

DELAWARE RIVER BASIN COMMISSION

MEETING OF MAY 5, 2010

Minutes

The meeting was held at the office of the Delaware River Basin Commission in West Trenton, New Jersey.

Commissioners present: Katherine E. Bunting-Howarth, Acting Chair, Delaware
Lt. Colonel Thomas J. Tickner, Second Vice Chair, United States
Dana Aunkst, Pennsylvania
Fred Sickels, New Jersey
Peter Freehafer, New York (*Via speaker phone*)

DRBC staff participants: Carol R. Collier, Executive Director
Robert Tudor, Deputy Executive Director
Kenneth J. Warren, DRBC General Counsel, Hangley Aronchick Segal & Pudlin
Pamela M. Bush, Commission Secretary & Assistant General Counsel
Richard C. Gore, Chief Administrative Officer
William J. Muszynski, Water Resources Management Branch Manager
Kenneth F. Najjar, Planning & Information Technology Branch Manager
Chad Pindar, Supervisor, Project Review Section
Amy Shallcross, Supervisor, Operations Section

Acting Chair Dr. Howarth convened the business meeting at 1:30 p.m.

Minutes. Dr. Howarth requested a motion for approval of the Minutes of the Commission's meeting of March 3, 2010. Mr. Sickels so moved, Lt. Col. Tickner seconded his motion, and the Minutes of the Commission's March 3, 2010 meeting were approved by unanimous vote.

Announcements. Ms. Bush announced the following meetings and events:

- *DRBC Regulated Flow Advisory Committee Meeting.* Thursday, May 13, 2010 at 10:00 a.m. in the Goddard Conference Room, DRBC, 25 State Police Drive, West Trenton, NJ. The staff contact is Hernan Quinodoz at (609) 883-9500, extension 225.
- *Delaware River Greenway Partnership (DRGP).* The partnership will sponsor a forum entitled *Health of the Delaware: Facing the Threats* on Tuesday, May 18, 2010 from 8:45 a.m. to 2:30 p.m. at the Prallsville Mills Complex, Route 29, Stockton, NJ. One of the scheduled speakers is DRBC Executive Director Carol Collier. The cost to attend the forum is \$25 and includes lunch; please visit the DRGP web site for registration details.

- *DRBC Flood Advisory Committee Meeting.* Wednesday, May 26, 2010 at 10:00 a.m. in the Goddard Conference Room, DRBC, 25 State Police Drive, West Trenton, NJ. The staff contact is Laura Tessieri at (609) 883-9500, extension 304.
- *DRBC Water Quality Advisory Committee Meeting.* Wednesday, June 23, 2010 at 9:30 a.m. in the Goddard Conference Room, DRBC, 25 State Police Drive, West Trenton, NJ. The staff contact is Donna Barnett at (609) 883-9500, extension 308.
- *Water Management Advisory Committee Meeting.* Tuesday, July 27, 2010 at 10:00 a.m. in the Goddard Conference Room, DRBC, 25 State Police Drive, West Trenton, NJ. The staff contact is Donna Barnett at (609) 883-9500, extension 308.

Hydrologic Conditions. Amy Shallcross offered the following report on hydrologic conditions in the Basin:

The observed precipitation for the Delaware River Basin above Montague, New Jersey for the period January 1 through May 3, 2010 was 13.84 inches or 0.67 inches above normal. The observed precipitation for the Basin above Trenton, New Jersey for the same period was 15.74 inches or 1.70 inches above normal and for Wilmington, Delaware, 16.27 inches or 2.27 inches above normal.

The average observed streamflow of the Delaware River at Montague, New Jersey in April 2010 was 9,069 cubic feet per second (cfs) or 80 percent of the long-term average for the month. For the same period, the average observed streamflow of the river at Trenton, New Jersey was 20,540 cfs, or 111 percent of the long-term average for the month.

For the month of May 1-3, 2010, the average observed streamflow at Montague was 4,997 cfs, or 73 percent of the long-term average for the month. The average streamflow at Trenton during the same period was 14,667 cfs, or 108 percent of the long-term average for the month.

In the Lower Basin, as of May 4, 2010, Beltzville Reservoir contained 12.99 billion gallons (bg) usable, or 99.9 percent of usable storage, and Blue Marsh contained 6.92 bg usable, or 106.5 percent of summer pool usable storage. As of May 3, Merrill Creek contained 15.36 bg usable, or 97.9 percent of usable storage.

In the Upper Basin, as of May 4, 2010, Pepacton Reservoir contained 139.013 bg usable, or 99.2 percent of usable storage. Cannonsville contained 96.060 bg usable, or 100.4 percent of usable storage. Neversink contained 33.722 bg usable, or 96.5 percent of usable storage. The total New York City Delaware Basin reservoir storage was 268.795 bg usable, or 99.2 percent of usable storage.

During the month of April 2010, the location of the seven-day average of the 250-parts per million (ppm) isochlor, also known as the "salt line," ranged from River Mile (RM) 54 to RM 67. The normal location of the salt line during April is RM 61, a location which is 17 miles downstream of the Delaware-Pennsylvania state line. As of May 3, the salt line was located at RM 66, which is two miles upstream of the normal location for May.

Executive Director's Report. Ms. Collier's remarks are summarized below.

- *Flow Management Issues.* Ms. Collier reported on several flow management issues:
 - *FFMP Reassessment Analysis.* Ms. Collier said that funding was never found to support a proposed "reassessment" of the Flexible Flow Management Program for the New York City reservoirs. As a result, the Decree Parties delegated to their work group the tasks of considering how to improve the reservoir releases program to better support fisheries ecology, salinity repulsion, water quality and supply reliability, flood and spill mitigation, the Trenton and Montague flow targets, recreational uses of the river and Lower Basin storage. Information on the status of the work group's efforts will be presented at the Regulated Flow Advisory Committee (RFAC) meeting on May 13, 2010.
 - *Flood Analysis Model.* The flood analysis model studied the potential uses of existing reservoirs to control flooding. In developing the model, the USGS, USACE and NWS examined three sub-regions of the basin: upstream of Trenton, and the Schuylkill and Christina river sub-basins, respectively. The model was completed and posted on the Commission's website at the end of 2009. A scope of work has been developed for an independent peer review of the model, and DRBC is working with the USACE on funding and management issues for that review.
 - *New York City Operating Support Tool (OST).* New York City has hired a consultant to help it develop a new tool that will facilitate consideration of multiple factors in designing reservoir releases, including NOAA-NWS 30- and 60-day forecasts. This tool will broaden the options for development of the next Flexible Flow Management Plan (FFMP). The current FFMP expires May 2011.
 - *Ecological Flows.* A joint report by the Pennsylvania Fish & Boat Commission and the fisheries division of the New York State DEC focused on trout habitat is being used to inform the summer releases program for the New York City Delaware Basin reservoirs. A study commissioned several years ago by the U.S. Fish & Wildlife Service to characterize the habitat of the federally endangered dwarf wedgemussel is past due. The dwarf wedgemussel habitat study is needed to support flow management decisions. The U.S. Fish & Wildlife Service is now re-scoping the study design to better address biological and hydrological needs.
- *Water Charges Program.* DRBC is preparing a document to respond to comments received on a proposal to increase the rates charged for surface water withdrawals and consider how the proposal might be modified to address a number of concerns raised by interested parties.
- *DRBC Staff Additions and Changes.* Ms. Collier introduced the new administrative assistant for the Planning and Information Technology Branch, Donna Barnett. Donna took over in the P&IT Branch for Victoria Lawson, who has moved to the Project Review Section. Ms. Collier also introduced John Calkin, who joined the Commission as a seasonal employee. John is an attorney with a background in forestry. He will help Pam Bush and Ken Warren

with regulatory issues. Ms. Collier welcomed both new staffers warmly. She also reported that Ed Santoro had officially retired from the Commission and wished him well.

- *2010 Delaware River Sojourn.* The Delaware River Sojourn will take place during the third week of June. Ms. Collier described this as a great opportunity to experience the river. The sojourn is accompanied by a safety patrol, is characterized by a spirit of camaraderie, and involves learning about river ecology and management issues from the resource itself.
- *Edelman Award.* The Edelman Award competition, now in its 39th year, looks at operational research in the for-profit and not-for-profit sectors and how it helps move projects forward. This year, a nomination for the award was submitted for the work of Peter Kolesar, a professor from Columbia University, with the assistance of the Delaware River Foundation, Trout Unlimited and The Nature Conservancy, to improve the design of releases from the New York City reservoirs to support multiple objectives. The project did not win but was one of six finalists. Bob Tudor represented the Commission at the awards ceremony and described the event as akin to “American Idol.” He said the other contenders were international corporations like petroleum refining companies and the overnight package delivery service, DHL. The Central Bank of Mexico, which handles \$200 billion in transactions per day, took the prize. The buzz among participants was that Dr. Kolesar’s project came in a close second. .
- *DRBC’s 50th Anniversary.* October 2011 marks the 50th anniversary of DRBC. Staff will highlight this milestone over the course of the next year, starting in October, by focusing on accomplishments in the basin and where DRBC should be heading in the future.

