

**WATER QUALITY ADVISORY COMMITTEE  
MARCH 8, 2005**

**ATTENDEES:**

<p><b>NY</b> Not in attendance</p>	<p><b>DE DNREC (via telephone) afternoon session</b> John Schneider</p>
<p><b>EPA</b> Denise Hakowski, EPA Region III Wayne Jackson, EPA</p>	<p><b>Dupont</b> Alfred Pagano, Env. Consultant</p>
<p><b>PA DEP (via telephone)</b> Ed Brezina, Env. Prog. Mgr. Michelle Moses</p>	<p><b>Delaware Riverkeeper Network</b> Tracy Carluccio Dick Albert</p>
<p><b>NJ DEP</b> Debra Hammond, Water Quality Standards &amp; Assmt.</p>	<p><b>Academy of Natural Sciences</b> Not in attendance</p>
<p><b>DRBC</b> Ken Najjar, Branch Head Planning &amp; Implementation Bill Muszynski, Head Project Review Tom Fikslin, Branch Head Modeling &amp; Monitoring Jonathan Zangwill, Water Resources Planner Bob Limbeck, Watershed Scientist</p>	<p><b>Other attendees:</b> Al Ambler, National Park Service</p>

Handouts distributed:

- agenda
- FAQs
- Minutes from 12/14/04
- color table for flow relationships
- SPW policies and implementation issues 3/8/05

**Review of agenda and minutes:**

Ed Brezina (PA) suggested getting items out at least 2 weeks before meeting so that the committee has enough time to prepare for the meeting. Ken Najjar (DRBC) noted that most of the information was out last week, but some things couldn't be completed until the last few days.

Minutes:

Ed Brezina asked what was done to the White Paper based on comments made as there wasn't a revised paper sent out. Ken Najjar stated that the language was changed to reflect comments received, but that it does not reflect the resolution.

The 12/30/04 edition of the White Paper, which was sent to the Commissioners, will be sent to the WQAC within the next few days. It was also noted that a new White Paper may be needed to reflect the Commission meeting results and what is now occurring.

### **Membership**

Debra Hammond (NJ) asked the status of the membership issue. Ken Najjar stated that we have spoken with Kevin Donnelly about getting someone from Delaware for Academia. We haven't not yet received a response from him. The other possible candidate was PA Chamber of Business and Industry, and we haven't reached out to them as of yet.

A request for other suggestions to fill the academia and business industries positions on was given to the committee. Debra Hammond asked if NJ Academics was interested. Ken Najjar reached out to them, but hasn't heard back yet.

### **Frequently Asked Questions**

Since the last time the WQAC met on this issue in December 2004, we had gone out to public comment on the change of the Lower Delaware to Special Protection Waters including classification as significant resource waters and outstanding basin waters in certain sections of the river. This was reviewed at some public information sessions and a public hearing in Philadelphia in October 2004. Comments were received and we are preparing the comment and response document, which is still in progress. But at the Commission meeting on January 19<sup>th</sup>, a frequently asked questions document was requested and instead of voting and approving the Lower Delaware as SPW, a resolution assigning interim protection until the end of September for the Lower Delaware was passed.

Ed Brezina (PA) would like to add a number of frequently asked questions to the various categories:

#### **General:**

Approximately around #5, "Did DRBC inform those impacted by the proposed designation (discharges, water withdrawals in the drainage area of the Lower Delaware River) how they will be affected?"

Under General #10, "How will changes to existing water quality be determined and what will be done if there is a change determined?"

Tracy Carluccio (Delaware Riverkeeper Ntwk) responded to Mr. Brezina's #5, by saying that there was a public process associated with this. What would be the purpose of this

question? Is it required that notification be made and was there some mistake that they weren't made aware of this? The exact purpose of that question is not understood, it seems it's sort of leading people to think that there is some requirement and that each discharger being notified and perhaps we should address this.

Mr. Brezina rephrased his question to state, "How did DRBC inform those impacted and how will they be affected"?

Bill M. (DRBC) stated that there is a question like that in the response document because something like this would go into a response document as opposed to frequently asked questions. The answer would be that we held 2 public meetings, we went out to public notice, and articles have appeared in magazines.

