ATTACHMENT 8

PROJECT DESCRIPTION AND AQUATIC RESOURCE IMPACT TABLE (ARIT)

Tioga Pathway Project Description

In accordance with Document 3150-PM-BWEW0036 (Rev. 3/2022) Section III.F(h), the following sections provide a detailed project description including a statement regarding what purpose the activity will serve, an overview of National Fuel's public health and safety measures, a water dependency statement, and a summary of aquatic resource impacts in Potter County including a completed Aquatic Resource Impact Table (ARIT).

A. Project Description

National Fuel Gas Supply Corporation (National Fuel) is proposing to construct and operate the proposed Tioga Pathway Project (Project) and to abandon certain pipeline facilities. The purpose of the Project is two-fold: (1) to provide incremental firm transportation service from the abundant Marcellus and Utica shale production area in Tioga County, Pennsylvania to various points on the interstate pipeline system grid and (2) to modernize a portion of National Fuel's existing Z20 Pipeline system in Potter County, Pennsylvania (PA) [Note: Attachment 10 of this JPA includes a detailed description of the Project's purpose and need].

The Project is located in Potter, Tioga, and McKean counties, PA, and consists of the construction and operation of the following facilities:

- Z20 Replacement Pipeline: Replace approximately 3.84 miles of 12-inch-diameter 1936-vintage bare steel pipeline with new 20-inch-diameter coated steel pipeline in National Fuel's existing right-of-way (ROW) in Potter County;
- YM59 Mainline Pipeline: Install approximately 19.48 miles of new 20-inch-diameter coated steel pipeline beginning at the east end of the 3.84-mile Z20 Pipeline replacement, traversing Potter and Tioga counties, and ending at the NFG Midstream Covington, LLC (Midstream) Lee Hill Interconnect;
- Auxiliary Facilities:
    - McCutcheon Hill Over-pressure Protection (OPP) Station: Construct a new OPP station at the interconnection between the eastern terminus of the Z20 Replacement Pipeline and the western terminus of the YM59 Mainline Pipeline in Potter County;
    - Measurement Equipment at Midstream's Lee Hill Interconnect: Install gas measurement, gas quality, flow control, OPP devices, a pig launcher, and associated appurtenances (Measurement Facilities) at Midstream's Lee Hill Interconnect to connect the proposed YM59 Mainline Pipeline to Midstream's facilities at the east end of the Project in Chatham Township, Tioga County;
    - Perform minor modifications at National Fuel's existing Ellisburg Compressor Station (CS) including replacing/installing measurement, OPP devices, flow control, and other associated appurtenances in Potter County;
    - Construct one new remote-control valve (RCV) setting at a location along the YM59 Pipeline in Tioga County;

- Perform modifications to an existing valve setting on the Z20 Replacement Pipeline in Potter County; and
- Install a new cathodic protection ground bed at a location along the YM59 Pipeline in Tioga County.

Project activities to be conducted in Potter County include the entire Z20 Pipeline Replacement, construction of the McCutcheon Hill OPP station, modifications at the existing Ellisburg CS, modifications to an existing valve setting on the Z20 Replacement Pipeline, and construction of approximately 2.8 miles of the YM59 Mainline Pipeline. The location of the proposed Project is shown on the United States Geological Survey 7.5-minute quadrangle maps in Attachment 7 of this Joint Permit Application (JPA).

To support construction activities and operation of the Project, National Fuel estimates that approximately 3.96 miles of temporary access roads (TARs) and 1.76 miles of permanent access roads (PARs) will be used. In addition, three (3) previously used staging areas (Port Allegany Pipe Yard, Harrison Valley Contractor Yard, and Middlebury Contractor Yard) will be used to store materials and equipment.

Construction will involve pipeline installation via open trench excavation and horizontal directional drilling (HDD) methods and the construction of the new OPP Station and cathodic protection ground bed. The existing Z20 Pipeline generally will be replaced by removal or may be abandoned in place where conditions preclude effective removal. Tree clearing will be required for the Project and is proposed to commence in early 2026 and be completed by March 31st, 2026, provided all required permits, approvals, land access, and materials have been obtained.

Direct, indirect, and cumulative impacts from the proposed construction, operation, and maintenance activities are presented in this Module. As discussed herein, the Project will have temporary and permanent impacts to stream and wetland resources. Potential impacts will be minimized and mitigated as discussed throughout this application.

