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ENVIRONMENTAL MANAGEMENT COMMISSION

Corrected Certificate Authorizing the Piedmont Triad Regional Water Authority To Use the Power of Eminent Domain and to Divert from One River to Another Under G.S. 162A-7 and 153A-285.

On August 18, 1988 the Piedmont Triad Regional Water Authority (PTRWA) petitioned the Environmental Management Commission (EMC) for approval to use the power of eminent domain and to divert water from one river to another in order to purchase land and construct and operate Randleman Lake.

As part of its review of the Randleman Lake project under General Statutes 162A-7 and 153A-285, the EMC held a public hearing in Randleman, North Carolina on February 6, 1991. A record of that hearing was included in the Review Document and Final Environmental Impact Statement (EIS) issued on October 18, 1991. The EIS was reviewed and approved by the State Clearinghouse on November 15, 1991. The Review Document and Final Environmental Impact Statement and comments on the EIS received by both the State Clearinghouse and the Division of Water Resources were mailed to EMC members on November 26, 1991. The EMC considered the PTRWA's petition at its regular meeting on December 12, 1991. According to G.S. 162A-7, the EMC shall issue certificates only to those projects which it finds to be consistent with the maximum beneficial use of the water resources in the State and shall give paramount consideration to the statewide effect of the proposed project rather than its purely local or regional effect. In making this determination, the Commission shall specifically consider:

1. The necessity of the proposed project;
2. Whether the proposed project will promote and increase the storage and conservation of water;
3. The extent of the probable detriment to be caused by the proposed project to the present beneficial use of water in the affected watershed and resulting damages to present beneficial users;
4. The extent of the probable detriment to be caused by the proposed project to the potential beneficial use of water on the affected watershed;
5. The feasibility of alternative sources of supply to the petitioning authority and the comparative cost thereof;
6. The extent of probable detriment to be caused by the use of alternative sources of supply to present and potentially beneficial use of water on the watershed or watersheds affected by such alternative sources of supply;
7. All other factors as will, in the Commission's opinion, produce the maximum beneficial use of water for all in all areas of the State affected by the proposed project or alternatives thereto.

The members of the EMC reviewed and considered the hearing record, the Review Document, the Final Environmental Impact Statement, the final agency and public comments relating to the Randleman Lake project, and the statutory criteria specified above. From the foregoing, the Commission makes the following:

Findings

(1) Necessity of the Proposed Project:

Additional water supply sources will be required in the region served by the members of the PTRWA by about the year 2000 to 2005. The proposed Randleman Lake, with a yield of approximately 48 million gallons per day (MGD), would supply the region's needs until the year 2040 at least. Of the members of the PTRWA, the City of Greensboro and the Town of Randleman have the most urgent need for water. Based on PTRWA's special study to determine the impact of water conservation on the need for an additional supply, the EMC concluded that a reasonable conservation program could delay the need of a new water supply source for five years, or until the 2005-2010 period.

(2) Whether the proposed project will promote and increase the storage and conservation of water:

The Randleman Lake project will increase the storage of water in the Deep River Basin from about 4.4 billion gallons to 22.4 billion gallons. By storing water during high flow periods and releasing water during low flow periods, Randleman Lake will increase the minimum flows of the Deep River. Up to 28.5 million gallons of water per day will be diverted from the Deep River Basin to the Haw River Basin, and up to 2.0 million gallons will be diverted to the Yadkin River Basin. Constructing Randleman Lake will require stricter protection of the watershed.

(3) Extent of the probable detriment to be caused by the proposed project to the present beneficial use of water in the affected watershed and resulting damages to present beneficial uses:

The operation of the Randleman Lake project involves the diversion of a portion of the lake's water to Greensboro and High Point, to be discharged into the Haw River and Yadkin River Basins. This diversion of up to 30.5 million gallons of water per day will reduce the average annual flow of the Deep River by a maximum of 27 percent at the dam site to 3 percent downstream at Moncure near the confluence of the Deep River and Haw River. Randleman Lake will flood one small non-operating hydroelectric site (Coltrane's Mill) and reduce hydroelectric generation at nine other operating sites by an estimated 5 to 15 percent. The PTRWA will negotiate with the owners of these hydroelectric facilities to adjust releases from Randleman Lake to minimize its overall impacts. The 7-day 10-year low flow of the Deep River at the Randleman dam site is slightly less than 10 cubic feet per second (cfs). Randleman Lake will release a minimum flow of 30 cfs under normal conditions, thereby providing an augmented flow downstream during dry periods. The quality of the discharge will also be better than the present flow in the Deep River because of the dilution and natural sedimentation

and assimilation of pollutants in a reservoir. There will therefore be a slightly positive effect on downstream communities who use the Deep River for water supply and wastewater assimilation. During extreme dry periods when the volume of water in Randleman Lake decreases to less than 60 percent of its storage capacity, the minimum flow will be reduced to 20 cfs and 10 cfs in stages. When that occurs, PTRWA members will implement a combination of voluntary and mandatory water conservation measures to reduce the demand on that storage. However, even under the worst drought that has occurred in the 58 years of streamflow records, more than the 7-day 10 year low flow will still be released from the lake for downstream needs. In summary, Randleman Lake will have a negative impact on hydroelectric facilities and a small positive impact on downstream water supply and wastewater facilities.

(4) Extent of the probable detriment to be caused by the proposed project to the potential beneficial use of the water on the affected watershed:

While future use of the waters of the Deep River downstream of Randleman Lake may double or triple in years to come, the impact of Randleman Lake will be small because of its ability to increase minimum flows. The water diverted from the Deep River to North and South Buffalo Creeks in the Haw River Basin and to Rich Fork Creek in the Yadkin River Basin as a part of the Randleman Lake project, is not expected to have a significant impact on erosion or flooding in these creeks.

(5) Feasibility of alternative sources of supply to the petitioning authority and the comparative cost thereof:

The Randleman Lake Environmental Impact Statement compares the recommended plan with several alternative reservoir sites. Other reservoir sites are feasible on paper and some of them would be superior to Randleman Lake in certain specific respects. However, the most promising alternatives (Altamahaw Lake and Benaja Lake/Polecat Creek Lake) are located primarily in Rockingham County. Because of a State law (Chapter 973, S.B. 1404 of the 1989 Session Laws) requiring approval by the Rockingham County Board of Commissioners before an outside local government acquires land for a public project, implementation of these alternatives would be difficult. Also, the comparative rating of environmental impacts of the alternative reservoir sites showed that Randleman Lake had a smaller total environmental impact. Comparative capital costs are as follows:

	<u>Yield (in MGD)</u>	<u>Capital</u>	<u>Cost Per MGD</u>
Randleman Lake	48	\$ 96,331,000	\$ 2,010
Upper Deep River Lake	40	84,929,000	2,120
Altamahaw Lake	48	90,649,000	1,890
Benaja Lake/Polecat Creek Lake	40.3	87,148,000	2,160

(6) Extent of probable detriment to be caused by the use of alternative sources of supply to present and potential beneficial use of water on the watershed or watersheds affected by such alternative sources of supply:

(a) Upper Deep River Lake - This Lake would result in the diversion of up to 25.75 million gallons per day from the Deep River Basin and thus would have less of an impact on downstream hydroelectric projects than Randleman Lake. The Lake would inundate portions of the High Point Eastside Wastewater Treatment Plant; the existing High Point landfill, and the Seaboard Chemical Plant site, however.

(b) Altamahaw Lake - This Lake would result in the diversion of up to 17.5 million gallons per day of water from the Haw River Basin to the Deep River and Yadkin River Basins. The project would inundate 600 more acres than Randleman Lake, cover up 470 acres of wetlands and impact one State Historic Site.

(c) Benaja Lake/Polecat Creek Lake - This alternative would only involve minor diversions of water. It would flood a natural area of regional significance and cover up about 845 acres of bottomlands and 735 acres of wetlands.

