



September 14, 2022

Mr. Jim McAdoo
Water-Based Systems
Division of Water Resources
William R. Snodgrass Tennessee Tower
312 Rosa L. Parks Ave., 11th Floor
Nashville, Tennessee 37243

Re: Inter-Basin Water Transfer Report
Erwin Utilities
Erwin, Unicoi County, Tennessee

Dear Mr. McAdoo:

Enclosed is Erwin Utilities' Inter-Basin Water Transfer Report for the time period July 1, 2021, through June 30, 2022, which shows a decrease in the inter-basin water transfer of 10,176 gallons per day for this period.

According to Tennessee Rule 0400-40-13-.01(3), ground water withdrawals, which do not have potential to significantly impact the flow of a Tennessee surface water, are not required to apply for an Inter-Basin Water Transfer Permit. Please refer to the letter from Mr. Howard C. Brown, P.E. to Mr. Philip M. Simmons, P.E., dated October 12, 2001. Based on the flow studies submitted with the letter dated October 12, 2001, it was determined that Erwin Utilities is not required to apply for an Inter-Basin Water Transfer Permit.

We respectfully request that the decrease in inter-basin water transfer of 10,176 gallons per day be approved without a permit.

Additionally, per our phone conversation on September 6th, 2022, I noticed while updating our inter-basin data sheet that the data for 40% inter-basin transfer from June 20 to June 21 did not get updated from 143,239 gal/day to 143,448 gallons per day. This resulted in a minor error. The total increase is 8,133 gallons per day instead of the reported 8,342 gallons per day. Please see the revised form with the information updated to reflect this change.

Mr. Jim McAdoo
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If you have any questions about this, please feel free to contact me at (423) 735-4555 or by email at jfoster@e-u.cc.

Sincerely,

ERWIN UTILITIES

A handwritten signature in blue ink that reads "Richard Jason Foster". The signature is written in a cursive style with a long horizontal stroke at the end.

Richard Jason Foster, P.E.
Director of Water & Wastewater

RJF

Enclosure

C: Tom Bryant, Unicoi Water Utility District (email)
Clay Hepburn, Erwin Utilities (email)
Chuck Edney, Erwin Utilities (email)
Dawn Taylor, TDEC Environmental Field Office-Johnson City, DWR (email)

INTER-BASIN WATER TRANSFER FY22 - FY21

BASED ON 40% OF TOTAL WATER PUMPED

FROM ERWIN UTILITIES

TO UNICOI WATER UTILITY DISTRICT (206060)

<u>MONTH</u>	<u>DAYS</u>	<u>USAGE</u>	<u>GALLONS</u>	<u>GAL/DAY</u>	<u>ROLLING 90-DAY AVERAGE</u>		
					<u>GALLONS PER DAY</u>		
Jun-22	31	105903	10,590,300	341,623			
May-22	30	94000	9,400,000	313,333			
Apr-22	31	81500	8,150,000	262,903	305,953		
Mar-22	28	91100	9,110,000	325,357		300,531	
Feb-22	31	103200	10,320,000	332,903			307,055
Jan-22	31	115500	11,550,000	372,581	343,614		
Dec-21	30	105510	10,551,000	351,700		352,395	
Nov-21	31	104240	10,424,000	336,258			353,513
Oct-21	30	100530	10,053,000	335,100	341,019		
Sep-21	31	102240	10,224,000	329,806		333,722	
Aug-21	31	114620	11,462,000	369,742			344,883
Jul-21	30	102750	10,275,000	342,500	347,349		

MAXIMUM -----> 347,349 352,395 353,513

MAXIMUM 90-DAY PERIOD = 353,513 GAL/DAY

40% INTER-BASIN TRANSFER - Jun-22 = 141,405 GAL/DAY

40% INTER-BASIN TRANSFER - Jun-21 = 151,581 GAL/DAY

INCREASE IN INTER-BASIN TRANSFER = (10,176) GAL/DAY

ORIGINATING WATERSHED: FRENCH BROAD RIVER AND NOLICHUCKEY RIVER

RECEIVING WATERSHED: HOLSTON RIVER AND WATAUGA RIVER

GENERAL NOTES: (1) 40% INTER-BASIN TRANSFER BASED ON INFORMATION FROM UNICOI WATER UTILITY DISTRICT METER FOR JUL-21 THRU JUN-22
 (2) USAGE TAKEN FROM BILLING RECORDS FROM JUL-21 THRU JUN-22.

