

Lake Davidson Fact Sheet

Where is Lake Davidson?

Lake Davidson straddles the Mecklenburg/Iredell county line along the I77 corridor and is approximately 341 acres. It is in the Catawba-Wateree watershed and is a part of Lake Norman via a culvert below I77. Lake Norman totals approximately 32,475 acres. Lake Cornelius lies to the south of Lake Davidson and is approximately 125 acres.

How and why does the Town of Davidson regulate boats on Lake Davidson?

When the Davidson Town Board first approved residential developments on the shore of Lake Davidson, they instituted a vision of “limited power-boating” for Lake Davidson. Beginning with Spinnaker Cove in 1980, they regulated the size of boat motors through zoning. Each of the succeeding Boards of Commissioners conditioned the approvals of plans of projects abutting Lake Davidson with a prohibition of motors greater than 10 horsepower at docks.

- Spinnaker Cove: Condition of approval of master plan, October 10, 1980.
- Woods at Lake Davidson: Condition of approval of master plan, September 28, 1993
- Spinnaker Point: Condition of approval of master plan, September 30, 1993.
- Lake Davidson Park: Condition of approval of master plan, November 11, 1997.
- Davidson Pointe: Condition of approval of master plan. Included in restrictive covenants. September 12, 2000.
- Spinnaker Reach: Ordinance language included in each boat slip agreement, June 10, 2007.

The horsepower limitation was written into Section 4.4.4 of the Davidson Planning Ordinance, approved in 2001: “All developments in the Lakeshore planning area shall include restrictive covenants that limit the size of boat motors to 10 horsepower if docked overnight or longer.”

Are there other zoning restrictions on lake properties?

The Davidson Planning Ordinance includes language requiring access to the lake in Section 4.4.4: “New development along the lake shall retain 100% of the lake shoreline for public use. This area may be for the exclusive use of the residents of the neighborhood or dedicated to the Town for general public use.” This means that the shoreline area can be HOA common area or publicly accessible by Davidson residents; it cannot be individually-owned private property.

All development in Davidson’s jurisdiction on the lakeshore must also comply with a 100’ buffer requirement, established in 2001, and the Watershed Protection Rules required by the state and incorporated into the Davidson Planning Ordinance.

Additionally, no individual docks are permitted on Lake Davidson. Only community boat slips are permitted.

What is the interlocal agreement?

The Davidson Board of Commissioners approved the interlocal agreement in October of 2007. The Mooresville Board of Commissioners has appointed two board members to a joint Lake Davidson Working Committee to review the lake issues.

The interlocal agreement would make uniform the restrictions on boats that are docked on or accessing Lake Davidson for most of the shoreline area.

For several years, the towns of Mooresville and Davidson have discussed an interlocal agreement that would regulate boat motors docked throughout Lake Davidson. The discussions began several years ago when a large residential development on the north shore of the lake seemed imminent. The agreement, in its draft form, includes the following points:

- 10 horsepower restriction for all boats docked at the lake in Mooresville's or Davidson's jurisdiction.
- No put-in areas allowed for boats over 10 horsepower. When development occurs on the north shore, the Transco Road put-in will be closed or adapted to 10 horsepower only.
- The towns will pursue a "no wake zone" for the lake.
- 100-foot vegetative buffers required at all new developments.
- The island will be a wildlife sanctuary.
- No individual docks will be allowed; boat slips at community docks only.
- A shoreline stabilization plan will be required for all new developments.

The agreement would be enforced through the towns' zoning and other land use regulations. Development in each town's jurisdiction would have to comply with the regulations.

Does the Town of Mooresville have a stated vision for the lake?

The Town of Mooresville has, in the past, agreed that Lake Davidson is a fragile ecosystem and should be protected. In their Mount Mourne and South Iredell Master Plan, approved in 2007, Guiding Principle 4 includes the provision for buffers around the lake and enhanced erosion control, prohibits discharge of stormwater, and asks for consideration of "restrictions on the size, speed, and number of watercraft allowed on the lake. Motorized watercraft cause shoreline erosion and bring accompanying litter and spills of gas and oil into the lake. Just a few speed boats on the very small lake can cause safety problems."

Additionally, the Master Plan states Mooresville's expectation for public accessibility: "A public access park to Lake Davidson is indicated at the end of the Transco Road peninsula. A similar public access park is under construction at the end of the Bridges Farm Road peninsula across the cove, to the east [Davidson's proposed town park]. These two projects encourage the development of a public shoreline park that allows a continuous jogging, walking, and biking trail along the water's edge while protecting the water quality for environmentally fragile Lake Davidson."

