pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northcentral Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0028282**
Facility Type	**Municipal**	APS ID	**1025495**
Major / Minor	**Minor**	Authorization ID	**1330858**

Applicant and Facility Information

Applicant Name	**Eagles Mere Borough Authority**	Facility Name	**Eagles Mere Borough Authority**
Applicant Address	PO Box 393 Eagles Mere, PA 17731-0393	Facility Address	Carl Rider Road Eagles Mere, PA 17731
Applicant Contact	Dave Carson	Facility Contact	Adam Maczuga
Applicant Phone	(570) 525-3247	Facility Phone	(570) 525-3582
Client ID	75072	Site ID	464869
Ch 94 Load Status	Not Overloaded	Municipality	Eagles Mere Borough
Connection Status	No Limitations	County	Sullivan
Date Application Received	October 15, 2020	EPA Waived?	Yes
Date Application Accepted	October 30, 2020	If No, Reason	
Purpose of Application	Renewal of an existing NPDES permit for the discharge of treated sewage.		

Public Participation

DEP will publish notice of the receipt of the NPDES permit application and a tentative decision to issue the individual NPDES permit in the *Pennsylvania Bulletin* in accordance with 25 Pa. Code § 92a.82. Upon publication in the *Pennsylvania Bulletin*, DEP will accept written comments from interested persons for a 30-day period (which may be extended for one additional 15-day period at DEP's discretion), which will be considered in making a final decision on the application. Any person may request or petition for a public hearing with respect to the application. A public hearing may be held if DEP determines that there is significant public interest in holding a hearing. If a hearing is held, notice of the hearing will be published in the *Pennsylvania Bulletin* at least 30 days prior to the hearing and in at least one newspaper of general circulation within the geographical area of the discharge.

Approve	Deny	Signatures	Date
X		*Derek S. Garner* Derek S. Garner / Project Manager	3/2/2021
X		*Nicholas W. Hartranft* Nicholas W. Hartranft, P.E. / Environmental Engineer Manager	3/3/2021

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	0.066
Latitude	41º 24' 26"	Longitude	-76º 34' 33"
Quad Name	Eagles Mere	Quad Code	0733

Wastewater Description: Sewage Effluent

Receiving Waters	The Outlet	Stream Code	19726
NHD Com ID	66909921	RMI	3.40
Drainage Area	0.63	Yield (cfs/mi^2)	0.389
Q_{7-10} Flow (cfs)	0.25	Q_{7-10} Basis	Streamgage No. 01552000
Elevation (ft)	1880	Slope (ft/ft)	0.16
Watershed No.	10-D	Chapter 93 Class.	HQ-CWF
Existing Use	Exceptional Value (1)	Existing Use Qualifier	RBP - Antidegradation
Exceptions to Use	n/a	Exceptions to Criteria	n/a

Assessment Status: Attaining Use(s)
Cause(s) of Impairment: n/a
Source(s) of Impairment: n/a
TMDL Status: n/a Name: n/a

Nearest Downstream Public Water Supply Intake: PA American Water Company

PWS Waters	West Branch Susquehanna River	Flow at Intake (cfs)	679.73
PWS RMI	10.65	Distance from Outfall (mi)	47.95

(1) DEP has evaluated information indicating that the existing use of the receiving waters is different than the designated use under 25 Pa. Code § 93.9. In developing the draft NPDES permit, DEP is proposing to protect the existing use of the receiving waters. Following DEP's notice of the receipt of the application and the draft permit in the Pennsylvania Bulletin, DEP will accept written comments during the public comment period regarding DEP's tentative determination to protect the existing use. DEP will make a final determination on existing use protection for the receiving waters as part of the final permit action.

Discharge, Receiving Waters and Water Supply Information

Outfall No.	002	Design Flow (MGD)	0.066
Latitude	41º 23' 59"	Longitude	-76º 34' 2"
Quad Name	Eagles Mere	Quad Code	0733
Wastewater Description:	Sewage Effluent		

Receiving Waters	UNT to The Outlet	Stream Code	19732
NHD Com ID	66909921	RMI	0.53
Drainage Area	0.88	Yield (cfs/mi^2)	0.389
Q_{7-10} Flow (cfs)	0.34	Q_{7-10} Basis	Streamgage No. 01552000
Elevation (ft)	1840	Slope (ft/ft)	0.039
Watershed No.	10-D	Chapter 93 Class.	HQ-CWF
Existing Use	Exceptional Value (1)	Existing Use Qualifier	RBP - Antidegradation
Exceptions to Use	n/a	Exceptions to Criteria	n/a
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment	n/a		
Source(s) of Impairment	n/a		
TMDL Status	n/a	Name	n/a

Nearest Downstream Public Water Supply Intake	PA American Water Company		
PWS Waters	West Branch Susquehanna River	Flow at Intake (cfs)	679.73
PWS RMI	10.65	Distance from Outfall (mi)	48.06

(1) DEP has evaluated information indicating that the existing use of the receiving waters is different than the designated use under 25 Pa. Code § 93.9. In developing the draft NPDES permit, DEP is proposing to protect the existing use of the receiving waters. Following DEP's notice of the receipt of the application and the draft permit in the Pennsylvania Bulletin, DEP will accept written comments during the public comment period regarding DEP's tentative determination to protect the existing use. DEP will make a final determination on existing use protection for the receiving waters as part of the final permit action.

Discharge, Receiving Waters and Water Supply Information

Outfall No.	003	Design Flow (MGD)	.066
Latitude	41º 23' 59"	Longitude	-76º 34' 2"
Quad Name	Eagles Mere	Quad Code	0733
Wastewater Description:	Sewage Effluent		

Receiving Waters	UNT to The Outlet	Stream Code	19732
NHD Com ID	66909921	RMI	0.53
Drainage Area	0.88	Yield (cfs/mi^2)	0.389
Q_{7-10} Flow (cfs)	0.34	Q_{7-10} Basis	Streamgage No. 01552000
Elevation (ft)	1840	Slope (ft/ft)	0.039
Watershed No.	10-D	Chapter 93 Class.	HQ-CWF
Existing Use	Exceptional Value (1)	Existing Use Qualifier	RBP - Antidegradation
Exceptions to Use	n/a	Exceptions to Criteria	n/a
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment	n/a		
Source(s) of Impairment	n/a		
TMDL Status	n/a	Name	n/a

Nearest Downstream Public Water Supply Intake	PA American Water Company		
PWS Waters	West Branch Susquehanna River	Flow at Intake (cfs)	679.73
PWS RMI	10.65	Distance from Outfall (mi)	48.06

(1) DEP has evaluated information indicating that the existing use of the receiving waters is different than the designated use under 25 Pa. Code § 93.9. In developing the draft NPDES permit, DEP is proposing to protect the existing use of the receiving waters. Following DEP's notice of the receipt of the application and the draft permit in the Pennsylvania Bulletin, DEP will accept written comments during the public comment period regarding DEP's tentative determination to protect the existing use. DEP will make a final determination on existing use protection for the receiving waters as part of the final permit action.