(7) Other factors that will produce the maximum beneficial use of water for all in all areas of the State affected by the proposed project or alternative thereto:

(a) Water Quality of the Upper Deep River - Even though recent monitoring data from the Upper Deep River indicate that the quality of water is generally good, the Piedmont Regional Water Authority had an extensive water quality study conducted to predict the quality of water in Randleman Lake. All potential sources of pollutants were inventoried and future discharges of pollutants were projected. A model of the lake was developed that assumed that all pollutants discharged into the lake would remain dissolved or suspended in the water. Based on this very conservative model, the untreated water in the lake is projected to meet all standards for finished drinking water except aluminum, copper, and iron. These three metals will either settle out in the lake or be removed in the water treatment plant and will not be a problem in the finished water supply. The water quality study also predicted the level of nutrient enrichment (eutrophication) in Randleman Lake. While some over-enrichment is projected in the Upper Deep River area near High Point's Eastside wastewater treatment plant, the lake as a whole is predicted to be less eutrophic than many other water supply impoundments in the Piedmont of North Carolina.

(b) Seaboard Chemical Site and High Point Landfill - The lake water quality model included inputs of pollutants from these two waste sites which lie adjacent to the Deep River area of Randleman Lake. The Division of Solid Waste Management has indicated that certain specific pollutants in the landfill were omitted from the model but that the quantity of these pollutants was not going to be available until the City of High Point completes an intensive monitoring study of the landfill in 12 months. Based on the results of that study, the Division of Solid Waste Management will require

the City of High Point to develop a closure plan for the landfill to prevent the escape of significant amounts of pollutants from the site. Provisions of this plan may include covering the landfill with an impervious cover, constructing a slurry wall to stop the flow of leachate, and pumping and treating leachate from the landfill. Because Randleman Lake is not planned to be constructed until the year 2000, there is adequate time to carry out these corrective measures. The same rationale applies to the much smaller Seaboard Chemical site, which is now being cleaned up by 10 of its largest contributors.

(c) Water Quality of the Deep River Downstream of Randleman Dam - The PTRWA will construct a multi-level outlet device at the Randleman Dam in order to release high quality water downstream regardless of the water level in the lake. In the review of the environmental impacts of the Randleman Lake project, the City of Sanford noted that water in the Deep River below Carbonton Dam frequently exhibited low substandard dissolved oxygen concentrations during warm base flow periods (late summer and fall). Because Randleman Lake will supplement base flows during these dry periods and improve the quality of water flowing downstream, it should help improve the quality of water in the lower Deep River. The Division of Environmental Management will investigate the causes of the dissolved oxygen deficit below Carbonton Dam and recommend steps to rectify this situation.

(d) Archaeology and Historical Properties - A comprehensive cultural resources survey, with archaeological, architectural, and historic components, must be done by the PTRWA. Data recovery and mitigation at affected sites determined to be eligible for listing in the National Register of Historic Places is also required.

(e) Recreation - Adequate recreational facilities should be planned and constructed around the lake by local governments, private concessionaires, or State agencies.

(f) Wetlands - Approximately 25 acres of wetlands in the impoundment area of Randleman Lake will need to be mitigated and 55 additional acres in the buffer area around the lake protected. A mitigation plan for the loss of wetlands and fish and wildlife resources must be developed during the Federal Clean Water Act Section 404 permitting process.

(g) Fish and Wildlife - There is no evidence of endangered or rare fish and wildlife species living in the Randleman Lake project area. PTRWA has agreed to perform an intensive fish and wildlife survey of the Randleman Lake site and buffer area and to develop a mitigation plan based on the results of that survey.

(h) Old Randleman Town Dump - The PTRWA has tested surface water down gradient of the site and found no contamination. No soil testing or ground-water monitoring of this 2.91 acre site adjacent to the site of the proposed Randleman dam has occurred. The Division of Solid Waste Management will test this site in early 1992 and require any necessary clean up if contamination is found.

(i) Forest Resources - The PTRWA will use best management practices in the planning, care, and harvest of forests in the 3,000-acre buffer area, following recommendations by the Division of Forest Resources. The main purposes of the buffer area will be for the protection of lake water quality and preservation of wildlife habitat.