Michelle Moses stated that perhaps it is appropriate for DRBC to describe how they publicly notice proposed rule changes as a frequently asked question.

Mr. Brezina explained that the basis of his question is to find out how well did the dischargers that could be affected understand how this designation would potentially affect them? Did they have enough detail to understand what it really would mean to them, whether they are an existing discharge and they are below their permitted capacity or whether they are a new discharge coming in?

Bill M. (DRBC) suggested that when it was said existing dischargers were grandfathered, those impacted decided not to dig for any further information.

Tracy Carluccio (DRKN) had a question somewhere around #5 as well. "How do these state programs differ from Special Protection Waters?" She has had a lot of people ask about the differences or similarities among the State antidegradation programs versus DRBC's program.

Ed Brezina (PA) had a comment for Socio-Economic, under #1, at the last part where it says "redevelopment projects", what PA would add is: "in Significant Resource Waters vs. Outstanding Basin Waters." It was suggested again that this same question be made neutral because something like this could stimulate economic development too. The new question is, "How do proposed amendments affect economic renewal?" Ken Najjar noted that a distinction between SRW and OBW and an answer to both would be given.

Dick Albert (DRKN) suggested that, under Socio-economic, where it talks about local government, it be changed to read, "Who determines what projects are in the public interest?"

#### Water Quality Monitoring:

Tracy Carluccio (DRKN) suggested that #2 under Water Monitoring should be moved to the General category. Also, a question she's had from members of the public is "Does Special Protection Waters deal with toxics"? If you could be sure to cover this question, because in #4 you say what the parameters are.

Ken Najjar (DRBC) asked if there are any situations where there would be existing water quality for toxics that are not already into a TMDL or water quality violation. It was thought that toxics was off limits from this because of that.

It was also suggested that, under Water Quality, it should be shown how the states antidegradation programs and the TMDL process work with Special Protection Waters? It might be too big of a question, but people have been asking why SPW are necessary if you have TMDL provisions?

Impacts:

Ed Brezina (PA): On #4 after “Lower Delaware River”, “and drainage areas” should be added. The same should apply in #5. The WQAC agreed to this change.

Mr. Brezina also would like to add the following 3 questions at the end:

- 9) How will the increased number of projects reviewable by DRBC impact the time to receive project approval from the states?
- 10) How will applicants without the authority to implement a non-point source pollution control plan be able to expand their service area if the municipality/borough will not cooperate by passing ordinances to implement their plan?
- 11) Who will be responsible for performing the no measurable change analysis, evaluating the alternatives analysis, and reviewing the non-point source pollution control plan?

Ken Najjar stated that these are some of the questions we have on the issues paper to talk about in the afternoon.

Bill M. (DRBC) stated that the non-point source issue is already in the regulations.

Dick Albert (DRKN) suggested that #1 is a leading question because SPW regulations specifically address protection of water supplies, which shows that the program provides benefits. However, calling it an impact suggest it's negative. There are certainly benefits as well as impacts.

Debra Hammond (NJ) agreed and asked what impacts would those seeking to withdraw water have? Then we also need to discuss what impacts would there be on the water supply side? What do they have to do that they didn't have to do before? They have to do a non-point source control plan that they didn't have to do before.

Ken Najjar suggested that all these issues can be captured under #1, impacts of water withdrawals, but instead of withdrawals, it needs to state water purveyors.

Tracy Carluccio suggested that agriculture also be addressed.

Debra Hammond suggested addressing what level water withdrawals would be covered for agriculture.

Debra Hammond also suggested #6 be moved under #2. The committee agreed that re-numeration is needed.

Tracy Carluccio mentioned that there are many questions that come from dischargers, so it makes it sound like that's all there is, and when she spoke to groups they want to know how is the Special Protection Waters going to help? How is it going to improve water quality? It just seems that it needs to be more balance in these FAQs. It was agreed that this is a valid point.

How would the regulations affect superfund sites? How will they be cleaned up differently, or has it no effect at all? Bill M. (DRBC) stated that it depends on the site, what the discharge is, if there is a discharge, etc.

Ken Najjar suggested that the point of the superfund clean up might work well under impacts #7 in terms of the redevelopment. It can be worked into the answer under that and reword the question so it is not a leading question. "How does it affect redevelopment sites?"....

