pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southwest Regional Office
CLEAN WATER PROGRAM

Application Type	**New**	Application No.	**PA0264113**
Facility Type	**Storm Water**	APS ID	**877638**
Major / Minor	**Minor**	Authorization ID	**1085086**

NPDES PERMIT FACT SHEET INDIVIDUAL INDUSTRIAL WASTE (IW) AND IW STORMWATER

Applicant and Facility Information

Applicant Name	**Salvatore & Dianna Tresco & Tresco Concrete Products Inc. Joint Client**	Facility Name	**Tresco Paving Asphalt Supply**
Applicant Address	415 Unity Center Road Pittsburgh, PA 15239-3409	Facility Address	155 Plant Road Delmont, PA 15626
Applicant Contact	Vince Tresco	Facility Contact	Vince Tresco
Applicant Phone	(412) 793-4385	Facility Phone	(412) 793-4385
Client ID	321717	Site ID	464809
SIC Code	2951,3273	Municipality	Salem Township
SIC Description	Manufacturing - Asphalt Paving Mixtures And Blocks, Manufacturing - Ready-Mixed Concrete	County	Westmoreland
Date Application Received	July 17, 2015	EPA Waived?	Yes
Date Application Accepted	April 12, 2018	If No, Reason	

Purpose of Application: New request for NPDES permit for Stormwater discharge to HQ-CWF receiving waters

Summary of Review

Background

Salvatore and Diane Tresco established Tresco Paving Corporation (Tresco) with other related company entities and constructed an asphalt batch plant at 155 Plant Road in the 1989-1990 timeframe at the site of a historic strip mine that predates 1939. Several expansions of the Tresco facilities have occurred including the addition of a concrete batch plant circa 2000 and, more recently, a second, larger asphalt batch plant location. All of these operations remain well inside the footprint of the original strip mine which contains most of the site's discharges and storm water runoff.

An application to obtain coverage under an Individual Permit to Discharge Industrial Wastewater was received on December 31, 2014 but was returned as incomplete on February 3, 2015. An updated submittal was received on July 15, 2015 and was determined to be complete on August 25, 2015. A site inspection was subsequently conducted which identified two additional outfalls which are now included as Outfalls 003 and 004. Further discussions were held in a meeting on December 20, 2017. These newly identified outfall locations were further defined in a follow-up email from the consultant, Markosky Engineering Group, Inc. (Markosky) on March 29, 2018. A second inspection was conducted by the Department on April 11, 2018, no violations were identified. An email attachment on April 12, 2018 from Markosky included updated versions of application Module 1 with additional sample information. Also updated in this time frame was Module 4 (Anti-Degradation) along with a site and an updated stormwater drainage map.

The Tresco application submittals indicated that activities at the site were best described under SIC codes of 2951, "Asphalt Paving Mixtures and Blocks" and also under 3273, "Ready-Mix Concrete." This facility houses permanent asphalt and concrete batch plants sitting on approximately 21.27 acres within Salem Township of Westmoreland County. Samples and

Approve	Deny	Signatures	Date
X		John L Duryea, Jr., P.E. / Environmental Engineer	August 15, 2023
X		Michael E. Fifth, P.E. / Environmental Engineer Manager	August 29, 2023

Summary of Review

analyses results were submitted with the permit application for the previously identified Outfalls 001 and 002. On April 12, 2018 sample analyses were received by the Department including stormwater samples for all four outfalls. Figure 1 below includes an overlay of a satellite image with the site plan showing its four outfalls and its permitted operational areas including two asphalt batch plants, one concrete batch plant along with storage areas and buildings:

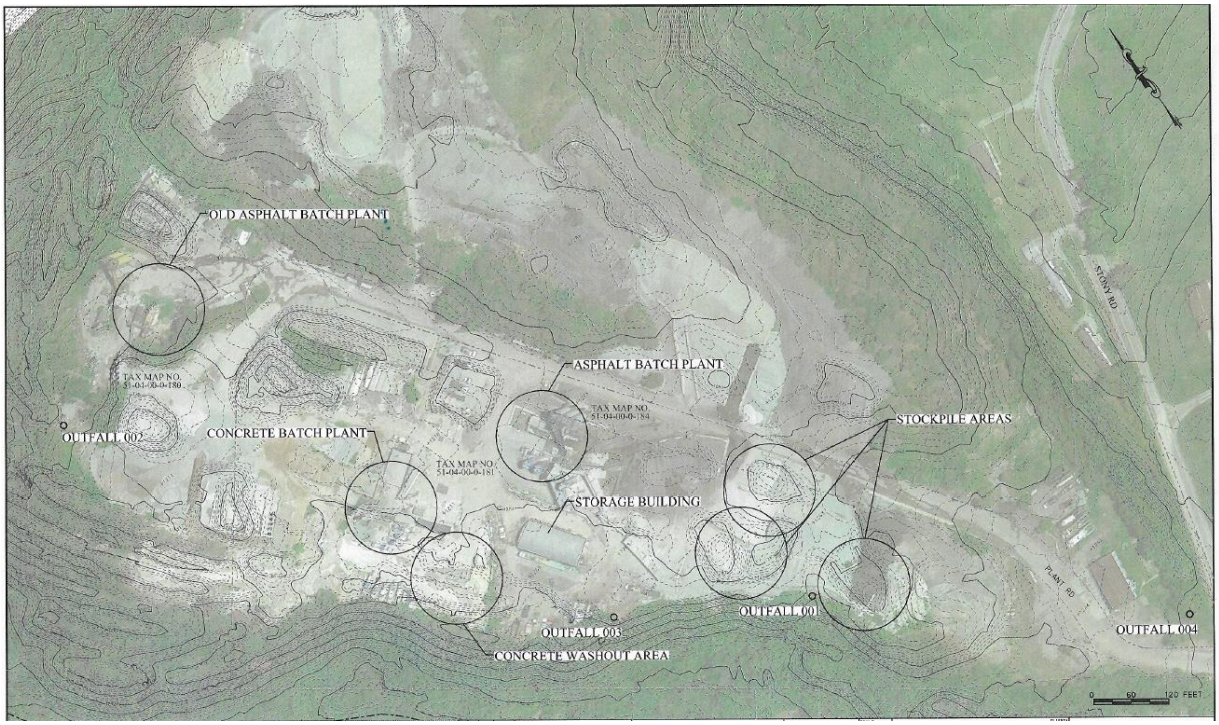

Figure 1:Tresco Site Plan Showing the four Outfalls, One Concrete and Two Asphalt Batch Plants

As noted above the hydrology of this repurposed strip mine is generally directing water into the middle of the prior pit area. Figure 2 below details the drainage areas for the four outfalls onsite:

