

**SUMMARY OF THOUGHTS AND RECOMMENDATIONS RELATED TO THE  
EASTERN VIRGINIA GROUNDWATER MANAGEMENT ADVISORY COMMITTEE  
WORKPLAN AND SUGGESTED SUBCOMMITTEES/WORGROUPS AND  
MEMBERSHIP ON THOSE SUBCOMMITTEES/WORKGROUPS**

**Thoughts/Suggestions for Subcommittee/workgroup #1 (Kurt Stephenson):**

**Ideas for Alternative Management Structures Subcommittee (workgroup) first meeting.**

- 1. Overview of groundwater use in the EGWMA (what are we using?). Objective: to establish baseline level of knowledge for future discussion on management options. Topics to review might be total aquifer withdrawals, including current permitted withdrawals, permitted use and estimated unpermitted use. Might be important to acknowledge that ~ 1/3 of use is small, unregulated users (largely domestic wells). I also think it is important for folks to understand how the aquifer is being used...e.g. some folks are using it for long term water supply and others are using it as a drought management strategy (the aquifer is cheap storage).**
- 2. Goals for EGWMA (what is it that we are trying to achieve?). Discussion of the current and alternative state GW management goals. Describe 80% criterion and explain how that might translate into long term use. Acknowledge that this is a controlled GW mining situation and the question is what should be the rate of decline in aquifer GW levels (under the assumption of no artificial recharge). I think it would be helpful for people to broadly understand what are the consequences of alternative GW use levels (go through some model runs, assuming different pumping futures, including making explicit assumptions about permitted and unpermitted use--- e.g. what the world looks like with and without policy change).**
- 3. Management alternatives:**
  - a. Characteristics of effective GW management policies (achieve aquifer goals, incentives for conservation, cost effective water supply investments, reliable water supply, etc.). What is a “good” management strategy? This might be one way to get folks interests on the table (“performance metrics”).**
  - b. Permitted use (limiting use and access with limited supply and uncertainty of impact)**
    - i. Trading**
    - ii. Regionalization**
    - iii. Mitigation**
    - iv. Standards**
    - v. others**
  - c. Unpermitted uses - Management alternatives.**

**COMMENTS FROM MISSION H2O/ANDREA WORTZEL:** Mission H2O appreciates the opportunity to provide comments on the proposed subcommittees to the Eastern Virginia Groundwater Advisory Committee. Mission H2O supports the use of subcommittees, and the opportunity that it creates for greater participation in this important discussion. We are providing comments on the subcommittee structure proposed, as well as the scope of the proposed subcommittees. We are also providing suggestions for participants on the various subcommittees.

### **Proposed Subcommittee Structure**

The proposal is for there to be five subcommittees, with two (options for alternative sources of supply and options for alternative management structures) completing their work first, with an intensive work plan between now and December.

Mission H2O agrees that the two subcommittees proposed are subcommittees that need to complete their work on the front end of the process. There is a technical component to these discussions, however. As demonstrated in the materials MH2O provided on actual water level data, there is a need to better assess how different actions might affect the aquifer. For example, the International Paper shut down had a more significant and more immediate impact than originally expected. The data also show how far afield those impacts were felt. This information helps inform the discussion about alternative sources, and where those alternative sources might be located to maximize their benefit. Additionally, the data can be used to recalibrate and update the model. For this reason, Mission H2O believes it would be helpful to have a technical subcommittee begin work between now and December as well. The technical subcommittee can also help assess the timeline for implementing such projects. Such a technical review will also help achieve consensus on the scope of the issue.

### **Proposed Subcommittee Descriptions**

Mission H2O's comments on the subcommittee descriptions are focused on the two immediate subcommittees.

#### **Subcommittee #1 (Alternative Sources)**

With respect to the options for alternative sources of supply, a critical component of this analysis is evaluation of bigger picture, regional alternative sources. It may be possible that through development of a regional solution, greater strides can be made in weaning individual sources off of groundwater. Moreover, regional solutions may be more cost effective and achieve greater reductions than piece-meal, individualized reductions. The regional aspect of the alternative sources under consideration should be included in the committee objectives in a more detailed way.