#### Applicability:

Dick Albert stated that the issues discussed under #1 were discussed up North and there should already be information in the record about that.

Ed Brezina (PA) would add under #11, after "...get a docket from DRBC", "at the time of their NPDES permit renewal."

Bill M. (DRBC) suggested that the proposal is that they not come in unless they are going to do something significant. The facilities would only be required to do the basic [Section d] requirements upon NPDES permit renewal. DRBC wouldn't go out and get a separate docket for them unless they did something significant or major alterations.

Tracy Carluccio (DRKN) had another question regarding how SPW reviews relate to NPDES. Has this been covered anywhere? It was stated that this is somewhat answered in one of the regulations but it could be put it in this document.

Debra Hammond (NJ) suggested combining #1 and #9, saying that #1 is almost an exemption to #9. Bill M. offered that what is grandfathered is the permitted load and that the facility would only be considered an expanding discharge if it were going to accept new flows and/or a new service areas that would result in a request for an increase in permitted load.

Bob Limbeck noted that the DRBC has done some retrievals of some of the projects in the states just to find out who are the existing dischargers. PA's list is not complete and about 1/3 of them were plotted in NJ.

Ed Brezina (PA) suggested Bob Limbeck contact Roger Musselman in Central Office for the information.

Tracy Carluccio (DRKN) questioned what is meant by “re-rating”, in #8. Bill M. (DRBC) stated that it’s a term that been used more with PA than anyplace else, where you take a one mgd plant and re-rate it to 1.1 or 1.2 without any physical changes to the plant. Debra Hammond stated that in New Jersey, it means increased flow, no loading increase. Tracy suggested this re-rating question should be part of the answer to #7.

Debra Hammond noted that there is nothing that talks about the water withdrawals. So if someone is coming in and renewing an existing docketed withdrawal, are they subject to anything? What if the rule applies but the town won’t implement the non-point source controls? What does that mean to their allocation? Do they not get more, do they not get docketed, do they go into limbo? It was agreed that this should be addressed where impacts to water withdrawals are addressed.

Technical:

Dick Albert questioned why this question talks about effluent requirements when the SPW program isn’t set up to set effluent limits? However, it was discussed that BDT, as defined in the SPW regulations does actually set limits. BDT does have effluent limits and those limits would be put into the docket

Jon Zangwill (DRBC) stated, when you have a situation like a tributary discharge that’s increasing their loading and you have to determine what level of treatment may be needed, it’s not necessarily going to be BDT, but it’s going to be whatever is necessary to not change EWQ at the boundary control point.

There is a process to go through, and the first tier of the analysis would be no discharge alternatives, then if you don’t demonstrate that you can do that, you have to go to the next tier which is BDT as a minimum technology, and/or no measurable change if that is more stringent. Which eventually gets translated into a docket and permitted limit.

Bill M. (DRBC) suggested that #2 refers more to which of the limits that are in the table, which of those parameters will be translated into effluent limits in the permit or docket? If this question is answered and you only address BDT then you’re not addressing the regulations fully. The regulations actually say you have to have somewhere between zero and BDT.

It was stated that all limits will not necessarily be technically feasible.

Ed Brezina (PA) would add, under #8, bullets and then added a #9 as follows:

- Where is the no measurable change criteria measured when calculating limits in permits for direct discharges to outstanding basin waters vs. significant resource waters? (if the discharge is located at the boundary control point, is a mixing zone allowed?)

- What instream flow is used to demonstrate compliance with the no measurable change criteria and to calculate effluent limits?
  - When calculating effluent limits, what is used as the upper target that constitutes no measurable change?
  - What are the 10<sup>th</sup> and 90<sup>th</sup> percentiles of the data set used for?
- #9) If a wastewater treatment plant expands, but maintains their existing load, must they meet the minimum treatment requirements also?

The Regional Offices have a general comment:

DRBC needs to perform sample calculations to demonstrate how to determine effluent limits for discharges on a tributary of Significant Resource Waters and outstanding basin waters and where's there's a direct discharge to significant resource waters or outstanding basin waters. They would like to see some sample calculations.

It was decided, under General, it has to be determined:

- What's the process that determines public interest and who is part of that process?

