

VRRBAC

Meeting of April 15, 2008

RRBA Presentation by Gene Adesso, VP RRBA

The Case Against the Inter-basin Transfer of Water

- Riparian water rights (or simply riparian rights) is a system of allocating water among the property owners who abut its source. It has its origins in English common law. It is used in the United Kingdom and the eastern United States. Under the riparian principle, all landowners whose property is adjacent to a body of water have the right to make reasonable use of it. If there is not enough water to satisfy all users, allotments are generally fixed in proportion to frontage on the water source. These rights cannot be sold or transferred other than with the adjoining land, and water cannot be transferred out of the watershed."
- The principle of Riparian Right is written into Virginia and North Carolina law.

Threats to Riparian Rights in the RRB

- Small/Minor
- - Creedmoor from Oxford via Kerr Lake Regional Water System – Need legal work to fully understand what is allowable under permit.
- -Dan River near Milton for Roxboro, NC
- Major Threat
- -Triangle Area NC – Raleigh/Durham

City of Raleigh

- **Year 2000 CH2M HILL Study.**
- **Year 2004 Roanoke River Bi-State Commissions established after hard work by a roundtable group from VA and NC.**

Level One: VA/NC Bi-State Commission... Six Legislators appointed by the Governors. 3 “citizen” (non-elected) members.

Level Two: Virginia/NC Roanoke River Basin Advisory Committee ...
The six legislative members above and 12 elected (co-supervisors) for the respective Planning Districts within the Roanoke River Basin..

2 citizen members appointed by the Speaker of the House and the Senate.

Level Three: Subcommittees chaired by a member from level two and will include interested individuals and experts from the localities within the Basin.

Status of Bi-States

- VA -Formed committees and are meeting regularly.
- NC -Commission formed. No advisory Committee yet and haven't had one meeting with VA.

City of Raleigh

- **2007/2008 Exceptional Drought**
- **No Tropical Storm Relief.**
- **Growth unconstrained- demand for water vs. Supply**
- **No viable partners to look to.**
- **Desperate measures sought.**
- **Media suggesting pipeline to Kerr Lake. City Mayor comments re: TV interview with RRBA.**
- **Current dialog and debate – N&O Articles, State Government Newsletter, and current exchanges between the City of Raleigh Public Utilities Director and the RRBA.**

Do We Care ?

- NC State Government Newsletter- “recent warning that Falls Lake could dry up this summer is enough to start the process to tap into Kerr Lake as a long term water source for the Triangle” — *Barlow Herget, SGR Contributing Editor, Feb. 12, 2008*

Does Anyone Care ?

- **That this transfer would be a violation of Riparian Rights?**
- **That when the entire Southeast is in extreme or exceptional drought with river flows at all time lows, the Roanoke Basin is effected as well ?**
- **That this spring we were in jeopardy of not having proper river flows to support fish spawning ?**
- **That reduced flows and unfavorable winds can drive salt wedges far enough up river causing industrial shut downs and the loss of jobs ?**
- **That low Lake levels greatly impact tourism and recreation in an area that has great economic dependence on those activities ?**

Does Anyone Care ? (2)

- That farming interests are also impacted by drought conditions, not just big cities ?
- That areas like the Triangle grow out of control with regards to proper infrastructure support and then look to solutions outside their own region, regardless of the effects ?
- That the areas generally being “tapped” are less economically endowed and more in need of critical resources such as water?
- *The RRBA believes the answer to all those questions is a resounding “yes” we care by the citizens of the Basin.*

Current Status

- It has been stated and reported that City of Raleigh has asked for the inclusion of a water supply allocation in Kerr Lake in the on going 216 Study of the Operations of the project.
- Durham and Granville County may be involved.
- Not able to confirm the 216 request from COE Project Manager.

216 Study Project

- **Water Supply Allocation not included within context of 216 Study.**
- **216 Not looking at water supply and demand.**
- **May do a project study on the value of Water Supply vs. Hydro, but not in plan yet.**
- **1958 Water Supply Act is the authority for all current reservoir allocations.**
- **Interstate problems (NC-VA) recognized but not a function of 216 involvement. BI-State Commissions seen as desirable & needed.**

216 Study (cont.)

- No formal request received by NC DENR for Inter-Basin Transfer permit from Triangle.
- Big I/T's difficult to get approved – 4 to 5 year process and 1\$million or more cost. Could be a 20 to 40 year long range potential.
- One time proposed 216 project to look at water allocation, i.e., should priorities of Kerr relative to supply be revisited? Question scoped out and will not be done as of now.

