

Client:	Port of Inola
Project Title:	Port of Inola Wasteload Allocation
Season:	Summer
Scenario:	Discharge Option 2b
Date:	8/18/2023

Key

Manual Input

Computed Value

Maximum Assimilative Capacity

	Name	CBOD5 (mg/L)	NH3-N (mg/L)	Flow (MGD)	Flow (cfs)	
PS1 Max WLA	City of Inola	28.75	13.8	0.4	0.6	(includes 15% MoS)
PS2 Max WLA	City of Inola New	28.75	13.8	0.4	0.6	(includes 15% MoS)
PS3 Max WLA	Sofidel	60	10	3.00	4.6	
PS4 Max WLA	Port-Domestic	28.75	13.8	0.8	1.2	(includes 15% MoS)
PS5 Max WLA	Port-Industrial	61.0	5.8	6.60	10.2	(includes 15% MoS)
PS6 Max WLA	Other WLA	61.0	0.0	8.1	12.6	(WLA that meets target DO)
Headwater 1	Verdigris	1.47	0.055	225.5	349.0	

	Name	NH3-N Mass (lbs/day)	NH3-N O2 Demand (lb/day)	CBOD5 Mass (lbs/day)	UBOD O2 Demand (lbs/day)	Total O2 Demand (NH3 + UBOD) (lbs/day)
PS1 Max WLA	City of Inola	46.1	199	96.0	221	420
PS2 Max WLA	City of Inola New	46.1	199	96.0	221	420
PS3 Max WLA	Sofidel	250.4	1084	1502.1	6008	7092
PS4 Max WLA	Port-Domestic	92.1	399	191.9	441	840
PS5 Max WLA	Port-Industrial	316.7	1371	3356.9	7721	9092
PS7 Max WLA	Other WLA	0.0	0	4129.4	9498	9498
Headwater 1	Verdigris	104	449	2,762	6,388	6,837
Headwater 2						
Headwater 3						
Totals:		538	2,330	4,648	13,280	34,200

NPS Loads Oxygen Demand (lb/day):	500
-----------------------------------	-----

Maximum Assimilative Capacity (lbs/day):	34,200
--	--------

Wasteload Allocation

	Name	NH3-N Mass (lbs/day)	NH3-N O2 Demand (lb/day)	CBOD5 Mass (lbs/day)	UBOD O2 Demand (lbs/day)	Total O2 Demand (NH3 + UBOD) (lbs/day)
PS1 Max WLA	City of Inola	40.1	173	83.5	192	365
PS2 Max WLA	City of Inola New	40.1	173	83.5	192	365
PS3 Max WLA	Sofidel	250	1084	1502.1	6008	7092
PS4 Max WLA	Port-Domestic	32	139	66.8	154	292
PS5 Max WLA	Port-Industrial	275	1192	2919.1	6714	7906
PS7 Max WLA	Other WLA	0	0	0.0	0	0
Totals:		638	2,762	4,655	13,260	16,022

		CBOD5 (mg/L)	NH3-N (mg/L)	Flow (MGD)	Flow (cfs)	
PS1 Max WLA	City of Inola	25	12	0.4	0.6	(Proposed Limits)
PS2 Max WLA	City of Inola New	25	12	0.4	0.6	(Proposed Limits)
PS3 Max WLA	Sofidel	60	10	3.00	4.6	
PS4 Max WLA	Port-Domestic	25	12	0.32	0.5	(Proposed Limits)
PS5 Max WLA	Port-Industrial	53	5	6.6	10.2	(Proposed Limits)
PS7 Max WLA	Other WLA	0	0	0	0.0	(Not Included in WLA)

Summary

Maximum Assimilative Capacity (lbs/day)	Wasteload Allocations (lbs/day)	Background Allocations (lbs/day)	NPS Loading (lbs/day)	Margin of Safety (lbs/day)	Reserved Capacity after MOS (lbs/day)
34,200	16,022	6,837	500	1,844	8,998