CONNECTIONS

RESIDENTIAL	1860
COMMERCIAL	9
INDUSTRIAL	0

INTER-BASIN WATER TRANSFER FY21-FY20

BASED ON 40% OF TOTAL WATER PUMPED

FROM ERWIN UTILITIES

TO UNICOI WATER UTILITY DISTRICT (206060)

<u>MONTH</u>	<u>DAYS</u>	<u>USAGE</u>	<u>GALLONS</u>	<u>GAL/DAY</u>	<u>ROLLING 90-DAY AVERAGE</u>	
					<u>GALLONS PER DAY</u>	
Jun-21	31	114840	11,484,000	370,452		
May-21	30	114750	11,475,000	382,500		
Apr-21	27	97040	9,704,000	359,407	370,786	
Mar-21	34	126760	12,676,000	372,824		371,577
Feb-21	27	107550	10,755,000	398,333		376,855
Jan-21	30	109710	10,971,000	365,700	378,952	
Dec-20	35	128200	12,820,000	366,286		376,773
Nov-20	27	89620	8,962,000	331,926		354,637
Oct-20	30	103190	10,319,000	343,967	347,393	
Sep-20	32	110180	11,018,000	344,313		340,068
Aug-20	29	96500	9,650,000	332,759		340,346
Jul-20	34	115580	11,558,000	339,941	339,004	

MAXIMUM -----> 378,952 376,773 376,855

MAXIMUM 90-DAY PERIOD = 378,952 GAL/DAY

40% INTER-BASIN TRANSFER - Jun-21 = 151,581 GAL/DAY

40% INTER-BASIN TRANSFER - Jun-20 = 143,448 GAL/DAY

INCREASE IN INTER-BASIN TRANSFER = 8,133 GAL/DAY

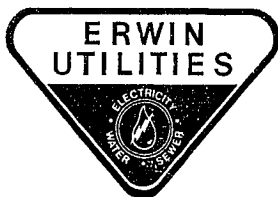
ORIGINATING WATERSHED: FRENCH BROAD RIVER AND NOLICHUCKEY RIVER

RECEIVING WATERSHED: HOLSTON RIVER AND WATAUGA RIVER

- GENERAL NOTES: (1) 40% INTER-BASIN TRANSFER BASED ON INFORMATION FROM UNICOI WATER UTILITY DISTRICT.
 (2) USAGE TAKEN FROM BILLING RECORDS FROM JUL-20 THRU JUN-21.

CONNECTIONS

RESIDENTIAL	1860
COMMERCIAL	9
INDUSTRIAL	0



ERWIN UTILITIES

244 LOVE STREET
P.O. BOX 817

ERWIN, TENNESSEE 37650-0817

Telephone (423) 743-1820
Fax (423) 743-1833

October 12, 2001

Mr. Philip M. Simmons
Environmental Protection Specialist, Permit Section
Division of Water Pollution Control
L & C Annex, 6th Floor
401 Church Street
Nashville, Tennessee 37243-1534

Re: Inter-basin Water Transfer Report
Erwin Utilities
Erwin, Unicoi County, Tennessee

Dear Mr. Simmons:

Enclosed is our Inter-basin Water Transfer Report for the time period January 1, 2000, through June 30, 2001 (Exhibit A). This report indicates an increase of 10,587 gallons per day over the amount that was reported last year. At first it appears that this increase in inter-basin water transfer will require an Inter-basin Water Transfer Permit. However, the Inter-basin Water Transfer Rules seem to indicate otherwise.

