

**J.H. Kerr Reservoir Section 216 Study – Roanoke River  
Water Supply Technical Work Group**

Meeting Minutes

Raleigh, NC

10/29/03

10:30 – 2:00

<b>Members</b>	<b>Present</b>	<b>Absent</b>
Carter Edge		√
<b>Tom Fransen</b>	√	
Joe Hassell		√
Thomas(Tom) Leahy	√	
Bob Lindsay	√	
John Morris		√
Allen Piner	√	
Russell Slayton	√	
Jim Thornton	√	
<b>Terry Wagner</b>	√	
Tony Young	√	

<b>Support Personnel/Presenters/Visitors Present</b>
Bill Adams

<b>Action Assignments</b>			
<b>Who</b>	<b>What</b>	<b>When</b>	<b>Status</b>
Tom Leahy	Provide a copy of Virginia Beach's Roanoke Basin Water Use study.		
Terry Wagner	Draft question(s) to forward to Executive Committee	November 13th	

After introductions, Tom Fransen asked the group for a volunteer to take notes, indicating that it would be difficult for the co-leaders to facilitate conversations and take adequate notes. Hearing no volunteers, Terry Wagner agreed to serve as the note taker for this first meeting but emphasized Tom's desire that members of the group other than the co-leaders should serve this role in the future.

Bill Adams provided an overview of the project. Bill identified the Flood Control Act of 1970 as the basis of this study and indicated that the purpose is to recommend structural or operational changes at Kerr Reservoir. The specific purpose of this work group is to determine if water supply issues exist that would lead to recommendations for such changes. If such issues exist, the work group should provide recommendations to address those issues that contribute to National Economic Development and National Environmental Restoration initiatives. Bill provided a handout identifying the six steps in the planning process. Bill then explained the three phase study approach (handout provided) indicating that each phase of the study is scheduled for approximately twelve months. During Phase 1 the primary task is to determine what water supply needs and issues will need to be addressed in the next 50 years and to determine what information exists to support this analysis and what information will need to be developed. During Phase 2, studies necessary to obtain information currently unavailable will be initiated. During Phase 3, alternatives will be developed to address water supply issues based on existing information and information developed during Phase 2. Bill also provided a handout identifying the relationship of the various entities that are participating in this study.

Bill was asked if the operation of Kerr could be modified to address water supply issues and, in terms of this study, how is water supply defined. Bill responded that in terms of this study water supply included all water uses and this group should consider all sources of water to the reservoir as well as all withdrawals from the reservoir. Bill also indicated that the potential for future inter basin transfers from the reservoir could be a significant issue. Bill closed by indicating that the current draft project plan is flexible and if this group identifies additional questions that should be addressed they could be included.

Tom Fransen stated that the purpose of this group during this phase of the project is to identify water supply related questions and what studies are needed to answer those questions, but not to answer those questions at this time.

General discussion followed regarding representation of the Water Supply Work Group. Some members felt that representation should be sought from agricultural water users. Other members questioned whether representation should be sought from operators of Smith Mountain Lake since the operation of this lake has a significant impact on inflows to Kerr, especially during low flow periods. It was also noted that the operation at Phillipott also affects inflows into Kerr. Tom Leahy indicated that based on his involvement with the Advisory Committee the intention of the tasks associated with the Water Supply Work Group is to examine a water balance for the reservoir including upstream lake releases. The group strongly agreed that the total inflows into Kerr should be considered by one of the work groups and agreed to raise this issue to the Executive Committee for clarification.

Tom Leahy indicated that Virginia Beach had prepared a report of existing and projected water use in the Roanoke River Basin that may be used as a template for this project. Tom agreed to attempt to get a copy of this report for the work group's consideration.

A general discussion of RRBROM followed. There was general agreement that if RRBROM is acceptable to USCOE as a planning tool the existing inflow and withdrawal data sets in that model would represent a significant task that is already complete. New data sets of projected inflows and withdrawals would have to be produced. USCOE is beginning the evaluation of RRBROM to determine the acceptability as a planning tool.

The group discussed the issues related to the impacts of water withdrawals from subsurface sources on levels and water availability in Kerr. There was general agreement that ground water contributions to the reservoir were probably too complex to include in this study. It was also generally agreed that inflows to the reservoir from wastewater treatment plants whose source is ground water should be considered.

The group identified the following issues:

1. Is RRBROM adequate to be used as a planning model?
2. Is the existing water supply data adequate?
3. What does water supply mean in the context of this project?
4. How to determine the non-consumptive impacts to inflows and reservoir operation?
5. Should water supply be added as an authorized purpose of Kerr and if so at what level?
6. What is the geographic scope?

The group discussed defining water supply as all consumptive uses, that is the difference in water withdrawn and water returned. The group agreed that the geographic scope of consideration should be the entire Roanoke River Basin. There was discussion regarding what levels of withdrawal/consumptive use should be considered. There was general agreement that all existing information should be used regardless of the amount, but that any data collection efforts proposed by the group should be focused on withdrawals and discharges of 100,000 gallons per day or more.

The group then discussed the specific questions in the existing draft project plan.

The group suggested that question 9A be amended by striking “three impoundments” and inserting “Roanoke River Basin”. (There was agreement that this issue needs to go back to the Executive Committee.) It was suggested that task 9A1 should include an inventory of existing water withdrawals and discharges. There was agreement that another task was needed between 9A2 and 9A3 relating to development of future water use projections. The work group agreed that task 9A4 must be completed prior to 9A3.

The group discussed whether a third question should be added to section 9. The question that was proposed was “Should water supply be added as an authorized use?”. After some discussion there was general agreement that the title of section 9 should be changed to the proposed question. Allen Piner agreed to identify specific tasks associated with this change including such issues, as “Is storage available to support existing and projected water uses?”

**Questions to the Executive Committee:**

*Should the scope of questions addressed by the Water Supply Work Group be expanded to consider all impacts on flows in the Roanoke River Basin instead of limiting the consideration to impacts in the reservoir? Issues involved include evaluating current and future water withdrawals and discharges in the entire basin to develop better alternatives to address future reservoir operations. Specifically the group questions whether existing and future operation conditions at Smith Mountain Lake and Philpott should be considered.*

*How is the review of RRBRM being coordinated across work groups to be sure it will meet all the workgroups needs?*

**Future Agenda Items**

- Water Supply as an authorized use.
- Start discussion of question B.

**Next Meeting will be a conference call** – Thursday November 13<sup>th</sup> from 3:00 PM to 5:00 PM  
Call in phone number is 919-733-2429.

**Minutes prepared by:** Terry Wagner

10/27/03

**J.H. Kerr Reservoir Section 216 Study – Roanoke River  
Water Supply Technical Work Group**

Meeting Agenda

10:00 AM to 3:00 PM

October 29, 2003

NC Division of Water Resources

Raleigh, NC

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|---|-----------------------------|
| 1. Introductions and Welcome  | Tom Fransen<br>Terry Wagner |
| 2. Overview of the 216 Study and the Team's Role and Responsibilities       | Bill Adams                  |
| 3. Review Project Management Plan Section 9 – Water Supply Use of Reservoir | Team                        |
| 4. Start Task Review  | Team                        |
| 5. Set next meeting agenda and time   | Tom Fransen<br>Terry Wagner |

## Six Steps in Planning Process:

- Step 1 - Problems and Opportunities
- Step 2 - Inventory and Forecast Resources
- Step 3 - Formulating Alternative Plans
- Step 4 - Evaluation of Alternative Plans
- Step 5 - Comparison of Alternative Plans
- Step 6 - Select Recommended Plan

**Project Planning**



## STEP 2: Inventory and Forecast Resources

- ◆ Determine existing conditions
- ◆ Forecast conditions
- ◆ Establish Without Project Conditions
- ◆ Fully develop specific problems, needs, and opportunities
- ◆ Identify planning objectives and constraints



## STEP 1: Problems and Opportunities

### ◆ Identify the setting:

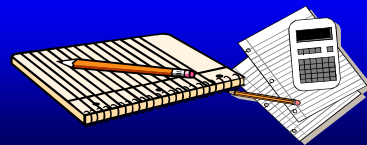
- ◆ Partnership
- ◆ Planning area
- ◆ Period of analysis
- ◆ Interdisciplinary team
- ◆ Stakeholders

### ◆ Preliminary problems, needs, and opportunities



## STEP 3: Formulation of Alternative Plans

- ◆ Identify measures that address objectives and constraints
- ◆ Combine measures into plans that contribute to NED and NER



## STEP 4: Evaluation of Alternative Plans

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- ◆ Decision Criteria
- ◆ Identify Cost Effective Plans
- ◆ Trade-off Analysis
- ◆ Rank Plans
- ◆ Plan Justification



## STEP 6: Select Recommended Plan

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- Cost Effective - Consider the NED/NER analysis
- Environmentally sound
- Technically feasible
- Socially/Politically Acceptable



## STEP 5: Comparison of Alternative Plans

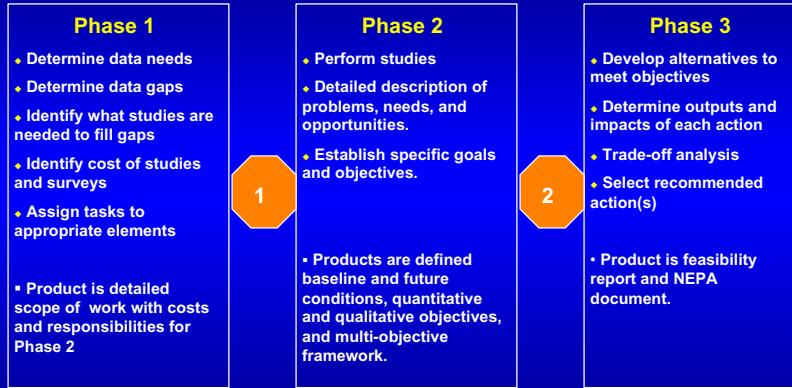
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There are different methods for comparing alternatives and their effects:

- Monetary/Environmental Evaluation methods
- Multi-criteria evaluation methods
- Trade-off analysis
- Goal achievement method



# Three Phase Study Approach



- 1 Decision Point – what studies, surveys, etc. will be conducted in Phase 2 and assignments
- 2 Decision Point – what objectives will be addressed in Phase 3 and cost allocation

## Project Delivery Team

**John H. Kerr 216 Feasibility Study**  
North Carolina and Virginia

### LEGEND

- HQUSACE - Headquarters, U.S. Army Corps of Engineers
- CESAD - South Atlantic Division Corps
- EC - Executive Committee
- NC - State of North Carolina
- LP - Lead Planner
- PM - Project Manager
- SAC - Sponsors' Advisory Committee
- SAW - Wilmington District Corps
- SMS - Subject Matter Specialists Group
- VA - Commonwealth of Virginia
- SMS Team Leaders - (NC, VA, or SAW Employees)