SO ----

- Raleigh news reports and/or official statements quoted, are thought to be a misunderstanding or a ----

“RUMOR”

Will the real deal please stand up

The Real Deal

- **Year 2000 – CH2M meeting with COE. Talk about allocation.**
- **2002 Request from Raleigh, Durham and Granville County for a 50 MGD allocation.**
- **Request held pending 216 Study - felt at the time to be completed in 5 or 6 years.**

The Real Deal (Cont)

- **Process requires Requestor Water Supply/Demand study and a COE Re-allocation study before submission for approval.**
- **COE now working on adjustments to current and available water allocation numbers due to yield changes occasioned by period of record drought of 2002 before processing the request.**

SAW Water Supply Agreements

John H Kerr

- City of Virginia Beach, VA Water Storage 10,200 acre-ft 13-Jan-84
- City of Henderson, NC Water Storage 10,292 acre-ft 17-Mar-06
- City of Clarksville, VA Water Use avg 0.3mgd* Grandfathered
- Burlington Industries Water Use avg 2.2mgd* Grandfathered
- VA Dept of Corrections Water Storage 23 acre-ft 7-Apr-89
- Mecklenburg Cogeneration Water Storage 600 acre-ft 20-Jun-91
- Reallocation Available **28,885** acre-ft
-

G.A. Piner, COE

SAW Water Supply Agreements

- **Philpott** No users currently
Reallocation Available 21,800 acre-ft
- **W Kerr Scott**
Wilkes Co./Winston-Salem Water Storage 33,000 acre-ft 29-Jun-60
- **Falls Lake**
City of Raleigh Water Storage **41,469** acre-ft 11-Sep-72
- **Jordan Lake**
State of North Carolina Water Storage **45,800** acre-ft 10-Apr-88

Notes

* Million Gallons per Day, Average usage for 2001

SAW Water Supply Allocations Feb 08 3/1/2008

G.A. Piner, COE

Watershed Management

- Systems Concept



Main process is water flow from rain at the head waters to the sound

Output desires are for water both in quantity and quality

Sub-processes are Water Supply facilities, Dams, Lakes, Power generation, recreation facilities, flood control, etc.

Watershed Management (continued)

What we know about Processes.

- They have defects, e.g. pollution, abuse of withdrawals, adverse impacts of extreme flooding or drought.
- Good processes have System wide defect prevention, e.g. flood and drought protocols, environmental studies and permits, laws on use and the doctrine of Riparian rights.

Example of Defects

“Idealistic”

- During overall watershed “extreme or exceptional” droughts, why do towns and cities have different water conservation restrictions and protocols?
- Lack of mandated restrictions and agreements between State spanning the same Basin.
- VA Beach contract with Norfolk. W/D’s *5/15/07-6/15/07 42k to 45k (MGD)*, **6/15/07- 8/5/07 - 45k to 55k**, **8/5/07-1/1/08 – 55k to 60K**, *1/1/08-2/15/08 – 60k to 45k*. *Let off 1/19/08 to 7k to 8k and now back to 35k to 45k.*

Norfolk/VA Beach Contract

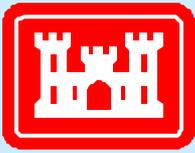
- Norfolk had been trying to do some required work on the Burnt Mills Dam as far back as the summer and fall of 2006. The first time they lowered the level by 2.5 feet. The second time they lowered it by five feet. Both times, heavy rainfall refilled the reservoir and washed their work away. Finally, in the spring of 2007, they lowered the reservoir ten feet, expecting that they could get the work done and the wet spring would refill the reservoir. That never happened and the reservoir has yet to refill.

Norfolk/VA Beach Contract

- Tropical Storm Ernesto (fall of 2006) flooded out the Blackwater River Pumping Station. The pumping station can only deliver about 22 MGD, so it must run for a long time to make a significant contribution. By the time Norfolk was able to replace and repair the station, river levels were so low that the station could not be operated.

