

# Introduction to Predictive Capabilities of the NPDES Early Warning SNC Dashboard

Presented by Katherine Green, EPA Region 2  
EPA-State SNC National Compliance Initiative Symposium 2  
January 22, 2020 – Dallas, TX

# Presentation Overview

- Early Warning features of the SNC Dashboard as they relate to *Effluent SNC*
- How facilities at risk of effluent SNC are displayed in the app
- Possibilities for enhanced notifications and compliance assistance

(Coming Friday: Accessing the dashboard, dashboard orientation, and walkthroughs on realtime data downloads, violation drilldowns, and identifying old SNC)

# Dashboard “Early Warning” Features

- Identifies violation statuses for the current official quarter, current unofficial quarter and in *realtime* – i.e., what will happen if nothing changes by the end of the current quarter
- Identifies facilities at risk of SNC *before* they first show up as SNC on either an unofficial or official RNC run – i.e., before it is too late to prevent them from being in SNC
- Lists effluent exceedances for facilities that are a single exceedance away from SNC at a time when SNC may still be preventable (**Realtime Status: Warning**)



Facility Name & Permit	Official Status Sep-19	Unoff. Status Dec-19	Realtime Status Mar-20	Current Unres. Vios	1st Vio. Det. Date	Last Vio Det. Date	SNC Parameters	Missing DMRs	ST
<b>Totals</b>				<b>20,189</b>	<b>8/31/91</b>	<b>1/13/20</b>			
Marlboro Psychiatric Hospital (NJ0022586 - Major)	S - Schedule Violations	S - Schedule Violations	S - Sch. Event	164	10/27/18	11/26/19	00665 - 1 - Phosphorus, total (as P)		NJ
Salt Storage Facility - Troy (NY0260843 - Minor)	X - Effluent Non-monthly Avg	X - Effluent Non-monthly Avg	Warning	11	9/30/18	1/13/20	00720 - 1 - Cyanide, total (as CN)		NY
Watertown (T) Sd#1 (NY0099091 - Minor)	X - Effluent Non-monthly Avg	X - Effluent Non-monthly Avg	No SNC	5	9/30/18	9/30/19	00310 - 1 - BOD, 5-day, 20 deg. C		NY
The Reef Associates (VI0040878 - Minor)	R - Resolved	V - Other Violation	DMR NR	3	8/31/18	12/31/19		2018-11	VI
Carambola Utilities Services, Inc. (Cusi) (VI0050334 - Minor)	E - Effluent Monthly Avg	E - Effluent Monthly Avg	No SNC	14	7/31/18	8/31/19	00310 - 1 - BOD, 5-day, 20 deg. C		VI
Bedford Park Apts@Westchester WWTP (NY0033596 - )	D - DMR Not Received	D - DMR Not Received	DMR NR	73	7/29/18	12/29/19		2018-05; 2018-06; 2018-07;	NY
Taconic Ddso (NY0098868 - Minor)	E - Effluent Monthly Avg	E - Effluent Monthly Avg	Warning	31	7/29/18	8/31/19	00530 - 1 - Solids, total suspended		NY

Violation Filters

Violation Lead Agency

Violation Type

SNC Flag

Export Facility Status Table

Facility Filters

Region

State

POTW Flag

Permitting Agency

Current Quarter SNC Flag

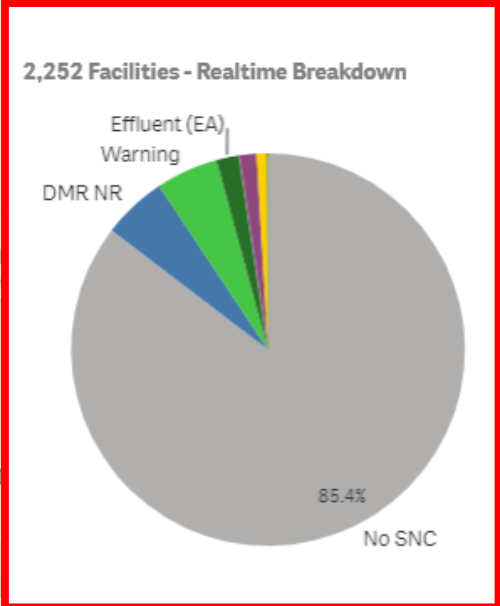
Major/Minor

If data downloads are not working properly, use more filters.

