

Application Type Renewal  
Facility Type Municipal  
Major / Minor Minor

## NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Application No. PA0272043  
APS ID 1128980  
Authorization ID 1512531

### Applicant and Facility Information

Applicant Name <u>Summit Township Authority</u>	Facility Name <u>Summit Township Authority STP</u>
Applicant Address <u>502 Bonniebrook Road</u>	Facility Address <u>Herman Road</u>
<u>Butler, PA 16002-0324</u>	<u>Butler, PA 16001</u>
Applicant Contact <u>David Barry</u>	Facility Contact _____
Applicant Phone <u>(724) 285-1168</u>	Facility Phone _____
Applicant Email <u>summitauthority@zoominternet.net</u>	_____
Client ID <u>347528</u>	Site ID <u>834227</u>
Ch 94 Load Status _____	Municipality <u>Summit Township</u>
Connection Status _____	County <u>Butler</u>
Date Application Received <u>December 19, 2024</u>	EPA Waived? <u>Yes</u>
Date Application Accepted <u>February 26, 2025</u>	If No, Reason _____
Purpose of Application <u>Renewal of a NPDES Permit for a Discharge of 0.13 MGD</u>	

### Summary of Review

This is a renewal NPDES permit application for 0.13 MGD of treated sanitary wastewater from a municipal sewer system. The Summit Township Authority STP has not started up yet.

There are no proposed changes to effluent limitations as part of this permit renewal.

Act 14 – Proof of Notification was submitted and received.

SPECIAL CONDITIONS: NONE

The EPA waiver is in effect.

There are NO open violations in WMS for the subject Client ID (347528) as of March 3, 2025.

#### 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		Aeshah Shameseldin Aeshah Shameseldin / Project Manager	March 3, 2025
X		Adam Olesnanik Adam Olesnanik, P.E. / Environmental Engineer Manager	April 18, 2025

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	001	Design Flow (MGD)	.13
Latitude	40° 51' 11.93"	Longitude	-79° 52' 12.89"
Quad Name	Saxonburg	Quad Code	40079G7
Wastewater Description:		Sewage Effluent	
Receiving Waters	Coal Run (WWF)	Stream Code	35130
NHD Com ID	126221594	RMI	0.95
Drainage Area	5.71 square miles	Yield (cfs/mi²)	0.047
Q <sub>7-10</sub> Flow (cfs)	0.268	Q <sub>7-10</sub> Basis	Calculated for Connoquenessing Creek
Elevation (ft)	1058	Slope (ft/ft)	---
Watershed No.	20-C	Chapter 93 Class.	WWF
Existing Use	---	Existing Use Qualifier	---
Exceptions to Use	---	Exceptions to Criteria	---
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment	---		
Source(s) of Impairment	---		
TMDL Status	---	Name	---
Background/Ambient Data		Data Source	
pH (SU)	7.0	Default	
Temperature (°F)	77	Default	
Hardness (mg/L)	100	Default	
Other:			
Nearest Downstream Public Water Supply Intake	Pennsylvania American Water Company - Ellwood City		
PWS Waters	Connoquenessing Creek	Flow at Intake (cfs)	---
PWS RMI	0.2	Distance from Outfall (mi)	---

Changes Since Last Permit Issuance: None.

Other Comments: None.

Treatment Facility Summary				
<b>Treatment Facility Name:</b> Summit Township Authority STP				
<b>WQM Permit No.</b>	<b>Issuance Date</b>			
1024401	May 7, 2024			
<b>Waste Type</b>	<b>Degree of Treatment</b>	<b>Process Type</b>	<b>Disinfection</b>	<b>Avg Annual Flow (MGD)</b>
Sewage	Tertiary	Activated Sludge	Ultraviolet Light	0.13
<b>Hydraulic Capacity (MGD)</b>	<b>Organic Capacity (lbs/day)</b>	<b>Load Status</b>	<b>Biosolids Treatment</b>	<b>Biosolids Use/Disposal</b>
0.416	335		Aerobic Digestion	Landfill

Changes Since Last Permit Issuance: None.

