



## Delaware River Basin Commission

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### **DRBC WATER MANAGEMENT ADVISORY COMMITTEE MEETING SEPTEMBER 29, 2003**

#### **COMMITTEE MEMBERS PRESENT:**

Jan Bowers	Chester County Water Resources Authority
William Gast	PA Department of Environmental Protection
Joseph Miri	NJ Dept. of Environmental Protection
Frank Schaefer	U.S. Army Corps of Engineers
Ronald Sloto	U.S. Geological Survey
John Mello	U.S. EPA Region 2
Debbie Lord	Pompeston Creek Watershed Assoc.
Mary Ellen Noble	Delaware Riverkeeper Network
Kurt Rieke	New York City DEP
Bob Molzahn	Water Resources Association of the Delaware River Basin
Tom Sims	University of Delaware
John Showler	NJ Dept. of Agriculture
Stewart Lovell	Delaware Department of Natural Resources and Environmental Control

#### **DRBC STAFF:**

Robert Tudor, DRBC Dep. Ex. Dir.  
David Sayers, Planning & Implementation Branch  
Ken Najjar, Head, Planning & Implementation Branch

#### **CALL TO ORDER:**

The meeting was called to order at 9:45 am by Chairwoman Jan Bowers.

#### **REVIEW OF MINUTES AND REVIEW AND APPROVAL OF AGENDA**

The minutes of 07/16/2003 were not approved. Joe Miri had concerns regarding item #2 on page 3 and wanted more time to review the minutes relative to his comments. This item was tabled until the next meeting.

The issue of DRBC Water Supply Security Issues will immediately follow update of WMAC membership. It was decided that the meeting would adjourn at 1:00 pm today. Changes to the agenda to accommodate this were unanimously approved.

#### **UPDATE OF WMAC MEMBERSHIP**

David Sayers stated that Kurt Rieke has agreed to represent New York City on the committee today, but Mr. Rieke is not sure if he will be the official representative. There has been no official appointment made for New York State and they will not be sending anyone to today's meeting. DRBC has reached out to New Jersey American Water Company for the Water Utility sector, unfortunately they are going through major changes and are not able to send anyone but anticipate that they should be able to appoint someone before the next WMAC meeting. David

Sayers introduced Tom Sims from the University of Delaware and John Showler of NJ Dept. of Agriculture as new members appointed to the committee.

### **DRBC's ROLE IN SECURITY:**

Bob Tudor of DRBC gave a short update to the Committee on DRBC involvement with security issues related to water resources management in the Basin. In May, the US Dept. of Homeland Security announced they were going to have up to \$700,000,000 available as part of the FY03 Supplemental Budget to enhance security of urban areas with high density population and critical infrastructure. DRBC had opted not to apply for any grants, thinking that most of the attention at that time was focused on physical security. DRBC wanted to reach out to the WMAC (and the Toxics Advisory Committee on 07/03/03), to explore if there is some niche in this for DRBC, or a role we could play.

DRBC is working with the City of Philadelphia and major purveyors on both sides of the river on an Early Warning System (EWS), which will be useful for communicating spill alerts and general information sharing between water purveyors. This network involves real-time water quality monitoring provided by the USGS and by the purveyors themselves. In the event of a water quality incident the EWS will enable information to be communicated quickly, securely and to the right people.

Bob Tudor noted that EPA has already expressed interest in using DRBC's expertise in fate and transport modeling to help understand the likely impact of spills under various flow conditions. Both the City and EPA are very supportive of DRBC getting involved in this area.

Bill Gast noted that a couple of years ago, the SRBC proposed something similar with regard to a flooding Early Warning System. PA Emergency Management Agency (PEMA) didn't want SRBC setting up a second warning system or spill-response type early warning system that would confuse either the public or some of the other entities with regard to their need to report their emergency management agencies. Bob Tudor will talk to Eric Conrad or other contact at PEMA.

Jan Bowers commented that there should definitely be the initial contact route through PEMA, but the downstream suppliers also need to be contacted about what might be coming their way. It was suggested that a time of travel study be carried out on the Brandywine, to determine when a contaminant will hit certain intakes given various input locations and flow conditions. This is a need currently not being met. David Sayers commented that the time of travel model for the Schuylkill and Delaware upstream of Philadelphia is an important component of the EWS under development.

Jan Bowers noted a concern with the safety of reservoirs. The response from PADEP is that reservoirs aren't of primary concern when dealing with water security issues. Ms. Bowers felt that there is little in the way of useful guidance regarding the protection of reservoirs and dams – especially the smaller ones. Kurt Rieke noted that NYC was spending a great deal of money of reservoir protection. Bill Gast suggested that one of the reasons for reservoirs to receive less attention is that it would take so much pollutant or toxins to cause a problem that it isn't a practical target for terrorism. The greater concern is within the distribution system itself, because once it's in there, you can't get rid of it and it's much closer to the point where it can cause harm. Joe Miri stated that in terms of contamination, there are no more vulnerable places than the reservoirs.

