ROANOKE RIVER BASIN REGIONAL COUNCIL

Claudine's Restaurant
Hwys. 561 & 258
Rich Square, NC

June 11, 1998
10:00 am

AGENDA

10:00am	Call to Order and Welcome	Mary Lilley, Chair
10:05	Introductions	All
10:15	Acceptance of Minutes-March 25, 2998	Mary Lilley
10:20	Presentations & Discussion: Flow in the Roanoke River	
	Ken Baker — VA Power & Light Terry Brown — US Corps of Engineers Sam Persall — Nature Conservance	
12:30pm	New Business	
1:00pm	Adjourn	

ROANOKE RIVER BASIN REGIONAL COUNCIL

MINUTES OF THE REGULAR MEETING

June 11, 1998

The meeting was called to order at 10:00 a.m. by the Chairman, Mary Lilley, at Claudine's Restaurant in Rich Square. Present at the meeting were:

Joan Giordano
Guy Stefanski
Kay Winn
Jerry Coker
Chuck Laughridge
James Outland
Andy Allen
Jerry Holloman
Michael Taylor

Guests at the meeting were:

Jean Richtt, US Fish and Wildlife Service
Ken Baker, Virginia Power
Sam Pearsall, The Nature Conservancy
Terry Brown, US Army Corps of Engineers
Daniel Emerson, US Army Corps of Engineers
Jeff Horton, The Nature Conservancy
James Gertaugh, Roanoke River Partners
Nils Johnson, Duke University/The Nature Conservancy Intern
Liz Burroughs, Duke University/The Nature Conservancy Intern.

After the call to order and welcome, self-introductions were made.

The minutes of the March meeting were approved as mailed, with the correction of changing "Jerry Coker" to "Jerry Holloman" as a member representing the Council at the Coordinating Council. The report of the work session of April 24 with facilitator Bitsy Waters was also approved with the correction of changing references to "Chowan" to "Roanoke" in several places throughout her submission. These reports were accepted by the council following a motion by Jerry Holloman, seconded by Andy Allen.

The program for the meeting consisted of presentations by several of the invited guests.

The first speaker was Terry Brown, US Army Corps of Engineers, Wilmington, who gave a visual presentation showing the Guide Curve which serves as a model for management of water levels in Kerr Lake. Mr. Brown explained how the different needs such as flood

control, recreation, and wildlife management, come into the definition of the model. A comparison and contrast was made with the pre-1974 Guide Curve. Mr. Brown responded to many questions from the members, and informed us of the possibility of a new "216 Study" which might provide more recent and diverse data than the previous study. Only after the completion of such a study over the entire basin could the Corps consider any management changes, due to the requirements of the Water Resources Development Act.

Dan Emerson, also of the Corps of Engineers, showed how the first few months of 1998 presented a management challenge to the Corps due to the frequent rainfalls attributed to El Nino. January through March of this year were the wettest three months since records commenced in 1891. Questions and discussion followed Mr. Emerson's presentation.

Sam Pearsall, Land manager for the Nature Conservancy (TNC) of North Carolina, gave a brief sketch of the purposes and philosophy of his organization. TNC has become involved in the Roanoke River Basin through ownership of over 50,000 acres (a $16 million investment) and through GREP (the Georgia Pacific/Nature Conservancy Roanoke Ecosystem Partnership). Mr. Pearsall explained the policy of "adaptive management" favored by TNC, and expressed his support of the proposed 216 Study.

The final speaker was Ken Baker of Virginia Power. Mr. Baker is one of the engineers involved in the re-licensing process. The utility company must complete this process with the FERC before the new license may be issued to operate this hydropower project after the present one expires in 2001. He made the members aware of an informational meeting scheduled for Martin Community College at 7:00 p.m. on July 9. He also indicated that copies of the draft application for the permit are available at all public libraries in the area. Mr. Baker explained how the normal (non-flood) operations of the dam are coordinated with other needs (sufficient water levels in the reservoir on weekends for recreation being one example), minimum required releases, etc.

By consensus, it was agreed that the members would try to attend the informational meeting at Martin Community College on July 9, 7:00 p.m. The college is located on Route 64 west of Williamston.

The next regular meeting of the Council will take place on September 23, in Washington County. Time and exact location to be announced later.

After discussion, it was moved by Michael Taylor, seconded by James Outland, that the Council would make a resolution to support the proposed 216 Study of the lower Roanoke River Basin, with a recommendation that the study be expanded to encompass the entire basin. The chairman will draft a resolution for mailing with these minutes.

(See Attachment A.)

Informational items:

Joan Giordano explained that a letter has been sent to all members of each of the regional councils, asking for the intentions fo the member as to his or her continued involvement. This was part due to the need to assure that all interest are represented, and satisfied the Council's decision at the March meeting to make such an inquiry of members who are not attending. If any members respond that they do not wish to continue participation, or if any fail to respond, the staff will begin the process of asking the appointing Boards of Commissioners to find replacements.

Telephone numbers for speakers at today's meeting are as follows:

Terry Brown - (910)251-4761
Sam Pearsall - (919)403-8558
Ken Baker - (804)273-3257

Information on river flows, updated hourly, and Kerr Lake levels, updated daily, may be accessed at epec.saw.usace.army.mil on the Internet.

With no other business to address, the meeting was adjourned.

