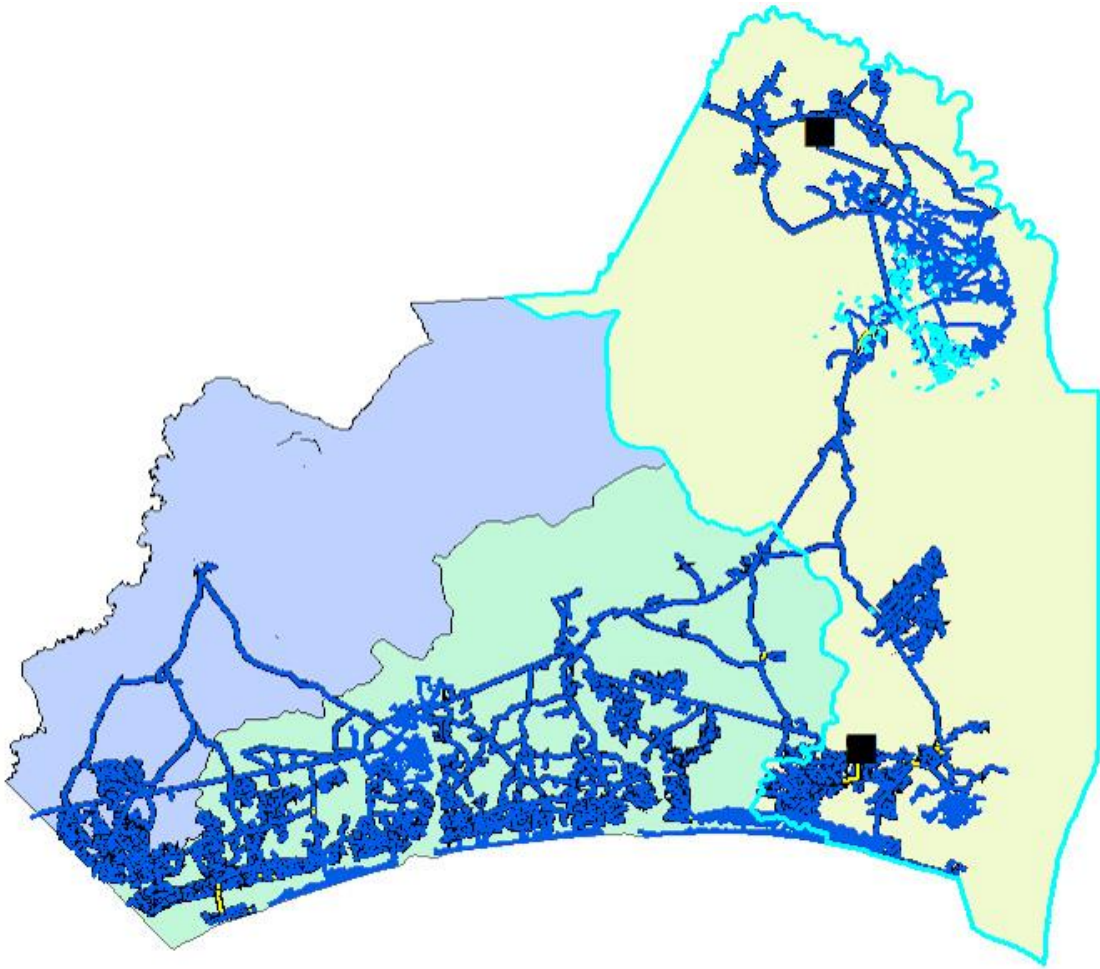


Brunswick County Public Utilities 2020 Interbasin Transfer Report



Brunswick County Public Utilities 2020 Annual Interbasin Transfer Report

Summary:

Brunswick County Public Utilities provides water to more than 46,000 retail customers and eight (8) wholesale customers including the towns of Oak Island, Shallotte, Ocean Isle, Leland, Southport, Ocean Isle, Holden Beach and H2Go a water authority. The County owns and operates the water systems in unincorporated towns within the county and provides water directly to individual retail customers in those areas. The Northwest Water Treatment Plant (WTP), is one of two facilities that the County operates and is the only surface water treatment plant.