Export Violations Table

20,189 Unresolved Violations for 1,528 Selected Facilities + 53,040 SNC-Causing Violations Resolved in Past 2 Years + 147 Future RNC Violation...

Facility	Monit... Period / Event	Outfall	Parameter / Sched Event [gray=EPA]	Limit Type / Comment	Vio Code	RNC Status	Limit Value	Report... Value	Exceedance %	Re
Readington-Lebanon Sa (NJ0098922 - )	Jan-2020	-	PR001 -- Pretreatment Performance	-	Late Schedule Event	Early Detection	-	-	-	-
Stage II Treatment Plant (NJ0026905 - )	Jan-2020	-	PR001 -- Pretreatment Performance	-	Late Schedule Event	Early Detection	-	-	-	-
PRASA Hogares Seguros WTP (PR0025810 - )	Dec-2019	001-Q	01051 - 1 - Lead, total (as Pb)	Concentration Maximum	E90 - DMR Limited - Numeric	1 NC - Unresolved RNC	6.2	10.8	74	11
Tuxedo Park (V) STP	Dec-2019	-	82299 -- Sewer System Evaluation	Updated SSES	C40 - Schedule	1 NC - Unresolved	-	-	-	-



Facility Name & Permit	Official Status Sep-19	Unoff. Status Dec-19	Realtime Status Mar-20	Curre... Unres. Vios	1st Vio. Det. Date	Last Vio Det. Date	SNC Parameters	Missing DMRs	STI
<b>Totals</b>				<b>1,038</b>	<b>10/13/94</b>	<b>1/13/20</b>			
Randolph State Fish Hatchery (NY0035459 - Minor)	E - Effluent Monthly Avg	E - Effluent Monthly Avg	Warning	5	7/31/19	10/28/19	00610 - 1 - Nitrogen, ammonia total (as		NY
Gerdau Ameristeel Sayerville Inc (NJ0107956 - Minor)	E - Effluent Monthly Avg	E - Effluent Monthly Avg	Warning	12	5/31/19	8/31/19	00530 - 1 - Solids, total suspended;		NJ
Salt Storage Facility - Troy (NY0260843 - Minor)	X - Effluent Non-monthly Avg	X - Effluent Non-monthly Avg	Warning	11	9/30/18	1/13/20	00720 - 1 - Cyanide, total (as CN)		NY
Taconic Ddso (NY0098868 - Minor)	E - Effluent Monthly Avg	E - Effluent Monthly Avg	Warning	31	7/29/18	8/31/19	00530 - 1 - Solids, total suspended		NY
VALcour Sd WWTF (NY0183636 - Minor)	X - Effluent Non-monthly Avg	X - Effluent Non-monthly Avg	Warning	7	2/28/18	9/30/19	50060 - 1 - Chlorine, total residual		NY
Chapel Hill Estates STP (NJ0053112 - Minor)	E - Effluent Monthly Avg	E - Effluent Monthly Avg	Warning	7	10/27/17	11/26/19	01119 - 1 - Copper, total recoverable		NJ
Allentown Boro WWTP (NJ0020206 - Minor)	E - Effluent Monthly Avg	E - Effluent Monthly Avg	Warning	10	9/30/17	9/30/19	00610 - 1 - Nitrogen,		NJ

**Violation Filters**

Violation Lead Agency

Violation Type

SNC Flag

[Export Facility Status Table](#)

[Export Violations Table](#)

