



Delaware River Basin Commission

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Steven J. Tambini, P.E.
Executive Director

Water Management Advisory Committee

MEETING HIGHLIGHTS

Thursday, June 20, 2019

10:00 a.m. – 12:00 p.m.

The DRBC Water Management Advisory Committee (WMAC) was called to order by Preston Luitweiler, Committee Chair. Information pertaining to the WMAC, including member listing and past meeting materials, is available at http://www.nj.gov/drbc/about/advisory/WMAC_index.html

ADMINISTRATION

- The highlights of the February 21, 2019 meeting were approved and will be posted on the WMAC webpage.
- Membership: Preston Luitweiler (WRA) and Jan Bowers (Chester County Water Resources Authority) have been reappointed to the WMAC as the Water Resources Association and County Water Authority representatives, respectively, for 5-year terms expiring June 30, 2024. Three positions for Watershed Organization, Academia, and Recreation will expire June 30, 2020. These positions will be posted on the DRBC website in January 2020. Current members in those positions are welcome to apply for reappointment. Please see the DRBC website (<http://www.nj.gov/drbc/about/advisory/committee-openings.html>) for more information.
- The last WMAC meeting of 2019 will be on October 22. Meetings for 2020 will be scheduled at the October WMAC meeting.

HYDROLOGIC CONDITIONS REPORT

Amy Shallcross, DRBC Manager of Water Resource Operations, provided a report on basin-wide hydrologic conditions. Year-to-date, the basin has experienced higher than normal amounts of precipitation. Currently, the Upper Basin is more susceptible to flash flooding, with only 1.5 inches in 3 hours. Larger amounts of rain are required for flash flooding in the Lower Basin. Streamflow at the USGS gages in the DRB indicate flows are mostly normal or above normal. The combined New York City reservoir storage is 100% of usable capacity and Lower Basin storage pools in Beltzville, Blue Marsh, and Merrill Creek reservoirs are at 100%. Currently, the salt front is at River Mile (RM) 64 compared to a normal location at RM 69 for this time of year. As of June 2019, groundwater levels in the USGS monitoring wells indicate normal or above normal levels. The 3-month outlook from NOAA show that temperatures have a 50% to be above normal while precipitation is predicted to be normal in the Delaware River Basin region. The 2019 Atlantic Hurricane Season outlook predicts 9 to 15 named storms, of which 4 to 8 could become hurricanes and 2 to 4 major hurricanes.

Ms. Shallcross's presentation can be viewed at https://www.nj.gov/drbc/library/documents/WMAC/062019/shallcross_hydro-report.pdf. Weekly, monthly and annual hydrologic reports are archived at <http://www.nj.gov/drbc/hydrological/reports/>.

DRBC UPDATES

Chad Pindar, DRBC Manager of Water Resource Planning, provided an update on DRBC activities, upcoming advisory committee meetings, Commission actions, and other items of interest, among them:

- Governors' Leadership Summit was held on May 16 in Philadelphia.
- At the June 12 DRBC Business Meeting, the Commissioners approved 27 dockets and the FY2020 budget. The NY Commissioner is the new Chair of the Commission for the next term (July 1, 2019 to June 30, 2020). Public testimony included comments on the Penn East pipeline, status of natural gas regulations, and the Gibbstown Logistics Center.
- The 25th Delaware River Sojourn is from June 15-22.
- DRBC Advisory Committee meetings include: MACC-STAC on June 17; TAC on June 18; and SEF on June 19. The next WQAC will be in September.
- DRBC employment opportunities include: Deputy Executive Director (applications due by June 26, 2019) and Accounting/Benefits Specialist (applications due by June 28, 2019).
- On July 1, 2019, an annual rate adjustment of 1.86% on DRBC Regulatory Program Fees/Water Charges will take effect.
- The next DRBC Public Hearing will be on August 14.

Recent Commission Meeting materials can be accessed at <http://www.nj.gov/drbc/meetings/archive/recent-drbc-mtg.html>. Mr. Pindar's presentation can be viewed at https://www.nj.gov/drbc/library/documents/WMAC/062019/pindar_drbc-updates.pdf.