### **Sample Existing Water Quality Targets**

The discussion focused on the need to produce target tables that go into the regulations, and to make sure everyone is comfortable with how those targets are developed from the data that we collected. This includes the appropriateness of parameters, statistical methodology for coming up with the targets, the medians, 10<sup>th</sup> & 90<sup>th</sup> percentile. The 2<sup>nd</sup> part of that is the similarity analysis, which looks at along the mainstem of the river similarities between stations to see if we can use the same target at multiple locations. BL been working the statistical side of this for a while.

An example of all the tables that would go out, totalling 24 tables, was distributed.

This is all based on 200-2004 data set that was collected. The spreadsheet will be on the web to go with the documents as soon as analysis is completed. As it stands now, the data set is only partially split up into the actual data set that is used to create the targets. The package that was sent out was really to show the process by which we are looking at this data.

The BCPs on intrastate streams have not been looked at yet. Those will be tested for relationship to flow, if there is one, a regression equation will be provided and the flows at which the equation should be calculated.

The first target table is a sample of what the target table is eventually going to look like. Those equations are not final, we still have to go through most of them and construct them based on the statistical analysis.

Where DRBC doesn't have criteria, the state's criteria is implemented.

At this point we don't know at what point it would render the waters unsuitable. NJ and PA are working on this toward a numerical value, it will be several years to figure out what the effect levels are. In the meantime, we are going to use no measurable change.

Part of comment when this goes out is that the 0.1 phosphorous criteria is not be applied because we don't know what the effect level is. NJ regulations don't apply and DRBC doesn't have a standard established.

New Jersey is declaring these are SPW therefore existing water quality applies so that if you don't have a criteria, such as in the case of phosphorous, existing water quality by establishing it applies.

The first thing the table does is tell what EWQ is at the time of the measurements. The 2<sup>nd</sup> thing is it is supposed to demonstrate what people are going to have to do a no measurable change against. The 3<sup>rd</sup> thing, down the road a few years from now as more data is collected, is what is the difference.

Another step to do after the flow chart is completed is to test the slopes, if the slopes are equal then compute a common regression equation to use one target instead of two at similar sites. If they're different, they're different. Policy wise what takes precedence is testing the relationship to flow, if we do not find a relationship to flow, the median applies. Then we test similar sites between each other.

PA Question: In resulting action section, the last sentence States "these targets are not applicable as effluent limits but they should be used by DRBC to assess measurable change". What does that mean?

Response: We would not produce targets for dischargers based on conductivity, but if we see a change in conductivity that wasn't explained naturally we want to know why.

Is there something in the water that creates this additional conductivity?

It would be the preliminary investigation of who is putting what in the water.

TDS ended up being a single equation for the entire thing

In writing a permit, you would plug in the median flows from this data set as well as the low and high flow from the data set. In the targets, I would specify which flows these targets apply to. Then a regression would be run on that flow and use that as the number that you plug in.

The alternative would be to, on the river itself, using DRBC's drought warning flows. A column needs to be added for the permitting flow, the permitting value, permitting target value

It was suggested that this is also used to make non-point source control plans also, so from a permitting perspective, the numbers that correlate should be used to establish what the target is for maintaining existing water quality.



An existing water quality analysis and a discharge evaluation are two separate things, and there is only one chart.

Technical discussion ensued on how to determine the calculations and what flows to evaluate against.

Anything other comments on the statistical portion of this should be directed to Bob Limbeck. Then we will come up with a proposal for what the tables would look like, what will be on a separate table, how discharges would be address vs. existing water quality, etc.

There are real examples of plans that are doing that now.

### **Policy and Implementation Issues**

This really encompasses everything talked about this morning, such as non-point source, where do you do the no measurable change determination, etc. It's not that simple. We've tried to base it around what the regulations are saying. There should be some adjustments made to the regulations.

Ken Najjar (DRBC) reviewed the current policies.

As far as explaining what's in the SPW regulations, the whole concept was that some planning component that would pick up some of the issues that can't be addressed through just project review.

Is the purpose of SPW program to protect degradation of waters below EWQ or to improve WQ where we can. The policy states that we would do that.

In looking through some of the previous documentation from the Upper and Middle Delaware there is always a question of what about the old facilities that were already there. The answer was that they would be allowed to run, but when they get upgraded, that's when improvement to water quality would occur.