General Counsel’s Report. Mr. Warren reported on a case brought by M&M Stone that is pending against DRBC and others in federal court. The case was dismissed by the Federal District Court for the Eastern District of Pennsylvania, not only as to the DRBC but also as to the Pennsylvania Department of Environmental Protection and other defendants. The plaintiff appealed the district court’s decision to the Court of Appeals for the Third Circuit. The issues were briefed, and the parties recently received an order from the Third Circuit stating that the court would decide the case solely on the briefs without oral argument. There is nothing more for the DRBC to do but wait. It is possible that the Third Circuit will render its decision by July. Counsel is optimistic about the outcome.

Rulemakings – Estuary Toxics. Dr. Howarth noted that in December 2009 the Commission had heard from Dr. Christopher Crocket of the Philadelphia Water Department, in his capacity as chair of the Commission’s Toxics Advisory Committee, with the recommendations of that body for updating human health and aquatic life criteria for the Delaware River Estuary (Water Quality Zones 2 through 5) and extending the criteria to Delaware Bay (Zone 6). She said that on behalf of the Commission she was directing staff to proceed with public notice of the proposed criteria changes, including establishing a written comment period and a hearing date.

Rulemakings – Natural Gas Development. Dr. Howarth next addressed natural gas drilling and in particular, the draft dockets for a surface water withdrawal and a natural gas well pad for the Stone Energy Corporation, which were the subject of a public hearing on February 24, 2010 and a written comment period that ran from February 8 through April 12, 2010. She related that

DRBC had received some 1,700 comments on the Stone Energy dockets. She announced that although she and her fellow Commissioners believe DRBC has sufficient regulatory authority to move forward on water allocation dockets, before considering approval of any well pad projects they would like staff to complete a rulemaking for this type of activity in the Basin.

Dr. Howarth asked the Commissioners to consider the following Resolution for the Minutes to clarify the Commission's intentions with respect to the development of new regulations and consideration of pending applications for projects associated with natural gas development:

(1) We direct staff to develop draft regulations on well pads in the shales for notice and comment rulemaking; (2) we will postpone the Commission's consideration of well pad dockets until regulations are adopted; and (3) we will move forward with water withdrawal dockets in due course.

Mr. Freehafer via speaker phone said that New York recognized that the impacts of natural gas development on interstate Special Protection Waters could include effects outside the scope of the individual states' rules. He said New York expects the Commission to consider new regulations to fill such potential gaps.

Dr. Howarth requested a motion to adopt the proposed resolution. Lt. Colonel Tickner so moved and Mr. Sickels offered a second. Dr. Howarth repeated the proposed resolution aloud. The Commissioners offered no additional comments and approved the Resolution for the Minutes by unanimous vote.

Public Hearing: Project Review Applications. Although included in the notice of public hearing for this date, hearings on the following eight projects were postponed to allow additional time for review: hearing item 8 – Lyons Borough Municipal Authority, D-1994-080 CP-2; hearing item 10 – Maiden Creek Township Authority, D-2000-028 CP-2; hearing item 11 – East Vincent Municipal Authority, D-2005-007 CP-1; hearing item 14 – Arcelor Mittal Plate, LLC, D-2008-036-1; hearing items 15 and 16 – Naval Surface Warfare Center, Carderock Division, Ship Systems Engineering Station, D-2009-003-1 and D-2009-004-1; hearing item 20 – Deb-El Food Products, D-2009-036-1; and hearing item 21 – Arcelor Mittal Plate, LLC, D-2009-039-1.

Project Review Section Supervisor Chad Pindar presented the remaining 19 projects for the Commission's consideration in three categories: Category A, consisting of docket renewals involving no substantial changes (hearing items 1 and 2); Category B, consisting of renewals involving significant changes, such as an increase or decrease in an authorized withdrawal or discharge (hearing items 3, 4, 5, 6, 7, 9 and 12); and Category C, consisting of projects not previously reviewed by the Commission (items 13, 17, 18, 19, 22, 23, 24, 25, 26 and 27).

A. *Renewals with No Substantive Changes (hearing items 1 and 2).* The Commission received comments on the Cabot Corporation project.

1. Cabot Corporation, D-1970-072-4. An application for the renewal of an existing 0.222 million gallons per day (mgd) discharge from Outfalls Nos. 001 (process wastewater and

non-contact cooling water (NCCW)), 002 (stormwater, condensate and NCCW), and 003 (process water treatment system wastewater). The project is located on Swamp Creek at River Mile 92.47 – 32.3 – 12.9 – 12.6 (Delaware River – Schuylkill River – Perkiomen Creek – Swamp Creek), on the border of Douglass Township, Montgomery County, Pennsylvania and Colebrookdale Township, Berks County, Pennsylvania.

The applicant commented on the sampling and microvertebrate study, and staff resolved those comments in dialogue with the applicant.

2. Gilbertsville Golf Club, D-1999-047-2. The purpose of this project is to continue to provide up to 12 million gallons per 30 days (mg/30 days) of water for golf course irrigation from existing Wells Nos. 2, 9, and 13, installed in the Brunswick Formation. The docket holder augments two ponds from the existing groundwater wells to satisfy the irrigation water demand for the docket holder's golf course. The project is located in the Minster Creek Watershed in New Hanover Township, Montgomery County, PA within the Southeastern Pennsylvania Ground Water Protected Area.

Mr. Pindar recommended that the Commissioners approve hearing items 1 and 2. Hearing no questions or comments from the Commissioners or the public, Dr. Howarth requested a motion to approve the two docket renewals with no substantive changes. Lt. Col. Tickner so moved, Mr. Aunkst seconded his motion, and hearing items 1 and 2 were approved by unanimous vote.

B. Renewals with Substantive Changes (hearing items 3, 4, 5, 6, 7, 9 and 12).

3. Womelsdorf Sewer Authority, D-1967-084 CP-2. An application to approve an expansion of the existing Womelsdorf Sewer Authority Wastewater Treatment Plant (WWTP). The WWTP was expanded in 2000 from 0.3 million mgd to 0.475 mgd, however this expansion was not approved by the Commission. The WWTP will continue to discharge to the Tulpehocken Creek, a tributary to the Schuylkill River. The facility is located in Heidelberg Township, Berks County, Pennsylvania.
4. Berks-Montgomery Municipal Authority – Morysville, D-1973-060 CP-2. An application for approval to increase the Morysville WWTP discharge from 0.25 mgd to 0.32 mgd. The hydraulic design capacity of 0.38 mgd will not be modified. The project will continue to discharge to Ironstone Creek at River Mile 92.47 – 54.15 – 4.0 – 4.1 (Delaware River – Schuylkill River – Manatawny Creek – Ironstone Creek), in Colebrookdale Township, Berks County, Pennsylvania.
5. North Wales Water Authority, D-1986-020 CP-2. An application for approval of a modification of the North Wales Water Authority WWTP. The applicant proposes to upgrade the existing 0.835 mgd WWTP to include the addition of an activated sludge unit and a chemical feed system. The project includes the transfer of ownership from North Wales Borough to the North Wales Water Authority. The WWTP's hydraulic design rate of 0.835 mgd will remain unchanged. The WWTP will continue to discharge to an unnamed tributary of the Wissahickon Creek, which is a tributary of the Schuylkill River. The facility is located in Upper Gwynedd Township, Montgomery County, Pennsylvania.

6. Township of Spring, D-1988-077 CP-2. An application for approval for expansion of the Spring Township WWTP. A 1.0 mgd oxidation ditch treatment system utilizing a fixed film contact aeration (packed bed reactor) system is proposed to be added to the existing 1.28 mgd WWTP in order to expand the plant's hydraulic design capacity from 1.28 mgd to 2.28 mgd. The average annual flow of the expanded plant will be 2.0 mgd. The WWTP will continue to discharge to Cacoosing Creek, a tributary of Tulpehocken Creek, which is a tributary of the Schuylkill River. The facility is located in the Township of Spring, Berks County, Pennsylvania.
7. Hilltown Township Water and Sewer Authority, D-1992-020 CP-3. An application for the renewal of a groundwater withdrawal project to continue the withdrawal of 16.0 mg/30 days to supply the applicant's public water supply system from existing Wells Nos. 2 and 5 and new Well No. 1A. New Well No. 1A was drilled as a replacement well for Well No. 1, which was abandoned due to a casing failure. The applicant requests that the withdrawal from New Well No. 1A be limited to 9.60 mg/30 days. The project is located in the Brunswick and Lockatong Formations in the Pleasant Spring Creek Watershed in Hilltown Township, Bucks County, Pennsylvania, within the Southeastern Pennsylvania Ground Water Protected Area.
9. Lower Providence Township Municipal Authority D-1999-021 CP-2. An application for the renewal of a groundwater withdrawal project to supply up to 3.3 mg/30 days of water to the applicant's golf course from existing Wells Nos. 1 and 2 in the Stockton Formation. The total allocation of groundwater is based on actual metered data and is an increase from the existing allocation of 2.27 mg/30 days. The project is located in the Mine Run and Schuylkill River watersheds in Lower Providence Township, Montgomery County, Pennsylvania in the Southeastern Pennsylvania Ground Water Protected Area.
12. Upper Makefield Township, D-2007-025 CP-2. An application for approval of expansion of the Upper Makefield Township Gray Tract WWTP, which was previously approved but not constructed. The applicant seeks approval to modify the approved design from 20,000 gallons per day (gpd) to 55,550 gpd in order to accommodate an additional service area consisting of the portions of the Melksy Farm and White Farm subdivisions located in Upper Makefield Township. The hydraulic design capacity of the proposed WWTP is to be 70,000 gpd. The WWTP is proposed to discharge to Houghs Creek rather than to the previously-approved location on an unnamed tributary of Houghs Creek. The project is to be located in the Houghs Creek Watershed in Upper Makefield Township, Bucks County, Pennsylvania, and is located within the drainage area of the section of the non-tidal Delaware River known as the Lower Delaware, which is classified as Special Protection Waters.