### **UPDATE ON WATER BUDGET / GW AVAILABILITY STUDY**

Ron Sloto explained the status of the two studies underway between DRBC and USGS. The first task was to break the Delaware River Basin up into manageable watersheds, starting with the HUC 11 watershed maps. In New York, some of the HUC 11 basins were fairly large so they were broken down with one piece above a reservoir, one piece with the reservoir and all the drainage into it, and one piece below the reservoir. The goal was to get all of the newly delineated watersheds to fall between 50 and 100 sq. mi., which are easier to work with.

The next step is to find some index stations that can be used to develop groundwater availability data. It's a matter of figuring out which areas are best suited for the stations. The ultimate end point is to take the groundwater availability and compare that to the water usage in each watershed which would give an indication of whether it is stressed, unstressed, somewhere in between, etc. Currently, there are concerns over the water use data. Ron Sloto noted that the water resources can't be managed if we don't know how much water people are using or where it is going, and this information is lacking in the basin, in some parts more than others. In 2001, the WMAC put together a form to collect water use data and then left it up to the states to implement - it doesn't look as if this is being done. Mr. Sloto noted that he is working with Scott Hoffman at the New Cumberland office and should have his information ready to hand to Scott by no later than the end of November. At that point, Scott will program the information into the GIS basin equation for every basin and then the database will pull out the groundwater availability, water use, domestic use, and then determine what is available and what's been used.

The second project aims to develop prototype, but detailed, water budgets for five watersheds through the Basin, two in NJ and three in PA. As far as the water use data for those watersheds, the longer the period of record, the better. This will also require a history of water discharge information. For the GW Availability assessments just the most recent year of withdrawal and discharge data would be adequate. In some format, water use data has been collected for many years and it would be nice to get all the historical data from the West Chester system or other system that goes back 20 or 30 years, but that data wasn't updated and stored. Mr. Sloto noted that the water use data should be collected and kept in a database format, where 10 or 20 years from now you can pull out those years of data and have all the information. Many people share that goal but for various reasons there always seem to be problems. Bill Gast commented that the information does exist for PA, but just hasn't been transferred over into their new database system yet.

David Sayers commented that he has been working with the states over the summer to obtain the most up to date information available and has been utilizing other resources such as the EPAs PCS database, to complete the database of withdrawals and discharges for 1990-2000 at a minimum.

#### **SUBCOMMITTEE ON ECOLOGICAL FLOWS (SEF) ACTIVITY**

Bill Gast updated the WMAC on SEF activity, noting the evolution of the committee to this point. Originally CEFUR (Committee for Ecological Function of the Upper River) was formed by DRBC and TNC (The Nature Conservancy) to look at issues of ecological flow in the Upper River. They had two or three meetings and scientific folks got together to talk about ecological flow needs in that region. Meanwhile, WMAC had asked Leroy Young (PA Fish and Boat Commission) to establish and chair an Instream Flow sub-committee to look at similar issue but with a Basin-wide scope. Because of the entanglement of the CEFUR activities with what's going on among the decree parties Flow Management committee became very interested in what CEFUR was doing and Colin Apse requested that DRBC give an official sanction to the CEFUR committee because he thought it would help in obtaining grants from organizations to help fund their work. The Flow Management committee spent several months putting together a resolution

whereby DRBC would officially sanction this committee but would not directly manage it. It was brought to the WMAC at the last meeting and asked for their input because it would result in a merger of Leroy's subcommittee and CEFUR and at the last commission meeting, DRBC approved the resolution. There is now one committee SEF (Subcommittee on Ecological Flows) and it is officially a subcommittee of the Flow Management Technical Advisory Committee, although it has equal responsibility to address ecological flow issues for Water Management. The resolution specifies each committee is to have at least one member on SEF; Flow Management's member is to be a decree party and WMAC's member is to be not a decree party. The Flow Management committee met and approved some initial appointments to SEF, seven in total, being one from each of the four states, Colin Apse, and a representative from Academy of Natural Sciences and one from Flow management (Kurt Rieke). Following Bill Gast's summary of SEF business, Debbie Lord motioned to nominate Mary Ellen Noble of the Delaware Riverkeeper Network as the liaison between WMAC and SEF, Bill Gast seconded this motion. It was voted upon and agreed that Mary Ellen would be the WMAC representative for the SEF committee.

