



WATER MANAGEMENT ADVISORY COMMITTEE
September 12, 2000
MEETING SUMMARY

The Water Management Advisory Committee meeting began at 9:30 a.m. at the Commission (DRBC) office in West Trenton, NJ. The meeting agenda is attached [[see Attachment 1](#)].

MINUTES AND PROCEDURAL ISSUES

Mr. Lovell noted an error in the draft minutes of the July 13, 2000 meeting - Medford should be changed to Milford. Upon motion by Dr. Ali, seconded by Ms. Bowers, the minutes were approved unanimously with this modification.

Mr. Palmer is searching for a replacement for Thomas Schuyler. Mr. Palmer asked Committee members for suggestions.

IRP SUBCOMMITTEE REPORT

Presentation

Ms. Bowers reported on the IRP subcommittee meeting held on August 15, 2000. The mission/definition statement has allowed the subcommittee to review the guidance document more effectively. Ms. Bowers reported that the subcommittee discussed two issues.

1. Would DRBC adopt an IRP's proposed lower withdrawal limit or would it have the latitude to approve another limit? How would municipalities be impacted if the limit was changed after they go through a public process? The subcommittee asked DRBC staff to develop an iterative process with coordination between DRBC and the municipalities throughout the process so that prior to the municipalities' and DRBC's adoption processes, DRBC and the municipalities are in agreement on the number proposed. DRBC staff is currently developing such a process.
2. Should the requirement that 100% of the municipalities adopt the IRP and withdrawal limit be changed? It was decided that for now, the requirement should be left at 100%. Through the experience gained by Montgomery County's pilot study, the issue can be explored later.

The subcommittee also reviewed and commented on the first third to half of the guidance document. DRBC staff will respond to the comments and the subcommittee will continue to review the document at its upcoming meetings on September 27th and October 17th. The subcommittee hopes to have a draft guidance document prepared for the November 2nd meeting.

Discussion/Issues Raised

Mr. Palmer asked when responses to the subcommittee's comments were expected. Ms. Bowers replied that DRBC staff will prepare a revised version before the next subcommittee meeting.

Mr. Palmer asked who internally within DRBC reviews the comments. Ms. Siskind responded that it depends on the comment. Policy issues were discussed with appropriate DRBC staff. Ms. Bowers added that Dr. Featherstone assisted on certain policy issues.

Ms. van Rossum raised a concern regarding the change in the mission/definition statement from "...an IRP is not intended to be a tool to preclude growth that is inconsequential to water resource protection" to "...an IRP is not intended to be a tool to arbitrarily preclude growth". The first version gave the message that if limits on growth were necessary to protect water, then they could be appropriate. The revision takes that message out of it. The statement should be clear that if limits on growth are necessary for water protection, then they can be an appropriate tool to be used municipalities. Ms. Bowers replied that an IRP is not, and should not be perceived to be, a tool to preclude growth. Under Pennsylvania state law, the lack of water resources can't be used to preclude growth. Water resource management provides many options for water supply. Dr. Mercuri added that the municipal planning code allows sewer service to be used as a tool to prohibit growth, but not water. Ms. Bowers continued that the guidance is being developed to ensure that water resource issues are looked at holistically and to address how water resources can be best used and how to manage growth to protect resources. The key is managing, not stopping, growth and to work with land use planners to develop management techniques. If entities try to use water to stop growth, they will inadvertently encourage the expansion of infrastructure. Dr. Mercuri further added that New Jersey is developing new watershed management rules to view water resources in their entirety. They will include stormwater and cumulative effects. He added that, historically, the tendency has been to look at water resources in individual components. Mr. Palmer noted that if a person wants water for development they can get it. The IRP is intended to look at the whole picture. He added that this issue was discussed at length by the Committee and subcommittee. Ms. van Rossum was encouraged to attend the subcommittee meetings.

DATA NEEDS SUBCOMMITTEE REPORT

Proposed Data Needs Resolution

Presentation

Dr. Mercuri reported that two comments were received from committee members on the draft data needs resolution since the last WMAC meeting. (1) Mr. Race commented that nurseries be included with agriculture rather than be reported separately. (2) Mr. Gast suggested that the public and institutional categories be combined. Dr. Mercuri stated that after discussing these items, he hoped there would be a motion to send the proposed resolution to the Commission.

