

SEPA Groundwater Protected Area Subbasin Assessment – Areas of Change

Kent Barr – Water Resource Planner

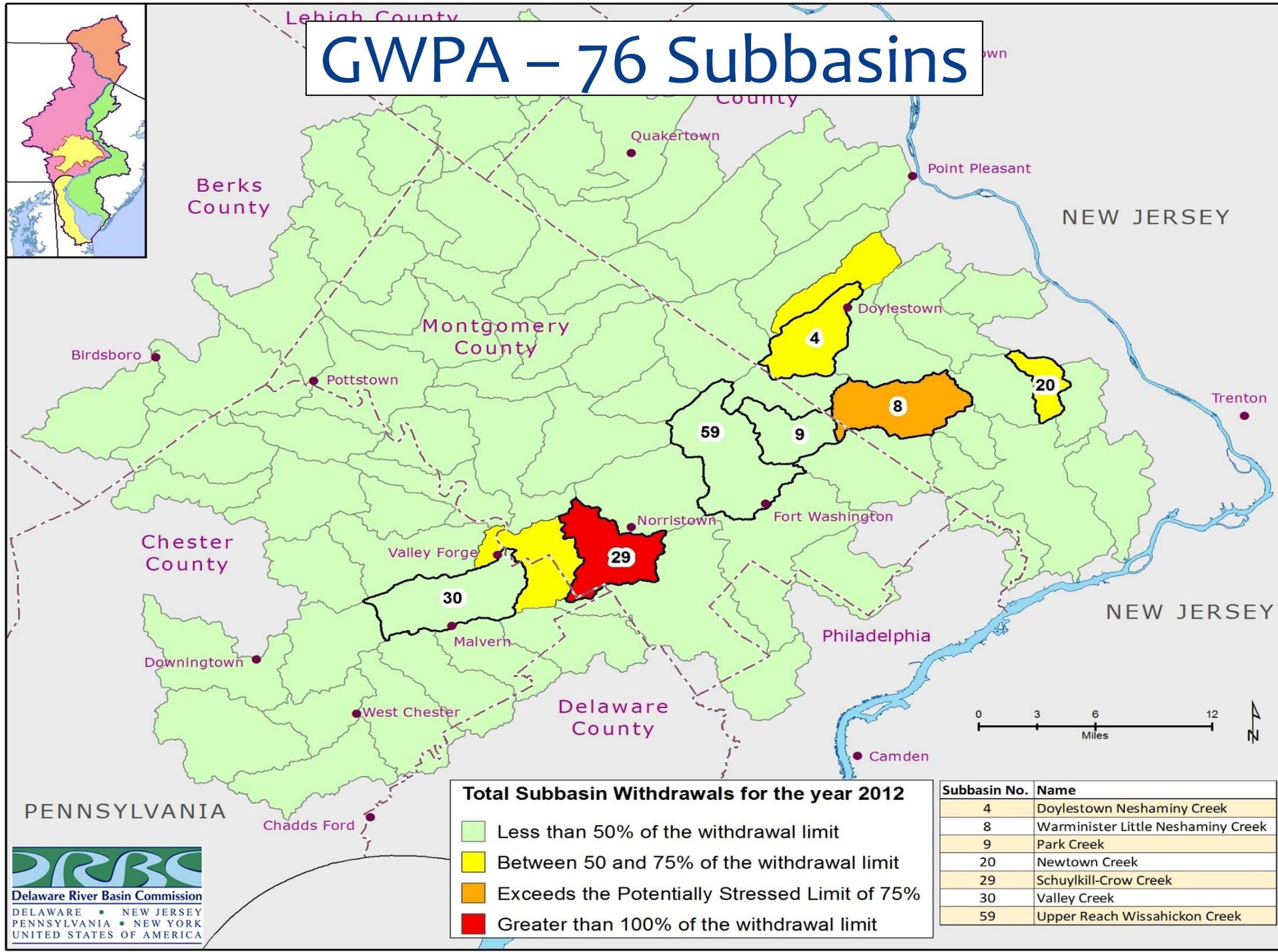
**Water Management Advisory
Committee**

February 18, 2016



Parker, Michael. Photo of Perkiomen Creek in Perkiomenville, Pennsylvania. Digital image. Wikipedia, 17 Oct. 2006. Web. 17 Feb. 2016. <https://en.wikipedia.org/wiki/File:Perkiomen_Creek.jpg>.