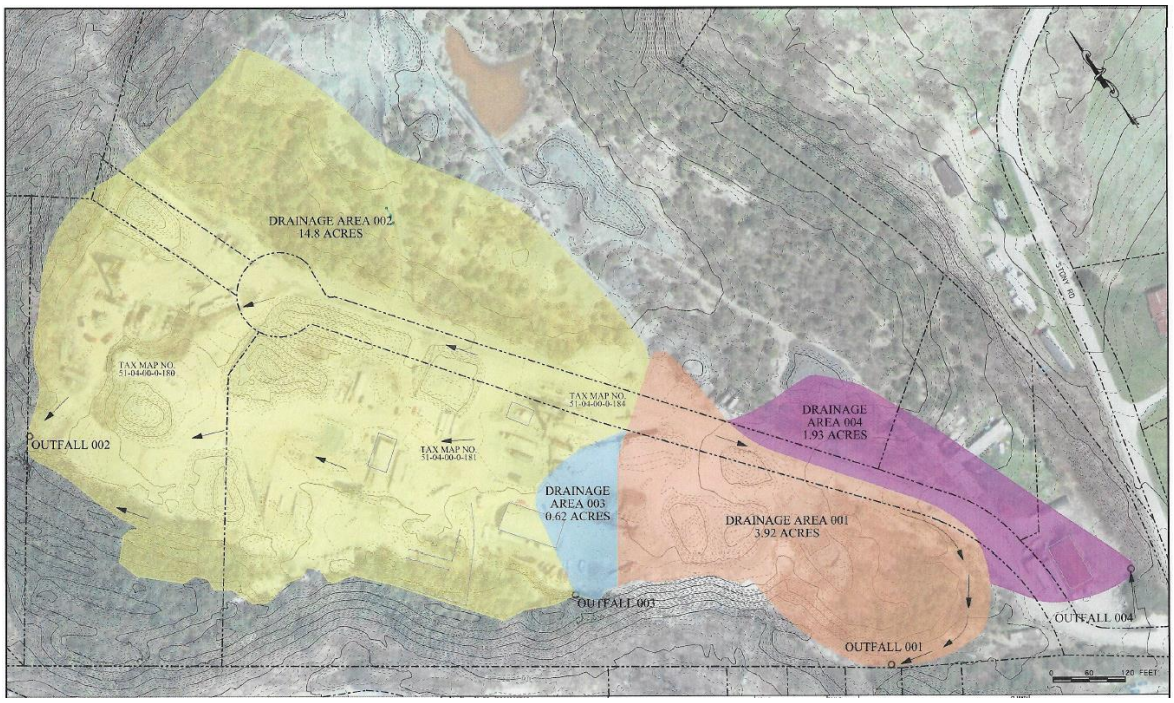

Figure 2: Tresco Site Drainage Areas Feeding the Four Site Outfalls

Summary of Review

A comparison of Figures 1 and 2 reveals that the three onsite batch plants are located in the drainage area of Outfall 002. Unusually, Outfall 002 does not discharge to a surface water and it is unclear if this discharge enters any of the nearby surface waters. It acts similarly to a detention pond best management practice (BMP), in that, water pools in this location briefly and then infiltrates.

This site, dedicated to producing asphalt and later concrete for almost three decades, has also been extensively altered with the regrading including placement of concrete blocks which are produced onsite. The result is to direct storm water away from asphalt and concrete batch processing areas, truck wash water settling basins and concrete recycling areas. Concrete wash water is recycled for use with concrete batch production. A limited storm water sewer system has been created to direct water into a central cistern also for the purpose of reuse for production needs. Apart from the wash areas, peripheral areas, the entry way, office and parking areas all direct storm water toward the four outfalls onsite.

Three of these stormwater outfalls, numbered 001 – 003 along the southwestern border of the site, are located in the Thorn Run watershed in the area of its unnamed tributary (42990). 25 PA Code Chapter 93 classifies these surface waters as high quality cold water fisheries (HQ-CWF). For Thorn Run, this designation was published in Pa. Bulletin 36 on September 8, 1979. As this designation predates the startup of the industrial activities onsite, the facility represents a new discharge to High Quality waters.

Outfall 004 directs storm water from a small area (less than 2 acres) near the plant's entry way toward the site entrance along Story Road. From there it flows offsite in the direction of an unnamed tributary of Beaver Run (43000). This stream and Beaver Run are also classified as HQ-CWF.

Therefore, 25 PA Code Chapter 93.4c.(b)(1)(i) requires an evaluation of non-discharge alternatives that are environmentally sound and cost-effective. Tresco submitted this evaluation with their submittals both in 2015 and again in 2018. In both of these submittals, Tresco commits to establishing and maintaining a condition of "No Exposure" within the stormwater drainage areas of their outfalls.

These four outfalls handle stormwater from the southern and western surface areas of the site. The majority of the acreage toward the north and east is not used for process purposes and is vegetated and pervious with much of the stormwater flow infiltrating. This is also true in the western area flowing toward Outfall 002 which directs storm water toward a rocky swale where stormwater collects and appears to quickly infiltrate underground. There is no visible outlet to surface water at Outfall 002. This area is pictured in Figure 3:

Figure 3: 2018 Inspection Photograph of the Area Designated as Outfall 002.

Summary of Review

Several possibilities exist for where this discharge goes. Exploring this question, a geologic review of this area is shown in Figure 4 below from the Department's eMapPA utility:

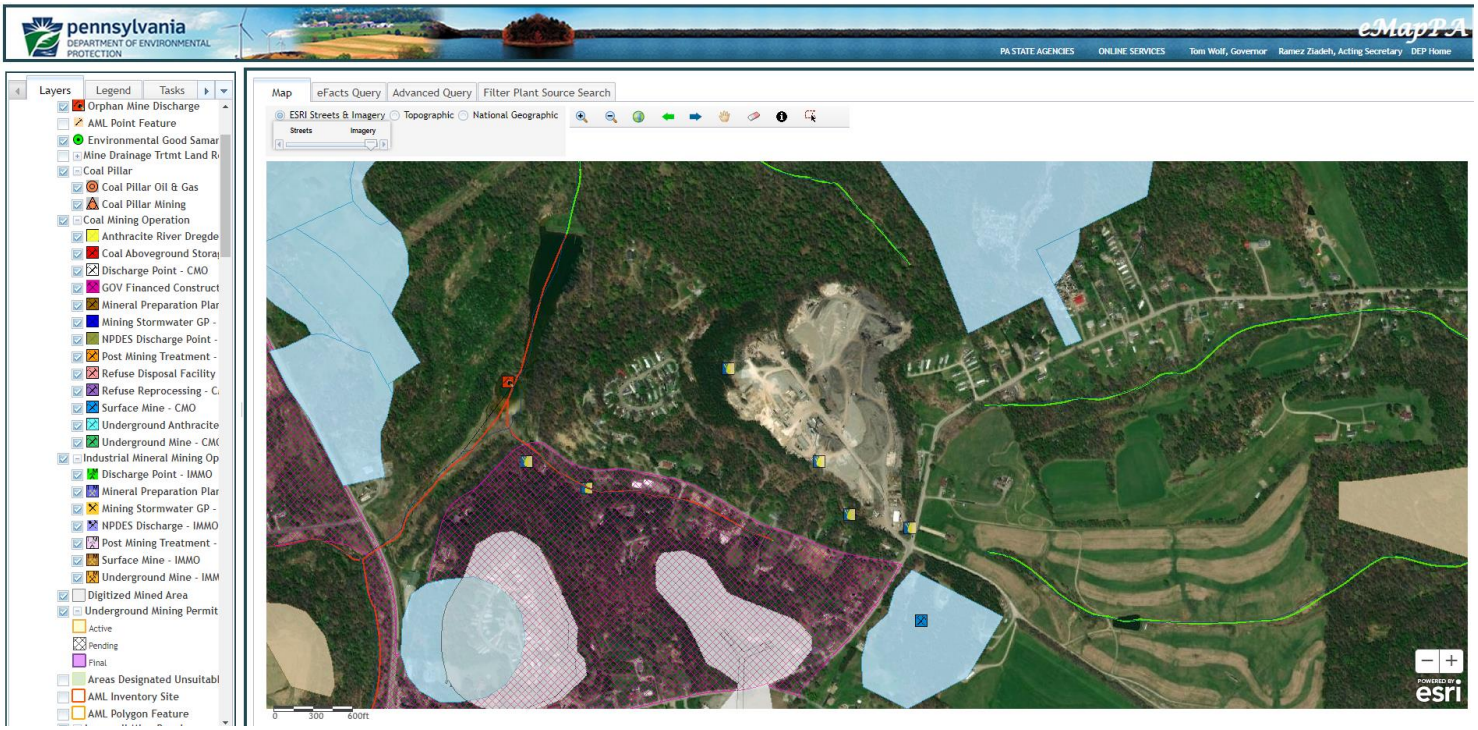

Figure 4: eMapPA Image of the Tresco Site and Environs

Figure 4 shows the surface and underground mines near the heart-shaped Tresco site in the center of the image. The light blue areas are surface coal mines and the magenta hatched areas are subsurface mines and the partial legend is toward the left of the image. The older surface mine that envelopes today's Tresco site predates these permitted mines. As can be seen in the image, no subsurface mine is directly below the Tresco site. The question of the destination of the discharge from Outfall 002 after it infiltrates has one or more of three obvious possibilities: (1) to a subterranean aquafer, (2) into a mine pool or (3) into a geologic sink. The last of these, a geologic sink is defined as a depression within an endoreic basin (i.e. a basin that retains water and allows no outflow to other external bodies of water). Of note, directly to the west of the Tresco site is a red square on Thorn Run which represents an orphan mine discharge. Directly down stream of this discharge is an abandoned mine discharge treatment area.

As noted above, all the industrial processing areas for the two asphalt plants and one concrete plant are located within the drainage area designated as Outfall 002. This area has no observable discharge to surface waters, but to firmly establish whether any of the drainage ultimately makes its way to surface water, further study would be required. Absent additional geologic information, the discharges to 002 will be regulated as surface water discharges to ensure that ground and surface water resources are protected from contamination.

The Tresco permit application indicates that no process water is proposed for discharge. If it could be further established that no stormwater from the process water basin areas reaches a regulated water of the Commonwealth, then this site may otherwise qualify for coverage under a General Permit if not for the discharges to HQ-CWF waters. These details were confirmed during the site inspection on April 11, 2018. The General Permit appendices that would have applied to this site includes both Appendix M and N, covering (among others) asphalt paving materials and concrete products, respectively. However, to ensure that the discharge does not degrade the receiving High Quality streams, the Department's "No Exposure" benchmark values will be used as the benchmark values in the permit. The goal for the permittee is to be consistently below these benchmark values; doing this shows that the discharges are uncontaminated stormwater and will maintain and protect the existing quality of the receiving waters for Outfalls 001 through 004.

A Preparedness, Prevention and Contingency (PPC) plan was included with the application. The PPC provides a more detailed description of the site and generally follows the format of "Guidelines for the Development and Implementation of Environmental Emergency Response Plans (400-2200-001).

Summary of Review

The permittee has complied with Act 14.

It is recommended that a Draft NPDES Permit be published for public comment in response to this application.

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.

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001, 002, 003	Design Flow (MGD)	0
Latitude	40º 26' 37", 40º 26' 48", 40º 26' 41"	Longitude	-79º 34' 07", -79º 34' 19"-79º 34' 10"
Quad Name	Slickville	Quad Code	1509
Wastewater Description:	Stormwater		
Receiving Waters	Unnamed Tributary to Thorn Run	Stream Code	42990
NHD Com ID	125291748	RMI	0.4400
Drainage Area	0.62	Yield (cfs/mi^2)	0.02371
Q_{7-10} Flow (cfs)	0.0147	Q_{7-10} Basis	USGS StreamStats
Elevation (ft)	1235 ft.	Slope (ft/ft)	
Watershed No.	18-B	Chapter 93 Class.	HQ-CWF
Existing Use	**Aquatic Life**	Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	Metals, Siltation, pH		
Source(s) of Impairment	Abandoned Mine Drainage		
TMDL Status	Final, Final	Name	Kiskiminetas-Conemaugh River Watersheds TMDL,Thorn Run Watershed
Nearest Downstream Public Water Supply Intake	MAWC Sweeney Plant		
PWS Waters	Beaver Run	Flow at Intake (cfs)	1.38
PWS RMI	7.1	Distance from Outfall (mi)	> 4.9

Other Comments: As can be seen from Figure 5, Outfall 001 is in the headwaters of UNT 42990, as is Outfall 003.