B. PNDI Coordination and Avoidance Measures

National Fuel submitted a Pennsylvania Natural Diversity Inventory (PNDI) query [Receipt-797684] and letters to the Pennsylvania Department of Conservation and Natural Resources (PADCNR), Pennsylvania Fish & Boat Commission (PAFBC), and Pennsylvania Game Commission (PGC) on December 15, 2023, requesting assistance in identifying any state-listed threatened, endangered, or other species of concern, state wildlife refuges/management areas, significant habitats, and other natural landscape features that may be directly or indirectly impacted by the proposed activity (refer to Attachment 5 of this JPA). National Fuel provided updated map information via the PNDI website on May 21, 2024, and directly to the PAFBC, and PGC on May 31, 2024.

- PADCNR provided responses on December 18, 2023 and May 23, 2024 stating that the proposed activity is not anticipated to impact any plants, terrestrial invertebrates, natural communities, or geological features of concern.
- PAFBC provided responses on December 18, 2023 and July 1, 2024 (review of updated mapping) indicating no adverse impacts are expected to the species of special concern.
- PGC provided responses on January 9, 2024, and June 3, 2024, indicating no impact to species or resources of concern is likely.

- National Fuel sent a Project-specific introduction letter to the United States Fish and Wildlife Service (USFWS) on December 27, 2023, requesting identification of potential impacts to threatened and endangered and/or special concern species and resources located within and near the Project. USFWS provided a response via email on March 13, 2024, recommending National Fuel conduct northeastern bulrush surveys. National Fuel conducted surveys for northeastern bulrush in July 2024: no northeastern bulrush or other federally listed plant species were found during the botanical survey. The complete report was submitted to USFWS on August 30, 2024 and is included in Attachment 5 of this JPA.

In response to USFWS information related to federally-protected bat species identified as possibly occurring in the area, National Fuel has scheduled tree clearing activities to be completed during winter before March 31 to avoid potential impacts to federally-protected bats and migratory birds. However, in certain areas and circumstances, there may be safety concerns related to conducting clearing activities in winter in this region, especially on particularly steep slopes in snowy/icy conditions. As such, National Fuel proactively conducted acoustic bat surveys in June 2024. The goal of the survey was to determine the presence or probable absence of the federally endangered Indiana bat (*Myotis sodalis*) and/or Northern long-eared bat (*Myotis septentrionalis*). The survey was conducted following the 2024 protocols outlined within the U. S. Fish and Wildlife Service (USFWS) *Range-Wide Indiana Bat Summer Survey Guidelines*. Qualitative (manual) review of *Myotis* species acoustic recordings determined that no recordings definitively could be classified solely as an Indiana bat. From the results of this analysis and with the limitations of acoustic monitoring, the determination of probable presence of the Indiana bat cannot be supported, and absence of the species may be assumed. Manual review of recordings can support the presence of Northern long-eared bats within the Project area, and presence of this species may be assumed. The survey also identified the candidate species Tricolored bat *(Perimyotis subflavus)* within the Project Area; however, none of these passed manual review and cannot be considered present. National Fuel provided a copy of the survey report to the USFWS on October 9, 2024 and will continue to work with the USFWS to determine the prudent and necessary seasonal timing restrictions along the proposed Project as it coordinates with USFWS regarding the Endangered Species Act and the Migratory Bird Treaty Act.

Related to the USFWS information on federal-status Candidate for protection monarch butterfly that was identified as possibly occurring in the area, National Fuel has enrolled in the Nationwide Monarch Butterfly Candidate Conservation Agreement for Energy and Transportation Lands. In any areas containing suitable monarch butterfly habitat that cannot be avoided, with landowner permission, National Fuel will reseed with native seed mixtures that contain milkweed and nectar plants similar to National Fuels' Monarch CCAA program mixes, in order to restore the habitat and provide increased conservation for the species. Implementation of industry-approved construction BMPs will minimize long- and short-term impacts to vegetation cover types.

C. Public Health and Safety

The Project facilities will fully adhere to regulatory requirements pertaining to pipeline safety. These safety regulations will be reinforced by the comprehensive and strictly enforced corporate practices of National Fuel.

Public Protection Measures

National Fuel is well qualified to perform both emergency and routine maintenance on its interstate pipeline facilities. National Fuel's pipeline construction contracts require compliance with all Occupational Safety and Health Administration regulations as well as all federal, state, and local laws. National Fuel maintains strict operating policies and procedures to meet or exceed current industry standards. National Fuel's Operator Qualification Program ensures that National Fuel personnel and contractors have the required knowledge and skills. Operating personnel are thoroughly trained to perform their duties in accordance with these policies and procedures. These policies provide specific directions in inspection and preventive maintenance of facilities, as well as procedures to follow in the event of an incident.