Is there public access to the lake in Davidson?

Yes, there is public access and the town is working on creating more access. The Town of Davidson wants to increase public access to the lake, not restrict it.

Adhering to the citizen-driven principles in the Davidson General Plan in 1993 and the Davidson Land Plan, approved in 1996, lakeshore developments are required to have public access to the lake. The Davidson Planning Ordinance includes language requiring access to the lake in Section 4.4.4: "New development along the lake shall retain 100% of the lake shoreline for public use. This area may be for the exclusive use of the residents of the neighborhood or dedicated to the Town for general public use."

There are three current or planned public access points in Davidson:

- Davidson Bay: When the Davidson Bay development on Armour Street is complete, there will be a public access point, including a public canoe/kayak put-in and fishing pier. Through the FERC relicensing process, Duke Energy will contribute \$130,000 for the construction of that facility.
- South Shore: On the south shore of the lake, directly north of Davidson Day School, is a nine-acre preserve which will be developed with trails and picnic areas.
- Davidson Pointe: A public trail has been constructed along the shore and park land has been deeded to the town.

On October 22, 1996, Crosland Land gave the town the option to obtain and make public all open space within Lake Davidson Park at no cost provided the town is prepared to improve and maintain these areas. This has not been instituted, and this agreement does not affect the dock, which is, and will remain, private.

How do boats access the lake?

There is only one put-in point used by the public for power boats in Lake Davidson. This is at the end of Transco Road in Mooresville's jurisdictional area. It was not built as a boat ramp. Most likely, it was an existing road that was flooded when Lake Norman was created. Most of the power boats that use the lake or are docked on the lake acquired access through Transco Road.

Under the new relicensing agreement, Duke Energy will contribute \$130,000 to build a public access canoe/kayak boat launch and fishing pier to be located within Davidson's town limits.

What is planned for the north shore of the lake?

Further information is pending from Mooresville. A 400 – 600 residential unit subdivision was proposed for the area several years ago.

Who has jurisdiction over the lake?

Several entities share jurisdiction over the lake:

- The waters are owned by the citizens of North Carolina.
- The land to the high water mark is owned by Duke Energy. Duke must comply with the Clean Water Act, the Endangered Species Act and other federal mandates.
- By virtue of Duke's electric dams, the Federal Energy Regulatory Commission (FERC) has jurisdiction over the hydroelectric project. That includes how the lakes and certain river reaches are managed and how the shoreline – up to the project boundary or full pond – is utilized. FERC also regulates habitat and recreational resources.
- The Lake Norman Marine Commission (LNMC) has jurisdiction over all safety-related issues. They "sign off" on pier permits, marinas, etc. They approve, but don't enforce, no-wake zones. Their jurisdiction includes the shoreline up to one mile from full pond level.
- The NC Wildlife Resources Commission (WRC) has a memorandum of agreement with Duke (approved by FERC) to construct, maintain, and manage boat access areas. They also license boats and regulate hunting and fishing. The WRC regulates uses on the water, and are empowered to adopt rules restricting boat speed and activity. They are charged with enforcing boating laws and regulations.
- The Charlotte-Mecklenburg police department has jurisdiction to enforce boater safety regulations on the lake. They implement swift water rescue and emergency medical response when needed.
- The NC Department of Environment and Natural Resources (DENR) regulates erosion and sedimentation control. Enforcement is handled by Mecklenburg County.

Who has jurisdiction over the shoreline?

- All of the shoreline in Mecklenburg County, as well as two parcels in Iredell County, are in Davidson's zoning jurisdiction.
- One subdivision on the east shoreline is in Iredell County's jurisdiction
- The remainder of the shore is in Mooresville's zoning jurisdiction.

What about skiers?

Two ski clubs and one collegiate ski team have utilized the lake. Ski clinics have been held on the lake, and in the past, a ski school operated there.

Is Lake Davidson fed by springs? How is water exchanged in the lake?

There is evidence of small springs in the pond at Roosevelt Wilson Park. If Lake Davidson is fed by springs, the effect is minimal, and negated by evaporation. The lake level would rise constantly and water would run through the causeway to Lake Norman if the springs in the lake were of greater magnitude.