Additionally, alternatives that are considered may have benefits beyond water supply. For example, reuse projects and aquifer recharge projects could also aid in meeting water quality objectives. There may be some solutions that include components that would aid in stormwater management. Assessment of the alternative sources should include consideration of benefits beyond water supply.

### Subcommittee #2 (Alternative Management Structures)

Given the short amount of time between now and December, it would make sense to split this subcommittee into two components: trading and alternative management structures. Thinking through how trading could work given our current legal framework for groundwater, how credits/mitigation would be generated, and the oversight that would be needed for such a program will require a significant amount of time and, at the end of the day, is different from the question of whether there are alternative governance structures that should be considered, such as commissions, districts, voluntary allocation committees, etc. At some point the two issues will have to be considered in tandem, but it seems that it would be more productive given the time in which to review these issues to split this subcommittee into two subgroups of 10 people each.

### Nominations for Subcommittees

Mission H2O generally agrees with DEQ's strawman of categories/proposed membership lists for the subcommittees. Mission H2O does have recommendations for specific participants on the various subcommittees, based on their expertise as well as interest in the various topics. Mission H2O nominates the following participants for each subcommittee: (Recommendations included in the individual subcommittee/workgroup lists that follow.)

### Subcommittee #1 (alternative sources of supply)

New Kent County – Larry Dame  
Chesapeake – Craig Maples  
Norfolk – Gina Shaw  
International Paper – Kyle Duffy  
James City County – Michael Vergakis  
Cardno – Gregg Jones  
Agribusiness Council – Katie Frazier  
Newport News – Dave Morris  
WestRock – Nina Butler / Carole Hamner

### Subcommittee #2 (trading and alternative management structures)

Troutman Sanders/Mission H2O – Shannon Varner (trading)  
Western Tidewater Water Authority – Chris Pomeroy (trading)  
WestRock – Nina Butler / Rhea Hale (trading)

**Newport News – Ron Harris (trading)**

**Hampton Roads Planning District Commission - Whitney Katchmark (alternative management structures)**

**Troutman Sanders/Mission H2O – Andrea Wortzel (alternative management structures)**

**Arcadis – Britt McMillan (alternative management structures)**

**Norfolk – Eric Tucker (alternative management structures)**

**Farm Bureau – Wilmer Stoneman (alternative management structures)**

**NOTE: James City County is interested in participating on subcommittees #1 and 3 rather than subcommittee #2.**

**Subcommittee #3 (options for future permitting criteria)**

**Arcadis – Britt McMillan**

**Draper Aden – Mike Lawless**

**WestRock – Nina Butler / Jim Taylor**

**Virginia Nursery and Landscapers Association – Ed Tankard**

**James City County – Doug Powell**

**Agribusiness Council – Katie Frazier**

**International Paper – Kyle Duffy**

**Chesapeake – Craig Maple**

**New Kent County – Larry Dame**

**Hampton Roads Planning District Commission – Whitney Katchmark**

**Subcommittee #4 (data needs)**

**Draper Aden – Mike Lawless**

**CH2MHill – Dan Holloway**

**Hampton Roads Planning District Commission – Whitney Katchmark**

**Jerry Samford, PG**

**Subcommittee #5 (options for funding)**

**Troutman Sanders/Mission H2O – Andrea Wortzel**

**VMA – Brett Vassey**

**Comments – Chris Pomeroy: On behalf of the Western Tidewater Water Authority (WTWA), thank you and the entire DEQ team for a thoughtful start to this important project. WTWA wishes to convey the following feedback and requests in response to the Tuesday, August 18 introductory meeting.**

**1. Problems Needed To Be Solved**

- a. WTWA requests that one priority issue be added to the work plan. The problem is the short duration nature of withdrawal permits, which, by statute, have a maximum term of 10 years. (This is an inadequate period for major public investments in major water infrastructure, which is usually built to last 30+ years and is financed over a similar 20-30 period so that users (our citizen ratepayers) can afford to pay for it; current permit reductions illustrate the disconnect between the permitting program and the realities of water utility construction, finance, and operation).**
- b. In terms of timing, WTWA further suggests that this receive near-term consideration (2015); we believe (a) early resolution could help achieve resolution of DEQ’s proposed permit reductions and (b) it is a topic around which there should be a good likelihood of finding a consensus solution.**
- c. This problem does not appear to fit within subcommittee #1 or #2. We believe it is best addressed at the Full Committee level, which also makes sense given the timing discussed above.**