During construction, qualified National Fuel inspectors are on site at all times with explicit stop work authority if any public safety or environmental issues are observed. Daily Safety Meetings are held with construction personnel to discuss current issues and observations. National Fuel's contract specifications require operator qualification programs, traffic control, road construction warning signs, power line flagging and barriers, safety fence around open excavations near residences and places of public gathering, and signs & barricades near pressure testing operations. Blasting operations are not anticipated, but if required, will take place in a controlled manner and access points will be monitored during blasting operations. In addition, land agents will be available during construction to make landowners aware of the timing of construction on their properties and to serve as a liaison between landowners and the construction work crews to prevent/minimize conflicts between the work and landowner activities.

Periodic training sessions and review of operating and emergency procedures are conducted for affected operations employees. This training includes safe operation of pipeline valves and equipment; facilities, including meter stations and compressor stations; hazardous material handling procedures; public liaison programs; and general operating procedures. The proposed Project facilities will be operated and maintained in accordance with these procedures.

Equipment

The National Fuel pipeline system includes many equipment features that are designed to increase the overall safety of the system and protect the public from a potential failure within the system.

Cathodic protection systems are installed at various points along the pipelines to prevent corrosion of the pipeline facilities. The cathodic protection system impresses a low voltage current to the pipeline to offset corrosion potential resulting from natural soil and groundwater conditions. The functional capability of cathodic protection systems is inspected frequently to ensure proper operating conditions for corrosion prevention.

A centralized gas control center is maintained in Western New York. The gas control center monitors system pressures, flows, and customer deliveries 24 hours a day. National Fuel also

operates area offices along its pipeline system whose personnel can provide the appropriate response to emergency situations and direct safety operations as necessary.

National Fuel's pipeline systems are equipped with measures that allow the valves to be operated remotely by National Fuel's gas control center in the event of an emergency. Remotely closing the valve allows sections of the pipeline to be isolated from the rest of the pipeline system. RCVs will be implemented by modifying an existing valve setting along the Z20 Replacement Pipeline and installing a RCV at the McCutcheon Hill OPP Station in Potter County and constructing one new valve setting along the YM59 Mainline Pipeline and installing a RCV at Midstream's Lee Hill Interconnect in Tioga County.

Procedures with Local Authorities

Coordination with public authorities and local utilities is maintained in all locations along the pipeline. Key components of the program consist of:

- periodic visits with municipal safety officials to inform them of the nature of National Fuel facilities and to coordinate emergency response in the event of an accident;
- special informational meetings and training at the initiation of the municipality; and
- periodic literature distribution listing emergency telephone numbers and other pertinent data.

National Fuel has emergency response plans in place for the existing facilities that comprise this Project. Regular meetings are held with the emergency response agencies (including local fire departments) where the roles and responsibilities for responding to pipeline emergencies are discussed. The information exchanged between National Fuel and the emergency response agencies that participate in these meetings familiarizes each organization with the resources, personnel, and equipment that can be utilized in the unlikely event that an incident occurs.

National Fuel will establish the same or similar emergency response plans, meetings with emergency response agencies, and information exchange with local agencies (including local fire departments) for the new facilities proposed as part of this Project. National Fuel will incorporate the new facilities proposed by this Project into its emergency response plans and will work with first responders in the communities to develop modifications to a local community's plan as necessary. National Fuel will continue to work with the local communities to ensure that a satisfactory plan is in place.

National Fuel's training of its personnel and of first responders provides instruction on the requirement to evacuate buildings or the immediate area of citizens affected by a leak or emergency, and the need to move to a safe location. The nature of the leak or emergency would determine the radius of evacuation; the direct notification would include avoiding actions that could cause an ignition source (do not allow anyone to smoke or operate electrical switches, lights, appliances, cellular phones, etc.).

One of the natural gas transmission company's primary roles in the event of a compromised facility is to isolate the compromised facility to stop the flow of gas to the site. First responders who are not National Fuel personnel are instructed not to operate any valves on the system because operating the wrong valve could make matters worse. National Fuel's personnel with knowledge of the system will perform any operation (opening and closing) of valves. First

responders' primary role is that of evacuation and creating a safe zone by cordoning off the emergency site. Roles of first responders, roles of National Fuel personnel, properties of natural gas, and "tabletop" scenarios are covered in training sessions with municipal responders. Additional equipment includes vehicles with hand tools, leak detection equipment (combustible gas indicators and flame-ionization leak detectors), air movers, pneumatic grease guns, leak repair materials, grounding cables, and traffic control safety devices. National Fuel also has emergency pipeline construction contractors available 24 hours a day, 7 days a week, in the event of an emergency to provide crews and heavy equipment.