The Commission received no significant comments on these proposed renewal projects with substantive changes, and Mr. Pindar recommended that the Commissioners approve hearing items 3, 4, 5, 6, 7, 9 and 12. Hearing no other questions or comments, Dr. Howarth requested a motion for approval of the group of seven dockets. Lt. Col. Tickner so moved, Mr. Sickels seconded his motion, and hearing items 3, 4, 5, 6, 7, 9 and 12 were approved by unanimous vote.

C. *New Projects (hearing items 13, 17, 18, 19, 22, 23, 24, 25, 26 and 27).* These ten projects comprised new discharges or withdrawals or constituted projects new to the Commission.

13. Artesian Water Company, Inc. D-2007-042 CP-1. An application for approval of a groundwater withdrawal project to supply up to 25.8 mg/30 days of water to the applicant's public water supply distribution system from new Wells Nos. PW-1 and PW-2 in the Weatherstone Crossing wellfield. The project is located in the Frederica Formation in the Murderkill River Watershed in Kent County, Delaware.
17. Village of Fleischmanns, D-2009-008 CP-1. An application for approval of a groundwater withdrawal project to supply up to 9.75 mg/30 days of water to the applicant's public water supply system from existing Wells Nos. 2 and 4, rehabilitated Well No. 3, new Well No. 5, and existing Springs Nos. 3, 4 & 5. The wells are completed in the Lower Walter Formation. The allocation is requested in order to meet existing and projected demands in the project service area. The project is located in the Bush Kill Watershed in the Village of Fleischmanns, Delaware County, New York, within the drainage area of the section of the non-tidal Delaware River known as the Upper Delaware, which is designated as Special Protection Waters.
18. Elwood P. Carey, D-2009-028-1. An application for approval of an existing groundwater withdrawal project to supply a maximum of 10.8 mg/30 days of water for the applicant's irrigation of approximately 86 acres of corn, soybean, and wheat crops. The project well (Well No. 1) is located in the Cheswold Aquifer in the Leipsic River Watershed in Kent County, Delaware.
19. State of Delaware Parks and Recreation, D-2009-034 CP-1. An application to approve an existing surface and groundwater withdrawal of up to 14.0 million gallons per 30 days (mg/30 days) of water for the irrigation of the docket holder's golf course from one existing surface water intake (Intake No. 1) located on an irrigation pond and one existing groundwater production well (Well No. 1). The allocation limits the withdrawal to 7.0 mg/30 days, with a daily restriction of 403,000 gallons per day (gpd) for each source. The project well is located in the Cheswold Formation, and the surface water withdrawal is from a pond located on an unnamed tributary of the Leipsic River in Kent County, Delaware.
22. Village of Buckingham Springs, D-2009-040 CP-1. An application for approval of an existing 0.1 mgd discharge from the Village of Buckingham Springs (VBS) WWTP. The VBS WWTP will continue to discharge to Mill Creek at River Mile 115.63 – 23.39 – 4.95 (Delaware River – Neshaminy Creek – Mill Creek). The VBS WWTP is located in Buckingham Township, Bucks County, Pennsylvania.
23. Tobyhanna Army Depot, D-2009-041 CP-1. An application for approval to modify the treatment process of the existing 0.802 mgd Tobyhanna Army Depot WWTP. The discharge is located at River Mile 183.66 – 83.5 – 26.4 – 1.82 (Delaware River – Lehigh River – Tobyhanna Creek – UNT) within the drainage area of the section of the non-tidal Delaware River known as the Lower Delaware, which is classified as Special Protection Waters. The WWTP is located in Coolbaugh Township, Monroe County, Pennsylvania.

24. Cedar Glen Lakes Water Company, D-2009-046 CP. An application for approval of a groundwater withdrawal project to supply up to 7.8 mg/30 days of water to the applicant's public water supply distribution system from existing Well No. 2. The project is located in the Kirkwood-Cohansey Formation in the Rancocas Creek Watershed in Manchester Township, Ocean County, New Jersey.
25. New Jersey American Water Company – New Egypt System, D-2009-050 CP-1. An application for approval of an existing groundwater withdrawal project to supply up to 5.0 mg/30 days of water to the applicant's public water supply system from existing Wells Nos. 1A and 2, which were not previously reviewed by the Commission. The project wells are located in the Englishtown Aquifer in the Crosswicks Creek Watershed in Plumsted Township, Ocean County, New Jersey.
26. Kinsley Group Family, LP – Kinsley Shopping Center, D-2010-005-1. An application for approval to construct and operate the 20,000 gpd Kinsley Shopping Center (KSC) WWTP. Effluent limits for the KSC WWTP will be based upon a 17,770 gpd discharge, the expected 2015 year discharge flow. The WWTP will discharge to ten (five primary and five reserve) on-site seepage beds in the Weir Creek Watershed near River Mile 183.66 – 40.88 – 6.30 – 6.51 – 7.40 – 2.40 (Delaware River – Lehigh River – Pohopoco Creek – Beltzville Reservoir – Pohopoco Creek – Weir Creek) in Chestnuthill Township, Monroe County, Pennsylvania, within the drainage area of the section of the non-tidal Delaware River known as the Lower Delaware, which is classified as Special Protection Waters.
27. Country Club Estates Condominium Association, D-2009-044 CP-1. An application for approval of the expansion of the Springdale Estates WWTP from 12,600 gpd to 30,000 gpd. Effluent limits for this facility will be based on an average monthly flow of 28,800 gpd. The Springdale Estates WWTP is located within the drainage area of the section of the non-tidal Delaware River known as the Lower Delaware, which is classified as Special Protection Waters. The WWTP will continue to discharge to an unnamed tributary of Mahoning Creek at River Mile 183.66 – 42.5 – 7.0 – 0.44 (Delaware River – Lehigh River – Mahoning Creek – UNT) in Mahoning Township, Carbon County, Pennsylvania.

Note: Notice of the hearing for this docket and a draft of this docket were posted on the Commission's website for ten days prior to the hearing date. Notice did not appear in print versions of the notice that appeared in the state and federal registers.

DRBC received no substantive comments on hearing items 13, 17, 18, 19, 22, 23, 24, 25, 26 and 27. Accordingly, Mr. Pindar recommended that the Commissioners approve the draft dockets for the entire group of ten new projects as proposed.

As to hearing item number 24 – Cedar Glen Lakes Water Company, D-2009-046 CP – Mr. Sickels asked if DRBC had reconciled the difference between the water allocation approved by the New Jersey Department of Environmental Protection and the proposed DRBC allocation. He noted that NJDEP had already reduced the applicant's approved allocation, and he was

concerned that the proposed DRBC allocation might be too low to ensure drinking water requirements could be met. Mr. Muszynski confirmed that the numbers had been reconciled.

Hearing no further comments or questions, Dr. Howarth requested a motion for approval of hearing items 13, 17, 18, 19, 22, 23, 24, 25, 26 and 27. Lt. Col. Tickner so moved, Mr. Aunkst seconded his motion and the ten dockets were approved by unanimous vote.

Resolution to Approve the FY 2010-2015 Water Resources Program. Consideration of this resolution was postponed to allow additional time for review.

Public Hearing: Resolution Adopting the DRBC Fiscal Year 2011 Operating and Capital Budgets. Mr. Gore related that a public hearing on the current expense and capital budgets for FY11 had taken place during the Commission's regularly scheduled meeting on December 9, 2009. During that hearing, staff noted that after publication of the draft budget, several large water users within the basin had announced plans to cease or reduce operations. Staff advised the Commission that these events would reduce projected revenues. Staff now is projecting a reduction in the amount of \$313,000 in projected revenue to the Water Supply Storage Facilities Fund as a result of the closures and reductions. Mr. Gore further noted that the budget discussed in December provided for an increase of \$.03 per thousand gallons in the consumptive water use rate and three-tenths of a mil per thousand gallons in the non-consumptive rate applicable to surface water use, effective January 1, 2011. Since the Commission has not formally adopted the proposed rate changes, projected revenue in the amount \$622,000 associated with these increases has been removed. The projected revenues for the Water Supply Storage Facilities Fund are now shown as \$3,144,000. The General Fund Budget remains the same as in the December proposal, at \$6,231,000.