Respectfully submitted,

Kay Winn

Kay Winn, Secretary

ATTACHMENT A

DRAFT RESOLUTION REQUESTING
The Initiation of a "216" Study of the Lower Roanoke River

WHEREAS, the Roanoke River basin is considered a great natural resource for all the people of North Carolina and the United States, and

WHEREAS, the Roanoke River Basin Regional Council was established by Executive Order #75, as recorded in the North Carolina Register, May 1, 1995, to act as a local liaison group with all other agencies involved with the Roanoke River, and

WHEREAS, the Council has been meeting regularly to establish local priorities for the river basin and has reported these priorities to the Albemarle-Pamlico Sounds National Estuary Program Coordinating Council, and

WHEREAS, the Council has identified water flow issues as the primary concern for the lower Roanoke River basin, and

WHEREAS, the last comprehensive environmental study of the entire Roanoke River basin was conducted in the mid-1970s, and

WHEREAS, dramatic shifts in river flow, in recent times, ~~is~~ are adversely affecting the flora, fauna, and people of the lower Roanoke River basin,

NOW, THEREFORE, BE IT RESOLVED that the Roanoke River Basin Regional Council supports the US Corps of Engineer's proposed "216 Study" of the lower Roanoke River basin, asking that Congress appropriate funds in a timely manner so that this Study may be undertaken swiftly, and

BE IT FURTHER RESOLVED that the Roanoke River Basin Regional Council further recommends that the proposed "216 Study" be expanded to encompass the entire Roanoke River basin.

Approved this the _____day of _____, 1998.

_____
Mary Lilley, Chair
Roanoke River Basin Regional Council

_____
Kay Winn, Secretary
Roanoke River Basin Regional Council

Some criteria used in daily or normal operation of Kerr Dam

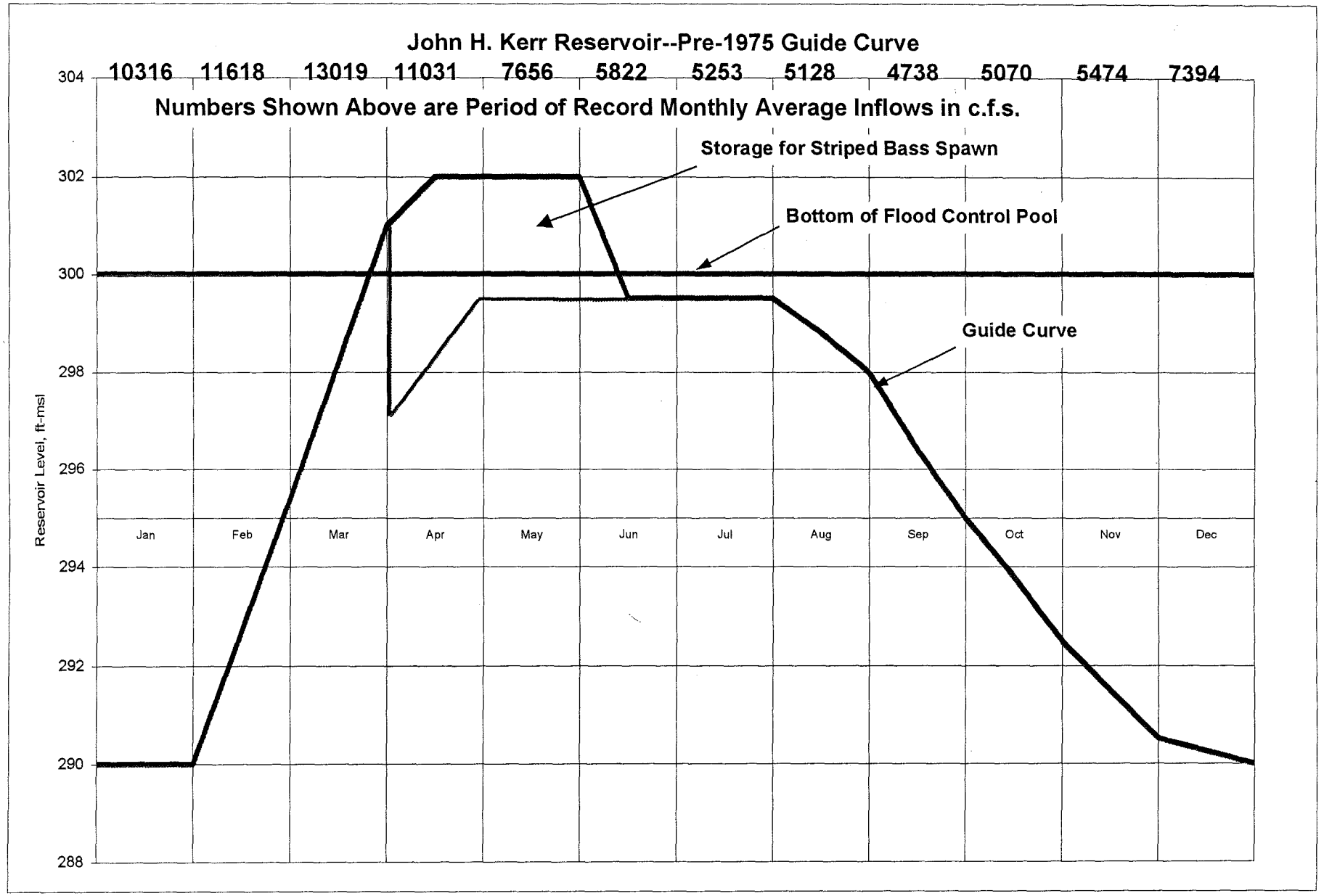
- **Level of Kerr Reservoir relative to the guide curve (see plot)**
- **Guide curve was developed to take advantage of how flows change during the year and also to help Kerr Reservoir meet certain recreational, hydropower, low flow and flood control needs.**
- **Weekly minimum Southeastern Power Administration (SEPA) hydropower contract amounts with VPCO and CP&L**
- **Projected inflows into Kerr Reservoir over the next few days**
- **During 1 April-15 June (striped bass spawn season), we try to adhere to recommended upper and lower flow limits if possible and coordinate with state and federal fisheries folks both in NC and VA.**

