

# Bridgewater Hydro Station Work

## New Plan Minimizes Impact to Lake James in Summer 2011



To comply with revised federal guidelines, a program is under way to make improvements to the three dams that form Lake James. This is part of a nationwide effort by the Federal Energy Regulatory Commission (FERC) to increase the safety of dams during severe earthquakes. Construction of seismic improvements is complete at Paddy Creek Dam and Catawba Dam; construction is scheduled to begin on Linville Dam in early 2012.

The Bridgewater Hydro Station, located at the toe of the Linville Dam, has to be relocated to facilitate construction of the seismic improvements on the dam. Construction of a new powerhouse further downstream is under way. After completing the new powerhouse, the old powerhouse will be removed. Repairs needed on the existing intake structure and connecting the new powerhouse require Duke Energy to operate Lake James at lower levels in late 2010 through spring of 2011.

Duke Energy recognizes this will impact businesses and recreation on Lake James. We have been working hard to develop a plan that lessens this impact. By separating the 90-day powerhouse outage into two shorter outages, we can complete the work while maintaining normal lake levels in the summer. We appreciate your understanding of this federally-required project.

- **Intake work (January to late March 2011)** – Lake James will be at about 85 feet (with 100 feet being full pond). Duke Energy will continue gradually lowering the lake in December 2010 and early January 2011 to achieve that level.
- **Connecting new powerhouse (late March to early June 2011)** – The Bridgewater Hydro Station will be out of service, and Lake James will immediately begin refilling in late March 2011. The lake will fill depending on the amount of rainfall received; this may result in spilling over the Paddy Creek and Catawba Dam spillways.
- **Normal lake levels (early June to August 2011)** – Duke Energy will operate Lake James at its normal operating range during the summer.
- **Switching to new powerhouse (September 2011)** – Duke Energy will need to lower Lake James in August 2011 to 95 feet for a brief outage in September 2011. Again, the lake will begin refilling based on rainfall. This will complete the transition to the new powerhouse, which is expected to begin operating in October 2011.

### Dock and Boat Preparations

Lake residents and businesses often elect to conduct dock, slip or shoreline improvements during times of lower lake levels. Please contact Duke Energy Lake Services at 800-443-5193 to obtain permits required to conduct work inside the lake boundary. At 85 feet, Lake James will be one foot lower than in December 2007 during the drought of record. Be thinking now about any arrangements needed for boat storage or transportation. Please be mindful how lower lake levels may affect your dock, and take precautions to protect it. Contact your pier contractor for advice.

### Steer Clear: Minimum Flow Valve

During the two outages at the Bridgewater Hydro Station in 2011, Duke Energy will provide supplemental flow downstream to minimize impacts to aquatic life and to support downstream water user needs. We will operate the Minimum Flow Valve on the Catawba Dam, which flows at 75 cubic feet per second. Because this water is flowing at high pressure, please heed signage and avoid this area for your safety.

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## Frequently Asked Questions

### **Why is a draw-down of Lake James necessary?**

Duke Energy is preparing for a federally-required construction project on the Linville Dam in 2012 to enhance stability in the event of a severe earthquake. A new powerhouse, which contains the turbines for hydroelectric power, is under construction now. Repairs needed on the existing intake structure and connecting the new powerhouse require Duke Energy to operate Lake James at lower levels from late 2010 through spring of 2011. During the intake repair work (January to late March 2011), a depth of 85 feet is needed to perform concrete repair work above water from a barge and to increase the safety of divers as they perform deeper gate repairs. While connecting the new powerhouse (late March to early June 2011) and while switching to the new powerhouse (September 2011), a drawdown is needed to provide storm runoff storage in Lake James to decrease the risk of flooding for lake residents and businesses.

### **Is the Linville Dam safe?**

Yes. The Linville Dam and all other Duke Energy dams are inspected regularly and are safe. This federal program is intended to improve the performance of existing dams during severe seismic events. It is unlikely our region would experience an earthquake the size of the ones used in FERC evaluations, but public safety is our top priority for communities surrounding our reservoirs.

### **Will downstream municipal water intakes be impacted by this project?**

Water released through the Minimum Flow Valve (MFV) on the Catawba Dam will supplement rainfall and natural stream flow downstream of Lake James and through the Upper Catawba River Basin to ensure municipal water intakes are not affected by lowering Lake James.

### **How will Duke Energy manage high-water events while connecting the new hydro station?**

Another benefit of conducting this work in two, shorter outages is that it reduces the risk of high water events. The existing powerhouse will operate from early June until it is taken out of service in September 2011, meaning Duke Energy will have a greater ability to manage lake levels during the summer months.

Duke Energy's Hydro Operating Center is staffed around the clock and expertly manages the Catawba-Wateree lake system as a whole by continually monitoring conditions and keeping the safety of downstream residents an utmost priority.

### **What provisions are you making for fish and other aquatic life during lower lake levels?**

We will operate the Minimum Flow Valve (MFV) on the Catawba Dam to provide additional flow downstream. The water flowing from the MFV is at high pressure; please be cautious and heed signage for safety.

The new powerhouse provides a unique opportunity to improve aquatic habitat long term as well. The state-of-the-art turbines that will be installed are designed to increase dissolved oxygen and provide a continuous flow of water through the hydro station.

### **Will I be able to have boat access through marinas, public access points or my own personal dock/pier?**

Unfortunately, boat access on Lake James will be limited from December 2010 through spring 2011. Some public access points and deeper marina docks may be usable in spring once the lake begins to refill. Boaters with shallower access points should be prepared for the boat storage or transportation arrangements you may need. Please be mindful how lower lake levels may affect your dock, and take precautions to protect it. Contact your pier contractor for advice. Duke Energy will monitor lake levels at public access ramps carefully and will temporarily close those that cannot support safe access. Canoe, kayak and small boat access should remain unaffected.

### **Do I need to take any special safety precautions while on Lake James?**

Since lower lake levels from late 2010 through spring of 2011 may expose hazards normally covered with water, please use caution while recreating on Lake James.

*Please note, time frames and lake levels are approximations, as weather may affect construction progress and lake management decisions.*

## Lake Level Updates

For updates during this project, please visit [www.duke-energy.com/lakes/levels.asp](http://www.duke-energy.com/lakes/levels.asp) or call 800-829-LAKE (5253) for special messages.

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