Other Comments: Treatment facilities permitted under WQM Permit # 1024401 consist of: A comminutor, raw sewage pumps, flow equalization tank, a Sequencing Batch Reactor (SBR), and Ultraviolet (UV) light disinfection.

**Development of Effluent Limitations**

Outfall No. 001  
Latitude 40° 51' 11.93"  
Wastewater Description: Sewage Effluent

Design Flow (MGD) .13  
Longitude -79° 52' 12.89"

**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 <sub>5</sub>	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	0.5	Average Monthly	-	92a.48(b)(2)
E. Coli	Report (No./100 ml)	IMAX	-	§ 92a.61

Comments: Monitoring for E. Coli is placed in the permit in accordance with the Department's SOP entitled "Establishing Effluent Limitations for Individual Sewage Permits."

**Water Quality-Based Limitations**

CBOD<sub>5</sub>, Ammonia, and DO are evaluated using WQM 7.0 (Attachment 1).

The following limitations were determined through water quality modeling (output files attached):

Parameter	Limit (mg/l)	SBC	Model
Dissolved Oxygen	4.0	Daily Min.	WQM 7.0
CBOD <sub>5</sub>	25	Average Monthly	WQM 7.0
	50	IMAX	
Ammonia Nitrogen (May 1 – Oct 31)	4.13	Average Monthly	WQM 7.0
	8.26	IMAX	

Comments: WQM modeling didn't calculate more stringent average monthly Ammonia Nitrogen limit at perennial conditions. Current monitoring requirements are more protective and will be retained.

**Best Professional Judgment (BPJ) Limitations**

Comments: Monitoring for total nitrogen, total phosphorus and raw sewage influent monitoring for CBOD<sub>5</sub> and TSS are placed in the permit in accordance with the Department's SOP entitled "Establishing Effluent Limitations for Individual Sewage Permits."

**Anti-Backsliding**

N/A

**Proposed Effluent Limitations and Monitoring Requirements**

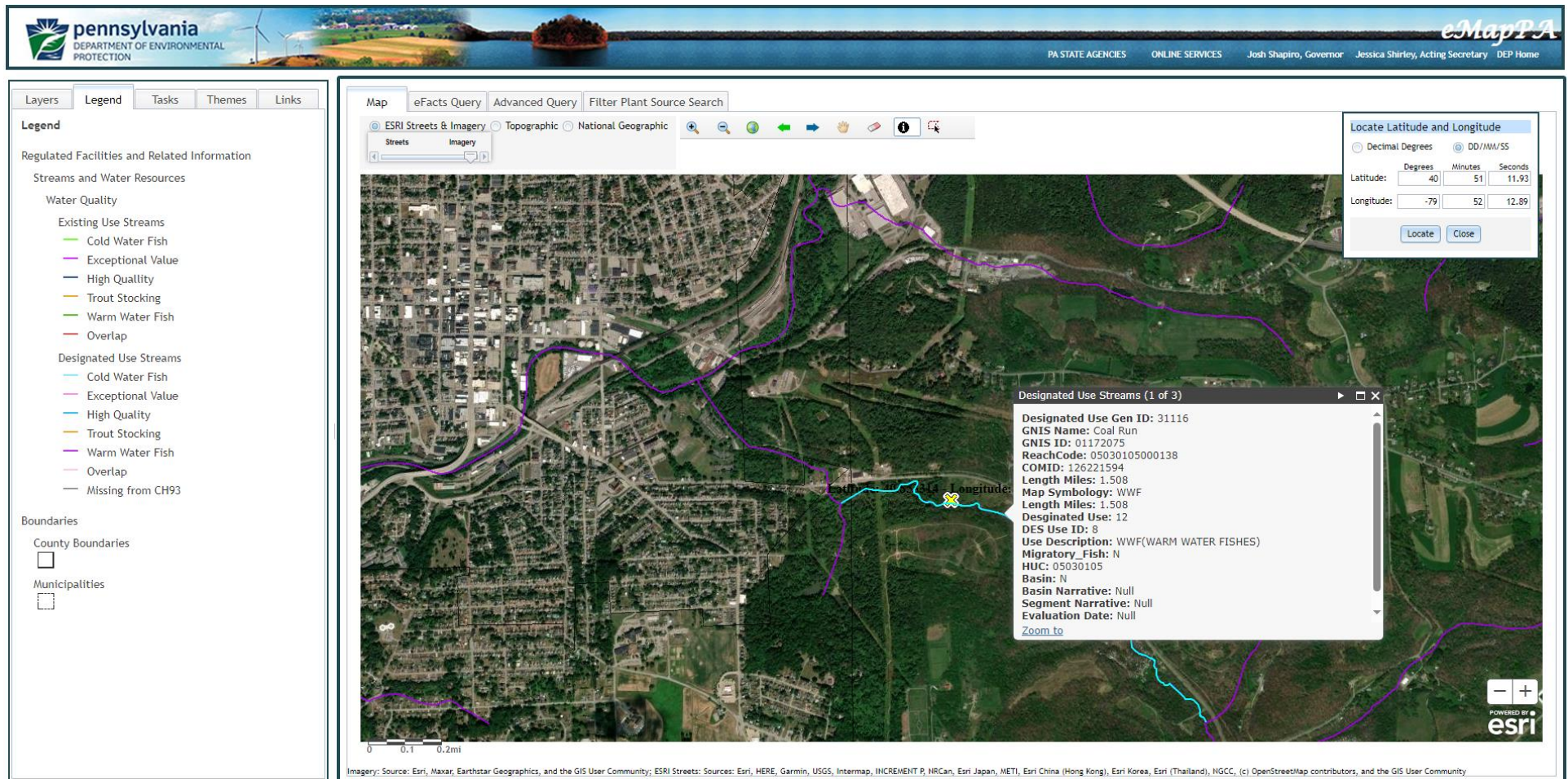
The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (386-0400-001), SOPs and/or BPJ.

