

COMMONWEALTH OF VIRGINIA

SENATOR MAMIE LOCKE, Chair
DELEGATE JOHN COSGROVE, Vice Chair
ELIZABETH A. PALEN, Executive Director



GENERAL ASSEMBLY BUILDING
910 CAPITOL STREET, SECOND FLOOR
RICHMOND, VIRGINIA 23219
(PHONE) 804-786-3591
(FAX) 804-371-0169
epalen@leg.state.va.us
<http://dls.state.va.us/houscomm.htm>

VIRGINIA HOUSING COMMISSION

HOUSING AND ENVIRONMENTAL STANDARDS WORK GROUP MEETING SUMMARY JUNE 25, 2008, 2:00 P.M.

I. Welcome and Call to Order - Senator Watkins, Work Group Chair

- This meeting is intended to be an organizational meeting, to layout some of the issues the work group will be looking into this year
- One of the issues the work group is studying is stormwater retention; how can we utilize and optimize this retention? The work group will take an empirical approach to determine how best to move into policies that will address the future of stormwater development.

II. Storm Water Retention

- **Basic Overview- Russell Baxter-Deputy Director, Department of Conservation and Recreation (DCR)**
 - There are several drivers that will move us into greater stormwater reuse over time.
 - DCR is not the only agency involved; the Department of Environmental Quality (DEQ) is examining the reuse of discharges on an industrial level. DCR looks more at reusing water that falls out of the sky, rooftops, etc.
 - DCR is designated in Code of Virginia to deal with non-point sources, with some overlap with DEQ.
 - DCR is responsible for implementing the Virginia Stormwater Act, operates general permits for discharges of stormwater from construction activities, and also is responsible for Municipal Separate Storm Sewer Systems (MS4s) permits.
 - DCR oversees local erosion and sediment control programs as well.
 - DCR has general authorities granted by the Code of Virginia, including:
 - Encouraging low impact development designs for controlling stormwater;
 - Senator Stewart's bill, effective July 1, 2008, further clarified DCR's responsibility and authority with regard to regulations relating to reuse of stormwater.
 - Happening currently with stormwater in Virginia:

DELEGATE JOHN A. COSGROVE
DELEGATE ROSALYN R. DANCE
DELEGATE ROBERT D. HULL
DELEGATE DANIEL W. MARSHALL, III
DELEGATE G. GLENN ODER

SENATOR MAMIE E. LOCKE
SENATOR JOHN C. WATKINS
SENATOR MARY MARGARET WHIPPLE

F. GARY GARCZYNSKI
T. K. SOMANATH
MELANIE S. THOMPSON

- DCR is undertaking a comprehensive rewrite of existing stormwater management regulations.
- In order to encourage low impact development, water quality and water quantity issues must be addressed.
- DCR is concerned with nitrogen and phosphorous in the water, and also with the rate and velocity in which the water is coming off of sites.
- **Delegate Hull** – What is the definition of “low impact development?”
- **Russell Baxter** -It deals with maintaining water when it falls from the sky and includes a variety of practices.
- **Delegate Hull** –Is it used by different groups of people?
- **Russell Baxter** - It does involve different groups at different levels.
- There is a technical advisory committee helping with regulations.
- DCR is dealing with two main issues when addressing stormwater quantity:
 - The protection of channels.
 - Promoting groundwater recharge, by keeping water on site and managing the volume of runoff that runs off a particular site.
- Having more stringent criteria will drive people to retain and reuse water:
- They are forced to deal with quantity and quality issues.
- They also know that if the water is stored, it must be reused because if it is not, then the site will run out of storage space. The questions then become:
 - How do we use this water?
 - What ability do we have to reuse it before the next rainfall?
- Examples of stormwater storage include:
 - A rain barrel placed at the bottom of gutter. This is a simple system, and can be used on individual homes.
 - A cistern, which is like a rain barrel, only larger, so it holds more water for storage and reuse.
 - A tank, which is even larger than a cistern, and is for collecting all the water coming off of a roof. The ability to use this large quantity of water must be taken into consideration.
- **Delegate Hull** – Would this water be used for human consumption or for other activities, such as irrigation, watering the lawn, etc?
- **Russell Baxter** - This water is not for potable uses, meaning that people will not drink it. It is used for irrigation and washing, flushing toilets, and other non-potable uses.
- There is a huge underground water storage tank under the Capital building. This type of tank keeps the runoff from flooding Main Street in downtown Richmond. It is not necessarily for reuse, but it could be used as such.
- **Delegate Marshall** – Do above-ground storage facilities create mosquitoes or other sitting water problems?
- **Eric Capps** (DCR) - This is generally not the case, as most of these above ground tanks are sealed.

