

CHOWAN RIVER BASIN REGIONAL COUNCIL

Martin Co. Community College
Bertie Campus
Windsor, NC

January 19, 1999

AGENDA

4:00pm	Welcome & Call to Order	Vice Chairman Brown
4:05	Self-Introductions	ALL
4:10	Acceptance of Minutes from October 1, 1998 meeting	Vice Chairman Brown
4:15	Presentations and Discussions:	
	-Update on Nucor Plans and Permitting Process	Giff Daughtride, Nucor
	-Consideration of a Chowan River Continuous Monitoring Station in Partnership with USGS	<i>Scott Caldwell</i> Vice Chairman Brown <i>USGS Raleigh</i>
	-Follow-up on CRBRC Roles & Responsibilities	Vice Chairman Brown
	-Update on Coordinating Council Meeting held on January 15, 1999	Vice Chairman Brown
6:00	New Business/Public Comment	ALL
6:15	Adjourn	

CHOWAN RIVER BASIN REGIONAL COUNCIL

Martin Community College-Bertie Campus

Windsor, NC

January 19, 1999

-MINUTES-

The meeting was called to order by Vice-Chairman Brewster Brown at 4:15 PM. Self-introductions were made (see Attachment A). Motion was made by John Stallings to approve minutes of October 1, 1999 meeting. Motion received a second and passed.

The following business was conducted:

COORDINATING COUNCIL MEETING

Brewster reported that the Council is currently working on by-laws and that these should be completed in the very near future. Sub-committee members were appointed at their last meeting, with Brewster being asked to serve on the Memorandum of Agreement (MOA) committee. A draft MOA between DENR and the Virginia Department of Conservation and Recreation is being written. The two Secretaries and each Governor will sign it within a year. Hopefully this document will help us do a better job of coordinating environmental concerns between our two states.

Currently, Brewster, Lee Wynns, and Billy Griffin represent our council on the Coordinating Council. Brewster asked that anyone interested in serving as an alternate let him know. The next Coordinating Council meeting is scheduled for April 23rd.

REPORT FROM NUCOR REPRESENTATIVE

Giff Daughtridge, General Manager for the Nucor Steel plant to be located in Hertford County, shared his appreciation of the rivers and thanked the council for what it does. He then showed a videotape produced by Nucor spotlighting their plant in Berkley, SC.

Giff stated that Nucor locates in rural areas because of the strong work ethic found there. Nucor is located in twenty communities across the country and, he feels, they have a good reputation. He reported that Nucor has been following the permitting process and hopes to begin construction on the mill in early April, if all permitting goes well. He further stated that there will be wells dug to test groundwater and that they will have no discharges to the Chowan River.

Giff responded to several questions and concerns (response is italicized):

- Bag House Noise (problems at Berkley County, SC plant) – *Different type of fans will be used here. The problem has been corrected (a design problem).*
- Non-point source pollution of river through the air – *The bag house controls only particulate matter. The plant is permitted to emit 700-800 tons per year of nitrous oxide.*
- Gallons of water out of ground per day – *Less than 1 million. Nucor will be recycling internally and will send some to the Colerain land application site. Most water will be evaporated.*
- Numbers of violations – *Over the past 26 years most have been paperwork fines. Where a problem has been found, it was remedied.*
- Product movement – *10% will go out by trucks. The majority will go by barge and rail.*

Giff further stated that there would be a 200-foot wide buffer around the plant and on the river side. There will be a curved road to the plant and no visibility from the road. Only the stack will be visible.

A council member expressed concern about the Zebra mussel (barge route from Norfolk or Morehead City) and the impact it could have if introduced to area waters.

Vice Chairman Brown thanked Giff for his attendance and asked him to consider serving on our council. The Chairman also reminded the council that our role is an advisory one. As individuals we can go back informed into our communities.

WATER QUALITY MONITORING - AMBIENT STATIONS

Chairman Brown recognized Scott Caldwell, USGS out of Raleigh, NC. Mr. Caldwell discussed several options and gave recommendations on the type of equipment needed on the river to give us the type of continuous monitoring we are looking for. Chairman Brown asked that Capt. Al Howard and Scott Caldwell serve with him on a committee to come up with some definite recommendations. The committee can look into having other group representatives serve with them (such as Albemarle RC&D, Mid-East RC&D, town and county governments, etc.).