**Comments – Nina Butler – WestRock: WestRock is spending a considerable amount of time and energy to identify and evaluate various water conservation opportunities and alternative sources of water supply for various locations throughout the company. Through these efforts we have developed a significant amount of information that is relevant to this subcommittee’s scope of work, and we believe we can provide a unique perspective on many of the issues to be considered by this subcommittee. WestRock would appreciate the opportunity to participate on subcommittee #1, and we propose that Carole Hamner, Environmental Manager for the West Point mill, and I serve as the subcommittee representatives.**

**Comments – Nina Butler – WestRock: Draft Work Plan**

- The scope of work for subcommittee #2 should encompass a broad array of approaches to achieve the Commonwealth’s groundwater sustainability objectives. These approaches could include, for example, programs that would generate offsets or “credits” for actions that protect and/or restore forested watersheds and achieve similar water supply and water quality goals as the construction of new infrastructure.**
- Providing an open forum for interested stakeholders to raise and express a range of opinions regarding the technical issues relating to the present and future condition of the Potomac Aquifer will be critical to achieving consensus on the important issues**

**before the Committee. It appears that these technical issues (e.g., the data used for modeling, etc.) will be considered by the members of subcommittee #4, but we would appreciate DEQ's clarification of our understanding.**

## **Potential Sub-Committee #1 Options for Alternative Sources of Supply ( 15)**

- Identify options, including, but not limited to water reclamation and reuse, groundwater recharge, desalination, surface water options, construction of storage reservoirs
- Evaluate how such structures might help with future growth and development, future individual reductions and regional water solutions
- For each option, evaluate technical feasibility, data needs, cost, potential location, participants/users, environmental benefits and impacts
- Other tasks identified by the full Committee

### **Possible Participants including those who have expressed interest**

HRPDC

Hampton Roads Sanitation District (reuse) - **Jay Bernas**

Hazen and Sawyer (reuse) (aquifer storage)

New Kent County (reuse) (surface water) - **Larry Dame**

Hanover County/Clear Creek Assoc. (surface water) (aquifer storage)

City of Chesapeake (aquifer storage) - **Craig Maples**

Newport News (conjunctive use) - **Dave Morris**

City of Norfolk (conjunctive use) - **Gina Shaw**

King George County

International Paper – **Kyle Duffy**

**TNC – Judy Dunscomb**

Farm Bureau

Virginia Agribusiness Council – **Katie Frazier**

VEDP

VDH - **John Aulbach (ODW) and Allen Knapp (OEHS) - Dan Horne**

DEQ - **Mark Sauer**

**James City County – Bryan Hill/Doug Powell - Michael Vergakis**

**VMA – Brett Vassey**

**CARDNO ENTRIX – Gregg Jones**

**HAZEN AND SAWYER – Erik Rosenfeldt**

**King George County Service Authority – Chris Thomas**

**City of Norfolk – Kristen Lentz**

**VA Economic Development Partnership – John Loftus**

**HRSD – Jamie Mitchell**

**AQUA VIRGINIA - Ram Natarajan, Aqua Virginia Director of Operations and Engineering**

**WestRock – Nina Butler / Carole Hamner**

**Virginia Home Builders Association – Richard Costello**

**Smithfield Foods – Bill Gill – Assistant VP for Environment**

**HRPDC – Whitney Katchmark – Comments from James Baker:** Whitney is the Principal Water Resources Engineer for the HRPDC. I believe Whitney is the best single representative for all the Hampton Roads jurisdictions and, therefore, a reasonable alternative to appointing representatives from a multitude of jurisdictions in the region. At a meeting today of the Chief Administrative Officers of all the HRPDC jurisdictions, I indicated I would not be advocating for the inclusion of representatives from all the impacted HRPDC jurisdictions, if Whitney was appointed to the subcommittee. This, simply because it would likely cause the size of the committee to become unwieldy. Instead, I urged each jurisdiction to communicate their concerns and ideas through Whitney (regarding matters pending before the subcommittees) and I further noted they were free to attend all the subcommittee meetings, as they desired.

