

**EASTERN VIRGINIA GROUNDWATER MANAGEMENT
ADVISORY COMMITTEE**

WORK GROUP #4 – FUNDING

MEETING NOTES – MEETING #2 - FINAL

**FRIDAY, SEPTEMBER 23, 2016 – 1:00 – 4:00
DEQ PIEDMONT REGIONAL OFFICE – TRAINING ROOM**

Meeting Attendees

EVGMAC – WORKGROUP #4	
Robert Carteris – City of Norfolk – Utilities	Chris Tabor – Hazen and Sawyer
Eric Gregory – King George County	Shannon Varner – Troutman Sanders/Mission H2O
Mike Lang – New Kent County	Brett Vassey – VMA
Jeff Scarano – Brown and Caldwell	Michael Vergakis – James City County
Kurt Stephenson – Virginia Tech	Matt Wells – WestRock

EVGMAC – WORKGROUP #4 – STATE AGENCIES	
Howard Eckstein – VDH/ODW/DWSRF	Scott Kudlas - DEQ
Lance Gregory – VDH/OEHS	

NOTE: Advisory Committee Members NOT in attendance: Jay Bernas – Hampton Roads Sanitation District; Richard Costello – AES Consulting Engineers; Barrett Hardiman – Luck Stone; Whitney Katchmark – Hampton Roads PDC; Sandi McNinch – Virginia EDP; Andrea Wortzel – Troutman Sanders/Mission H2O

INTERESTED PARTIES ATTENDING MEETING	
Ken Bannister – Draper Aden	Rhea Hale - WestRock
Robert Crockett – ADVANTUS/City of Chesapeake	Mike Polychrones - VML

SUPPORT STAFF ATTENDING MEETING	
Craig Nicol - DEQ	Mark Rubin - VCU
Bill Norris - DEQ	

1. Welcome & Introductions (Mark Rubin – Meeting Facilitator)

Mark Rubin, Executive Director of the Virginia Center for Consensus Building at VCU, opened the meeting and welcomed everyone to the meeting.

He asked for introductions

He noted that we had a meeting of the EVGMAC Workgroup #3 – Alternative Permitting Criteria this morning. We had some very interesting discussions about “unpermitted users” and a little bit about the planning process and strayed into the topic of “funding” for a little bit.

He noted that earlier in the week (Monday, September 19th) the Alternative Sources of Supply (Workgroup #1) and the Alternative Management Structures (Workgroup #2A) workgroups had a joint

meeting. These workgroups put together a matrix that we hope to be able to have for the upcoming meeting of the Advisory Committee on Monday, October 17th.

He informed the group that the HRSD folks had an event recently where everyone got to drink the water from their HRSD SWIFT project.

He noted that we had hoped to have some speakers for today’s meeting from the VRA and the Virginia Revolving Loan Fund but we couldn’t get that done for this meeting. Speakers representing both the VRA and the Virginia Revolving Loan Fund will be available for the next meeting of the workgroup (Friday, October 21st).

2. Funding Discussion: What needs to be funded and how do we fund it? (Mark Rubin)

Mark Rubin referred the group to a chart which had been distributed prior to the meeting and was also available as a hand-out (illustrated below).

WHAT	HOW MUCHS	SOURCE	WHO GOVERNS EXPENDITURE
Public Infrastructure			
Private Infrastructure			
Research - Pilot			
Research - Data Collection			
Research - Modeling			
Research - Source Identification			
Research - Economic Benefits			
DEQ Resources			
Land Acquisition			
Switch Consumer to Municipal Systems			
Improved Planning			
Public Education - Problem			
Public Education - Solution			
Conservation and Efficiency Program			
Stranded Assets			

He noted that in our discussions today, the stuff under the “WHAT” column of the chart are all things that we identified during our last meeting (Thursday, August 25th) of “what needs to be funded”. We will talk a little bit about “HOW MUCH” which will likely include some “WAGs” – “Wild Ass Guesses” but we may be able to come up with a range of possible funding amount needs. Then we will need to talk about what the “SOURCE” of that money might be – some kind of a fee, maybe. Then we

will talk about who would need to govern the expenditure – is it “Local Government”; “State Government”; “DEQ”; or some other entity.

The first question today is to look at the “WHAT” column – “Do we have everything that we think that needs to be included as part of this process of creating alternative sources? The group asked for Mark to go through the items on the list and give some explanation for the inclusion of the item in the list. The items in the “WHAT” column and the group’s discussions on each included the following:

- **Public Infrastructure:** This is just projects – in the meeting this morning we talked a little bit about potentially expanding municipal systems and trying to take people off of private wells and get them connected to public systems drawing on surface water as their source of water. It could also be the HRSD SWIFT project and things of that nature.
- **Private Infrastructure:** We have had presentations about use of private land for the creation of an impoundment for use as a water supply source. There may be projects that are private that we may want to consider funding. A lot of the funding for this type of project would be “private source” funding.
- **Research:** There were five things raised under the category of “Research”, these included:
 - **Pilot Programs/Projects**
 - **Data Collection**
 - **Modeling**
 - **Source Identification**
 - **Study of what the Economic Benefits of a given project might be**
- **DEQ Resources:** This topic was generally about the fact that if we are going to give DEQ a few more things to do, i.e., fast-track permits, where are resources coming from? Do you add money to a fee? Do you create some type of a fee to take care of it?
- **Land Acquisition:** The group talked a little bit about land acquisition. There are some states that are actually buying up land that they think would be valuable for surface water impoundments, before the land is developed for other purposes.
- **Switch Consumer to Municipal Systems:** Incentives to get folks to switch off of private wells and connect to municipal systems.
- **Improved Planning:** This topic could be included under “DEQ Resources”. This is looking at funding to specifically improve the planning process. He noted that we had discussed this in the Workgroup meeting this morning (Workgroup #3) but didn’t come up with an awful lot of things, there were a few, but not a lot of things in terms of improving the planning process. There are things that the group still needs to look at to define that.
- **Public Education – About the Problem:** Do we want to fund some kind of public education to inform the public as to what the problem that this group is trying to address is? How do we get the public aware of the problem and engaged in the process of finding a solution? How do we get them to understand the problem?
- **Public Education – About the Solution:** If we identify a solution, how do we deal with a potential “Ick Factor” associated with a given solution? Do we try to educate folks about

potential solutions to the problem? Generally everyone agrees that there needs to be some kind of public education.