GWPA – 76 Subbasins



Total Subbasin Withdrawals for the year 2012

- Less than 50% of the withdrawal limit
- Between 50 and 75% of the withdrawal limit
- Exceeds the Potentially Stressed Limit of 75%
- Greater than 100% of the withdrawal limit

Subbasin No.	Name
4	Doylestown Neshaminy Creek
8	Warminster Little Neshaminy Creek
9	Park Creek
20	Newtown Creek
29	Schuylkill-Crow Creek
30	Valley Creek
59	Upper Reach Wissahickon Creek



7 Subbasins for Further Analysis

Subbasin Name	Subbasin No.	Subbasin Area (Square Miles)	Subbasin Withdrawal Limit (MGY)	2003		2008		2012	
				Total Withdrawal (MGY)	Total Withdrawal (%)	Total Withdrawal (MGY)	Total Withdrawal (%)	Total Withdrawal (MGY)	Total Withdrawal (%)
Doylestown Neshaminy Creek	4	15	948	1,012	107	1,190	125	491	52
Warminster Little Neshaminy Creek	8	20	1,355	1,231	91	1,348	100	1,288	95
Park Creek	9	12	778	608	78	496	64	376	48
Newtown Creek	20	6	397	377	95	296	75	210	71
Schuylkill-Crow Creek	29	18	1,543	3,338	216	2,560	166	2,414	156
Valley Creek	30	23	2,486	2,549	103	370	15	301	12
Upper Reach Wissahickon Creek	59	27	1,736	923	53	944	54	720	41

Primary Drivers of Change

- * Conjunctive use
 - * Forest Park (Point Pleasant Pump) – Delaware River SWWD
 - * PA American Yardley – Delaware River SWWD
- * Quarry Withdrawals
- * Facility Closures
- * Data Categorization



Hanauer, David. Lake Galena. Digital image. David's Photographic Tour of Bucks County, Pennsylvania. N.p., n.d. Web. 16 Feb. 2016. <<http://www.davidhanauer.com/buckscounty/newbritain/index.html>>.

Southeastern Pennsylvania Groundwater Protected Area Subbasin Groundwater Use Information

Doylestown Neshaminy Creek: Subbasin #4 –

- * Eureka Stone Quarry Well No. 2 is not in operation, overall groundwater use in the quarry has declined.

Warminster Little Neshaminy Creek: Subbasin #8

- * Warminster MA withdrawals have declined due to conjunctive use through an interconnection with North Wales Water Authority (Forest Park).

Park Creek: Subbasin #9 –

- * Willow Grove Naval Air Station closed.
- * Horsham Water and Sewer Authority withdrawals have declined due to conjunctive use through an interconnection with North Penn Water Authority (Forest Park).
- * Glasgow Spring House Quarry has stopped withdrawing groundwater or reporting their withdrawals to the PADEP.

Southeastern Pennsylvania Groundwater Protected Area Subbasin Groundwater Use Information

Newtown Creek: Subbasin #20

- * H Stanford Roberts Nursey closed.
- * Newtown Artesian Water Company withdrawals have declined due to conjunctive use through interconnections
 - * BCWSA (Forest Park)
 - * PAWC (Yardley System)

Schuylkill-Crow Creek: Subbasin #29 –

- * Aqua PA's Upper Merion Reservoir withdrawal is designated as groundwater by PADEP.
- * DRBC's active approval dating back to the 1960's considered this source SW.
- * For the purpose of estimating subbasin water use DRBC is considering this GW.

