

**LOWER GAR OUTLET – JOINT MEETING  
DICKINSON COUNTY BOARD OF SUPERVISORS & MILFORD CITY COUNCIL  
PEARSON LAKES ART CENTER (THEATRE)  
MAY 20, 2009 7:00 P.M.**

A video production of the effects from the flooding and high water events during July 1993 played prior to the meeting.

**I. Introductions**

Ted Kourousis, Executive Director, NWIPDC (meeting facilitator)  
Dickinson County Board of Supervisors

- Wayne Northy
- Dave Gotsche
- Mardi Allen
- Pam Jordan
- Paul Johnson

Bryan Read, Milford City Administrator

Virgil Wahlman, Milford Mayor

Milford City Council

Iowa Department of Natural Resources staff

- Mike Hawkins, IDNR, Biologist – Spirit Lake
- Ken H., IDNR - Spencer
- Joe W., IDNR - Des Moines
- Barb, IDNR

Roger Kay, P.E., Hydraulics Engineer, U.S. Army Corps of Engineers

**II. Overview of Meeting process – Ted Kourousis, NWIPDC**

Established the process of who will be speaking and presenting in which order and then discussed the opportunity for public comments and questions at the end of presentations. Please come to the microphone and state name and city before asking questions.

**III. Presentation from Roger Kay, Army Corps of Engineers**

- Over 19 years experience with the Army Corps of Engineers as a Hydraulics Engineer
- Participated in and was present in Spirit Lake during the 1993 flooding events
- Overview of information leading to and the results from the Army Corps studies published in 1997 and 1999 pertaining to water control structures on the Iowa Great Lakes.
  - Discussed Lower Gar timeline in 1993
  - Discussed Lower Gar construction projects in 1993
  - 1997 study – removal of road at Lower Gar Outlet would lower Okoboji lakes by 0.6 feet and would raise the Little Sioux River down stream 1.1' to 2.7'
  - 1999 study initiated to determine the feasibility of altering Lower Gar outlet structures to increase out flow and capacity from Okoboji chain of lakes
  - 4 recommended alternatives presented in 1999 studies to be considered. Cost was not a factor in these alternatives; they should be evaluated on effectiveness.

**IV. Presentation from Mike Hawkins, Iowa Department of Natural Resources- Spirit Lake**

- Discussed 2002 Water Quality Study (TDML) – Lower Gar is listed as impaired water way.
- Discussed the Iowa DNR Lake Restoration program
- Discussed watershed, drainage and development within the Iowa Great Lakes watershed

**V. Introduction of Milford City Council and Dickinson County Board of Supervisors and Responses to specific questions submitted to the IDNR and Army Corps of Engineers.**

Roger Kay, Army Corps of Engineers

Q: Requiring changes for Low Gar outlet?

A: No

Q: Any stimulus funding for Lower Gar?

A: No stimulus money available through Army Corps for this project

Q: What is unbiased recommendation of flood control structures at Lower Gar

A: The 1997 & 1999 reports evaluated a range of alternatives, not 1 specific alternative. No recommendations were given. The final decision should be left up t the local governments.

Q: If another flood event hits the Iowa Great Lakes will this affect flood levels?

A: The suggested alternatives are intended to provide an appropriate outflow of the Lower Gar Lake that will help reduce the duration of flooding events.

Q: What will be the damages caused from flooding to the IGL?

A: Damages will vary by flood event; damage will increase as water levels increase

Q: What is the likelihood of a 1993 flood event?

A: The flood event in 1993 in Spirit Lake would be considered an 80 yr. flood event or 1.25% chance in any given year. With improvements to Spirit Lake, after 1993, that same flood event would now be considered a 1,000 yr. flood event or < .01%. With improvements to Lower Gar outlet since 1993, the same flood events would now be considered a 175 yr. flood event on the Okoboji lakes or 0.6% in any given year.

Q: What happens if we do nothing?

A: The flooding potential remains as is.

Q: Would another 1993 flood event cause damage to hoists, docks and houses in Lower Gar?

A: Flooding damage would likely be similar to 1993 flooding, but duration would be less. Damage amounts would not take into account inflation of prices of land or structures.

Q: Would removal or alteration of flood control structure at Loon Lake have an effect?

A: The removal of the barrier at Loon Lake will have little impact on the water flow in the Okoboji lakes.

Q: Explain what has been accomplished by Lower Gar improvements since 1993?