Discussion/Issues Raised

Agriculture and Nursery Categories: Dr. Ali explained that in New Jersey, it is the policy of NJDEP to treat nurseries equally with other types of agriculture during drought. Dr. Miri responded that separate reporting by nurseries would not affect their status during drought. Mr. Palmer replied that the agricultural community may be concerned that this could establish a form of precedence. Mr. Gast asked whether DRBC staff need to track the categories separately. Ms. Siskind replied that she did not believe so. She explained that in the previous draft of the resolution, nurseries were included under "non-agricultural irrigation." The New Jersey Department of Agriculture had commented that nurseries are not considered "non-agricultural," so nurseries were removed from that category and placed in a separate category. They could just as easily have been combined with agriculture. She added that if nurseries were combined with agriculture in the resolution, the States could continue to track the categories separately if they choose to. Mr. Lavery asked Mr. Gast if Pennsylvania treated nurseries differently than other agriculture during droughts. Mr. Gast replied that there were separate regulations for nurseries. Mr. Palmer recommended putting nurseries under agriculture, in an effort to gain cooperation.

Dr. Mercuri recommended that the agricultural irrigation category be modified further to include livestock. Mr. Gast disagreed stating that livestock water use is different. Ms. Siskind stated that consumptive use is different, however, livestock use is a relatively small use in the basin. Dr. Ali stated that it would be difficult for a farmer to separate out livestock and crop use. Dr. Ali recommended that aquaculture also be included under agriculture.

There was general agreement that nurseries would be removed as a separate category and that the category "Self-supplied agricultural irrigation" would be changed to "Self-supplied agriculture (including crop irrigation, nurseries, aquaculture & livestock)."

Public and institutional categories: Mr. Gast recommended that public and institutional categories be combined to minimize overlap and confusion. Similar uses should be tracked together - i.e. public and private schools should be in the same category. Dr. Miri stated that the category public could be confused with public water supplier. An issue was raised as to whether it was important to distinguish between different types of institutional uses. Dr. Miri cautioned that too many categories would make reporting more difficult. Ms. Siskind stated that different institutional uses can usually be distinguished by name. Dr. Mercuri asked whether parks would be considered institutional and Mr. Palmer replied that they would.

Ms. Bowers asked whether it was necessary for the resolution to be so specific. This would increase the potential need to revise the resolution in the future. She suggested re-drafting the resolution to get the Commissioners to acknowledge that the data were needed and to list, in general, the types of data required. Dr. Miri agreed there should be flexibility. Ms. Siskind replied that the intent in being specific was to get consistency in the way the data are reported amongst the States. Currently, it is difficult to analyze water use in the basin because there isn't consistency. Not only are there different categories, but States report on different uses. The need to standardize the information reported is a primary purpose of the resolution and the reason why the categories are listed. The subcommittee developed broad categories and intentionally did not create definitions for each of the categories so that there would be flexibility. Such definitions could be included on the forms.

There was general agreement that the two categories be combined as institutional.

Upon motion by Dr. Mercuri, seconded by Mr. Lovell, the committee agreed unanimously to forward the draft resolution to the Commission for consideration with the two minor changes related to agricultural and institutional uses.

Unaccounted-for-Water

Presentation

Members representing the Basin States were asked to report their progress on collecting 1999 unaccounted-for-water (UAW) data from public water suppliers supplying 1 mgd and over.

Mr. Lovell reported that he did not have anything more to report since the last meeting because Wilmington and Milford still had not submitted their data. He will be sending them another letter. The data show that UAW ranges from a low of 4% for New Castle that runs an amazingly tight system to a high of 17% for Wilmington (based on a verbal communication). Wilmington is the only supplier with UAW in excess of the 15% standard.

Dr. Miri reported that New Jersey is compiling the data and he does not have results to report yet. He added that the response rate was lower than in previous years and they are doing follow-up to get more responses. He hopes to have a report in November.

Mr. Gast distributed data that Pennsylvania had compiled from the recent annual water supply reports. The data are for public water suppliers supplying 1 mgd and over, sorted first by report year and then by UAW percent. UAW ranged up to a high of 51.18% for Lehighon Municipal Water Authority. On average, UAW was 19.89%. Three suppliers who responded that they had no UAW were not included in the analysis since the data are questionable.

Discussion/Issues Raised

Dr. Mercuri raised a question as to whether Doylestown Township Authority should be reporting separately since they receive most of their water from Lower Bucks Joint Municipal Authority. Mr. Gast explained that the data were compiled based on where water was used, rather than withdrawn.

Mr. Palmer noted that some older systems are reporting the least UAW.

An issue was raised regarding whether suppliers were using similar ratios. Mr. Gast replied that what is reported is UAW, not unmetered ratio. Mr. Milan suggested that utilities report both loss/leakage and unmetered ratio. Mr. Palmer replied that the Committee should take one step at a time.

Dr. Featherstone presented UAW totals received by DRBC in previous years. In 1989, UAW was reported as 21.9% and in 1993, 18%. The Pennsylvania numbers fall in between. Mr. Neukrug responded that UAW numbers change a lot from year to year and periodic data do not provide much information. The difference between 21.9% and 18% doesn't necessarily represent a change. Mr. Palmer asked what the UAW goal is. The response given was 15% based on DRBC regulations.

