

DENR
November 8, 2011

Tom Reeder, DENR handout
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**North Carolina Reservoirs developed within the last 20 years:
compiled on September 26, 2011**

The following information is based on records maintained by the Division of Water Resources.

2009 Rocky River Lower Reservoir Expansion - Charles L. Turner Reservoir (Siler City)

Siler City increased the impounded area of an existing reservoir from 24 acres to 162 acres by constructing a new dam downstream of the existing one. Consultation on the proposed project began in 1989. A draft Environmental Assessment was submitted in November 2001 and the final EA was submitted in 2002. DENR issued a water quality certification, a mandatory precursor to receive the necessary federal permit, in May 2006. The project was completed and the town obtained final approval to impound water in October 2009. This impoundment, in combination with another reservoir upstream, provides storage for 440 million gallons of water with an estimated yield of 4 million gallons per day.

2008 Horse Creek Reservoir (Southern Pines -water pumped from Drowning Creek)

May 2007 planning began for an off-stream raw water storage reservoir. An Environmental Assessment was submitted for the project. A finding of no significant impact (FONSI) and permission for construction were issued in December 2008. The impoundment covers 36 acres and provides off-stream storage for 140 million gallons of water.

2002 Nicks Creek Reservoir Modifications (Town of Carthage)

In the summer of 2002 reservoir modifications were completed under temporary permits issued because of extreme drought conditions. The temporary permits expired in 2003. Subsequent applications and review led to a final permit being issued in 2005. The impoundment provides on-stream storage of 1 million gallons of water.

2000 West Fork Eno Reservoir (Town of Hillsborough)

Hillsborough constructed a new on-stream water supply reservoir on the West Fork of the Eno River. Consultation and scoping for an Environmental Impact Statement began in June 1993 and a final EIS was submitted in June 1994. In 1998, an "Approval to Construct" was issued by DENR Division of Land Resources. This reservoir was completed and permission to impound water was granted in October 2000. The impoundment covers about 206 acres providing on-stream storage for 786 million gallons of water with an estimated yield of 1.8 million gallons per day.

1999 Buckhorn Dam and Reservoir Expansion (City of Wilson)

The City of Wilson expanded an existing reservoir on Contentnea Creek by constructing a dam downstream. In May 1990 Wilson submitted preliminary plans for operation of an expanded reservoir. In June 1991 DWR confirmed previously recommended minimum flow requirements and provided guidance for the Environmental Assessment. Design

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began in 1996 and in 1998 construction began. The project was completed in 1999. Buckhorn Reservoir covers over 2300 acres providing storage for 6.7 billion gallons of water with an estimated yield of 26.7 million gallons per day.

1993 Burlington's Mackintosh Reservoir

The City of Burlington constructed a water supply reservoir on Big Alamance Creek. Consultation meetings between Burlington, the Office of Water and Air Resources, and US Army Corps of Engineers began at least as early as 1972. In 1976 DWR provided minimum flow recommendations for the proposed impoundment. In 1987 the COE requested agency review of the documentation submitted to support the request for a dredge and fill permit. The permit was issued sometime after that and construction began in 1991. Lake Mackintosh reservoir was completed in 1993. The impoundment covers over 1100 acres and provides storage for 7 billion gallons of water with an estimated yield of 36 million gallons per day

1993 Lake Howell (Cabarrus County/Water & Sewer Authority of Cabarrus County)

Cabarrus County constructed a water supply reservoir on Coddle Creek. During 1985 the department consulted with the county and DWR supplied minimum flow recommendations in July 1985. After review of environmental impact evaluations and acquisition of necessary permits the impoundment was constructed in 1992-1993. Lake Don T. Howell encompasses 1300 acres and provides over 5 billion gallons of storage that is estimated to reliably yield 28 million gallons per day.

1992 Stewarts Creek Reservoir Expansion (Mount Airy)

The height of an existing barrier was raised to increase the capacity of the pumping pool for the Town of Mount Airy's water treatment plant. Request for expansion was submitted in 1989 and DWR provided minimum release recommendations in October 1989 and a permit to construct was issued April 1992. The impoundment provides on-stream storage for 300 million gallons of water with an estimated yield of 14 million gallons per day.

