New Jersey Department of Environmental Protection
Division of Water Monitoring and Standards
Bureau of Environmental Analysis, Restoration and Standards

2012 New Jersey Integrated Report
Decisions to Not List Assessment Unit/Pollutant Combinations on the 2012 303(d) List of Water Quality Limited Waters
July 2014

The 2012 Integrated Water Quality Monitoring and Assessment Methods (Methods Document) explains the scientific methods used to assess water quality data, including compliance with applicable surface water quality standards and criteria, and status and spatial extent of designated use support. The Methods Document also explains the rationale for the placement on the 303(d) List of Water Quality Limited Waters (303(d) List), as well as decisions to not list. This document provides the justification for the Department's decision to not list the following assessment unit/pollutant combinations.

I. Section 4.1 of the 2012 Methods Document states that any samples that do not comply with the applicable numeric Surface Water Quality Standards (SWQS) criteria are considered excursions and are further reviewed by the Department to determine if the excursions are within the **margin of error** of the analytical method or can be attributed to **natural conditions, transient events**, or flow conditions that do not represent design flows. Such decisions are explained in Sections A through C below.

A. Margin of Error

Assessment Unit (AU)	AU Name	Station	Pollutant	Reason for Not Listing
NJ02020007010010-01	Wallkill R / Lake Mohawk(above Sparta Sta)	01367625	TP	Three of 20 samples were above applicable SWQS. Two of the excursions (12/03/08, 08/25/10) were within the margin of error of the analytical method. AMNET data at Station AN0297 show biology is not impaired.
NJ02030103120070-01	Passaic R Lwr (Fair Lawn Ave to Goffle)	NJHDG-3	pH	Two of 41 samples were above applicable SWQS. One of the excursions (07/12/10) was within the margin of error of the analytical method.

NJ02030103120080-01	Passaic R Lwr (Dundee Dam to F.L. Ave)	NJHDG-4	pH	Three of 39 samples were above applicable SWQS. Two of the excursions (07/13/10, 06/22/10) were within the margin of error of the analytical method.
NJ02030103120110-01	Passaic R Lwr (Goeffle Bk to Pump stn)	NJHDG-2	pH	Two of 40 samples were above applicable SWQS. Both excursions (07/12/2010, 06/07/10) were within the margin of error of the analytical method.
NJ02030103150030-01	Passaic R Lwr (Second R to Saddle R)	NJHDG-7	pH	Three of 40 samples were above applicable SWQS. All three excursions (07/13/10, 06/22/10, and 06/09/10) were within the margin of error of the analytical method.
NJ02030104020030-01	Elizabeth R (below Elizabeth CORP BDY)	NJHDG-20	pH	Two of 22 samples were above the applicable SWQS. One of the excursions was within the margin of error of the analytical method.
NJ02030105120140-01	Raritan R Lwr (I-287 Piscatway-Millstone)	01403300	pH	Two of 110 samples were above the applicable SWQS. One of the excursions was within the margin of error of the analytical method.
NJ02040202030060-01	Pole Bridge Branch (CountryLk dam - Co line)	GPOWHITE	pH	Two of six samples were above the applicable SWQS; however, one of the two excursions was within the margin of error of the analytical method.
NJ02040301020050-01	Metedeconk R NB (confluence to Rt 9)	NA	pH	Four of 141 samples were above the applicable SWQS. Three of the excursions were within the margin of error of the analytical method. (The fourth excursion was due to a transient storm event (07/05/10 - 07/08/10).)
NJ02040301030050-01	Metedeconk R SB (confluence to Rt 9)	SA	pH	Four of 137 samples were above the applicable SWQS. Three of the excursions were within the margin of error of the analytical method. (The fourth excursion was due to a transient storm event (07/05/10 - 07/08/10).)

NJ02040301040020-01	Metedeconk R (Beaverdam Ck to confl)	INTAKE	pH	Six of 139 samples were above the applicable SWQS. Five of the excursions were within the margin of error of the analytical method. (The sixth excursion was due to a transient storm event (07/05/10 - 07/08/10).)

