

**Yadkin River Flooding Issues
May 27, 2003**

Recently we have had a number of remarks and accusations surface, concerning recent flood events. As we interpret these comments, most concern events that have occurred west of Interstate 85, in the river valley; and in the vicinity of the confluence of the Yadkin River and the South Yadkin.

Some people have chosen to ignore the effects of record rainfall and river flows; and have blamed the river flooding on the water levels in High Rock Lake.

To understand the flooding that took place in the Yadkin River and the South Yadkin River basins, one must first understand the tremendous volumes of water that were recorded March 20, 21, and 22. Similar high flows were again recorded in mid-April. Major water flows entering the west end of High Rock Lake can be estimated by looking at recorded at three (3) government gage stations. Readings at these three stations for the March events were as follows:

	Normal Avg. Flow	March Peak Flow	Gage Datum	Peak Flow Ht.
Yadkin at Yadkin College	2,200 cfs	42,600 cfs	638.45 MSL	25 ft
South Yadkin	300 cfs	11,900 cfs	663.62 MSL	19 ft
Second Creek	100 cfs	2,700 cfs	642.31 MSL	12 ft.
Total Recorded Flow	2,600 cfs	57,200 cfs		

The huge flow recorded caused the Yadkin River to rise to the bridge beams at the bridge on US 64 west of Lexington. The flood water elevation at US 64 was 663.4 M.S.L; approximately 40 feet above the level of High Rock Lake. At normal flow, the river at this point is about 16 ft. above the lake. It must be noted the three (3) flow measuring stations are many miles up-river of the headwaters of High Rock Lake, normally considered to be the lake zone beginning about 2 miles west of US29 / I-85 and continuing about 5 miles east of I-85.

Yadkin at Yadkin College Flow Station	22 miles up-river
South Yadkin Flow Station	18 miles up-river
Second Creek Flow Station	13 miles up-stream

Considering the watershed area below and between the flow measuring stations and the High Rock Lake headwaters, it is reasonable to estimate at least 70,000 cfs was entering the western end of High Rock Lake on March 21.

As this huge flow of water moved downstream, it encountered impediments to flow at several locations where the natural topography creates "choke points". This occurs at the lower end of Horseshoe Neck, just below Boones Cave State Park, and again at the old US 29 bridge at York Hill. At the US 29 bridge, the distance between the river banks narrows to about 700 feet. These natural geographic flow restrictions, together with record amounts of water, are the reasons flooding occurred all over the river basins in Davidson, Rowan, and Davie Counties.

Considering recorded flood elevations from 10' to 20' above normal at points 10 miles or more upstream from the confluence of the Yadkin River and the South Yadkin River, it is very easy to visualize the river valley flood event that occurred on March 21, 2003. A trip up the river after this flood revealed the extent of the flooding, with many trees knocked down high above normal river levels.



From US 64 to the confluence of the Yadkin River and the South Yadkin (the "Point") the river falls about 10'-15' under normal flows. At the Point the river banks are only about 5'- 6' above High Rock Lakes full pool elevation of 623.9' MSL. The approximate 5 mile stretch between the Point and US 29 is almost dead level, and a huge flood plain. Claims of 8' to 10' flooding in this area on March 21-22 2003 are easily understood when factual information of the river flows are reviewed.

One of the most vocal complainers about the March floods on the rivers (Yadkin and South Yadkin) was Mr. Ronnie Lee Qualkenbush. Mr. Qualkenbush has alleged his campground was flooded because the level of High Rock Lake was "too high". To understand this complaint, we went upriver from the lake to find Mr. Qualkenbush's campground. The campground is located 5 miles west of the I-85 Bridge (N35-44.803 W80-27.639). The RV's on the campground are parked at the very edge of the river bank. The day we observed this camp, 5/25/2003, the ground the campers were parked on was about 5' above the water. This is confirmed by a nearby USGS benchmark with an elevation of 629' MSL.



*Qualkenbush Campground – Hannah Ferry Road
Photographed May 25, 2003 @ 10:40 am*

We were absolutely amazed to find anyone would put facilities this close to a major river, and then claim that lake levels miles downstream caused his property to incur flood damage. Common sense should tell anyone that they are at risk of flooding when they choose to locate on a river bank.

Adjacent to Mr. Qualkenbush's campground is the pump station owned by the City of Salisbury. The City of Salisbury apparently decided to join Mr. Qualkenbush in complaining about flooding in March 2003. The pump station is on the same low ground as the campground, and flooding is inevitable during flood events such as were experienced in March 2003. Following is a recent picture of the pump station.



*Pump Station – City of Salisbury and Alcoa Boat Launch Ramp
Photographed May 25, 2003 @ 10:40 am*

After review of the flooding complaints, the High Rock Lake Association has concluded there is no basis to allegations that the March flooding was a result of high water levels in High Rock Lake. During the March event, Alcoa had all flood gates open at times at High Rock Dam, and to our best knowledge High Rock Lake never rose above full pool elevation of 623.9' MSL (USGS datum).

The March 2003 river flows were among the all-time record high flows in the Yadkin River Valley, and especially on Second Creek and the South Yadkin River. It is disappointing to see how quickly people can forget the drought problems of the past several years, and start complaining when Nature provides the rainfall needed to recover from the drought.

People who locate in river bottoms and flood plains should consider their facilities temporary and be willing to bear the loss when floods come, because it will happen, sooner or later.

Appendix A

The Qualkenbush Campground is located in Rowan County, at the end of Hannah Ferry Road, adjacent to the City of Salisbury primary raw water pump station. According to Rowan County public records Mr. Qualkenbush owns 2 adjoining parcels of land totaling 2.16 acres. The Rowan County Tax Assessor values the land at \$47,617.00 and the improvements at \$21,000.00.



*Qualkenbush Campground
Rowan County Tax Map/Parcel 307 050 & 307 02801
Photographed May 25, 2003 @ 10:40 am*