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

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) <sup>(1)</sup>		Concentrations (mg/L)				Minimum <sup>(2)</sup> Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	1/week	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	6.0 Inst Min	XXX	XXX	XXX	1/day	Grab
CBOD5	10.8	XXX	XXX	10.0	XXX	20	1/week	24-Hr Composite
BOD5	XXX	XXX	XXX	Report	XXX	XXX	1/week	24-Hr Composite
Raw Sewage Influent	XXX	XXX	XXX	Report	XXX	XXX	1/week	24-Hr Composite
TSS	10.8	XXX	XXX	10.0	XXX	20	1/week	24-Hr Composite
TSS Raw Sewage Influent	XXX	XXX	XXX	Report	XXX	XXX	1/week	24-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	1/week	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	1/week	Grab
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/quarter	Grab
UV Intensity (µw/cm²)	XXX	XXX	XXX	Report Daily Max	XXX	XXX	1/day	Recorded
Total Nitrogen	Report	XXX	XXX	5.0	XXX	10	1/week	24-Hr Composite
Ammonia Nov 1 - Apr 30	12.3	XXX	XXX	11.4	XXX	22.8	1/week	24-Hr Composite
Ammonia May 1 - Oct 31	4.1	XXX	XXX	3.8	XXX	7.6	1/week	24-Hr Composite
Total Phosphorus	Report	XXX	XXX	0.5	XXX	1	1/week	24-Hr Composite

Compliance Sampling Location: Outfall 001, after disinfection.

Outfall Location - eMap with Aerial Imagery





## Drainage Area Location – StreamStats with Aerial Imagery

## StreamStats Report

Region ID:

PA

Workspace ID:

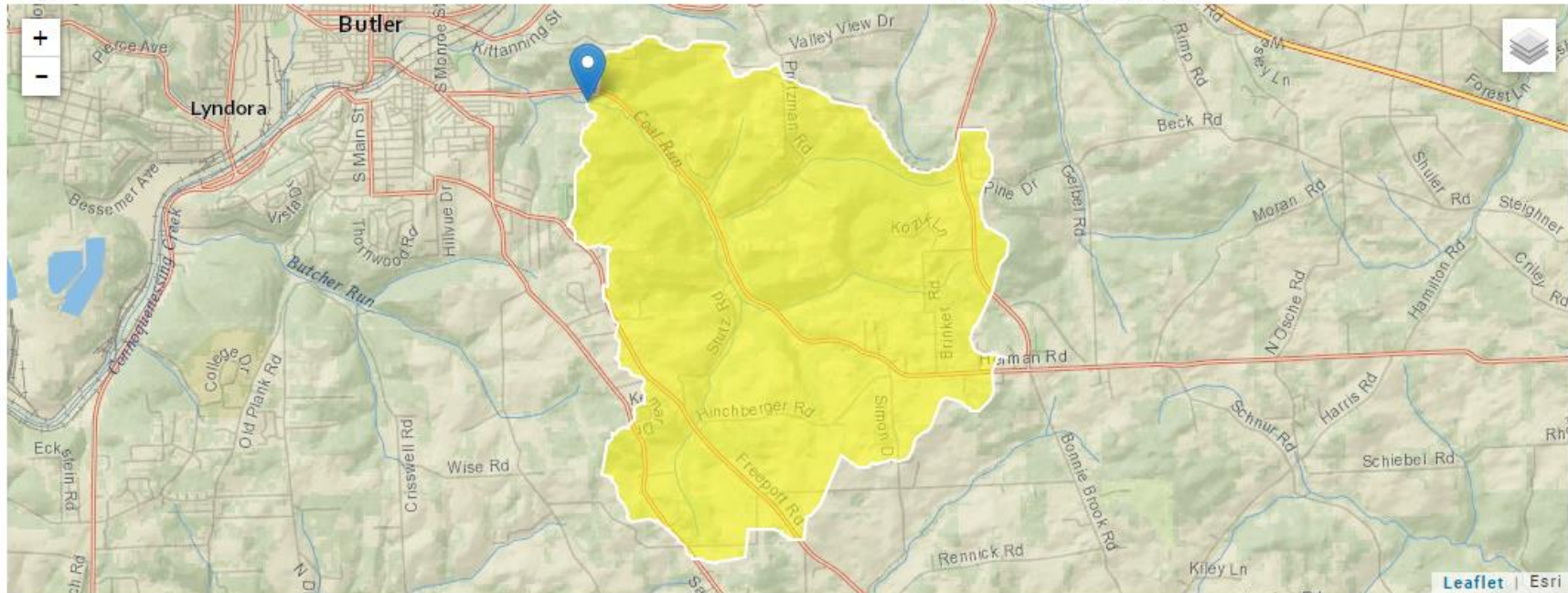
PA20250226191744652000

**Clicked Point (Latitude, Longitude):**

40.85318, -79.87019

Time:

2025-02-26 14:18:13 -0500



 Collapse All

### ➤ Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	5.71	square miles

## Attachment 1

### WQM 7.0 Effluent Limits

<u>SWP Basin</u>		<u>Stream Code</u>		<u>Stream Name</u>			
20C		35130		COAL 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)
0.950	Summit TWP STP	PA0272043	0.130	CBOD5	25		
				NH3-N	4.13	8.26	
				Dissolved Oxygen			4



### WQM 7.0 Modeling Specifications

Parameters	Both	Use Inputted Q1-10 and Q30-10 Flows	<input checked="" type="checkbox"/>
WLA Method	EMPR	Use Inputted W/D Ratio	<input type="checkbox"/>
Q1-10/Q7-10 Ratio	0.64	Use Inputted Reach Travel Times	<input type="checkbox"/>
Q30-10/Q7-10 Ratio	1.36	Temperature Adjust Kr	<input checked="" type="checkbox"/>
D.O. Saturation	90.00%	Use Balanced Technology	<input checked="" type="checkbox"/>
D.O. Goal	5		