Jerry Kauffman (Director, University of Delaware Water Resources Center) asked about the status of DRBC's natural gas regulations and if the WMAC will be involved. Jerry expressed his concern that his 2011 study, [*Socioeconomic Value of the Delaware River Basin in Delaware, New Jersey, New York, and Pennsylvania*](#), which provides a potential dollar value for recovered natural gas from Marcellus Shale, has been referenced by both sides of the natural gas debate. A couple of bills have been introduced in the PA General Assembly proposing that if DRBC adopts a ban on high volume hydraulic fracturing, it would constitute a "taking" and would have to compensate landowners. DRBC staff declined to comment on the matter citing ongoing legal matters.

WATER USE UPDATE

Seung Ah Byun, Water Resource Engineer, presented an update of water use in the DRB. In 2016, total water withdrawals in the Basin were 6,565 mgd. Thermoelectric (3,792 mgd) was the largest water use sector, followed by Public Water Supply (1,003 mgd). Consumptive use and major basin exports totaled 969 mgd. Public Water Supply (100 mgd) accounted for about 1/3 of of total consumptive use (362 mgd). Trends for monthly water withdrawals for the 3 major water use sectors (Thermoelectric, Public Water Supply, and Industrial) in the Basin show that overall water use is decreasing over time.

In 2015, of over 7,000 withdrawal points in the Basin, approximately 5,600 are groundwater withdrawals. While there are about 1,500 surface water withdrawal points, surface water accounts for about 95% of the volume withdrawn (~6,000 mgd). Eighty percent of the surface water withdrawals are in the tidal portion of the Basin. Hydropower accounts for 303 mgd (27%) of the surface water volume withdrawn in the non-tidal portion of the Basin.

Additional comments from WMAC related to the Water Use Update included:

- Preston Luitweiler (WRA) suggested that DRBC staff add consumptive use trends for the 3 major water use sectors (Thermo, Public Water Supply, and Industrial) to the Water Use Update presentation.
- The Committee discussed the values that DRBC uses to estimate consumptive use. In 2018, DRBC staff found that our default values were comparable to those used by SRBC and found in the literature. DRBC staff presented these findings at the WMAC meeting on October 16, 2018. The presentation is available at https://www.nj.gov/drbc/library/documents/WMAC/10162018/ConsumptiveUseCoefficients_overview.pdf.
- Dan Goode (USGS) asked whether DRBC's groundwater withdrawal data includes self-supplied/private wells. DRBC does not currently include an estimate for self-supplied groundwater withdrawals.

Ms. Byun's presentation can be viewed at https://www.nj.gov/drbc/library/documents/WMAC/062019/byun_water-use.pdf.

WATER CONSERVATION

Chad Pindar discussed DRBC's water conservation initiatives, including:

- DRBC staff are preparing a Water Conservation Survey to better understand the current status of Public Water Supply management practices (i.e. metering; leak detection and repair; and water audits). DRBC is aiming to distribute the survey in 2020.
- DRBC staff are also working on a Water Audit Survey for 2020 to help shape the future of the Water Audit Program. This effort builds upon DRBC/PADEP's 3-part water loss training sessions from Fall 2018. The survey will be web-based and seeking a larger docket holder response than the survey conducted in 2015.
- DRBC's Water Audit Report is a bi-annual report that analyzes data from public water supply systems required to submit water audits to DRBC. Past reports have been developed for water audits from CY2012, 2014, and 2016. Rather than limiting the analysis to CY2018 water data, DRBC is looking to review trends since 2012.

Mr. Pindar's presentation can be viewed at https://www.nj.gov/drbc/library/documents/WMAC/062019/pindar_water-conservation.pdf.