- **Delegate Marshall** – How would homeowners treat and use the water in the rain barrels?
- **Russell Baxter** -This water is presumably used and not stored for a long period of time, because the homeowner is most likely collecting it for a purpose, such as watering a garden.
- **Delegate Marshall** – What about pervious asphalt and pavement?
- **Russell Baxter** - These are examples of low-impact practices that keep large amounts of water from coming off of a site.
- **Delegate Hull**- Could this water be used for drinking purposes, if the sediments and other debris in the water were to be separated from the water?
- **Russell Baxter**- DCR is not advocating for drinking water use, but rather more for other purposes.
- **Senator Watkins** - This issue comes to the work group from Senate Finance, because good, potable water is being used for irrigation. To help conserve potable water, we need to think about alternative systems for irrigation and other non-potable uses.
- *(Note: The Virginia Rainwater Harvesting Manual may be viewed online on the VHC website, under the 6-24 work group meeting.)*

(Note: Senator Watkins left the work group meeting at 2:25 to return to Senate Session. Delegate Daniel Marshall took over as acting chair.)

- **Health related issues -Dwayne Roadcap-Program Manager, VA Department of Health**
 - VDH is given broad authority under Title 32.1 of the Code of Virginia to regulate private water systems and sewer systems that permeate into soil.
 - There are rainwater and gray water guidelines.
 - VDH is often asked how Virginia compares with other states in terms of water reuse.
 - Most states with programs in gray water and rainwater reuse are typically states that do not get a lot of rain.
 - For example, Arizona gets an average of less than 24 inches of rain annually. Compare this with 42 inches of average annual rainfall in Virginia.
 - There are many different terms:
 - Gray water is not kitchen or toilet waste. This waste is called blackwater.
 - Kitchen sink waste is not gray water because food particles and grease are often dumped down sinks.
 - Gray water includes water from showers, sinks, bathtubs, and washing machines.
 - This water does include pathogens.
 - Some other terms having different meanings under different regulations include:

- Sewage
 - Effluent
 - Wastewater
 - Non-potable water
 - Reclaimed water
 - Reuse water
- There is also overlapping complexity with the various agencies that are involved in dealing with water reuse:
 - Dependent upon the use of the water.
 - Within VDH, different offices might come into play, depending on whether this is a public water supply, a larger system, etc.
 - There is a continuum from zero to ten, with zero representing potable water and ten representing blackwater.
 - Along this continuum, some levels may be treatable to be reused for drinking purposes.
 - Rainwater will fall into this continuum depending on the quality of the water. The technology is available to treat rainwater and make it potable.
 - VDH is more concerned with gray water than rainwater.
 - Gray water contains fecal contamination, body fat, oils, soaps, and other pathogens that are more concerning than those present in rainwater.
 - However, there are concerns for rainwater:
 - Rainwater can have what is called the “black biomat,” where bugs and organisms can develop. The water can be treated to prevent this type of contamination, and to avoid septic issues.
 - VDH is also concerned with trenches or pipes used to disperse water. If gray water is dispersed in a trench, this creates an avenue for pathogens to move.
 - **Delegate Hull** – Will open trenches also cause mosquito problems?
 - **Dwayne Roadcap**- This is a problem, and therefore, these trenches require maintenance and open ditches are not allowed.
 - **Delegate Marshall** -Who is responsible for the inspection of the trenches and pipes used?
 - **Dwayne Roadcap** -The homeowner is expected to maintain the system if they chose to retain gray water. If a homeowner wants to reuse gray water, VDH will issue a permit and has a reporting requirement; however, VDH does not get many requests for these permits.
 - **Delegate Marshall** – What about neighborhood requirements, in particular, how would a neighbor deal with a trench or pipeline that is not properly maintained?
 - **Dwayne Roadcap** -This is a major area of concern for VDH, because if gray water moves across a property line, neighbors could get sick from exposure to pathogens that they are not otherwise exposed to on a regular basis. If a homeowner wishes to

reuse gray water, the rules require that the homeowner has a septic or sewage system for storage, and then when there is an opportunity to divert it, they can use the water.

- **Delegate Hull** – Have these systems been approved in Virginia?
 - **Dwayne Roadcap** –Example: woman wanted to have this type of reuse system. VDH required that she have a professional engineer who would work with the family and ensure proper maintenance of the system.
- **Delegate Hull** – Can developments have a joint, larger system for gray water reuse, and if so, what sort of engineering and maintenance must be involved?
 - **Dwayne Roadcap** - This type of infrastructure is possible, but it would be a high dollar investment for the development, and that part of the permitting requirement would be to maintain the system. However, even though this system would involve a higher quantity of water flow, it is less risky than a single homeowner system.
 - **Delegate Marshall** - This would probably be easier for new neighborhoods, but may be hard to implement in already existing developments?
 - **Dwayne Roadcap**- This is true, but it is not impossible for existing neighborhoods to implement a reuse system.
- **Building code requirements- Emory Rodgers- Deputy Director of Building & Fire Regulation, VA Department of Housing and Community Development**
 - In developing the 2009 statewide building code, DHCD will work with state agencies and officials to include a functional design section so that there is coordination at the state and local level regarding the design and scope of retention systems.
 - Building inspectors are usually more interested in looking at indoor water uses, and issues dealing with lawn irrigation, such as pipelines and trenches. These are usually handled more by VDH and their regulations.
 - In looking at DCR's presentation and Appendix C of the *International Plumbing Code* (dealing with Gray Water Recycling Systems), there are different criteria on how much can water can be stored, so this may need to be looked into if it becomes a problem on the local level.
 - Gray water was used even before Appendix C existed; it has been used successfully at a Northern Virginia country club for over thirty years, for example.
 - **Delegate Hull** – What about runoff from gray water used for irrigation?
 - **Rick Link**, DEQ, Policy Coordinator - Pathogens and fertilizer cause water quality concerns, and this is typically dealt with using best management practices, such as riparian buffers, etc.
 - DCR is primarily responsible for working with localities to help implement best management practices.