Discharge, Receiving Waters and Water Supply Information

Outfall No.	004	Design Flow (MGD)	0.066
Latitude	41º 24' 27.5"	Longitude	-76º 35' 18.7"
Quad Name	Eagles Mere	Quad Code	0733
Wastewater Description:	Sewage Effluent		

Receiving Waters	UNT to Mackeys Run	Stream Code	19731
NHD Com ID	66909957	RMI	0.52
Drainage Area	0.22	Yield (cfs/mi^2)	0.389
Q_{7-10} Flow (cfs)	0.09	Q_{7-10} Basis	Streamgage No. 01552000
Elevation (ft)	1850	Slope (ft/ft)	0.036
Watershed No.	10-D	Chapter 93 Class.	HQ-CWF
Existing Use	Exceptional Value (1)	Existing Use Qualifier	RBP - Antidegradation
Exceptions to Use	n/a	Exceptions to Criteria	n/a
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment	n/a		
Source(s) of Impairment	n/a		
TMDL Status	n/a	Name	n/a

Nearest Downstream Public Water Supply Intake	PA American Water Company		
PWS Waters	West Branch Susquehanna River	Flow at Intake (cfs)	679.73
PWS RMI	10.65	Distance from Outfall (mi)	51.16

(1) DEP has evaluated information indicating that the existing use of the receiving waters is different than the designated use under 25 Pa. Code § 93.9. In developing the draft NPDES permit, DEP is proposing to protect the existing use of the receiving waters. Following DEP's notice of the receipt of the application and the draft permit in the Pennsylvania Bulletin, DEP will accept written comments during the public comment period regarding DEP's tentative determination to protect the existing use. DEP will make a final determination on existing use protection for the receiving waters as part of the final permit action.

Discharge, Receiving Waters and Water Supply Information

Outfall No.	005	Design Flow (MGD)	0.066
Latitude	41º 24' 24"	Longitude	-76º 35' 24"
Quad Name	Eagles Mere	Quad Code	0733
Wastewater Description:	Sewage Effluent		

Receiving Waters	UNT to Mackeys Run	Stream Code	19731
NHD Com ID	66909957	RMI	0.52
Drainage Area	0.22	Yield (cfs/mi^2)	0.389
Q_{7-10} Flow (cfs)	0.09	Q_{7-10} Basis	Streamgage No. 01552000
Elevation (ft)	1850	Slope (ft/ft)	0.036
Watershed No.	10-D	Chapter 93 Class.	HQ-CWF
Existing Use	Exceptional Value (1)	Existing Use Qualifier	RBP - Antidegradation
Exceptions to Use	n/a	Exceptions to Criteria	n/a
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment	n/a		
Source(s) of Impairment	n/a		
TMDL Status	n/a	Name	n/a

Nearest Downstream Public Water Supply Intake	PA American Water Company		
PWS Waters	West Branch Susquehanna River	Flow at Intake (cfs)	679.73
PWS RMI	10.65	Distance from Outfall (mi)	51.16

(1) DEP has evaluated information indicating that the existing use of the receiving waters is different than the designated use under 25 Pa. Code § 93.9. In developing the draft NPDES permit, DEP is proposing to protect the existing use of the receiving waters. Following DEP's notice of the receipt of the application and the draft permit in the Pennsylvania Bulletin, DEP will accept written comments during the public comment period regarding DEP's tentative determination to protect the existing use. DEP will make a final determination on existing use protection for the receiving waters as part of the final permit action.

Discharge, Receiving Waters and Water Supply Information

Outfall No.	006	Design Flow (MGD)	0.066
Latitude	41º 24' 24"	Longitude	-76º 35' 24"
Quad Name	Eagles Mere	Quad Code	0733
Wastewater Description:	Sewage Effluent		

Receiving Waters	UNT to Mackeys Run	Stream Code	19731
NHD Com ID	66909957	RMI	0.52
Drainage Area	0.22	Yield (cfs/mi^2)	0.389
Q_{7-10} Flow (cfs)	0.09	Q_{7-10} Basis	Streamgage No. 01552000
Elevation (ft)	1850	Slope (ft/ft)	0.036
Watershed No.	10-D	Chapter 93 Class.	HQ-CWF
Existing Use	Exceptional Value (1)	Existing Use Qualifier	RBP - Antidegradation
Exceptions to Use	n/a	Exceptions to Criteria	n/a
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment	n/a		
Source(s) of Impairment	n/a		
TMDL Status	n/a	Name	n/a

Nearest Downstream Public Water Supply Intake	PA American Water Company		
PWS Waters	West Branch Susquehanna River	Flow at Intake (cfs)	679.73
PWS RMI	10.65	Distance from Outfall (mi)	51.16

(1) DEP has evaluated information indicating that the existing use of the receiving waters is different than the designated use under 25 Pa. Code § 93.9. In developing the draft NPDES permit, DEP is proposing to protect the existing use of the receiving waters. Following DEP's notice of the receipt of the application and the draft permit in the Pennsylvania Bulletin, DEP will accept written comments during the public comment period regarding DEP's tentative determination to protect the existing use. DEP will make a final determination on existing use protection for the receiving waters as part of the final permit action.

Discharge, Receiving Waters and Water Supply Information

Outfall No.	007	Design Flow (MGD)	0.027
Latitude	41º 25' 46.2"	Longitude	-76º 33' 53.8"
Quad Name	Eagles Mere	Quad Code	0733
Wastewater Description:	Sewage Effluent		

Receiving Waters	UNT to Double Run	Stream Code	20328
NHD Com ID	66909099	RMI	1.2
Drainage Area	0.23	Yield (cfs/mi^2)	0.389
Q_{7-10} Flow (cfs)	0.09	Q_{7-10} Basis	Streamgage No. 01552000
Elevation (ft)	1920	Slope (ft/ft)	0.063
Watershed No.	10-B	Chapter 93 Class.	CWF
Existing Use	Exceptional Value (1)	Existing Use Qualifier	RBP - Antidegradation
Exceptions to Use	n/a	Exceptions to Criteria	n/a
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment	n/a		
Source(s) of Impairment	n/a		
TMDL Status	n/a	Name	n/a

Nearest Downstream Public Water Supply Intake	PA American Water Company		
PWS Waters	West Branch Susquehanna River	Flow at Intake (cfs)	679.73
PWS RMI	10.65	Distance from Outfall (mi)	68.04

(1) DEP has evaluated information indicating that the existing use of the receiving waters is different than the designated use under 25 Pa. Code § 93.9. In developing the draft NPDES permit, DEP is proposing to protect the existing use of the receiving waters. Following DEP's notice of the receipt of the application and the draft permit in the Pennsylvania Bulletin, DEP will accept written comments during the public comment period regarding DEP's tentative determination to protect the existing use. DEP will make a final determination on existing use protection for the receiving waters as part of the final permit action.

Treatment Facility Summary

The Eagles Mere Borough Authority owns and operates three wastewater treatment plants ("WWTPs"); The Outlet, Mackeys Run, and Forest Inn Wastewater Treatment Plants. The Outlet Wastewater Treatment plant is a 0.066 MGD extended aeration plant with calcium hypochlorite disinfection and sodium sulfite dechlorination. Sludge from the clarifiers is wasted to an aerobic digester tank. During normal operations the effluent is discharged to The Outlet via Outfall 001. To prevent a washout of the treatment plant, if further treatment of effluent is necessary, or if the disinfection/dechlorination units are taken out of service the facility has the ability to divert flows to a dual lagoon system that is operated in series. Due to the varying amounts of treatment received dependent on effluent being diverted because of a hydraulic overload or for further treatment/disinfection maintenance, the lagoon system effluent is assigned two different outfalls for one physical discharge point. Outfall 002 discharges disinfected and dechlorinated secondary effluent from the lagoon system, while Outfall 003 discharges wastewater diverted into the lagoon system to avoid hydraulic overloading of the plant. In both cases (Outfall 002 and 003), effluent is still disinfected utilizing calcium hypochlorite and dechlorinated with sodium sulfite.