D. Water Dependency

A project is water dependent when the project requires access or proximity to or siting within water to fulfill the basic purposes of the project (Pennsylvania Code Chapter 105.13[e][iii][D]). Constructing and operating a buried pipeline is often a water-dependent activity. Considering Pennsylvania's abundant surface water and wetland resources, any linear project that travels substantial distances across the Commonwealth, using reasonable and practicable siting approaches (and even avoiding resources where possible and practicable), unavoidably requires the crossing beneath some waters and wetlands. The Project requires access, proximity to, and siting in, on, over, or under, streams and wetlands in order to achieve its primary purpose to transport natural gas in National Fuel's existing and proposed natural gas pipeline system to fixed-point interconnections with other commercial pipeline systems. Therefore, the linear nature of the overall Project, approximately 3.84 miles of replacement pipeline and 19.48 miles of new pipeline, in the geographic region as proposed, makes the Project water dependent.

National Fuel sited the Z20 Replacement Pipeline in Potter County within National Fuel's existing permanent pipeline ROW, as per industry standard established by the Federal Energy Regulatory Commission (FERC) siting guidelines, as well as to meet National Fuel's purpose and need for the Project to provide a technically and economically feasible and practical route. This siting decision allows the Z20 Replacement Pipeline to remain within and not diverge from its existing land easements, which also limits impacts to stream and wetland locations that have previously been involved during past construction, restoration, operation, and maintenance of the existing pipeline.

The new 19.48-mile YM59 Pipeline (including the 2.8 miles located in Potter County) will create a new pipeline ROW. However, the proposed construction workspaces and new permanent ROW largely avoids a greater area of streams and wetlands that were delineated within the larger 300-foot-wide (and in some areas, wider) survey corridor than it will impact. Siting decisions were made to avoid temporary and permanent impacts to sensitive aquatic resources to the extent practicable, including re-design of routes in specific areas after the results of aquatic resources surveys were known. Project siting decisions also factored in considerations related to constructability (related to natural topographic conditions), property boundary and landowner considerations, and avoidance of cultural resources sites, sensitive ecological areas, conservation easements, public lands, active mineral extraction areas, residential and other sensitive land use areas, and other similar impact issues.

As presented in detail in Attachment 10, Module S3.F (Alternatives Analysis), National Fuel conducted an analysis of potential alternatives, ranging from the broadest evaluation of no-action and system alternatives to the detailed evaluation of route variations. Pipeline routing and aboveground facility siting options were evaluated based on regional topography, potential

adverse environmental impacts, population density, existing land use, and construction safety and feasibility considerations. National Fuel also considered feedback and input received from the public and affected landowners throughout the planning process. National Fuel has endeavored to locate the pipeline within, adjacent to, or parallel to existing utility corridors where practicable and feasible and to minimize environmental resource impacts as much as possible.

Avoidance of all impacts to aquatic resources is not feasible or practicable due to the linear nature of the Project between two fixed points. However, the proposed routing avoids and minimizes impacts to aquatic resources to the extent practicable, based on the intentional and deliberate siting and decision-making process implemented during Project planning, the proposed construction-phase impact minimization and restoration methods, and the post-construction monitoring of the Project areas for restoration success.

It is National Fuel's opinion that the Project is water dependent, because through siting and construction/restoration planning, no other more favorable practicable alternatives have been identified that would fulfill the purpose of the Project while avoiding all wetlands and streams, which would not have other adverse effects on the environment.

E. Aquatic Resource Summary and Impacts

A total of 14 wetland areas are located within the proposed limits of disturbance (LOD) of the proposed Project in Potter County. Of these wetlands, 3 will be entirely avoided, 1 will be temporarily impacted by an access road, and the remaining 10 will be impacted by pipeline construction. In addition, a total of 21 streams and 8 ditches were identified in the Project LOD in Potter County. Although one of the streams will not be impacted and 8 of the streams are waived from permit requirements as they have a drainage area of less than 100 acres, per Section 105.12(a)(2), they have been included in the permit application but not the fee calculations.

Based on PADEP's definition, the acreage of vegetation cover type that will be converted due to routine vegetation maintenance within the proposed YM59 pipeline ROW has been classified as permanent. Specifically, in accordance with the FERC Procedures, National Fuel will not conduct routine vegetation mowing or clearing over the full width of the permanent ROW within aquatic resources. However, to facilitate periodic corrosion/leak surveys, a corridor centered on the pipeline and up to 10 feet wide may be cleared through all emergent (PEM), scrub-shrub (PSS), and forested (PFO) wetlands at a frequency necessary to maintain the 10-foot corridor in an herbaceous state. In addition, PFO trees within 15 feet of the pipeline (30-foot-wide corridor) with roots that could compromise the integrity of pipeline coating may be selectively cut and removed from the permanent ROW. In addition, all streams and floodways will be restored to pre-existing conditions and there will be no long-term impact to the substrate, banks, flow, aquatic/terrestrial life, or floodway; with the exception of S73z where the corner of a small gravel pad will be placed in the floodway. However, similar to the wetland areas National Fuel will maintain a 10-foot-wide corridor centered over the pipeline in an herbaceous state and has conservatively identified stream and floodway impacts within this corridor along the proposed YM59 pipeline as permanent. All resource impacts associated with the existing Z20 pipeline ROW and wetland, stream, and floodway acreage located within the construction LOD and outside of these maintained areas along the YM59 pipeline are classified as temporary impacts.

