



Saylorville Lake

5600 NW 78th Avenue, Johnston, IA 50131
Des Moines River

U.S. ARMY CORPS OF ENGINEERS

BUILDING STRONG®

Saylorville Lake Regulation Manual Modification to Regulations

Regulation of Saylorville Lake in conjunction with Lake Red Rock provides flood risk benefits along both the Des Moines and Mississippi Rivers. Additionally, a permanent conservation pool provides storage for water supply, water quality, fish and wildlife enhancement, and a multitude of recreational opportunities. A final objective provides a drought contingency regulation which effectively rations water during extended drought periods.

On 13 August 1982, the state of Iowa and the United States Government signed contract No. DACW25-82-C0053. This agreement provided for an average water supply release of 75 cubic feet per second throughout the year. The new plan authorized a water supply pool at elevation 823.5' and increased the top of the conservation pool from elevation 833' to 836'. The state has the right to 18.86% (approximately 14,900 acre feet; 4.86 billion gallons) of the usable storage between elevations 812.0' and 836.0'. During the fall, the top of the conservation pool can be raised to elevation 838' at the request of the Iowa Department of Natural Resources.



In 1994 pneumatic gates were added to the crest of the spillway. The change reduced the number of overflow events eroding the unlined portion of the spillway. The modification did not change release rates at the dam, it only changed the location of the release.

Before pneumatic crest gates, as the pool rose above elevation 884' (spillway crest) discharge through the outlet was reduced so the sum of the outlet discharge plus the spillway discharge remained at 21,000 cfs. By the time the pool reached 889', the outlet was completely closed and 21,000 cfs flowed over the spillway. Between elevation 889' and 890' the discharge in the outlet was gradually increased. As the pool reached elevation 890' the outlet was again fully open, and the combined discharge from the outlet and the spillway totaled 42,000 cfs. Above elevation 890' the outlet was kept fully open and uncontrolled flow passed over the spillway.

With pneumatic gates, if the pool approaches (or is forecast to exceed) elevation 884' the crest gates are inflated, raising the spillway elevation to 890'. As the pool rises from elevation 884' to 890' the outlet is adjusted to release 21,000 cfs and no overflow is allowed at the spillway. If the pool is forecast to exceed elevation 890' the crest gates could be lowered depending on the forecasted maximum pool. Normally, the gates start lowering at pool elevation 889' depending on the pool crest forecast. The gates are completely lowered when the pool reaches (or is forecast to exceed) elevation 890' as the spillway is needed to pass flood flows. Above elevation 890' the outlet is fully open and uncontrolled flow passes over the crest of the pneumatic crest gates (deflated crest elevation 884').

Visit Saylorville Lake on the Web @ <http://www.mvr.usace.army.mil/Missions/Recreation/SaylorvilleLake.aspx>. For more information about reservoirs operated by the Rock Island District, visit us on the Web @ <http://www.mvr.usace.army.mil/Media/FactSheets.aspx>

UPDATE: October 2012

U.S. ARMY CORPS OF ENGINEERS – ROCK ISLAND DISTRICT
CLOCK TOWER BUILDING, P.O. BOX 2004, ROCK ISLAND, IL 61204-2004
Corporate Communications Office, (309) 794-5274, www.mvr.usace.army.mil