Mr. Gore said that expenditures totaling \$3,407,000 in the Water Supply Storage Facilities Fund were anticipated. The fair share allocation of General Fund expenses among the signatories is the same as discussed in December. Mr. Gore noted that the Commission also anticipates receipt of \$127,000 from the Commonwealth of Pennsylvania for operation of the Southeastern Pennsylvania Ground Water Protected Area program. The budget provides for a transfer from the Water Supply Storage Facilities Fund to the General Fund in the amount of \$1,923,000, and Other Income is anticipated in the amount of \$734,000. The draft resolution notes that the budget is subject to the legislative approval processes of each of the signatories. With adoption of this resolution, a certification will be transmitted from the Commission to each of the signatory parties for their consideration.

Hearing no further comments or questions, Dr. Howarth requested a motion to approve the resolution adopting the Commission's Fiscal Year 2011 Operating and Capital Budgets. Mr. Freehafer so moved, Lt. Col. Tickner seconded his motion and Resolution No. 2010-2 was unanimously approved.

Mr. Freehafer pointed out that New York has not been able in the past to submit its full fair share, and Governor Paterson's proposed budget has a shortfall. He said that New York supports the proposed budget plan but cautions that the expenditures may need further evaluation. Dr. Howarth reported that the Commission's dues had not been included in the State of Delaware's

draft operating budget this year, and Ms. Collier, Mr. Gore and Mr. Tudor had visited with state officials in an attempt to reinstate the fair share contribution as a line item for Fiscal Year 2011. Although the outcome of their efforts will not be known until June 30, 2010, she said that Delaware was supportive of the budget at hand.

A roll call vote of the Commissioners was taken. The Commissioners for Delaware, New Jersey, New York, Pennsylvania, and the federal government in turn each voted in favor of adoption, and Resolution No. 2010-2 was approved by unanimous vote.

Resolution Approving Election of the Commission Chair, Vice Chair and Second Vice Chair for Fiscal Year 2011. Ms. Bush explained that the Commission's practice is to elect new officers every year before the start of the fiscal year beginning July 1. In accordance with the customary rotation, the Governor of Delaware is due to become Chair, the federal government Vice Chair, and the Governor of Pennsylvania Second Vice Chair.

Hearing no comments or questions, Dr. Howarth requested a motion to adopt the resolution approving election of the Commission Chair, Vice Chair and Second Vice Chair for Fiscal Year 2011. Mr. Sickels so moved, Lt. Col. Tickner seconded his motion and Resolution No. 2010-3 was adopted by unanimous vote.

Public Dialogue. Because a number of individuals requested to address the Commission, Dr. Howarth established a time limit of five minutes for each speaker. A rough transcript of remarks offered during this part of the meeting is provided as an attachment.

Dr. Howarth concluded by offering comments in her capacity as the incoming Chair. Noting that because the Commissioner from New York had been restricted from traveling to meetings, she had chaired the last two in his place, she said that attendees may have observed that she tends to run things less formally than other chairs. She assured attendees that this should not be construed as a signal that she does not take the concerns of her colleagues and the public seriously, whether they are concerns about flooding, fisheries management, or more recently, the issue of natural gas extraction from shale. As a downstream state, she said, Delaware cares very much what happens upstream. So as the Commission heads toward its 50th anniversary year, she looks forward to working with the Commissioners, staff and concerned citizens on these issues and on new regulatory actions and policies. She thanked the New York Commissioners for their service as Chair. She added that as the Commission moves ahead in addressing shale gas development issues, Delaware is very much engaged. She has complete confidence that her colleagues in New York and Pennsylvania are acting in the best interests of their respective states and is equally confident that DRBC is examining these issues on a basin-wide scale and considering aspects of concern downstream as well as in the host jurisdictions. Dr. Howarth closed by stating that she very much looks forward to serving the staff and her fellow Commissioners as Chair and is grateful for the opportunity to do so.

Lt. Col. Tickner announced that this was his last meeting as a Commissioner of the DRBC, as he will be moving on to a new assignment. He wanted Executive Director Carol Collier, his fellow Commissioners and the public to know that he considers his service on the Commission to have been an honor. He is proud to have had this opportunity to listen on behalf of the federal

government to the concerns of citizens of four states, and he knows his colleagues share this sentiment as to their respective governors. For a military officer, in particular, Lt. Col. Tickner said the Commission affords a great opportunity to see democracy in action. He noted that many parts of the country lack forums like this one. He will be working next for the Assistant Secretary of the Army for Civil Works, who looks to the DRBC as a model for entities she would like to see established elsewhere in the country.

Following the public dialogue portion of the meeting, a rough transcript of which is attached, a motion to adjourn the meeting was offered and seconded, and Dr. Howarth adjourned the Commission's business meeting of May 5, 2010 at 3:50 p.m.

/s/ Pamela M. Bush
Pamela M. Bush, Esquire
Commission Secretary

ATTACHMENT**TO DRBC MEETING MINUTES FOR MAY 5, 2010
ROUGH TRANSCRIPT OF PUBLIC DIALOGUE SESSION**

A rough transcript of the Public Dialogue session follows. Text in brackets is paraphrased or inserted by the editor.

Tracy Carluccio, Deputy Director, Delaware Riverkeeper Network

I have two subjects to comment on. My first concern is gas drilling. We submitted a letter on the record and I wanted it sent around to the states. We do want to submit an original of that now. Our concern today focuses on the lack of the application of the Executive Director's Determination of May 2009 [Determination of the Executive Director Concerning Natural Gas Extraction Activities in Shale Formations Within the Drainage Area of Special Protection Waters, May 19, 2009] to exploratory or test wells for natural gas development. As we stated in our report we consider exploratory and test wells are covered by the Executive Director's Determination. We think if you look closely at the wording, particularly the statement that says a reviewable project is a project that is defined as a well pad upon which a well intended for eventual production is located, that that really applies to exploratory wells as well as production wells. It goes on to say that exploratory wells are excepted, however, in our review of the Pennsylvania Department of Environment Protection's file of one of those wells, the Rutledge Well, which was an application filed and actually has been approved in the last couple of days by PADEP, it is not classified as an exploratory well. It's classified as a "Marcellus Shale well" and the definition of the "Marcellus Shale well" according to the Pennsylvania Code is a well that will eventually be used for the production of gas. We believe that actually in order to properly apply the Executive Director's Determination of last year, you need to be covering these exploratory and test wells. As we pointed out in other comment that we put on the record for the DRBC's lack of jurisdiction over non-shale wells, the development and construction of the pad – the siting, the drilling, all of the original construction impacts – are all going to be the same for an exploratory well as for a production well. We know that the Determination of the Executive Director last year flowed out of the concept that there was a potential for a significant impact on the water resources of the basin from the proliferation of natural gas development. Now we see with not only this one Rutledge Well application and new permits being issued by PADEP, we see at least eight, and others have mentioned as many as 14, wells so we see an actual proliferation just in Wayne County alone, a very small part of Wayne County, of these exploratory wells. We're afraid what's happening here is that the horse is getting out of the barn and we say if it looks like a duck and quacks like a duck, it's a duck. This is definitely a gas well. We are concerned because the DRBC has no transparent process in order for us to explore and look into how it is decided that it was an exploratory well by the Commission. There's no record on file at the DRBC about how this was arrived at. All we do have to go on is what is filed in PADEP and that says that this is a production well. We ask you at this point to immediately notify all operators that plan to explore and develop gas in the Delaware River Basin that they need to come in for all wells, including this well, before construction begins and go through the Commission process for the docketing of a natural gas project. We believe that this is a very precarious position that the Commission has put themselves in, to have made the decision not to include these so-called exploratory or test wells. A cautious approach is the one that we are asking the Commission to take. We think it should be a very conservative and careful approach. We think the damage that can be caused at one well – the Robson Well that was not given any oversight by the DRBC, pollution from that has been documented – is reason enough. The tremendous amount of harm and accidents and spills and problems that have occurred across Pennsylvania as natural gas is developed too quickly before regulations are in place – all argue for the Commission to bring these test wells into them just like any other production well and include them under the Executive Director Determination which we believe is the correct interpretation.

The second issue is related to our review of the sewage treatment plant projects in Special Protection Waters and in looking at the fund that New Jersey has posted for projects that will be funded and some of them earmarked for fast-track under the stimulus program. One of these is Lambertville and another one is Phillipsburg. Phillipsburg, in the documents filed with New Jersey, shows that it is going to be treated as a higher and advanced treatment and Special Protection Waters is specifically mentioned in the description of that project and that they will be meeting Special Protection Waters requirements in order to protect the river because it is a project that is reviewable by the Commission. However, the Lambertville expansion of their sewage treatment plant which is also, from what I understand, under consent order from New Jersey, does not mention that it is going to be advanced treatment. It's only secondary treatment there. We're concerned about the fact that during our Freedom of Information Act request to the Commission on this we saw that there was a letter sent out in November of last year to Lambertville telling them that they were a reviewable project, they had to meet the requirements of Special Protection Waters, and basically we were given the silent treatment from what we can see. No action has been taken by anybody that we know of at the state level or local level. We are very concerned about this. We think that the Commission should use all of its power to spur enforcement action particularly because we understand construction is imminent and has already begun now. We believe that in order to properly implement the Special Protection Waters regulations we can't let something very important like this fly under the radar and just because there was not a response, several months ago now, is no reason to ignore the problem. We are very interested in knowing what New Jersey is doing and what the Commission is doing about this gross oversight.