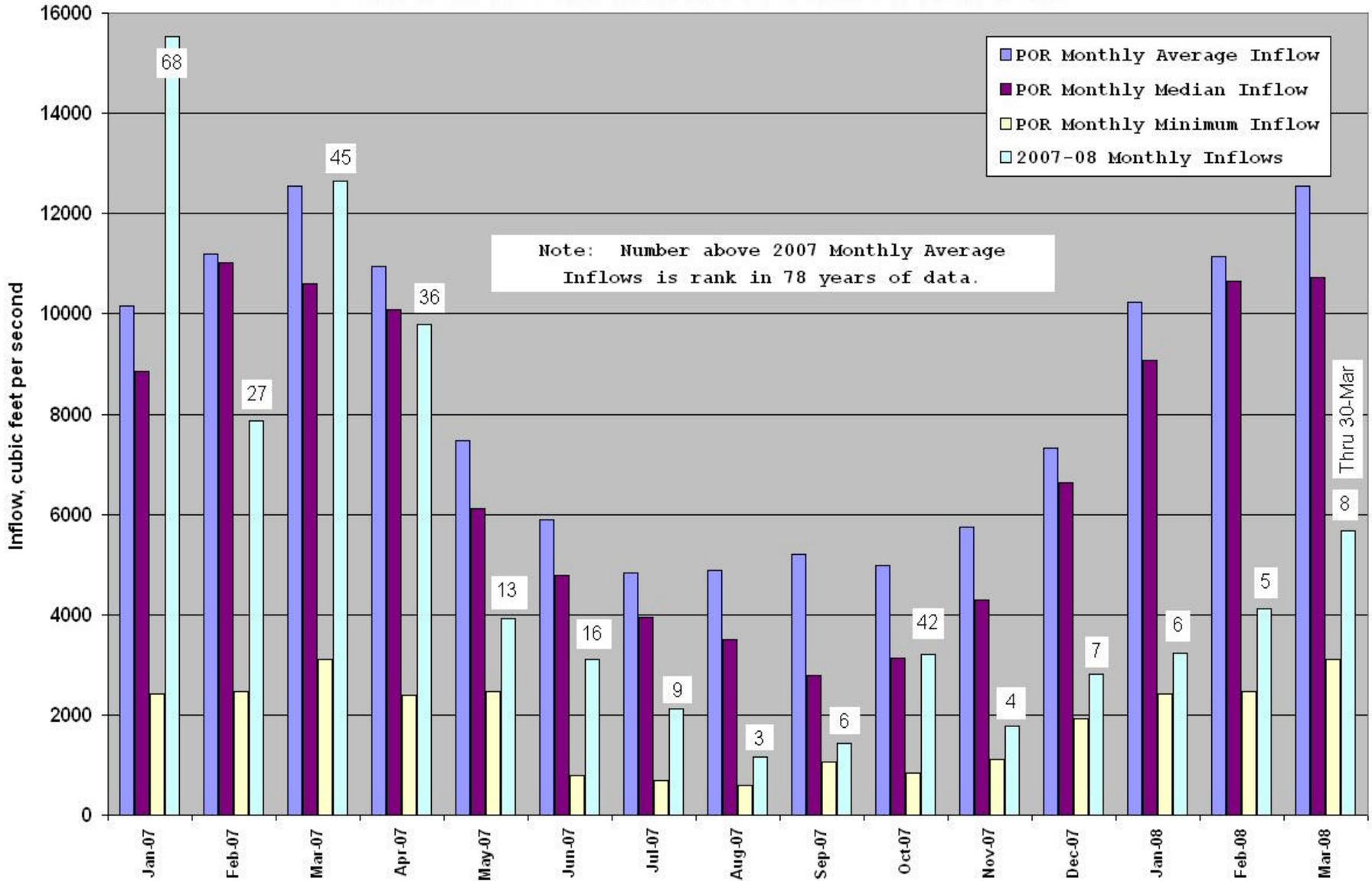
Norfolk/VA Beach Contract

- Problem is that the Contract has provision for Norfolk to accumulate credits for times when they did not pump their allotment, so they called upon them right at the height of the drought and during months we were experiencing record low inflows to Kerr.
- VA Beach requests for them to cut back at that time were denied.



Roanoke River Basin John H. Kerr Reservoir

Period of Record Inflows to John H. Kerr Dam

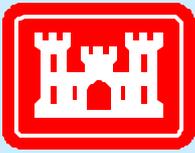


Watershed Management (continued)

- All processes require constant improvement to keep up with changing environment. Re: *The definition of Insanity*
- We know that CHANGE MANAGEMENT MUST BE PRACTISED. A change to any part or sub-process of a system has an effect on the desired output. Practical change management dictates that you must only change one variable of a process at a time and monitor the results before imbedding.

Watershed Management (continued)

- **Adaptive Management was, and The Proposed Interim Operational Plan is change management tasks aimed at improving response to extreme flooding.**
- **The RRBA is supporting the deviation with the hopes it will be a win-win solution for the Basin as a whole. We believe interested stakeholders should follow suit.**
- **RRBA believes the Bi-State Commission approach is absolutely necessary and offers best opportunity for approximating Systems Concept Management of the *Roanoke River Basin*.**
- *The End*



Roanoke River Basin John H. Kerr Reservoir

JH Kerr Lake Level Forecast -- 31 Mar 2008
(Assumes 30% of Historical Monthly Median Inflows and Minimum Energy Declarations)