Mr. Neukrug stated that UAW is an economic issue for utilities. The WMAC is interested in depletive use - how much is taken from and returned to the Basin. Philadelphia's UAW is not lost to the Basin. Dr. Miri disagreed stating that the WMAC was not focused on UAW as only a depletive use issue. The WMAC is concerned about good water resources management and good water utility resource practices. Mr. Lavery added that it was important to look at where water is withdrawn and where it is put back. You shouldn't withdraw any more than you need because you are not going to put it back in exactly the same place. Dr. Mercuri noted that in the Ground Water Protected Area, if existing users were withdrawing up to a subbasin's limit, new users would be precluded from withdrawing, even if the existing withdrawals included UAW. Ms. Bowers stated that while she did not disagree that UAW may not be depletive in the Philadelphia system, the issue of UAW is important in Chester County with its smaller streams and reservoirs. For example if Downingtown is withdrawing 27% more or Coatesville is withdrawing 30% more than needed, then they need to do something different. Why pull it out of the source water if it's not needed? Mr. Palmer agreed. He stated that UAW was important because of its economic impact on the utility and its affect on the water source. Utilities should pump and use what they need and not more. Mr. Neukrug noted that the Philadelphia Water Department maintains and operates an aging system and it follows UAW numbers carefully.

Ms. Siskind requested, for the next meeting, each State to compare the 1999 UAW data to previous years, if possible.

RECLAIMED WATER USE - FEASIBILITY ASSESSMENT FORM

Presentation

Ms. Siskind presented a Draft Feasibility Assessment Form for Reclaimed Water Use developed in response to a discussion on reclaimed water use at the previous Committee meeting. She proposed that the form be completed by docket applicants for new or expanded withdrawals for non-potable water uses. The form would exclude projects located more than 1 mile from a wastewater treatment plant (WWTP) and applications for food or drug processing or handling and food crop production. The purpose of the form would

be two-fold: (1) to encourage applicants with non-potable water needs to consider reclaimed water use and (2) to provide DRBC with data on the feasibility of reclaimed water use for the purpose of setting future policy, if appropriate. The Commissioners asked the Committee to assess what DRBC's role should be with regard to reclaimed water use. Non-potable water use (including agricultural irrigation, other irrigation, commercial, industrial and thermoelectric power) comprises 81% of reported in-basin withdrawals. Currently, there are only minimal DRBC water conservation requirements for non-potable, self-supplied users. The assessment is being proposed in a "form" format to develop consistency in the data that is being collected and to make clear the level of effort, for example, that it is not an engineering-level study. Among other things, the form would enable DRBC to gain a better understanding of how to balance reclaimed water use with stream flow needs, especially during low flow periods. It would also provide information on costs associated with reclaimed water use. The form would need to get to applicants early in the process to be useful; under the current system, this would not always be possible.

Ms. Siskind also distributed a list of definitions related to reclaimed water and noted that, in many cases, reclaimed water, reuse, recycle and greywater are used interchangeably, but have different meanings.

Discussion/Issues Raised

Dr. Miri asked whether the form would require a new regulation. Ms. Siskind responded that there may be authority within current DRBC regulations to require the forms be completed. Dr. Miri commented that in New Jersey there was some discussion of requiring applicants to determine initially whether reclaimed water use would be feasible for a project.

Mr. Neukrug asked how source water protection was covered in the form. For example spray irrigating a golf course with reclaimed water in an area that drains to a drinking water supply. Ms. Siskind responded that the form was an initial screen. A detailed assessment of the water quality impacts on surface and ground waters would come at a later stage. Ms. Bowers noted that she is aware of a spray irrigation site adjacent to a water supply well. She commented that PADEP's permit process for spray irrigation sites evaluates runoff and application rates. Dr. Mercuri added that from a water quality perspective, it is almost always better to apply discharges to the land rather than directly into a stream. He stated that the wastewater would be treated, perhaps to the tertiary level, and applied under controlled conditions. Mr. Neukrug replied that land application may be good for removing nitrates, but not cryptosporidium. He also stated that PCBs could be potentially applied on golf courses. Reclaimed water use is more necessary out west; in the basin, there is the luxury to look at the environmental consequences. He further commented that it was important, when dealing with water resource issues, to deal with water quality issues. Dr. Featherstone asked Mr. Neukrug if he could provide the committee with information on cryptosporidium and land application.

Dr. Mercuri commented on the need to develop a mechanism to get the form to the applicant early on. In Pennsylvania, outside the Groundwater Protected Area, there is no permitting process to dig a well for a golf course, other than local approvals.

Ms. Bowers stated that the form was putting the cart ahead of the horse. The Commission had no clear policy statement on the use of reclaimed water. First, the Committee should develop a policy statement for the Commission and then the tools. There was general agreement.