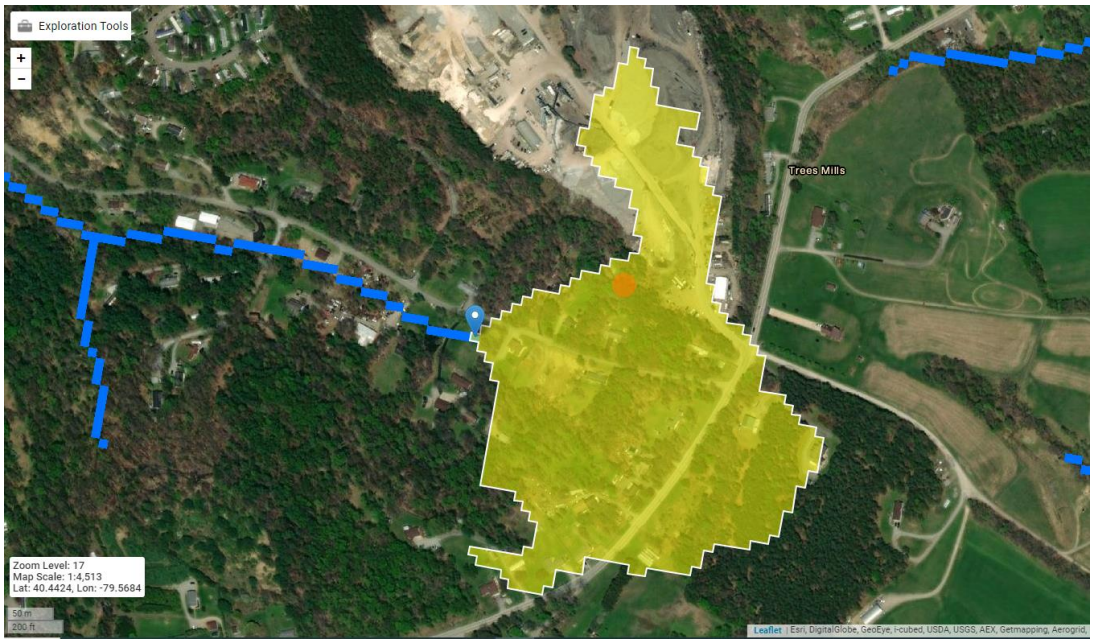

Figure 5: Drainage Area at the Headwaters of UNT 42990 of Thorn Run and Location of Outfall 001

Discharge, Receiving Waters and Water Supply Information

Outfall No.	004	Design Flow (MGD)	0
Latitude	40º 26' 34.17"	Longitude	-79º 33' 53.19"
Quad Name	Slickville	Quad Code	1509
Wastewater Description:	Stormwater		

Receiving Waters	Unnamed Tributary to Beaver Run	Stream Code	43000*
NHD Com ID	125291743	RMI	0.2000
Drainage Area	1.93 acres (0.003 sq. miles)	Yield (cfs/mi^2)	0.03412
Q_{7-10} Flow (cfs)	0.0001	Q_{7-10} Basis	USGS StreamStats
Elevation (ft)	1240	Slope (ft/ft)	
Watershed No.	18-B	Chapter 93 Class.	HQ-CWF
Existing Use	**Aquatic Life**	Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Attaining Use(s): All		
Cause(s) of Impairment	**None**		
Source(s) of Impairment	**None**		
TMDL Status	Final	Name	Kiskiminetas-Conemaugh River Watersheds TMDL

Nearest Downstream Public Water Supply Intake	MAWC Sweeney Plant		
PWS Waters	Beaver Run	Flow at Intake (cfs)	1.38
PWS RMI	7.1	Distance from Outfall (mi)	> 5.9

Other Comments: Outfall 004 is in the headwaters of either UNT 43000 or UNT 42998 to Beaver Run, the latter being the more likely. This is shown in Figure 6 below:

Figure 6: Drainage Area at the Headwaters of UNT 42998 of Beaver Run and Location of Outfall 004

Development of Effluent Limitations

Outfall No.	001, 002, 003 and 004	**Design Flow (MGD)**	0
Latitude	40º 26' 37", 40º 26' 48", 40º 26' 41", 40º 26' 36"	**Longitude**	-79º 34' 07", -79º 34' 19", -79º 34' 10", -79º 34' 01"
Wastewater Description:	Stormwater		

Technology-Based Limitations

This facility is categorized by its SIC Code under 40 CFR 443 Effluent Limitations Guidelines (ELGs) for Existing Sources and Standards of Performance and Pretreatment Standards for New Sources for the Paving and Roofing Materials (Tars and Asphalt) Point Source Category, Subpart B 443.23 (BAT) – Asphalt Concrete Subcategory. This ELG was promulgated in 1975 for discharges of process water used for the control of point-source dust emissions from aggregate drying and material mixing operations (i.e. wet collection systems for point-source dust control, not water spraying for general facility dust control).

The only ELG provision of this subcategory is that "there shall be no discharge of process wastewater pollutants to navigable waters." Since the asphalt plant areas are categorized under 40 CFR 443, an individual permit may be precluded for any process wastewater from the asphalt plant areas since the ELG's "no discharge" provision precludes the issuance of a permit allowing a wastewater discharge.

For the Ready-Mix concrete batch facility (SIC Code 3273), no current sections of Federal statutes, i.e. No parts of Title 40 Code of Federal Regulations(CFR) §§ 405 – 471, directly apply to the establishment of effluent limits for this type of facility. Therefore, Tresco is not subject to any additional Federal ELGs related to the concrete mixing facilities onsite.

Storm Water Outfalls

The Department's policy for stormwater discharges is to either (1) require that the stormwater is uncontaminated, (2) impose "Monitor and Report", to establish effluent goals and require the permittee to submit a Stormwater Pollution Prevention Plan (SWPPP), or (3) impose effluent limits. In all cases, a storm water special condition is placed in the permit in Part C.

If stormwater effluent data is reported in the application, it can be compared to stream criteria, EPA's Multi-Sector General Permit (MSGP) "benchmark values", ELGs and other references while considering site specific conditions such as stream flow and location to determine if actual discharge concentrations of various pollutants in stormwater warrant further controls. If there is insufficient data available, or if pollutant levels are excessive, monitoring for specific pollutants and/or a storm water pollution prevention plan (SWPPP) are required in the permit. In the case of the stormwater discharges at Outfalls 001, 002, 003 and 004 for Tresco, limited stormwater data was contained in the applicant's submittal from 2015 and again in 2018. The more recent data is compared with the "No Exposure" benchmarks in individual Tables that follow. Table 1 below shows the information received on April 12, 2018 for Outfall 001:

Table 1: Applicant Sample Results for Outfall 001 and Benchmarks

Parameter	Application Concentration (mg/L)	No Exposure Thresholds (mg/L)
Oil and Grease	**5.9**	≤ 5.0
Biochemical Oxygen Demand (5-day)	<5.2	≤ 10.0
Chemical Oxygen Demand	**40.1**	≤ 30.0
Total Suspended Solids	27	≤ 30.0
Total Nitrogen	**3.3**	≤ 2.0 (Tot. N)
Total Iron	No Data Supplied	≤ 7.0
Total Phosphorus	0.22	≤ 1.0
pH (s.u.)	6.7	6.0 – 9.0 s.u.

As can be seen in Table 1 above, for the sample results reported by Markosky for Outfall 001, several pollutants listed nominally exceed the Department's "No Exposure" benchmarks. These exceedances are shown in bold, **red** in the table. In addition, no value was reported for iron. In contrast, these reported results were a substantial improvement over results reported with the original application in 2015, so the trend may be positive. Similar results were reported for Outfalls 002 through 004 in Tables 2 through 4 below. As with Table 1, exceedances are again shown in bold, **red**:

Table 2: Applicant Sample Results for Outfall 002 and Benchmarks

Parameter	Application Concentration (mg/L)	No Exposure Thresholds (mg/L)
Oil and Grease	<4.8	≤ 5.0
Biochemical Oxygen Demand (5-day)	<5.2	≤ 10.0
Chemical Oxygen Demand	**42.3**	≤ 30.0
Total Suspended Solids	**72**	≤ 30.0
Total Nitrogen	**2.7**	≤ 2.0 (Tot. N)
Total Iron	No Data Supplied	≤ 7.0
Total Phosphorus	0.1	≤ 1.0
pH (s.u.)	7.7	6.0 – 9.0 s.u.