Mackeys Run Wastewater Treatment Plant is a 0.066 MGD extended aeration plant that essentially mirrors The Outlet Wastewater Treatment Plant described above. During normal operations effluent is discharged to Mackeys Run via Outfall 004. As with The Outlet plant, effluent can be diverted to a dual lagoon system that is operated in series and is assigned two different outfalls for one physical discharge point dependent on the treatment received. However, instead of being discharged to the first pond in the series like The Outlet plant, wastewater diverted around the disinfection/dechlorination units at the Mackeys Run plant is conveyed to the second pond known as the polishing pond. This effluent is monitored as Outfall 005. Wastewater diverted around the headworks is conveyed to the first pond known as the primary facultative pond and is monitored at Outfall 006.

The Forest Inn Wastewater Treatment Plant is a 0.0265 MGD facultative lagoon system that consists of one primary facultative lagoon and a secondary polishing lagoon operated in series. Prior to discharge to an UNT to Double Run via Outfall 007 the effluent is disinfected with calcium hypochlorite. In 2017, the facility's existing WQM Permit, No. 5711401, was amended to include the same dechlorination unit that is used in The Outlet and Mackeys Run WWTPs.

Wasted sludge from the facilities is hauled to the TVMA Wastewater Treatment Plant in Jersey Shore, PA.

Compliance History

A review of eDMR data did not yield any effluent violations during the existing permit's term.

There are no open violations associated with the permittee.

The three WWTPs were most recently inspected by DEP on July 16, 2020. No violations or impacts to the receiving waters were noted.

Development of Effluent Limitations for The Outlet WWTP

Outfall No. 001 **Design Flow (MGD)** 0.066
Latitude 41º 24' 3.30" **Longitude** -76º 34' 1.30"
Wastewater Description: Sewage Effluent

Technology-Based Limitations

The following technology-based limitations apply, subject to water quality analysis and BPJ where applicable:

Pollutant	Limit (mg/l)	SBC	Federal Regulation	State Regulation
$CBOD_5$	25	Average Monthly	133.102(a)(4)(i)	92a.47(a)(1)
	40	Average Weekly	133.102(a)(4)(ii)	92a.47(a)(2)
Total Suspended Solids	30	Average Monthly	133.102(b)(1)	92a.47(a)(1)
	45	Average Weekly	133.102(b)(2)	92a.47(a)(2)
pH	6.0 – 9.0 S.U.	Min – Max	133.102(c)	95.2(1)
Fecal Coliform (5/1 – 9/30)	200 / 100 ml	Geo Mean	-	92a.47(a)(4)
Fecal Coliform (5/1 – 9/30)	1,000 / 100 ml	IMAX	-	92a.47(a)(4)
Fecal Coliform (10/1 – 4/30)	2,000 / 100 ml	Geo Mean	-	92a.47(a)(5)
Fecal Coliform (10/1 – 4/30)	10,000 / 100 ml	IMAX	-	92a.47(a)(5)
Total Residual Chlorine (1)	0.02	IMAX	-	92a.48(b)(3)

(1) Since this is a discharge to an exceptional value fishery, the permittee is required to dechlorinate per 25 PA Code § 92a.48(b)(3). To demonstrate effective dechlorination, previous renewals established an instantaneous maximum limitation 0.05 mg/l. DEP has proposed to change the limit to 0.02 mg/l to match the target quantitative limit recommended by the Bureau of Laboratories.

Water Quality-Based Limitations

A “Reasonable Potential Analysis” (attached) determined the existing WQBELs are appropriate. WQM 7.0 v1.0b output is as follows:

Parameter	Monthly Avg (mg/l)	Daily Max (mg/l)	Minimum (mg/l)
CBOD5	15	n/a	n/a
Ammonia-N	3	6	n/a
Dissolved Oxygen	n/a	n/a	3

Best Professional Judgment (BPJ) Limitations

DEP recommends the existing dissolved oxygen monitoring requirement remains in the permit to continue to characterize the effluent.

DEP also recommends that the existing BOD5 and TSS influent monitoring remains in the permit to continue to characterize the influent and supplement Chapter 94 reporting.

Anti-Backsliding

No limits or monitoring requirements are proposed to be made less stringent. Anti-backsliding regulations should not impact the permit.

Outfall No. 002 **Design Flow (MGD)** 0.066
Latitude 41º 23' 59.00" **Longitude** -76º 34' 2.00"
Wastewater Description: Sewage Effluent

Technology-Based Limitations

The following technology-based limitations apply, subject to water quality analysis and BPJ where applicable:

Pollutant	Limit (mg/l)	SBC	Federal Regulation	State Regulation
$CBOD_5$	25	Average Monthly	133.102(a)(4)(i)	92a.47(a)(1)
	40	Average Weekly	133.102(a)(4)(ii)	92a.47(a)(2)
Total Suspended Solids	30	Average Monthly	133.102(b)(1)	92a.47(a)(1)
	45	Average Weekly	133.102(b)(2)	92a.47(a)(2)
pH	6.0 – 9.0 S.U.	Min – Max	133.102(c)	95.2(1)
Fecal Coliform (5/1 – 9/30)	200 / 100 ml	Geo Mean	-	92a.47(a)(4)
Fecal Coliform (5/1 – 9/30)	1,000 / 100 ml	IMAX	-	92a.47(a)(4)
Fecal Coliform (10/1 – 4/30)	2,000 / 100 ml	Geo Mean	-	92a.47(a)(5)
Fecal Coliform (10/1 – 4/30)	10,000 / 100 ml	IMAX	-	92a.47(a)(5)
Total Residual Chlorine (1)	0.02	IMAX	-	92a.48(b)(3)

(1) Since this is a discharge to an exceptional value fishery, the permittee is required to dechlorinate per 25 PA Code § 92a.48(b)(3). To demonstrate effective dechlorination, previous renewals established an instantaneous maximum limitation 0.05 mg/l. DEP has proposed to change the limit to 0.02 mg/l to match the target quantitative limit recommended by the Bureau of Laboratories.

Water Quality-Based Limitations

A “Reasonable Potential Analysis” (attached) determined the existing WQBELs are appropriate. WQM 7.0 v1.0b output is as follows:

Parameter	Monthly Avg (mg/l)	Daily Max (mg/l)	Minimum (mg/l)
CBOD5	15	n/a	n/a
Ammonia-N	3	6	n/a
Dissolved Oxygen	n/a	n/a	3

Best Professional Judgment (BPJ) Limitations

DEP recommends the existing dissolved oxygen monitoring requirement remains in the permit to continue to characterize the effluent.

Influent BOD5 and TSS monitoring is not proposed for this outfall. Influent monitoring will be captured during normal operation when the facility is discharging via Outfall 001.

Anti-Backsliding

No limits or monitoring requirements are proposed to be made less stringent. Anti-backsliding regulations should not impact the permit.