GROUNDWATER MANAGEMENT

- Basin-wide Groundwater Withdrawals/Availability (Chad Pindar, DRBC)
 - In 2006, DRBC engaged USGS to investigate the groundwater availability in the Basin (see Sloto and Buxton, 2006). In this study, USGS estimated the 2, 5, 10, 25,

and 50-year annual baseflow recurrence intervals for 147 of the USGS-derived subwatersheds in the Basin. These baseflows were then used to determine groundwater availability as annual withdrawals and annual percent availability. DRBC determined basin-wide groundwater availability for 2016 using the USGS baseflow estimates. The 2016 data show that the Basin is in good shape in terms of groundwater availability given current water use.

Mr. Pindar's presentation can be viewed at

https://www.nj.gov/drbc/library/documents/WMAC/062019/pindar_groundwater.pdf.

- SEPA GWPA (Chad Pindar, DRBC)
 - DRBC, at the request of Pennsylvania, established the Southeastern Pennsylvania Groundwater Protected Area (SEPA GWPA). SEPA GWPA includes 76 subbasins in Montgomery, Berks, Bucks, and Chester County, PA and each subbasin has annual withdrawal limits. For 2016, the subbasins with groundwater withdrawals greater than 50% of availability include: Schuylkill- Crow Creek (171%), Perkiomen-Lodal Creeks (64%), Pine Run Basin (64%), North Branch Neshaminy Creek (63%), Newtown Creek (63%), Doylestown-Neshaminy Creek (63%), Upper Reach Wissahickon Creek (58%), Schuylkill-Trout Creek (53%), and Towamencin Creek (52%). The trend for groundwater withdrawals in SEPA GWPA shows reductions since 2000.
 - Jan Bowers (CCWRA) asked if DRBC and WMAC are comfortable using the baseflow analysis done by USGS for 2060 projections.
 - Jerry Kauffman (UDel) inquired about re-delineating the SEPA GWPA boundaries and possibly include Delaware? The process for expanding the GWPA can be found in DRBC's Ground Water Protected Area Regulations Southeastern Pennsylvania (Resolution No. 80-18), Section 6.I.
https://www.nj.gov/drbc/library/documents/gwpa_regs.pdf.
- New Jersey Critical Area 2 (NJ CA2) (Ian Snook, NJDEP)
 - NJ CA2 is located in the southwest portion of the state and includes the Potomac-Raritan-Magothy (PRM) aquifer. NJ CA2 consists of 2 areas the depleted zone and the threatened margin around the depleted zone. Critical Area Implementation started in 1991, which:
 - defined and delineated depleted zone and threatened margin of the CA aquifers;
 - ordered reductions in allocations (via reductions in pumping); and
 - phased in allocation reductions as alternate water sources became available.

PRM confined GW withdrawals have generally decreased since the NJ American Water Delran Intake and Tri-County pipeline came online in ~1998. NJ CA2 groundwater levels have been increasing since around 1993 with declining withdrawals coupled with conservation measures and regional water supply alternatives. Published water data is available at the NJGS website

<https://www.nj.gov/dep/njgs/geodata/dgs10-3.htm>.

Mr. Snook's presentation can be viewed at

https://www.nj.gov/drbc/library/documents/WMAC/062019/snook_NJcritical-area2.pdf.

- Real-time Groundwater Levels (John Yagecic, DRBC)

- John Yagecic has developed a script that downloads, processes, and plots real-time groundwater data from USGS for wells in SEPA GWPA and NJ CA2. The script pulls data from USGS National Water Information System (NWIS) (<https://waterdata.usgs.gov/nwis>). The plots for NJ Critical Area 2 can be found at <https://www.drbc.net/Sky/nj2.htm> and for SEPA-GWPA at <https://www.drbc.net/Sky/sepagwpa.htm>. The script is available if anyone is interested and can be modified for other wells. Mr. Yagecic's presentation can be viewed at https://www.nj.gov/drbc/library/documents/WMAC/062019/yagecic_GWplots.pdf.
- Dan Goode suggested reporting 1-year trends geospatially. DRBC is considering adding these trends for SEPA GWPA for the next Water Resources Program.
- **Action Item:** Amy Shallcross (DRBC), Jerry Kauffman, Dan Goode, and Jan Bowers will hold a conference call to discuss topics related to groundwater management before the next WMAC meeting.