Rule 1200-4-13-.01, paragraph (3), tells who must apply for a permit, and the last part of subparagraph (3), (a), 2. states that, "provided, however, that in the case of ground water withdrawal this section shall only apply if the loss of the ground water has a significant potential to adversely affect the flow of a Tennessee surface water".

Rule 1200-4-13-.02 defines: "Significant potential to adversely affect the flow" means, in the context of whether a ground water withdrawal is likely to affect a surface water, a withdrawal of ground water in a location that:

- (a) is in close proximity horizontally and vertically to a stream; and
- (b) has ground water with a significant degree of hydraulic connection to the surface water.

Based on these rules, we feel that our inter-basin water transfer should be approved without a permit for the following reasons:

Mr. Philip M. Simmons

October 12, 2001

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1. Water for the inter-basin transfer comes from the Elks Club Well. This well is 305 feet deep and is located 300 feet horizontally across a four-lane highway from the nearest stream, which is North Indian Creek. The Division of Water Supply has determined that the Elks Club Well is not under the direct influence of surface water as defined in State Regulation 1200-5-1-.31. Copy of the approval letter from the Division of Water Supply is enclosed as Exhibit B.
2. The loss of ground water due to the increase in inter-basin water transfer has no significant potential to adversely affect the flow of a Tennessee surface water. This can be shown by increasing the amount of increase for this year by ten times to allow for future growth, and assuming that it is taken directly from the Nolichucky River, the losing river, during the time of minimum flow (3Q20 was used for this study). The 3Q20 low flow of the Nolichucky River at Erwin is 127 mgd. The reported increase in inter-basin water transfer of 10,587 gpd increased ten times is approximately 0.11 mgd. This amount taken from the 3Q20 is equal to 126.89 mgd. Flow studies were done for two cross sections of the Nolichucky River near Erwin at river miles 92.5 (Exhibit C) and 94.93 (Exhibit D). From these studies, it was found that removing 0.11 mgd from the 3Q20 low flow changed the water surface elevation 0.001 of a foot at mile 94.93 and less than 0.001 of a foot at mile 92.5.

From these flow studies, it can be seen that the loss of ground water has no significant potential to adversely affect the flow of the Nolichucky River, the losing river, because:

1. The ground water has no direct connection to the river.
2. To emphasize the affect of the additional inter-basin water transfer, it was increased ten times to allow for future growth.
3. The flow calculations to determine the water surface elevation at river mile 94.93 had to be carried out to one thousandth of a foot to detect any change at all in the water surface elevation due to the direct removal from the Nolichucky River of ten times the amount of the increased inter-basin water transfer. Even at this minute degree of accuracy, at river mile 92.5 no change could be detected in the water surface elevation.

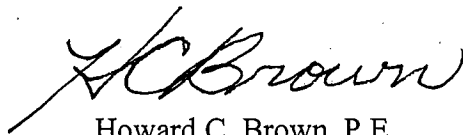
Even with the extremely liberal assumptions used above, there is no significant potential to affect the flow of the Nolichucky River.

Mr. Philip M. Simmons
October 12, 2001
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Since it is my understanding that the Inter-basin Water Transfer Rule does not apply in the case of ground water withdrawal which has no significant potential to adversely affect the flow of a Tennessee surface water, we hereby respectfully request that the increase in inter-basin water transfer of 10,587 gpd be approved without a permit.

Very truly yours,

ERWIN UTILITIES



Howard C. Brown, P.E.
General Manager

Enclosures (4)

- C: Lee Bennett, Unicoi Water Utility District, w/Enclosures
- Scotty Street, w/Enclosures
- Charles McNabb, w/Enclosures
- Andrew Tolley, Environmental Assistance Center-Johnson City, Division of
Water Pollution Control, w/Enclosures