Outfall No. 003 **Design Flow (MGD)** 0.066
Latitude 41º 23' 59.00" **Longitude** -76º 34' 2.00"
Wastewater Description: Sewage Effluent

Technology-Based Limitations

The following technology-based limitations apply, subject to water quality analysis and BPJ where applicable:

Pollutant	Limit (mg/l)	SBC	Federal Regulation	State Regulation
$CBOD_5$	25	Average Monthly	133.102(a)(4)(i)	92a.47(a)(1)
	40	Average Weekly	133.102(a)(4)(ii)	92a.47(a)(2)
Total Suspended Solids	30	Average Monthly	133.102(b)(1)	92a.47(a)(1)
	45	Average Weekly	133.102(b)(2)	92a.47(a)(2)
pH	6.0 – 9.0 S.U.	Min – Max	133.102(c)	95.2(1)
Fecal Coliform (5/1 – 9/30)	200 / 100 ml	Geo Mean	-	92a.47(a)(4)
Fecal Coliform (5/1 – 9/30)	1,000 / 100 ml	IMAX	-	92a.47(a)(4)
Fecal Coliform (10/1 – 4/30)	2,000 / 100 ml	Geo Mean	-	92a.47(a)(5)
Fecal Coliform (10/1 – 4/30)	10,000 / 100 ml	IMAX	-	92a.47(a)(5)
Total Residual Chlorine (1)	0.02	IMAX	-	92a.48(b)(3)

(1) Since this is a discharge to an exceptional value fishery, the permittee is required to dechlorinate per 25 PA Code § 92a.48(b)(3). To demonstrate effective dechlorination, previous renewals established an instantaneous maximum limitation 0.05 mg/l. DEP has proposed to change the limit to 0.02 mg/l to match the target quantitative limit recommended by the Bureau of Laboratories.

Water Quality-Based Limitations

A “Reasonable Potential Analysis” (attached) determined the existing WQBELs are appropriate. WQM 7.0 v1.0b output is as follows:

Parameter	Monthly Avg (mg/l)	Daily Max (mg/l)	Minimum (mg/l)
CBOD5	15	n/a	n/a
Ammonia-N	3	6	n/a
Dissolved Oxygen	n/a	n/a	3

Best Professional Judgment (BPJ) Limitations

DEP recommends the existing dissolved oxygen monitoring requirement remains in the permit to continue to characterize the effluent.

Influent BOD5 and TSS monitoring is not proposed for this outfall. Influent monitoring will be captured during normal operation when the facility is discharging via Outfall 001.

Anti-Backsliding

No limits or monitoring requirements are proposed to be made less stringent. Anti-backsliding regulations should not impact the permit.

Development of Effluent Limitations for Mackeys Run WWTP

Outfall No. 004 **Design Flow (MGD)** 0.066
Latitude 41º 24' 27.50" **Longitude** -76º 35' 18.70"
Wastewater Description: Sewage Effluent

Technology-Based Limitations

The following technology-based limitations apply, subject to water quality analysis and BPJ where applicable:

Pollutant	Limit (mg/l)	SBC	Federal Regulation	State Regulation
$CBOD_5$	25	Average Monthly	133.102(a)(4)(i)	92a.47(a)(1)
	40	Average Weekly	133.102(a)(4)(ii)	92a.47(a)(2)
Total Suspended Solids	30	Average Monthly	133.102(b)(1)	92a.47(a)(1)
	45	Average Weekly	133.102(b)(2)	92a.47(a)(2)
pH	6.0 – 9.0 S.U.	Min – Max	133.102(c)	95.2(1)
Fecal Coliform (5/1 – 9/30)	200 / 100 ml	Geo Mean	-	92a.47(a)(4)
Fecal Coliform (5/1 – 9/30)	1,000 / 100 ml	IMAX	-	92a.47(a)(4)
Fecal Coliform (10/1 – 4/30)	2,000 / 100 ml	Geo Mean	-	92a.47(a)(5)
Fecal Coliform (10/1 – 4/30)	10,000 / 100 ml	IMAX	-	92a.47(a)(5)
Total Residual Chlorine (1)	0.02	IMAX	-	92a.48(b)(3)

(1) Since this is a discharge to an exceptional value fishery, the permittee is required to dechlorinate per 25 PA Code § 92a.48(b)(3). To demonstrate effective dechlorination, previous renewals established an instantaneous maximum limitation 0.05 mg/l. DEP has proposed to change the limit to 0.02 mg/l to match the target quantitative limit recommended by the Bureau of Laboratories.

Water Quality-Based Limitations

A “Reasonable Potential Analysis” (attached) determined the existing WQBELs are appropriate. WQM 7.0 v1.0b output is as follows:

Parameter	Monthly Avg (mg/l)	Daily Max (mg/l)	Minimum (mg/l)
CBOD5	15	n/a	n/a
Ammonia-N	3	6	n/a
Dissolved Oxygen	n/a	n/a	3

Best Professional Judgment (BPJ) Limitations

DEP recommends the existing dissolved oxygen monitoring requirement remains in the permit to continue to characterize the effluent.

DEP also recommends that the existing BOD5 and TSS influent monitoring remains in the permit to continue to characterize the influent and supplement Chapter 94 reporting.

Anti-Backsliding

No limits or monitoring requirements are proposed to be made less stringent. Anti-backsliding regulations should not impact the permit.

Outfall No. 005 **Design Flow (MGD)** 0.066
Latitude 41º 24' 24.00" **Longitude** -76º 35' 24.00"
Wastewater Description: Sewage Effluent

Technology-Based Limitations

The following technology-based limitations apply, subject to water quality analysis and BPJ where applicable:

Pollutant	Limit (mg/l)	SBC	Federal Regulation	State Regulation
$CBOD_5$	25	Average Monthly	133.102(a)(4)(i)	92a.47(a)(1)
	40	Average Weekly	133.102(a)(4)(ii)	92a.47(a)(2)
Total Suspended Solids	30	Average Monthly	133.102(b)(1)	92a.47(a)(1)
	45	Average Weekly	133.102(b)(2)	92a.47(a)(2)
pH	6.0 – 9.0 S.U.	Min – Max	133.102(c)	95.2(1)
Fecal Coliform (5/1 – 9/30)	200 / 100 ml	Geo Mean	-	92a.47(a)(4)
Fecal Coliform (5/1 – 9/30)	1,000 / 100 ml	IMAX	-	92a.47(a)(4)
Fecal Coliform (10/1 – 4/30)	2,000 / 100 ml	Geo Mean	-	92a.47(a)(5)
Fecal Coliform (10/1 – 4/30)	10,000 / 100 ml	IMAX	-	92a.47(a)(5)
Total Residual Chlorine (1)	0.02	IMAX	-	92a.48(b)(3)

(1) Since this is a discharge to an exceptional value fishery, the permittee is required to dechlorinate per 25 PA Code § 92a.48(b)(3). To demonstrate effective dechlorination, previous renewals established an instantaneous maximum limitation 0.05 mg/l. DEP has proposed to change the limit to 0.02 mg/l to match the target quantitative limit recommended by the Bureau of Laboratories.

Water Quality-Based Limitations

A “Reasonable Potential Analysis” (attached) determined the existing WQBELs are appropriate. WQM 7.0 v1.0b output is as follows:

Parameter	Monthly Avg (mg/l)	Daily Max (mg/l)	Minimum (mg/l)
CBOD5	15	n/a	n/a
Ammonia-N	3	6	n/a
Dissolved Oxygen	n/a	n/a	3

Best Professional Judgment (BPJ) Limitations

DEP recommends the existing dissolved oxygen monitoring requirement remains in the permit to continue to characterize the effluent.

Influent BOD5 and TSS monitoring is not proposed for this outfall. Influent monitoring will be captured during normal operation when the facility is discharging via Outfall 004.

Anti-Backsliding

No limits or monitoring requirements are proposed to be made less stringent. Anti-backsliding regulations should not impact the permit.