- **Conservation and Efficiency Program:** How should we fund conservation and efficiency programs?
- **Stranded Assets:** To the extent that someone has invested heavily in a groundwater project and somehow they switch over to a surface water source - How do we address the potential for a “stranded asset” and the loss of that investment? Is this something that we need to look at funding?

Mark informed the group that even though we do not have a lot of information to go on but we are trying to get a rough sense of what it is that we need to look at funding and how should those items be prioritized? The “How Much” is going to be a guess. The “Source” we really do need to talk about, as well as the “Who governs the expenditure” piece. He noted that in the Workgroup meeting this morning (Workgroup #3) that we talked about “unpermitted users” and we were raising the concept of whether folks who are unpermitted users have some responsibility for the health of the aquifer. A number of things were discussed and one of the things that came up was the possibility of a “fee” charged to “unpermitted users” that would go towards alternative sources or some of the other items needing funding. That concept was not universally accepted by the group and there are significant political issues involved with talking about the imposition of fees like that. The tenor of the conversations this morning that there is not a lot of regulation to do with regard to “unpermitted users” – at least there wasn’t much of a “stomach” for it – so the question was “How do you get them engaged, if you are not going to regulate them any more than they are regulated now in terms of the reporting that they have to do?” “How else can you get them engaged in this process?” The reason being that when you look at the amount of water that is being withdrawn by the unpermitted users the estimate is that it is pretty close to what is coming out from permitted users. When you look at that it appears that is there something that you ought to be getting out of the unpermitted users, since the permitted users are paying money to create these infrastructures and systems. For this workgroup, the Funding Workgroup, we would be talking a little bit today about the concept of fees and what would be a viable source of funding for these types of projects identified in the chart.

Discussions by the Workgroup included the following:

- Regarding the “WHAT” of “Research – Source Identification” – Are we talking about a “revenue sources” or “sources of water”? That is “where is the money for research coming from”.
- Regarding “Public Infrastructure”: The concept of the use of a “groundwater replenishment fund” was raised. This could be used to pay people to put water back into the aquifer. Any locality that had surplus water from their drinking water supplies could request money for putting water back into the aquifer. The question would be “how would you fund something like that?” This would be a very specific “what” to include in the chart.
 - Is this money that would be used to cover O&M costs for a project? It could be. Conceptually, you could put it out that the State could say that they are buying “replenishment services” for folks to put water back into the aquifer at some compensation rate per some replenishment rate.

- There could be people that have surplus water at certain times of the year that if they are willing to treat it they might be willing to inject it into the aquifer if they were compensated for their costs.
- Where does the state get the money that would be used for this compensation? That is part of the exercise for today's meeting. It was suggested that it would have to be a fee or a tax.
- For this type of "fund" would you tie the fee to something like "usage" or "volume"? It could be tied to "new wells" or "per gallon use"; or "existing wells". Or even part of a "permit application fee". Staff noted that it would have to be so expensive to cover the resource that you wouldn't want the permit. Right now DEQ spends approximately 75% of the application fee for a permit just to process the technical evaluation and modeling exercises. It really does not currently cover staff time involved in the permitting process. The permit fee currently covers 10% of the program costs. The permit fee is currently \$6,000. That gets you about 10 years - \$600 a year – but with the permit renewal process it is probably more like 20 years for that fee.
- This would mean either getting money out of the General Fund or through "fees". What about the use of "tax credits" as part of this process? The "tax credit" scenario would only apply to manufacturers, they are the only one with permits – the only way that tax credits would work is if they were "refundable" or "transferable". "Refundable" is harder because it looks like a grant. "Transferable" – the manufacturers like a little less but the State likes a little more because you may never have to pay out. That works pretty well as a tool. With the group of permittees that have already been identified for the 50% cut in their permits is that the benefits is to the public not a single penny benefits to the Company – "because they have today what they have today". This is really not a winning solution for business but knowing that they have to be part of the solution, a tax credit at some level does lessen the harm particular for companies with small margins. Local Water Authorities couldn't use the concept of "tax credits".
- The concept of the privatization of water supplies was raised.
- You could get a credit for selling a commodity (excess water) – a credit for replenishing groundwater. These are really two different concepts – one is a credit that could be traded (related to an abundance of excess water) and one is getting credit (money) for replenishing groundwater.
- Is trading a possible source of revenue?
- Mark summarized the discussions on possible sources of revenue for "public infrastructure". He noted that the group had discussed the following: Fees; Tax Credits; Trading. Additionally, someone mentioned the "T" word – Taxes as a possible source of funding. It was also suggested that the "GO Virginia" money, if there is going to be any money in the fund, might also be an applicable source of funding – this was supposed to be available to fund regional infrastructure that relates to economic development. This is funded through a General Appropriation.

- What about the idea of reprogramming or repurposing some federal funds? Asking for waivers or consolidation? Could some of the federal money for water be reprogrammed towards funding any of these items on the chart? Staff suggested that this might be a question for the folks that are scheduled to speak at the next meeting of the workgroup.
- What about the use of funding through the Water Infrastructure Financing Innovation Act – money has been authorized but has not been appropriated under this act.
- What about the use of private funding? This is kind of where a tax credit might come into play.
- Are there any private/public partnerships currently nationally funding projects? It is being done in transportation, which is infrastructure. Hopewell was mentioned as an example of a unique local private/public partnership related to wastewater treatment for the region. It is governed by an authority/commission. It was put in place around 1976 right after the Clean Water Act.
- It was noted that a number of the Desalination Projects nationally and a couple of the plants in Texas are Public/Private Partnerships. Virginia American Water also owns and/or operates a number of water facilities in Virginia – this is through a contract mechanism. They operate the City of Hopewell’s water facility. Aqua Virginia also operate a number of smaller water facilities in Virginia.
- It was noted that one of the concepts that has been voiced is that “water is owned by the Commonwealth”. But people are selling it all the time. It is an interesting concept – folks are just “selling you access to your water”. It is just a transmission concept. “The water has little or no value if you can’t access it.”
- Any other creative thoughts? It was suggested that you could “sell naming rights to our rivers”.
- In looking through the notes from the last meeting – there was a list of different kinds of funding sources – see below:

- Low or no interest loans – VRA, loans to localities; Bond Bank
- User fees – like stormwater connection – pay per ERC
- Pay per gallon
- Tiered or per gallon permit fee
- Taxes
- Premium for expedited permit
- Tax credits for injection or other investment – conservation or efficiency
- Short term – peer to peer
- Long-Term – trading – certainty of structure
- Low interest loans to private users – conservation and efficiency – authority mechanism – GA can create.
- VA Investment Partnership – grant
- Infrastructure bank – dedicated source of funding

- Public/Private Partnership – state money leveraged
 - Access fee – new wells – additional fee
 - Unpermitted user fee
 - Tap tax/flush tax
 - Tax by district/neighborhood
 - Require connection to municipal system – where possible
 - Amnesty or discount to create incentive to switch
 - Availability fee to run line
 - Federal funding source
 - Buy back permit for over-allocation - \$ used for alternative source
 - Utility tax
 - Incentivize impoundments to create alternative source
 - Monetize credits
 - Public/private partnership for development of sources or water efficiency
 - In-lieu fee to mitigation fee
 - Irrigation – pay more for a particular use like watering lawns
 - Regional funding mechanism – regional authority with revenue generating authority for moving forward not to manage what currently exists
 - Go Virginia
 - A New Regional Authority – focused on stormwater; address sea level rise; TMDL Issue (Not HRSD)?
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- That list included the idea of the use of “in lieu fee type funds”. Typically the concept of an “in lieu fee fund” is that you have an over utilized resource or the resource has been over allocated so you pay into a fund and for that you have the right to use more of that resource – that fund is used to create something or utilized for something related to the use of or maintenance of the resource – this is something else to add to the list that we are generating today.
- It was suggested that we need to think of this from the perspective of “what is the problem” not necessarily what is each of these items? We have an over allocated resource. We have permittees who are being requested to reduce their withdrawals. We are trying to figure out either how to pay for something that replenishes that resource (for example, HRSD SWIFT) or if that isn’t going to work then how do we deal with the issue of replenishing the resource or finding an alternative sources or alternatives. Or a third consideration is there a hybrid approach that would be between these two options? Some of the things on the list, might not have much impact on these issues. Education may have some but it might not be the type of solution that would rise to the top of a priority list for funding – there may not be that much bang for the buck. There may be some alternative sources of funding considered for some of these items. We probably need to work towards prioritizing the list.

3. Flip Chart Notes (Mark Rubin):

- **Groundwater Replenishment:**
 - Existing Wells
 - Volume
 - Permit Application Fee
- **Tax Credit (only applies to manufacturers):**
 - Refundable
 - Transferable
- **Trading – as a source of funding**
- **Fees**
- **Tax**
- **Go VA – Government Grants**
- **Repurposing federal \$ for water**
- **Public/Private Partnerships**
 - Hopewell
 - American Water

4. Discussion – What would a “Fee” be? – What would it look like? (Mark Rubin):

Mark asked the group to take a few minutes and think about the concept of a “fee” and what it would look like and include and what could or would it be tied too or not tied to? He noted that in the workgroup meeting this morning that there was an interesting discussion about “rural concerns versus urban concerns”. Do you distinguish in terms of the fee structure between “rural and urban”? Conceptually, if you have a “groundwater replenishment fund” that is going to be the one big pot of money for this region for alternative sources and the money is going to come from some type of a fee and the question is “what would the fee look like”?

Discussions by the Workgroup included the following:

- At the last meeting the concept of the “ERU” model was suggested. “ERU” is Equivalent Residential Units based on square footage of either a home or in the case of stormwater it is tied to the amount of impervious area. It is tied to your house size. This would be analogous to some unit average usage for that unit – it is based on a “low end”; “medium” and “upper” unit sizes – it is used by stormwater utilities across the state. It is a rough estimate of how much that unit/property uses the stormwater system. To make this concept analogous you could say “what is the contribution of that property to the drawdown of the aquifer”? It could be based on that or some kind of “unit” fee – or just a per unit charge. One ERU is your standard residential home.
- If we are replenishing the groundwater in this type of a system then it is a beneficiary pay type of system – the people that are benefiting from the replenishment are paying for the replenishment – conceptually.

- In the discussions during this morning's workgroup meeting it was noted that Tappahannock doesn't have a groundwater problem right now and New Kent currently does have a problem related to groundwater, so if Tappahannock has no restrictions – it can use all of the water that it wants eventually it is going to affect New Kent. This goes back to the notion of looking at things holistically or regionally as opposed to “who gets the direct benefit”. Anyone now or potentially in the future is going to withdraw water is going to eventually have an impact on the system. The political piece of this is that people who are asked to put money into something want to see what they are getting for the money – otherwise it is really hard to sell the concept. This goes back to the education piece that we discussed earlier – so here is the problem – the problem is that it is going to affect everybody in the region so everybody is going to need to contribute to it – everybody is going to benefit from this – it is one way to try to sell it.
- A concern was raised during the Workgroup #3 meeting was what would be the basis for the charging of a fee. Is it the total land area of a piece of property or is it related to just the impervious surface as it relates to stormwater? Would the fee be based on acreage; or amount of impervious area; or withdrawal amounts?
- If a homeowner puts in a well and it is into the aquifer, is there a fee for that right now? There is a \$300 application fee paid to VDH that is for the operating costs for VDH to administer the program. Conceptually, if a homeowner is already paying a fee of \$300, then you could impose an additional \$50 fee as a groundwater replenishment fee, this might be a whole lot easier than coming up with a brand new tax.
- In a jurisdiction, that shall remain nameless, if you want to drop a well it will cost you about \$1,000 plus (construction costs). If you want to connect to the municipal water system it will cost you about \$3,000 (connection fee). What is wrong with this picture? We are talking about the concept of user fees but we should also be considering incentives so that these costs are more comparable or even that the cost of putting in a well is higher than connecting to the public system.
- In the Virginia Beach and City of Chesapeake area irrigation wells cost about \$900 because they are very shallow wells 2 inch wells – typical water well construction in the Middle Peninsula can run \$8,000.
- There was a long discussion during the Workgroup #3 meeting about residential irrigation wells and whether those types of wells actually affect the aquifer. The answer is generally no – there is some relationship because sometime one can contaminate the other, but mostly the answer is no. At the same time, where well drillers go typically is not to the shallow water table aquifer but into the confined aquifer because of the quality of the water and because the pressure is better. They are not using the shallow aquifer as much as they are going into the deeper aquifers.
- Doesn't the person on a well kind of set the basis for costs? If someone could get onto the municipal system for the same level of costs as putting in a private well they would likely take the public system option.