Grandfathering existing facilities – this has been discussed for 6 months or more. Existing facilities are grandfathered to the permitted load. If the facility did nothing else, they could continue to take on load/discharges up to their permitted limit. Those facilities at time of permit renewal would be required to do some things, Emergency management plans, no visual plumes, etc.

Questions:

- 1) What about if the service area is changed, but the load is kept the same?  
That would affect the non-point source and it's under the non-point sources – new connections limited to service areas under the plan. The load wasn't increased.

- 2) What about when you're not increasing your load, but are increasing their flow?

They wouldn't necessarily be considered significant, they are using up their permitted load

- 3). There was going to be a non-point source pollution control plan requirement. There is, for even existing service areas if they're not connected.

It's covered under section d, control of non-point sources

There was then discussion on what is meant by new or expanding. Debra H. (NJ) stated that new or expanding also means expanding sewer services, it should be added in here.

We started out with grandfathering because everyone wanted to protect the investment that people have made in the plant. We didn't want to make them do things that would damage that investment.

Every docket that we've been writing, now, for SPW, we put in a condition that says if you're going to be taking on new connections, you've got to comply with this requirement. So, for dockets where I have that condition, I'll be getting, even within the existing service area, new chunks of places, whether or not the load changes they still have to a non-point source control plan for the new connected areas.  
That's covered under D.

Watershed plan should go under D as a second bullet.

Discussion regarding Mixing zones –

For Special Protection Waters Outstanding Basin Waters, NMC must be met at the point of discharge. If it's a direct discharge under the OBW, there's no mixing zone at that point of discharge you must meet existing water quality as defined by the nearest downstream ICP. (This should be added)

Discussion then focused on the ability of a discharger, that is on a tributary but close to the Delaware River, to meet criteria in the Delaware River by meeting the State criteria in the stream. Debra Hammond questioned if there are many instances in which the State criteria are different than the DRBC criteria. There was a general consensus that there are no NJ criteria that are significantly more stringent than the DRBC criteria (where DRBC has criteria) such that there should be much concern about this.

Debra Hammond questioned if we will be able to tell, perhaps every five years, if existing water quality is actually changing. Bob Limbeck indicated that, since we have grandfathered permitted loads and there may be a change over time to EWQ, that we need a way to discern what portion of that change is attributable to increased loading from dischargers as opposed to other sources. Bill Muszynski stated that if we could

identify the causes of the change, and determine that it is not due to the dischargers, then we would have to try and persuade others to reduce loading, perhaps from non-point sources, to account for the increased loads from the grandfathered dischargers. Perhaps we could identify non-point source control areas. Tracking this will be important. Bill M. indicated that modeling will be important for this.

Debra Hammond said that DRBC needs to push the no discharge policy and not let it be easily disregarded as infeasible.

Debra Hammond asked, when an existing plant expands, do they need to assess their entire loading versus the no measurable change policy or only the expanded loading? Bill Muszynski indicated that generally the entire loading needs to be looked at. Bill indicated. Debra stated that if we try to eliminate discharges, it will likely not be feasible. Bill indicated that we should start with a policy that states that the entire load must be looked at, rather than only the increased loading. Then, we can see how much of the entire loading can be addressed.

#### Best Demonstrable Technology

Kenneth Najjar began a discussion about how and when BDT is required. The issue also relates to No Discharge policy. The discussion started w/ expanding direct discharges. Ken discussed what requirements are made of these facilities. The first is the no-discharge policy, then all of Section D. The first instance is a facility that is expanding but the additional loading can be applied to the land and thus no net increase will occur. Is BDT required in this situation? In general BDT is required of all expanding direct discharges. However, if the facility proposes to limit the loading to what existed when EWQ was defined, then BDT would not automatically be required for the entire load.

Debra Hammond questioned what defines the loading at the time when EWQ was defined. There was general agreement that the average of what was being discharged over the twelve months prior to September 2004 would be a good approximation for that.

Bob Limbeck indicated that John Yagecic has proposed to put together a model that would predict the cumulative impacts from various dischargers.

Staff indicated that the Committee would be contacted regarding the date for the next meeting, but that it would probably be within about six weeks after this meeting. The FAQs would be sent to the Committee in April and to the Commissioners in May.