

BRUNSWICK COUNTY INTERBASIN TRANSFER
2016 ANNUAL REPORT

Due to the increased rainfall levels during the month of July 2016, the average day usage and peak day potable water usage were slightly lower than in the previous year. However, the total water production in the month of July at the Northwest Water treatment plant was 17.36 mgd or 72.3% of its permitted capacity. The potable water usage by customer class was up slightly for the wholesale customers, retail customers, and industrial customers when compared to 2015. The total interbasin transfer in the month of July was increased to 10.02 mgd.

Wastewater discharges increased slightly versus the prior year due to the increased rainfall. Most of the wastewater effluent was used as reclaimed water for irrigation of golf courses and tree farms and used for groundwater recharge.

The interconnection with the Little River Water Company was completed and placed into service. The County has completed installation of its Advanced Meter Infrastructure Project which will improve our ability track flows by basin.

	July 2016	July 2015
Total Water Production (mg)	675.946	689.143
Total Water Sold (mg)	603.013	591.396
Total IBT (mgd) Shallotte	9.89	9.56
Total IBT (mgd) Waccamaw	0.42	0.35
Total Wastewater Flow (mg)	205.2707	202.0709

**AVERAGE DAY IN PEAK MONTH
TRANSFERRED BETWEEN RIVER BASINS**

	July-16 (mg)	July-16 (mgd)	
Northwest WTP	538.04	17.36	
NC 211 WTP	137.906	4.45	
Total Plant Flows	675.946	21.80	
Total Billed Flows	603.013	19.45	
 Wholesale/Industrial Customers by Basin			
Cape Fear Basin			
ADM	27.798	0.90	
Bald Head Island	1.85	0.06	
DAK Monomers	0.219	0.01	
Brunswick Regional (H2GO)	66.418	2.14	
Leland	16.171	0.52	
Navassa	2.2	0.07	
Northwest	2.02	0.07	
Oak Island	45.997	1.48	
Capital Power	22.518	0.73	
Southport	21.066	0.68	
Total Flows	206.257	6.65	
 Shalotte River Basin			
Holden Beach	30.892	1.00	
Ocean Isle Beach	41.882	1.35	
Shalotte	12.874	0.42	
Total Flows	85.648	2.76	
 Retail Flows			
	311.108	10.04	
Cape Fear River Basin	111.687772	3.60	35.90%
Shalotte River Basin	187.909232	6.06	60.40%
Waccamaw River Basin	11.510996	0.37	3.70%
	311.108		
 Total Billed Flow By Basin			
Cape Fear River Basin	317.944772	53%	
Shalotte River Basin	273.557232	45%	
Waccamaw River Basin	11.510996	2%	
	603.013	100%	
 Non Revenue Flow Allocation			
	72.933	2.35	
(Based upon Billed Percentages)			
Cape Fear	38.45467022		
Shalotte	33.08610196		
Waccamaw	1.392227815		
 Total Transferred			
Cape Fear to Shalotte River Basin	306.643334	9.89	
Cape Fear to Waccamaw River Basin	12.90322381	0.42	

Wastewater Discharges

NPDES Permits	July-16 (mg)	July-16 (mgd)
Cape Fear River Basin		
Northeast Brunswick Regional WWTP	50.328	1.623
Waccamaw River Basin		
Carolina Shores WWTP	11.043	0.356
Non-Discharge Permits		
Shalotte River Basin		
Sea Trail WWTP	5.1667	0.167
West Brunswick WRF	118.149	3.811
Shalotte WWTP	4.67	0.151
Ocean Isle Beach WWTP	15.914	0.513
Total Shalotte River Basin	143.8997	4.642