Decision

Based on the complete hearing record, the Commission, on December 12, 1991, by duly made motions and votes, granted the petition of the Piedmont Triad Regional Water Authority to use the power of eminent domain in purchasing land for the Randleman Lake project and to divert up to 30.5 million gallons per day of water from the Deep River Basin to the Haw and Yadkin River Basins in operating Randleman Lake. As a part of this grant of authority, the Commission required that the Piedmont Triad Water Authority maintain a minimum release of 30 cubic feet per second from Randleman Lake, except during extended droughts when the minimum flows could be lowered to 20 cubic feet per second and 10 cubic feet per second after the water stored in the lake fell below 60 percent and 30 percent of the total lake volume respectively. The Commission also required the PTRWA to determine the relationship between the dissolved oxygen concentration of water released from Randleman Lake and the dissolved oxygen concentration downstream in the Deep River to the confluence with the Haw River. If the water released from Randleman Lake does not meet ambient dissolved oxygen standards 1000 feet downstream from the dam, or if the dissolved oxygen content of the water released from Randleman Lake contributes significantly to ambient dissolved oxygen standard violations downstream in the Deep River, the PTRWA is required to install and operate appropriate oxygenation equipment at Randleman Dam.

This document shall constitute the certificate as required by G.S. 153A-285 and 162A-7, and is effective as of the Commission's action on December 12, 1991.

This the 21st day of February, 1992.


Charles L. Baker, Chairman

STATE OF NORTH CAROLINA
COUNTY OF RANDOLPH

BEFORE THE ENVIRONMENTAL
MANAGEMENT COMMISSION

IN THE MATTER OF:)
CERTIFICATE AUTHORIZING THE)
PIEDMONT TRIAD REGIONAL WATER)
AUTHORITY TO USE THE POWER OF)
EMINENT DOMAIN AND TO DIVERT)
WATER FROM ONE RIVER TO)
ANOTHER UNDER G.S. §162A-7)
AND 153A-285.)

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ORDER

ENVIRONMENTAL MANAGEMENT
COMMISSION

THIS MATTER came before the undersigned Chairman of the Environmental Management Commission for the correction of the Certificate previously entered herein, it appearing to the undersigned that the Certificate contains a drafting error limiting the study of dissolved oxygen levels in the Deep River to the waters below Carbonton Dam and the installation of oxygenation equipment at Randleman Dam. This error became apparent upon the correction of the minutes for the December 12, 1991 meeting of the Commission.

THEREFORE, IT IS ORDERED that the Certificate authorizing the power of eminent domain and the transfer of water from one river to another is corrected by replacing the last two sentences in the Decision paragraph on page 6, lines 19 through 26, with the following:

The Commission also required the PTRWA to determine the relationship between the dissolved oxygen concentration of water released from Randleman Lake and the dissolved oxygen concentration downstream in the Deep River to the confluence with the Haw River. If the water released from Randleman Lake does not meet ambient dissolved oxygen standards 1000 feet downstream from the dam, or if the dissolved oxygen content of the

water released from Randleman Lake contributes significantly to ambient dissolved oxygen standard violations downstream in the Deep River, the PTRWA is required to install and operate appropriate oxygenation equipment at Randleman Dam.

IT IS FURTHER ORDERED that the attached Corrected Certificate Authorizing the Piedmont Triad Regional Water Authority to Use the Power of Eminent Domain and to Divert Water from One River to Another under G.S. §162A-7 and 153A-285 be filed with the Recording Secretary and served upon the parties.

This the 21st day of February, 1992.


Charles L. Baker, Chairman
Environmental Management Commission

:emcorder.fc

CERTIFICATE OF SERVICE

This is to certify that the undersigned has this day served the foregoing Certificate of the Environmental Management Commission upon each of the following persons by depositing a copy in the United States Mail, First-Class Postage Prepaid except as otherwise indicated and addressed as follows:

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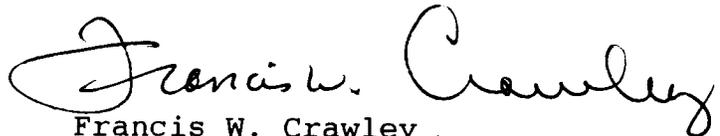
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Mr. Leroy Townsend, Jr.
Lockville Hydro Power Co.
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This the 25th day of February, 1992.

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