A: New Spirit Lake structure at Orleans; impetus was loss of R.R. embankment and potential flooding of 1'-3' higher on Okoboji lakes. Installed additional capacity at Spirit Lake spillway to reduce high lake levels on Spirit Lake. The Lower Gar improvements were installed to reduce the added flow into the Okoboji lakes from the added flow from Spirit Lake releases. Potential flood risk:

Spirit Lake level – would decrease lake level 2.2' during 100 year flood.

Okoboji (Lower Gar) level – would decrease lake 0.1' during 100 year flood

Lower Gar outlet would reduce the duration of flooding (or amount of high water days) on Okoboji lakes by 35-40%.

Q: Why install inadequate structures at Lower Gar outlet?

A: In 1993, they were adequate and met the needs intended to serve. Literally, the Lower Gar project went from planning to construction in 7 days in 1993. No time for analysis.

Q: What do affects from 1999 study show on downstream properties?

A: 100 year flood event would have little impact on downstream properties with alternatives shown in the 1999 report.

Q: Will placing new culverts above the dam work? – different from the 4 alternatives offered

A: The reports specified 4 alternatives, other configurations of outlet structures can't be discussed without additional technical analysis.

Q: Will placing an additional five 5'x12' box culverts at an elevation of 1' over the dam work?

A: Army Corps of Engineers has no jurisdiction over the lakes but recommends the local governments look at all of the effects of properties upstream and downstream of the dam.

Q: Could a mechanical structure (designed to open and close during flooding events) be placed at Lower Gar?

A: Again, ACOE has no jurisdiction over local decisions for Lower Gar structures

Q: Is ACOE and DNR open to reviewing other alternatives for Lower Gar outlet?

A: ACOE has no jurisdiction to review other alternatives. The Army Corps has no jurisdiction over natural lakes in the State of Iowa, only man made lake structures.

Q: What impact does waterfront development have upon flooding?

A: This issue was not addressed in the 1997 or 1999 reports, but may be significant to locals

Q: Does more impervious surfaces and development have an impact on the results of the 1997 and 1999 reports?

A: Some additional low flow reports have been identified, but do not know if it is a result of wetlands or additional impervious paving.

Q: Explain formulas for Table 6 in the 1999 report?

A: Table 6 – high water levels. Roger Kay explained the process of determining and reporting the data included in this table.

Q: Will any plans cause more algae growth, damage water quality, or affect turbidity?

A: The ACOE reports are simply informational and intended for locals to make the best decisions.

Q: Will 110' bridge be the best solution to unimpeded flow?

A: A 110' bridge will allow the greatest amount of flow and greatest reduction in lake levels, but the best solution should be left to the local governments

Q: If 110' bridge is installed with the ACOE guarantee it as the best solution?

A: ACOE can't guarantee any project selected because the Army Corps does not have local jurisdiction or any control over the alternative selected.

#### Mike H. & Ken H., Iowa Department of Natural Resources

##### Biological implications

- increasing capacity of the road structure would not decrease flows at low flow events.
- high water levels, flooding can have negative effects, especially with longer durations.

Q: Will DNR consider raising the dam?

A: IDNR discourages raising lake levels on any natural lake. The DNR has a policy of discouraging raising water levels; this would change the lake elevations (change the ordinary high water line)

Ken H., Iowa DNR Floodplain Questions

Q: Is DNR or ACOE requiring changes?

A: No, DNR is not requiring anything, but strongly recommends looking at the alternatives presented in the reports and make a decision based upon the best interest at the local level.

Q: What is the liability to the DNR if structures are not maintained?

A: Can't answer that.

Q: What happens if we do nothing?

A: Future flooding events will be much the same in the lower chain as in 1993.

Q: What is the waiting time for IDNR approval?

A: Currently there is a 6 month timeframe for review of permits.

Q: Any funding available?

A: locally funded – no stimulus money available

Q: How to make Lower Gar deeper?

A: Level of the entire Okoboji lakes is controlled at the dam, IDNR is not going to change the dam

Barb, Iowa DNR

A: If the dam is raised, it will change the lake elevations. This will change the ordinary high water line and will also affect people property rights. If the high water line is raised, people will potentially loose some of their personal property of which it will become sovereign or public property.

Q: Will DNR mandate changes?

A: In an opinion from IDNR Attorneys and the floodplain engineer, the DNR STRONGLY recommends that the 2 local governments involved come together and find a solution. The DNR suggests using one of the alternatives identified in the ACOE reports. IDNR would likely expedite a permit if it was one of the alternatives identified in the ACOE report. The DNR is backlogged on permit reviews due to the 2008 flooding in eastern Iowa.