- The hypothetical concept is that we would have one big fund and that fund could be used to incentivize switching connections from a private well to the public system – the other thing would be to make it as expensive if not more expensive to have a private well than it is to connect to the public system. That is really not a state solution. Couldn't you create your own local incentive fund through the rate structure? You could create a special fund just to get people off of private wells and onto the public system. Would you need legislation to enable that? It could probably be done at the local level and then charge a fee through the local tax assessments. It was noted that there are localities that have special tax districts that funds the utility system – where everyone that lives in that district pays a little bit extra that goes towards funding the utility system – to pay for the infrastructure that was built in that area.
- What goes into the \$3,000 fee? Is that the actual cost of hooking a person up? That is the connection fee. It can go to fund any number of things. It can pay for the meter that is needed. It pays for some of the debt typically that you have to take on to build the systems. One approach noted is that your rates pay for the Operation and Maintenance (O&M) and the connection fees pay the Capital Costs.
- If the goal is to get more people off of private wells and the impediment is \$3 to \$5 grand that very few people have in cash is there a solution where you could spread that costs over say 5 years like a car payment? You would get a fractional increase in your monthly rate to ultimately pay for the connection. Is anyone doing that right now? No. It is a cost issue – you have to have utilities put in transmission lines to service smaller and smaller communities. In other counties, which will remain nameless, they cut deals with developers all the time – we have a subdivision going in and it has 50 homes and it is cheaper for the developer to put in wells and septic for each house and the locality's preference is to extend the water system – it would be more valuable to the developer's customers/purchasers if there is public water available – they agree to do it but they have to have some incentive – the locality charges connection fees and the developer agrees to put in the infrastructure and run it to the homes – then when the locality receives the connection fees, when each house connects to the system the developer receives a rebate – money back for that connection fee to help offset those costs of construction. It was suggested that approach was a book-keeping nightmare. The incentive for the developer is the density of the development. They get more lots on the same piece of land especially if they have both public water and sewer, because with private water and sewer you have to have the drain field and the reserve drain field area as well as the buffers around each individual well – it just comes down to density.
- Is there a way to quantify the number of individual wells or households currently on wells that could be reasonably hooked up to some municipal source? It is likely that some localities have an estimate of that number others might not. That makes a difference, it is one thing to try to create a program to incentivize to get somebody that is close to a municipal system to connect, and it is another thing to try to get someone who is a greater distance from the system to connect. Again it is a question of density, if you have 5 acre lots it is probably not a cost effective proposition, if you are dealing with ¼ acre lots it might be a viable option. In rural

areas you are not going to be able to incentivize those folks to hook to the public system, unless you expand the system out to them.

- It was noted that during a conversation with USDA recently that they had indicated that their project funding goal was \$25,000 to \$30,000 per connection. These are loans for just about anything – you just have to pay it back with interest.
- This conversation is only relevant if the source of water for the municipal system is not relying on groundwater.

Mark noted that there probably wasn't going to be just one fee that gets us where we need to be – there are probably going to have to be a series of fees.

Further Discussions included the following:

- The use of the ERU concept could be comprehensive throughout the region – in theory. If it is a fee you are going to have to tie it to some kind of usage – number of bedrooms/bathrooms, etc. – or some other way to distinguish water use and be able to tie it to some kind of usage. How much money you get out of it would be dependent on how high you set the fee? Is there some sense of what the tolerance is for fees for water? It was suggested you could probably correlate it with the Stormwater Utility Fee. The fees for the Stormwater Utility Fee range from \$30 to \$180 per year – with an average of \$70/year. Kind of a rain tax is harder to accept than a drinking water tax. It has been free for a long time so a fee may not be readily accepted. Does it make a difference if the rural water user is on a deep well or a shallow well?
- Suppose you were going to have an ERU. What are the factors that would go into an ERU? What else do we need to consider?
 - It is tied to usage, which is measured by the units (residential/agricultural/commercial).
 - Someone has to administer the program – an administration fee would be included.
 - Do you need to take into consideration rural versus urban? Is there some level of factoring that is needed? It is tough to compare “rural” versus “urban”.
 - An ERU is usually “impervious area based” – it is rain water based – this is a different case because of the consumptive use component – there needs to be some metric different than a normal ERU is usually factored on.
 - Maybe an estimated usage number for a residential unit could be used and some other estimated number for agricultural use – you could tie it into the local assessment based on the number of bedrooms at some predetermined estimated usage per bedroom or per capita calculation. The usage rate is about 80 to 100 gallons per day per capita. The old rule of thumb is 100 gallons per capita per day. The per capita usage numbers are decreasing slightly (about 65 gallons per capita per day) but now more of the water is being used on residential lawns (irrigation) than is being used in the home. There are 60 million gallons per day in permitted use so if you charge a rate of \$1 per thousand gallons that would generate approximately \$22 million a year just from the permitted users – assuming no change in use – which might be a big assumption.