The Project will permanently impact 0.030 acre (1,309 square feet [ft^2]) of wetlands, 0.008 acre (350 ft^2) of streams, and 0.079 acre (3,442 ft^2) of floodplains in Potter County. The Project will

also temporarily impact 3.138 acres (136,691 ft^2) of wetlands, 0.443 acre (19,298 ft^2) of streams, and 4.634 acres (201,857 ft^2) of floodplains in Potter County. Tables S3.C-1 and S3.C-2 in Appendix B of this EA provide a detailed breakdown of the Potter County wetland and stream/floodplain impacts, respectively..

An ARIT has been prepared in accordance with the provided instructions, including a detailed chart of each proposed impact to waters and/or wetlands as it pertains to the project's activities and is included with this Project Description. In addition, a number of resource tables are provided in Appendix B of Attachment 10 (Environmental Assessment) of this JPA that provide the following information:

- temporary and permanent direct and indirect impacts for each affected resource category (e.g. riverine, wetlands and lacustrine resources), and
- identification of all proposed water obstruction(s), encroachment activities, the subfacility code and description, resource identifier, latitude and longitude, the proposed temporary and permanent direct and indirect impacts.

National Fuel has contracted Resource Environmental Solutions (RES), to develop a Permittee-Responsible Mitigation (PRM) Plan to compensate for unavoidable impacts to waters of the United States (U.S.) associated with the Project. RES has prepared a Preliminary PRM Plan for the Project (Appendix D) in accordance with the Compensatory Mitigation for Losses of Aquatic Resources Final Rule issued on April 10, 2008 as detailed in 33 CFR §332.4(c) of the Federal Register (Volume 73, Number 70).

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Applicant's Name / Client National Fuel Gas Supply Corporation

AQUATIC RESOURCE IMPACT TABLE
FOR PENNSYLVANIA CHAPTER 105 WATER OBSTRUCTION AND ENCROACHMENT APPLICATION

Project / Site Name: Tioga Pathway Project – Potter County Date: 11/05/2024

DEP USE ONLY	Project Information						PA DEP / 105						Enter Only If Different from DEP Impacts Army Corps Impacts:	
PADEP Permit Number	Structure / Activity unique identifier	Aquatic Resource Type	Latitude dd nad83	Longitude dd nad83	Waters Name	PA Code Chapter 93 Designation	Work Proposed	DEP Impact Type temp / perm[f,g]	ACOE Impact Type temp / perm[a]	Watercourse Impact Top of Bank to Top of Bank Length and Width in feet[b,d]	Floodway Impact Top of Bank Landward Length and Width in feet[c,d,e]	Wetland Impact Dimensions Length and Width in feet[d]	Watercourse Impact Length and Width in feet[d]	Wetland Impact Length and Width in feet[d]
	W01z	PEM	41.966832	-77.718405	Wetland W01z	Other	Temporary Bridge	Temp	Temp	n/a	n/a	31-37	n/a	-
	W01	PSS	41.967236	-77.715901	Wetland W01	Other	Trench Excavation / Fill	Perm	Temp	n/a	n/a	n/a	n/a	-
							Temporary Bridge	Temp	Temp	n/a	n/a	206-75	n/a	-
	W02	PEM/PSS	41.968985	-77.705062	Wetland W02	Other	Trench Excavation / Fill	Perm	Temp	n/a	n/a	n/a	n/a	-
							Temporary Bridge	Temp	Temp	n/a	n/a	503-75	n/a	-
							Temp Access Road	Temp	Temp	n/a	n/a	19-30	n/a	
	W03	PEM/PFO	41.971927	-77.692612	Wetland W03	Other	Trench Excavation / Fill	Perm	Temp	n/a	n/a	n/a	n/a	-
							Temporary Bridge	Temp	Temp	n/a	n/a	99-75	n/a	-
	W04	PEM/PFO	41.974176	-77.683657	Wetland W04	Other	Trench Excavation / Fill	Perm	Temp	n/a	n/a	n/a	n/a	-
							Temporary Bridge	Temp	Temp	n/a	n/a	226-75	n/a	-
	W05	PEM	41.974656	-77.681935	Wetland W05	Other	Trench Excavation / Fill	Perm	Temp	n/a	n/a	n/a	n/a	-
							Temporary Bridge	Temp	Temp	n/a	n/a	66-75	n/a	-
	W06	PEM/PSS	41.976286	-77.67759	Wetland W06	Other	Trench Excavation / Fill	Perm	Temp	n/a	n/a	n/a	n/a	-
							Temporary Bridge	Temp	Temp	n/a	n/a	580-75	n/a	-
	W07	PEM/PFO	41.978328	-77.668284	Wetland W07	Other	Trench Excavation / Fill	Perm	Temp	n/a	n/a	n/a	n/a	-
							Temporary Bridge	Temp	Temp	n/a	n/a	60-75	n/a	-
	W08	PEM	41.980661	-77.655791	Wetland W08	Other	Trench Excavation / Fill	Perm	Temp	n/a	n/a	n/a	n/a	-
							Temporary Bridge	Temp	Temp	n/a	n/a	33-75	n/a	-
	W10	PFO	41.964401	-77.616983	Wetland W10	Other	Trench Excavation / Fill	Perm	Temp	n/a	n/a	44-30	n/a	-
							Temporary Bridge	Temp	Temp	n/a	n/a	43-45	n/a	-
	W45	PEM	41.899303	-77.914484	Wetland W45	Other	Avoided	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	W46	PEM	41.89984	-77.913537	Wetland W46	Other	Avoided	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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Applicant's Name / Client National Fuel Gas Supply Corporation