STATE OF THE BASIN UPDATE

Seung Ah Byun, Water Resource Engineer, presented an update of DRBC's State of the Basin Report. The report is published every 5 years, as required by Resolution 2004-BP (the resolution adopting the 2004 Water Resources Plan for the DRB). The report includes indicators related to the following topics: Watersheds and Landscapes, Water Quantity, Water Quality, and Living Resources. The State of the Basin Report is scheduled to be released sometime in late summer of 2019.

Ms. Byun's presentation can be viewed at https://www.nj.gov/drbc/library/documents/WMAC/062019/byun_sotb2019.pdf.

STATE OF OUR BASIN

[This topic was not discussed at the meeting due to time constraints]

ROUNDTABLE

Updates by WMAC Members

- Dan Goode (USGS) has been working with the U.S. Navy on PFAS issues in the Warminster, PA area.
- Jan Bowers (Chester County Water Resource Authority) – PA USGS has a new Director, Melinda Chapman; CCWRA is ramping up to start an update of Watersheds, Act 167, and County-wide Chesapeake Bay plans.

The meeting was adjourned at 12:25 pm by Chair Preston Luitweiler.

WMAC Meeting Attendance – June 20, 2019			
SECTOR	WMAC MEMBER/ ALTERNATE	REPRESENTING	ATTENDANCE
Delaware	Steven Smailer Bill Cocke (A) Allison Diggins	DE DNREC	- GoToMeeting -
New Jersey	Andy MacDonald Jeff Hoffman	NJ DEP NJDEP-NJGS	Present -
New York	Erik Schmitt (A)	NY DEC	-
Pennsylvania	Hoss Liaghiat Dave Gordner (A) Mike Hill	PADEP	GoToMeeting - -
US Army Corps of Engineers	Laura Bittner	Phila. District	GoToMeeting
US Env. Protection Agency	Katie Lynch	Drinking Water Protection	-
US Geological Survey	Dan Goode Curtis Scheffler (A)	Water Science Center	Present -
City of New York	Dana Olivio	NYC DEP	GoToMeeting
City of Philadelphia	Kelly Anderson Hesson, Molly (A)	Phila. Water Dept.	GoToMeeting -
County Water Agency	Jan Bowers	Chester Co. WR Authority	Present
Water Resource Association	Preston Luitweiler (C)	WRA of the DRB	Present
Industry	Jim Mershon	Merrill Creek Owners Group	-
Water Utility	John Thaeber (V) Virginia Eisenbrey (A)	Artesian Water	GoToMeeting GoToMeeting
Agriculture	Sandra Howland	NJ Dept. of Agriculture	-
Civic	Jill Greene	PA League of Women Voters	-
Environmental Organization	Mary Ellen Noble	Delaware Riverkeeper Network	Present
Watershed Organization	Golod, Pete	Upper Delaware Council	GoToMeeting
Academia	Jerry Kauffman Andrew Homsey (A) Martha Narvaez	University of Delaware	Present Present -
Recreation	Ann Pilcher	Pocono Mts. Visitors Bureau	-
Fisheries	Sheila Eyler	US F&W Service	-
<i>(A) indicates Alternate (C) indicates Chairperson (V) indicates Vice Chairperson</i>			
DRBC STAFF	Byun, SeungAh	WMAC Liaison	
	Eschbach, Peter	External Affairs and Communications	
	Kwityn, Evan	Water Resource Planning	
	Pindar, Chad	Water Resource Planning	
	Shallcross, Amy	Water Resource Operations	
	Thompson, Michael	Water Resource Planning	
	Yagecic, John	Water Quality Assessment	
	Zola, Justine	Water Resource Planning	
GUESTS	Meg McGuire	Delaware Currents	
	Ian Snook	NJDEP – DWSG	
	Barbara Ware	NJDEP – Water Allocation	

Approved: October 22, 2019