- There would likely need to be different rates for residential; agricultural; and commercial user.
- Under the stormwater program the justification is that it is a fee for use – the burden on the groundwater resource that you cause is in direct relationship to your impervious area. If you are already on a municipal water supply there is no burden to the groundwater, so asking those people to pay might not be appropriate or acceptable – unless the system was using groundwater and then you would only charge when they were pumping out of the ground. That kind of charge (fee) would be charged directly to the municipality and they could charge their users however they needed to through the rates. – That would make since if you were on a system using groundwater but not for a system using surface water.
- The group discussed the concept that a fee for groundwater use might appear to be a double tax in some instances for the larger permittees/applicants.
- It was noted that the imposition of a fee might discourage new industrial growth in the region.
- If the rate were .50 per 1,000 gallons – the average household taking the 70 gallons per capita per day with a household of 4 that is about 100 1,000 gallon units so if you are charging per 1,000 gallons – if it is .50 per 1,000 gallons that would be \$50 per year per household for all groundwater users. At a rate of .50, for the permitted users that would get about \$10 million and then if you added the unpermitted users at \$50 per year for “aquifer replenishment” that would get you some additional funds – the collection and administration of such a fee might be a challenge.
- It was noted that for larger industrial users even a relatively small fee that isn’t going to impact a municipal or a residential user too much adds up significantly. When you think about structuring this you need to take that into consideration too, for example industrial users don’t pay the same utility rates as residential users. At \$1 per 1,000 gallons a large user would pay \$500 per day – this would apply to any of the large users who are currently permitted. You may need to consider the use of tiered rates.
- It is a different conversation if you are talking about an either/or scenario – if you are going to ask the permittees to take a significant cut OR to invest significant amounts of money into water systems to avoid taking a cut and then on top of that you are going to ask that they pay a per gallon usage fee for the pleasure of doing that – that is a different conversation then paying some kind of potential per gallon fee instead of doing the other.
- It was suggested that what we are looking at is the “silver buckshot” instead of the “silver bullet” to address the problem.
- If you are going to charge a “fee” then everyone needs to be “in the boat” – you can’t just balance this on the backs of a couple of people or only on one segment of the population.
- The thing is that we have to be able to say that we have a problem, we are not going to have as much water in the future; it is creating land subsidence and it is “X”; “Y”; and “Z”, we need to take advantage and use that storage space and use that asset as a State managed resource and we need to make an investment in it today and the people that are using the resource need to make

that investment. This is the education challenge of this process. The general public just doesn't understand the impact that the current usage is having on the aquifer and future water resources.

- It was noted that both North Carolina and Maryland are part of the overall aquifer system (Potomac Aquifer) that we are discussing and trying to identify management options for – are there any regional efforts looking at these issues? Is there a regional component to this process? It was noted that North Carolina has made a big investment in getting off of groundwater through cuts and trading and by developing alternate surface water resources.
- Did any of the other workgroups make any progress with the concept of surface water reservoirs? The progress is that it is a concept that definitely needs to be “on the table”.
- It was suggested that the group also needs to consider existing surface water resources (public and/or private) that are either not currently being used or are being underutilized and put them on a list for future use.

Mark asked the group whether there any sort of “nudges” that you have seen in a system that would change behavior that would help us with something like this? Apparently there have been experiments that have been done on water demand based on a “social comparison” nudge – so someone gets their water bill and realize that they are using more water than their neighbor and those neighbors usage rates get compared and they are aware of it that behavior can be changed – usage rates can be changed through this type of social comparison. These types of changes tend to be small. It always comes down to cost, that is the “nudge” – the cost of water is going up so use if going down. It was suggested that if people had real time data on their usage that their usage would be impacted/reduced.

5. BREAK – 2:30 – 2:43

6. Continuation of “Fee” Discussions (Mark Rubin):

Mark noted that in the workgroups earlier discussions we talked about the use of the ERU as a model. We discussed it but is that something that the group thinks that we ought to be pursuing in terms of a fee to deal with “unpermitted users”?

Discussions included the following:

- Did we decide that it would apply to all existing or to only new unpermitted users? We can make it apply to whichever and however the group wants to – we just want to explore the concept to see what would be acceptable from the group's perspective.
- The ERU concept is something that is known and provides a basis and is used by and accepted by developers. It is an accepted methodology.
- The big question is “how do you administer that fee?” Would you be creating an administrative headache? There are ¼ million unpermitted wells out there that likely are not getting any other utility related bill other than a power bill, so how do you collect the fee. It was suggested that you could use the tax assessments – it could be added to the local property tax bill similar to

how the stormwater fees are collected. The counties/localities by default know who is on their central water system then everybody else has got to be drawing from a well. In the Ground Water Management Area you would be on either public water or private wells.

- Generally, where is the money, collected through this fee, going to go? Is it going to DEQ to administer globally or is the money going to the locality where these users are? Are we looking at a centralized solution that provides funding for a centralized program or are we just funding individual projects? Or providing opportunities for individual local projects? The whole point is how do we get a better regional solution?
- One of the big questions is who governs the expenditure? Who is going to use it? The hypothesis was that there is a Groundwater Replenishment Fee/Fund that DEQ runs for the purpose of this argument and discussion. DEQ could form a Regional Group to manage the fund. It should be a “dedicated fund” that would be used for groundwater replenishment projects.
- A ½ cent environmental impact tax was suggested as a funding mechanism for the fund.
- However this fund is structured, it has to be set up so that you do not continually have to go back and alter the fee, every time a new project comes up. Once it is set up don’t revisit to increase for each new project – it should not be project specific – it could be reassessed every 5 years or some other set time period but not for each individual project.
- The assumption is that such a fee would be administered by the state.
- Can’t assume that HRSD is the only project – anybody, any project should be considered.
- It was noted that we do need to be careful, even though the HRSD project is a great project with a lot of promise; “re injection” is an early science.
- We can’t rely on having the HRSD SWIFT project implemented fully because it isn’t there yet. So we can’t just think that the fund created through this type of fee would go only to HRSD – there are a lot of small injection projects out there that could make a really big difference. For example, some of the municipalities that are on surface water have more capacity and could actually make more water than they are actually doing because they are meeting their current demands and have that excess to inject into the aquifer.
- It was suggested that a Trading Program might create funding effectively – private sector funding to do things if they knew they were getting credits out of a trading system. It was noted that the notion of trading has come and gone numerous times in the discussions of the various workgroups. Is this a viable process for funding? The group felt that this might be a viable option for providing funding. This could be specific to injection but it could include other things as well. A question of if you had an existing permit that you decided not to use could you trade that away was raised. There are likely to be all kinds of possible opportunities for use of a trading concept. If you create a new source and are able to take someone off of groundwater, if you had a system in place, you could create a credit that could be transferred to somebody that has a need.