Concern was expressed over having adequate funding in the future needed to maintain a monitoring system.

OTHER BUSINESS AND CONCERNS

Chairman Brown asked Joan Giordano to be looking for replacements for vacant and non-active seats on the council. He also expressed the need that a Chairman for the council be found as soon as possible.

Updates to be given at next meeting:

- NUCOR
- Water Monitoring Committee

The next meeting will be held at this location on April 13, 1999 at 4:00 PM.

There being no further business the meeting adjourned at 6:30 PM.

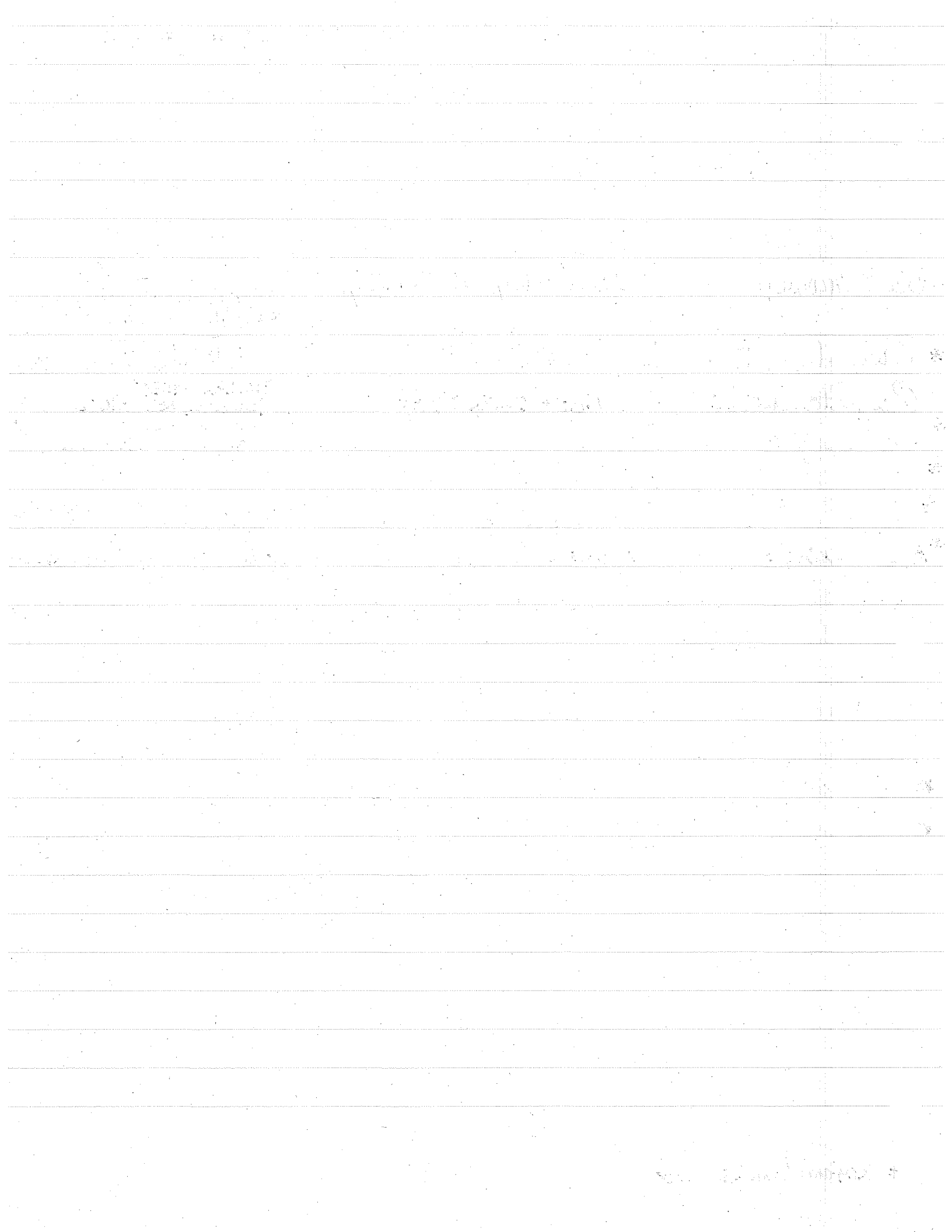
Respectfully submitted,

Nan Laughton
Recording Secretary

attachment

CRBRC
Attendance List
Windsor
1/19/99

NAME	AFFILIATION	ADDRESS
John J. Giordano	NEP+DWR Staff	DEER-DEER 943 Wash. St. Hall Washington, NC 5317 Pronghorn Ln 27889 Raleigh, NC 27607
SCOTT CAWELL	U.S. Geological Survey	
* Brewster W Brown	CRBRC	P.O. Box 527 Winston NC 27886
Guy Stefanski	NEP+ DWR Staff	P.O. Box 29535 Raleigh, NC 27606
* Non Loughton	Chowan SWCD	414 W Queen St. Edenton NC 27932
* Patricia P. Pland	Student	Rt 2 Box 93A Gates NC 27937
* G. R. Perry	Farmer	221 E 14th St Tallapoosa NC 27924
* Billy Griffin	BERTIE EXTENSION	P.O. Box 280 Windsor, NC 27983
CHAD PRIOR	NUCOR STEEL	216 North St. Ahoskie, NC
H Daughtridge	Nucor Steel	" " " " "
Jamey Gerlaugh	Roanoke River Partners	PO Box 488, Windsor, NC 27983
Jeffrey Hoston	The Nature Conservancy	P.O. Box 568, Windsor NC 27983
Marjorie Rayburn	NCCES	P.O. Box 1030 Edenton NC 27932
* John W. Stallinga	Bertie County SWCD	1001 Stokes Windsor, NC 27983
* Roger C. Spivey	Chowan Tree Farm	345 O'Brien Rd. Hobbsville, NC 27846