Table 3: Applicant Sample Results for Outfall 003 and Benchmarks

Parameter	Application Concentration (mg/L)	No Exposure Thresholds (mg/L)
Oil and Grease	<4.8	≤ 5.0
Biochemical Oxygen Demand (5-day)	<5.2	≤ 10.0
Chemical Oxygen Demand	**40.1**	≤ 30.0
Total Suspended Solids	16	≤ 30.0
Total Nitrogen	**2.7**	≤ 2.0 (Tot. N)
Total Iron	No Data Supplied	≤ 7.0
Total Phosphorus	0.096	≤ 1.0
pH (s.u.)	7.4	6.0 – 9.0 s.u.

Table 4: Applicant Sample Results for Outfall 004 and Benchmarks

Parameter	Application Concentration (mg/L)	No Exposure Thresholds (mg/L)
Oil and Grease	<4.8	≤ 5.0
Biochemical Oxygen Demand (5-day)	<5.2	≤ 10.0
Chemical Oxygen Demand	**40.1**	≤ 30.0
Total Suspended Solids	**33**	≤ 30.0
Total Nitrogen	**2.7**	≤ 2.0 (Tot. N)
Total Iron	No Data Supplied	≤ 7.0
Total Phosphorus	0.46	≤ 1.0
pH (s.u.)	7.1	6.0 – 9.0 s.u.

In all of the tables above, some of the reported results exceed the established benchmarks. To assess the applicant's assertion of "No Exposure" to onsite industrial activity, multiple communications with the client's consultant and the applicant were made, including a detailed electronic mail with data comparisons on August 1, 2022; a reply on December 13, 2022 from the consultant, reasserting the position that "No Exposure" benchmarks are achievable using BMPs; an in-person meeting on February 22, 2023; the consultant's detail design and implementation schedule for BMPs, received March 22, 2023, a confirmation of the "Late Finish" BMP development date (June 19, 2023) on May 24, 2023 and a pre-draft teleconference, held on June 1, 2023. Throughout, Tresco has committed to manage the site to meet the "No Exposure" thresholds and to monitor quarterly. Therefore, consistent with 25 Pa. Code § 92a.61(h) and DEP's policy for permitting storm water discharges associated with industrial activities, minimum standards are developed below, including as described in DEP's PAG-03 General NPDES Permit for Discharges of Storm Water Associated with Industrial Activity will be applied to Tresco's storm water discharges.

Stormwater Technology Limits

Outfalls 001 through 004 will be subject to PAG-03 General Stormwater Permit conditions as a minimum requirement because the outfalls discharge stormwater associated with industrial activity. As noted earlier, the SIC codes applicable to the site are 2951 and 3273. The corresponding appendices of the PAG-03 that would apply to the facility are Appendix M and N. The reporting requirements applicable to stormwater discharges are shown in Tables 5 and 6 below. Along with the monitoring requirements, sector specific Best Management Practices (BMPs) included in Appendices M and N of the PAG-03 will also be included in Part C of the Draft Permit.

Table 5: PAG-03 Appendix (M) Monitoring Requirements

Parameter	Max Daily Concentration	Measurement Frequency	Sample Type
pH	Monitor and Report	1/6 Months	Grab
Total Suspended Solids (TSS)	Monitor and Report	1/6 Months	Grab
Oil and Grease	Monitor and Report	1/6 Months	Grab

Table 6: PAG-03 Appendix (N) Monitoring Requirements

Parameter	Max Daily Concentration	Measurement Frequency	Sample Type
pH	Monitor and Report	1/6 Months	Grab
Total Suspended Solids (TSS)	Monitor and Report	1/6 Months	Grab
Total Aluminum	Monitor and Report	1/6 Months	Grab
Total Iron	Monitor and Report	1/6 Months	Grab

In addition, in July 2023 monitoring for Total Nitrogen and Total Phosphorus is being added to all Appendices. Also, due to the number of exceedances and the amount of industrial activity ongoing at the Tresco site, the monitoring frequency will be set to once per quarter in order to more closely monitor these stormwater discharges that may enter HQ-CWF designated surface waters of the Commonwealth.

In addition, since the "No Exposure" benchmark for Chemical Oxygen Demand (COD) is exceeded for all outfalls (see Tables 1 – 4 above) discharging to HQ-CWF receiving surface waters, monitoring will be added for this as well. This will afford Tresco the data needed to optimize the site's practices and possibly add BMPs to better achieve the "No Exposure" condition to which they have committed themselves

BPJ Analysis – [TSS, COD, Nitrogen, Phosphorus, pH, Oil and Grease]

This site has been operating since circa 1990, monitoring samples have been obtained in support of their application submittals circa 2015 and again in 2018. Since the latter application, the client has consistently maintained their position that they can implement BMPs and meet "No Exposure" benchmarks. The focus of this analysis will be a consideration of application of the Department's "No Exposure" benchmarks as Effluent Limitations in order to be protective of the HQ-CWF receiving waters surrounding this site. The No Exposure benchmark values are shown in Table 7 below.

Table 7: "No Exposure" Benchmark Values

Parameter	Concentrations (mg/L)
Total Suspended Solids (TSS)	≤ 30.0
Chemical Oxygen Demand	≤ 30.0
Total Nitrogen	≤ 2.0
Total Phosphorus	≤ 1.0
Oil and Grease	5.0

Applicable Federal ELGs for discharges from asphalt batch plants, as at Tresco's site, preclude discharge of process wastewaters. However, as noted above, the Department has General Permit appendices for discharges of stormwater associated with industrial activities conducted at this site. For the Ready-Mix concrete batch areas, the absence of any ELG technology limitations are developed based on BPJ. In establishing effluent limitations on a case-by-case basis, the appropriate technology for the applicant is considered. When evaluating appropriate BPJ limits for a permittee, the Department considers six factors as required by 40 CFR § 125.3. These six factors are: (1) the age of the equipment and facility, (2) the process employed, (3) the engineering aspects of the application of various types of control technique, (4) process changes, (5) the cost of achieving such effluent reduction and, (6) non-water quality environmental impact (including energy requirements). Factors specific to each level of control technology include costs, pollutant reduction benefits and economic achievability. Each of these factors are discussed below as they relate to Tresco's site.