## WQM 7.0 D.O.Simulation

<u>SWP Basin</u>	<u>Stream Code</u>	<u>Stream Name</u>		
20C	35130	COAL RUN		
<u>RMI</u>	<u>Total Discharge Flow (mgd)</u>	<u>Analysis Temperature (°C)</u>	<u>Analysis pH</u>	
0.950	0.130	22.858	7.000	
<u>Reach Width (ft)</u>	<u>Reach Depth (ft)</u>	<u>Reach WDRatio</u>	<u>Reach Velocity (fps)</u>	
10.256	0.454	22.606	0.101	
<u>Reach CBOD5 (mg/L)</u>	<u>Reach Kc (1/days)</u>	<u>Reach NH3-N (mg/L)</u>	<u>Reach Kn (1/days)</u>	
11.85	1.273	1.83	0.872	
<u>Reach DO (mg/L)</u>	<u>Reach Kr (1/days)</u>	<u>Kr Equation</u>	<u>Reach DO Goal (mg/L)</u>	
6.024	21.553	Owens	5	
<u>Reach Travel Time (days)</u>	<u>Subreach Results</u>			
0.569	TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
	0.057	10.91	1.74	6.87
	0.114	10.05	1.65	7.20
	0.171	9.25	1.57	7.36
	0.228	8.52	1.50	7.48
	0.285	7.84	1.43	7.54
	0.342	7.22	1.36	7.54
	0.399	6.65	1.29	7.54
	0.455	6.12	1.23	7.54
	0.512	5.63	1.17	7.54
	0.569	5.19	1.11	7.54

### 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
20C	35130	COAL RUN	0.950	1058.00	5.71	0.00000	0.00	<input checked="" type="checkbox"/>

#### Stream Data

Design Cond.	LFY	Trib Flow	Stream Flow	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	pH	Stream Temp (°C)	pH
	(cfsm)	(cfs)	(cfs)									
Q7-10	0.047	0.00	0.00	0.000	0.000	0.0	0.00	0.00	25.00	7.00	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
Summit TWP STP	PA0272043	0.1300	0.0000	0.0000	0.000	20.00	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	4.00	7.54	0.00	0.00
NH3-N	25.00	0.10	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
20C	35130	COAL RUN	0.010	998.00	6.43	0.00000	0.00	<input checked="" type="checkbox"/>

#### Stream Data

Design Cond.	LFY	Trib Flow	Stream Flow	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	pH	Stream Temp (°C)	pH
	(cfsm)	(cfs)	(cfs)									
Q7-10	0.047	0.00	0.00	0.000	0.000	0.0	0.00	0.00	25.00	7.00	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 Wasteload Allocations

<u>SWP Basin</u>	<u>Stream Code</u>	<u>Stream Name</u>
20C	35130	COAL 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
0.950	Summit TWP ST	13.85	25.59	13.85	25.59	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
0.950	Summit TWP ST	1.53	4.13	1.53	4.13	0	0

### **Dissolved Oxygen Allocations**

RMI	Discharge Name	<u>CBOD5</u>		<u>NH3-N</u>		<u>Dissolved Oxygen</u>		Critical Reach	Percent Reduction
		Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)		
0.95	Summit TWP STP	25	25	4.13	4.13	4	4	0	0

### WQM 7.0 Hydrodynamic Outputs

<u>SWP Basin</u>		<u>Stream Code</u>		<u>Stream Name</u>								
20C		35130		COAL RUN								
RMI	Stream Flow	PWS With	Net Stream Flow	Disc Analysis Flow	Reach Slope	Depth	Width	W/D Ratio	Velocity	Reach Trav Time	Analysis Temp	Analysis pH
	(cfs)	(cfs)	(cfs)	(cfs)	(ft/ft)	(ft)	(ft)		(fps)	(days)	(°C)	
<b>Q7-10 Flow</b>												
0.950	0.27	0.00	0.27	.2011	0.01209	.454	10.26	22.61	0.10	0.569	22.86	7.00
<b>Q1-10 Flow</b>												
0.950	0.17	0.00	0.17	.2011	0.01209	NA	NA	NA	0.09	0.648	22.30	7.00
<b>Q30-10 Flow</b>												
0.950	0.36	0.00	0.36	.2011	0.01209	NA	NA	NA	0.11	0.513	23.22	7.00