**Facility Filters**

Region

State

POTW Flag

Permitting Agency

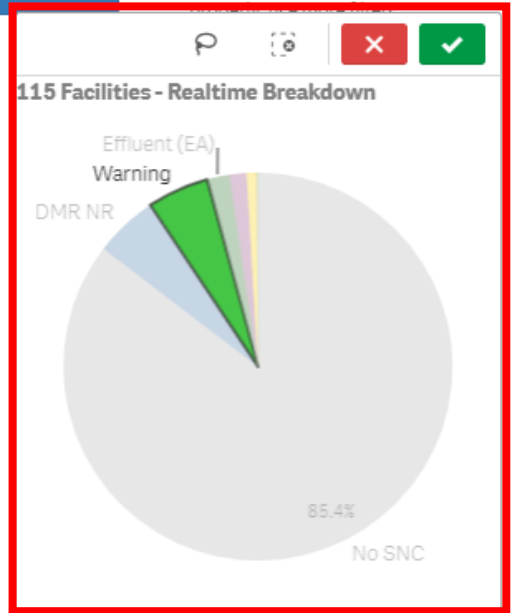
Current Quarter SNC Flag

Major/Minor

If data downloads are not working

1,038 Unresolved Violations for 115 Selected Facilities + 5,599 SNC-Causing Violations Resolved in Past 2 Years + 10 Future RNC Violations in "E..."

Facility	Monit... Period / Event	Outfall	Parameter / Sched Event [gray=EPA]	Limit Type / Comment	Vio Code	RNC Status	Limit Value	Report... Value	Exceedance %	Rec
Alden WWTP (NY0020541 - Minor)	Sep-2019	001-M	00310 - 1 - BOD, 5-day, 20 deg. C	Concentration Average	E90 - DMR Limited - Numeric	1 NC - Unresolved RNC	5	9.4	88	1
Alden WWTP (NY0020541 - Minor)	Sep-2019	001-M	00310 - 1 - BOD, 5-day, 20 deg. C	Quantity Average	E90 - DMR Limited - Numeric	1 NC - Unresolved RNC	27	27.7	3	1
V.I. Water & Power Authority (VI0000051 - )	Sep-2019	001-A	00530 - 1 - Solids, total suspended	Concentration Average	E90 - DMR Limited - Numeric	1 NC - Unresolved RNC	30	57	90	10
Alden WWTP (NY0020541 - )	Sep-2019	001-M	00610 - 1 - Nitrogen, ammonia	Concentration Average	E90 - DMR Limited -	1 NC - Unresolved	1.25	10	700	1



Summary Facilities / Violations Effluent Early Warning SNC DMR Nonreceipt **SNC Rate Breakouts** Info

Facility Name & Permit	Official Status Sep-19	Unoff. Status Dec-19	Realtime Status Mar-20	Curre... Unres. Vios	1st Vio. Det. Date	Last Vio Det. Date	SNC Parameters	Missing DMRs	STI
<b>Totals</b>				<b>1,038</b>	<b>10/13/94</b>	<b>1/13/20</b>			
Ithaca Area WWTF (NY0026638 - Major)	N - Reportable Noncompli...	N - Reportable Noncompli...	Warning	2	3/31/18	4/1/19			NY
Puerto Rico Electric Pwr Auth- Costa (PR0001147 - Major)	N - Reportable Noncompli...	N - Reportable Noncompli...	Warning	1	1/28/18	5/31/18			PR
Buccaneer Hotel (VI0000305 - Minor)	N - Reportable Noncompli...	X - Effluent Non-monthly Avn	Warning	18	12/31/17	12/31/19			VI
Hyland Landfill (NY0269620 - Minor)	R - Resolved	R - Resolved	Warning	0	10/31/17	6/30/19			NY
Hunter Highlands WWTP (NY0061131 - Minor)	N - Reportable Noncompli...	R - Resolved	Warning	0	10/29/17	10/29/17			NY
Batavia (C) STP (NY0026514 - Major)	N - Reportable Noncompli...	X - Effluent Non-monthly Avn	Warning	1	9/30/17	5/29/19			NY
Fredonia (V) WWTP (NY0026409 - Major)	R - Resolved	R - Resolved	Warning	0	9/28/17	9/28/17			NY
DRAMA Municipal WWTP	N - Reportable	N - Reportable	Warning	1	9/28/17	3/31/19			PR