B. Natural Conditions – Conventional Parameters

Assessment Unit (AU)	AU Name	Station	Pollutant	Reason for Not Listing
NJ02040201050070-01	Crosswicks Ck (Doctors Ck-Ellisdale trib)	01464504	pH	New data at Station 01464504 show four of nine samples exceed the pH criteria for South Jersey waters; however, this station is tidally influenced by the Delaware River, which causes the pH to be naturally higher. AMNET results show biology at Stations AN0125 and AN0126b is good. Data from upstread AUs show that pH meets applicable WQS and there are no identified anthropogenic sources of high pH.
NJ02040206100040-01	Cedar Creek (above Rt 553)	01412250	pH	New data at Station 0142250 show five of 20 samples exceed the South Jersey criterion for pH but meet the FW2 criterion. This station is tidally influenced by the Delaware Bay, which causes the pH to be naturally higher. Data at Lummis Lake and Cedar Lake meet the applicable pH criterion. Data from upstread AUs show that pH meets applicable WQS and there are no identified anthropogenic sources of high pH.

C. Transient Events:

Chloride and/or Total Dissolved Solids (TDS) were not listed for the following AUs because excursions of the applicable WQS were due to **transient events**. Episodic excursions of criteria can occur during storm events that are short term and not expected to impair the designated uses of the waterbody (and are not conducive to a Total Maximum Daily Load (TMDL)), such as emergency road salting in preparation for winter storms. In the assessment process, when excursions were observed and considered atypical

within the data set under review, the Department reviewed the last five years of data and determined that the occurrences were episodic based on weather data from the Office of the New Jersey State Climatologist Web site at http://climate.rutgers.edu/stateclim/. Snow totals are posted on this web site for events where at least one station in NJ reports 2 or more inches of snow…"Storm" indicates that the report includes snowfall for the entire event. Where time is listed, it is uncertain whether these are storm totals or incomplete snowfall reports." The dates given do not indicate when the storm event began or was predicted to begin. Many public works departments begin applying road salt as a precautionary measure when severe conditions are anticipated and/or may commence prior to snowfalls accumulating the two inches required to be noted as a "storm". Dates given also do not reflect winter storm conditions that alternate from rain, snow, and freezing rain, throughout which road salting may occur without the event being recorded as a "storm". Elevated Chloride and TDS records that coincided with residual effects of winter road treatments are shown in the table below.

Assessment Unit (AU)	**AU Name**	**Pollutant**	Station	**Sample Date**	**Storm Date**
NJ02030103020050-01	Whippany R (Malapardis to Lk Pocahontas)	Chloride, TDS	01381515	02/05/09	01/27/009-01/28/09; 02/03/09-02/04/09
NJ02030103020050-01	Whippany R (Malapardis to Lk Pocahontas)	Chloride, TDS	01381515	02/24/10	02/09/10-02/10/10; 02/15/10; 02/23-02/24/10; 02/25/10-02/26/10
NJ02030103040010-01	Passaic R Upr (Pompton R to Pine Bk)	TDS	01382000	02/24/10	02/09/10-02/10/10; 02/15/10; 02/23-02/24/10; 02/25/10-02/26/10
NJ02030103120110-01	Passaic R Lwr (Goeffle Bk to Pump stn)	TDS	01389500	02/24/10	02/09/10-02/10/10; 02/15/10; 02/23-02/24/10; 02/25/10-02/26/10
NJ02030103140060-01	Saddle River (Lodi gage to Rt 4)	Chloride	01391500	03/04/10	02/09/10-02/10/10; 02/15/10; 02/23-02/24/10; 02/25/10-02/26/10
NJ02030103150020-01	Second River	TSS*	NJHDG-9	07/14/10	07/14/10
NJ02030103170010-01	Pascack Brook (above Westwood gage)	Chloride	01377358	02/16/06	02/11/06-02/12/06
NJ02030103170010-01	Pascack Brook (above Westwood gage)	Chloride	01377358	03/02/09	03/01/09-03/02/09
NJ02030103170010-01	Pascack Brook (above Westwood gage)	Chloride, TDS	01377358	02/16/10	02/09/10-02/10/10; 2/15/2010