Ms. Collier said a letter had been sent out yesterday. Ms. Carluccio asked what the letter said, if it was public information at this point. Mr. Muszynski responded that the letter basically advised Lambertville that they are covered by Commission rules and regulations and they need to come in. We are instructing them to come in and discuss with us why they didn't come in, or to appear before the Commission on July 14, 2010 and explain in front of the Commissioners why they believe their project is not covered. Ms. Carluccio asked how New Jersey was involved in this. Is the state involved in any way? Mr. Muszynski said we are coordinating it with the state. The project is essentially under a state program where they are not increasing their capacity and so they did not have to get a modified NJPDES permit. That is partially why it may have slipped through a little bit but clearly we put them on notice in November 2009. This was a project that we felt was reviewable, that was substantial alterations and additions under our regulations and that they had to come in. Apparently they decided they didn't have to. Dr. Howarth guessed that Mr. Pindar will be discussing that docket with us in the future. Ms. Carluccio asked if the Commission used the "e" word – enforcement or "v" word – violation. Mr. Muszynski said yes, we used the word "penalties."

Mr. Warren said that if Ms. Carluccio had any evidence that some of the wells DRBC deems to be exploratory wells are actually intended for production, she should let the Commission know. Ms. Carluccio agreed and added that the Delaware Riverkeeper Network would like to see any evidence that DRBC has on hand that says the wells cannot be used for production. Mr. Warren reminded her that she is entitled to see the Commission's records.

Mr. Muszynski said that Phillipsburg has been in and has been working with staff to go through the "no measurable change" review. The project that Phillipsburg applied for and I guess received funding from New Jersey, is to build an additional tank but not increase their capacity. It is not the complete upgrade project yet. They are still working with us to determine the effluent requirements that would be a part of that. We've also advised them they need to come in and get approval for what they are doing as well. But since we've been working with them we don't anticipate any issues on the 'no measurable change.'

Richard Schneider, Coalition to Protect the Environment, DE and Recreational Fishing Association, NJ

Hello, my name is Richard Schneider. I'm representing the Coalition to Protect the Environment in Delaware and the Recreational Fishing Association based in New Jersey. I'm here again to talk about protecting the fisheries. I want to make one point very clear to everyone. We don't want to shut down facilities – just stop killing the fish. That's our goal. There's been a recent development in this region pertaining to saving the fish using closed-loop cooling systems and it was done by the State of New York. The Indian Point Nuclear Power Plant, which is on the Hudson River thirty miles north of New York City, the New York City Department of Environmental Protection is requiring them to use closed-loop cooling systems. That facility draws in two billion gallons of water per day. The Hudson Riverkeeper has been trying for decades to stop the fish kill, the same as the Delaware Riverkeeper is down here, and have been trying for decades to stop the fish kill along the Delaware River. The Salem plant and the New York plant are very similar. They both draw in over two billion gallons of water. Salem draws in over three billion gallons. They both have open-loop cooling systems. They should have been retro-fitted many years ago. New York is doing the right thing. I want to thank the NYCDEP for doing the right thing in protecting the fisheries. The State of Delaware has also passed a resolution to protect the fisheries, requiring closed-loop cooling as one of the methods. We, again, ask the Commission to do likewise. It's not unusual so you don't feel you're putting yourself out there. Other places are doing it. Get on board, please. The NYCDEP concluded that the plant's cooling system, whether operated as they have for decades or modified under a proposal by Entergy who owns the plant, "do not and will not comply with existing New York State water quality standards." That's a statement on the NYCDEP ruling.

The Salem Nuclear facility is applying for a new Number Four Unit to build a whole new unit at Salem. There's a public hearing on it tomorrow night and it's just starting to process. That facility was even built with the cooling tower, a new one, which would still draw in over 100 million gallons of water a day. We feel that before they build another one, they should stop the damage that the facility is doing now, the existing facility, killing millions of fish a year. PSE&G and Exelon who own Salem, one of their excuses is it costs too much to build a cooling tower. But on the other hand they say they have over \$10 billion to build a new facility. You either have the money or you don't. They have the excuse they don't have the money to stop the fish kill but they do have the money to build a brand new facility. What story are they really telling here? The goal is to protect the fisheries. We don't want the facilities to shut down. We just want to protect the fisheries.

Another issue I want to bring up is the coal ash issue. The federal government is reviewing the coal ash issue, there was an article in today's paper about it, and I believe they are going to categorize it as hazardous waste. It is because it has a lot of bad stuff in it like arsenic, cadmium and a bunch of other bad stuff. For decades the coal industry has been getting away with just putting it anywhere and everywhere. Now the federal government – the EPA – is cracking down on that issue. That issue pertains to the Delaware River because there are plenty of spots along the Delaware River where this coal ash is being used to build berms and just been disposed of as non-hazardous waste. I ask the Commission to get a tally of all the locations of coal ash along the Delaware River and be prepared for this rule change. To have an inventory of all the facilities, how much they have, make it presentable to the public and all of us who are concerned and to deal with this problem when it occurs. When the federal decision comes down, to notify the companies that have this ash that they have to discontinue immediately the present disposable aspects of their business and dispose of it as hazardous waste which it will be declared, hopefully. I'm asking the Commission to be on top of this, notify the people and let them know and to address this coal ash issue. There's so much around and it's been around for decades and it is bad stuff and industry has been getting away with just calling it "potting soil" and it's okay, but it's not. We all know it's bad, the chemical tests show it's bad so the facts are there. We ask the Commission to act accordingly to protect the Delaware River.

Elaine Reichart

I'd like to ask two questions. The first has to do with the flood model. Is there an RFP going out for this independent peer review? Dr. Howarth said yes, there will be. Ms. Reichart asked if the Commission was paying to have this done. Dr. Howarth replied yes. Ms. Reichart said then it's not an independent peer review. It's a customer finding a consultant to give them an opinion on projects that they've already done. An independent peer review, as far as I understand it, means something that is given to another group of peers to be reviewed. Lt. Col. Tickner said and you have to pay for that. Ms. Reichart said it was her understanding that was not the case because then it's a client-supplier relationship. Lt. Col. Tickner said you can give us someone who will do it for free. Ms. Reichart said what she would like to suggest is that you go to DEP and other states that have reservoir issues such as Georgia and Alabama and ask them to do a peer review on this. They might find it useful and helpful to their consideration because I do remember way back when after the 2006 flood, an engineer by the name of Tim Pryor came up with a very basic Excel spreadsheet that did a flood analysis model of the 2006 flood which was given to the DRBC and an independent peer review was done by John Miller of Lambertville and it was done for free because that is the standard practice in private industry to have an organization on a non-paying basis review something as an independent peer review.

Mr. Muszynski said what you do in independent peer reviews is look for people independent of the Commission. You still have to pay for that but they don't have prior dealings in terms of contracts or grants with us or any of the parties involved in that case so that they can be influenced. You try to get people that are not currently engaged. We look back at the PCBs in the Hudson when that review was done and they had to find people in Canada that had no dealing with either GE or Environmental Protection Agency to get its review. Most places you pay for that independent review. Somebody's got to pay for it.

Ms. Reichart said if you have USGS and the Army Corps of Engineers involved in this project I really wonder where you're going to find somebody in this country who has not been somehow involved. Dr. Howarth said she could argue that there shouldn't be a need for peer review if it's a government.

Ms. Reichart asked what was meant by delaying permitting for the gas drilling, the sites for the withdrawal of water. What exactly are you not doing? Could you help me with that? Dr. Howarth said the staff has been asked to start the public notice and comment process for the development of regulations for the well pad sites for Marcellus-type activity. It is our understanding that we have appropriate authority to address allocation issues and so we will go forward. Ms. Reichart said so you do intend on granting permits for allocation of water without waiting for the regulations to be completed. Dr. Howarth said the regulations would be for well pads. Ms. Reichart said so you are granting, you're still opening the door for permitting for water withdrawals from the Delaware. Is that correct? Dr. Howarth said that was the understanding. Ms. Reichart asked if this was a decision voted on by the Commission. Mr. Warren said there hasn't been a decision that's been voted on. I think the Chair was expressing her intent. There's been no vote on this. Ms. Reichart asked if there was going to be a vote on this. Dr. Howarth said there would be a vote on draft regulations or final proposed regulations once they go through a process. Ms. Reichart asked if there was a vote that's going to take place or has taken place or that will take place on whether water withdrawals from the Delaware will take place before any type of gas drilling regulations are put on paper and approved by the Commission. Dr. Howarth said I think counsel will argue that the Commission made that decision when it passed the last version of water allocation regulation. Ms. Reichart asked and that would be when. Mr. Warren said we have water allocation regulations on our books, we have a docket that was put out for public notice with respect to the water withdrawal and the Commissioners have said that it will not be until July at the earliest that they will vote on that docket, but there has been no decision as of today as to whether that docket will be approved, not