Project / Site Name: Tioga Pathway Project – Potter County Date: 11/05/2024

DEP USE ONLY	Project Information						PA DEP / 105						Enter Only If Different from DEP Impacts Army Corps Impacts:	
PADEP Permit Number	Structure / Activity unique identifier	Aquatic Resource Type	Latitude dd nad83	Longitude dd nad83	Waters Name	PA Code Chapter 93 Designation	Work Proposed	DEP Impact Type temp / perm[f,g]	ACOE Impact Type temp / perm[a]	Watercourse Impact Top of Bank to Top of Bank Length and Width in feet[b,d]	Floodway Impact Top of Bank Landward Length and Width in feet[c,d,e]	Wetland Impact Dimensions Length and Width in feet[d]	Watercourse Impact Length and Width in feet[d]	Wetland Impact Length and Width in feet[d]
	W47	PEM	41.902289	-77.914483	Wetland W47	Other	Avoided	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	S01	Perennial	41.967218	-77.716046	Marsh Creek	CWF	Trench Excavation / Fill	Perm	Temp	n/a	--	n/a	-	n/a
							Temporary Bridge	Temp	Temp	105-12	--	n/a	-	n/a
	S02	Perennial	41.967179	-77.716108	UNT to Marsh Creek	Drains to CWF	Temporary Bridge	Temp	Temp	43-2	--	n/a	-	n/a
	S01/S02	Floodway	41.96722	-77.71598	UNT to Marsh Creek	Drains to CWF	Trench Excavation / Fill	Perm	n/a	--	n/a	n/a	n/a	n/a
							Temporary Bridge	Temp	n/a	--	277-75	n/a	n/a	n/a
	S03	Perennial	41.968702	-77.705193	UNT to Marsh Creek	Drains to CWF	Trench Excavation / Fill	Perm	Temp	n/a	n/a	n/a	-	n/a
							Temporary Bridge	Temp	Temp	125-8	168-75	n/a	-	n/a
							Temporary Road / Bridge	Temp	Temp	10-30	319-30	n/a	-	n/a
	S04	Perennial	41.969286	-77.703812	UNT to Marsh Creek	Drains to CWF	Trench Excavation / Fill	Perm	Temp	n/a	n/a	n/a	-	n/a
							Temporary Bridge	Temp	Temp	145-6	193-75	n/a	-	n/a
	S05	Ephemeral	41.969407	-77.703308	UNT to Marsh Creek	Drains to CWF	Trench Excavation / Fill	Perm	Temp	n/a	n/a	n/a	-	n/a
							Temporary Bridge	Temp	Temp	96-10	136-75	n/a	-	n/a
	S06	Intermittent	41.974183	-77.683917	UNT to North Branch Cowanesque River	Drains to CWF	Trench Excavation / Fill	Perm	Temp	n/a	--	n/a	-	n/a
							Temporary Bridge	Temp	Temp	70-15	--	n/a	-	n/a
	S07	Intermittent	41.974085	-77.684287	UNT to North Branch Cowanesque River	Drains to CWF	Trench Excavation / Fill	Perm	Temp	n/a	--	n/a	-	n/a
							Temporary Bridge	Temp	Temp	73-15	--	n/a	-	n/a
	S06/S07	Floodway	41.974049	-77.684111	UNT to North Branch Cowanesque River	Drains to CWF	Trench Excavation / Fill	Perm	n/a	--	n/a	n/a	n/a	n/a
							Temporary Bridge	Temp	n/a	--	255-75	n/a	n/a	n/a
	S08	Ephemeral	41.97441	-77.682827	UNT to North Branch Cowanesque River	Drains to CWF	Trench Excavation / Fill	Perm	Temp	n/a	n/a	n/a	-	n/a
							Temporary Bridge	Temp	Temp	82-8	117-75	n/a	-	n/a
	S09	Ephemeral	41.974737	-77.681639	UNT to North Branch Cowanesque River	Drains to CWF	Trench Excavation / Fill	Perm	Temp	n/a	--	n/a	-	n/a
							Temporary Bridge	Temp	Temp	150-20	--	n/a	-	n/a