NJ02030103180010-01	Coles Brook / Van Saun Mill Brook	Chloride	01378560	02/27/07	02/13/07-02/14/07, 02/25/07-02/26/07
NJ02030103180010-01	Coles Brook / Van Saun Mill Brook	Chloride	01378560	02/02/09	01/27/009-01/28/09; 02/03/09-02/04/09
NJ02030103180010-01	Coles Brook / Van Saun Mill Brook	Chloride	01378560	02/04/10	02/02/10-02/03/10; 02/09/10-02/10/10
NJ02030104030010-01	Morses Creek/Piles Creek	Chloride	01393690	02/14/06	02/11/06-02/12/06
NJ02030104030010-01	Morses Creek/Piles Creek	Chloride	01393690	03/05/09	03/01/09-03/02/09
NJ02030104050020-01	Rahway River EB	TDS	01394500	02/23/10	02/09/10-02/10/10; 02/15/10; 02/23-02/24/10; 02/25/10-02/26/10
NJ02030104050040-01	Rahway R (Kenilworth Blvd to EB / WB)	Chloride	01394500	02/23/10	02/09/10-02/10/10; 02/15/10; 02/23-02/24/10; 02/25/10-02/26/10
NJ02030104050040-01	Rahway R (Kenilworth Blvd to EB / WB)	TDS	01394500	02/23/10	02/09/10-02/10/10; 02/15/10; 02/23-02/24/10; 02/25/10-02/26/10
NJ02030104050060-01	Rahway River (Robinsons Br to KenilworthBlvd)	TDS	01395000	02/03/09	01/27/009-01/28/09; 02/03/09-02/04/09
NJ02030104050060-01	Rahway River (Robinsons Br to KenilworthBlvd)	TDS**	01395000	02/01/10	02/02/10-02/03/10; 02/05/10-02/06/10
NJ02030105100130-01	Bear Brook (below Trenton Road)	Chloride	01400775	03/05/09	03/01/09-03/02/09
NJ02030105100130-01	Bear Brook (below Trenton Road)	Chloride	01400775	02/23/10	02/09/10-02/10/10; 02/15/10; 02/23-02/24/10; 02/25/10-02/26/10
NJ02030105110010-01	Heathcote Brook	Chloride, TDS	01401400	02/05/09	01/27/009-01/28/09; 02/03/09-02/04/09
NJ02030105110010-01	Heathcote Brook	Chloride, TDS	01401400	02/08/10	02/02/10-02/03/10; 02/05/10-02/06/10; 02/09/10-02/10/10
NJ02030105120100-01	Bound Brook (below fork at 74d 25m 15s)	TDS	01403385	02/10/09	02/03/09-02/04/09

*Summer storm event (see http://www.nj.com/news/index.ssf/2010/07/flash_flood_warning_issued_for_1.html).

** Sample collected one day prior to the storm event on 2/3/2010; however, this sample was collected in the midst of a series of significant storm events that began on 1/28/2010 with an accumulation of 1-1.9 inches of snow in Essex County, followed by significant accumulation in South Jersey two days later, another 1.8-2.7 inches in Essex County the day after the sample was collected and another massive accumulation in South Jersey a few days after that. Therefore, the sample is considered an excursion attributed to precautionary road salting occurred preceding/during a transient storm event.

II. Section 4.1 of the 2012 Methods Document also states that when censored values exceed 50 percent of the data, the Department will consider the dataset insufficient to determine if the criterion has been exceeded. Censored data are reported values that are less than the minimum reporting level of an analytical procedure. Arsenic in the following AUs was not placed on the 2012 303(d) List because all censored values comprised 50% or more of the readily available data.