- **Russell Baxter** - On a small scale, with non-point sources, this can become an issue. There have been DEQ enforcement issues dealing with using sewage to irrigate, saturating the soils with too much irrigation, and run-off going into groundwater. The basic question is how much land is available to assimilate the application of irrigation.

III. **Betterment Loans – Failing septic systems- Lindsay Trittipoe, President of NatLUST,**

- natLUST (Leaking Underground Storage Tanks) is a 501(c)(3) organization which started in 2002 to keep cleaning up underground storage tank leakage issues when the petroleum fund became insolvent.
- In 2005, the nonprofit began examining leaking septic systems.
- In Virginia, at least 10 percent are failing in some form or fashion. This winds up in state water supply sources.
 - This problem is in the range of about \$1 billion dollars.
- How do we solve this problem without socializing the cost?
 - States have come up with creative financing programs.
 - States must create a “carrot” – a fund of unlimited money, at low-cost to taxpayers – to help VDH deal with failing septic systems.
- Other purposes for betterments financing could include cleaning up dry cleaning stores and regulated underground storage tank users.
- A betterment is an improvement made by state or local government to a private homeowner, where the improvement is repaid over time through charge assessed against the property.
 - Betterment loans are senior to mortgage debt; they are equivalent to a tax lien and would be repaid before all other debts.
 - In order for the loan to have this superior status, the state must determine that this is a compelling public interest.
- This legislature should enact a betterment statute that would allow a homeowner to qualify for and receive this type of loan.
 - This would allow financing to be made available to homeowners in Virginia.
 - Particularly now, with the mortgage crisis, this would be good because homeowners cannot get financing to make these repairs.
- The organization’s legal counsel has come up with a strategy which will allow natLUST to provide tax-exempt bonds, but a statute is needed that would allow state agencies to qualify parties to receive the loans.
- **Delegate Hull** - Why does the state government need to be involved in such a program? Can’t this be handled on a local level? Currently, in Fairfax County, there is a program in which the county fixes roads and gutter, etc., and then puts a lien on the property. When the property is sold, the county is reimbursed for the repairs. Also, a homeowner would mostly likely not be able to sell their home without first having a failing septic system replaced because upon inspection, a mortgage lender would not provide a mortgage to a buyer if the system was not working properly. However, a buyer could go in and get a loan that includes the

cost of fixing the system, so this is already in place right now to handle the problems.

- **Lindsay Trittippoe** - Fairfax has the resources to implement such a program, but other localities do not have the funds. Many localities also think that this is a state and not a local issue, because counties do not want to borrow money and put the county in debt. They also do not wish to foreclose on the homeowners.
- Due to the mortgage crisis, homeowners now have limited ability to take out conventional sources of financing to repair their systems.
- **Delegate Hull** – Are these failing systems are in violation at the local level?
 - **Bob Hicks, VDH** – Yes, they are.
- **Mr. Trittippoe**- If VDH is able to qualify a homeowner for the betterment loan, then the local government must record it in land record books, but there would be no other county involvement.
- **Delegate Hull** – Where would the start up money come from to begin the revolving fund?
 - **Lindsay Trittippoe** - The fund would begin with private funding; NatLUST will contribute significantly.
- **Delegate Marshall** - Have any other states implemented this program?
 - **Lindsay Trittippoe** -No states have implemented such a program yet, but many states have been in correspondence with NatLUST regarding the program, including Connecticut, Rhode Island, and Kentucky.
- **Delegate Hull** - Why is a state agency needed to qualify a lender, why can't NatLUST offer a program now, without state involvement?
 - **Arthur Anderson, McGuire Woods** (counsel for NatLust) – Because the loans require the super lien status.
- **Delegate Marshall** – Do any other similar super liens like this currently exist?
 - **Arthur Anderson** -The assessment program that Delegate Hull mentioned earlier is similar.
- **Lindsay Trittippoe** - The state can make these loans directly, by putting VDH in charge administering the loans, but the state would most likely not wish to take on this role.

IV. Public Comment

V. Adjourn- 2:57 p.m.