Brunswick County had a grandfathered surface water transfer capacity of 10.44 MGD. The grandfathered capacity allowed the system to transfer water from the Cape Fear River Basin to the Waccamaw and Shallotte River Basins (each a sub basin to the Lumber Major River Basin). On February 17, 2009, Brunswick County submitted a Notice of Intent to Request an Interbasin Transfer (IBT) Certificate to the EMC. In that notice the County requested an authorized transfer of 18.35 MGD to the Shallotte River Basin and 0.94 MGD to the Waccamaw River Basin. These transfer amounts were based on a proposed expansion of the Northwest WTP from 24 MGD to 36 MGD and took into account population projections through the year 2040. In its final determination on November 26, 2013, the EMC authorized a transfer amount not to exceed a maximum of 17 MGD, calculated as a daily average of a calendar month, from the Cape Fear River Basin to the Shallotte and Waccamaw River Basins.

In 2020 Brunswick County experienced average weather for the months of May, June, July, August, and September. Brunswick County did issue water conservation messaging to its wholesale customers on May 21st to raise awareness and encourage customers to use water wisely. However due to the seasonal nature of our customer demand, July was our peak month for water production and transfers between basins (see Figure 1). Average daily water production for July at the Northwest WTP was 19.436 MGD or 81 % of its permitted capacity of 24 MGD, this represents a decrease of 0.5 % over 2019. Potable water usage by customer class in each basin was mixed, wholesale water usage was up for most beach communities with the exception of Ocean Isle Beach. Industrial water usage was similar with some industries showing robust usage while others were more conservative. Retail water usage was down 12% in July and represents the biggest drop of the three customer classes and is probably reflective of lower irrigation demand as compared to 2019. Wholesale and Industrial usage in the Cape Fear River Basin saw a 1.1 % increase, while there was a 9% decrease in the Shallotte River Basin as compared to 2019. Daily surface water transfers for the month of July were lower than the previous year by 0.439 MGD for the Shallotte river basin totaling 7.228 MG per day and a decrease of 0.1 MGD for the Waccamaw river basin totaling 1.515 MG per day, both well within our IBT limit of 17 MGD.

Brunswick County Public Utilities 2020 Annual Interbasin Transfer Report - Continued

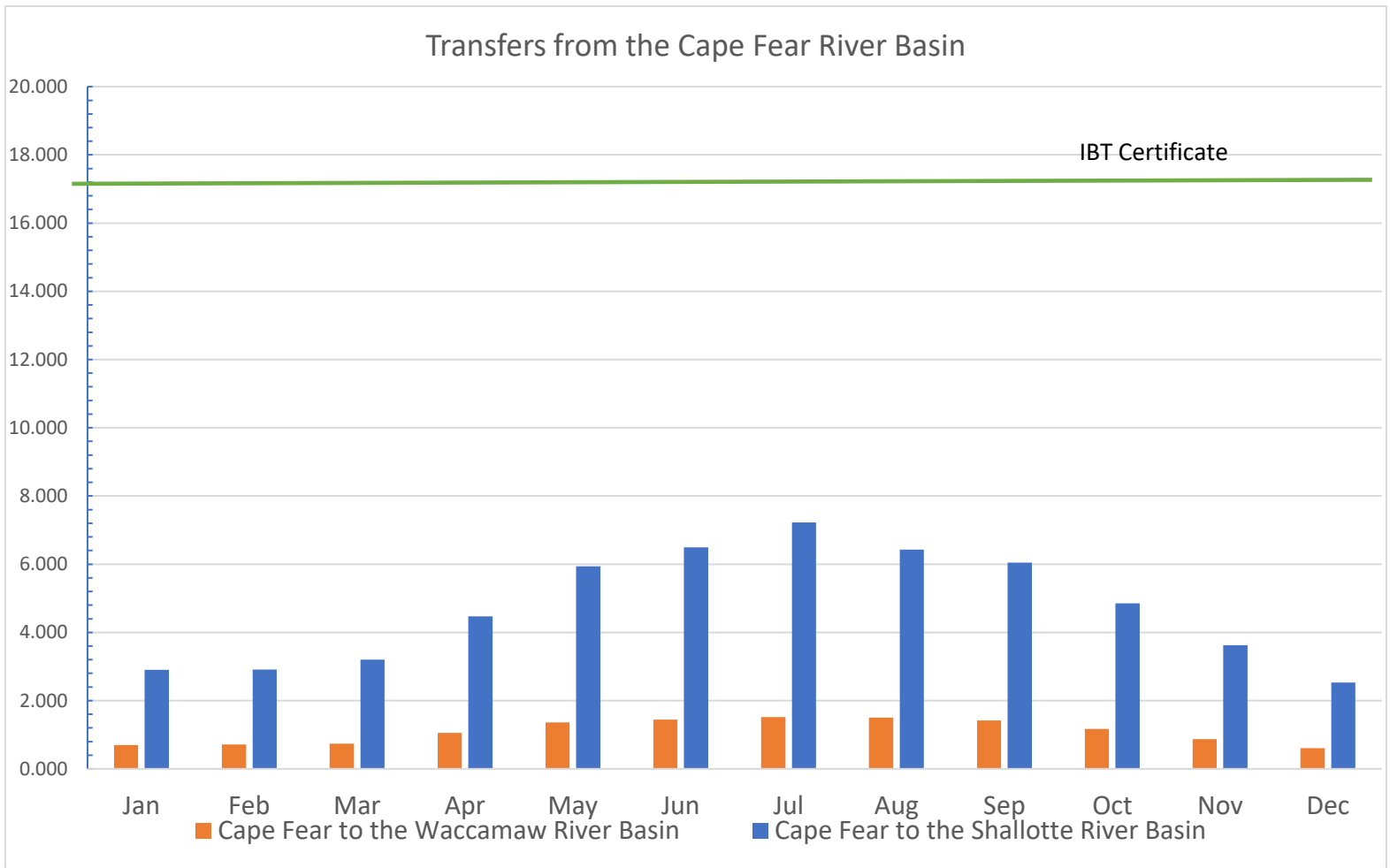


Figure 1.

2020 Interbasin Transfer Supporting Data

Peak Month WTP Flows (Million Gallons)	July-20 Total Monthly Flow (MG)	July-20 Daily Average (MGD)
Northwest WTP (Surface Water)	602.506	19.436
NC 211 WTP (Groundwater)	94.438	3.046
Total Plant Flows	696.944	22.482
Total Billed Flows	618.077	19.938
Unaccounted for Water	78.867	2.544
NWTP % of Plant flow to total flow	86%	
Surface Water (NWTP) Portion of Billed flow	534.326	17.236

2020 Interbasin Transfer Supporting Data Continued

Cape Fear River Basin Wholesale and Industrial Usage	July-20 Total Monthly Flow (MG)	July-20 Daily Average (MGD)
ADM	35.208	1.136
Bald Head Island	6.2514	0.202
DAK Monomers	0	0.000
Brunswick Regional (H2GO)	78.715	2.539
Leland	22.855	0.737
Navassa	3.026	0.098
Northwest	0.000	0.000
Oak Island	59.475	1.919
Duke Energy	5.218	0.168
Capital Power	17.036	0.550
Southport	22.068	0.712
Sunny Point	0.684	0.022
Total Flows	250.538	8.082
Surface Water Portion of Total	216.590	6.987
 Shallotte River Basin Wholesale Water Usage (MG)		
Holden Beach	26.393	0.851
Ocean Isle Beach	39.260	1.266
Shallotte	15.288	0.493
Total Flows	82.472	2.660
Surface Water Portion of Total Flow	71.297	2.300
Retail Water Usage for Peak Month	285.066	9.196
Surface Water Portion of Retail Flows	246.439	7.950
Retail Surface Water Flow Per Basin		
Cape Fear River Basin	77.135	2.488
Shallotte River Basin	127.409	4.110
Waccamaw River Basin	41.648	1.343
	July-20	July-20
Surface Water Usage Billed Per Basin		
Cape Fear River Basin	293.725	9.475
Shallotte River Basin	198.706	6.410
Waccamaw River Basin	41.648	1.343
 Billed Surface Water Flow Percentage Per Basin		
Cape Fear River Basin	47.52%	
Shallotte River Basin	32.15%	
Waccamaw River Basin	6.74%	

2020 Interbasin Transfer Supporting Data Continued

Non Revenue Flow Allocation Per Basin (Based upon Billed Percentages)	July-20 (MG)	July-20 (MGD)
Cape Fear River Basin	37.480	1.209
Shalotte River Basin	25.355	0.818
Waccamaw River Basin	5.314	0.171

Total Surface Water Transferred in Peak Month (July)		
Cape Fear to Shalotte River Basin	224.061	7.228
Cape Fear to Waccamaw River Basin	46.963	1.515

Wastewater Discharges	July-20 (MG)	July-20 (MGD)
Cape Fear River Basin		
Northeast Brunswick Regional WWTP	74.330	2.398
Waccamaw River Basin		
Carolina Shores WWTP	12.401	0.400
Non-Discharge Permits		
Shalotte River Basin		
Sea Trail WWTP	6.303	0.203
West Brunswick WRF	165.85	5.350
Shalotte WWTP	7.23	0.233
Ocean Isle Beach WWTP	14.848	0.479
Total Shalotte River Basin	194.2324	6.266