VOLUME OF WATER TRANSFERRED BETWEEN RIVER BASINS IN 2016

Plant Flows (Million Gallons)	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Northwest WTP	212.769	179.809		320.761	348.07	445.51	538.04	534.41	402.77	251.96	247.78	259.60
NC 211 WTP	87.528	105.53		97.203	134.90	125.67	137.906	128.95	98.36	113.60	118.94	87.00
Total Plant Flows	300.297	285.339		417.964	482.97	571.18	675.946	663.36	501.13	365.56	366.723	346.596
Total Billed Flows	245.03	262.18		329.24	428.23	492.82	603.013	570.65	455.76	331.57	305.98	270.86
Cape Fear River Basin (Million Gallons)												
ADIM	35.314	36.194		30.749	31.044	33.686	27.798	25.450	22.263	23.288	28.075	30.598
Bald Head Island	0.357	0.569		0.141	0.331	1.596	1.850	0.912	0.737	0.241	0.456	0.080
Caswell Beach						Included as County Retail Customers as of Oct. 2015						
DAK Monomers	0.035	0.126		0.315	0.485	0.444	0.219	0.294	0.251	0.173	0.200	0.024
Brunswick Regional (H2GO)	38.319	43.605		50.990	57.644	58.356	66.418	66.612	56.559	41.446	43.740	40.864
Leland	3.855	4.724		5.932	10.868	13.733	16.171	16.745	14.352	8.979	8.944	5.771
Navassa	2.499	1.753		2.870	2.533	2.183	2.2	2.506	2.394	2.007	2.007	1.821
Northwest	1.009	1.456		1.212	1.457	1.588	2.02	3.121	3.310	2.372	2.553	2.577
Oak Island	15.508	16.107		20.120	27.928	35.347	45.997	37.809	28.465	22.130	23.562	19.347
Capital Power	15.338	19.627		18.560	22.497	20.450	22.518	25.340	16.284	18.752	9.894	13.667
Southport	7.652	9.073		12.474	17.904	18.378	21.066	19.116	17.220	11.267	11.789	9.703
Total Flows	119.886	133.234		143.363	172.691	185.761	206.257	197.905	161.835	130.655	131.220	124.452
Shallotte River Basin (Million Gallons)												
Holden Beach	4.243	3.821		9.618	15.705	21.773	30.892	25.247	16.775	7.942	7.497	4.909
Ocean Isle Beach	5.867	6.351		12.733	16.984	34.160	41.852	32.722	22.615	12.954	11.480	6.801
Shallotte	4.695	6.184		6.505	6.191	8.583	12.874	10.739	7.377	4.954	7.275	5.654
Total Flows	14.805	16.356		28.856	38.880	64.516	85.648	68.708	46.767	25.850	26.252	17.364
Retail Flows (Million Gallons)												
Cape Fear River Basin	110.339	112.591		157.021	216.659	242.543	311.108	304.037	247.158	175.060	148.507	129.043
Shallotte River Basin	39.612	40.420		56.371	77.781	87.073	111.688	109.149	88.730	62.847	53.314	46.326
Waccamaw River Basin	66.645	68.005		94.841	130.862	146.496	187.909	183.638	149.283	105.736	89.698	77.942
	4.0825	4.1658		5.8098	8.0164	8.9741	11.5110	11.2494	9.1448	6.4772	5.4948	4.7746
	0.3590000											
Total Billed Flow By Basin (Million Gallons)												
Cape Fear River Basin	159.498	173.654		199.734	250.472	272.834	317.945	307.054	250.565	193.502	184.534	170.778
Shallotte River Basin	81.450	84.360		123.697	169.742	211.012	273.557	252.346	196.050	131.586	115.950	95.306
Waccamaw River Basin	4.0825	4.1658		5.8098	8.0164	8.9741	11.5110	11.2494	9.1448	6.4772	5.4948	4.7746
Cape Fear River Basin	65.09%	66.23%		60.67%	58.49%	55.36%	52.73%	53.81%	54.98%	58.36%	60.31%	63.05%

Shallotte River Basin	33.24%	32.18%	33.84%	37.57%	39.64%	42.82%	45.37%	44.22%	43.02%	39.69%	37.89%	35.19%
Waccamaw River Basin	1.67%	1.59%	1.57%	1.76%	1.87%	1.82%	1.91%	1.97%	2.01%	1.95%	1.80%	1.76%

Non Revenue Flow Allocation

(Based upon Billed Percentages)

Cape Fear	35.97502119	15.33928119	55.63939559	53.82443966	32.01740734	43.38149284	38.45467022	49.88522313	24.94321888	19.83950312	36.63432486	47.7526923
Shallotte	18.37115318	7.451739232	29.14683909	33.33393449	21.69787042	33.55159719	33.08610196	40.997161	19.51642992	13.49139453	23.01883675	26.64924703
Waccamaw	0.920825629	0.367979577	1.35176532	1.565625849	1.024722241	1.426909969	1.392227815	1.827615877	0.9103512	0.664102345	1.090838393	1.335060672

Total Transferred

(Million Gallons)

Cape Fear to Shallotte River Basin	99.821	91.812	121.283	157.031	191.440	244.564	306.643	293.344	215.567	145.078	138.969	121.955
Cape Fear to Waccamaw River Basin	5.0034	4.5338	5.6248	7.3754	9.0411	10.4010	12.9032	13.0770	10.0552	7.1413	6.5856	6.1097

Total Transferred

(Million Gallons Per Day)

Cape Fear to Shallotte River Basin	3.22	3.28	3.91	5.23	6.18	8.15	9.89	9.46	7.19	4.68	4.63	3.93
Cape Fear to Waccamaw River Basin	0.161	0.162	0.181	0.246	0.292	0.347	0.416	0.422	0.335	0.230	0.220	0.197

Wastewater Discharges

NPDES Permits

(Million Gallons)

Cape Fear River Basin	66.03	66.01	56.32	48.388	46.8	46.61	50.33	46.53	62.28	73.07	54.75	59.25
Northeast Brunswick Regional WWTP												

Waccamaw River Basin

Carolina Shores WWTP

	11.8	10.864	11.94	10.49	10.83	10.67	11.04	9.99	10.34	10.90	10.12	12.33
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Non-Discharge Permits

Shallotte River Basin

Sea Trail WWTP

West Brunswick WRF

Shallotte WWTP

Ocean Isle Beach WWTP

	4.71	4.49	4.97	5.073	4.371	4.75	5.17	4.94	4.82	4.92	4.37	4.81
	88.36	95.79	88.96	79.09	82.522	96.255	118.15	108.74	116.90	109.48	78.72	84.10
	4.497	3.62	7.56	7.17	6.758	4.75	4.95	5.23	-	6.70	6.69	3.34
	8.934	7.67	9.27	11.399	15.409	21.603	21.68	17.282	12.82	13.62	7.28	6.30

Total Shallotte River Basin

	106.501	111.57	110.76	102.732	109.06	127.358	149.949	136.192	134.543	134.715	97.06	98.55
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