Outfall No. 006 **Design Flow (MGD)** 0.066
Latitude 41º 24' 24.00" **Longitude** -76º 35' 24.00"
Wastewater Description: Sewage Effluent

Technology-Based Limitations

The following technology-based limitations apply, subject to water quality analysis and BPJ where applicable:

Pollutant	Limit (mg/l)	SBC	Federal Regulation	State Regulation
$CBOD_5$	25	Average Monthly	133.102(a)(4)(i)	92a.47(a)(1)
	40	Average Weekly	133.102(a)(4)(ii)	92a.47(a)(2)
Total Suspended Solids	30	Average Monthly	133.102(b)(1)	92a.47(a)(1)
	45	Average Weekly	133.102(b)(2)	92a.47(a)(2)
pH	6.0 – 9.0 S.U.	Min – Max	133.102(c)	95.2(1)
Fecal Coliform (5/1 – 9/30)	200 / 100 ml	Geo Mean	-	92a.47(a)(4)
Fecal Coliform (5/1 – 9/30)	1,000 / 100 ml	IMAX	-	92a.47(a)(4)
Fecal Coliform (10/1 – 4/30)	2,000 / 100 ml	Geo Mean	-	92a.47(a)(5)
Fecal Coliform (10/1 – 4/30)	10,000 / 100 ml	IMAX	-	92a.47(a)(5)
Total Residual Chlorine (1)	0.02	IMAX	-	92a.48(b)(3)

(1) Since this is a discharge to an exceptional value fishery, the permittee is required to dechlorinate per 25 PA Code § 92a.48(b)(3). To demonstrate effective dechlorination, previous renewals established an instantaneous maximum limitation 0.05 mg/l. DEP has proposed to change the limit to 0.02 mg/l to match the target quantitative limit recommended by the Bureau of Laboratories.

Water Quality-Based Limitations

A “Reasonable Potential Analysis” (attached) determined the existing WQBELs are appropriate. WQM 7.0 v1.0b output is as follows:

Parameter	Monthly Avg (mg/l)	Daily Max (mg/l)	Minimum (mg/l)
CBOD5	15	n/a	n/a
Ammonia-N	3	6	n/a
Dissolved Oxygen	n/a	n/a	3

Best Professional Judgment (BPJ) Limitations

DEP recommends the existing dissolved oxygen monitoring requirement remains in the permit to continue to characterize the effluent.

Influent BOD5 and TSS monitoring is not proposed for this outfall. Influent monitoring will be captured during normal operation when the facility is discharging via Outfall 004.

Anti-Backsliding

No limits or monitoring requirements are proposed to be made less stringent. Anti-backsliding regulations should not impact the permit.

Development of Effluent Limitations for Forest Inn WWTP

Outfall No. 007 **Design Flow (MGD)** 0.0265
Latitude 41º 25' 46.20" **Longitude** -76º 33' 53.80"
Wastewater Description: Sewage Effluent

Technology-Based Limitations

The following technology-based limitations apply, subject to water quality analysis and BPJ where applicable:

Pollutant	Limit (mg/l)	SBC	Federal Regulation	State Regulation
$CBOD_5$	25	Average Monthly	133.102(a)(4)(i)	92a.47(a)(1)
	40	Average Weekly	133.102(a)(4)(ii)	92a.47(a)(2)
Total Suspended Solids	30	Average Monthly	133.102(b)(1)	92a.47(a)(1)
	45	Average Weekly	133.102(b)(2)	92a.47(a)(2)
pH	6.0 – 9.0 S.U.	Min – Max	133.102(c)	95.2(1)
Fecal Coliform (5/1 – 9/30)	200 / 100 ml	Geo Mean	-	92a.47(a)(4)
Fecal Coliform (5/1 – 9/30)	1,000 / 100 ml	IMAX	-	92a.47(a)(4)
Fecal Coliform (10/1 – 4/30)	2,000 / 100 ml	Geo Mean	-	92a.47(a)(5)
Fecal Coliform (10/1 – 4/30)	10,000 / 100 ml	IMAX	-	92a.47(a)(5)
Total Residual Chlorine (1)	0.02	IMAX	-	92a.48(b)(3)

(1) Since this is a discharge to an exceptional value fishery, the permittee is required to dechlorinate per 25 PA Code § 92a.48(b)(3). To demonstrate effective dechlorination, previous renewals established an instantaneous maximum limitation 0.05 mg/l. DEP has proposed to change the limit to 0.02 mg/l to match the target quantitative limit recommended by the Bureau of Laboratories.

Water Quality-Based Limitations

A “Reasonable Potential Analysis” (attached) determined the existing WQBELs are appropriate. WQM 7.0 v1.0b output is as follows:

Parameter	Monthly Avg (mg/l)	Daily Max (mg/l)	Minimum (mg/l)
CBOD5	25	n/a	n/a
Ammonia-N	9.08	18.16	n/a
Dissolved Oxygen	n/a	n/a	3

Best Professional Judgment (BPJ) Limitations

DEP recommends the existing dissolved oxygen monitoring requirement remains in the permit to continue to characterize the effluent.

DEP also recommends that the existing BOD5 and TSS influent monitoring remains in the permit to continue to characterize the influent and supplement Chapter 94 reporting.

Anti-Backsliding

No limits or monitoring requirements are proposed to be made less stringent. Anti-backsliding regulations should not impact the permit.

Chesapeake Bay Requirements

The permittee monitored for total phosphorus and the nitrogen series for seven quarters in 2006 through 2007. The results are summarized in the fact sheet prepared in August 2015 for the most recent renewal of the permit. Per Pennsylvania's Chesapeake Bay Watershed Implementation Plan, further nutrient monitoring is not necessary.

Seasonal Limits

Due to the decrease in treatment efficiency and the increase in assimilative capacity in the receiving surface waters during cold weather months, seasonal limits have been implemented for CBOD5 and Ammonia-N. This approach is consistent with *Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits (362-0400-001), Determining Water Quality-Based Effluent Limits (391-2000-003), and Implementation Guidance of Section 93.7 Ammonia Criteria (391-2000-013)*.

Monitoring Frequencies

Outfalls 002, 003, 005, and 006 have historically been assigned lesser monitoring frequencies (1/quarter) than the primary Outfalls 001 and 004 (1/day, 2/month). A quarterly sample is unable to satisfy regulatory requirements for average monthly and average weekly statistical base codes. When these "emergency" outfalls are used, DEP believes they should be monitored at the same frequency as the primary outfalls. Accordingly, DEP has changed the monitoring requirements for Outfalls 002, 003, 005, and 006 to match the requirements at Outfalls 001 and 004.