- It was noted that the trading concept has a lot of parallels with the Nutrient program – where excess credits are able to be traded – this includes both public and private entities in the trading process.
- Something to report to the main advisory committee is that we are starting to look at the concept of trading as a possible Funding source.
- Regarding ERUs and well fees – A well fee is kind of like an “access fee” and an ERU is a “user fee”. It should be one or the other – it is just two different approaches. The “well fee” only captures new wells and is only a one-time fee that is not going to generate much money.

7. Discussion – Relationship between Short-Term Reductions and Long-Term Solutions (Mark Rubin):

Mark introduced the next topic for discussion of the workgroup. He noted that he had heard from several people and it has come up in some of the discussions – talking about the relationship between the (short-term) reductions that are being negotiated for permits that DEQ is doing now and long-term solutions. It has come up two ways – one was in terms of funding and the other was in terms of energy that people would have to put towards pushing whatever comes out of this process.

Discussions included the following:

- Part of the impetus for the creation of the Advisory Group originally was the looming permit reductions and the permit-by-permit decisions didn’t foster or allow regional and more holistic approaches. When people get tied into a particular reduction that they have to do and they start investing money in that type of infrastructure or whatever and they have a permit in place that requires them to do that there is not a whole lot of incentive to continue to participate in regional solutions. The question that is why they should do anything else when they already have time and money invested in something else – meeting the required permit reductions.
- It was noted that this is a great process and that the permittees are glad to be a part of it. There are some good regional solutions that have been discussed and some good process stuff that is being discussed. But if they go and sink a lot of money into a project at this point, they are kind of “picking a path” and that might reduce their appetite for other projects/options later.
- A funding piece that came up in today’s discussions was the concept that what motivated this process were concerns about those reductions in the permits – one of the things about the process was that DEQ was being entirely too reasonable with everybody because they were able to get to reductions that the permittees are okay with – not thrilled with but were okay with and that would take the political steam out of moving forward and supporting this current process and pushing for the longer term solutions.
- The reasons for the original reductions were that we had a big problem and we were heading towards a crisis real quickly and we needed to stop the bleeding first and then start looking at what you do for the long-term solution.

- Everyone realizes that we have a resource that we need to manage. The statement has been made that it is not an immediate issue – it depends on where you are in the aquifer as to the time-lines that we have to deal with the issue. It was suggested that this is the opportunity for us to look at regional solutions. If the permits get issued then everyone is stuck with their way, we are not going to have this opportunity again except in another 10 or 20 years from now when we will be back at the table.
- In another 10 to 20 years we will be back at the table going through these options/going through this process again if we don't take any other actions other than the permit reductions.
- The issue of stranded assets was raised – it was noted that since an investment has been made that there should be some recognition at the state level of that infrastructure and its costs be in place and not be impacted or lost – that you get that associated permit in perpetuity. It was suggested that the long-term holistic solutions helps to provide for protection for those. It was also noted that it needs to be recognized that “not all investment as good investments.” Staff noted that to the extent that we can still meet our environmental goals within a reasonable period of time, then we are open to discussing a lot of different things.
- Can we set up a better management process/system while we have this opportunity? We don't have to figure out how people are going to provide the water we just have to figure out a system that allows people to plan for providing that water.
- Staff noted that regardless of how we do address this, there is still a transition period. That transition period if you are going to change the management system, no matter what you do is going to take 5 years. So it is at least 5 years. The issue is how do we share the risks over that transition period to get where we need to be? In one sense, you can look at the permits that have been issued, that have been negotiated, as being a way to share the risks. It was noted that it is unlikely that everyone agrees with that assessment. The thought is that if we have to go down this “shared risk” path of permit reductions then we really don't have the incentive to look at anything else, whether it is a different management structure or a trading program or something else. Staff noted that “keeping the status quo is not sharing the risks”. The question is what are the permittees going to do to show that we are going to get to that alternative management structure? It was noted that there have been a lot of people and lot of time commitment from folks involved in this ongoing process over the last months trying to come up with a solution – that is a pretty big effort – a lot of good faith effort – it needs time to continue to evolve and to continue the process.
- When we are talking about “transition time”, we are talking about from the time now when we are seeing damage to the aquifer to the time that the new sources, whatever, kick in to manage the resource differently. It is going to take 5 years to decide whatever the new management system or process is going to be and to get the authorization in place to do it and then there is the response time to implement whatever that new management system is. So in that period, stuff has happened. The status-quo is that the resource is on a declining trajectory. The real question from the agency's perspective is how do you deal with the status-quo until the other stuff kicks in? Whether it is 5-years or 2-years or whatever. That is a real problem for the

agency and likely for everyone, unless the “silver-bullet” is really a “silver-bullet” and it becomes clear that you are solving the problem in the long-term.

