

## Fox River Dams

- The 13 dams on the Fox River in Illinois are listed in Table below. Most of these dams were built during 1830-1850 to provide power for sawmills and flour mills, and ice during the winter. Over the years, these dams were improved and replaced, and they continued to provide power throughout the early part of the twentieth century.

Fox River Dams in Illinois			
Name	Location (river mile)	Type/function	Removal Status
Stratton near McHenry	98.9	Navigation, pool control	Not Being Considered
Algonquin	82.6	Channel	Not Being Considered
Carpentersville	78.8	Channel	<b>Planning for Removal</b>
Elgin	71.9	Channel (old hydropower)	<b>Under Consideration</b>
South Elgin	68.2	Channel (old hydropower)	<b>Under Consideration</b>
St. Charles	60.6	Channel	<b>Under Consideration</b>
Geneva	58.7	Channel	<b>Under Consideration</b>
North Batavia	56.3	Channel	<b>Under Consideration</b>
North Aurora	52.6	Channel/reaeration	<b>Planning for Removal</b>
Aurora	48.9	Channel	<b>Under Consideration</b>
Montgomery	46.8	Channel/reaeration	<b>Under Consideration</b>
Yorkville	36.5	Channel (modified)	<b>Modified w/ bypass</b>
Dayton	5.1	Hydropower	Not Being Considered

### *Dams in the Fox Waterway System*

- For public safety and ecosystem benefits, IDNR is considering removal of or modifications to a majority of the dams on the river. The dams in North Aurora and Carpentersville are in the planning stages of removal.
- The Fox River system is heavily used for recreation. The dams in Illinois along the Fox River provide for that recreation by maintaining water levels needed for boating.
- Stratton Dam and Algonquin Dam provide for recreational boating on the river and in the Chain of Lakes. The McHenry County Dam Act (615 ILCS 100), 1923-24, assigns IDNR the duty of maintaining the Stratton “*dam at a suitable height to properly provide a*

*sufficient depth of water north of the dam in the Fox River and the lakes adjacent thereto and connected therewith to enable said water to be navigable.”* In light of the McHenry County Dam Act, the primary objective of operating the Stratton Dam is to maintain a recreation pool in the Chain of Lakes. An operation manual, *Operation of Stratton and Algonquin Dams, Fox River February 2012* was developed in conjunction with the ISWS and outlines the competing operation objectives. This manual is available on the IDNR website at [www.dnr.illinois.gov/WaterResources/Pages/StrattonLockandDam.aspx](http://www.dnr.illinois.gov/WaterResources/Pages/StrattonLockandDam.aspx). The manual provides additional guidance for winter operations, ice jam conditions, low flow operations, and summer rain events. Recently completed dam improvements will double the capacity of the lock, improve the boat passage, and replace the five deteriorating sluice gates with three hinged crest gates.

- Operational goals of Stratton Dam are:
  - maintain a recreational pool,
  - utilize available storage in the Chain of Lakes to minimize regional flooding,
  - maintain minimum flows for water supply and aquatic habitat, and
  - limit flows during ice jam periods.
  
- It is possible that water levels may rise quickly in the Chain of Lakes because of high runoff events caused by rainfall and snow melt or other causes such as ice jams. Immediately downstream of the Fox Lake, water flows through a narrow channel around Johnsburg. This narrow river section is also extremely flat, which restricts the flow of water out of the Chain of Lakes, over five miles upstream of the gate structure at Stratton Dam. As a result, the gates cannot and do not directly control water levels in the Chain of Lakes during periods of high flow.
  
- The Stratton gates are opened in the fall to draw down the lake levels over the winter to utilize the available storage in the Chain of Lakes and minimize seasonal spring flooding. Sophisticated models are used to make river flow forecasts and aid in determining gate settings and timing with limited effectiveness during smaller rainfall events and essentially no impact during large flood events.