Existing Effluent Limitations and Monitoring Requirements

The existing effluent limitations and monitoring requirements are as follows:

Outfall 001, Effective Period: Permit Effective Date through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Metered
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	Report Inst Min	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	Report	XXX	0.05	1/day	Grab
CBOD5 Nov 1 - Apr 30	13.8	22.0	XXX	25.0	40.0	50	2/month	Grab
CBOD5 May 1 - Oct 31	8.3	13.8	XXX	15.0	25.0	30	2/month	Grab
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/month	Grab
TSS	16.5	24.8	XXX	30.0	45.0	60	2/month	Grab
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/month	Grab
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab
Ammonia Nov 1 - Apr 30	5.0	7.4	XXX	9.0	13.5	18	2/month	Grab
Ammonia May 1 - Oct 31	1.7	2.5	XXX	3.0	4.5	6	2/month	Grab

Compliance Sampling Location: Outfall 001

Outfall 002. **Effective Period: Permit Effective Date through Permit Expiration Date.**

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Metered
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/quarter	Grab
DO	XXX	XXX	Report Inst Min	XXX	XXX	XXX	1/quarter	Grab
TRC	XXX	XXX	XXX	Report	XXX	0.05	1/quarter	Grab
CBOD5 Nov 1 - Apr 30	13.8	22.0	XXX	25.0	40.0	50	1/quarter	Grab
CBOD5 May 1 - Oct 31	8.3	13.8	XXX	15.0	25.0	30	1/quarter	Grab
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/quarter	Grab
TSS	16.5	24.8	XXX	30.0	45.0	60	1/quarter	Grab
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/quarter	Grab
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	1/quarter	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	1/quarter	Grab
Ammonia Nov 1 - Jun 30	5.0	7.4	XXX	9.0	13.5	18	1/quarter	Grab
Ammonia Jul 1 - Oct 31	1.7	2.5	XXX	3.0	4.5	6	1/quarter	Grab

Compliance Sampling Location: Outfall 002

Outfall 003, Effective Period: Permit Effective Date through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Metered
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/quarter	Grab
DO	XXX	XXX	Report Inst Min	XXX	XXX	XXX	1/quarter	Grab
TRC	XXX	XXX	XXX	Report	XXX	0.05	1/quarter	Grab
CBOD5 Nov 1 - Apr 30	13.8	22.0	XXX	25.0	40.0	50	1/quarter	Grab
CBOD5 May 1 - Oct 31	8.3	13.8	XXX	15.0	25.0	30	1/quarter	Grab
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/quarter	Grab
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/quarter	Grab
TSS	16.5	24.8	XXX	30.0	45.0	60	1/quarter	Grab
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	1/quarter	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	1/quarter	Grab
Ammonia Nov 1 - Apr 30	5.0	7.4	XXX	9.0	13.5	18	1/quarter	Grab
Ammonia May 1 - Oct 31	1.7	2.5	XXX	3.0	4.5	6	1/quarter	Grab

Compliance Sampling Location: Outfall 003

Outfall 004. **Effective Period: Permit Effective Date through Permit Expiration Date.**

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Metered
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	Report Inst Min	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	XXX	XXX	0.05	1/day	Grab
CBOD5 Nov 1 - Apr 30	13.8	22.0	XXX	25.0	40.0	50	2/month	Grab
CBOD5 May 1 - Oct 31	8.3	13.8	XXX	15.0	25.0	30	2/month	Grab
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/month	Grab
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/month	Grab
TSS	16.5	24.8	XXX	30.0	45.0	60	2/month	Grab
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab
Ammonia Nov 1 - Apr 30	5.0	7.4	XXX	9.0	13.5	18	2/month	Grab
Ammonia May 1 - Oct 31	1.7	2.5	XXX	3.0	4.5	6	2/month	Grab

Compliance Sampling Location: Outfall 004

Outfall 005. **Effective Period: Permit Effective Date through Permit Expiration Date.**

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Metered
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/quarter	Grab
DO	XXX	XXX	Report Inst Min	XXX	XXX	XXX	1/quarter	Grab
TRC	XXX	XXX	XXX	XXX	XXX	0.05	1/quarter	Grab
CBOD5 Nov 1 - Apr 30	13.8	22.0	XXX	25.0	40.0	50	1/quarter	Grab
CBOD5 May 1 - Oct 31	8.3	13.8	XXX	15.0	25.0	30	1/quarter	Grab
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/quarter	Grab
TSS	16.5	24.8	XXX	30.0	45.0	60	1/quarter	Grab
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/quarter	Grab
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	1/quarter	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	1/quarter	Grab
Ammonia Nov 1 - Apr 30	5.0	7.4	XXX	9.0	13.5	18	1/quarter	Grab
Ammonia May 1 - Oct 31	1.7	2.5	XXX	3.0	4.5	6	1/quarter	Grab

Compliance Sampling Location: Outfall 005

Outfall 006. **Effective Period: Permit Effective Date through Permit Expiration Date.**

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Metered
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/quarter	Grab
DO	XXX	XXX	Report Inst Min	XXX	XXX	XXX	1/quarter	Grab
TRC	XXX	XXX	XXX	XXX	XXX	0.05	1/quarter	Grab
CBOD5 Nov 1 - Apr 30	13.8	22.0	XXX	25.0	40.0	50	1/quarter	Grab
CBOD5 May 1 - Oct 31	8.3	13.8	XXX	15.0	25.0	30	1/quarter	Grab
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/quarter	Grab
TSS	16.5	24.8	XXX	30.0	45.0	60	1/quarter	Grab
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/quarter	Grab
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	1/quarter	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	1/quarter	Grab
Ammonia Nov 1 - Apr 30	5.0	7.4	XXX	9.0	13.5	18	1/quarter	Grab
Ammonia May 1 - Oct 31	1.7	2.5	XXX	3.0	4.5	6	1/quarter	Grab

Compliance Sampling Location: Outfall 006

Outfall 007. **Effective Period: Permit Effective Date through Permit Expiration Date.**

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Metered
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
TRC	XXX	XXX	XXX	Report	XXX	0.05	1/day	Grab
CBOD5	5.5	8.8	XXX	25.0	40.0	50	2/month	Grab
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/month	Grab
TSS	6.5	10	XXX	30.0	45.0	60	2/month	Grab
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/month	Grab
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab
Ammonia Nov 1 - Apr 30	Report	Report	XXX	Report	Report	XXX	2/month	Grab
Ammonia May 1 - Oct 31	2.0	2.9	XXX	9.0	13.5	18	2/month	Grab

Compliance Sampling Location: Outfall 007

Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (362-0400-001), SOPs and/or BPJ.

Outfall 001. **Effective Period: Permit Effective Date through Permit Expiration Date**.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Metered
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	Report Inst Min	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	Report	XXX	0.02	1/day	Grab
CBOD5 Nov 1 - Apr 30	13.8	22.0	XXX	25.0	40.0	50	2/month	Grab
CBOD5 May 1 - Oct 31	8.3	13.8	XXX	15.0	25.0	30	2/month	Grab
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/month	Grab
TSS	16.5	24.8	XXX	30.0	45.0	60	2/month	Grab
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/month	Grab
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab
Ammonia Nov 1 - Apr 30	5.0	7.4	XXX	9.0	13.5	18	2/month	Grab
Ammonia May 1 - Oct 31	1.7	2.5	XXX	3.0	4.5	6	2/month	Grab

Compliance Sampling Location: Outfall 001

Outfall 002. **Effective Period: Permit Effective Date through Permit Expiration Date.**

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Metered
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	Report Inst Min	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	Report	XXX	0.02	1/day	Grab
CBOD5 Nov 1 - Apr 30	13.8	22.0	XXX	25.0	40.0	50	2/month	Grab
CBOD5 May 1 - Oct 31	8.3	13.8	XXX	15.0	25.0	30	2/month	Grab
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/month	Grab
TSS	16.5	24.8	XXX	30.0	45.0	60	2/month	Grab
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/month	Grab
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab
Ammonia Nov 1 - Jun 30	5.0	7.4	XXX	9.0	13.5	18	2/month	Grab
Ammonia Jul 1 - Oct 31	1.7	2.5	XXX	3.0	4.5	6	2/month	Grab