PROVISIONAL DATA SUBJECT TO REVISION

02049500-- BLACKWATER RIVER NEAR FRANKLIN, VA

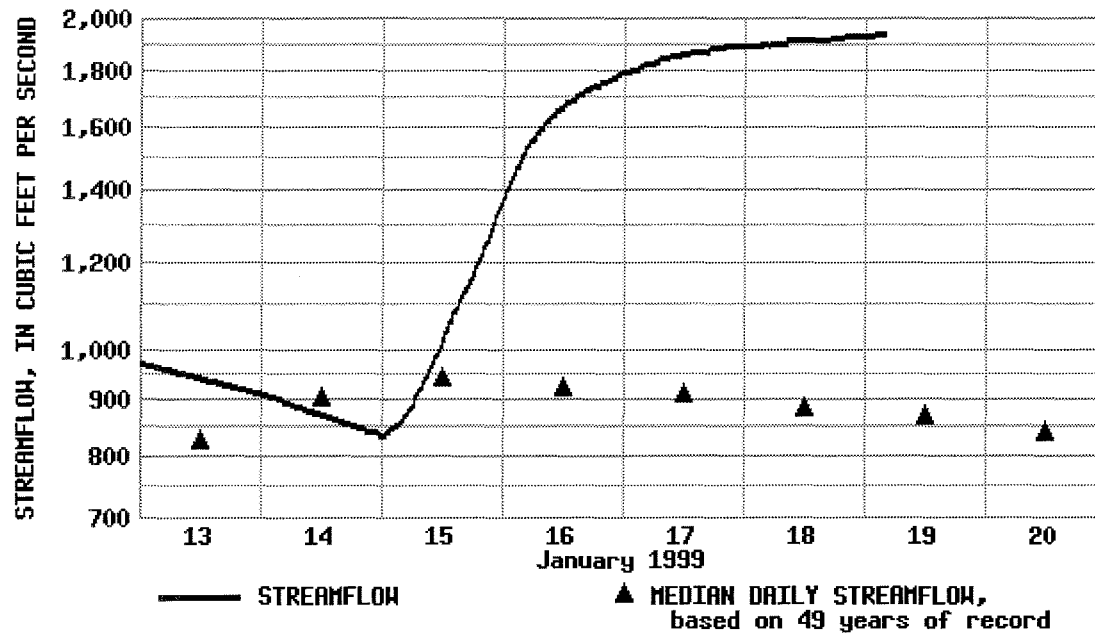
Current Conditions

Flow (ft ³ /s)	Stage (ft)	Date	Time
1,940	9.58	01/19	04:15

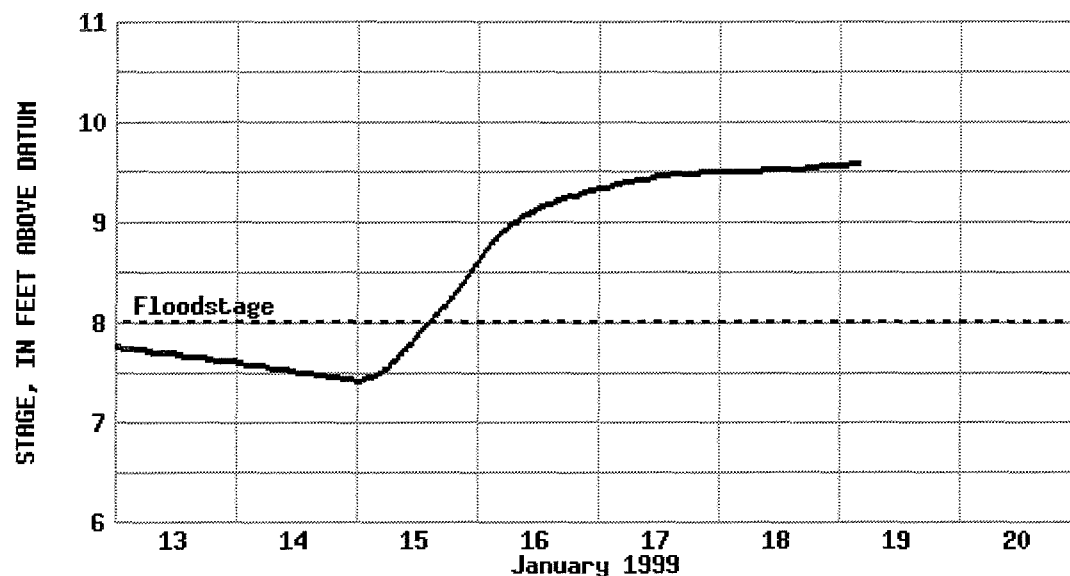
*National water-quality
assessment station*

*June
Aug
Sept*

Streamflow -- updated Tue Jan 19 04:15 1999 -- [download presentation-quality graph](#)



Stage -- updated Tue Jan 19 04:15 1999 -- [download presentation-quality graph](#)



- [Data used in graph \(Provisional Data\)](#)
- [Historical daily mean or peakflow data for this station](#)
- [Complete station data for previous water year](#)
- [Map of area surrounding station](#)
- [Return to Current Streamflow Conditions table](#)

Station Description

CHOWAN RIVER BASIN

02049500 BLACKWATER RIVER NEAR FRANKLIN, VA

LOCATION.--Lat 36 degrees 45'45", long 76 degrees 53'55", Southampton County, Hydrologic Unit 03010202, on right bank south of Burdette, 0.5 mi upstream from Black Creek, 3.3 mi downstream from Corrowaugh Swamp, and 6.0 mi north of Franklin.

DRAINAGE AREA.--617 mi².

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August 1944 to current year.

ADJUSTED RECORDS.--WSP 2104: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 1.56 ft above sea level.