**Violation Filters**

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Export Facility Status Table

Export Violations Table

**Facility Filters**

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Permitting Agency

Current Quarter SNC Flag

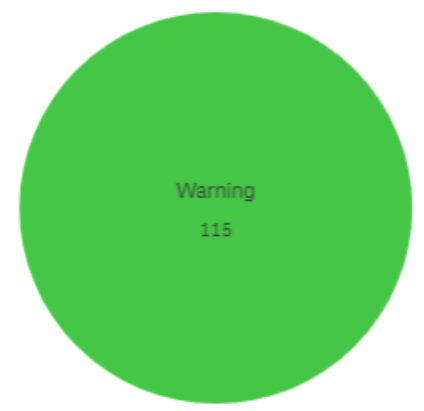
Major/Minor

If data downloads are not working properly, use more filters.

115 Facilities - Realtime Breakdown

1,038 Unresolved Violations for 115 Selected Facilities + 5,599 SNC-Causing Violations Resolved in Past 2 Years + 10 Future RNC Violations in "E..."

Facility	Monit... Period / Event	Outfall	Parameter / Sched Event [gray=EPA]	Limit Type / Comment	Vio Code	RNC Status	Limit Value	Report... Value	Exceedance %	Rec
Alden WWTP (NY0020541 - Minor)	Sep-2019	001-M	00310 - 1 - BOD, 5-day, 20 deg. C	Concentration Average	E90 - DMR Limited - Numeric	1 NC - Unresolved RNC	5	9.4	88	1
Alden WWTP (NY0020541 - Minor)	Sep-2019	001-M	00310 - 1 - BOD, 5-day, 20 deg. C	Quantity Average	E90 - DMR Limited - Numeric	1 NC - Unresolved RNC	27	27.7	3	1
V.I. Water & Power Authority (VI0000051 - )	Sep-2019	001-A	00530 - 1 - Solids, total suspended	Concentration Average	E90 - DMR Limited - Numeric	1 NC - Unresolved RNC	30	57	90	10
Alden WWTP (NY0020541 - )	Sep-2019	001-M	00610 - 1 - Nitrogen, ammonia	Concentration Average	E90 - DMR Limited -	1 NC - Unresolved	1.25	10	700	1



Summary Facilities / Violations **Effluent Early Warning** SNC DMR Nonreceipt SNC Rate Breakouts Info

Facilities  
**115**

Select State Major Minor Warning

Table below shows **maximum exceedance (%)** for each month in last 2 quarters **where 1 more violation could cause SNC**. 2 TRC or 4 chronic violations for a parameter's monthly average (A) will cause SNC if not resolved by quarter's end. Same may apply to other value types (N).

If data download is not working properly, use more filters.

Export Table

Facility Q Last Official Qtr Q Unofficial Status Q Outfall Q MonLoc Q Par Q Mo. Avg? Q Warning Status Q Mon. Period Q