Compliance Sampling Location: Outfall 002

Outfall 003, Effective Period: Permit Effective Date through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Metered
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	Report Inst Min	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	Report	XXX	0.02	1/day	Grab
CBOD5 Nov 1 - Apr 30	13.8	22.0	XXX	25.0	40.0	50	2/month	Grab
CBOD5 May 1 - Oct 31	8.3	13.8	XXX	15.0	25.0	30	2/month	Grab
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/month	Grab
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/month	Grab
TSS	16.5	24.8	XXX	30.0	45.0	60	2/month	Grab
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab
Ammonia Nov 1 - Apr 30	5.0	7.4	XXX	9.0	13.5	18	2/month	Grab
Ammonia May 1 - Oct 31	1.7	2.5	XXX	3.0	4.5	6	2/month	Grab

Compliance Sampling Location: Outfall 003

Outfall 004. **Effective Period: Permit Effective Date through Permit Expiration Date.**

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Metered
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	Report Inst Min	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	Report	XXX	0.02	1/day	Grab
CBOD5 Nov 1 - Apr 30	13.8	22.0	XXX	25.0	40.0	50	2/month	Grab
CBOD5 May 1 - Oct 31	8.3	13.8	XXX	15.0	25.0	30	2/month	Grab
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/month	Grab
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/month	Grab
TSS	16.5	24.8	XXX	30.0	45.0	60	2/month	Grab
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab
Ammonia Nov 1 - Apr 30	5.0	7.4	XXX	9.0	13.5	18	2/month	Grab
Ammonia May 1 - Oct 31	1.7	2.5	XXX	3.0	4.5	6	2/month	Grab

Compliance Sampling Location: Outfall 004

Outfall 005, Effective Period: **Permit Effective Date** through **Permit Expiration Date**.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Metered
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	Report Inst Min	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	Report	XXX	0.02	1/day	Grab
CBOD5 Nov 1 - Apr 30	13.8	22.0	XXX	25.0	40.0	50	2/month	Grab
CBOD5 May 1 - Oct 31	8.3	13.8	XXX	15.0	25.0	30	2/month	Grab
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/month	Grab
TSS	16.5	24.8	XXX	30.0	45.0	60	2/month	Grab
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/month	Grab
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab
Ammonia Nov 1 - Apr 30	5.0	7.4	XXX	9.0	13.5	18	2/month	Grab
Ammonia May 1 - Oct 31	1.7	2.5	XXX	3.0	4.5	6	2/month	Grab

Compliance Sampling Location: Outfall 005

Outfall 006. **Effective Period: Permit Effective Date through Permit Expiration Date.**

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Metered
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	Report Inst Min	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	Report	XXX	0.02	1/day	Grab
CBOD5 Nov 1 - Apr 30	13.8	22.0	XXX	25.0	40.0	50	2/month	Grab
CBOD5 May 1 - Oct 31	8.3	13.8	XXX	15.0	25.0	30	2/month	Grab
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/month	Grab
TSS	16.5	24.8	XXX	30.0	45.0	60	2/month	Grab
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/month	Grab
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab
Ammonia Nov 1 - Apr 30	5.0	7.4	XXX	9.0	13.5	18	2/month	Grab
Ammonia May 1 - Oct 31	1.7	2.5	XXX	3.0	4.5	6	2/month	Grab

Compliance Sampling Location: Outfall 006

Outfall 007, Effective Period: Permit Effective Date through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Metered
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
TRC	XXX	XXX	XXX	Report	XXX	0.02	1/day	Grab
CBOD5	5.5	8.8	XXX	25.0	40.0	50	2/month	Grab
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/month	Grab
TSS	6.5	10	XXX	30.0	45.0	60	2/month	Grab
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/month	Grab
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/month	Grab
Ammonia Nov 1 - Apr 30	Report	Report	XXX	Report	Report	XXX	2/month	Grab
Ammonia May 1 - Oct 31	2.0	2.9	XXX	9.0	13.5	18	2/month	Grab

Compliance Sampling Location: Outfall 007

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
10D	19732	Trib 19732 to Outlet, The	**0.530**	1640.00	0.88	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.389	0.00	0.00	0.000	0.000	0.0	0.00	0.00	20.00	6.50	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
The Outlet WWTP	PA0028282	0.0660	0.0660	0.0660	0.000	25.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	15.00	2.00	0.00	1.50
Dissolved Oxygen	3.00	8.24	0.00	0.00
NH3-N	3.00	0.00	0.00	0.70

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
10D	19732	Trib 19732 to Outlet, The	**0.000**	1530.00	1.04	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.389	0.00	0.00	0.000	0.000	0.0	0.00	0.00	20.00	6.50	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
		0.0000	0.0000	0.0000	0.000	25.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	25.00	2.00	0.00	1.50
Dissolved Oxygen	3.00	8.24	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
10D	19732	Trib 19732 to Outlet, The

RMI	Stream Flow (cfs)	PWS With (cfs)	Net Stream Flow (cfs)	Disc Analysis Flow (cfs)	Reach Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Reach Trav Time (days)	Analysis Temp (ºC)	Analysis pH
Q7-10 Flow												
0.530	0.34	0.00	0.34	.1021	0.03931	.469	5.82	12.42	0.16	0.199	21.15	6.57
Q1-10 Flow												
0.530	0.28	0.00	0.28	.1021	0.03931	NA	NA	NA	0.15	0.217	21.35	6.59
Q30-10 Flow												
0.530	0.46	0.00	0.46	.1021	0.03931	NA	NA	NA	0.19	0.174	20.90	6.56

WQM 7.0 Modeling Specifications

Parameters	Both	Use Inputted Q1-10 and Q30-10 Flows	☑
WLA Method	EMPR	Use Inputted W/D Ratio	☐
Q1-10/Q7-10 Ratio	0.81	Use Inputted Reach Travel Times	☐
Q30-10/Q7-10 Ratio	1.35	Temperature Adjust Kr	☑
D.O. Saturation	90.00%	Use Balanced Technology	☑
D.O. Goal	5		

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
10D	19732	Trib 19732 to Outlet, The

NH3-N Acute Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
0.530	The Outlet WWT	10.62	6	10.62	6	0	0

NH3-N Chronic Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
0.530	The Outlet WWT	2.33	3	2.33	3	0	0

Dissolved Oxygen Allocations

RMI	Discharge Name	CBOD5		NH3-N		Dissolved Oxygen		Critical Reach	Percent Reduction
		Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)		
0.53	The Outlet WWTP	15	15	3	3	3	3	0	0

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
10D	19732	Trib 19732 to Outlet, The

RMI	Total Discharge Flow (mgd)	Analysis Temperature (ºC)	Analysis pH
0.530	0.066	21.149	6.574
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
5.822	0.469	12.417	0.163
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
4.99	0.984	0.69	0.765
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
7.038	26.837	Owens	5
Reach Travel Time (days)			
0.199			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.020	4.88	0.68	7.68
0.040	4.78	0.67	8.06
0.060	4.69	0.66	8.07
0.080	4.59	0.65	8.07
0.099	4.50	0.64	8.07
0.119	4.41	0.63	8.07
0.139	4.32	0.62	8.07
0.159	4.23	0.61	8.07
0.179	4.14	0.60	8.07
0.199	4.06	0.59	8.07

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
10D	19732	Trib 19732 to Outlet, The

RMI	Name	Permit Number	Disc Flow (mgd)	Parameter	Effl. Limit 30-day Ave. (mg/L)	Effl. Limit Maximum (mg/L)	Effl. Limit Minimum (mg/L)
0.530	The Outlet WWTP	PA0028282	0.066	CBOD5	15		
				NH3-N	3	6	
				Dissolved Oxygen			3