REMARKS.--Records fair except those for periods of no gage-height record, Jan. 3-18 and Feb. 25 to Mar. 25, and for period with ice effect, Feb. 3-7, and periods of tidal effect below 20 ft³/s October and November, which are poor. Low flow reversed by tide some years. Diversion upstream from station by city of Norfolk for municipal water supply most years. Maximum discharge, 9,420 ft³/s, from rating curve extended above 9,400 ft³/s.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in August 1940 reached a stage of about 22 ft, discharge, 21,000 ft³/s, from rating curve extended above 9,400 ft³/s.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 4,340 ft³/s, Sept. 13, gage height, 12.31 ft; minimum daily, 1.3 ft³/s, Oct. 1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	3.3	161	186	1810	e1600	1280	306	292	787	705	494
2	1.5	2.9	170	193	1710	e1400	1260	307	260	471	2040	358
3	2.3	3.0	162	e215	e1740	e1200	1190	286	210	321	2740	264
4	3.5	5.1	151	e250	e1710	e1100	1110	266	153	257	2960	215
5	5.2	15	119	e305	e1630	e990	1060	248	122	198	2860	187
6	7.2	19	102	e380	e1540	e850	1030	249	111	154	2590	813
7	5.0	36	97	e450	e1420	e810	1050	304	76	114	2300	2180
8	3.7	60	101	e505	1290	e860	1090	432	57	78	2080	2360
9	2.4	93	129	e510	1350	e980	1180	555	47	72	1850	2210
10	2.2	110	200	e480	1560	e1080	1350	665	43	90	1600	1910
11	2.2	128	257	e455	1720	e1150	1430	778	40	118	1290	1840
12	2.1	166	283	e445	1820	e1130	1450	855	e92	114	928	3020
13	2.2	205	297	e505	1840	e1100	1420	808	e180	667	696	4170

14	3.3	251	306	e590	1800	e1020	1270	710	e245	1550	583	4200
15	5.1	270	296	e630	1730	e900	1090	645	e295	1810	535	3550
16	5.1	269	282	e670	1660	e760	935	636	e325	1820	531	2720
17	4.4	270	268	e720	1650	e640	811	671	e340	1570	495	2050
18	3.0	260	254	e830	1640	e560	719	708	e330	1190	418	1520
19	1.9	251	270	947	1600	e590	655	738	e300	887	338	1090
20	1.9	247	329	1350	1540	e630	603	742	e250	801	296	752
21	1.9	246	355	1720	1770	e690	571	703	213	1230	263	553
22	2.1	240	344	1950	2090	e750	541	647	168	1360	231	429
23	2.3	231	318	2040	2150	e790	513	554	115	1060	215	344
24	2.3	223	298	2000	2120	e800	493	468	76	695	210	286
25	2.2	213	284	2020	e2000	e780	482	411	540	476	428	249
26	2.3	213	266	2080	e1820	736	460	376	1420	411	570	219
27	2.4	202	247	2110	e1900	722	428	337	2130	415	706	194
28	3.6	199	227	2220	e1800	742	382	321	2190	498	1110	175
29	3.0	187	210	2220	e1700	949	333	328	1830	530	1250	246
30	3.2	173	195	2100	---	1130	302	321	1340	468	971	516
31	4.5	---	187	1960	---	1230	---	303	---	398	680	---
TOTAL	95.3	4791.3	7165	33036	50110	28669	26488	15678	13790	20610	34469	39114
MEAN	3.07	160	231	1066	1728	925	883	506	460	665	1112	1304
MAX	7.2	270	355	2220	2150	1600	1450	855	2190	1820	2960	4200
MIN	1.3	2.9	97	186	1290	560	302	248	40	72	210	175
(+)	14.2	31.4	36.0	36.3	30.4	4.71	0	17.2	19.8	.05	5.90	0
MEAN++	17.3	191	267	1102	1758	930	883	523	480	665	1118	1304

SM++	.03	.31	.43	1.79	2.85	1.51	1.43	.85	.78	1.08	1.81	2.11		
IN.++	.03	.34	.50	2.06	3.07	1.74	1.60	.98	.87	1.24	2.09	2.36		
CAL YR 1995	TOTAL	85221.8	MEAN	233	MAX	2930	MIN	1.3	MEAN++	255	CFSM++	.41	IN.++	5.61
WTR YR 1996	TOTAL	274015.6	MEAN	749	MAX	4200	MIN	1.3	MEAN++	765	CFSM++	1.24	IN.++	16.88

+ Average daily diversion, in cubic feet per second, by city of Norfolk.