									10/31/2019	11/30/2019	12/31/2019	1/31/2020
(T) Friendship STP - NY0029301	V	E	001	1	34726 Nitrogen, ...	A	1 TRC	135	-	-	-	-
Alden WWTP - NY0020541	E	E	001	1	00310 BOD, 5-day...	A	1 TRC	168	-	-	-	-
					00610 Nitrogen, ...	A	1 TRC	200	-	-	-	-
Allentown Boro WWTP - NJ0020206	E	E	001	1	00610 Nitrogen, ...	A	1 TRC	61	-	-	-	-
Batavia (C) STP - NY0026514	N	X	001	1	00181 Oxygen dem...	N	1 TRC	65	-	-	-	-
Bedford Hills Correctional Fac - NY0101885	X	X	001	1	34726 Nitrogen, ...	N	2 TRC	352	197	-	-	-
Buccaneer Hotel - VI0000305	N	X	002	1	00310 BOD, 5-day...	N	1 TRC	40	-	-	-	-
Buffalo Niagara Int'L Airport - NY0171409	-	-	002	1	00310 BOD, 5-day...	A	1 TRC	-	99999	-	-	-
Buffalo Terminal LLC - NY0105678	D	R	004	1	00556 Oil & Grea...	N	1 TRC	51	-	-	-	-
Camp Simcha - NY0035271	N	N	001	1	00310 BOD, 5-day...	N	1 TRC	-	120	-	-	-
Cape Vincent (V) STP - NY0021393	N	E	001	1	00310 BOD, 5-day...	A	1 TRC	129	-	-	-	-
					00530 Solids, to...	A	1 TRC	393	-	-	-	-
Carmel Hillsdale Estates STP - NY0030678	E	E	001	1	34726 Nitrogen, ...	A	1 TRC	75	-	-	-	-
Cazenovia (T) Highway Garage - NY0261998	R	X	001	1	00556 Oil & Grea...	N	1 TRC	40	-	-	-	-
					01288 Foaming ag...	N	1 TRC	5599900	-	-	-	-
Chapel Hill Estates STP - NJ0053112	E	E	001	1	01119 Copper, to...	A	1 TRC	39	-	-	-	-
Chenango Heights Subdivision - NY0153206	N	N	001	1	00530 Solids, to...	N	1 TRC	-	48	-	-	-
Commonwealth Oil Refining Co., Inc. - PR0000345	N	X	003	1	01042 Copper, to...	N	1 TRC	409	7	-	-	-
					01051 Lead, tota...	N	1 TRC	88	-	-	-	-
					01067 Nickel, to...	N	1 TRC	588	-	-	-	-
Corwin / Crescent Duck Farm - NY0005304	X	X	002	1	70295 Solids, to...	N	2 TRC	97	77	-	-	-
Darien (T) WWTF - NY0228346	X	X	001	1	80082 BOD, carbo...	N	1 TRC	600	-	-	-	-
Delaware Aqueduct - Shaft#6, 6b - NY0000000	N	N	01B	IM	00556 Oil & Grea...	N	1 TRC	88	-	-	-	-

Right-click to export

# Current R2 Approach: Notification letters generated based on official SNC status (not intended to *prevent* SNC)

CWP\_EPA\_REGI... 02
STTE 2 of 60
Curr. Major Min... Minor
Curr Qtr SNC SNC
Violation Type Effluent
ONSNC Unresolved SNC
Selections

Summary
Facilities / Violations
Effluent Early Warning
SNC DMR Nonreceipt
SNC Rate Breakouts
Info

Facility Name & Permit	Official Status Sep-19	Unoff. Status Dec-19	Realtime Status Mar-20	Curre... Unres. Vios	1st Vio. Det. Date	Last Vio Det. Date	SNC Parameters	Missing DMRs	STTE
<b>Totals</b>				<b>519</b>	<b>6/30/11</b>	<b>10/31/19</b>			
Tivoli (V) WWTP (NY0022098 - Minor)	E - Effluent Monthly Avg	E - Effluent Monthly Avg	Warning	3	9/30/19	9/30/19	00665 - 1 - Phosphorus, total (as P)		NY
US Army Watervliet Arsenal (NY0023361 - Minor)	X - Effluent Non-monthly Avg	X - Effluent Non-monthly Avg	No SNC	2	9/30/19	9/30/19	00556 - 1 - Oil & Grease		NY
Warwick Sewer District 1 STP (NY0021890 - Minor)	X - Effluent Non-monthly Avg	X - Effluent Non-monthly Avg	Warning	2	9/30/19	9/30/19	50060 - 1 - Chlorine, total residual		NY
Bass Lake Resort (NY0087858 - Minor)	X - Effluent Non-monthly Avg	X - Effluent Non-monthly Avg	No SNC	5	8/31/19	8/31/19	00310 - 1 - BOD, 5-day, 20 deg. C		NY
Byron (T) WWTF (NY0160971 - Minor)	X - Effluent Non-monthly Avg	X - Effluent Non-monthly Avg	No SNC	3	8/31/19	8/31/19	34726 - 1 - Nitrogen, ammonia, total		NY
Camp French Woods (NY0100480 - Minor)	X - Effluent Non-monthly Avg	X - Effluent Non-monthly Avg	No SNC	2	8/31/19	8/31/19	00610 - 1 - Nitrogen, ammonia total (as		NY
Loch Sheldrake WWTP (NY0024538 - Minor)	E - Effluent Monthly Avg	E - Effluent Monthly Avg	Warning	6	8/31/19	9/30/19	00630 - 1 - Nitrite plus nitrate total		NY