approved, or deferred. Ms. Reichart asked then there will be no granting of any permits on wells for any reason? I'm just trying to figure out what is being allowed and what isn't. Mr. Warren said there was a docket that was put out for public notice. That docket is still up for decision by the Commissioners which we said several weeks ago will not occur today. It may occur in July. There's nothing that anyone has said today that would suggest that we will not go forward with the water withdrawal docket in July. Ms. Reichart said so to answer my question, there are no permits that will be given from this date forward until you vote on these things and if that's July, it's July, but there will be no permits that will be voted on, accepted or approved for any aspect of gas drilling from now until these dockets are voted on. Is that true? Mr. Warren said there will be no permits issued until the July meeting because the Commissioners only issue dockets at public meetings. So the next public meeting is scheduled for July, and it may be that the Commissioners will consider the Stone Energy water withdrawal docket at that time. If the Commissioners decide to do that, there will be public notice to let people know that that will be on the agenda. Ms. Reichart asked if there would be a roll call vote on this. Mr. Warren said there will be our usual vote. The Chair will take a vote but it isn't a state-by-state individual roll call. Ms. Reichart asked if we could request such a thing. Mr. Warren said you can request anything but the Commissioners will have to decide whether they will do it or not. Ms. Reichart said she was making that request now that if and when you do go forward with an application permit for gas drilling that you do it by roll call. Mr. Warren said that was something that the Commissioners will make a decision on in July.

Barbara Arrindell

I know I'm probably not going to say anything that you don't already know. You may have decided this is not what you want to be bothered with, that it's only money or is it oil and the waters. But that is the point – the water. I was taught as a child that being honest and responsible was not something that you could just not do. If I did choose to ignore or pretend that something was not there, I was made to understand that I was actually making a choice – that not choosing is also a choice. Of course I tested this and found that when I looked out again from my blinders the problem or moral dilemma or homework project that was being ignored was in fact still there and had not disappeared because I had my eyes closed and was simply not acknowledging the situation. The test wells are like that. You have chosen to ignore what you're obligated to either sanction or deny permission for, to observe, to regulate and instead you are all pretending that they do not exist. I wonder why. In the dockets you carefully examined the particulars, determined, mulled over, measured and voted on today there was not the possible damage capability of these current fourteen test wells that are marching towards a chemical, diesel, intrinsic contaminating fulfillment, some to be horizontally drilled. These test wells that so far the Commission has not acknowledged are full-scale drill and operate gas oil wells as permitted by Pennsylvania. They are not toys, not pretend gas oil wells but real ones that stand to potentially pollute and damage, each one at least as much as the Robson Well has done. The company drilling the test wells has said it expects at least five to be put into production. And this Commission is not even going to look at them? Is this what you are here for? You know they use many toxic endocrine-disrupting and other types of chemicals even in the initial drilling. The mineral testing done at Robson Well where large trees died very quickly shows indicative materials from drilling, even when testing was not done until months after the event. You have those initial test results and DCS's Robson complaint which you also chose to ignore. Any sewage treatment plant, golf course, shopping center or mushroom-growing facility gets careful analysis as to how the river is affected in terms of water quantity and quality. How can gas oil wells drilled anywhere in the basin into any geological layer be ignored, even if advertised as test wells, a made-up advertising term with no definition in Pennsylvania or New York. This gas and oil industry is rich in cash, influence and pride. It says it does not need regulation. It can take care of everything without regulation. Ask the people in Dimock, Pennsylvania, in Clearville, in towns in western Pennsylvania, McKean County, Pennsylvania, Dish, Texas, towns in Wyoming, Colorado, New Mexico, Michigan and on and on, how well the industry takes care of things. Okay, here's the highest state-of-the-art industrial drilling. This is the first 36 hours of the explosion at the British Petroleum (BP) well. Yes this is at sea, but know that

driller BP fought not to have a few scheduled inspections – fought hard. Here we are today with the possibility of an Exxon Valdez equivalent about every two weeks or less for three, maybe six months, to impact five states' complete ecosystems. This well is called an exploratory well. There's actually only two types of wells talked about in the industry – and I've talked to industry people over and over and over again – exploratory and production. This is an exploratory well. Every well is an exploratory well until it's hooked into a pipeline. Then it becomes a production well. Here's the non-industry analysis that I will leave with you which lays out a much larger than a big media mound [?] to the spill. Industry was saying it was only 2,000 barrels a day. Analysis of the actual spill from satellite transmission shows it's ten times that amount. This spill is a function by the way of the layers of the geology now being connected sort of like in Dimock, Pennsylvania and other places. The state-of-the-art and the pride of the industry and its self-regulating was not enough to keep all the other activities in this huge area – the lives, the economies, whole ecosystems – from death by drilling pollution. Here you want to let them do that without even looking? Who do you work for? What are your values? I do hope you will think hard on this. Even the industry knows that every well pollutes, including in binders which we will give you today, a paper delivered to the Society of Petroleum Engineers three years in a row that says just that: All the gas and oil wells cause pollution, but the industry could save money if it was more careful. Please do take a very careful look at this. These test wells and all gas and oil wells maybe you can view them like they are a series of factories, shopping centers, or golf courses, maybe. Just don't ignore this elephant. It's not going to make it go away. Study it for us. Understand what we are trading. Everything is always a trade. Make an informed decision, not a blind stumble. Our – yours and mine – our future is at stake. Thank you.

Joe Levine

I'd like to start where we left off last time, hearing the news that you are going to, or are embarking on, or have the intentions of doing and seeking funds for the cumulative impact study. It still astounds me with all that's going on and certainly in Pennsylvania with respect to this process of gas drilling that anything would be done at all in the basin – that you would allow anything to happen – without doing a cumulative study. Without belaboring the test well issue too much, I do want to comment on it because once again there is no such thing as a test well. The test well might be the DRBC loophole to join the other loopholes. There is no test wells so if these wells are done and ignored or we're just keeping our eyes closed and waiting for the accidents to happen because they are happening all over the place, contamination and everything else you know. The other thing is that this test well is essentially ninety percent of the regular production well anyway. All of the issues that this commission looks at or tests or production wells are all incorporated into the same process of the test well whether it's the pad construction you mentioned, or all the auxiliary activity and construction and the digging of the hole and everything. Ninety percent of everything that's being done in that invasive procedure is being done in a test well and that's much more invasive than most other processes that are performed in the basin. To not look at the test well doesn't make any sense ignoring all of the other ninety percent just to say that ten percent of this is about a test well. It doesn't make any sense at all. It really looks like this is a matter of taking assurances from industry that they are going to do a test well when in fact they are drilling a well. It wouldn't really matter. They don't even need to do a test well anyway. They already have their data from these other wells as a matter of fact. The Robson Well is the first test well in the basin. Nobody was watching the Robson Well so we had to get a plane and fly over the site and we were able to see that there was some deterioration of some stand of trees that was from the runoff from the Robson Well. These are a couple more photographs of the erosion of the Robson Well. All of this was done without DRBC's engagement. We thought that was suspicious that stand of trees that went down from the runoff down to the little pond behind it but nobody would look into it. We called for months but nobody would look into it. Maybe it was six or eight months later that PADEP finally came and did an analysis of what took place at the well. Contamination was found. There's a document – I think you have it – about diesel products, barium, chromium, there's a list of what was found at the well. Also you can see that there's a

pond here that takes the runoff from that well. That pond then drains down to the Delaware River. This is only a few miles from the Delaware River. We have contamination at the first model run of drilling this test well and to consider doing any more test wells just seems to be totally insane and inappropriate and irresponsible. I don't know this for sure, but we've been told by somebody that a fishkill has been seen at this very pond, but it is private property and we haven't been able to get in. That's all we would need but in any case six months after the fact contamination was discovered, ten different chemicals were found then and could only be related to a drilling operation at the site. I think that everybody understands now that it isn't soap and water and all that stuff. I don't know how much time we should spend continuing that but from the Society of Petroleum Engineers' report that Barbara mentions I'll just read one quick paragraph here because everything in here says that the risks are gigantic in drilling, whether it's oil drilling off-shore or gas drilling on land. When you read this report you're stunned about how much abuse we allow to occur in the system, but since it's in the ocean and there's so much volume of water it's okay because it's also salt water so we're not drinking it. The amount of petroleum that exits into the water on a typical drill site is slightly phenomenal but that's just the first time I'm hearing it. "Another characteristic of the chemical composition of most produced waters is that they are very high in mineralization. It is usually higher than sea water – salinity reaching up to 300 grams per liter. Besides, produced waters often have elevated levels of some heavy metals, as well as corrosion inhibitors, descalers, biosides dispersants, emulsion breakers and chemicals. Recently studies have revealed that produced waters frequently contain naturally occurring radioactive elements such as radium. All of these waters are usually polluted by oil and organic salts, trace minerals, barium. Composition varies between oil fields and can be difficult to predict. Produced waters potentially impacting the surface or groundwater are typically disposed of in deep aquifers. There is still the threat of accidental release from temporary storage." So even from these deep aquifer storage areas there's still the potential of release from those. The reason I read it from this is because we've been bringing in all sorts of reports that haven't been mainstream industry. This is mainstream industry in this report and they're talking about all things that everybody has been saying about the risks involved with this process. Test wells don't make any sense. Do the cumulative impact study so we know what we're doing here. The Delaware River Basin is at stake. Thank you.