Assessment Unit	AU Name	Station ID	Reason for Not Listing
02030103020100-01	Whippany R (Rockaway R to Malapardis Bk)	6-whi-2	More than 50% censored data
02030103030170-01	Rockaway R (Passaic R to Boonton dam)	6-ROC-1, 6-SITE-10	More than 50% censored data
02030103050060-01	Pequannock R (Macopin gage to Charl'brg)	3-PEQ-1, 3-SITE-8	All samples are non-detect
02030103070040-01	West Brook/Burnt Meadow Brook	01386000	More than 50% censored data
02030103100010-01	Ramapo R (above 74d 11m 00s)	3-RAM-1, 3-SITE-9	More than 50% censored data
02030103110020-01	Pompton River	3-site-7	More than 50% censored data
02030104020020-01	Elizabeth R (Elizabeth CORP BDY to I-78)	7-ELI-1, 7-wbe-1	More than 50% censored data
02030104050090-01	Rahway River SB	7-sbr-1	More than 50% censored data
02030104070040-01	Yellow Brook (above Bucks Mill)	12-yel-1	More than 50% censored data
02030104100030-01	Manasquan R (West Farms Rd to Rt 9)	12-MA-1, 12-MA-2, 12-MA-3	All samples are non detect
02030104100050-01	Manasquan R (gage to West Farms Rd)	01407900	More than 50% censored data
02030105010020-01	Drakes Brook (below Eyland Ave)	01396180	More than 50% censored data
02030105010060-01	Raritan R SB (Califon br to Long Valley)	8-sb-1	All samples are non detect
02030105010080-01	Raritan R SB (Spruce Run-StoneMill gage)	8-sb-2	All samples are non detect

02030105020010-01	Spruce Run (above Glen Gardner)	01396550	More than 50% censored data
02030105020020-01	Spruce Run (Reservior to Glen Gardner)	8-sp-2	More than 50% censored data
02030105020030-01	Mulhockaway Creek	8-mu-1	More than 50% censored data
02030105020070-01	Raritan R SB (River Rd to Spruce Run)	SB1	More than 50% censored data
02030105020100-01	Raritan R SB (Three Bridges-Prescott Bk)	8-sb-4	All samples are non detect
02030105060090-01	Raritan R NB (Lamington R to Mine Bk)	8-nb-2	All samples are non detect
02030105090030-01	Stony Bk (Baldwins Ck to 74d 48m 10s)	10-sto-3	All samples are non detect
02030105110170-01	Millstone R (below Amwell Rd)	10-mil-3	More than 50% censored data
02030105140020-01	Manalapan Brook (incl LkManlpn to 40d16m15s)	9-man-1	More than 50% censored data
02040105150090-01	Mine Brook (Morris Co)	01456074, 01456077	More than 50% censored data
02040105170060-01	Kingwood Twp(Warford-Little Nishisakawk)	01458710	More than 50% censored data
02040206080040-01	Cohansey R (incl Beebe Run to HandsPond)	17-COH-1	More than 50% censored data
02040206210020-01	West Ck (above Rt 550)	01411444	More than 50% censored data
02040301030020-01	Metedeconk R SB (74d19m15s to I-195 X21)	SK	More than 50% censored data
02040301060080-01	Toms River (Oak Ridge Parkway to Rt 70)	13-tom-1	All samples are non-detect
02040301090010-01	Webbs Mill Branch	01408800	More than 50% censored data
02040301140020-01	Mill Branch (below GS Parkway)	01409305	More than 50% censored data
02040301150080-01	Batsto River (Batsto gage to Quaker Bridge)	14-bat-1	More than 50% censored data
02040301160030-01	Mullica River (Rt 206 to Jackson Road)	14-mul-2	More than 50% censored data
02040301180070-01	Oswego River (below Andrews Road)	14-osw-1	More than 50% censored data