Southeastern Pennsylvania Groundwater Protected Area Subbasin Groundwater Use Information

Valley Creek: Subbasin #30 –

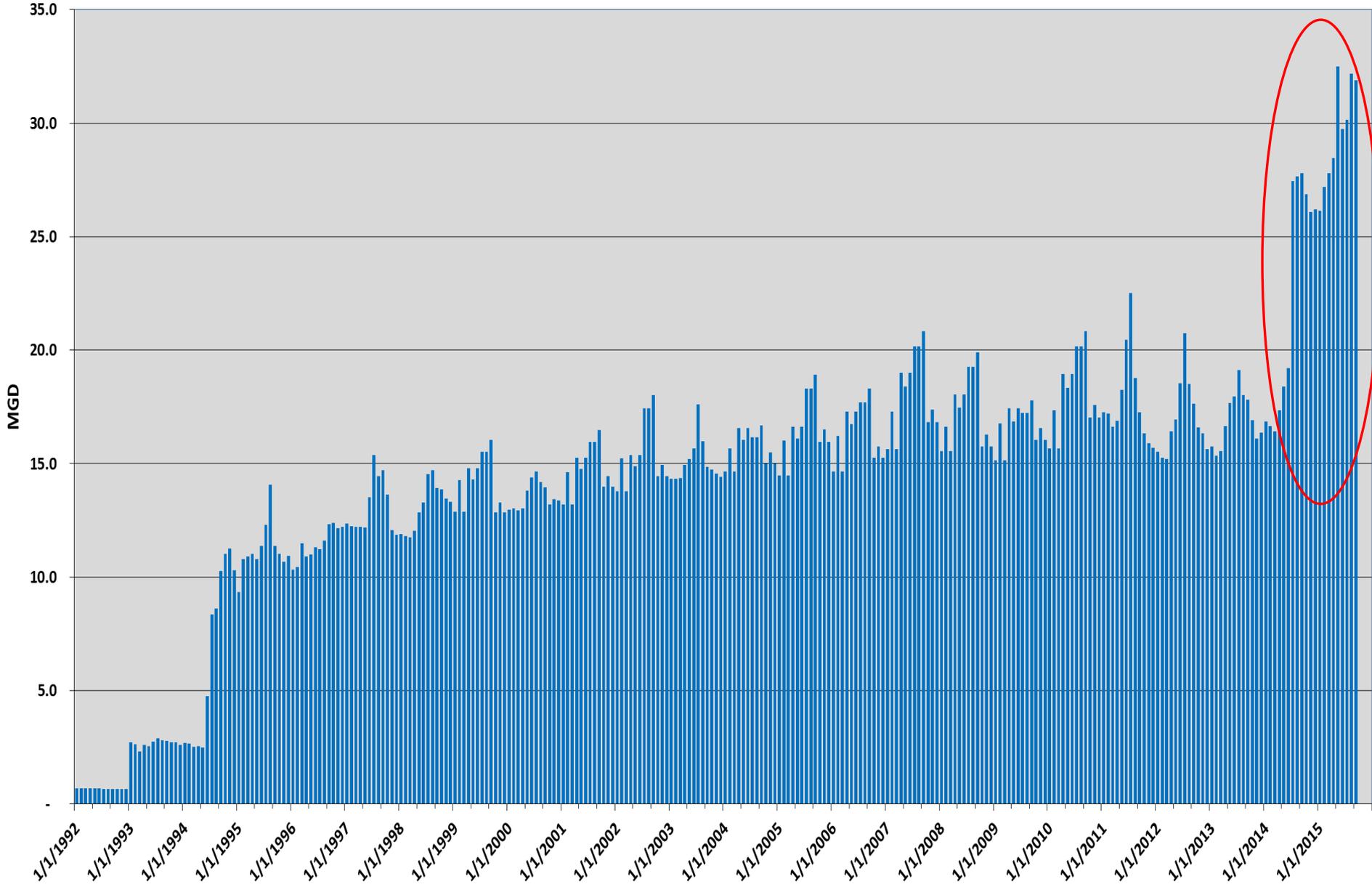
- * Cedar Hollow Quarry closed.
- * Glasgow Catanach Quarry, stopped withdrawing groundwater or reporting their withdrawals to the PADEP in 2003.

Upper Reach Wissahickon Creek: Subbasin #59

- * North Penn Water Authority and North Wales Water Authority (co-owners of Forest Park) stopped using eight (8) wells in this subbasin due to surface water availability.

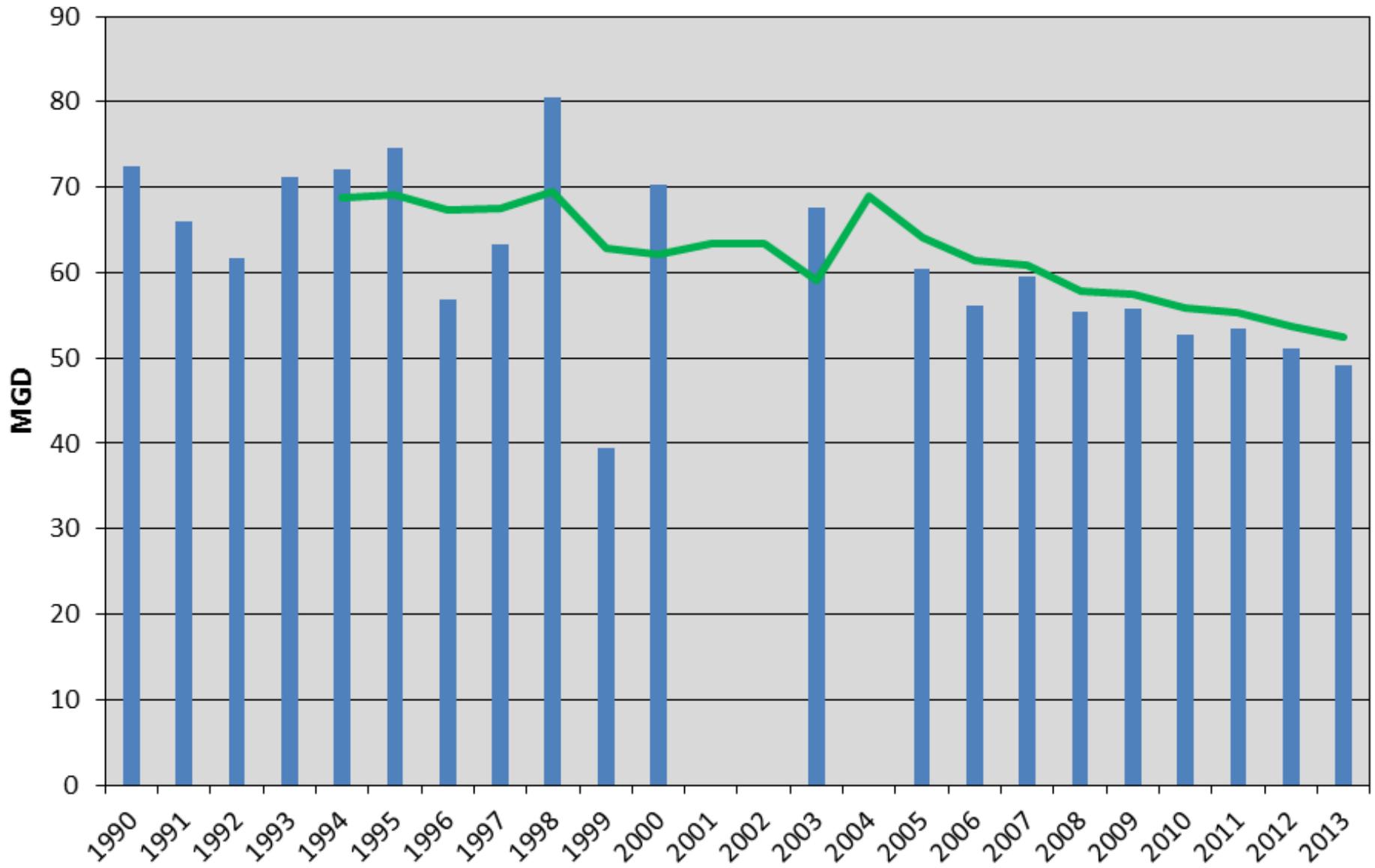
Forest Park Water : Neshaminy Creek Intake - Monthly Withdrawals (MGD)

D-1965-076 CP-11 allocates 40 MGD from the Neshaminy Creek intake with a max of 39.5 MGD coming from the Delaware River and 0.5 MGD coming from the Neshaminy Creek drainage area.

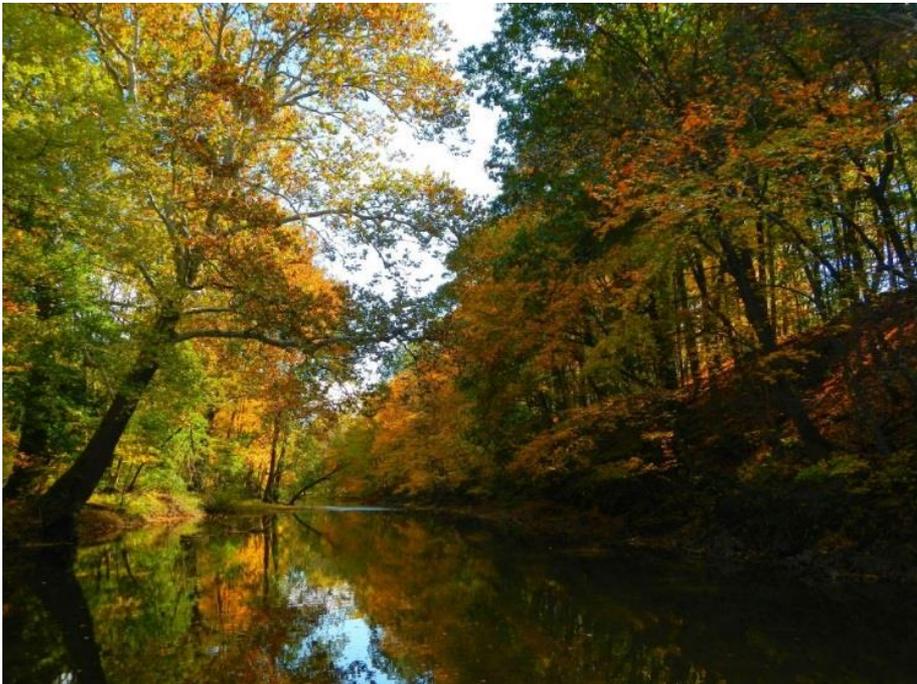


GWPA Total GW Withdrawals

■ Total GWPA Reported GW Withdrawal — 5 per. Mov. Avg. (Total GWPA Reported GW Withdrawal)



Summary



Neshaminy-ROY-2015. Digital image. <http://www.heritageconservancy.org/>. Heritage Conservancy, n.d. Web. 16 Feb. 2016. <<http://www.heritageconservancy.org/heritage-conservancy-seeks-help-from-community-to-vote-for-neshaminy-creek-as-pa-river-of-the-year/>>.

- * Total GWPA GW withdrawals declining
- * Majority of subbasins withdrawing below 50% of limit
- * Use reporting and withdrawal data has improved
- * Conjunctive use primary driver for GW declines
 - * Mainstem Delaware – most drought resilient Basin source

Questions?