++Adjusted for diversion.

e Estimated.

CHOWAN RIVER BASIN

02049500 BLACKWATER RIVER NEAR FRANKLIN, VA--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1944 - 1996, BY WATER YEAR (WY) [UNADJUSTED]

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	270	369	617	1001	1161	1278	926	555	356	301	365	289
MAX	1795	1713	2082	2271	2502	2915	2783	1890	1925	2003	1481	2490
(WY)	1973	1980	1958	1978	1957	1989	1989	1958	1963	1945	1969	1960
MIN	.94	1.69	2.12	12.5	152	158	107	51.4	15.0	3.02	2.08	2.16
(WY)	1988	1981	1981	1981	1981	1981	1995	1985	1986	1986	1995	1995

SUMMARY STATISTICS	FOR 1995 CALENDAR YEAR				FOR 1996 WATER YEAR				WATER YEARS 1944 - 1996			
ANNUAL TOTAL	85221.8				274015.6							
ANNUAL MEAN	233				749				622			
HIGHEST ANNUAL MEAN									1155			
LOWEST ANNUAL MEAN									133			
HIGHEST DAILY MEAN	2930		Mar 12		4200		Sep 14		9420		Sep 14 1960	
LOWEST DAILY MEAN	1.3		Aug 20		1.3		Oct 1		.07		Oct 16 1981	
ANNUAL SEVEN-DAY MINIMUM	1.5		Jul 31		2.1		Oct 19		.26		Oct 10 1987	

INSTANTANEOUS PEAK FLOW		4340	Sep 13	9420	Sep 14 1960
INSTANTANEOUS PEAK STAGE		12.31	Sep 13	a17.14	Sep 14 1960
INSTANTANEOUS LOW FLOW		(b)		(b)	
ANNUAL RUNOFF (CFSM)	.38	1.21		1.01	
ANNUAL RUNOFF (INCHES)	5.14	16.52		13.70	
10 PERCENT EXCEEDS	486	1840		1620	
50 PERCENT EXCEEDS	128	481		371	
90 PERCENT EXCEEDS	2.0	18		9.0	

a From floodmarks.

b Not determined, tidally affected most years during periods of extreme low flows; minimum measured flow, 2.4 ft³/s (reverse flow), Sept. 17, 1952.

CHOWAN RIVER BASIN

02049500 BLACKWATER RIVER NEAR FRANKLIN, VA--Continued

(National water-quality assessment station)

WATER-QUALITY RECORDS

LOCATION.--Samples taken at bridge 2.0 mi upstream from discharge station.

PERIOD OF RECORD.--Water years 1947, 1952, 1975 to current year.

REMARKS.--These data are a part of the Albemarle-Pimlico National Water-Quality Assessment (NAWQA) program.

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DIS-		PH		BARO-		OXYGEN,			
CHARGE,	SPE-	WATER		METRIC		DIS-	HARD-		MAGNE-
INST.	CIFIC	WHOLE		PRES-		SOLVED	NESS	CALCIUM	SIUM,
CUBIC	CON-	FIELD	TEMPER-	SURE	OXYGEN,	(PER-	TOTAL	DIS-	DIS-
FEET	DUCT-	(STAND-	ATURE	(MM	DIS-	CENT	(MG/L	SOLVED	SOLVED