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Applicant's Name / Client National Fuel Gas Supply Corporation

Project / Site Name: Tioga Pathway Project – Potter County Date: 11/05/2024

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	S10	Ephemeral	41.974835	-77.681285	UNT to North Branch Cowanesque River	Drains to CWF	Trench Excavation / Fill	Perm	Temp	n/a	--	n/a	-	n/a
							Temporary Bridge	Temp	Temp	87-5	--	n/a	-	n/a
	S09/S10	Floodway	41.974766	-77.681532	UNT to North Branch Cowanesque River	Drains to CWF	Trench Excavation / Fill	Perm	n/a	--	n/a	n/a	n/a	n/a
							Temporary Bridge	Temp	n/a	--	248-75	n/a	n/a	n/a
	S11	Perennial	41.976008	-77.678276	UNT to North Branch Cowanesque River	Drains to CWF	Trench Excavation / Fill	Perm	Temp	n/a	n/a	n/a	-	n/a
							Temporary Bridge	Temp	Temp	65-2	129-75	n/a	-	n/a
	S12	Perennial	41.976395	-77.677322	North Branch Cowanesque River	CWF	Trench Excavation / Fill	Perm	Temp	n/a	--	n/a	-	n/a
							Temporary Bridge	Temp	Temp	165-10	--	n/a	-	n/a
	S13	Perennial	41.976543	-77.676957	North Branch Cowanesque River	CWF	Trench Excavation / Fill	Perm	Temp	n/a	--	n/a	-	n/a
							Temporary Bridge	Temp	Temp	82-8	--	n/a	-	n/a
	S12/S13	Floodway	41.976446	-77.677195	North Branch Cowanesque River	CWF	Trench Excavation / Fill	Perm	n/a	--	n/a	n/a	n/a	n/a
							Temporary Bridge	Temp	n/a	--	286-75	n/a	n/a	n/a
	S14	Perennial	41.978337	-77.668231	UNT to North Branch Cowanesque River	CWF	Trench Excavation / Fill	Perm	Temp	n/a	n/a	n/a	-	n/a
							Temporary Bridge	Temp	Temp	87-6	117-75	n/a	-	n/a
	S15	Ephemeral	41.980243	-77.657616	UNT to North Branch Cowanesque River	Drains to CWF	Trench Excavation / Fill	Perm	Temp	n/a	n/a	n/a	-	n/a
							Temporary Bridge	Temp	Temp	87-5	124-75	n/a	-	n/a
	S16	Perennial	41.980684	-77.655608	UNT to North Branch Cowanesque River	CWF	Trench Excavation / Fill	Perm	Temp	n/a	n/a	n/a	-	n/a
							Temporary Bridge	Temp	Temp	85-20	163-75	n/a	-	n/a
	S17	Perennial	41.967001	-77.618712	UNT to North Fork of Cowanesque River	CWF	Trench Excavation / Fill	Perm	Temp	10-15	115-10	n/a	-	n/a
							Temporary Bridge	Temp	Temp	69-15	121-65	n/a	-	n/a
	S18a	Perennial	41.964729	-77.61804	UNT to North Fork of Cowanesque River	Drains to CWF	Trench Excavation / Fill	Perm	Temp	10-20	120-10	n/a	-	n/a
							Temporary Bridge	Temp	Temp	74-20	135-65	n/a	-	n/a
	S55	Perennial	41.899581	-77.913991	Rose Lake Run	HQ-CWF	Avoided	n/a	n/a	n/a	n/a	n/a	n/a	n/a

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WATERWAYS ENGINEERING AND WETLANDS

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Applicant's Name / Client National Fuel Gas Supply Corporation