1. Equipment and Facility Age – The asphalt and concrete batch plants at this site vary widely in age over the 32 year history of Tresco's operations onsite. The site is in continuing operation and has full-time staff. The site has access to installed electrical power and water supply in the immediate vicinity but does not currently have sampling and monitoring facilities or controls installed. Fortunately, these should not be required to design and implement the BMPs needed to treat stormwater runoff. It appears unlikely that Tresco will need to invest resources into additional specialized pollution control equipment. The site is expected to be successful in the future using its new BMPs.

2. The Process Employed – The Department anticipates compliance with the proposed effluent limitations through use of the new, BMPs to control stormwater discharges. However, any process water being discharged is likely to exceed these same effluent limitations and may require chemical additives or other treatment technologies Until implementation of these BMPs, this site will likely be challenged to meet its effluent limits.

3. Engineering Aspects of Control Techniques – Design and implementation of stormwater BMPs are being developed with the assistance of an engineering consultant. After implementation, time may be required to adjust these BMPs, the Department and the permittee will evaluate the engineering aspects of any required changes after implementation during the permit term.

4. Process Changes – Given the planned implementation of BMPs to control stormwater releases from the site, few, if any, changes to operations at the site are expected. Therefore, sample analysis results submitted under this NPDES permit are expected to be in compliance in the future. Implementation of any required additional measures should have minimal impact on the continuing operations at this facility, as well. Future BMP adjustments are not expected to significantly add to the overall cost of operating the facility but may increase maintenance expenses.

5. The Cost of Achieving Effluent Reductions – The TBELs for TSS, COD, Nitrogen, Phosphorus, pH, oil and grease have been set at a level indicative of uncontaminated stormwater. Implementation of BMPs are anticipated using commercially materials and equipment already available onsite. Although costs will be incurred, the use of a compliance schedule should allow for these costs to be managed during the site's "off season."

6. Non-Water-Quality Environmental Impacts (Including Energy Requirements) – Implementation of stormwater BMPs should have no known non-water quality environmental impacts. The proposed effluent limits are appropriate to verify that uncontaminated stormwater is discharged from this site.

In order to monitor the operation and maintenance of the expected BMPs, the Department proposes TBELs based upon BPJ for Outfalls 001 - 004. These limits are imposed consistent with the previously noted Department General Permit appendices shown in Tables 5 and 6 with the recent additions of Total Nitrogen and Total Phosphorus with the addition of COD based on the client's supplied samples and pH, now applied as BPJ, derived from applicable PA regulations. A maximum pH limit of 9.0 S.U. is proposed in accordance with 25 Pa. Code § 95.2. The typical 6.0 S.U. lower bound is waived consistent with regional stormwater permitting policy which acknowledges precipitation as having a pH of less than 6.0 S.U.

These recommendations for TBELs are included in Table 8 below.

Table 8: Recommended TBELs for Outfalls 001 - 004

Parameter	Monthly Avg.	Daily Max	IMAX	Units
TSS	---	30.0	----	mg/L
COD	---	30.0	----	mg/L
Oil and Grease		5.0		mg/L
pH		9.0		S.U.
Nitrogen, Total	---	2.0	----	mg/L
Phosphorus, Total	---	1.0	----	mg/L

Note that quarterly sampling renders promulgation of monthly averages impractical.

Water Quality-Based Limitations

Stormwater WQBELs

Water quality analyses are typically performed under low-flow (Q_{7-10}) conditions. Stormwater discharges occur at variable rates and frequencies but rarely however during Q_{7-10} conditions. Since the discharges from Outfalls 001, 002, 003, and 004 are composed entirely of stormwater, a formal water quality analysis cannot be accurately conducted. Accordingly, water quality-based effluent limitations are not proposed.

Anti-Degradation

Antidegradation regulations under Chapter 93.4c(a)(l)(i) require discharger to protect the existing use of receiving waters. Chapter 93.4c(b) requires dischargers to consider non-discharge alternatives, public participation and social/economic justification when proposing new, additional or increased discharges to high quality or exceptional value streams. Existing use protection required under Chapter 93.4c(a)(l)(i) is ensured for discharges to high quality streams imposing the most stringent of technology-based, water quality based and non-degrading effluent limitations. To ensure that the discharge does not degrade the stream, the “No Exposure” benchmark values will be imposed as effluent limitations in the permit.

Total Maximum Daily Loads (TMDL)

All stormwater discharges from Tresco are located within the Kiskiminetas-Conemaugh River Watersheds for which the Department has developed a TMDL. This TMDL was finalized on January 29, 2010 and establishes waste load allocations for the discharge of aluminum, iron and manganese within the Kiskiminetas-Conemaugh River Watersheds. In addition, Outfalls 001, 002 and 003 are also within the Thorn Run Watershed TMDL. This TMDL was finalized on April 9, 2001. It also establishes, effectively equivalent effluent discharge concentrations for these same metals.

Section 303(d) of the Clean Water Act and the U.S. Environmental Protection Agency’s Water Quality Planning and Management Regulations (codified at Title 40 of the *Code of Federal Regulations* Part 130) require states to develop a TMDL for impaired water bodies. A TMDL establishes the amount of a pollutant that a water body can assimilate without exceeding the water quality criteria for that pollutant. TMDLs provide the scientific basis for a state to establish water quality-based controls to reduce pollution from both point and non-point sources in order to restore and maintain the quality of the state’s water resources (USEPA 1991a). Stream reaches within the Kiskiminetas-Conemaugh River Watersheds as well as the Thorn Run Watershed are included in the state’s 2008 Section 303(d) list because of various impairments, including metals, pH and sediment (among others). These TMDLs include consideration for each river and tributary within the target watershed and its impairment sources. Stream data is then used to calculate minimum pollutant reductions that are necessary to attain water quality criteria levels. Target concentrations published in both of these TMDLs were based on established water quality criteria of **0.750** $^{mg}/_{L}$ total recoverable aluminum, **1.5** $^{mg}/_{L}$ total recoverable iron based on a 30-day average and **1.0** $^{mg}/_{L}$ total recoverable manganese. The reduction needed to meet the minimum water quality standards is then divided between each known point and non-point pollutant source in the form

of a watershed allocation. TMDLs prescribe allocations that minimally achieve water quality criteria (i.e., 100 percent use of a stream's assimilative capacity).

The Tresco site, being newly permitted, is not listed in the Appendix G of the Kiskiminetas-Conemaugh River Watersheds TMDL nor in the Thorn Run Watershed TMDL and therefore, wasn't provided load allocations under either. It was assumed that stormwater discharges from Tresco will not contain aluminum, iron, and manganese since in Module 4 of their application submittal, Tresco committed to establish and maintain "No Exposure" conditions which would preclude discharge these metals. Therefore, these Tresco point sources were not considered as potential sources of the metal impairments in the Thorn Run and Kiskiminetas-Conemaugh River Watersheds. In other words, if it is determined that a site is discharging wastewater containing these pollutants, the site must meet the instream criterion values for these parameters at the point of discharge. However, in this case the only discharge from Outfalls 001, 002, 003 and 004 is stormwater, therefore, only monitor and report for aluminum, iron and manganese will be imposed at Outfall 001, 002, 003 and 004 based on both of these applicable TMDLs.