DATE	TIME	PER SECOND (00061)	ANCE (US/CM) (00095)	ARD UNITS) (00400)	WATER (DEG C) (00010)	OF HG) (00025)	SOLVED (MG/L) (00300)	SATUR- ATION) (00301)	AS CACO3) (00900)	(MG/L AS CA) (00915)	(MG/L AS MG) (00925)
JUN											
13...	1000	180	94	--	22.5	766	4.9	56	32	10	1.8
AUG											
20...	1100	300	101	6.0	23.0	776	4.8	55	35	11	1.8
SEP											
26...	0900	222	103	6.3	18.5	764	4.9	52	35	11	1.9
BICAR- ALKA- SOLIDS, SODIUM POTAS- BONATE LINTY CHLO- FLUO- SILICA, RESIDUE SODIUM, AD- SIUM, WATER WAT DIS SULFATE RIDE, RIDE, DIS- AT 180 DIS- SORP- DIS- DIS IT TOT IT DIS- DIS- DIS- SOLVED DEG. C SOLVED TION SOLVED FIELD FIELD SOLVED SOLVED SOLVED (MG/L DIS- DATE (MG/L SODIUM RATIO (MG/L MG/L AS MG/L AS (MG/L (MG/L (MG/L AS SOLVED AS NA) PERCENT AS K) HCO3 CACO3 AS SO4) AS CL) AS F) SIO2) (MG/L) (00930) (00932) (00931) (00935) (00453) (39086) (00945) (00940) (00950) (00955) (70300)											
JUN											
13...	3.4	17	0.3	2.7	--	--	9.0	8.0	0.10	5.3	83
AUG											
20...	3.1	15	0.2	2.4	27	22	4.6	8.3	<0.10	7.7	108
SEP											
26...	3.4	16	0.2	2.9	26	21	5.3	9.6	<0.10	8.3	94

< Actual value is known to be less than the value shown.

IOWAN RIVER BASIN

02049500 BLACKWATER RIVER NEAR FRANKLIN, VA--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	NITRO- GEN, NITRATE TOTAL (MG/L AS N) (00620)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, ORGANIC TOTAL (MG/L AS N) (00605)	NITRO- GEN, ORGANIC DIS- SOLVED (MG/L AS N) (00607)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	NITRO- GEN DIS- SOLVED (MG/L AS N) (00602)
JUN											
13...	0.180	0.030	0.210	0.210	0.110	0.89	0.59	1.0	0.70	1.2	0.91
AUG											
20...	0.240	<0.010	0.240	0.240	0.040	0.66	0.66	0.70	0.70	0.94	0.94
SEP											
26...	0.120	0.010	0.130	0.130	0.050	0.65	0.65	0.70	0.70	0.83	0.83
DATE	PHOS- PHORUS TOTAL (MG/L AS P) (00620)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00613)	PHOS- PHORUS ORTHOD, IRON, SOLVED (MG/L AS P) (00630)	PHOS- PHORUS IRON, SOLVED (UG/L AS FE) (00631)	PHOS- PHORUS NESE, SOLVED (UG/L AS MN) (00608)	PHOS- PHORUS ORGANIC SOLVED (MG/L AS C) (00605)	PHOS- PHORUS ORGANIC DIS- SOLVED (MG/L AS C) (00607)	PHOS- PHORUS SUS- TOTAL (MG/L AS C) (00625)	PHOS- PHORUS SUS- SUS- (MG/L) (00623)	PHOS- PHORUS DIS- SUS- (T/DAY) (00600)	PHOS- PHORUS SUSP. SIEVE DIAM. % FINER THAN .062 MM (00602)

	(00665)	(00666)	(00671)	(01046)	(01056)	(00681)	(00689)	(80154)	(80155)	(70331)
JUN										
13...	0.250	0.060	0.030	1200	140	13	4.0	--	--	--
AUG										
20...	0.050	0.040	0.040	1900	110	18	0.80	8	6.5	100
SEP										
26...	0.040	0.030	0.030	1800	79	17	0.90	--	--	--

< Actual value is known to be less than the value shown.

Daily Mean Flow Statistics for 01/19 based on 49 years of record, in ft³/s

Latest flow 01/19 04:15	Minimum	Mean	Maximum	80 percent exceedance	50 percent exceedance	20 percent exceedance
1,940	6.0	1,020	2,780	567	870	1,620
Percent exceedance means that 80, 50, or 20 percent of all daily mean flows for 01/19 have been greater than the the value shown.						

Flood thresholds

Flow (ft ³ /s)	Stage (ft)
---	8.0

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Please direct questions or comments to rtmaster@mailsvrmd.er.usgs.gov
or contact:

Data Chief Roger White
U.S. Geological Survey
1730 East Parham Rd
Richmond, VA, 23228

-800-684-1592 x605

or

(804) 261-2605

rt_www -- (rev 2.02) -- Acknowledgements