Project / Site Name: Tioga Pathway Project – Potter County Date: 11/05/2024

DEP USE ONLY	Project Information						PA DEP / 105						Enter Only If Different from DEP Impacts Army Corps Impacts:	
PADEP Permit Number	Structure / Activity unique identifier	Aquatic Resource Type	Latitude dd nad83	Longitude dd nad83	Waters Name	PA Code Chapter 93 Designation	Work Proposed	DEP Impact Type temp / perm[f,g]	ACOE Impact Type temp / perm[a]	Watercourse Impact Top of Bank to Top of Bank Length and Width in feet[b,d]	Floodway Impact Top of Bank Landward Length and Width in feet[c,d,e]	Wetland Impact Dimensions Length and Width in feet[d]	Watercourse Impact Length and Width in feet[d]	Wetland Impact Length and Width in feet[d]
	S-73z	Intermittent	41.966834	-77.718357	Unnamed Tributary (UNT) to Marsh Creek	Drains to CWF	Placement of Fill	Perm	Temp	--	32-30	n/a	-	n/a
							Temporary Bridge	Temp	Temp	90-12	151-62	n/a	-	n/a

Footnotes:

a Resources will be temporarily disturbed and restored to pre-construction contours and elevations.

b Permanent wetland impact length was generated by measuring the crossing distance along the pipeline centerline. If the pipeline centerline did not cross the wetland but the construction workspace did, the length was measured at a representative location within the workspace, parallel to the centerline. Temporary wetland impact lengths were measured along the boundary between permanent and temporary workspace when the wetland occurred within the proposed temporary (or additional temporary) workspace, or at a representative location parallel to the pipeline centerline. Width calculations were determined by the overall width of the workspace if the feature was located in the entire workspace, otherwise width was calculated by dividing the total square feet of the proposed impact area by the length. Waterbody widths represent the bank-to-bank width of the feature, and the length is the length of the waterbody within the proposed workspace. Floodway lengths and widths were calculated similar to the wetland lengths and widths. Measurements for access road crossings used the center of the access road and width of the proposed access road. For aquatic resources that extended from the pipeline ROW into an access road, the additional length of the extension was added to the total length for that resource.

c Floodways that overlap and share area have been grouped together.

d Acreage calculations provided in other sections of this application may not equal the acreage or square footage from the lengths multiplied by widths presented in this table, as most aquatic resource features have an irregular shape. Acreage calculations elsewhere in this application were determined using GIS calculations of the total area of each aquatic resource polygon feature within the Project workspace, broken down by temporary and permanent impacts.

e Floodways were determined using FEMA floodway mapping. Where FEMA mapping was unavailable, a 50-ft buffer extending landward from each bank of each waterbody was used. For example, a 5-ft wide waterbody would have a floodway 105 ft wide.

f Per DEP, "Temporary Impacts are those areas affected during the construction of a water obstruction or encroachment that consists of both direct and indirect impacts located in, along or across, or projecting into a watercourse, floodway or body of water that are restored upon completion of construction. This **does not include areas that will be maintained** as a result of the operation and maintenance of the water obstruction or encroachment located in, along or across, or projecting into a watercourse, floodway or body of water (these are considered permanent impacts)." Accordingly, these values reflect the entire LOD through regulated wetlands minus the maintained areas described in the permanent impacts below. Note: all resource impacts associated with the Z20 replacement pipeline are considered temporary as they will occur within an existing pipeline ROW.

g Per DEP, "Permanent Impacts are those areas affected by a water obstruction or encroachment that consist of both direct and indirect impacts that result from the placement or construction of a water obstruction or encroachment and **include areas necessary for the operation and maintenance of the water obstruction** or encroachment located in, along or across, or projecting into a watercourse, floodway or body of water." Accordingly, these values represent the acreage of cover type conversion due to vegetation maintenance procedures within the 30-foot-wide portion of the permanent ROW. Specifically, in accordance with the FERC Procedures, National Fuel will not conduct routine vegetation mowing or clearing over the full width of the permanent ROW. However, to facilitate periodic corrosion/leak surveys, a corridor centered on the pipeline and up to 10 feet wide may be cleared through all wetlands (PEM, PSS, PFO) at a frequency necessary to maintain the 10-foot corridor in an herbaceous state. In addition, PFO trees within 15 feet of the pipeline with roots that could compromise the integrity of pipeline coating may be selectively cut and removed from the permanent ROW. National Fuel will not conduct any routine vegetation mowing or clearing in wetlands located between HDD entry and exit points (W58, W59, W23) but has included at permanent impact in these areas based on the width of the pipeline (2 feet) times the length of the wetland at centerline. All streams and floodways will be restored to pre-existing conditions and there will be no long-term impact to the substrate, banks, flow, aquatic/terrestrial life, or floodway; with the exception of S73z where the corner of a small gravel pad will be placed in the floodway. However, National Fuel will maintain a 10-foot-wide corridor centered over the pipeline in an herbaceous state and has conservatively identified stream and floodway impacts within this corridor as permanent.