**Violation Filters**

Violation Lead Agency

Violation Type

SNC Flag

[Export Facility Status Table](#)

[Export Violations Table](#)

**Facility Filters**

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Permitting Agency

Current Quarter SNC Flag

Major/Minor

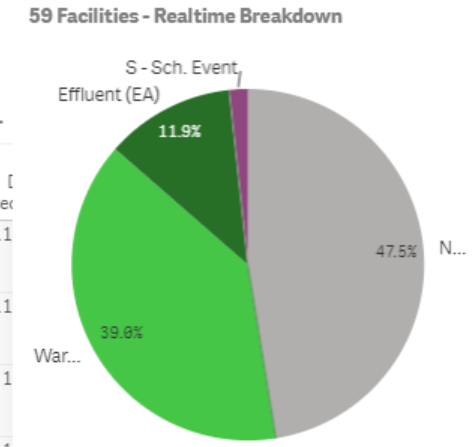
If data downloads are not working properly, use more filters.

**519 Unresolved Violations for 59 Selected Facilities + 0 SNC-Causing Violations Resolved in Past 2 Years + 0 Future RNC Violations in "Early Dete..."**

Facility	Monit... Period / Event	Outfall	Parameter / Sched Event [gray=EPA]	Limit Type / Comment	Vio Code	RNC Status	Limit Value	Report... Value	Exceedance %	Ex	Rec
Deb-EI Foods (NY0272779 - Minor)	Oct-2019	001-M	00625 - 1 - Nitrogen, Kjeldahl, total (as N)	Quantity Average	E90 - DMR Limited - Numeric	1 NC - Unresolved RNC	3.2	5.03	57	11	
Deb-EI Foods (NY0272779 - Minor)	Oct-2019	001-M	00630 - 1 - Nitrite plus nitrate total 1 det. (as N)	Quantity Average	E90 - DMR Limited - Numeric	1 NC - Unresolved RNC	1.6	2.8	75	11	
Alden WWTP (NY0020541 - Minor)	Sep-2019	001-M	00310 - 1 - BOD, 5-day, 20 deg. C	Concentration Average	E90 - DMR Limited - Numeric	1 NC - Unresolved RNC	5	9.4	88	1	
Alden WWTP (NY0020541 - Minor)	Sep-2019	001-M	00310 - 1 - BOD, 5-day, 20 deg. C	Quantity Average	E90 - DMR Limited - Numeric	1 NC - Unresolved RNC	27	27.7	3	1	

## Example Scenario:

TRC exceedances in April and August 2019 cause SNC 4Q2019 (qtr ending September 2019). The SNC becomes official mid-December, and letter is sent out end of December 2019.





# Enhanced Notification and Compliance Assistance Possibilities

- Earlier transmittal of SNC notifications using Unofficial Status
- Outreach to facilities not yet in SNC but one effluent exceedance away
- Other ideas?

# Questions?

For more information contact Daniel Teitelbaum (EPA R2)  
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Rusty Wasem (EPA HQ) at [Wasem.Russell@epa.gov](mailto:Wasem.Russell@epa.gov) or  
Katherine Green (EPA R2) at [Green.Katherine@epa.gov](mailto:Green.Katherine@epa.gov).