

[Minnesota Department of Natural Resources Press Release – June 11, 2008]

Outlet options considered for Pelican Lake near Orr

In response to concerns voiced by local residents Minnesota Department of Natural Resources (DNR) completed an analysis of Pelican Lake near Orr in St. Louis County. The analysis was completed following a meeting last summer when concerned citizens, resort owners and landowners met with DNR officials and St. Louis County Public Works officials.

Local participants asked for modifications to the Pelican Lake dam to help minimize the duration of low lake levels. Last month, further analysis was done to address the concern of flood damage to structures and septic systems.

The Pelican Lake outlet dam was reconstructed in the fall of 2002 after public information meetings and hearings in 1999 and 2000. In 2006, St. Louis County repaired the new outlet structure, which was designed to mimic the function of the previous dam. In July 2007, a county survey found that this dam has settled about 2 inches below the authorized elevation.

The outlet analysis states that climate conditions will continue to be the predominant factor affecting lake levels, regardless of any change to the dam, and lake levels will continue to occasionally fall below the run out elevation of the dam during dry climatic conditions.

At a minimum the elevation of the entire dam will be raised to the authorized elevation. In addition the report offers two alternatives to address lake levels:

- Alternative A would add 4 inches to the existing runout in two of three bays in the existing structure; for a short period of time, this would raise lake levels by about 3.5 inches higher than the existing settled dam.
- Alternative B would add 6 inches to the existing runout in two of three bays to raise lake levels by about 4.5 inches for a short amount of time.

Neither alternative would affect the peak elevation of the "100-year flood" (1 percent chance in any given year), according to the analysis. This means, the regulatory flood elevation for flood insurance requirements and building elevation low-floor requirements would remain unchanged.

Both alternatives address only two of the three bays in the lake. Neither alternative would change the elevation of the structure in the middle bay.

Increasing the elevation of the runout in two of three bays would result in higher lake levels following an isolated summer rainstorm. Potential adverse impacts include increased shoreline erosion, septic system impacts, and potential flood damage to low-lying structures.

The DNR is also concerned about effects on wild rice due to raising the elevation of the runout in two of three bays of the outlet dam. Therefore, once this year's wild rice is established, the DNR plans to do a shallow lake survey in July-August 2008.

St. Louis County has estimated raising the dam runout to the authorized elevation would cost approximately \$500, not including labor. The costs for Alternative A or Alternative B would be significantly higher.

Prior to raising the dam elevation, officials would need to:

- determine whether flowage easements are needed
- finalize structure risk analysis
- obtain approval from St. Louis County, which owns the dam
- estimate final costs for design, materials and labor for raising elevations
- obtain comments from appropriate agencies after a shallow lakes survey
- keep concerned landowners informed, and
- obtain public waters work permit.

Climate has a big influence on lake levels. Northeastern Minnesota has experienced drought conditions during most of 2007, as well as 2006, 2003 and 2002.

Low lake level conditions hinder navigation on the lake. High lake levels can cause damage to shoreline and low-lying structures. Pelican Lake, like many Northeastern Minnesota lakes, has gone from very low lake levels during the recent drought, to high lake levels due to precipitation received primarily in the fall 2007 and spring 2008.

The outlet analysis report is available on the DNR web site at http://files.dnr.state.mn.us/publications/waters/pelican_lake_outlet.pdf or at the Orr City Hall, 4540 Lake Street, Orr, MN 55771 or at the DNR area office in Eveleth, 7979 Hwy 37, Eveleth, MN 55734 (218) 744-7450, ext. 2222, or by contacting amy.loiselle@dnr.state.mn.us.