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Flood figures called 'ridiculous':

Corps dam ratings debunked

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SKAGIT COUNTY — Though maximum flood and precipitation figures used in a recent study by the U.S. Army Corps of Engineers are considered "extreme" by local officials, three dams in Skagit County have been rated as "unsafe" by the Corps.

Cranberry Lake Dam on Cranberry Creek in Anacortes and Judy Reservoir Dams A and B on a tributary of the Skagit River three miles east of Clear Lake, were included on a list of some 28 dams in the state of Washington classified as unsafe, but not in imminent danger of failing.

The 218 dams inspected were at least 25 feet high or impounded 50-acre-feet of water or more and were located upstream from populated areas or sites where dam failure could cause serious property damage.

According to the Corps, the rating of unsafe was used when a serious deficiency was found in the dam's ability to pass at least 50 percent of a "probable maximum flood." The most common major problem, according to the Corps, was an inability to safely handle such maximum flood flows.

Cranberry Lake Dam, originally built in 1910 to store the city water supply, is presently used for recreation by residents of Anacortes, according to Public Works Director David Ford.

After reviewing the reports by the Corps of Engineers, which calculate "probable maximum precipitation" and "probable maximum flood," Ford said he considers the figures used in the study to be "ridiculous."

Figures charted rainfall predictions of 3.6 inches within six hours and 14.66 inches in 72 hours plus some five inches of snow melt, in what the Corps called a "general storm." The Corps of Engineers study indicated that the discharge or storage capability of the dam is approximately 25 percent of the recommended level.

Ford said he is doubtful whether such amounts of rain and snow melt would ever occur in this area, much less during an average storm.

"It does not seem realistic for a generalized storm. Those figures are ridiculous, we would have a lot more to worry about than Cranberry Lake in a storm like that," Ford said.

In response to the study, Ford said the city of Anacortes will take a closer look at the dam issue in January.

Recommendations from the Corps of Engineers for Cranberry Lake include an emergency notification plan for residents downstream in the event of a dam failure; removal of any trees, brush or debris from the spillway; investigation of the stability of the dam; further hydrologic and hydraulic studies and regular checks of the site.

Ford said city officials already make regular inspections of the dam, particularly during the winter and rainy months, and are willing to consider some of the recommendations.

According to Ford, the earth-filled dam has failed previously on two occasions, in the 1920s and 1959, making city officials aware of the potential damage such an event can cause..

The two earthfill dams listed by the Corps at Judy Reservoir are owned and operated by Skagit County Public Utility District No. 1, as a storage site for public water supply.

The reservoir holds 1.2 billion gallon and covers 120 acres when at capacity,, according to PUD Manager Jack Doty.

The Corps of Engineers established in their study that the discharge or storage capability at Judy Reservoir is approximately 32 percent of that recommended.

Figures used for the Judy Reservoir dams set a maximum precipitation level at 36 inches of rain combined with snow melt within 72 hours during the month of December, Doty said.

The Corps indicated in their study that the spillways may not be sufficient to contain such amounts of water which could subsequently cause erosion, weaken the dam and potentially cause cracks.

Doty called such figures "outlandish", citing that the month of December is traditionally one of the lowest periods of the year as far as depth of the reservoir is concerned. Presently, the reservoir level is at 443 feet while the maximum level is 451 feet, he said.

"For the maximum possible flood, the criteria is so outlandish that it is hard to adapt your thinking that it will ever happen. Even if it should happen, the dam would hardly be the greatest worry," Doty said.

Doty said that the Corps recommended that a consulting engineer be called in to do further studies on the dams and make a recommendation to the PUD as to how the problems could be dealt with. Such a study was estimated at a cost of $25,000, he said, which the utility decided against spending at this time.

"We felt really that the urgent necessity is not there to spend that kind of money. We will undoubtedly get to it sometime," Doty said.

The PUD Commissioners accompanied by an engineer and Doty looked at the site recently, noting that there was a natural ravine downstream of the dam where "excess water would automatically flow," he said.