Some criteria used in flood operation of Kerr Dam

- **Level of Kerr Reservoir in flood pool will dictate release rates (see plot)**
- **Projected inflows into Kerr Reservoir**
- **Weather or rainfall quantity forecast**
- **COE memorandums with VPCO on flood control operation at Roanoke Rapids Dam (COE calls the shots during flood events)**
- **During a flood, flood release control point is Roanoke Rapids Dam, not Kerr Dam per se. Main point is to get flood waters out of the three dam system of Kerr, Gaston, and Roanoke Rapids.**
- **Generational flow capacity at Roanoke Rapids is about 19,000 cfs (used to be 20,000 cfs) and at Kerr is about 31,000 cfs. (Kerr used to be closer to 34,000 cfs).**
- **Flood releases from Roanoke Rapids Dam of greater than 35,000 cfs would be damaging not only to farmlands but also to industrial developments and private structures. If Kerr were to rise to level greater than 320 feet, msl, flow amounts greater than 35,000 cfs would have to be released (see attached sheet). Spillway gates at Kerr could put out about 800,000 cfs if Kerr rose to elevation 326 feet, msl.**

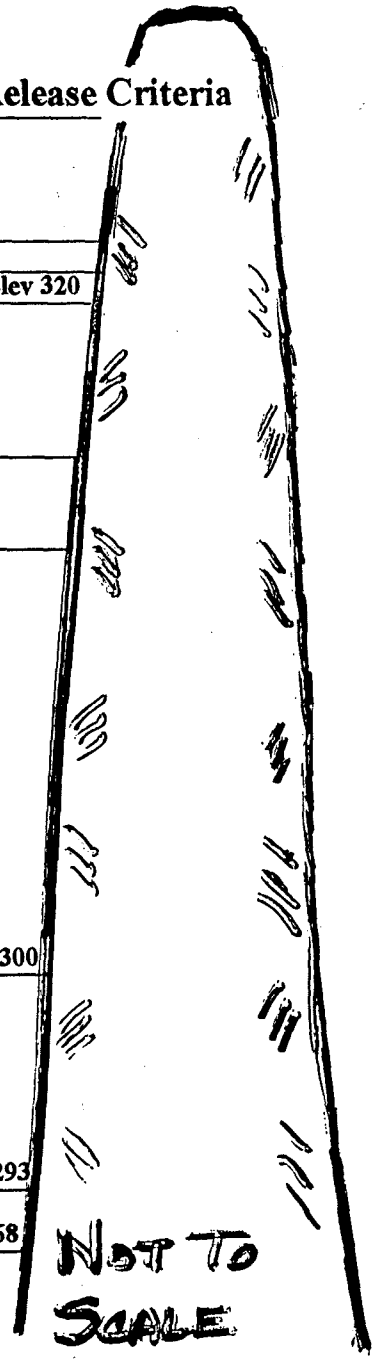
Process and Partners in weekly power generation

- **Each Wednesday, COE tells SEPA how much excess water is available in Kerr for the following week. If no excess or in a drought, minimum contract amount overrides.**
- **SEPA tells power companies how much energy they will have**
- **SEPA tells COE how they plan to take the energy day by day**
- **COE tracks daily how VPCO and CP&L have taken energy. This may influence the power declaration the following week.**
- **Operators at VPCO control how generation at Kerr actually takes place, regardless of intended schedule. This allows for more or less peak power demand to be accounted for.**


John H. Kerr Reservoir--Pre-1975 Guide Curve
10316 11618 13019 11031 7656 5822 5253 5128 4738 5070 5474 7394
Numbers Shown Above are Period of Record Monthly Average Inflows in c.f.s.
Storage for Striped Bass Spawn
Bottom of Flood Control Pool
Guide Curve
Reservoir Level, ft-msl
304
302
300
298
296
294
292
290
288
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Oct
Nov
Dec

Profile and Information for John H. Kerr Dam and Flood Release Criteria

Kerr Reservoir Elevation Range Feet, m.s.l.	Maximum Release Out of Roanoke Rapids Dam	Inches Of Runoff	
Elev > 321	100% of Inflow		
Elev 320-321	85% of Inflow	0.22	Top of Tainter Gates at Elev 320
Elev 315-320	35,000 cfs	0.95	Top of Flood Control Pool at Elev 320
Elev 312-315	25,000 cfs	0.49	
Elev 300-312	20,000 cfs	1.64	Bottom of Flood Control Pool at Elev 300
Elev 293- 300	8,500 cfs	0.76	Bottom of Contract Power Pool at Elev. 293
			Bottom of Design Power Pool at Elev. 268



Flood Operational Criteria—John H. Kerr Project

Releases from Roanoke Rapids Dam cfs	Kerr Reservoir Levels when Rising feet, msl	Kerr Reservoir Levels when Falling feet, msl	
		Pre-1995 Plan	"Ramped Down" Plan
100% of inflow into Kerr Dam	>321	down to ~318**	down to ~318**
85% of inflow into Kerr Dam	320 to 321	down to ~318**	down to ~318**
35,000	315 to 320	*320 to ~312**	*320 to ~312**
25,000	312 to 315	~312 to ~307**	~312 to ~307**
20,000	300 to 312	~307 to 300**	>= 4 days
15,000	not in plan	not in plan	>= 4 days
10,000	not in plan	not in plan	>= 3 days
5,000	not in plan	not in plan	>= 3 days

*if elevation 320 feet, msl has not been exceeded in Kerr Reservoir. If 320 has been exceeded, then ~318 to 312.

**these levels are highly impacted by the magnitude of inflows coming into Kerr Dam, predicted rainfall, and guide curve level.

pressure from beachfront property owners – including the Shell Island Resort in Wrightsville Beach challenging the state's ban on seawalls, Mr. Miller said.

Sewage leak may be years old

Associated Press

RALEIGH – An unplugged sewage pipe in the Northampton County town of Rich Square may have been pumping thousands of gallons of untreated sewage a day for several years into a nearby swamp, state officials said Friday.

The pipe was discovered by a Division of Water Quality inspector Tuesday, division spokesman Ernie Seneca said.

As much as 14,000 gallons of untreated sewage a day may have been pouring into the swamp, which drains into the Roanoke River basin, for as many as 27 years. Mr. Seneca said those numbers are a worst-case scenario but are not out of the realm of possibility.

Mr. Seneca said the pipe has been plugged and cleanup efforts are under way.

The pipe led to an old wastewater system that had been closed in 1971 in an overgrown, wooded area. Inspectors are still trying to determine whether the pipe was never shut off when the old plant was closed down or whether it was accidentally opened during subsequent work on the sewage collection system during the last few years.

"We're still investigating. It looks like the line was just not blocked up when the switch was made. However, there have been quite a few upgrades," Mr. Seneca said. "It's going to take us awhile to sort it all out."

The town could face thousands of dollars in fines or other enforcement actions by the state.

Rich Square was taken off a moratorium list in recent years that had prevented it from adding homes or businesses to its sewer system.

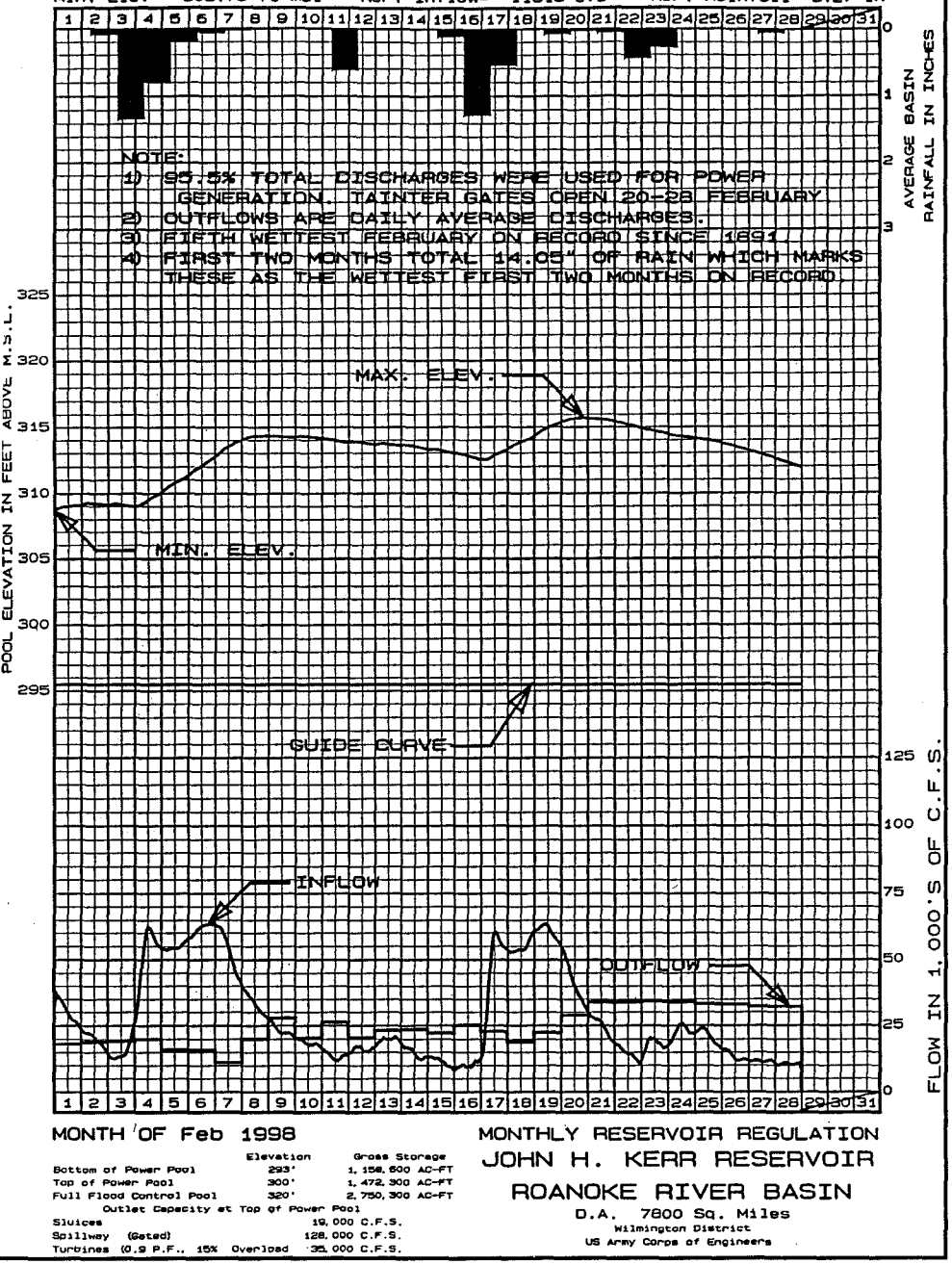
WILMINGTON MORNING STAR / 6 JUNE 1998

Monthly Summary

REPORTS CONTROL SYMBOL ENGCW-E-C

Max. Elev = 315.73 ft-msl Avg. Inflow= 28168 cfs Obs. Rainfall= 6.12 in

Min. Elev= 308.78 ft-msl Nor. Inflow= 11618 cfs Nor. Rainfall= 3.27 in



MONTH OF Feb 1998

MONTHLY RESERVOIR REGULATION

JOHN H. KERR RESERVOIR

ROANOKE RIVER BASIN

D.A. 7800 Sq. Miles

Wilmington District

US Army Corps of Engineers

	Elevation	Gross Storage
Bottom of Power Pool	293'	1,158,500 AC-FT
Top of Power Pool	300'	1,472,300 AC-FT
Full Flood Control Pool	320'	2,750,300 AC-FT

Outlet Capacity at Top of Power Pool

Sluices	19,000 C.F.S.
Spillway (Gated)	128,000 C.F.S.
Turbines (0.9 P.F., 15% Overload	35,000 C.F.S.

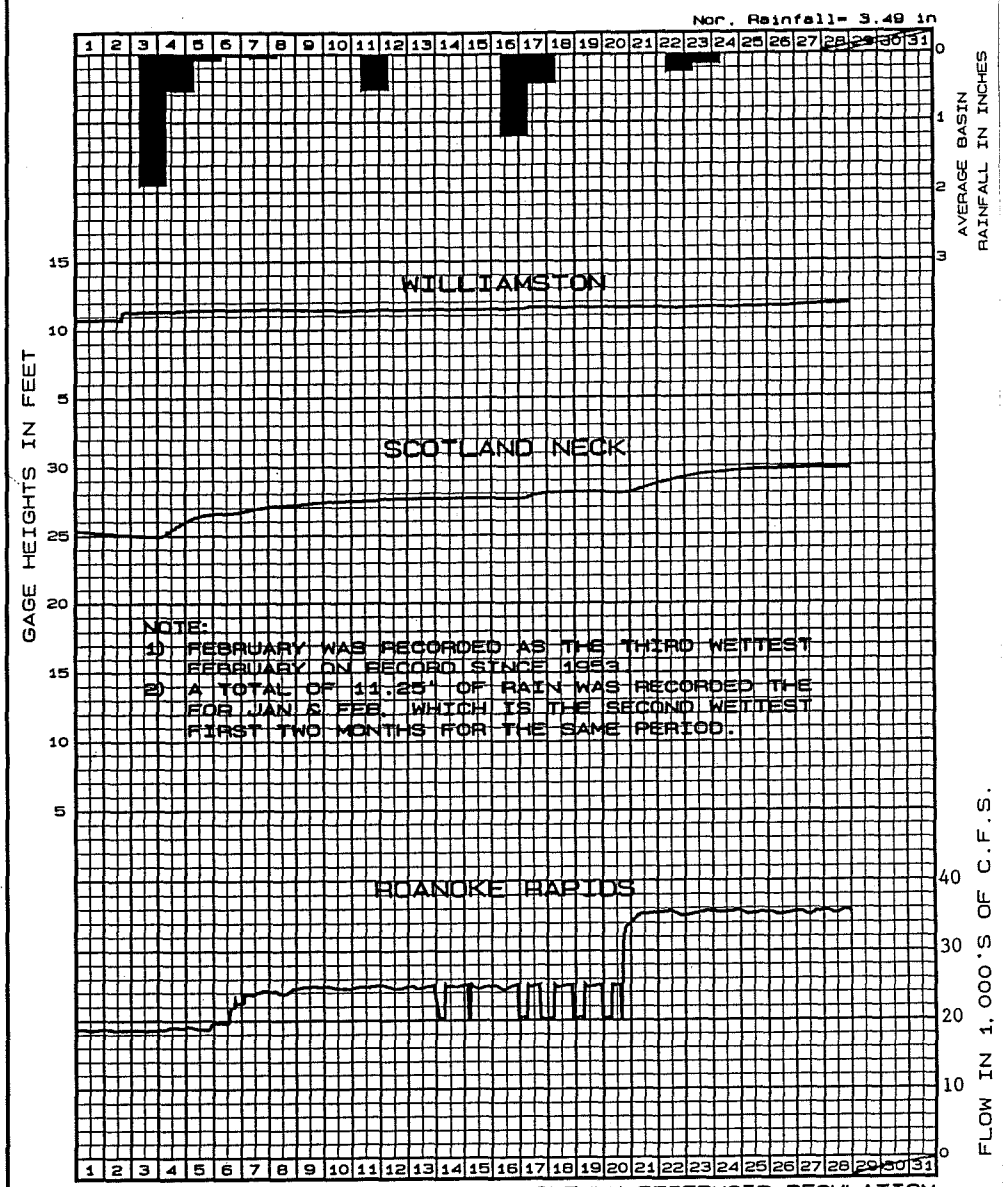
SAW Form 112 r21Sep1994

Sheet 1 of 2

REF CONTROL SYMBOL ENGCW-E-C

Obs. Ra 11= 5.26 in

Nor. Rainfall= 3.49 in



MONTH OF Feb 1998

MONTHLY RESERVOIR REGULATION

JOHN H. KERR RESERVOIR

LOWER ROANOKE RIVER BASIN

D.A. 7800 Sq. Miles

Wilmington District

US Army Corps of Engineers

STATION	RIVER MILES ABOVE MOUTH	GAGE ZERO FT. M.S.L.	U S W B FLOOD STAGE
KERR DAM	178.7	———	———
ROANOKE RAPIDS	133.6	43.63	———
SCOTLAND NECK	102.5	5.77	28
WILLIAMSTON	37.5	-2.75	10

STAGES AND FLOWS ARE FROM DATA COLLECTION PLATFORM DATA

SAW Form 112 r21Sep1994

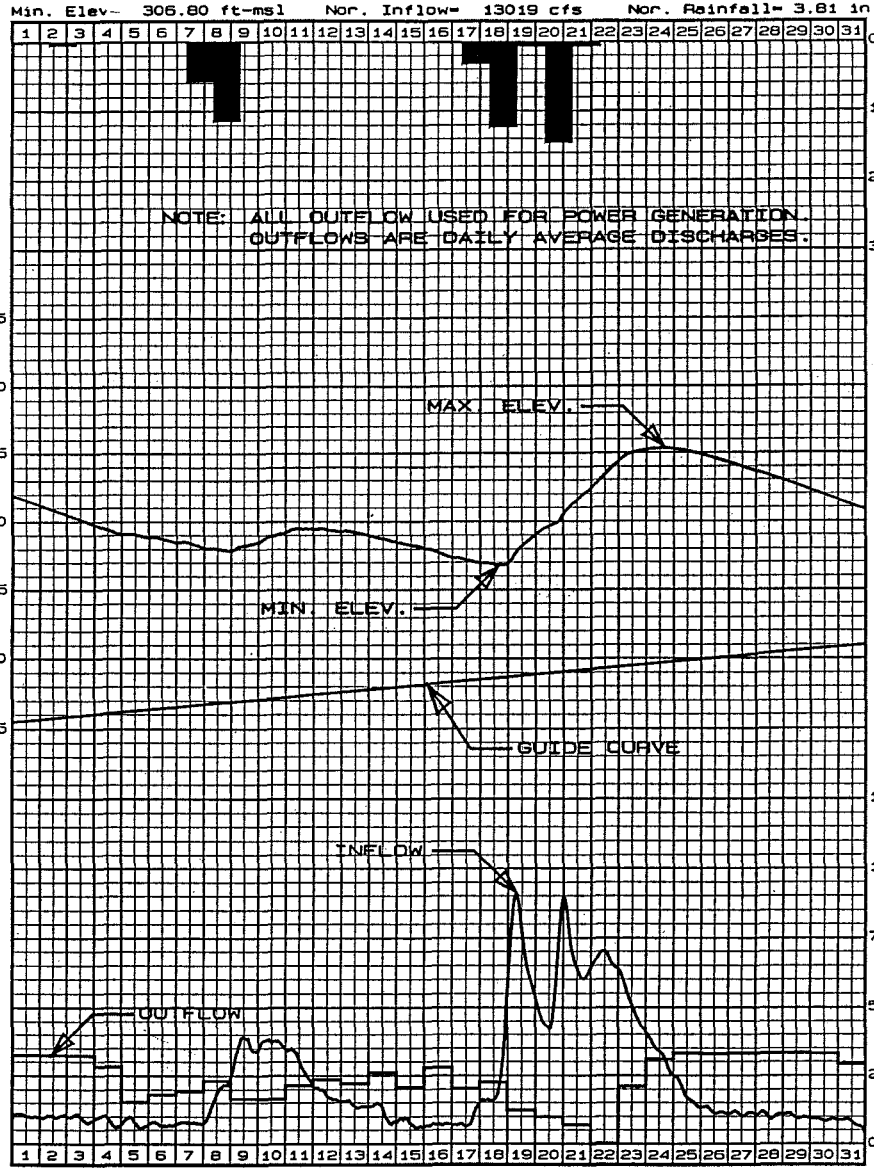
Sheet 2 of 2

Monthly Summary

REPORTS CONTROL SYMBOL ENGCW-E-

ax. El 315.34 ft-msl Avg. Inflow= 22445 cfs Obs. Rainfall= 5.03 in

Min. Elev= 306.80 ft-msl Nor. Inflow= 13019 cfs Nor. Rainfall= 3.81 in



MONTH OF Mar 1998

MONTHLY RESERVOIR REGULATION

JOHN H. KERR RESERVOIR

ROANOKE RIVER BASIN

D.A. 7800 Sq. Miles

Wilmington District

US Army Corps of Engineers

	Elevation	Gross Storage
Bottom of Power Pool	293'	1,158,600 AC-FT
Top of Power Pool	300'	1,472,300 AC-FT
Full Flood Control Pool	320'	2,750,300 AC-FT

Outlet Capacity at Top of Power Pool

Sluices	19,000 C.F.S.
Spillway (Gated)	128,000 C.F.S.
Turbines (0.8 P.F., 15% Overload	35,000 C.F.S.

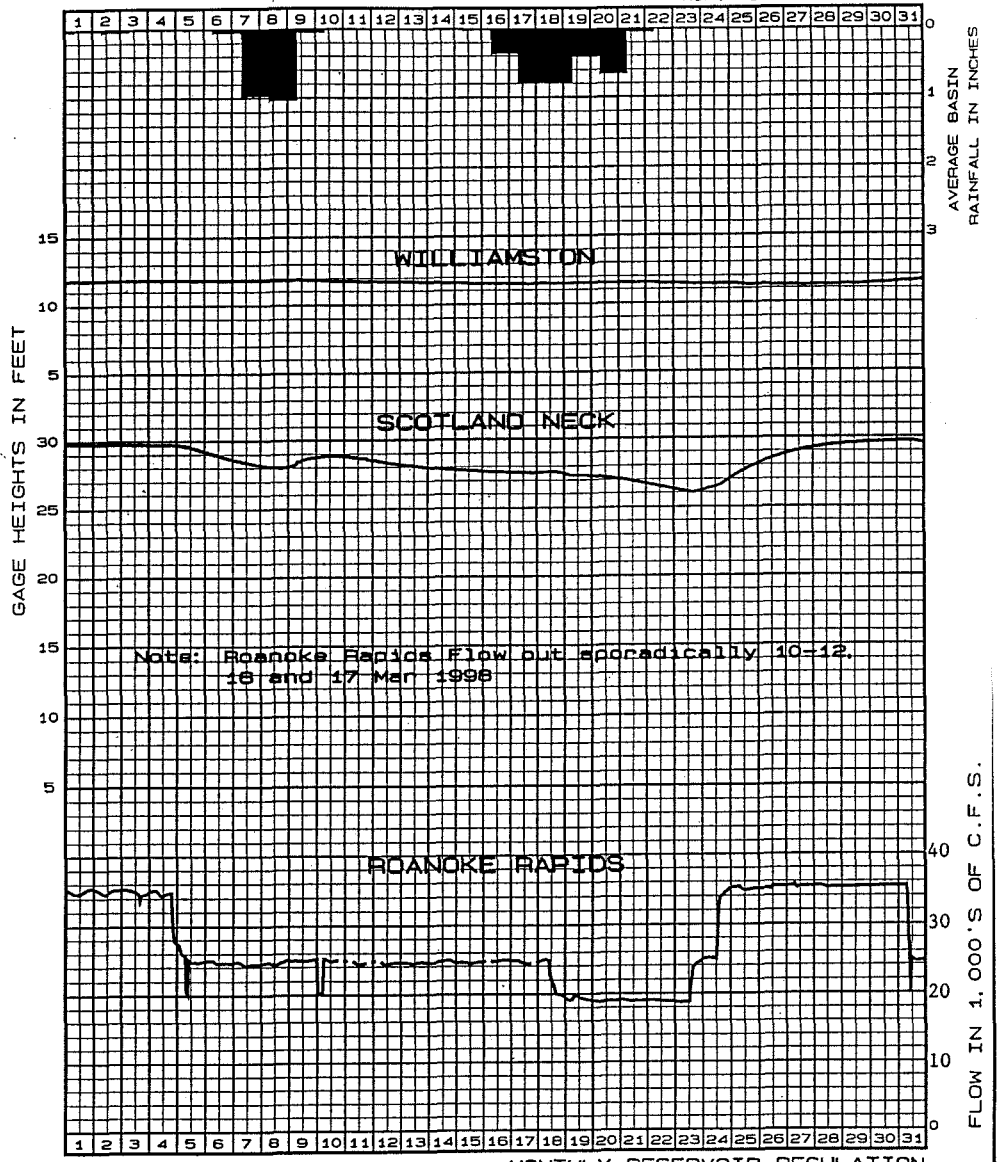
SAW Form 112 r21Sep1994

Sheet 1 of 2

CONTROL SYMBOL ENGCW-E-C

Obs. Rainfall= 5.30 in

Nor. Rainfall= 3.96 in



MONTH OF Mar 1998

MONTHLY RESERVOIR REGULATION

JOHN H. KERR RESERVOIR

LOWER ROANOKE RIVER BASIN

D.A. 7800 Sq. Miles

Wilmington District

US Army Corps of Engineers

STATION	RIVER MILES ABOVE MOUTH	GAGE ZERO FT. M.S.L.	U S W B FLOOD STAGE
KERR DAM	178.7	———	———
ROANOKE RAPIDS	133.6	43.83	———
SCOTLAND NECK	102.5	5.77	28
WILLIAMSTON	37.5	-2.75	10

STAGES AND FLOWS ARE FROM DATA COLLECTION PLATFORM DATA

SAW Form 112 r21Sep1994

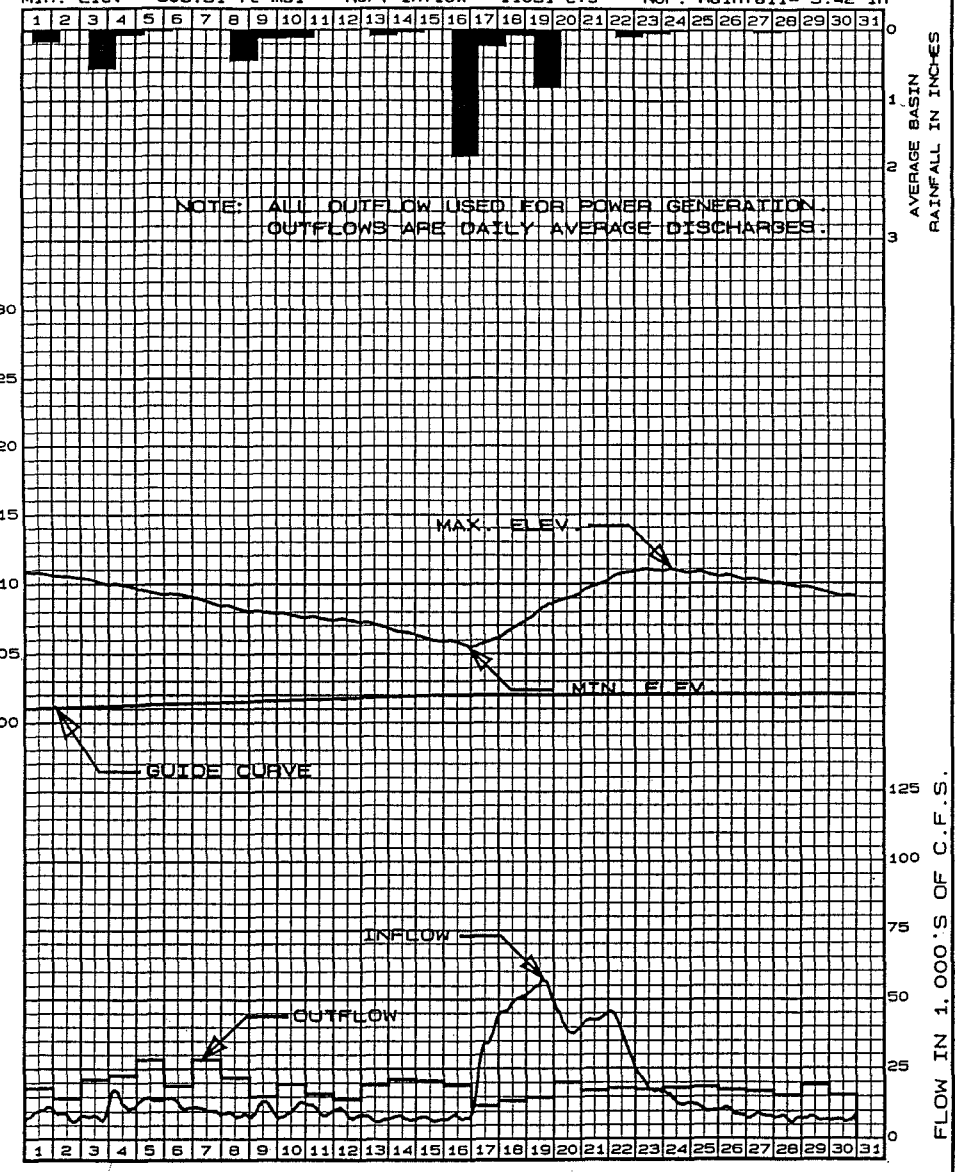
Sheet 2 of 2

Monthly Summary

REPORTS CONTROL SYMBOL ENGCW-E-6

ax. Elev= 1.01 ft-msl Avg. Inflow= 16549 cfs Obs. Rainfall= 4.87 in

Min. Elev= 305.51 ft-msl Nor. Inflow= 11031 cfs Nor. Rainfall= 3.42 in



MONTH OF Apr 1998

MONTHLY RESERVOIR REGULATION

JOHN H. KERR RESERVOIR

ROANOKE RIVER BASIN

D.A. 7800 Sq. Miles

Wilmington District

US Army Corps of Engineers

	Elevation	Gross Storage
Bottom of Power Pool	293'	1,158,600 AC-FT
Top of Power Pool	300'	1,472,300 AC-FT
Full Flood Control Pool	320'	2,750,300 AC-FT

Outlet Capacity at Top of Power Pool

Sluices	19,000 C.F.S.
Spillway (Gated)	128,000 C.F.S.
Turbines (0.9 P.F., 15% Overload	35,000 C.F.S.

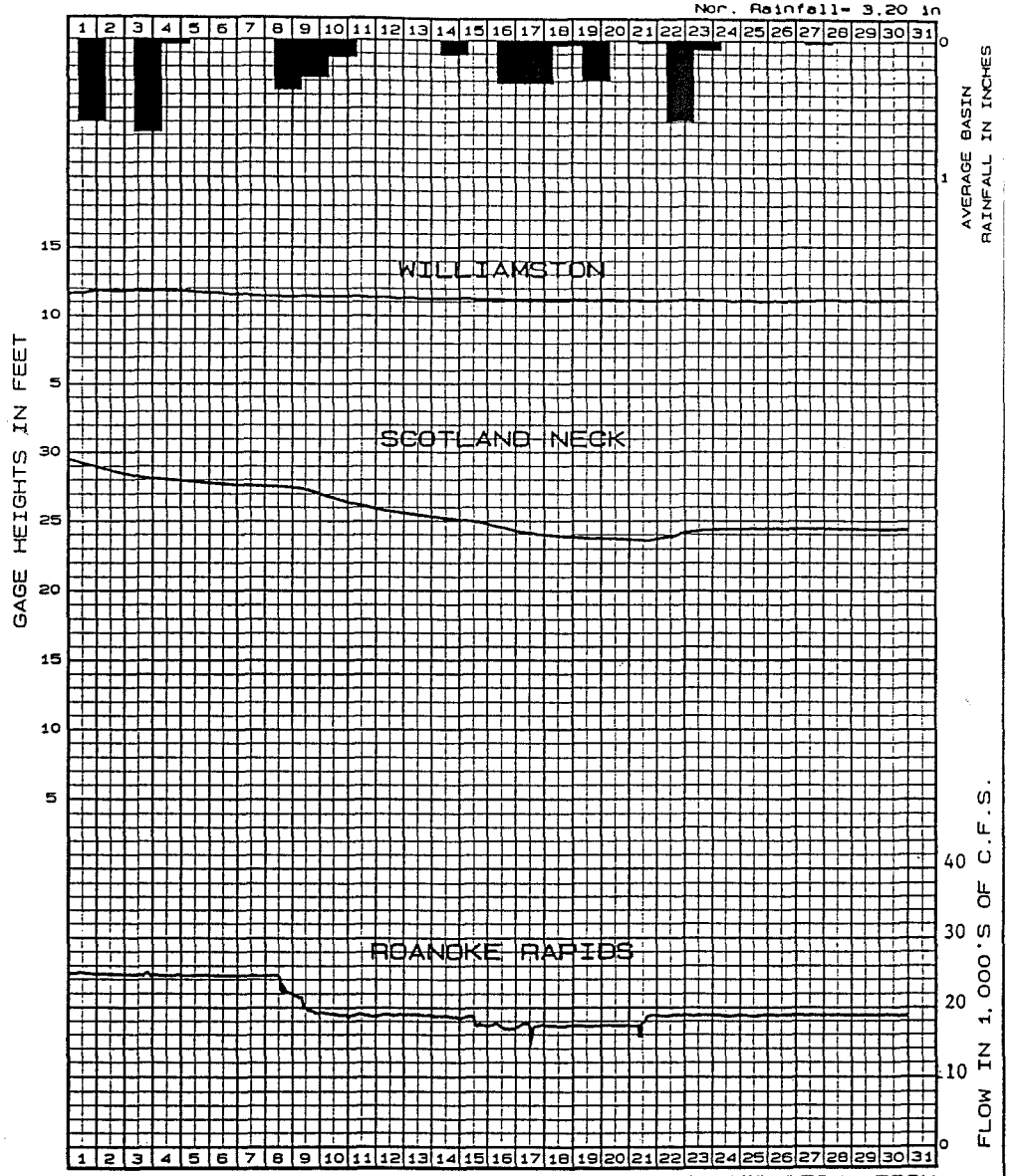
Form 112 r215ep1994

Sheet 1 of 2

REPORTS CONTROL SYMBOL ENGCW-E-6

Obs. Rainfall= 3.89 in

Nor. Rainfall= 3.20 in



MONTH OF Apr 1998

MONTHLY RESERVOIR REGULATION

JOHN H. KERR RESERVOIR

LOWER ROANOKE RIVER BASIN

D.A. 7800 Sq. Miles

Wilmington District

US Army Corps of Engineers

STATION	RIVER MILES ABOVE MOUTH	GAGE ZERO FT. M.S.L.	U S W B FLOOD STAGE
KERR DAM	178.7	----	----
ROANOKE RAPIDS	133.6	43.69	----
SCOTLAND NECK	102.5	5.77	28
WILLIAMSTON	37.5	-2.75	10

STAGES AND FLOWS ARE FROM DATA COLLECTION PLATFORM DATA

SAW Form 112 r215ep1994

Sheet 2 of 2