Ms. Collier said DRBC is talking to different entities, but I did hear from Congressman Hinchey's office yesterday that while he is still very supportive of a cumulative impact statement, he thought it would be unlikely that we would get the federal funding in place. Mr. Levine said that doesn't mean that the study should not be pursued. Just because the money isn't there doesn't mean that we should still allow that thing to happen, right? Ms. Collier said she agreed it needs to be done but we need something to do it with. Mr. Levine said the oil industry should pay for the study.

Josh Fox

I came here to talk about the exploratory wells. You can probably hear at this point that it feels sort of like a desperate moment. One of these wells is planned a mile away from me and very close to the people in this room who are residents of Wayne County. I have to say that I have been appreciative of the steps that you are taking to take a measured approach to this. I think that allowing whether it's 8 or 14, there are a lot of rumors of these wells going into one county. It will have an incredible impact that allows the industry to put a huge footprint on one part of this Delaware River Basin and there's no going back from that. This is the start of the process. In Dimock, when I first visited there in February of 2009 they had about 21 wells. They have already had five households with flammable water. They had problems with their animals. They had several spills. This was the start of that process. It was a year ago. PADEP has now shut down Cabot, of course, but there are other drilling companies in Dimock now, ready to take their place. If you look the other way on this and let this go, you're starting the process of gas drilling to a huge degree. I don't really approve of New York State DEC's shenanigans of the last three weeks. I don't think it protects anything. One of the things they did bring up is interesting. They never talked

about hydraulic fracturing. They talked about all the other parts of the gas drilling process which would be unacceptable in a watershed – traffic, gravel – all the other things that happen. If you deal with these exploratory wells you will have all that stuff going on inside a watershed area. I think Barbara's analogy to this blowout in the Gulf is really appropriate because blowouts occur in the drilling process. They don't often occur in the fracking process. So if you go ahead and drill these things you could suffer something. I want to draw your attention to Clark's Fork, Wyoming where they had a catastrophic – they only have two wells – and during the drilling of one of them they had a catastrophic blowout. The blowout preventers, the regulators at the time, did not control it. You had plumes of benzene that covered that entire valley. If you visit there, which I have, and you can see air monitoring stations coming up out of the ground everywhere because those are benzene, they're actually coming up through all the different creeks and streams in one well. The drilling company, Newfield, proposing these exploratory wells has no experience in this part of the country at all. I don't think they've ever drilled a well in the Northeast. So this is like an experiment. It's an experiment on one of the most sensitive watershed areas and it doesn't make any sense to me that they would do that to upwards of 14 wells. There are no permits on these docket. We did put out the call for people to come, last February, on a Wednesday afternoon, far from where everybody was at. You had a seven-hour session. I don't think the start of this drilling is going to be a peaceful process. I think you're going to have a lot of protests, a lot of things happening. You have to go ahead with this cumulative impact study because how many exploratory wells can you do? Can we do 14, could we do 20? Let me ask a really simple question and I apologize I didn't hear exactly what the statement was at the beginning about the water withdrawal versus the pad construction because I read in the *Wayne Independent* that Hess and Newfield had press conferences that said they were going to have air drilling, air fracking. To me that sounded like they were trying to get around the DRBC to go ahead and drill. Air drilling is really dangerous, it explodes a lot. The point is this: industry is fond of saying they've never had a single contamination due to hydraulic fracturing. Nobody has ever proved that hydraulic fracturing actually did a contamination. The thing is that they've never had a *proven* contamination due to gas drilling. They never state that because it's not true. They can talk about hydraulic fracturing because it's relatively new and because no one actually investigated it. I am here to belabor the point because we're going to live with it. My question in terms of air drilling and exploratory wells is, if you are talking about permitting well pads, who's doing it?

[At this point in the Public Dialogue session, Dr. Howarth proposed a Resolution for the Minutes on which the Commissioners voted. This segment of the meeting is recorded in the official Minutes under the heading Rulemakings – Natural Gas Development.]

Mary Ellen Noble, Delaware Riverkeeper Network

Ms. Noble asked for DRBC's definition of an exploratory well.

Mr. Muszynski replied that it was a well that was not producing gas. Dr. Howarth said a non-fracking well. Mr. Muszynski said they don't drill a horizontal extension of it and it has to be done in order to turn it into a production well and then they'd have to frack the well. Ms. Collier said I know what you are all saying that we're not looking at some of the site issues and well construction issues and those things along with the pad but in the Executive Director Determination it does say that any well they plan to frack they have to come to us and get approval before they do that. So they can't turn it into a production well. Ms. Carluccio said that in the press release that accompanied the Determination, you said that an exploratory well must be capped and plugged.

Cliff Westfall

When it was solely for exploration, the operator must cap and plug the well at the end of exploration. What that seems to suggest was that it could not then turn around and be used for production. The only way that would make sense to me is if the word "ever" was also appended to that. If you are allowed to

do it first, and I think that's exactly the situation that we have here, what you get is a situation where there's a loophole where they have an incentive to do 90% of their activities prior to the DRBC permitting process and present DRBC with a *fait accompli* before the fracking. On the horizontal thing I should also note that one of the wells that are being applied for at least has a gauge[?] for a horizontal next to it. That's under consideration by PADEP right now. At least two permits have been granted although I think both of those are vertical. That was a big part of the point I wanted to make. It seems to me that this position is one that puts DRBC rules in conflict with one another for that very reason because it's a long-standing policy and part of good planning to have a rule that essentially DRBC has rules that forbid anything that is subject to DRBC review from having any substantial construction activity in advance of having been granted a permit to do so. What we have here is a situation where for this one class of activity, we have actually an incentive for them to go ahead and do very substantial construction activity to say the least. I think Josh Fox's point about what kind of activity it might be is very important to remember here but we have an incentive for them to do major construction and then come to DRBC after the fact. Those two rules are in conflict and make no sense. Secondly, given what the original ruling that an exploratory well is one that requires an intensive plugging cap at the end, unless you make clear to them that they are not allowed ever to frack that well, that it cannot be converted to a production well, frankly I would oppose even those exploration wells because I think they're dangerous but, it would at least be a clear set of rules. There would be a bright line rule if you had a rule in place that said you can do all the exploration wells you want but you'll never get a drop of gas out it. That would be one thing but that's not the situation we're at right now. So for example, you get folks like one from PADEP, geologist Jason Shoemaker was quoted in the *Scranton Times Tribune* on March 24, 2010 saying, "some call them exploration wells but they're going to produce them for sure because it costs them too much to make to not intend to produce them. Secondly, range resources in this first quarter 2010 results, said we have completed some test wells with good results and we're just waiting to hook them up to the pipeline. That's what they think of as a test well. I'm not going to belabor the point. I think you get the argument I'm trying to make but in some, it's essentially an exemption, it's a loophole you could drive a drilling rig through.

Larry Braverman

You have something called "A River Bounces Back." [Reading] 'Years before there was an EPA or a federal Clean Water Act or even an environmental movement, a little government agency was hard at work restoring life to one of America's most polluted rivers. Today, 36 years later, the clean up of the Delaware River is hailed as one of the world's top water quality success stories. A pioneer in environmental protection, the Delaware River Basin Commission got its start on October 27, 1961, the day the Delaware River Basin Compact became law. The Compact's signing marked the first time since the nation's birth that the federal government and a group of states joined together as equal partners in a river basin planning, development, and regulatory agency. When the DRBC was created, some 43 state agencies, 14 interstate, and 19 federal agencies exercised a multiplicity of splintered powers and duties within the watershed. The Compact created a regional body with the force of law to oversee a unified approach to managing a river system without regard to political boundaries.'

You all know my name; I'm a citizen of the Upper Delaware River. I sat in on a few of your meetings here and around Pennsylvania. You sit up there as if you were diligently doing your jobs but what I see is a group of marionettes for different interest groups trying to get their way. The fisherman who tries to get the cooling tower issue resolved might as well talk to the wall. He's not getting anywhere with you guys. Are you the regulators of the river or are you just marionettes? We have an energy industry saying nothing goes wrong and if it does, we have it under control, don't worry. As I spoke at the last meeting here, without the absolute value of water for life to exist, how can you sit up there and not be a positive force for the river as your job stipulates? B.G. Edgar Bergen [inaudible]. Now, you're the Army Corps of Engineers, and you're a former PADEP person. You two know well what industry does. You've been

involved in it, you've regulated it, and you've got to do your jobs. That's what you have to do. If you were to hire a general contractor to put an addition on your house, you'd either get one that came with impeccable qualifications or you'd go to the Better Business Bureau and research. You have to research these energy companies, see what their track records are, see if this is what we want here. That's the important thing, that's what your job is. Thank you.