Mr. Palmer asked for a clarification on what the Commission wanted the Committee to do and whether or not they supported reuse. Dr. Featherstone replied that during approval of docket applications, at times, the Commissioners asked whether the applicant had considered reclaimed water. Dr. Miri stated that the Commissioners asked the Committee to consider the issue at the end of last year's drought. Mr. Lavery added that the Commission wanted a technical exploration and wanted the Committee to tap into the available technical expertise.

Mr. Palmer suggested sending out a 1-2 page questionnaire to golf courses in the basin asking them whether they would use reclaimed water.

Mr. Palmer commented that Questions 9-17 related to the treatment plant and the golf course owner wouldn't know the answers. Ms. Siskind responded that the answers to the questions were readily available from PADEP and many applicants hire consultants that would obtain the information. Mr. Palmer commented that obtaining the information could take a long time.

Mr. Sloto suggested that some of the information on the form could be obtained instead by querying the GIS - for example, how many golf courses are within a one mile radius. Mr. Palmer questioned how many golf courses would be near WWTPs. Mr. Milan responded that in Montgomery County there were many local plants.

Mr Lavery asked Mr. Sloto where USGS was on its pilot study of spray irrigation. Mr. Sloto responded that USGS was halfway through its data collection. The pilot study would measure the effects of spray irrigation on ground and surface water quality and quantity. Mr. Lavery commented that the science isn't firm yet, but at the same time there is a push to have a policy to save water. Mr. Sloto replied that there are a lot of unanswered questions. Ms. Bowers commented that enough was known about land application for it to be used safely. USGS was providing a more refined understanding and would improve the permit process by providing better science. She also added that what she has learned from the USGS study is that spray irrigation is not about recharging ground water as much as it is about getting rid of wastewater, since much of it is evaporated.

Mr. Palmer asked if the Department of Agriculture was doing anything on this issue and raised the issue of crop uptake. Dr. Ali said that the Department's input was on promoting conservation. He noted that there are nurseries that use reclaimed water. He noted that there were many questions surrounding the issue. When do we need to use reclaimed water - mainly during a drought? Who should use reclaimed water, for example, the power industry since they use 65% of the water? Ms. Siskind responded that this was a primary purpose of the form - to collect these types of data. These data would then allow the Committee to formulate a policy to suggest to the Commission.

Ms. Bowers suggested talking to golf course organizations who, in her experience, had a lot of knowledge on the topic. They should be invited to have a dialogue with and educate the Committee on the pros and cons. Mr. Palmer strongly supported this idea. He noted that the Committee could start with golf courses and then expand to other areas. There was general concurrence. Ms. Bowers suggested that Mr. Sloto also give a presentation of his preliminary results. Mr. Neukrug also suggested educating WWTPs owners on the opportunities.

NEXT MEETING

The next meeting was scheduled for November 2nd at 9:30 a.m. at the DRBC office in West Trenton. [Note this meeting was canceled and rescheduled for January 4, 2001.]

WATER MANAGEMENT ADVISORY COMMITTEE ATTENDANCE September 12, 2000

Members Present

1. Ferdows Ali (designee)

New Jersey Dept. of Agriculture

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| 2. Janet Bowers | Chester County Water Resources Authority |
| 3. William Gast | Pennsylvania DEP |
| 4. Warren Lavery | New York State DEC |
| 5. Stewart Lovell | Delaware DNREC |
| 6. John Mello | U.S. EPA, Region II |
| 7. Bruno Mercuri | Mercuri & Associates |
| 8. David Milan | Superior Water Company |
| 9. Joseph Miri | New Jersey DEP |
| 10. Howard Neukrug | Philadelphia Water Department |
| 11. Maya van Rossum (designee) | Delaware Riverkeeper Network |
| 12. William Palmer | Water Resources Association |
| 13. Frank Schaefer | U.S. Army Corps of Engineers |
| 14. Ron Sloto | U.S. Geological Survey |

Designated proxy

John Gaston (Stony Brook Regional Sewerage Authority) designated his proxy to William Palmer.

DRBC Staff present

1. Evelyn Borbely
2. Jeffrey Featherstone
3. David Pollison
4. Esther Siskind

Attachment 1

**AGENDA
WATER MANAGEMENT ADVISORY COMMITTEE**

Delaware River Basin Commission

September 12, 2000 - 9:30 A.M.

- 1. Minutes and Procedural Issues**
- 2. IRP Subcommittee Report (Bowers)**
 - IRP Draft Guidance**

3. Proposed Data Needs Resolution (Mercuri)

4. Unaccounted-for-Water

- States to present 1999 data and trends

5. Reclaimed Water Use - Feasibility Assessment Form

6. Next Meetings

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