02040302020020-01	Absecon Creek SB	01410455	More than 50% censored data
02040302030020-01	GEHR (AC Expressway to New Freedom Rd)	15-geh-1	All samples are non-detect
02040302030080-01	GEHR (Hospitality Br to Piney Hollow Rd)	15-geh-2	All samples are non-detect
02040302040090-01	GEHR (Rt 322 to 39d32m50s)	15-geh-3	More than 50% censored data

III. Section 5.0 of the 2012 Methods Document states that where monitoring station data is inconclusive, insufficient, or inconsistent, the Department may take other factors into consideration and use **Best Professional Judgment** (BPJ) to determine if the weight of evidence collectively demonstrates full support or non-support of the designated use. The following AU/pollutant combinations were not placed on the 2012 303(d) List based on such BPJ decisions, as explained below.

Assessment Unit (AU)	AU Name	Station	Pollutant	Reason for Not Listing
NJ02030104100080-01	Manasquan R (74d07m30s to Squankum gage)	AN0496	Cause Unknown	AMNET results show biology changed from excellent to good at Station AN0497 and from good to poor at Station AN0496. However, AN0497 is more representative of the AU since it is located downstream on the main stem and AN0496 is located on a small tributary.
NJ02040105160020-01	Musconetcong R (Changewater to HancesBk)	GDD5/ SDD5	pH	New data at Station GDD5/SDD5 show four of nine samples exceed the pH criterion; however, nearby stations upstream and downstream do not show impairment. Station 01456200 shows only 1 of 32 samples exceed the FW2 criterion. All 9 samples at downstream Station 01456590 meet the FW2 criterion. Data from upstream Stations GDD2/ SDD2, GDD3/SDD3 and GDD4/SDD4 each show only 1 of nine samples exceed criteria – all on the same day (08/14/08). Samples were all near the high end of the pH criterion range but reflect natural conditions because the Musconetcong River is influenced by underlying limestone geology that causes pH to be naturally higher than other North Jersey waters.

NJ02040202110050-01	Cooper River (Rt 130 to Wallworth gage)	Cooper River near mouth	TSS	New data at Station Cooper River near mouth show two of eight samples exceed the FW2-NT criterion for TSS; however, this station is tidally influenced and not representative of the AU. Stations 01467150, 01467191, and Cooper River at Cuthbert meet the applicable WQS for TSS and are more representative of this AU.
NJ02040301030020-01	Metedeconk R SB (74d19m15s to I-195 X21)	SK	DO	New data at Brick Township MUA Station SK show four of 16 samples exceed the FW2 criterion for DO; however, Station SK is located at the outlet of a lake. All 19 samples at upstream station SL and 18 of 19 samples at downstream station SI meet the DO criterion. AMNET results show biology at Station AN0509 improved from fair to good.
NJ02040301060080-01	Toms River (Oak Ridge Parkway to Rt 70)	AN0524	Cause Unknown	AMNET results at Station AN0524 show biology changed from excellent to fair (CPMI); however, sensitive species, including clams and anthropods, were observed. Therefore, this sample is inconclusive regarding the overall biological condition of the AU and is insufficient to support a new listing.
NJ02040105050040-01	Yards Creek	01443890	Temperature	Diurnal data at Station 01443890 exceed the Temperature criterion for trout production waters; however, this station is located below the dam of Lower Yards Creek Reservoir, a non-trout lake, and is not representative of trout waters.
NJ02040301170060-01	Mullica River (Rt 563 to Batsto River)	01409525	DO	New data at Station 01409525 show three of seven samples exceed the DO criterion; however, AMNET results at co-located Station AN0589 show biology is excellent, indicating that DO conditions at this station are naturally-occurring or the data is inconclusive. Both stations are located on a small tributary to the mainstem Mullica and are not representative of overall water quality in this AU. Data from Station R27, which is located downstream on the mainstem Mullica, meet the applicable WQS and are more representative of overall water quality.