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
10D	19731	Trib 19731 to Mackeys Run	**0.520**	850.00	0.22	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.389	0.00	0.00	0.000	0.000	0.0	0.00	0.00	20.00	6.50	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
MackeysRun WWTP	PA0028282-2	0.0660	0.0660	0.0660	0.000	25.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	15.00	2.00	0.00	1.50
Dissolved Oxygen	3.00	8.24	0.00	0.00
NH3-N	3.00	0.00	0.00	0.70

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
10D	19731	Trib 19731 to Mackeys Run	**0.000**	750.00	0.32	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.389	0.00	0.00	0.000	0.000	0.0	0.00	0.00	20.00	6.50	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
		0.0000	0.0000	0.0000	0.000	0.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	25.00	2.00	0.00	1.50
Dissolved Oxygen	3.00	8.24	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
10D	19731	Trib 19731 to Mackeys Run

RMI	Stream Flow (cfs)	PWS With (cfs)	Net Stream Flow (cfs)	Disc Analysis Flow (cfs)	Reach Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Reach Trav Time (days)	Analysis Temp (ºC)	Analysis pH
Q7-10 Flow												
0.520	0.09	0.00	0.09	.1021	0.03642	.417	3.33	7.99	0.14	0.235	22.72	6.70
Q1-10 Flow												
0.520	0.07	0.00	0.07	.1021	0.03642	NA	NA	NA	0.13	0.247	22.98	6.73
Q30-10 Flow												
0.520	0.12	0.00	0.12	.1021	0.03642	NA	NA	NA	0.15	0.216	22.35	6.67

WQM 7.0 Modeling Specifications

Parameters	Both	Use Inputted Q1-10 and Q30-10 Flows	☑
WLA Method	EMPR	Use Inputted W/D Ratio	☐
Q1-10/Q7-10 Ratio	0.81	Use Inputted Reach Travel Times	☐
Q30-10/Q7-10 Ratio	1.35	Temperature Adjust Kr	☑
D.O. Saturation	90.00%	Use Balanced Technology	☑
D.O. Goal	5		

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
10D	19731	Trib 19731 to Mackeys Run

NH3-N Acute Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
0.520	MackeysRun W	9.01	6	9.01	6	0	0

NH3-N Chronic Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
0.520	MackeysRun W	1.97	3	1.97	3	0	0

Dissolved Oxygen Allocations

RMI	Discharge Name	CBOD5		NH3-N		Dissolved Oxygen		Critical Reach	Percent Reduction
		Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)		
0.52	MackeysRun WWTP	15	15	3	3	3	3	0	0

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
10D	19731	Trib 19731 to Mackeys Run

RMI	Total Discharge Flow (mgd)	Analysis Temperature (ºC)	Analysis pH
0.520	0.066	22.720	6.702
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
3.327	0.417	7.988	0.135
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
9.07	1.319	1.63	0.863
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
5.391	30.653	Owens	5
Reach Travel Time (days)			
0.235			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.023	8.76	1.60	6.66
0.047	8.46	1.57	7.29
0.070	8.17	1.54	7.61
0.094	7.88	1.51	7.77
0.117	7.61	1.47	7.84
0.141	7.35	1.45	7.84
0.164	7.10	1.42	7.84
0.188	6.85	1.39	7.84
0.211	6.62	1.36	7.84
0.235	6.39	1.33	7.84

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
10D	19731	Trib 19731 to Mackeys Run

RMI	Name	Permit Number	Disc Flow (mgd)	Parameter	Effl. Limit 30-day Ave. (mg/L)	Effl. Limit Maximum (mg/L)	Effl. Limit Minimum (mg/L)
0.520	MackeysRun WWTP	PA0028282-2	0.066	CBOD5	15		
				NH3-N	3	6	
				Dissolved Oxygen			3

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
10B	20328	Trib 20328 of Double Run	**1.200**	1920.00	0.23	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.389	0.00	0.00	0.000	0.000	0.0	0.00	0.00	20.00	6.50	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
ForestInnWWTP	PA0028282-3	0.0265	0.0265	0.0265	0.000	25.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	25.00	2.00	0.00	1.50
Dissolved Oxygen	3.00	8.24	0.00	0.00
NH3-N	9.08	0.00	0.00	0.70

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
10B	20328	Trib 20328 of Double Run	**0.000**	1520.00	0.61	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.389	0.00	0.00	0.000	0.000	0.0	0.00	0.00	20.00	6.50	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
		0.0000	0.0000	0.0000	0.000	25.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	25.00	2.00	0.00	1.50
Dissolved Oxygen	3.00	8.24	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
10B	20328	Trib 20328 of Double Run

RMI	Stream Flow (cfs)	PWS With (cfs)	Net Stream Flow (cfs)	Disc Analysis Flow (cfs)	Reach Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Reach Trav Time (days)	Analysis Temp (ºC)	Analysis pH
Q7-10 Flow												
1.200	0.09	0.00	0.09	.041	0.06313	.406	2.8	6.9	0.11	0.640	21.57	6.61
Q1-10 Flow												
1.200	0.07	0.00	0.07	.041	0.06313	NA	NA	NA	0.10	0.711	21.90	6.63
Q30-10 Flow												
1.200	0.13	0.00	0.13	.041	0.06313	NA	NA	NA	0.13	0.556	21.22	6.58

WQM 7.0 Modeling Specifications

Parameters	Both	Use Inputted Q1-10 and Q30-10 Flows	☑
WLA Method	EMPR	Use Inputted W/D Ratio	☐
Q1-10/Q7-10 Ratio	0.75	Use Inputted Reach Travel Times	☐
Q30-10/Q7-10 Ratio	1.42	Temperature Adjust Kr	☑
D.O. Saturation	90.00%	Use Balanced Technology	☑
D.O. Goal	5		

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
10B	20328	Trib 20328 of Double Run

NH3-N Acute Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
1.200	ForestInnWWTP	10.08	18.16	10.08	18.16	0	0

NH3-N Chronic Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
1.200	ForestInnWWTP	2.25	9.08	2.25	9.08	0	0

Dissolved Oxygen Allocations

RMI	Discharge Name	CBOD5		NH3-N		Dissolved Oxygen		Critical Reach	Percent Reduction
		Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)		
1.20	ForestInnWWTP	25	25	9.08	9.08	3	3	0	0

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
10B	20328	Trib 20328 of Double Run

RMI	Total Discharge Flow (mgd)	Analysis Temperature (ºC)	Analysis pH
1.200	0.027	21.571	6.605
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
2.803	0.406	6.898	0.115
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
9.23	1.154	2.85	0.790
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
6.596	27.899	Owens	5
Reach Travel Time (days)			
0.640			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.064	8.52	2.71	7.73
0.128	7.87	2.58	7.97
0.192	7.27	2.45	8.01
0.256	6.72	2.33	8.01
0.320	6.20	2.22	8.01
0.384	5.73	2.11	8.01
0.448	5.29	2.00	8.01
0.512	4.89	1.90	8.01
0.576	4.51	1.81	8.01
0.640	4.17	1.72	8.01

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
10B	20328	Trib 20328 of Double Run

RMI	Name	Permit Number	Disc Flow (mgd)	Parameter	Effl. Limit 30-day Ave. (mg/L)	Effl. Limit Maximum (mg/L)	Effl. Limit Minimum (mg/L)
1.200	ForestInnWWTP	PA0028282-3	0.026	CBOD5	25		
				NH3-N	9.08	18.16	
				Dissolved Oxygen			3