Port of Inola WLA

8,199

Town of Inola WLA

Existing	Total
296	731

Client:	Port of Inola
Project Title:	Port of Inola Wasteload Allocation
Season:	Winter
Scenario:	Discharge Option 2b
Date:	8/18/2023

Key

Manual Input

Computed Value

Maximum Assimilative Capacity

	Name	CBOD5 (mg/L)	NH3-N (mg/L)	Flow (MGD)	Flow (cfs)	
PS1 Max WLA	City of Inola	28.75	13.8	0.4	0.6	(includes 15% MoS)
PS2 Max WLA	City of Inola New	28.75	13.8	0.4	0.6	(includes 15% MoS)
PS3 Max WLA	Sofidel	60	10	3.00	4.6	
PS4 Max WLA	Port-Domestic	28.75	13.8	0.8	1.2	(includes 15% MoS)
PS5 Max WLA	Port-Industrial	61.0	5.8	6.60	10.2	(includes 15% MoS)
PS6 Max WLA	Other WLA	61.0	5.8	5.2	8.1	(WLA that meets target DO)
Headwater 1	Verdigris	1.47	0.11	172.6	267.0	

	Name	NH3-N Mass (lbs/day)	NH3-N O2 Demand (lb/day)	CBOD5 Mass (lbs/day)	UBOD O2 Demand (lbs/day)	Total O2 Demand (NH3 + UBOD) (lbs/day)
PS1 Max WLA	City of Inola	46.1	199	96.0	221	420
PS2 Max WLA	City of Inola New	46.1	199	96.0	221	420
PS3 Max WLA	Sofidel	250.4	1084	1502.1	6008	7092
PS4 Max WLA	Port-Domestic	92.1	399	191.9	441	840
PS5 Max WLA	Port-Industrial	316.7	1371	3356.9	7721	9092
PS6 Max WLA	Other WLA	250.0	1083	2650.4	6096	7179
Headwater 1	Verdigris	158	686	2,113	4,887	5,574
Headwater 2						
Headwater 3						
Totals:		593	2,568	3,999	11,779	30,618

NPS Loads Oxygen Demand (lb/day):	500
-----------------------------------	-----

Maximum Assimilative Capacity (lbs/day):	30,618
--	--------

Wasteload Allocation

	Name	NH3-N Mass (lbs/day)	NH3-N O2 Demand (lb/day)	CBOD5 Mass (lbs/day)	UBOD O2 Demand (lbs/day)	Total O2 Demand (NH3 + UBOD) (lbs/day)
PS1 Max WLA	City of Inola	40.1	173	83.5	192	365
PS2 Max WLA	City of Inola New	40.1	173	83.5	192	365
PS3 Max WLA	Sofidel	250	1084	1502.1	6008	7092
PS4 Max WLA	Port-Domestic	32	139	66.8	154	292
PS5 Max WLA	Port-Industrial	275	1192	2919.1	6714	7906
PS6 Max WLA	Other WLA	0	0	0.0	0	0
Totals:		638	2,762	4,655	13,260	16,022

		CBOD5 (mg/L)	NH3-N (mg/L)	Flow (MGD)	Flow (cfs)	
PS1 Max WLA	City of Inola	25	12	0.4	0.6	(Proposed Limits)
PS2 Max WLA	City of Inola New	25	12	0.4	0.6	(Proposed Limits)
PS3 Max WLA	Sofidel	60	10	3.00	4.6	
PS4 Max WLA	Port-Domestic	25	12	0.32	0.5	(Proposed Limits)
PS5 Max WLA	Port-Industrial	53	5	6.6	10.2	(Proposed Limits)
PS6 Max WLA	Other WLA	0	0	0	0.0	(Not Included in WLA)

Summary

Maximum Assimilative Capacity (lbs/day)	Wasteload Allocations (lbs/day)	Background Allocations (lbs/day)	NPS Loading (lbs/day)	Margin of Safety (lbs/day)	Reserved Capacity after MOS (lbs/day)
30,618	16,022	5,574	500	1,844	6,679

Port of Inola WLA

8,199

Town of Inola WLA

Existing	Total
415	731

Client:	Port of Inola
Project Title:	Port of Inola Wasteload Allocation
Season:	Spring
Scenario:	Discharge Option 2b
Date:	8/18/2023

Key

Manual Input

Computed Value

Maximum Assimilative Capacity

	Name	CBOD5 (mg/L)	NH3-N (mg/L)	Flow (MGD)	Flow (cfs)	
PS1 Max WLA	City of Inola	28.75	13.8	0.4	0.6	(includes 15% MoS)
PS2 Max WLA	City of Inola New	28.75	13.8	0.4	0.6	(includes 15% MoS)
PS3 Max WLA	Sofidel	60	10	3.00	4.6	
PS4 Max WLA	Port-Domestic	28.75	13.8	0.8	1.2	(includes 15% MoS)
PS5 Max WLA	Port-Industrial	61.0	5.8	6.60	10.2	(includes 15% MoS)
PS6 Max WLA	Other WLA	61.0	5.8	9.7	15.1	(WLA that meets target DO)
Headwater 1	Verdigris	1.47	0.12	620.4	960.0	

	Name	NH3-N Mass (lbs/day)	NH3-N O2 Demand (lb/day)	CBOD5 Mass (lbs/day)	UBOD O2 Demand (lbs/day)	Total O2 Demand (NH3 + UBOD) (lbs/day)
PS1 Max WLA	City of Inola	46.1	199	96.0	221	420
PS2 Max WLA	City of Inola New	46.1	199	96.0	221	420
PS3 Max WLA	Sofidel	250.4	1084	1502.1	6008	7092
PS4 Max WLA	Port-Domestic	92.1	399	191.9	441	840
PS5 Max WLA	Port-Industrial	316.7	1371	3356.9	7721	9092
PS6 Max WLA	Other WLA	467.7	2025	4957.1	11401	13426
Headwater 1	Verdigris	621	2,692	7,597	17,573	20,265
Headwater 2						
Headwater 3						
Totals:		1,056	4,574	9,483	24,464	51,556

NPS Loads Oxygen Demand (lb/day):	500
-----------------------------------	-----

Maximum Assimilative Capacity (lbs/day):	51,556
--	--------

Wasteload Allocation

	Name	NH3-N Mass (lbs/day)	NH3-N O2 Demand (lb/day)	CBOD5 Mass (lbs/day)	UBOD O2 Demand (lbs/day)	Total O2 Demand (NH3 + UBOD) (lbs/day)
PS1 Max WLA	City of Inola	40.1	173	83.5	192	365
PS2 Max WLA	City of Inola New	40.1	173	83.5	192	365
PS3 Max WLA	Sofidel	250	1084	1502.1	6008	7092
PS4 Max WLA	Port-Domestic	32	139	66.8	154	292
PS5 Max WLA	Port-Industrial	275	1192	2919.1	6714	7906
PS6 Max WLA	Other WLA	0	0	0.0	0	0
Totals:		638	2,762	4,655	13,260	16,022

		CBOD5 (mg/L)	NH3-N (mg/L)	Flow (MGD)	Flow (cfs)	
PS1 Max WLA	City of Inola	25	12	0.4	0.6	(Proposed Limits)
PS2 Max WLA	City of Inola New	25	12	0.4	0.6	(Proposed Limits)
PS3 Max WLA	Sofidel	60	10	3.00	4.6	
PS4 Max WLA	Port-Domestic	25	12	0.32	0.5	(Proposed Limits)
PS5 Max WLA	Port-Industrial	53	5	6.6	10.2	(Proposed Limits)
PS6 Max WLA	Other WLA	0	0	0	0.0	(Not Included in WLA)

Summary

Maximum Assimilative Capacity (lbs/day)	Wasteload Allocations (lbs/day)	Background Allocations (lbs/day)	NPS Loading (lbs/day)	Margin of Safety (lbs/day)	Reserved Capacity after MOS (lbs/day)
51,556	16,022	20,265	500	1,844	12,926

Port of Inola WLA

8,199

Town of Inola WLA

Existing	Total
415	731