and probabilities of increased lake levels. However, with the potential for acceleration in a lake level rise, as observed between 1993 and 1999, upper basin storage would not preclude the need to implement flood risk management actions at the City of Devils Lake should the lake level continue to rise.

Devils Lake Rainfall Precipitation Chart

The graphics below are charts created by the United States Geological Survey (USGS) that show the mean precipitation from 1950 thru 1979 was lower than the period of 1980 to 2006. This trend, or change in weather patterns, is what many people are using to describe a wet cycle that the entire basin is experiencing.



Next Steps for Study

July 8-9, 2008 Public Meetings: Present the findings of the screening process and which alternatives are not feasible.

July - Sept., 2008: Develop details and cost estimates for feasible alternatives.

September 2008: Present feasible alternatives in public meeting.

December 2008: Select preferred alternative.

December 2009: Complete design of preferred alternative. (May be done in stages).

How to Get More Information

Write, call, or e-mail



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Bruce Engelhardt
701-328-4958
bengelhardt@nd.gov

North Dakota State Water Commission
900 East Boulevard
Bismarck, ND 58505-0850

Technical reports

All past Corps technical reports associated with Devils Lake, including the Draft Integrated Planning Report/EIS, and Infrastructure Report, are available for review at:

U.S. Army Corps of Engineers, St. Paul District
www.mvp.usace.army.mil/devilslake
North Dakota State Water Commission
www.water.swc.state.nd.us



Also available on the Corps website is additional project information, background information, mailing list sign-up information, and all project newsletters.

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Return Service Requested

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