## **VI. Questions/Comments from Milford and Dickinson County to IDNR and ACOE**

Milford: Regardless of what is done to Lower Gar, will it still flood?

ACOE: Flooding risk is only slightly reduced in flood water height, but the duration of flooding will be reduced more.

Dickinson Co: In a letter from Rich Leopold, IDNR Director, in January 2009, indicated that structures can not impede the flow of waters in natural lakes according to Iowa Code. If a new structure is installed in the road above the level of the dam, is this not impeding the flow of water in a natural lake and therefore in violation of Iowa Code.

DNR: Don't know. Issues with elevations of water control structures would be resolved during permitting. One of the 4 alternatives identified in the COE reports would be reviewed much quicker.

Milford: in 1997, the DNR requested the study, who requested the 1999 study?

ACOE: Both 1997 and 1999 reports were completed in conjunction with IDNR and the 1999 study was also done in cooperation with IDOT.

Dickinson Co: One of the Supervisors wanted clarification of Milford's 1<sup>st</sup> question

Milford: Lower Gar Lake is impaired. In presentation is said that lake restoration projects must meet standard of 4.5' of water clarity 50% of the time. How is this possible with only 2' of water in the lake?

DNR: Water clarity is rated with a device. With the standards in place, after the lake is restored, you should be able to see the bottom about 50% of the time.

Dickinson Co: We are in year 1 of a study with ISU on water clarity of Lower Gar?

DNR: Study is partnership with local authorities, DNR and ISU is completing the research and analysis. The study is over 3 years - a diagnostic feasibility project with the lake restoration program. In June 2009, preliminary data should be available to the public

Dickinson Co: Original culverts in Lower Gar put in during '82 or '83 were installed to current engineering standards; will new ones be to current standards?

ACOE: Current engineering standards and construction standards should be incorporated.

Dickinson Co: Comment for DNR; the road is determining the lake levels in the spring and fall, not the dam. If something is done, people believe the lake levels will be affected.

DNR: Increasing the state dam is cautioned against. The first dam was put in place in 1909, replaced in 1919 and current structure is 1971-1972. Lake elevations of the Okoboji lakes are taken from the current dam level. Moving the dam level also moves the ordinary high water line, which may lead to changes in public/private property on the lake shores.

## **VII. Questions/Comments from the Audience**

Larry: When water goes over the dam that determines the lake levels. Evaporation decreases water levels by August.

Smith S.: DNR is sole legal entity determined to change the level of the lake. 1999 report suggests that 230<sup>th</sup> Ave. impedes the flow of water to the dam. Would a bridge over 230<sup>th</sup> Ave. allow water to flow to the dam?

DNR: There is a legal opinion published by the DNR on this issue which will be made available to the general public

Jim B: The proposal was not stated correctly. Existing structures will stay the same. The dam will stay the same. New culverts will be put in at 6" over the dam. Why are cities allowing people to build below flood elevations?

ACOE: What will be the benefit to the lakes by placing the culverts at 6” over the dam?  
Would it be a better bang for the buck to keep the new culverts at a lower level?

Irving J.: Retired contractor, worked for ACOE, DNR, Dickinson Co.; have been sued for impeding waterways. Is there a Iowa Code section that states you cannot impede the flow of waterways. Who sets the elevations of the dam? Iowa Code? Legislature? What is impeding the flow?

DNR: Do not know who set the elevation of the dam. Road may be an impediment, but there is an attorney’s opinion on this that will be made available to the public.

Darryl: Why in Minnesota does the ACOE have the authority by MDNR to regulate lake levels by mechanical structures?

ACOE: Not familiar with MDNR operating criteria. ACOE has no agreements with the State of Iowa to control the lake levels of natural lakes in Iowa.

Jane S: Who is the “local authority” to make decisions?

Dickinson Co: Local authority is the owners of the road (230<sup>th</sup> Ave.) Dickinson County and Milford have a joint interest in the road.

### **VIII. Conclusion**

Ted Kourousis, NWIPDC, thanked the speakers, presenters, Board of Supervisors and City of Milford for attending and participating and thanked the members of the public for showing up and showing an interest in the project. He indicated the Board of Supervisors would be meeting on May 21<sup>st</sup> with Milford City Council at the Milford Community Room at 7:00 p.m.

Meeting adjourned at 9:15 p.m.

Respectfully submitted,

Steven J. Hallgren  
Planning Director  
NWIPDC