Bernie Handler

It's been a fun meeting here today, I appreciate you all being here, so to continue with the way things are going I'm going to start more in the middle of my speech rather than at the beginning because things have changed. I think you just voted on it [referring to resolution regarding natural gas drilling]. Some of the things I jotted down may not be totally accurate but I think I have them straightened out in my mind right now. Many things have been said. There are currently seven drilling permits before the PADEP. Of these, five are being called 'non-production wells.' I think we've already solved which two have already been permitted. Nine more are scheduled to begin their application process. Also there are several soil and erosion permits being processed and one in particular that's not being processed by PADEP but which is up in Mount Pleasant above where the water withdrawal is, which obviously will have no place to use the water because it has to be used for drilling purposes in the river basin. So until something is permitted for it they won't be able to use the water, but that one is a 20-acre piece of land that's before the Wayne County Commissioners for the soil and erosion. They are going to be putting in a 5-acre water storage pit that they can take from the Lackawaxen River and fill it up to use it at appropriate times. There are also possibilities of putting a drilling pad on there as well. Something that I hope you are all going to look into before it gets very far as well as the soil and erosion permits that are being processed by the PADEP right now. I believe there's one close to the Teeple Well which has already been approved. So these whole bunch of wells need to be looked at in terms of cumulative effect and also it's a precursor of the many, many, many wells whether they are hydraulically fractured wells or production or other test wells going on. What you just voted on before, about drill pads, I hope you will include all of the exploratory wells within that frame because the drill pad is basically the same. All of the work is basically the same and they need to be included in that new draft regulation that you're coming up with because otherwise it's going to be again putting the cart before the horse. They're going to be done and you're going to say 'well, they're done, we'll accept them.' But they're not, they shouldn't be. There's something that you really need to look into in terms of considering that in your new determination and stop the proposed wells that are there, the two that have been approved already by the PADEP and the other three that are being processed and the other ones that are in plans that are being applied for. I'm not really opposed to all industry coming in but that doesn't mean that all industry is acceptable in the Delaware River Basin and to me what's happening with the gas industry, they're taking over the upper basin and basically it's the colonization by one industry with a few players in it that are going to own through lease and everything else all of the rights in the river. It's something that needs to be watched carefully. It's a corporate takeover and it's not a good corporation. Their track record elsewhere has been horrendous everywhere. Restrictions and protections should be the path that you're going to follow on there.

Over the past couple of years we've been hitting you with tons of counter-industry information. I know it's sunk in. I know many of you really believe it but there are other powers in play here that seem to be controlling things very much. A lot of it is politics and a lot of it is economics and both of those are very changeable. Pennsylvania has been leading the charge to allow gas drilling. New York is still on the line there, they're kind of either in a moratorium or conundrum of sorts. It's hard to figure out what's going on there. Pennsylvania has been pushing forcefully to allow gas drilling and recently John Hanger has come out with some very interesting remarks about the industry. At Duquesne University PADEP Secretary John Hanger called for tougher regulations and aggressive independent enforcements and he said now would not be soon enough to protect the state's water resources. That's our job, that's your job

here to be protecting the Delaware River Basin resources. He then went on to say that there's no such thing – and he's said this before – as zero impact drilling. Out in Western Pennsylvania they're also doing air quality tests around drill sites right now because it's contaminating, there's no question about it. Also in Pennsylvania, yesterday the House voted 150 to 41 to support a three-year moratorium on any further leasing in state forest land. They're getting the message. Pennsylvania – thank you for finally getting the message. Now that you've been playing follow-the-leader of Pennsylvania, keep following them in that direction and please come up with some very, very strong regulations because what's happening is a disaster and the Delaware River in particular and the whole basin is really a treasure and it's basically the Upper Delaware that is industry-free other than a few stone quarries which now they're saying in zoning ways, instead of using quarry, we'll allow gas rigs to be there and we'll allow all these things. The federal government is also moving in a direction of protectionism and trying to get a handle on this gas industry but they're also far behind the curve and have been doled some money – not nearly as much money as BP lobbyists – to not do things so that we can have tremendous explosions under sea and eruptions that contaminate. We need to be ahead of the curve in order to protect this treasure and not behind it. I have something to say about economics also. We've listened to the industry of how much money is going to be coming in and when you really look at the full impact of the economics, there's agricultural disasters. If any of you are parents here, would you like to serve, give your child milk from Dimock, Pennsylvania or from somewhere else in Susquehanna right now? They're grazing on from contaminated water, contaminated air, contaminated grass and they're milking them. This is something that really has to be taken to heart. The contamination may be there for we don't know how many generations it will be there. But it's our job to protect the future generations, hundreds of years from now. Underground migration, it can take 100 years to move up to the surface or into an aquifer and then what? There's nobody around to say 'we told you so' anymore. I know I won't be here for that but it's a real serious crisis that's on our hands in the Delaware River and it really needs to be considered. In terms of the economic things that are gained, economic costs, reclamation of the land, the cleaning up of toxic dumps, waste sites that they are exempt, in terms of agriculture, in terms of tourism, in terms of property values, in terms of houses. Right now, even the mortgage companies are refusing to give mortgages to land that has leases on it. This land will never be able to be used for agriculture or farming again. Thank you.

Lieutenant Colonel Tickner noted, you talk about the federal government. We do talk to the EPA weekly on this issue and they definitely have taken this on. They're behind just like we all were but they are looking at this and I would expect to get some updates from them. They have their own meetings and they are out there doing similar studies. Mr. Handler added that funding is an important issue. If you give them \$2 million dollars to look at natural gas drilling throughout the entire state – it's great that they have that and the possible \$2 million dollars coming, if they can get that – but is this adequate actually to do the job because industry is fighting that? They make that money in a couple of days and they spend more than that lobbying against what the EPA wants to do. We're in a battle here against an industry that's ruthless. I'm thankful for the EPA, I'm thankful for the DRBC, I really am, and I hope I didn't say anything denigrating – I really don't know what I said, but I do appreciate it. Mr. Westfall asked Lt. Col. Tickner whether it was EPA Region 3 or Region 2 working on the impact analysis. Lt. Col. Tickner said we talk to Region 2 right in Philadelphia.

Jeff Zimmerman

I am very fortunate to be a lawyer for clients who have already made their case for us. Let me point this out otherwise I wouldn't be doing my job. You've all heard about exploratory wells. Obviously with your decision today on production well pads, all of the pressure in the basin will now be on exploratory wells or on wells completed in formations other than shale, because the Executive Director's Determination only covers shale projects. We already have the poster child in the Robson Well of contamination from an exploratory well completed in the Oriskany Sandstone and not completed in shale.

I would ask you to consider expanding your resolution to cover exploratory wells and non-shale wells, because that's the only way that you can develop your regulations without having the pressures of wells that you're not really even looking at that are affecting the basin. If you don't do that, I'm afraid I would have to say that it really is arbitrary and capricious and an abuse of your discretion not to control exploratory and non-shale wells. Thank you.

Iris Marie Bloom

I just wanted to make a few points and one of those points is that Philadelphia City Council passed a resolution directing the DRBC to not approve any fracking permits until there's been specifically an environmental impact statement. I believe City Council members are too busy to come here in person but I'm from Philadelphia where voices downstream have not been heard. There are not that many people who can actually give up 14 hours of a day on a snowy whatever-day-of-the-week-that-was in Matamoras to testify about something. But there's a lot of concern in Philadelphia about the watershed and of course about drinking water. As we know, exploratory wells are real gas wells and those accidents can happen. Vertical drilling can cause accidents and contamination not just horizontal. We would also join in asking DRBC to (1) expand your ruling that does exist to delay permitting but to include exploratory wells or so-called test wells in your permitting rules, and (2) there's absolutely no reason to fragment the water withdrawal process from the permitting process for test wells for shale gas drilling. It seems problematic to continue to consider approving a water withdrawal that is a permit to withdraw 1,277,000,000 gallons of water over five years or up to that amount. That's still a lot of water for the purposes of fracking of shale gas drilling. It just doesn't make any sense to fragment those things. I know legalistically and policy-wise if you can fragment things, of course you can do it but it will make us continue to be vigilant and to fight it as long as you are still considering giving that approval. Ultimately, really what we want is a ban on any shale gas well in the Delaware River watershed, and we really appreciate that you've been vigilant and paying attention, but it's not appropriate to have any shale gas drilling in this watershed at all. I just wanted to say that aloud since I think you've been focusing on regulations and what we're really asking for is a ban. Also, I don't know if anyone has spoken about the experience of being not just in Dimock but in Clearville and Hickory. I just want to say a little bit about that, having traveled there recently, that it is quite stunning to speak with people whose water has been contaminated and who have drunk that water for a year and a half or six months, any amount of time, while being told that it's okay. That's happening over and over. I really haven't been able to ascertain how many cases there are but in western Pennsylvania I was told in the Hickory area alone there were at least 50 cases of water contamination. It's very upsetting to listen to people describe their animals dying, losing their motor control and dying, dogs, horses, cows. It's happening everywhere there's drilling and that includes vertical drilling as well as horizontal drilling. This is really serious stuff and if you're not paying attention to what happened with the Massey Coal disaster, that company had lots of money and the CEO bought a judge for \$3 million dollars. There is a lot of corruption in coal and oil and in big gas. So we have a chance to act with integrity here and really we see you as holding the line and being the body that can act with integrity, so please do.