

Table H-8 - Regulation Schedule - Pine River Dam and Reservoir

Regulation Schedule	Condition	Reservoir Elev./Stage in ft.	Operation
1. Routine Operation			
After Labor Day to spring breakup	Winter drawdown	1229.57 to 1227.32 13.25± to 11.0	<p>The Reservoir Regulating Section shall compute the discharge required to lower the pool to spring level, elev. 1227.32 ft. (11.0 ft. stage), before the beginning of the spring breakup, usually about 1 April. Periodic checks of inflow shall be made and outflow adjusted as necessary. If the drawdown is completed before the breakup begins, discharge inflow until spring runoff starts.</p> <p>*The State of Minnesota's plan of operation requires the discharge to be 30 cfs if the elev. is between 1225.32 ft. (9.0 ft. stage) and 1229.32 ft. (13.0 ft. stage).</p>
Spring breakup Period	Storing spring runoff	1227.32 to *1235.30 11.0 to 18.98	<p>When the breakup begins, reduce the outflow to 40 cfs and store balance of inflow until the pool reaches an elevation of 1229.32 ft. (13.0 ft. stage), desirable summer level. If the pool continues to rise above 1229.32 ft. damage within the reservoir and downstream conditions shall govern the amount of the discharge. The situation at stations on the Mississippi River from Fort Ripley to the Twin Cities shall be considered in determining the outflow. If protection from flooding is needed at any of these stations, the inflows shall be stored as necessary until maximum</p>
<p>*Note: Lake Pine's upper limit has been raised from 1234.82 ft. to 1235.30 ft. due to a dam safety rehabilitation of the dam.</p>			

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Regulation Schedule	Condition	Elev./Stage in ft.	Reservoir Operation
<u>Routine Operation (Cont.)</u>			
			operating limit, elevation 1235.30 ft., is reached. At this elevation, increase discharge to inflow. If the inflow becomes greater than the discharge capacity of the dam, the dam shall be completely opened, and open river conditions will exist until regulation at the dam is again possible. Discharge shall be governed by damage within the reservoir and downstream conditions until the spring breakup is completed.
			*The State of Minnesota's plan of operation limits the maximum discharge to 2500 cfs if the reservoir is above the desired maximum elev. of 1230.32 ft. (14.0 ft. stage).
End of spring breakup to about 15 May	Bringing reservoir to desired summer range	1235.30 to (1229.07 - 1229.57) 18.98 to 12.75 - 13.25	After the reservoir has filled to an elevation of at least 1229.32 ft. (13.0 ft. stage), and it is no longer necessary to store runoff for downstream damage prevention, the Reservoir Regulating Section shall compute the discharge required to lower the pool to the desired summer range (1229.07 - 1229.57 ft.) by about 15 May if possible. (There have been only a few times since operation started that this reservoir has not filled to above the desired summer elevation.)

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About 15 May to Labor Day	Normal summer operation	1229.07 - 1229.57 12.75 to 13.25		By the operation of the sluice gates and the addition or removal of bulkheads, if necessary, maintain pool at the desired summer range, until winter drawdown begins. *The State of Minnesota's plan of operation requires the discharge to be 30 cfs if the elevation is below 1229.32 ft. (13.0 ft. stage).
<u>2. Flood Control</u>				
Summer	Large runoff from intense	1229.07 - 1235.30 12.75 - 18.98		The operation is the same as that for storing the spring runoff during the spring breakup period.
Fall	or prolonged rainfall or	1227.32 - 1235.30 11.0 - 18.98		
Winter	winter thaw	1227.32 - 1235.30 11.0 - 18.98		
<u>3. Water Supply And Conservation</u>				
Drought	Very low inflows	1229.57 to 1225.32 (13.25 to 9.0) or lower if necessary		If inflows become so low that the reservoir must be lowered below the desired elevation, so far as practicable, the reservoir shall be maintained above an elev. of 1225.32 ft. (9.0 ft. stage). The flow shall be governed by the Secretary of War's regulation that the average annual discharge shall not be reduced below 90 cfs. If the reservoir is at or below the minimum elev. of 1225.32 ft. (9.0 ft. stage), no discharge other than the minimum specified above shall be permitted except such increased discharge as may

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Water Supply And Conservation (cont.)

specifically be directed by the Chief of Engineers.

*The State of Minnesota's plan of operation requires the discharge to be 15 cfs if the elevation is below 1225.32 ft. (9.0 ft. stage), minimum elev.; and 30 cfs if the elevation is between 1225.32 and 1229.32 ft. When larger flows are required at the minimum elev., the discharge may be increased if authorized by the Commissioner of Conservation, and the maximum shall be 100 cfs.

*The State of Minnesota's plan of operation shall be effective only when the reservoirs are not functioning for the primary purposes of navigation and flood control.

MINNESOTA DEPARTMENT OF CONSERVATION
REGULATION OF PINE RIVER RESERVOIR

Elev. in feet	Maximum Discharge in cfs if Authorized By The Commissioner of Conservation
1217.32	15
1218.32	30
1219.32	40
1220.32	50
1221.32	60
1222.32	70
1223.32	80
1224.32	90
1225.32	100
1226.32	200
1227.32	300
1228.32	400
1229.32**	500
1230.32	2500
over 1231.32	2500

** Most desirable elevation for recreation purposes.