- It was suggested that there is time to work through this process that the resource is not going to be in sufficient jeopardy that we need to do this first level of preservation by implementing these permit reductions at this time. So part of this is a timing question and part of it is a disagreement about factually what the effect of “not acting now” is versus acting 5 years or 3 years from now.
- Are there other ways to deal with the transition period other than through permit reductions?
- It is a question of certainty that needs to be answered. We don’t know that these things are going to work necessarily. Staff noted that we really don’t know that (and this isn’t a reflection of any of the individuals here) come January 1, 2018 that people will still be in the room and still engaged in this process and agree to do anything if they are not committed to do something under an enforceable arrangement. All due respect to the folks here, yes we have had a lot of people around the room and we have talked a lot but there are not a lot of details yet. Our charge goes until August of 2017.
- It was agreed that there has been a lot of good discussions around the table during the committee and workgroup meetings – but there have been a lot of issues and the discussions have had to evolve and are continuing to evolve.
- This is not a question of choosing sides; this is a question of trying to solve the problem – Whether you need to protect the resource during the transition period? And then how is the best way to do it? The agency has decided that the best way to do that at this time is through the permit reductions.
- Isn’t there some concern on the part of DEQ that the creativity and dialogue might be discouraged as you go forward and issue some of these more significant permits, before the committee can finish its work? Staff responded that “no – not really”, because of the transition period. In most of the permits there is going to be 5 years to figure somethings out. So, that provides a period of time before people have to spend any real money for them to figure things out. The state is covered because there is a permit – the permittee is covered because there is a permit. It gives us the flexibility to all be in place doing what we need to do to meet the statutory requirements while we continue to talk and have this dialogue. That is way people are willing to accept the permits with the reductions that the state has offered – it is not because they like them – it is because it provides an opportunity to not necessarily make all of their investment up front.
- Do the permits have reopeners in them? There are a lot of different ways to create “reopeners”. What DEQ has tried to do in the permits that they have negotiated is to account for the things that people are concerned about while we are continuing to talk. For example, if there is an unexpected investor that comes in they can handle it over the life of the permit term. Groundwater can meet it during the permit term and if something better comes along that allows the permittee to continue to use groundwater to meet that need that’s great but if not then you have to find an alternative source to meet that additional need.

- It was suggested that one of the things that is lacking in that scenario is that we are in the same loop – we are relying on groundwater – it is a limited resource – we have not created a system that would allow for use of other types of regional solutions, like a trading program or a new surface storage reservoir. Why not get something in place so that people can move in that direction?
- Everyone is looking for the same thing which is a long-term solution and the only question is how does the short-term solution (permit reductions) play into the discussions and dialogue regarding a long-term solution? The negative result could be that there are no further discussions. In order for DEQ to meet the risks there needs to be something in place (permit reductions) and the permittees are saying that in order to meet their risks that they need to continue the status-quo till we are done talking.
- If there is any hope of getting to the unregulated and getting to a broader source of income you need everyone at this table to make that happen. If you walk away from the permitted sources because it is a “chicken and egg” game then the whole thing falls apart. The political reality is that everyone has to be at the table and stay at the table to resolve the problem and arrive at a solution. All the players have to be at the table for this to work.
- Is it an “either/or” or is there some other way to work through it?
- It was suggested that there needs to be “certainty”. You probably don’t need “status-quo” for 10 more years and delay the process. There needs to be some level of certainty for a reasonable period of time – it is not going to take more than 2 GA sessions to get everything done – either it is going to work or it is not going to work – you are going to have an opportunity to get two Governors over the next 24 months to buy into the process/the solution – it is a 50-year problem that we are trying to solve today. Literally, if there was certainty for 24 months, you could probably get the commitment from all the players to continue the process and the dialogue. It was suggested that it could all be addressed within a 24-month window. Staff noted that there is any regulatory work involved you are talking longer than 24-months. Trying to get this through 140 members of the General Assembly is not going to be easy. Staff’s concern is how you would implement it and the length of time it would take to implement a solution, especially if regulatory amendments were needed. Given the APA requirements, that is no less than 18 months, probably more.
- It was noted that the permittees are making on-going decisions now about long-term expenditures and making long-term investments – it presents a real challenge. The discussions can’t stop.
- Staff asked whether there is some other tool that if we put into place this group or something continues on, not necessarily in perpetuity, but for some allotted period of time, does that give people a little bit of certainty that these dialogues will continue and that people will be active in the process while we can go ahead and band aid the system in the meantime? So that the permits can be issued so that the state can have some certainty but it allows for and provides certainty that the dialogue won’t stop. Is it really about issuing the permits or not or is it about

you do this for two years and then stop or how do you implement something that requires this to continue so that you can find that place in the middle?

- It was suggested that once the permits are out there (have been issued) that human nature is “I have got something, so I need to move forward – this is what they have told me to do, so this is the path I am on – I have other things to do as well – so I am moving forward. If the permits aren’t issued, it is obviously hanging over everyone’s heads – it is a great motivator. That motivation is going to continue to be there without having actual permits issued.
- Does anyone need more capacity in the next two years or is everyone going to be asking for what they have plus population growth? Staff noted that everybody thinks that they may need additional capacity within the next two years – whether they actually do or not is unknown. From a critical point of view, if the permits were just frozen until we finished this process and we had a deadline – say 2 cycles – Does that harm anybody?
- Staff noted that if DEQ could issue a shorter permit term to cover the time we are talking about using the current permit limits. The question with that scenario is whether that shorter term permit would be for the current use or would it be for the current permitted use limit? The “permitted use” is much larger than what the permittees are currently using. If you limit it to “current use” then that might be a way for you to bridge that interim time period. Permitted use levels would only take us further down the path of having an adverse impact on the aquifer. “Current use” could be argued that you are trying to approach a sustainable use level.
- The idea would be to freeze the permits at the current use level for only a couple of years. No one’s water use is going to fluctuate that much over a couple of years. Staff could issue a permit for a shorter permit and keep people at the status-quo for that permit term (a couple of years), while these discussions continue and we arrive at a solution. That would make DEQ feel that they had covered all the bases. Under this concept the situation is not going to get any worse for DEQ and it is not going to get any better for the permittees but it is going to hold them at current use levels for the shorter permit term.
- Staff explained that right now DEQ can only issue the permittees a 10-year permit – 10-years at the current levels makes DEQ uncomfortable, but if for the sake of argument that staff could issue a 2-year permit or a 3-year permit that kept the permittees at their current use levels while we continue to negotiate the long-term agreement that might be a way out, because the permittee would be operating legally with a permit, and DEQ would be covered, they have issued a permit – the aquifer is probably not going to get any more damaged than it already is over this short time period. Over a 10-year period it would likely become more damaged.
- How does that work for a municipality that wants to grow through economic growth or whatever? There would have to be some cushion built into those short-term permits to allow for economic growth – it just couldn’t be a lot. It still wouldn’t limit people from implementing alternatives.
- Staff noted that one thing that this process has done is that it has pushed people into diversifying their water portfolios. At some point in this process, whether it is 2 years or 5 years or 10 years from now that is going to be something that most people are going to want to do

(diversify their water portfolio) to create more certainty. They are going to need that flexibility to manage a system that has conjunctive uses.

- It was noted that these extended conversations are complicated ones, but one of the conversations is all about capital equity. The concern is that assuming that you issue a permit, even with the transition period, there is a responsibility on the part of the permittee to go after the appropriate amount of capital to comply with whatever that permit is – the concern then is does that shut off the conversation if there are parties looking to spend a lot of capital in a way that complies with the permit but doesn't allow them to look at the broader solutions that this group might be discussing. Is this question based on the conversation of freezing the permits at current use levels? Yes, if you freeze where you are does that shut off the conversation about capital equity to allow the conversations to continue around the table? Staff noted that it might. It might be specific to the individual entity. It is hard to paint a picture with a broad brush when every permit is a little bit different.
- If there was a 2-year permit or a 2-year freeze, at the point where DEQ would then issue the new 10-year permits would they still grant that same “glide path” that has been discussed previously to allow the capital process to start from where it needs to? Ideally, but DEQ would still need to do the resource assessment, but conceivably, sure.
- It was noted that the one thing that seems to be lost in all this is “growth”. The question in terms of the resource is if it is on a downward trajectory are you going to be able to grow anyway. So would the permittee really be giving up anything for that short-term (2-year/3-year) permit? It would be hard to predict a tremendous growth for that period and the per capita demand is still falling. What is being given up under this scenario is the notion of growth. Staff noted that should be an incentive to move forward.
- The concept of the larger permittees scaling back and some reduction is understandable – to give the opportunity to develop those other resources – but they don't come in 2 years – Staff noted that they recognize that – especially if you are looking at a huge capital infrastructure – so to get there give the permittees the “cushion” so that they are not in violation every month.
- What we are trying to do is meet a number of interests. One interest is to have a “cushion” of some level under this scenario of having a short term permit for that 2 to 3 year period would allow for a small percentage of growth. The question from the agency is that they feel a responsibility for the resource not to degrade further, if at all possible. If everything fell apart and the permittees were out there using more water than they are today the trajectory of the health of the resource is going down faster – that is the concern.
- It was noted that there are a lot of things that are taking place in the next 10 to 15 year window, especially if HRSD's project becomes the “silver bullet” and that helps us out in the groundwater issue, but if it doesn't at least one permittee is trying to look at a path to develop an alternative water source – they need the opportunity to develop that and not be in violation and not have the availability of water pulled out from under them and have to tell people that they have to move. That is not going to go over good for anybody.

- Staff noted that they had suggested “current use” as a starting point for this discussion – it is understandable that the permittees would have to get something that was reasonable – in some cases it might be current use, because it accounts for some kind of “peaking” factor. The question is “how do you share the risk?”
- The question was raised as to whether it would be possible for DEQ to reasonable map out what it would take – how many sessions it would take – to get whatever priorities we were looking at through the system? There are certain rules of the General Assembly that have to be followed which results in certain actions taking a specific amount of time to make it through the process. New fees and taxes are not going to happen on an off year – they are only going to happen in a new budget year. Some of these things will have to wait until 2018. Could DEQ’s Policy shop or someone do an analysis of what we come up with here today and tell us how long it would theoretically take to implement if everything went perfect? Could that effort help to inform the time-line? Staff noted that it might. That conversation can take place.

ACTION ITEM: Staff will discuss the question raised regarding the analysis of the specific items discussed by the group today to identify “how long it would theoretically take to implement them if everything went perfect” with DEQ management and the DEQ Policy Office.

8. Questions for the Advisory Committee (Mark Rubin):

Mark asked the workgroup whether there were questions that we could ask the Advisory Committee that would help the workgroup in finalizing the discussions about funding and funding sources.

Discussions included the following:

- It was noted that it would be good to know what we are funding. That list has been laid out during today’s discussions and now it is a matter of prioritizing that list. We could lay that list out for the Advisory Committee and ask them how they would prioritize the list.
- Should the question of “if we came up with a fee” what would be your reaction be posed to the group? It was suggested it was too soon - that until the group came up with a specific proposal related to fees that this shouldn’t be promoted as a recommendation or question to the Advisory Committee.
- It was suggested that the question of how much additional funding would DEQ need to implement the concepts and ideas raised by the group should be raised. The normal tendency in Virginia is for us to pile on more work but not offer up any additional resources to do the work, and then wonder why things go slow. It was noted that this is more of an agency question than an Advisory Committee question.

Mark noted that he wants to give the Advisory Group the start of the chart and give them a sense of the discussions of the group and at least give them the “What” items that were identified in the first column of the chart that we started today’s discussions with and the potential sources that we discussed today. One of the things that they need to be made aware of, especially since it has not been a major part of

their discussions or thought processes so far is that the concept of “trading” is starting to “bubble up” in a very serious way in the discussions of a number of the workgroups. We will also need to educate them on the concept that we have discussed about the notion of the use of an “ERU” concept to see what they think.

9. Public Comment: No public comment was offered.

10. Meeting Adjournment:

Mark Rubin thanked everyone for their attendance and participation in today's meeting.

Mark noted that the next meeting of this workgroup is scheduled for the 21st of October at the Virginia Housing Center. Bill Norris noted that he would send out a meeting reminder with directions to the meeting location.

The meeting was adjourned at approximately 3:50 P.M.