1991 Back Creek Reservoir (Graham-Mebane Water Supply)

The cities of Graham and Mebane constructed a water supply reservoir on Back Creek. Consultation meetings were held November 1986. DWR provided minimum release recommendation in February 1987. The reservoir was completed in 1991. The impoundment covers about 650 acres and provides on-stream storage for 2.8 billion gallons of water with an estimated yield of 12 million gallons per day.

HISTORY OF RANDLEMAN RESERVOIR
(state approvals are highlighted)

As a federal flood control project:

1937 – US Army Corps of Engineers proposed dam on the Deep River above Randleman as part of a flood control project for the Cape Fear River

1968 – Congress authorized \$11 million dollar/ 3,000 acre Randleman Lake project for flood control, water supply and recreation

1976 – First U.S. Army Corps of Engineers Environmental Impact Statement

1987 – After spending \$6.1 million on engineering, surveying, planning and environmental impact statements, the Corps of Engineers withdrew its support for the federal project because the costs would outweigh the flood control benefits. By that date, the estimated costs of the project had reached \$135 million.

As a regional water supply project:

1987-1988 – Piedmont Triad Regional Water Authority proposed a smaller project to be funded by local government as a water supply. Estimated cost: \$67 million for a 6,000 acre project.

1988 – Sierra Club, Clean Water Fund of N.C., Audubon Society, Deep River Coalition, Conservation Council of N.C., and League of Women Voters asked the administration of Gov. Jim Martin to order a new environmental impact statement for the project arguing that the 1975 Corps of Engineers EIS was “inadequate and out of date”.

1990 – The Piedmont Triad Regional Water Authority received a water quantity/quality study from consultants that concluded the proposed reservoir could produce water acceptable for use as a public water supply.

1991 – The Water Authority released a revised Draft EIS; biological and aquatic studies began on the project area.

1991 – Based on the DRAFT EIS, the Environmental Management Commission authorized the Authority to use the power of eminent domain to acquire land for the reservoir and also approved a transfer of water from the Deep River to the Haw River.

1994 – Piedmont Triad Regional Water Authority prepared an initial wetland mitigation plan to satisfy requirements of both Section 404 (the Corps of Engineers permitting program) and Section 401 (state water quality certification) of the Clean Water Act.

1995 – Preliminary design work on the dam began.

1996 – Archaeological and architectural studies of the project area began. Dam design and land acquisition continued.

1997 – Revised Draft EIS released for public comment.¹

1998 – Piedmont Triad Regional Water Authority consultants completed studies of the contaminated Seaboard Chemical and Landfill sites adjacent to the Deep River and concluded concentrations of toxins would be within drinking water standards.

1998 – N.C. Environmental Management Commission (EMC) completed a rulemaking to classify all waters of the Randleman Lake Watershed for water supply uses, designate the area as Critical Water Supply Watershed and put in place standards to protect the proposed water supply from excess nutrients.

1998 – The Authority submitted an application to the N.C. Division of Water Quality for a Section 401 Water Quality Certification.

1999 – In March of 1999, the N.C. Division of Water Quality issued the Section 401 Water Quality Certification for the project. (The Corps of Engineers cannot issue a Section 404 Clean Water Act permit to fill waters and wetlands – required for dam and reservoir construction – unless the state certifies under Section 401 of the Clean Water Act that the project will meet state water quality standards.)²

2000 – In December 2000, the Corps of Engineers published the final EIS/Record of Decision on the Randleman Reservoir project.

2001 – April 6, 2001, the Corps of Engineers issued the Section 404 Clean Water Act permit for filling waters and wetlands to construct the Randleman dam. Construction began in August of 2001.

¹ Since the Corps of Engineers' Section 404 permit for the dam required an EIS under the National Environmental Policy Act, the Corps ultimately had responsibility for the adequacy of the Randleman Dam EIS. As a result, the Corps determined when the Draft EIS was complete; published the revised Draft EIS for public comment; responded to comments; and published the Final EIS and Record of Decision (the selection of the preferred project alternative from the alternatives described in the EIS).

² The American Canoe Association and the Deep River Coalition appealed the approval of the Section 401 Certification. The legal challenge ended with a 2004 N.C. Court of Appeals decision upholding the state action.