### **NEW CHAIR AND VICE CHAIR**

As it was beyond time to select a new chair and vice-chair, Jan Bowers requested nominations for these positions. The Committee noted that Jan Bowers had done an excellent job of chairing the meetings in the previous year. In the absence of volunteers to immediately take up the position of Chair (the previous vice-chair, David Milan, resigned from the committee), it was suggested that Jan Bowers continue to keep her position until July 2004. The Committee approved this motion by unanimous vote. Similarly, Bob Molzahn was nominated and voted in to the position of vice-chair.

### **CONSUMPTIVE USE DEFINITION**

David Sayers noted that in reviewing the proposed definitions for the Basin Plan the terms consumptive use and non-consumptive use need to be agreed upon, as there are currently differences between definitions used by the states and also those used in a regulatory sense by DRBC. Bill Gast commented that the current definitions don't state what is meant by the water supply. It might be clearer to phrase it in terms of ground water and surface water sources (natural water resources) rather than water supply. The words "water supply" shall be replaced with "surface water or ground water resources."

The new wording shall be: "The quantity of water that is effectively removed from the surface or groundwater resources because it has been evaporated, transpired, or incorporated into products or plant or animal tissue as a result of human intervention in the water cycle."

This definition leaves the terms "exports" and "imports" to describe the situation where water is removed from one watershed and sent to another. For the purposes of water budgets and other water use data assessments this seems to be a useful distinction.

### **WATER DEMAND PROJECTIONS / FORECASTS**

David Sayers brought up this issue because it came up at Watershed Advisory Council meeting a few weeks earlier. The Basin Plan discussions have noted the need to make projections of future water demand in the Basin and DRBC has started to consider the question: "How can we best make these projections?" David Sayers gave a brief presentation on projecting water demands using a scenario approach. Mr. Sayers used a diagram to illustrate the fact that, when making such long-term projections, the concept of studying different scenarios can be useful. Debate can focus first on where we want to be in thirty years, rather than accepting that we can only follow

one course to get there. The various future demand conditions (high to low levels of demand) can be calculated along with any additional resource requirements. It can then be determined which path strikes the most appropriate balance between providing additional capacity and protecting water resources. As such the scenario approach is a useful planning tool. Whichever method we choose to do the forecasts, it must be remembered that the sophistication of any forecasting techniques is likely to be limited by the availability of good water withdrawal, use and discharge data. Basically, the more current data there is, the better the chances of getting accurate forecasts.

Bob Molzahn noted that electric generators – a significant water use sector in the Basin – used to compile reports on expected growth in the region. The last such study was produced in the 1990's – but maybe a starting point. Mr. Molzahn also noted that industrial use in the Basin has declined significantly in recent years.

Joe Miri stated that New Jersey is about to do a revision of the state water supply plan within the next couple of years. They are trying to incorporate smart growth initiatives, demand projections in the green areas as opposed to the red areas. A lot of it does relate to how service areas expand. A wrinkle would be to determine what impact the smart growth initiatives would actually have on demand.

The recommendation was also made that DRBC contact DVRPC for projection of where growth in demand for public water supply may occur.

#### **WATER CONSERVATION: LEAK DETECTION AND REPAIR**

David Sayers reviewed the current DRBC policy relating to Leak Detection and Repair. Recently, a new approach has been advocated by the AWWA in accounting for water losses and leakage and also for evaluating water system performance in this regard. The purpose of this discussion is to consider the following: How important is this issue from a water management perspective? If it is significant – should DRBC consider changing its policy in light of developments in this area since the DRBC resolution was passed in 1987?

It was noted in the discussion that while a leaking water distribution system loses water (relative to the distribution system) it becomes a potential source of ground water recharge and therefore not necessarily such a severe water resources management issue – although it is certainly an efficiency issue for the water purveyor.

The committee felt that the issue is certainly worthy of attention and agreed that it makes sense to work with the most meaningful definitions and methods for accounting for water loss. Jan Bowers stated that she thought the WMAC already defined this as part of the Data Needs 2001-8 resolution, which requested data of this type. Esther Siskind worked with a number of state representatives trying to determine final concurrence on that. The group remembered the discussion on unaccounted for water, but couldn't remember if they had actually resolved it and defined it in the resolution. Jan Bowers asked that the resolution be reviewed and/or the minutes of the committee around the time the resolution was finalized, to see if any kind of definition was posed. The Committee agreed that they would like to find out more about the new AWWA approach and David Sayers agreed to distribute the report via email. The topic will be discussed further at future meetings.

#### **MEETING ADJOURNED:**

The meeting concluded at 1:00pm. The next meeting is scheduled for December 18, 2003 [This meeting was later postponed]