Table B-1: WSC - Outfall 002 Critical Effluent Concentrations (Cd) for 2014-2018

	Units	RRV [1]	Maximum Observed DMR	Maximum Observed **Highest**	*TSD Table 3-2* [2] *#Samples*	*CV*	*Multiplier*	C_d [3]
Nutrients [4]								
Total Nitrogen (TN)	mg/L	0.25	1.1	**1.1**	*4*	*0.6*	*2.60*	**2.9**
Total Phosphorus (TP)	mg/L	0.003	1.2	**1.2**	*4*	*0.8*	*3.31*	**3.9**
Metals/Toxics								
Ammonia	mg/L	0.07	2.1	**2.1**	*23*	*0.7*	*1.32*	**2.8**
Nitrate+Nitrite (N+N)	mg/L	0.02	0.8	**0.8**	*27*	*0.4*	*1.17*	**0.9**
Chlorine, Total Residual	µg/L	100	19	**19**	*27*	*1.9*	*1.60*	**30**

Footnote:

(1) RRV = Required Reporting Value listed in the 2017 Circular DEQ-7 or Circular DEQ-12A.

(2) TSD multiplier developed in accordance with TSD Table 3-2. If there are more than 10 samples and the coeffiecient of variation is known, the baseline "0.6" can be overridden.

(3) C_d = Critical Discharge Concentration used in Reasonable Potential (RP) Analysis, based on max observed x TSD Multiplier

(4) Nutrient data based on September monthly average DMR data. TN average monthly data was unavailable for Outfall 002; data shown is daily maximum Total Inorganic Nitrogen.

Table B-2: WSC Outfall 002 - Municipal Storm Drain Reasonable Potential Analysis

	Units	RRV	C_d [1]	C_s [2]	Acute C_r [3]	Acute Std [4]	Acute C_r > Std?	Chronic/HH C_r [3]	Chronic Std [4]	Chronic C_r > Std?	HHS/Nutrient Std	HHS/Nutrient C_r > Std?	RP Comments
Nutrients													
TN - Storm Drain	mg/L	0.25	2.9		**2.9**	NA	NO	**2.9**	NA	NO	**1.3**	**YES**	**RP**
TP - Storm Drain	mg/L	0.003	3.9		**3.9**	NA	NO	**3.9**	NA	NO	**0.15**	**YES**	**RP**
Metals/Toxics													
Ammonia	mg/L	0.07	2.8		2.8	12.1	NO	**2.8**	**1.7**	**YES**	NA	NO	**RP**
Nitrate+Nitrite (N+N)	mg/L	0.02	0.9		0.9	NA	NO	**0.9**	NA	NO	10.0	NO	No
Chlorine, Total Residual	µg/L	100	30		**30**	**19**	**YES**	**30**	**11**	**YES**	4,000	NO	**RP** [5]

Footnotes:

(1) C_d = Critical discharge concentration, based on maximum observed (see Table D-1).

(2) Cs = Critical upstream receiving water concentration, based on 75th percentile of receiving water data; NA since no mixing zone granted for the Municipal Storm Drain.

(3) C_r = Critical receiving water concentration after mixing. The following flow assumptions are used to calculate $C_{r\text{-acute}}$ and $C_{r\text{-chronic/HH}}$:

$$Cr = \frac{(Qd \times Cd) + (Qs \times Cs)}{Qd + Qs}$$

Available Dilution Water Flow (Qs)

	Low Flow (cfs)		%Dilution		Available Dilution mgd
Metals/Toxics Acute 7Q10 Qs =	0.0	x	0%	=	**0.0**
Ammonia & TRC Acute 7Q10 Qs =		x		=	**0.0**
Chronic 7Q10 Qs =		x		=	**0.0**
Nutrient Seasonal 14Q5 Qs =	0	x	100%	=	**0.0**

Discharge (Qd)

Q_d = **2.2** **mgd**

(4) Std = Water Quality Standards from Circular DEQ-7 (2017) or Circular DEQ-12A (2014). Metals based on 25th percentile of hardness (239 mg/L as CaCO3).

(5) TRC - unknown if RP due to possible Manganese interference.

Table B-3: Outfall 002 WQBEL

Parameters		Standards (C_r)			C_s	Wasteload Allocations (C_d) [2]			LTA				n	WQBELs			
		Acute	Chronic	HHS [1]	Background Stream Conc	**Acute (WLA_a)**	**Chronic (WLA_c)**	**HHS [1] (WLA_{hh})**	CV	Acute (LTAa)	Chronic (LTAc)	**Minimum (LTAm)**		**Acute MDL**	**Chronic AML**	**HHS [3] MDL**	**HHS [1,3] AML**
Nutrients																	
TN - Storm Drain	mg/L	NA	NA	1.3	-	NA	NA	1.3	-	NA	NA	-	4	NA	NA	NA	**1.3**
TP - Storm Drain	mg/L	NA	NA	0.2	-	NA	NA	0.2	-	NA	NA	-	4	NA	NA	NA	**0.15**
Metals/Toxics																	
Ammonia	mg/L	12.1	1.7	NA	-	12.1	1.7	NA	0.7	3.6	0.9	0.9	4	**2.9**	**1.4**	NA	NA
Chlorine, Total Residual	µg/L	19	11	4,000	-	19	11	4,000	1.9	2.3	2.3	2.3	4	**19.0**	**6.2**	4,000	4,000

Footnote:

(1) Human Health Standards (HHS) or Nutrient Criteria.

(2) Wasteload Allocation (WLA) = Cr + [Qs/Qd x (Cr-Cs)]. When the ambient condition (Cs) > Standard, the WLA = Standard.

(3) HHS - No single sample shall exceed (DEQ-7 Footnote 16). Therefore, both the AML and MDL = HHS WLA

Available Dilution Water Flow (Qs)

	Low Flow (cfs)		%Dilution		Available Dilution mgd
Metals/Toxics Acute 7Q10 Qs =	0.0	x	0%	=	**0.0**
Ammonia & TRC Acute 7Q10 Qs =		x	0%	=	**0.0**
Chronic 7Q10 Qs =		x	0%	=	**0.0**
Nutrient Seasonal 14Q5 Qs =	0.0	x	100%	=	**0.0**

Critical Discharge (Qd)

Q_d = **2.2** **mgd**