Future renewals may benefit from the acquired data and may revisit imposition of effluent limitations related to these TMDLs in the future.

Anti-Backsliding

As this is the initial issuance of this NPDES permit, EPA's anti-backsliding regulation, 40 CFR 122.44(l) does not apply.

Considerations Unique to Outfall 002

Since the destination of the discharge from this outfall is indeterminant, the question is how to permit this. In a US Supreme Court decision on April 23, 2020 in the County of Maui v. Hawaii Wildlife Fund, the majority opinion established that a permit is required for a discharge for "the functional equivalent of a direct discharge." It is the Department's opinion that, absent further data, this discharge is the functional equivalent of a direct discharge. Therefore, it will be treated as analogous with the discharges at Outfalls 001, 003 and 004. If data is submitted that runs counter to this conclusion, this information can be considered in the future.

Because of proximity and topography, this discharge is expected to drain into the adjacent Thorn Run watershed, likely through a segment of the underground mine pool to the south of the Tresco site. Note that Pennsylvania's Clean Streams Law broadly defines groundwater and mine pools as waters of the Commonwealth and therefore are subject to regulation. Should it be determined in the future that stormwater settling in the vicinity of Outfall 002 does not make its way to regulated waters (e.g. is to a geologic sink) then this decision may be reconsidered. Figure 7 is a topographic map view from eMapPA, similar to that previously shown in Figure 4, but centered on the orphan mine discharge on Thorn Run:

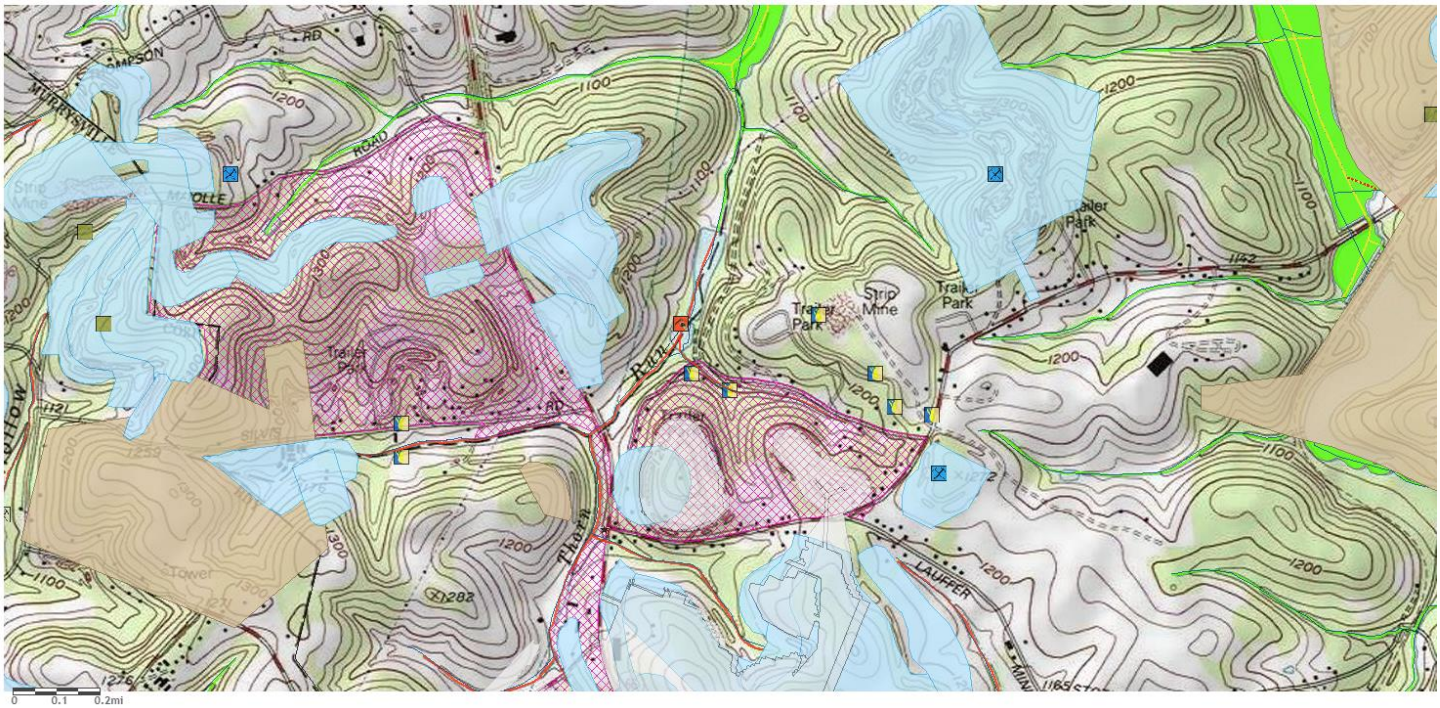

Figure 7: Topographic Map of Tresco Outfall 002 and the Orphan Mine Discharge on Thorn Run

The red square in the center of Figure 6 is the location of the orphan mine discharge, as well as, other outfalls from the underground mine directly south of the Tresco site. A careful study of this figure reveals that the elevation at the Outfall 002 location is notably higher than both the mine to the south and the various outfalls toward the southeast on Thorn Run. Given this, the Department considers that the most reasonable approach is essentially the same as used for Outfalls 001 and 003. This will require that a provision be implemented to collect a stormwater sample at Outfall 002.

Monitoring Requirements for Outfalls 001 - 004

Sampling will be established at these outfalls to monitor the effectiveness of the site's BMPs, implemented to maintain stormwater discharges within "No Exposure" benchmark values. The benchmarks will be promulgated as effluent limitations in order to protect the receiving high quality surface waters. Monitoring will be established at a once per quarter frequency. As noted above, the General Permit has recently added nitrogen and phosphorus to the monitored pollutants, so these are included with the associated benchmarks. Also, the AMD metals limited in the Kiskiminetas-Conemaugh River Watershed and Thorn Rune TMDLs will be added for monitoring. The resulting monitoring requirements are shown in Table 9 below:

Table 9. Effluent limits and Monitoring Requirements for Outfalls 001 - 004

Parameter	Mass (pounds)		Concentration (mg/L)		Monitoring Requirements
	Average Monthly	Daily Maximum	Daily Maximum	Instant. Maximum	
Total Suspended Solids	—	—	30.0	—	Grab sample; 1/quarter
Oil and Grease	—	—	5.0	—	Grab sample; 1/quarter
Chemical Oxygen Demand	—	—	30.0	—	Grab sample; 1/quarter
Total Nitrogen	—	—	2.0	—	Calculation; 1/quarter
Total Phosphorus			1.0		Grab sample; 1/quarter
Total Aluminum	—	—	Report	—	Grab sample; 1/quarter
Total Iron	—	—	Report	—	Grab sample; 1/quarter
Total Manganese	—	—	Report	—	Grab sample; 1/quarter
pH (S.U.)	Within the range of 6.0 to 9.0				Grab sample; 1/quarter

Footnote: Total Nitrogen is the sum of Total Kjeldahl-N (TKN) plus Nitrite-Nitrate as N (NO_2+NO_3-N), where TKN and NO_2

+NO_3-N are measured in the same sample.