**City of Chesapeake - David Jurgens, Public Utilities Director for the City of Chesapeake (or his proxy). Comments from James Baker:** Due to our Department's historic use of treated water injection, I think it is important for David or a member of his staff to participate on the Alternate Sources Committee.

**CH2MHill –Dan Holloway**

**Comments from James Baker:** Finally, if and only if Whitney Katchmark should not be designated as a subcommittee member and alternative members were needed to represent the interests of Hampton Roads Utility Directors, I would suggest the following two individuals as appropriate subcommittee members:

**City of Norfolk - Eric Tucker (Assistant Director), Norfolk**  
**City of Newport News - Dave Morris (Newport News Waterworks)**

**Thoughts on Sub-Committee #2 – Sandi McNinch: It would be helpful to receive information on the current permitting and regulatory environment regarding water usage in Eastern Virginia.**

**Comments – Nina Butler – WestRock: DEQ has identified WestRock as a member of this subcommittee. We intend to have Rhea Hale, our Director of Public Policy, and I serve as the representatives to this subcommittee.**

**Potential Sub-Committee #2 Options for Alternative Management Structures ( 15)**

- Identify options, including, but not limited to water resource trading program, formation of a long-term groundwater management committee, formation of a commission
- Evaluate how such structures might help with future growth and development, future individual reductions and regional water solutions
- For each option, evaluate feasibility, data needs, cost, possible participants
- Other tasks identified by the full Committee

**Possible Participants including those who have expressed interest**

Virginia Tech

**WestRock – Nina Butler / Rhea Hale (trading)**

Permittees

~~James City County~~

Marstel-Day

**Arcadis – Britt McMillan (alternative management structures)**

PDC

**Aqua (Virginia) - Terry Blankenship, P.E., Aqua Engineer**

Well Drillers

Home Builders

Economic development interests

Agricultural/irrigation interests

VML /VACO

VA AWWA

DEQ

**VDH – Susan Douglas (ODW) and Dwayne Roadcap (OEHS)**

**Farm Bureau – Wilmer Stoneman**

**Janet Pawlukiewicz – Recommended by Bob Wayland**

**King George County – Eric Gregory**

**City of Norfolk – Kristen Lentz**

**VA Economic Development Partnership – Sandi McNinch**

**Troutman Sanders/Mission H2O – Shannon Varner (trading)**

**Western Tidewater Water Authority – Chris Pomeroy (trading)**

**Newport News – Ron Harris (trading)**

**Hampton Roads Planning District Commission - Whitney Katchmark (alternative management structures) – Comments from James Baker:**

Again, if Whitney Katchmark is not appointed to this subcommittee, I would suggest David Jurgens from the City of Chesapeake be appointed to represent the interests of other member jurisdictions of the HRPDC. However, if Whitney is appointed, I would withdraw my recommendation for Mr. Jurgens in the interest of maintaining this subcommittee at a manageable size.

**Troutman Sanders/Mission H2O – Andrea Wortzel (alternative management structures)**

**Norfolk – Eric Tucker (alternative management structures)**

**Farm Bureau – Wilmer Stoneman (alternative management structures)**

**HRSD - Jay Bernas**

**Western Tidewater Water Authority (WTWA) – Chris Pomeroy**

**TNC – Nikki Rovner**

**Citizen – Janet Pawlukiewicz – Former Deputy Director of US EPA's Office of Groundwater and Drinking Water**

**Subcommittee #3 - Comments – Nina Butler – WestRock: DEQ has invited permittees to participate in this subcommittee. WestRock is interested in working with this group and intends to have Jim Taylor, Director of Environmental Services, Tim Morse, Director of International Environmental Services and Senior Wastewater Engineering, and I serve as the subcommittee representatives.**

### **Potential Sub-Committee #3 Options for Future Permitting Criteria (15)**

- Recommend we wait until there are some recommendations from Subcommittees #1 and #2
- Review current permitting criteria and compare to other states
- Consider options for incorporating accurate land subsidence and salt water intrusion into the model, including review of land subsidence model package being tested by DEQ
- Considerations for withdrawals near/impacting the fall line
- Consider permitting implications/incentives of any alternative sources of supply recommended by subcommittee #1 or full Committee
- Consider permitting implications of any alternative management structures recommended by subcommittee #2 or full Committee
- For each option, evaluate statutory/regulatory needs, data needs, costs
- Other tasks identified by the full Committee

### **Possible Participants including those who have expressed interest**

PDC

**Arcadis – Britt McMillan**

Permittees

Economic development Interests

Home builders

High growth locality

Low growth locality

Agricultural interests

VA AWWA

**VDH – Roy Soto (ODW) and Lance Gregory (OEHS)**

DEQ

USGS

Others?

**CARDNO ENTRIX – John Voorhees/Gregg Jones**

**King George County – Eric Gregory**

**James City County – Doug Powell/Mike Vergakis**

**HRSD – Jamie Mitchell (If Aquifer recharge is a Component of the Alternate Source Strategies)**

**Virginia Agribusiness Council – Katie Frazier**

**VNLA**

**AQUA VIRGINIA - Brent Hutchinson, Aqua Project and Compliance Supervisor**

**Draper Aden – Mike Lawless**

**WestRock – Nina Butler / Jim Taylor / Tim Morse**

**Virginia Nursery and Landscapers Association – Ed Tankard**

**Agribusiness Council – Katie Frazier**

**International Paper – Kyle Duffy**

**Chesapeake – Craig Maple**

**New Kent County – Larry Dame**

**Hampton Roads Planning District Commission – Whitney Katchmark**

**TNC – Judy Dunscomb**

## **Potential Sub-Committee #4 Options for Data Needs ( 15)**

- Recommend we wait until there are some recommendations from Subcommittees #1, #2, and #3
- Identify data needs for continuous improvement of analysis tools, including, but not limited to groundwater modeling of head declines, subsidence, and saltwater intrusion
- Identify data needs for implementation of any alternative management structures recommended by subcommittee #2 or full Committee
- Identify data needs for implementation of any future permitting criteria recommended by subcommittee #3 or full Committee
- Other tasks identified by the full Committee

### **Possible Participants including those who have expressed interest**

PDC

CH2M

Draper Aden

Permittees

Economic development interests

Agricultural/irrigation interests

Local government

VEDP

DEQ

**VDH – Susan Douglas (ODW) and Dwayne Roadcap (OEHS)**

USGS

Others?

**HBAV**

**CARDNO ENTRIX – John Voorhees/Gregg Jones**

**HRSD – Jamie Mitchell (If Aquifer recharge is a Component of the Alternate Source Strategies)**

**Agricultural interest**

**Draper Aden – Mike Lawless**

**CH2MHill – Dan Holloway**

**Hampton Roads Planning District Commission – Whitney Katchmark**

**Jerry Samford, PG**

## Potential Sub-Committee #5 Options for Funding ( 15)

- Recommend we wait until there are some recommendations from Subcommittees #1, #2, and #3
- Identify funding needs for implementation of any alternative water supply source development incentives recommended by subcommittee #1 or full Committee
- Identify data funding needs for implementation of any alternative management structures recommended by subcommittee #2 or full Committee
- Identify funding needs for implementation of any future permitting criteria recommended by subcommittee #3 or full Committee
- Identify funding needs for acquisition of data, continuous improvement of analysis tools recommended by subcommittee #4 or full Committee
- Identify supportable funding mechanisms
- Other tasks identified by the full Committee

### Possible Participants including those who have expressed interest

PDC

VACO/VML

Permittees

Economic development interests

CH2M

Draper Aden

VEDP

**VDH – Roy Soto (ODW) and Jim Bowles (OEHS)**

DEQ

USGS

Others?

**HRSD – Jamie Mitchell (If Aquifer recharge is a Component of the Alternate Source Strategies)**

**Troutman Sanders/Mission H2O – Andrea Wortzel**

**VMA – Brett Vassey**