Lake Davidson is a relatively closed system with little exchange of water with Lake Norman. The exchange of water with Lake Norman is minimal. The culvert under I-77 connecting Lake Davidson and Lake Norman is built high because its purpose is to take care of overflow. Duke controls the overflow according to predetermined *target levels* (optimal water levels) given to every lake on the Catawba. Target levels are established to ensure Duke's ability to generate power and to provide recreational activity on the lakes. Duke takes target levels seriously and adjusts the flows through the whole Catawba system of reservoirs to maintain these levels. When a lake exceeds its target level, Duke draws down the lake level by generating additional hydroelectric power.

The target levels of Lake Norman range from a high of 98 feet to a low of 94 feet, respectively 2 feet and 6 feet below full pond level of 100 feet (levels are expressed in feet in relation to full pond, where full pond is 100.0 feet). Thus, when Lake Norman's water exceeds its target level, be that anywhere from 98 to 94, Duke adjusts the amount of water flowing through the hydros in order to maintain the target level.

The culvert connecting Lake Davidson and Lake Norman had 0.5 feet of water in it on June 10, 2008 when the water level of Lake Norman was 98. Thus, whenever the water level is 97.5 or below, Lake Norman is below the level of the culvert and thus no water flows into Lake Davidson. During dry seasons, Lake Davidson is entirely dependent on rainfall and surface runoff. When there is little to no rainfall or surface runoff, Lake Davidson is also below the level of the culvert. A dry culvert means that and there is no water exchange of any kind between the two lakes.

The *target* level in Lake Norman is below the Lake Davidson culvert for more than half the year, from mid-October through late April. Duke's 13-month water level chart for Lake Norman, available at <http://www.duke-energy.com/lakes/levels/lake-norman.asp?lake=lake-norman&range=13monthhistorical>, shows target levels at or below 97.5 feet from October 11, 2007 through April 23, 2007. By design, there would be no water exchange between the two lakes during this period.

The *actual* water levels on the chart reveal a starker reality. The actual level of water in Lake Norman was below the 97.5 exchange level from the first day on the 13-month chart, May 11, 2007, until March 14, 2008. This is at least a stretch of 10 months – and for this 10-month stretch, the culvert was dry. During this time, Lake Davidson was at its lowest level in memory. Measurements taken demonstrate that Lake Davidson was as low as 3 feet below the water exchange level for much of the summer of 2007.

In addition, the *actual* water levels show that the highest level in Lake Norman was 98.5, reached for 3 days (April 8-10, 2008). This means that the most water in the culvert over a 13-month period was 11 inches, and that for only 3 days.

Another indication of water exchange is a lake's hold-time, which is the amount of time water is expected to stay in a lake. Lake Davidson's hold-time is 1.3 years. As a point of reference, Lake Norman's hold-time is 206 days, Lake Wylie's is 32 days, and Mountain Island Lake's is 12 days.

How many boat slips are currently on the lake?

The Woods at Lake Davidson: 36

Spinnaker Cove: 18

Spinnaker Point: 16

Spinnaker Reach: 14

Lake Davidson Park: 10

Davidson Pointe: 16

Estates at Lake Davidson: 6, with 5 individual docks at adjacent cove

Is camping allowed on the island in Lake Davidson?

Camping is not allowed on any of the islands in Lake Norman or Lake Davidson.

Lake Davidson Timeline

- 1963 Lake Norman, Lake Davidson, and Lake Cornelius created.
- 1980 Town of Davidson created first powerboat restriction for Lake Davidson by conditioning the approval of the Spinnaker Cove master plan.
- 1993 Watershed Protection Rules adopted.
- 1993 Spinnaker Point boat restriction a condition of approval of master plan.
- 1993 Woods at Lake Davidson boat restriction a condition of approval of master plan.
- 1997 Lake Davidson Park boat restriction a condition of approval of master plan.
- 2000 Davidson Point boat restriction a condition of approval for master plan.
- 2001 Horsepower limitation written into Davidson Planning Ordinance. "All developments in the Lakeshore planning area shall include restrictive covenants that limit the size of boat motors to 10 horsepower if docked overnight or longer."
- 2001 Public access written into Davidson Planning Ordinance. "New development along the lake shall retain 100% of the lake shoreline for public use. This area exclusive use of the residents of the neighborhood or dedicated to the Town for general public use."
- 2001 Shoreline vegetative buffer requirement of 100' adopted by the Town of Davidson.
- 2006 Mooresville and Davidson begin discussion of jointly protecting the lake.
- 2007 Spinnaker Reach boat slip agreement approved with 10hp restriction.
- 2007 Davidson Board of Commissioners approved interlocal agreement.
- 2008 Davidson-Mooresville Lake Davidson Working Committee created.