In Table 9 above, since once per quarter monitoring has been imposed, averaging over a month will only typically occur when extra samples are taken. Therefore, no reported values for average have been proposed, but only the daily maximum values.

Effluent Limitation Compliance Schedule

Whenever the Department proposes the imposition of water quality based effluent limitations on existing sources, the NPDES permit may include a schedule of compliance to achieve the WQBELs. Any compliance schedule contained in an NPDES permit must be an "enforceable sequence of actions or operations leading to compliance with the water quality-based effluent limitations ("WQBELs"). In accordance with 40 CFR 122.47(a)(3) and PA Code, Chapter 92a.51, compliance schedules that are longer than one year in duration must set forth interim requirements and dates for their achievement. In order to grant a compliance schedule in an NPDES permit, the permitting authority has to make a reasonable finding, adequately supported by the administrative record and described in the fact sheet, that a compliance schedule is "appropriate" and that compliance with the final WQBEL is required "as soon as possible".

In this case, Tresco had been working cooperatively with the Department and their consultant toward meeting their commitment of achieving the "No Exposure" benchmarks. Since the discharges consist of stormwater only; and, to be protective of the HQ receiving waters, the Department is requiring these benchmarks to be enforced as effluent limitations rather than imposing strict anti-degradation effluent limitations based on BPJ. Given this fact and to allow the permittee sufficient time to adapt BMPs and possibly treatments at their outfalls to meet these newly imposed TBELs, then it is judged to also be necessary and reasonable to allow a compliance schedule before enforcing these new limitation, also based on BPJ. Toward the objective of determining a reasonable compliance schedule period, the permittee supplied a schedule, shown as Table 10 below:

Table 10: Planning Schedule Offered by Tresco and Their Consultant, Markosky

Action Item	Early Start	Late Start	Early Finish	Late Finish	Duration
Markosky to develop BMPs and submit plans to Tresco for concurrence	4/3/23	4/24/23	5/29/23	6/19/23	8 Weeks
Tresco to Review and accept or provide comment	5/29/23	6/19/23	6/19/23	7/10/23	3 Weeks
Markosky to revise and obtain approval from Tresco and submit to DEP for review	6/19/23	7/10/23	7/10/23	7/31/23	3 Weeks
DEP to review plans and provide comments or concurrence	7/10/23	7/31/23	9/18/23	10/9/23	10 Weeks
Markosky to respond to comments, obtain concurrence from DEP and provide approved plans to Tresco (assumed 1 round of correspondence)	9/18/23	10/9/23	10/16/23	11/6/23	4 Weeks
Tresco to construct BMPs	10/16/23	11/6/23	1/8/24	1/29/24	12 Weeks (Estimate based on assumed BMPs prior to development)
Tresco to sample outfalls	1/22/24	2/12/24	2/5/24	2/26/24	2-4 weeks after construction during a rain event
Markosky to review water quality results and assess BMP function	2/19/24	3/11/24	3/4/24	3/25/24	2 weeks assumed to receive the results + 2 weeks for assessment
Markosky to report results and assessment of BMPs to DEP (Further action items will be developed at this time as necessary based on results)	3/4/24	3/25/24	3/11/24	4/1/24	1 week

After the discussions held between Tresco and the Department on June 1, 2023, further delay in drafting this permit was considered unnecessary. So, rather than wait for the above plan to play out, the parties agreed to a 1-year compliance schedule before effluent limitations would be enforced. This will allow an effectively equivalent period for Tresco to adapt BMPs to meet the "No Exposure" benchmarks imposed as Effluent Limitations. After this 1-year period following the permit effective date, the final permit limits will take effect.

Tools and References Used to Develop Permit	
☐	WQM for Windows Model
☐	PENTOXSD for Windows Model
☐	TRC Model Spreadsheet
☐	Temperature Model Spreadsheet
☐	Toxics Management Spreadsheet
☐	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
☐	Technical Guidance for the Development and Specification of Effluent Limitations, 362-0400-001, 10/97.
☐	Policy for Permitting Surface Water Diversions, 362-2000-003, 3/98.
☐	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 362-2000-008, 11/96.
☐	Technology-Based Control Requirements for Water Treatment Plant Wastes, 362-2183-003, 10/97.
☐	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 362-2183-004, 12/97.
☐	Pennsylvania CSO Policy, 385-2000-011, 9/08.
☒	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
☐	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 391-2000-002, 4/97.
☐	Determining Water Quality-Based Effluent Limits, 391-2000-003, 12/97.
☐	Implementation Guidance Design Conditions, 391-2000-006, 9/97.
☐	Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 391-2000-007, 6/2004.
☐	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 391-2000-008, 10/1997.
☐	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 391-2000-010, 3/99.
☐	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 391-2000-011, 5/2004.
☐	Implementation Guidance for Section 93.7 Ammonia Criteria, 391-2000-013, 11/97.
☐	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 391-2000-014, 4/2008.
☐	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 391-2000-015, 11/1994.
☐	Implementation Guidance for Temperature Criteria, 391-2000-017, 4/09.
☐	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 391-2000-018, 10/97.
☐	Implementation Guidance for Application of Section 93.5(e) for Potable Water Supply Protection Total Dissolved Solids, Nitrite-Nitrate, Non-Priority Pollutant Phenolics and Fluorides, 391-2000-019, 10/97.
☐	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 391-2000-021, 3/99.
☐	Implementation Guidance for the Determination and Use of Background/Ambient Water Quality in the Determination of Wasteload Allocations and NPDES Effluent Limitations for Toxic Substances, 391-2000-022, 3/1999.
☐	Design Stream Flows, 391-2000-023, 9/98.
☐	Field Data Collection and Evaluation Protocol for Deriving Daily and Hourly Discharge Coefficients of Variation (CV) and Other Discharge Characteristics, 391-2000-024, 10/98.
☐	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 391-3200-013, 6/97.
☐	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
☒	SOP: SOP for Clean Water Program Internal Public Notice Process for NPDES and WQM Permits, Final, December 22, 2020, Revised August 30, 2021, Version 1.2. SOP for Clean Water Program Establishing WQBELs and Permit Conditions for Toxic Pollutants in NPDES Permits for Existing Dischargers, (BCW-PMT-037).
☐	Other: