ATLANTIC COAST PIPELINE, LLC
ATLANTIC COAST PIPELINE

and

DOMINION ENERGY TRANSMISSION, INC.
SUPPLY HEADER PROJECT

Implementation Plan

EC18 Attachment 2

Update to the *Invasive Plant Species Management Plan*

ATLANTIC COAST PIPELINE, LLC
ATLANTIC COAST PIPELINE
Docket Nos. CP15-554-000
CP15-554-001

and

DOMINION ENERGY TRANSMISSION, INC.
SUPPLY HEADER PROJECT
Docket No. CP15-555-000

Invasive Plant Species Management Plan

Updated, Rev. 5

Prepared by

ERM

August 2017

TABLE OF CONTENTS

LIST OF TABLES

LIST OF ATTACHMENTS

LIST OF ACRONYMS AND ABBREVIATIONS

ACP	Atlantic Coast Pipeline
Atlantic	Atlantic Coast Pipeline, LLC
DETI	Dominion Energy Transmission, Inc.
EI	Environmental Inspector
FERC	Federal Energy Regulatory Commission
HDD	horizontal directional drill
NCDACS	North Carolina Department of Agriculture and Consumer Services
OHV	off-highway vehicle
PDA	Pennsylvania Department of Agriculture
Plan	Upland Erosion Control, Revegetation, and Maintenance Plan
Procedures	Wetland and Waterbody Construction and Mitigation Procedures
Projects	Atlantic Coastline Pipeline and Supply Header Project
SHP	Supply Header Project
SPCC Plan	Spill Prevention, Control, and Countermeasures Plan
VDACS	Virginia Department of Agriculture and Consumer Services

1.0 INTRODUCTION

Atlantic Coast Pipeline, LLC (Atlantic) – a company formed by four major energy companies – Dominion Energy; Duke Energy Corporation; Piedmont Natural Gas Co., Inc.; and Southern Gas Company – proposes to construct and operate approximately 600 miles of natural gas transmission pipelines and associated aboveground facilities in West Virginia, Virginia, and North Carolina. This Project, referred to as the Atlantic Coast Pipeline (ACP), will deliver up to 1.5 million dekatherms per day of natural gas from supply areas in the Appalachian region to demand areas in Virginia and North Carolina. Atlantic has contracted with Dominion Energy Transmission, Inc. (DETI), a subsidiary of Dominion Energy, Inc., to construct and operate the ACP on behalf of Atlantic.

In conjunction with the ACP, DETI proposes to construct and operate approximately 37.5 miles of pipeline loop and modify existing compression facilities in Pennsylvania and West Virginia. This Project, referred to as the Supply Header Project (SHP), will enable DETI to provide firm transportation service to various customers, including Atlantic.

2.0 PURPOSE

Noxious weeds are plant species designated by Federal, State/Commonwealth, or County/City governments as injurious to public health, agriculture, recreation, wildlife, or property (Sheley et al., 1999). The more general term "invasive species" is used for species that are non-native to an ecosystem and whose introduction causes or is likely to cause economic or environmental harm or harm to human health (Executive Order 13112). Invasive plants include not only noxious weeds but other plants that are not native to an area. Both noxious weeds and non-native invasive plants are considered opportunistic species that flourish in disturbed areas and prevent native plants from establishing successive communities.

The areas crossed by the ACP and SHP (collectively, the Projects) contain widespread populations of many noxious weeds and other invasive plant species. The purpose of this *Invasive Plant Species Management Plan* is to describe methods to prevent and control the introduction or spread of invasive plant species during and following construction of the Projects. Atlantic and DETI and their Contractors[1] will be responsible for implementing the procedures described in this plan.

3.0 TRAINING

Prior to the start of construction, Atlantic and DETI will conduct environmental training for Company and Contractor personnel. The training program will focus on the Federal Energy Regulatory Commission's (FERC's) *Upland Erosion Control, Revegetation, and Maintenance Plan* (Plan) and *Wetland and Waterbody Construction and Mitigation Procedures* (Procedures); other construction, restoration, and mitigation plans, including this *Invasive Species Management Plan*; and applicable permit conditions. In addition, Atlantic and DETI will provide large-group

[1] Contractor refers to the company or companies retained by Atlantic/DETI or another contractor to construct the proposed facilities.

training sessions before each work crew commences construction with periodic follow-up training for groups of newly assigned personnel.

4.0 JURISDICTION

Under Executive Order 13112, a Federal agency shall not authorize, fund, or carry out actions likely to cause or promote the introduction or spread of invasive species in the United States or elsewhere unless it has been determined that the benefits of such actions outweigh the potential harm caused by invasive species, and that all feasible and prudent measures to minimize the risk of harm will be implemented.

4.1 West Virginia

The West Virginia Noxious Weed Act (Chapter 19, Section 12D of the Code of West Virginia), which is administered by the West Virginia Department of Agriculture, prohibits persons, including corporations, from moving, transporting, delivering, shipping, or offering for shipment noxious weeds into or within the State without a permit from the State Secretary of Agriculture. West Virginia adopts the Federal Noxious Weed List in addition to its own State noxious weed list, and both lists are regulated by the West Virginia Noxious Weed Act. The invasive plant species identified in West Virginia are listed in Table 4-1.

4.2 Virginia

Virginia's Noxious Weed Law is administered by the Virginia Department of Agriculture and Consumer Services (VDACS). The Noxious Weed Law allows the VDACS to list weeds to be regulated; enforce quarantines to regulate the movement of listed weeds; and eradicate and/or suppress weed populations to prevent dissemination. The law defines a 'noxious' weed as a plant not widely disseminated that is determined to be detrimental to crops, surface waters, or other desirable plant, livestock, land, or other property, or to be injurious to the public health or the economy (Code of Virginia § 3.2-800 thru 809).

The Regulations for the Enforcement of the Noxious Weed Law (Virginia Administrative Code 2VAC5-317-20), which became effective in January 2015, list eight noxious weeds. European wand loosestrife was previously listed under the Noxious Weed Law and therefore was included in the survey list for Virginia. These nine species are consistent with those identified during correspondence with the program manager for the VDACS Plant Industry Services (VDACS, 2014). The invasive plant species identified in Virginia are listed in Table 4-1.

4.3 North Carolina

North Carolina noxious weed laws are regulated by the North Carolina Department of Agriculture and Consumer Services (NCDACS). The State Noxious Weed Regulations (North Carolina Administrative Code 48 §1700), adopted under the authority of the North Carolina Plant Pest Law, were enacted to prevent the widespread establishment of harmful non-native plants that are placed on a Noxious Weed List. Plants on the Noxious Weed List are prohibited entry into the State without a permit. Noxious weeds already present in the State are contained by prohibiting movement of the plant outside of regulated areas. In addition to the plant itself,

articles that could contain noxious weed propagules, such as soil or hay, are also regulated. Regulated areas are usually defined by County boundaries and must be described by no more than 20 counties.

TABLE 4-1

Invasive Plant Species Identified Along the Atlantic Coast Pipeline and Supply Header Project

Common Name	Latin Name	Atlantic Coast Pipeline	Supply Header Project
West Virginia [a]			
Tree of heaven	*Ailanthus altissima*	X	X
Marijuana	*Cannabis sativa*		
Nodding plumeless thistle	*Carduus acanthoides*		
Curled thistle	*Carduus crispus*		X
Musk thistle	*Carduus nutans*	X	
Poison hemlock	*Conium maculatum*		
Autumn olive	*Elaeagnus umbellata*	X	X
Morrow's honeysuckle	*Lonicera morrowii*	X	X
Tatarian honeysuckle	*Lonicera tatarica*		X
Purple loosestrife	*Lythrum salicaria*	X	
Japanese stiltgrass	*Microstegium vimineum*	X	X
Opium poppy	*Papaver somniferum*		
Japanese knotweed	*Polygonum cuspidatum*	X	X
Mile-a-minute vine	*Polygonum perfoliatum*		
Kudzu	*Pueraria montana*	X	
Multiflora rose	*Rosa multiflora*	X	X
Johnsongrass	*Sorghum halepense*	X	
Virginia [b]			
Giant hogweed	*Heracleum mantegazzianum*		
Cogongrass	*Imperta cylindrica*		
Water spinach	*Ipomoea aquatic*		
Purple loosestrife	*Lythrum salicaria*		
Wand loosestrife	*Lythrum virgatum*		
Wavyleaf basketgrass	*Oplismenus hirtellus*		
Giant salvinia	*Salvinia molesta*		
Tropical soda apple	*Solanum viarum*		
Beach vitex	*Vitex rotundifolia*		
North Carolina [c]			
Curled thistle	*Carduus crispus*		
Musk thistle	*Carduus nutans*		
Giant hogweed	*Heracleum mantegazzianum*		
Cogongrass/Japanese blood grass	*Imperta cylindrical*		
Water spinach	*Ipomoea aquatic*		
Purple loosestrife	*Lythrum salicaria*		
Wand loosestrife	*Lythrum virgatum*		
Wavyleaf basketgrass	*Oplismenus hirtellus*		
Common reed	*Phragmites australis*		
Mile-a-minute vine	*Polygonum perfoliatum*		
Giant salvinia	*Salvinia molesta*		
Tropical soda apple	*Solanum viarum*		
Witchweed	*Striga* (all species)		
Puncturevine	*Tribulus terrestris*		

TABLE 4-1 (continued)

Invasive Plant Species Identified Along the Atlantic Coast Pipeline and Supply Header Project

Common Name	Latin Name	Atlantic Coast Pipeline	Supply Header Project
Beach vitex	*Vitex rotundifolia*		
Itchgrass	*Rottboellia cochinchinensis*		
Pennsylvania [d]			
Marijuana	*Cannabis sativa*		
Musk thistle/ Nodding thistle	*Carduus nutans*		
Canadian thistle	*Cirsium arvense*		
Bull thistle/ Spear thistle	*Cirsium vulgare*		
Jimsonweed	*Datura stramonium*		
Goatsrue	*Galega officinalis*		
Giant hogweed	*Heracleum mantegazzianum*		
Purple Loosestrife	*Lythrum salicaria*		
Mile-a-minute	*Polygonum perfoliatum*		
Kudzu-vine	*Pueraria lobate*		
Multiflora rose	*Rosa multiflora*		X
Shattercane	*Sorghum bicolor*		
Johnsongrass	*Sorghum halepense*		

[a] Obtained from Article 12D of the West Virginia Noxious Weed Act of 1976, Title 61 Legislative Rules West Virginia Department of Agriculture, Series 14A Rules and additional U.S. Department of Agriculture listed species occurring in the State (U.S. Department of Agriculture, 2014).

[b] Obtained from the Regulations for the Enforcement of the Noxious Weed Law (Virginia Administrative Code 2VAC5-317-20) and correspondence with the Plant Industries Services Program Manager with the Virginia Department of Agriculture and Consumer Services (VDACS, 2014).

[c] Provided by the Plant Pest Administrator with the North Carolina Department of Agriculture and Consumer Services – Plant Industry Division (NCDACS, 2014).

[d] Obtained from the Pennsylvania Noxious Weed Control List (PDA, 2015).

Although North Carolina has outlined 19 noxious weeds on the Noxious Weed List, Atlantic contacted the State Plant Pest Administrator with the NCDACS Plant Industry Division to discuss this list and to confirm what species should be documented during survey efforts (NCDACS, 2014). During this consultation, Atlantic was provided a list of 16 noxious weed species of concern as well as all species of the genus *Striga*. The invasive plant species identified by the NCDACS are listed in Table 4-1.

4.4 Pennsylvania

In Pennsylvania, the Noxious Weed Control Law and Noxious Weed Control List are administered by the Pennsylvania Department of Agriculture (PDA). The PDA is responsible for implementing Federal and Commonwealth eradication and control programs for suppression, control, or eradication of noxious weeds. Under the Noxious Weed Control Law, it is a violation to "sell, transport, plant, or otherwise propagate that weed within the Commonwealth" (PDA, 1997). The Secretary of Agriculture retains the right to designate weed control areas when necessary and to require affected landowners to comply with the control measures required within 30 days of the designation. The invasive plant species identified by the PDA are listed in Table 4-1.

5.0 INVASIVE PLANT SPECIES SURVEYS

Atlantic and DETI are conducting a field survey for State/Commonwealth listed invasive plant species within a 300-foot-wide corridor along the proposed ACP and SHP pipeline routes. A list of the invasive plant species identified through June 2016 in the ACP and SHP survey corridors (approximately 98 percent of the Projects) is provided in Table 4-1. This table and attachment will be updated periodically as surveys are completed. The milepost locations of invasive plant species identified through June 2016 are provided in Attachment A. Table 5-1 identifies invasive species that are adjacent to threatened and endangered plant species along the proposed route. Because this table includes location information for federally listed species, it has been filed under separate cover. The table is marked "Contains Privileged Information – Do Not Release."

6.0 INVASIVE PLANT SPECIES MANAGEMENT

The invasive plant species management program for the ACP and SHP is designed to:

- identify areas supporting invasive plants prior to construction;
- prevent the introduction and spread of invasive plants from construction equipment moving along the right-of-way;
- contain invasive plant propagules by preventing segregated topsoil from being spread to adjacent areas along the construction right-of-way; and
- address invasive plant infestations that develop during restoration and operation of the Projects.

Attachment A identifies the primary and alternative treatment methods for invasive species identified during survey in the ACP Project area and SHP Project area. The primary and/or alternative treatment method will be used based on the growing stage and prevalence of the invasive species. Methods may vary based on proximity to environmental features (e.g., wetlands, open water, sensitive species locations, and agricultural fields), in accordance with State/Commonwealth regulations.

6.1 Identification of Problem Areas

As noted above, Atlantic and DETI are conducting surveys for invasive plant species within the ACP Project area and SHP Project area. Additional areas supporting invasive plant species may be identified during preconstruction inspections by Atlantic and DETI's Environmental Inspectors (EI).[2] Prior to construction, the EIs will mark areas of invasive plant infestations by using color-coded flagging, staking, and/or signs on the construction rights-of-way. Identification of existing invasive plant locations will alert EIs and construction personnel to implement control measures during construction.

[2] The role and responsibilities of an EI are defined in the FERC's Plan.

6.2 Treatment Measures

6.2.1 Pre-Treatment

Prior to clearing and grading operations, pre-treatment of invasive plant infestations may be conducted if it will aid in controlling the spread of invasive plant species during construction. The control measures to be implemented may include the application of herbicide or mechanical measures such as mowing. The control measure chosen will be the best method available for the time, place, and species, as determined through consultation with the appropriate State/Commonwealth or Federal agency.

Herbicide application is an effective means of reducing the size of invasive plant species populations. Herbicide treatment methods will be based on species-specific and area-specific conditions (e.g., annual vs. perennial species; proximity to wetlands, open water, riparian areas, or agricultural areas; and time of year), and will be coordinated, as necessary, with State/Commonwealth and/or Federal agencies. Hand application methods (e.g., backpack spraying) will be used to treat occurrences of invasive species within the right-of-way and in other work areas. Preconstruction treatment of infestation areas will be controlled, as described in Section 7.0, to minimize impacts on surrounding vegetation. Aerial spraying will not be used for invasive plant species control along the rights-of-way.

Application of herbicides will be completed in accordance with applicable chemical contact times (as specified by the manufacturer) in advance of clearing and grading within the construction right-of-way. Treatment may be restricted in areas that are not readily accessible (e.g., difficult topography, saturated/inundated soils) or where there are documented occurrences of protected species that could be adversely impacted by herbicide applications. No herbicides will be applied within 25 feet of known occurrences of federal-listed threatened or endangered plant species. No use of herbicides (or pesticides) will be allowed within 100 feet of a wetland or waterbody, except where allowed by State/Commonwealth or Federal agencies.[3] No spraying of herbicides (or insecticides) will be allowed within a 300-foot karst feature buffer, except where allowed by State/Commonwealth or Federal agencies.

Atlantic and DETI will continue to work with applicable State/Commonwealth and Federal agencies to address invasive plant species control options where protected species and their habitats occur along the ACP and SHP. Mitigation measures to avoid impacts on these species could include hand pulling or spot herbicide treatment (for state-protected species) using a five gallon bucket or tarps to cover the sensitive plants during treatments. No herbicides will be applied within 25 feet of known occurrences of federally-listed threatened and endangered species.

In accordance with 18 CFR 380.15(f)(3), herbicides will not be used as a treatment unless authorized by the landowner or land managing agency. Atlantic and DETI will obtain

[3] Rodeo® Aquatic, for example, is a water-friendly herbicide approved by the PDA, WVDA, VDACS, and NCDACS.

permission from landowners or land managing agencies prior to applications of herbicides within the right-of-way or other work areas. Additionally, Atlantic and DETI will use products which are approved by the U.S. Environmental Protection Agency (EPA) for use as herbicides, and applications of these products will be in accordance with applicable regulations.

In addition to complying with 18 CFR 380.15(f)(3), Atlantic and DETI will: 1) use herbicides which are registered with the EPA; 2) apply herbicides according to specifications of the *Federal Insecticide, Fungicide, and Rodenticide Act*; and 3) use only certified applicators to apply herbicides.

Mechanical control (e.g., mowing or disking) can also be an effective control measure for annual species. The efficacy of mechanical control measures are dependent upon proper timing to cut the vegetation prior to the maturation of seed and may require multiple treatments during the growing season.

6.2.2 Preventive Measures during Construction

The following measures will be implemented to prevent the spread of invasive plant species during construction activities.

- Atlantic and DETI will direct its Contractors to clean equipment and vehicles prior to initial arrival at contractor yards and staging areas.
- All equipment (including timber mats) will be cleaned prior to arriving on the construction site. The equipment will be inspected by the Contractor and an EI to verify that it is clean of soil and debris, which are capable of transporting invasive plant propagules, prior to working on the Projects.
- Atlantic/DETI will install cleaning and washing stations at contractor yards and other locations along the pipeline routes as listed in Table 6.6.2-1. The locations for the stations were selected based on the results of field surveys and other mitigating factors (such as accessibility), the prevalence of invasive plants, the locations of sensitive resources (e.g., wetlands), landowner requirements, and recommendations from State/Commonwealth or Federal agencies.
- The wash stations will be installed prior to construction and removed during/following the restoration of the right-of-way.
- Cleaning will be conducted using high pressure washing equipment, compressed air, and/or manually to remove excess soil and debris from the tracks, tires, and blades of equipment.
- Wash water will be managed on site at the wash station. The water will be allowed to infiltrate into upland soils within the work area. Debris which collects around the work area will be collected and disposed of at an approved facility.

TABLE 6.2.2-1

Proposed Wash Stations along the Atlantic Coast Pipeline and Supply Header Project

Project/Segment	Approximate Milepost	Description
Atlantic Coast Pipeline		
AP-1	73.1	Entry to the Monongahela National Forest
AP-1	83.9	Exit to the Monongahela National Forest
AP-1	76.9	Entry to the Seneca State Forest
AP-1	80.5	Exit to the Seneca State Forest
AP-1	83.9	Entry to the George Washington National Forest
AP-1	158.1	Exit to the George Washington National Forest
AP-1	141.8	Entry to certified organic farm
AP-1	142.4	Exit to certified organic farm
AP-1	183.3	Entry to the James River WMA
AP-1	184.7	Exit to the James River WMA
AP-1	300.0	Entry to North Carolina
AP-3	12.0	Exit to North Carolina
AP-2	118.8	Entry to a certified organic farm
AP-2	118.9	Exit to a certified organic farm
Contractor Yard Spread 01-A	offline	Equipment cleaning prior to mobilizing to the right-of-way
Contractor Yard Spread 02-A	offline	Equipment cleaning prior to mobilizing to the right-of-way
Contractor Yard – GWNF – 6 Spread 02A-A	offline	Equipment cleaning prior to mobilizing to the right-of-way
Contractor Yard – GWNF – 6 Spread 02A-B	offline	Equipment cleaning prior to mobilizing to the right-of-way
Contractor Yard – GWNF – 6 Spread 02-D	offline	Equipment cleaning prior to mobilizing to the right-of-way
Contractor Yard – GWNF – 6 Spread 03-A	offline	Equipment cleaning prior to mobilizing to the right-of-way
Contractor Yard – GWNF – 6 Spread 03-B	offline	Equipment cleaning prior to mobilizing to the right-of-way
Contractor Yard Spread 03-A	offline	Equipment cleaning prior to mobilizing to the right-of-way
Contractor Yard Spread 04-A	offline	Equipment cleaning prior to mobilizing to the right-of-way
Contractor Yard Spread 04-A-A	offline	Equipment cleaning prior to mobilizing to the right-of-way
Contractor Yard – GWNF – 6 Spread 03A-A	offline	Equipment cleaning prior to mobilizing to the right-of-way
Contractor Yard – GWNF – 6 Spread 03A-B	offline	Equipment cleaning prior to mobilizing to the right-of-way
Contractor Yard Spread 05-C	offline	Equipment cleaning prior to mobilizing to the right-of-way
Contractor Yard – GWNF – 6 Spread 04-A	offline	Equipment cleaning prior to mobilizing to the right-of-way
Contractor Yard Spread 06-C	offline	Equipment cleaning prior to mobilizing to the right-of-way
Contractor Yard Spread 07-B	offline	Equipment cleaning prior to mobilizing to the right-of-way
Contractor Yard Spread 08-A	offline	Equipment cleaning prior to mobilizing to the right-of-way
Contractor Yard Spread 09-A	offline	Equipment cleaning prior to mobilizing to the right-of-way
Contractor Yard Spread 10-A	offline	Equipment cleaning prior to mobilizing to the right-of-way
Contractor Yard Spread 11-C	offline	Equipment cleaning prior to mobilizing to the right-of-way
Supply Header Project		
TL-635	23.7	Entry to the Lewis Wetzel WMA
TL-635	27.3	Exit to the Lewis Wetzel WMA
TL-635	27.6	Entry to the Lewis Wetzel WMA
TL-635	27.7	Exit to the Lewis Wetzel WMA
Contractor Yard 9	5.7	Equipment cleaning prior to mobilizing to the right-of-way
Contractor Yard 10	10.7	Equipment cleaning prior to mobilizing to the right-of-way
Contractor Yard 8	18.6	Equipment cleaning prior to mobilizing to the right-of-way
Contractor Yard 7	19.0	Equipment cleaning prior to mobilizing to the right-of-way
Contractor Yard 4	0.3	Equipment cleaning prior to mobilizing to the right-of-way
Contractor Yards 1, 2, 3	0.4	Equipment cleaning prior to mobilizing to the right-of-way

- The Contractor and EI will maintain logs documenting the cleaning history of each piece of equipment. The EI will use stickers or other visual marking to identify that equipment has been cleaned and an inspection has been completed.

- Topsoil will be segregated, or buried if approved, in all infested areas, including the spoil-side and working-side portions of the construction right-of-way as a method to prevent equipment and workers from transporting and spreading invasive species.

- Cleared vegetation and segregated topsoil from areas with invasive plant infestations will be maintained adjacent to the areas from which they were removed to eliminate the transport of soil-borne propagules to other areas. The stockpiles will be identified as invasive plant species stockpiles with signs. The Contractor will install sediment barriers (e.g., silt fence) around the stockpiles to ensure the material is not transported to adjacent areas. During reclamation, the materials will be returned to the areas from which they were obtained.

- Equipment required for initial vegetation clearing and/or topsoil segregation in areas with invasive plant infestation will be cleaned prior to leaving the area. Once topsoil has been segregated, subsequent equipment will not require cleaning as it will not come into contact with invasive plant species or topsoil potentially containing propagules. Equipment required for topsoil replacement during restoration will also be cleaned prior to moving out of an area of infestation.

- All equipment which comes in contact with soils potentially contaminated with invasive species will be cleaned prior to being transported from ACP or SHP work sites to other job sites.

Materials used for erosion control (e.g., hay bales or straw mulch) will be certified as weed free.

6.2.3 Post-Construction Treatment Methods

Atlantic's and DETI's objective is to comply with regulatory and Project-specific requirements to prevent the spread of invasive plant species and treat areas of the rights-of-way where invasive plant species form a significant portion of the vegetation community in comparison to adjacent areas. Atlantic and DETI will utilize established restoration procedures to prevent the establishment of invasive plant species in areas disturbed by construction.

In non-frozen soil conditions, the construction Contractor will implement restoration procedures on disturbed lands immediately following construction. In frozen soil conditions, restoration activities will be delayed until the Spring or Summer following construction. In either case, ongoing revegetation and monitoring efforts will ensure adequate vegetative cover to discourage the establishment of invasive plant species.

Following construction, the ACP Project area and SHP Project area will be monitored in accordance with the Plan and Procedures. In the event that invasive plant species become

established in the right-of-way, Atlantic and DETI will implement measures (e.g., mowing or treatment with herbicides) to control invasive plants within the right-of-way and prevent the spread of invasive plants to adjacent lands which do not contain invasive species. In addition, Atlantic and DETI will implement control measures at the aboveground facility sites to prevent the spread of invasive plant species onto adjacent properties. Weed infestations that develop during operations as a result of construction will be treated using approved herbicides or mechanical methods (e.g., mowing) as appropriate for the species and in accordance with applicable laws and regulations. The method selected will be the best available for the time, place, and species as determined through consultation with the appropriate State/Commonwealth or Federal agency and with the landowner.

Post-construction herbicide applications will be conducted prior to seed maturation where possible and where necessary. Applications will be controlled, as described in Section 7.0, to minimize impacts on surrounding vegetation. Herbicide treatment methods will be based on species-specific and area-specific conditions as described above and will be coordinated with State/Commonwealth and Federal agencies as applicable. Hand application methods (e.g., backpack spraying) will be used to treat occurrences of invasive species within the right-of-way and in other work areas. Following the treatment, a seeding program will be implemented in accordance with the *Restoration and Rehabilitation Plan*. The timing of subsequent revegetation efforts will be based on the persistence of the herbicide.

Mechanical methods entail the use of equipment to mow or disk invasive plant species populations. Mechanical treatments will be conducted prior to seed maturation where required. If such a method is used, subsequent seeding will be conducted, if necessary, to re-establish a desirable vegetative cover that will stabilize the soils and slow the potential reoccurrence of invasive plant species.

Where warranted, Atlantic and DETI will consult with the appropriate State/Commonwealth or Federal agency regarding the use of biological and alternative invasive plant control methods. The implementation of these measures will require approval from the landowner or land managing agency.

Increased accessibility of lands along the proposed pipeline rights-of-way, particularly during operations, could lead to off-highway vehicle (OHV) use into previously restricted or inaccessible areas. Atlantic and DETI will take steps to limit OHV use on the proposed pipeline rights-of-way to avoid issues with revegetation efforts or erosion problems to address landowner concerns or preferences, and to complete additional operational and maintenance activities that may require the use of an OHV. To extent practicable, the use of Atlantic and DETI OHVs will only be on an as needed basis to complete these tasks. In addition to these operational issues, OHV use along the pipeline rights-of-way could allow unintended access to sensitive wildlife habitats, species, or culturally sensitive areas and lead to adverse impacts on these resources.

To avoid OHV access along the pipeline rights-of-way and additional roads opened up for construction equipment and vehicles, Atlantic and DETI will implement measures, as appropriate, to restrict OHV access along the right-of-way. This could include installation of OHV barriers at appropriate locations along the rights-of-way. Barriers may consist of signs,

fences, vegetation, or boulders. Atlantic and DETI will coordinate with the appropriate land managing agencies to identify locations where unauthorized OHV access to Federal and State/Commonwealth lands via the pipeline right-of-way is most likely. At these key crossing locations, site-specific OHV blocking measures will be developed in consultation with the land managing agencies.

7.0 MONITORING

Following construction, invasive plant infestations will be monitored as part of Atlantic's and DETI's restoration monitoring activities as described in the *Restoration and Rehabilitation Plan*. Atlantic/DETI will inspect disturbed areas after the first and second growing seasons, at a minimum, to determine the success of revegetation. Revegetation shall be considered successful if upon visual survey the density and cover of non-nuisance vegetation are similar to adjacent undisturbed lands. Atlantic and DETI will continue revegetation efforts and monitoring until successful revegetation is achieved. Following successful revegetation, Atlantic and DETI's operations staff will monitor and treat invasive plant species as part of its normal operations and maintenance activities in accordance with applicable State/Commonwealth or Federal regulations.

8.0 HERBICIDES

8.1 Herbicide Application and Handling

Herbicide application will be based on information gathered from field surveys and consultations with applicable State/Commonwealth or Federal agencies. Before application, Atlantic or DETI or its Contractors will obtain required State/Commonwealth or local permits and landowner approval. Herbicide application will be conducted in accordance with applicable laws and regulations by a licensed contractor. Additionally, the following protocols will be implemented:

- Atlantic and DETI will not use aerial spraying as a means of invasive plant species control along the right-of-way;
- Atlantic and DETI will not use herbicides within 25 feet of known occurrences of federally-listed endangered or threatened plant species;
- Atlantic and DEIT will not use herbicides (or pesticides) within 100 feet of a waterbody or wetland, except where allowed by State/Commonwealth or Federal agencies;
- Atlantic and DETI will not use spraying of herbicides (or insecticides) within a 300-foot karst feature buffer, except where allowed by State/Commonwealth or Federal agencies.

Hand application methods (e.g., backpack spraying) will be used to treat occurrences of invasive species within the right-of-way and in other work areas. Calibration checks of

equipment will be conducted at the beginning of spraying and periodically to ensure proper application rates.

Herbicides will be transported to the site with the following provisions:

- on-site herbicide quantities will be limited where practical;
- concentrate will be transported in approved containers only, in a manner that will prevent tipping or spilling, and in a compartment that is isolated from food, clothing, and safety equipment;
- mixing will be conducted in an upland area and at a distance greater than 100 feet from waterbodies or wetlands; greater than 200 feet from private wells; greater than 300 feet from karst features; and greater than 400 feet from public wells. The property owner will be consulted about the presence and location of wells prior to herbicide application;
- storage and handling of all herbicides and equipment will be in accordance with all applicable regulations; and
- all herbicide equipment and containers will be maintained as needed and inspected for leaks on a daily basis.

8.2 Herbicide Spills

Atlantic and DETI have prepared and will implement a *Spill Prevention, Control, and Countermeasures Plan* (SPCC Plan) to avoid or minimize the potential impact of hazardous material spills during construction and operation of the Projects. In accordance with this plan, herbicide contractors will be responsible for keeping spill kits in their vehicles and in herbicide storage areas to allow for quick and effective response to spills. Response to an herbicide spill will vary depending on the material spilled and the size and location of the spill. The order of priorities after discovering a spill are to protect the safety of personnel and the public, minimize damage to the environment, and conduct cleanup and remediation activities.

All herbicide contractors will obtain and have readily available copies of the appropriate Safety Data Sheets (formally known as Material Safety Data Sheets) and labels for the herbicides used. All herbicide spills will be reported in accordance with applicable laws and requirements. Further information regarding spill response and reporting is provided in the SPCC Plan.

9.0 FEDERALLY MANAGED LANDS

The ACP crosses approximately 20.0 miles of U.S. Forest Service lands in the Monongahela and George Washington National Forests. For these crossings, Atlantic has prepared a *Construction, Operations, and Maintenance Plan*, which identifies construction procedures and mitigation measures to be implemented on these federally managed lands. The

results of the invasive plant species surveys and proposed control measures on Federal lands are included in this plan.

The ACP also crosses approximately 0.1 mile of National Park Service land along the Blue Ridge Parkway. Atlantic will be using the horizontal directional drill (HDD) construction method to install the proposed pipeline under the Blue Ridge Parkway. The HDD method will avoid direct impacts on the parkway, including impacts on vegetation immediately adjacent to the parkway. This will limit the potential for the spread of invasive species or propagules along the parkway.

10.0 REFERENCES

North Carolina Department of Agriculture and Consumer Services. 2014. Call dated June 2, from G. Blosser (Natural Resource Group, LLC) to P. Wilson.

North Carolina Department of Environmental Quality. 2016a. Natural Heritage Database. Geographic Information Systems Data received March 21, 2016.

North Carolina Department of Environmental Quality. Natural Heritage Program. 2016b. Email dated August 3, from L. Robison to J. Martin.

Pennsylvania Department of Agriculture. 1997. *Legal Reference: Noxious Weed Law Summary*. Available online at: http://www.agriculture.state.pa.us/portal/server.pt/gateway/PTARGS_0_2_75292_10297_0_43/AgWebsite/Files/Publications/NoxiousWeedLawSummary.pdf. Accessed April 2015.

Pennsylvania Department of Agriculture. 2015. *Noxious, Invasive and Poisonous Plant Program.* Available online at: http://www.agriculture.state.pa.us/portal/server.pt/gateway/PTARGS_6_2_24476_10297_0_43/AgWebsite/ProgramDetail.aspx?name=Noxious-Invasive-and-Poisonous-Plant-Program&navid=12&parentnavid=0&palid=116&. Accessed April 2015.

Sheley, R., J. Petroff, M. Borman. 1999. *Introduction to Biology and Management of Noxious Rangeland Weeds*, Corvallis, OR.

U.S. Department of Agriculture. 2014. *Introduced, Invasive, and Noxious Plants*. Available online at: http://plants.usda.gov/java/noxiousDriver. Accessed December 2014.

Virginia Department of Agriculture and Consumer Services. 2014. Call dated June 2, from G. Blosser (Natural Resource Group, LLC) to L. Nichols.

Virginia Department of Conservation and Recreation. 2016. Natural Heritage Program. Natural Heritage Screening and Element Occurrence. Geographic Information Systems Data received October 25, 2016.

West Virginia Division of Natural Resources. 2016. Natural Heritage Program. Geographic Information Systems Data received July 14, 2016.

ATLANTIC COAST PIPELINE, LLC
ATLANTIC COAST PIPELINE

and

DOMINION TRANSMISSION, INC.
SUPPLY HEADER PROJECT

Invasive Species Management Plan

ATTACHMENT A
Invasive Plant Species Identified along the Atlantic Coast Pipeline and Supply Header Project

ATTACHMENT A

Invasive Plant Species Identified along the Atlantic Coast Pipeline and Supply Header Project [a]

Facility, State/ Commonwealth, County/City	Approximate Milepost	Invasive Plant Species	Prevalence (percent)	Primary Treatment Method	Secondary Treatment Method
ATLANTIC COAST PIPELINE					
AP-1					
West Virginia					
Harrison	0.0	*Rosa multiflora, Elaeagnus umbellata, Microstegium vimineum*	0-10, 10-25, 0-10	Ground herbicide application	Spot herbicide application
Harrison	0.7	*Elaeagnus umbellata, Lonicera morrowii*	0-10, 0-10	Ground herbicide application	Spot herbicide application
Harrison	0.8	*Ailanthus altissima*	25-50	Ground herbicide application	Spot herbicide application
Harrison	1.0	*Elaeagnus umbellata*	25-50	Ground herbicide application	Spot herbicide application
Lewis	1.1	*Elaeagnus umbellata, Rosa multiflora*	25-50, 25-50	Ground herbicide application	Spot herbicide application
Lewis	1.3	*Ailanthus altissima*	25-50	Ground herbicide application	Spot herbicide application
Lewis	3.8	*Elaeagnus umbellata, Rosa multiflora, Lonicera morrowii*	10-25, 0-10, 0-10	Ground herbicide application	Spot herbicide application
Lewis	6.8	*Carduus nutans*	0-10	Ground herbicide application	Spot herbicide application
Lewis	8.2	*Microstegium vimineum*	50-75	Mechanical	Ground herbicide application
Lewis	8.3	*Microstegium vimineum*	50-75	Mechanical	Ground herbicide application
Lewis	11.3	*Sorghum halepense*	10-25	Ground herbicide application	Spot herbicide application
Lewis	11.6	*Carduus nutans*	10-25	Ground herbicide application	Spot herbicide application
Lewis	12.6	*Lonicera morrowii, Rosa multiflora*	0-10, 0-10	Ground herbicide application	Spot herbicide application
Lewis	12.8	*Lonicera morrowii, Rosa multiflora, Elaeagnus umbellata*	0-10, 0-10, 0-10	Ground herbicide application	Spot herbicide application
Lewis	13.4	*Ailanthus altissima, Rosa multiflora, Microstegium vimineum*	0-10, 10-25, 10-25	Ground herbicide application	Spot herbicide application
Lewis	13.6	*Lonicera morrowii, Rosa multiflora, Elaeagnus umbellata*	0-10, 0-10, 10-25	Ground herbicide application	Spot herbicide application
Lewis	13.8	*Rosa multiflora, Elaeagnus umbellata*	10-25, 0-10	Ground herbicide application	Spot herbicide application
Lewis	13.9	*Lonicera morrowii, Rosa multiflora, Elaeagnus umbellata*	10-25, 0-10, 0-10	Ground herbicide application	Spot herbicide application
Lewis	14.0	*Elaeagnus umbellata, Lonicera morrowii, Rosa multiflora*	0-10, 0-10, 0-10	Ground herbicide application	Spot herbicide application
Lewis	14.3	*Elaeagnus umbellata*	0-10	Ground herbicide application	Spot herbicide application
Lewis	14.4	*Lonicera morrowii*	0-10	Ground herbicide application	Spot herbicide application
Lewis	14.5	*Elaeagnus umbellata, Lonicera morrowii, Rosa multiflora*	0-10, 0-10, 0-10	Ground herbicide application	Spot herbicide application
Lewis	14.8	*Lonicera morrowii, Rosa multiflora, Ailanthus altissima, Elaeagnus umbellata*	0-10, 0-10, 0-10, 10-25	Ground herbicide application	Spot herbicide application
Lewis	14.9	*Lonicera morrowii, Elaeagnus umbellata, Rosa multiflora*	0-10, 10-25, 0-10	Ground herbicide application	Spot herbicide application
Lewis	15.3	*Microstegium vimineum, Ailanthus altissima*	0-10, 0-10	Ground herbicide application	Spot herbicide application
Lewis	15.4	*Rosa multiflora, Elaeagnus umbellata, Lonicera morrowii*	0-10, 10-25, 0-10	Ground herbicide application	Spot herbicide application

ATTACHMENT A (cont'd)

Invasive Plant Species Identified along the Atlantic Coast Pipeline and Supply Header Project [a]

Facility, State/ Commonwealth, County/City	Approximate Milepost	Invasive Plant Species	Prevalence (percent)	Primary Treatment Method [b]	Secondary Treatment Method
Lewis	15.5	*Ailanthus altissima*	50-75	Mechanical	Ground herbicide application
Lewis	16.0	*Elaeagnus umbellata, Microstegium vimineum, Ailanthus altissima, Rosa multiflora*	10-25, 0-10, 0-10, 0-10	Ground herbicide application	Spot herbicide application
Lewis	16.1	*Elaeagnus umbellata, Microstegium vimineum, Rosa multiflora, Ailanthus altissima, Lonicera morrowii*	10-25, 0-10, 0-10, 0-10, 0-10	Ground herbicide application	Spot herbicide application
Lewis	16.5	*Elaeagnus umbellata, Microstegium vimineum, Ailanthus altissima*	10-25, 0-10, 0-10	Ground herbicide application	Spot herbicide application
Lewis	17.0	*Ailanthus altissima, Elaeagnus umbellata, Lonicera morrowii, Microstegium vimineum, Rosa multiflora*	0-10, 10-25, 0-10, 0-10, 0-10	Ground herbicide application	Spot herbicide application
Lewis	17.1	*Ailanthus altissima, Elaeagnus umbellata, Lonicera morrowii, Microstegium vimineum, Rosa multiflora*	0-10, 10-25, 0-10, 0-10, 0-10	Ground herbicide application	Spot herbicide application
Lewis	17.3	*Elaeagnus umbellata, Lonicera morrowii, Rosa multiflora*	0-10, 0-10, 0-10	Ground herbicide application	Spot herbicide application
Lewis	17.4	*Elaeagnus umbellata, Rosa multiflora, Lonicera morrowii*	0-10, 0-10, 0-10	Ground herbicide application	Spot herbicide application
Lewis	17.6	*Microstegium vimineum, Rosa multiflora, Elaeagnus umbellata*	0-10, 0-10, 0-10	Ground herbicide application	Spot herbicide application
Lewis	18.6	*Microstegium vimineum, Rosa multiflora*	10-25, 0-10	Ground herbicide application	Spot herbicide application
Lewis	18.7	*Elaeagnus umbellata, Microstegium vimineum*	0-10, 25-50	Ground herbicide application	Spot herbicide application
Lewis	18.8	*Elaeagnus umbellata, Microstegium vimineum, Rosa multiflora*	10-25, 10-25, 0-10	Ground herbicide application	Spot herbicide application
Lewis	19.0	*Lonicera morrowii, Elaeagnus umbellata, Microstegium vimineum, Rosa multiflora, Ailanthus altissima*	0-10, 0-10, 0-10, 0-10, 0-10	Ground herbicide application	Spot herbicide application
Lewis	20.2	*Lonicera morrowii, Elaeagnus umbellata, Microstegium vimineum, Rosa multiflora*	0-10, 0-10, 0-10, 0-10	Ground herbicide application	Spot herbicide application
Lewis	20.6	*Lonicera morrowii, Rosa multiflora*	10-25, 0-10	Ground herbicide application	Spot herbicide application
Lewis	20.9	*Elaeagnus umbellata, Microstegium vimineum, Ailanthus altissima, Lonicera morrowii*	0-10, 10-25, 0-10, 0-10	Ground herbicide application	Spot herbicide application
Lewis	21.1	*Microstegium vimineum, Rosa multiflora*	10-25, 0-10	Ground herbicide application	Spot herbicide application
Lewis	21.4	*Elaeagnus umbellata, Microstegium vimineum, Rosa multiflora*	0-10, 0-10, 0-10	Ground herbicide application	Spot herbicide application
Lewis	21.9	*Rosa multiflora, Elaeagnus umbellata*	0-10, 0-10	Ground herbicide application	Spot herbicide application
Upshur	23.2	*Elaeagnus umbellata, Lonicera morrowii*	10-25, 0-10	Ground herbicide application	Spot herbicide application
Upshur	23.3	*Polygonum cuspidatum*	0-10	Ground herbicide application	Spot herbicide application
Upshur	24.4	*Elaeagnus umbellata, Rosa multiflora*	0-10, 0-10	Ground herbicide application	Spot herbicide application
Upshur	24.8	*Ailanthus altissima, Elaeagnus umbellata*	0-10, 50-75	Mechanical	Ground herbicide application
Upshur	25.1	*Elaeagnus umbellata, Rosa multiflora*	25-50, 10-25	Ground herbicide application	Spot herbicide application
Upshur	25.2	*Microstegium vimineum, Elaeagnus umbellata*	75-100, 10-25	Ground herbicide application	Spot herbicide application
Upshur	26.1	*Elaeagnus umbellata, Rosa multiflora*	0-10, 0-10	Ground herbicide application	Spot herbicide application
Upshur	26.2	*Rosa multiflora, Elaeagnus umbellata, Lonicera morrowii*	0-10, 0-10, 0-10	Ground herbicide application	Spot herbicide application

ATTACHMENT A (cont'd)

Invasive Plant Species Identified along the Atlantic Coast Pipeline and Supply Header Project [a]

Facility, State/ Commonwealth, County/City	Approximate Milepost	Invasive Plant Species	Prevalence (percent)	Primary Treatment Method [b]	Secondary Treatment Method
Upshur	26.5	*Rosa multiflora*	0-10	Ground herbicide application	Spot herbicide application
Upshur	27.4	*Carduus nutans*	0-10	Ground herbicide application	Spot herbicide application
Upshur	27.7	*Elaeagnus umbellata, Rosa multiflora*	0-10, 0-10	Ground herbicide application	Spot herbicide application
Upshur	28.3	*Elaeagnus umbellata, Rosa multiflora, Microstegium vimineum*	0-10, 0-10, 0-10	Ground herbicide application	Spot herbicide application
Upshur	28.9	*Elaeagnus umbellata, Lonicera morrowii, Rosa multiflora*	0-10, 10-25, 0-10	Ground herbicide application	Spot herbicide application
Upshur	29.0	*Carduus nutans*	0-10	Ground herbicide application	Spot herbicide application
Upshur	29.1	*Lonicera morrowii, Rosa multiflora*	25-50, 25-50	Ground herbicide application	Spot herbicide application
Upshur	29.3	*Elaeagnus umbellata, Lonicera morrowii, Rosa multiflora*	0-10, 10-25, 10-25	Ground herbicide application	Spot herbicide application
Upshur	29.6	*Elaeagnus umbellata, Rosa multiflora, Lonicera morrowii*	10-25, 0-10, 0-10	Ground herbicide application	Spot herbicide application
Upshur	29.8	*Rosa multiflora, Elaeagnus umbellata, Lonicera morrowii*	10-25, 10-25, 10-25	Ground herbicide application	Spot herbicide application
Upshur	30.1	*Carduus nutans*	0-10	Ground herbicide application	Spot herbicide application
Upshur	30.6	*Rosa multiflora, Elaeagnus umbellata, Lonicera morrowii, Microstegium vimineum*	0-10, 0-10, 0-10, 10-25	Ground herbicide application	Spot herbicide application
Upshur	31.1	*Rosa multiflora, Elaeagnus umbellata, Lonicera morrowii, Microstegium vimineum*	0-10, 0-10, 0-10	Ground herbicide application	Spot herbicide application
Upshur	31.2	*Rosa multiflora, Elaeagnus umbellata, Lonicera morrowii*	10-25, 10-25, 10-25	Ground herbicide application	Spot herbicide application
Upshur	31.6	*Elaeagnus umbellata, Lonicera morrowii*	0-10	Ground herbicide application	Spot herbicide application
Upshur	31.7	*Polygonum cuspidatum*	10-25	Ground herbicide application	Spot herbicide application
Upshur	32.0	*Ailanthus altissima, Elaeagnus umbellata*	10-25, 0-10	Ground herbicide application	Spot herbicide application
Upshur	32.1	*Rosa multiflora, Elaeagnus umbellata*	0-10, 0-10	Ground herbicide application	Spot herbicide application
Upshur	32.3	*Elaeagnus umbellata*	0-10	Ground herbicide application	Spot herbicide application
Upshur	32.4	*Rosa multiflora, Elaeagnus umbellata, Lonicera morrowii, Ailanthus altissima*	10-25, 10-25, 10-25, 10-25	Ground herbicide application	Spot herbicide application
Upshur	32.5	*Lonicera morrowii, Rosa multiflora, Ailanthus altissima*	10-25, 0-10, 0-10	Ground herbicide application	Spot herbicide application
Upshur	32.7	*Rosa multiflora*	0-10	Ground herbicide application	Spot herbicide application
Upshur	33.6	*Lonicera morrowii, Rosa multiflora*	0-10, 10-25	Ground herbicide application	Spot herbicide application
Upshur	34.4	*Polygonum cuspidatum, Elaeagnus umbellata, Rosa multiflora*	50-75, 0-10, 0-10	Mechanical	Ground herbicide application
Upshur	36.0	*Microstegium vimineum*	10-25	Ground herbicide application	Spot herbicide application
Upshur	36.2	*Microstegium vimineum, Rosa multiflora*	10-25, 0-10	Ground herbicide application	Spot herbicide application
Upshur	36.4	*Microstegium vimineum*	10-25	Ground herbicide application	Spot herbicide application
Upshur	36.7	*Microstegium vimineum, Rosa multiflora*	10-25, 0-10	Ground herbicide application	Spot herbicide application
Upshur	36.8	*Rosa multiflora*	0-10	Ground herbicide application	Spot herbicide application
Upshur	37.1	*Rosa multiflora*	10-25	Ground herbicide application	Spot herbicide application

ATTACHMENT A (cont'd)

Invasive Plant Species Identified along the Atlantic Coast Pipeline and Supply Header Project [a]

Facility, State/ Commonwealth, County/City	Approximate Milepost	Invasive Plant Species	Prevalence (percent)	Primary Treatment Method [b]	Secondary Treatment Method
Upshur	37.4	*Rosa multiflora, Microstegium vimineum, Elaeagnus umbellata*	0-10, 0-10, 0-10	Ground herbicide application	Spot herbicide application
Upshur	37.5	*Rosa multiflora, Elaeagnus umbellata*	10-25, 0-10	Ground herbicide application	Spot herbicide application
Upshur	37.7	*Elaeagnus umbellata, Rosa multiflora*	0-10, 0-10	Ground herbicide application	Spot herbicide application
Upshur	37.9	*Elaeagnus umbellata, Rosa multiflora*	0-10, 0-10	Ground herbicide application	Spot herbicide application
Upshur	39.5	*Rosa multiflora*	75-100	Mechanical	Ground herbicide application
Upshur	39.7	*Elaeagnus umbellata*	10-25	Ground herbicide application	Spot herbicide application
Upshur	40.6	*Rosa multiflora, Elaeagnus umbellata*	0-10, 0-10	Ground herbicide application	Spot herbicide application
Upshur	43.6	*Microstegium vimineum, Rosa multiflora, Elaeagnus umbellata*	10-25, 10-25, 0-10	Ground herbicide application	Spot herbicide application
Randolph	44.8	*Rosa multiflora, Lonicera morrowii, Elaeagnus umbellata, Lythrum salicaria, Microstegium vimineum*	10-25, 10-25, 0-10, 0-10, 0-10	Ground herbicide application	Spot herbicide application
Randolph	49.3	*Rosa multiflora*	0-10	Ground herbicide application	Spot herbicide application
Randolph	49.5	*Carduus nutans, Sorghum halepense, Rosa multiflora*	10-25, 0-10, 0-10	Ground herbicide application	Spot herbicide application
Randolph	49.9	*Elaeagnus umbellata*	0-10	Ground herbicide application	Spot herbicide application
Randolph	50.4	*Microstegium vimineum, Rosa multiflora*	25-50, 0-10	Ground herbicide application	Spot herbicide application
Randolph	50.9	*Rosa multiflora, Elaeagnus umbellata, Microstegium vimineum*	0-10, 10-25, 50-75	Mechanical	Ground herbicide application
Randolph	51.1	*Rosa multiflora, Ailanthus altissima, Elaeagnus umbellata*	10-25, 10-25, 0-10	Ground herbicide application	Spot herbicide application
Randolph	51.5	*Elaeagnus umbellata, Rosa multiflora*	0-10, 10-25	Ground herbicide application	Spot herbicide application
Randolph	51.6	*Elaeagnus umbellata, Rosa multiflora*	0-10, 10-25	Ground herbicide application	Spot herbicide application
Randolph	52.0	*Elaeagnus umbellata, Rosa multiflora*	10-25, 0-10	Ground herbicide application	Spot herbicide application
Randolph	52.3	*Elaeagnus umbellata, Lonicera morrowii, Rosa multiflora*	10-25, 0-10, 10-25	Ground herbicide application	Spot herbicide application
Randolph	52.4	*Rosa multiflora, Elaeagnus umbellata, Lonicera morrowii*	10-25, 10-25, 0-10	Ground herbicide application	Spot herbicide application
Randolph	52.6	*Rosa multiflora, Elaeagnus umbellata*	0-10, 10-25	Ground herbicide application	Spot herbicide application
Randolph	52.9	*Elaeagnus umbellata, Rosa multiflora*	10-25, 10-25	Ground herbicide application	Spot herbicide application
Randolph	53.5	*Rosa multiflora, Elaeagnus umbellata*	0-10, 0-10	Ground herbicide application	Spot herbicide application
Randolph	54.0	*Elaeagnus umbellata*	0-10	Ground herbicide application	Spot herbicide application
Randolph	54.1	*Elaeagnus umbellata*	0-10	Ground herbicide application	Spot herbicide application
Randolph	54.4	*Rosa multiflora, Elaeagnus umbellata*	0-10, 0-10	Ground herbicide application	Spot herbicide application
Randolph	56.2	*Elaeagnus umbellata*	0-10	Ground herbicide application	Spot herbicide application
Randolph	56.4	*Elaeagnus umbellata*	25-50	Ground herbicide application	Spot herbicide application
Randolph	57.1	*Elaeagnus umbellata*	10-25	Ground herbicide application	Spot herbicide application
Randolph	57.3	*Rosa multiflora, Elaeagnus umbellata*	0-10, 0-10	Ground herbicide application	Spot herbicide application
Randolph	57.6	*Elaeagnus umbellata*	10-25	Ground herbicide application	Spot herbicide application
Randolph	57.7	*Rosa multiflora*	0-10	Ground herbicide application	Spot herbicide application

ATTACHMENT A (cont'd)

Invasive Plant Species Identified along the Atlantic Coast Pipeline and Supply Header Project [a]

Facility, State/ Commonwealth, County/City	Approximate Milepost	Invasive Plant Species	Prevalence (percent)	Primary Treatment Method [b]	Secondary Treatment Method
Randolph	58.3	*Pueraria montana*	10-25	Ground herbicide application	Spot herbicide application
Randolph	58.4	*Rosa multiflora*	0-10	Ground herbicide application	Spot herbicide application
Randolph	59.5	*Rosa multiflora*	0-10	Ground herbicide application	Spot herbicide application
Randolph	59.6	*Elaeagnus umbellata, Polygonum cuspidatum, Rosa multiflora*	25-50	Ground herbicide application	Spot herbicide application
Randolph	60.2	*Polygonum cuspidatum*	75-100	Mechanical	Ground herbicide application
Randolph	60.7	*Rosa multiflora*	0-10	Ground herbicide application	Spot herbicide application
Randolph	61.0	*Microstegium vimineum*	10-25	Ground herbicide application	Spot herbicide application
Randolph	63.5	*Rosa multiflora*	10-25	Ground herbicide application	Spot herbicide application
Randolph	63.9	*Rosa multiflora*	10-25	Ground herbicide application	Spot herbicide application
Randolph	64.5	*Rosa multiflora*	25-50	Ground herbicide application	Spot herbicide application
Randolph	64.6	*Rosa multiflora*	10-25	Ground herbicide application	Spot herbicide application
Randolph	65.0	*Rosa multiflora, Elaeagnus umbellata, Lonicera morrowii*	10-25, 0-10, 0-10	Ground herbicide application	Spot herbicide application
Randolph	65.1	*Lonicera morrowii, Rosa multiflora*	0-10, 0-10	Ground herbicide application	Spot herbicide application
Randolph	65.2	*Rosa multiflora*	10-25	Ground herbicide application	Spot herbicide application
Randolph	65.4	*Elaeagnus umbellata, Rosa multiflora*	10-25, 25-50	Ground herbicide application	Spot herbicide application
Randolph	65.5	*Rosa multiflora, Elaeagnus umbellata*	25-10, 0-10	Ground herbicide application	Spot herbicide application
Randolph	65.7	*Rosa multiflora, Lonicera morrowii, Microstegium vimineum, Rosa multiflora*	0-10, 0-10, 0-10, 0-10	Ground herbicide application	Spot herbicide application
Pocahontas	67.4	*Rosa multiflora*	0-10	Ground herbicide application	Spot herbicide application
Pocahontas	67.7	*Rosa multiflora*	25-50	Ground herbicide application	Spot herbicide application
Pocahontas	68.6	*Elaeagnus umbellata, Rosa multiflora*	0-10, 0-10	Ground herbicide application	Spot herbicide application
Pocahontas	69.0	*Rosa multiflora*	0-10	Ground herbicide application	Spot herbicide application
Pocahontas	69.1	*Elaeagnus umbellata*	10-26	Ground herbicide application	Spot herbicide application
Pocahontas	69.2	*Elaeagnus umbellata, Carduus ntans, Rosa multiflora*	0-10, 0-10, 0-10	Ground herbicide application	Spot herbicide application
Pocahontas	69.3	*Rosa multiflora*	10-25	Ground herbicide application	Spot herbicide application
Pocahontas	70.3	*Elaeagnus umbellata, Rosa multiflora*	0-10, 0-10	Ground herbicide application	Spot herbicide application
Pocahontas	70.5	*Rosa multiflora*	0-10	Ground herbicide application	Spot herbicide application
Virginia					
None Identified					
AP-2					
North Carolina					
None identified					

ATTACHMENT A (cont'd)

Invasive Plant Species Identified along the Atlantic Coast Pipeline and Supply Header Project [a]

Facility, State/ Commonwealth, County/City	Approximate Milepost	Invasive Plant Species	Prevalence (percent)	Primary Treatment Method [b]	Secondary Treatment Method
AP-3					
None Identified					
SUPPLY HEADER PROJECT					
TL-636					
Pennsylvania					
Westmoreland	0.5	*Microstegium vimineum*	25-50	Ground herbicide application	Spot herbicide application
Westmoreland	0.7	*Microstegium vimineum, Lonicera tartarica*	25-50, 50-75	Mechanical	Ground herbicide application
Westmoreland	2.2	*Lonicera tartarica*	50-75	Mechanical	Ground herbicide application
Westmoreland	3.2	*Rosa multiflora*	0-10	Ground herbicide application	Spot herbicide application
TL-635					
West Virginia					
Harrison	0.1	*Elaeagnus umbellata*	25-50	Ground herbicide application	Spot herbicide application
Harrison	0.2	*Elaeagnus umbellata, Rosa multiflora*	50-75, 25-50	Mechanical	Ground herbicide application
Harrison	0.3	*Microstegium vimineum*	50-75	Mechanical	Ground herbicide application
Harrison	0.4	*Microstegium vimineum*	50-75	Mechanical	Ground herbicide application
Harrison	0.5	*Elaeagnus umbellata, Microstegium vimineum*	0-10, 25-50	Ground herbicide application	Spot herbicide application
Harrison	0.6	*Elaeagnus umbellata, Microstegium vimineum*	25-50, 25-50	Ground herbicide application	Spot herbicide application
Doddridge	0.8	*Elaeagnus umbellata, Microstegium vimineum*	50-75, 50-75	Mechanical	Ground herbicide application
Doddridge	0.9	*Microstegium vimineum*	25-50	Ground herbicide application	Spot herbicide application
Doddridge	1.9	*Microstegium vimineum*	25-50	Ground herbicide application	Spot herbicide application
Doddridge	2.1	*Microstegium vimineum*	50-75	Mechanical	Ground herbicide application
Doddridge	2.3	*Microstegium vimineum*	25-50	Ground herbicide application	Spot herbicide application
Doddridge	2.4	*Microstegium vimineum*	50-75	Mechanical	Ground herbicide application
Doddridge	2.5	*Microstegium vimineum*	25-50	Ground herbicide application	Spot herbicide application
Doddridge	2.8	*Microstegium vimineum*	50-75	Mechanical	Ground herbicide application
Doddridge	3.1	*Microstegium vimineum*	75-100	Mechanical	Ground herbicide application
Doddridge	3.9	*Microstegium vimineum*	75-100	Mechanical	Ground herbicide application
Doddridge	4.0	*Ailanthus altissima, Elaeagnus umbellata, Microstegium vimineum,*	0-10, 25-50, 50-75	Ground herbicide application	Spot herbicide application
Doddridge	4.1	*Microstegium vimineum*	75-100	Mechanical	Ground herbicide application
Doddridge	4.2	*Microstegium vimineum, Rosa multiflora*	75-100, 75-100	Mechanical	Ground herbicide application
Doddridge	4.4	*Microstegium vimineum*	25-50	Ground herbicide application	Spot herbicide application
Doddridge	4.5	*Microstegium vimineum*	25-50	Ground herbicide application	Spot herbicide application
Doddridge	4.6	*Microstegium vimineum*	75-100	Mechanical	Ground herbicide application

ATTACHMENT A (cont'd)

Invasive Plant Species Identified along the Atlantic Coast Pipeline and Supply Header Project [a]

Facility, State/ Commonwealth, County/City	Approximate Milepost	Invasive Plant Species	Prevalence (percent)	Primary Treatment Method [b]	Secondary Treatment Method
Doddridge	5.9	*Elaeagnus umbellata, Lonicera morrowii, Microstegium vimineum*	25-50, 25-50, 50-75	Ground herbicide application	Spot herbicide application
Doddridge	6.0	*Elaeagnus umbellata, Microstegium vimineum*	25-50, 25-50	Ground herbicide application	Spot herbicide application
Doddridge	6.2	*Microstegium vimineum*	50-75	Mechanical	Ground herbicide application
Doddridge	6.3	*Microstegium vimineum*	50-75	Mechanical	Ground herbicide application
Doddridge	6.4	*Rosa multiflora*	25-50	Ground herbicide application	Spot herbicide application
Doddridge	6.6	*Microstegium vimineum*	25-50	Ground herbicide application	Spot herbicide application
Doddridge	7.0	*Microstegium vimineum*	25-50	Ground herbicide application	Spot herbicide application
Doddridge	7.3	*Microstegium vimineum*	50-75	Mechanical	Ground herbicide application
Doddridge	7.4	*Microstegium vimineum*	75-100	Mechanical	Ground herbicide application
Doddridge	7.6	*Microstegium vimineum*	50-75	Mechanical	Ground herbicide application
Doddridge	7.7	*Microstegium vimineum*	50-75	Mechanical	Ground herbicide application
Doddridge	7.8	*Microstegium vimineum*	50-75	Mechanical	Ground herbicide application
Doddridge	7.9	*Lonicera tatarica*	25-50	Ground herbicide application	Spot herbicide application
Doddridge	8.1	*Microstegium vimineum*	50-75	Mechanical	Ground herbicide application
Doddridge	8.2	*Microstegium vimineum*	50-75	Mechanical	Ground herbicide application
Doddridge	8.4	*Microstegium vimineum*	25-50	Ground herbicide application	Spot herbicide application
Doddridge	8.7	*Microstegium vimineum*	75-100	Mechanical	Ground herbicide application
Doddridge	8.8	*Microstegium vimineum*	50-75	Mechanical	Ground herbicide application
Doddridge	8.9	*Microstegium vimineum*	75-100	Mechanical	Ground herbicide application
Doddridge	9.0	*Microstegium vimineum*	75-100	Mechanical	Ground herbicide application
Doddridge	9.3	*Microstegium vimineum*	10-25	Ground herbicide application	Spot herbicide application
Doddridge	9.5	*Microstegium vimineum*	50-75	Mechanical	Ground herbicide application
Doddridge	9.6	*Microstegium vimineum*	50-75	Mechanical	Ground herbicide application
Doddridge	9.7	*Microstegium vimineum*	75-100	Mechanical	Ground herbicide application
Doddridge	9.8	*Microstegium vimineum, Rosa multiflora*	75-100, 25-50	Mechanical	Ground herbicide application
Doddridge	10.0	*Microstegium vimineum*	25-50	Ground herbicide application	Spot herbicide application
Doddridge	10.7	*Rosa multiflora*	10-25	Ground herbicide application	Spot herbicide application
Doddridge	11.2	*Microstegium vimineum*	10-25	Ground herbicide application	Spot herbicide application
Doddridge	11.3	*Microstegium vimineum*	25-50	Ground herbicide application	Spot herbicide application
Doddridge	11.4	*Microstegium vimineum, Rosa multiflora*	25-50, 25-50	Ground herbicide application	Spot herbicide application
Doddridge	11.5	*Carduus crispus, Microstegium vimineum*	10-25, 25-50	Ground herbicide application	Spot herbicide application
Doddridge	11.6	*Microstegium vimineum*	25-50	Mechanical	Ground herbicide application
Doddridge	11.7	*Microstegium vimineum*	25-50	Ground herbicide application	Spot herbicide application

ATTACHMENT A (cont'd)

Invasive Plant Species Identified along the Atlantic Coast Pipeline and Supply Header Project [a]

Facility, State/ Commonwealth, County/City	Approximate Milepost	Invasive Plant Species	Prevalence (percent)	Primary Treatment Method [b]	Secondary Treatment Method
Doddridge	11.8	*Microstegium vimineum*	25-50	Ground herbicide application	Spot herbicide application
Doddridge	11.9	*Microstegium vimineum*	50-75	Mechanical	Ground herbicide application
Doddridge	12.2	*Microstegium vimineum*	50-75	Mechanical	Ground herbicide application
Doddridge	12.4	*Microstegium vimineum*	25-50	Ground herbicide application	Spot herbicide application
Doddridge	12.7	*Microstegium vimineum*	75-100	Mechanical	Ground herbicide application
Doddridge	12.9	*Elaeagnus umbellata, Microstegium vimineum*	50-75, 50-75	Mechanical	Ground herbicide application
Doddridge	13.3	*Elaeagnus umbellata*	50-75	Mechanical	Ground herbicide application
Doddridge	13.8	*Elaeagnus umbellata*	25-50	Ground herbicide application	Spot herbicide application
Doddridge	13.9	*Microstegium vimineum*	50-75	Mechanical	Ground herbicide application
Doddridge	14.0	*Elaeagnus umbellata, Microstegium vimineum, Rosa multiflora*	10-25, 0-10, 0-10	Ground herbicide application	Spot herbicide application
Doddridge	14.2	*Elaeagnus umbellata*	10-25	Mechanical	Ground herbicide application
Doddridge	14.4	*Elaeagnus umbellata*	25-50	Ground herbicide application	Spot herbicide application
Doddridge	14.6	*Elaeagnus umbellata*	50-75	Mechanical	Ground herbicide application
Doddridge	15.1	*Microstegium vimineum*	50-75	Mechanical	Ground herbicide application
Doddridge	15.4	*Elaeagnus umbellata*	10-25	Ground herbicide application	Spot herbicide application
Doddridge	15.6	*Microstegium vimineum*	50-75	Mechanical	Ground herbicide application
Doddridge	16.7	*Microstegium vimineum*	50-75	Mechanical	Ground herbicide application
Doddridge	16.9	*Microstegium vimineum*	25-50	Ground herbicide application	Spot herbicide application
Doddridge	17.1	*Microstegium vimineum*	50-75	Mechanical	Ground herbicide application
Doddridge	17.3	*Microstegium vimineum, Rosa multiflora, Elaeagnus umbellata*	25-50, 0-10, 0-10	Ground herbicide application	Spot herbicide application
Doddridge	17.4	*Microstegium vimineum*	25-50	Ground herbicide application	Spot herbicide application
Doddridge	17.5	*Microstegium vimineum, Rosa multiflora*	25-50, 50-75	Ground herbicide application	Spot herbicide application
Doddridge	17.8	*Ailanthus altissima, Microstegium vimineum*	0-10, 25-50	Ground herbicide application	Spot herbicide application
Doddridge	18.0	*Microstegium vimineum, Rosa multiflora, Elaeagnus umbellata*	0-10, 0-10, 0-10	Ground herbicide application	Spot herbicide application
Doddridge	18.5	*Polygonum cuspidatum, Rosa multiflora, Elaeagnus umbellata*	10-25, 0-10, 0-10	Ground herbicide application	Spot herbicide application
Doddridge	18.6	*Elaeagnus umbellata, Fallopia japonica*	50-75, 25-50	Mechanical	Ground herbicide application
Doddridge	19.0	*Ailanthus altissima, Rosa multiflora, Polygonum cuspidatum, Microstegium vimineum*	0-10, 0-10, 0-10, 25-50	Ground herbicide application	Spot herbicide application
Doddridge	19.8	*Microstegium vimineum*	25-50	Ground herbicide application	Spot herbicide application
Doddridge	19.9	*Microstegium vimineum*	25-50	Ground herbicide application	Spot herbicide application
Doddridge	20.0	*Microstegium vimineum*	50-75	Mechanical	Ground herbicide application
Doddridge	20.1	*Microstegium vimineum*	50-75	Mechanical	Ground herbicide application
Doddridge	20.5	*Microstegium vimineum, Rosa multiflora, Elaeagnus umbellata*	0-10, 0-10, 0-10	Ground herbicide application	Spot herbicide application

ATTACHMENT A (cont'd)

Invasive Plant Species Identified along the Atlantic Coast Pipeline and Supply Header Project [a]

Facility, State/ Commonwealth, County/City	Approximate Milepost	Invasive Plant Species	Prevalence (percent)	Primary Treatment Method [b]	Secondary Treatment Method
Doddridge	20.7	*Fallopia japnoica*	25-50	Ground herbicide application	Spot herbicide application
Doddridge	21.0	*Microstegium vimineum, Rosa multiflora, Elaeagnus umbellata*	0-10, 0-10, 0-10	Ground herbicide application	Spot herbicide application
Doddridge	21.3	*Microstegium vimineum*	75-100	Mechanical	Ground herbicide application
Doddridge	21.9	*Microstegium vimineum*	0-10	Ground herbicide application	Spot herbicide application
Doddridge	22.0	*Microstegium vimineum*	25-50	Ground herbicide application	Spot herbicide application
Doddridge	22.5	*Microstegium vimineum*	50-75	Mechanical	Ground herbicide application
Doddridge	22.6	*Microstegium vimineum*	50-75	Mechanical	Ground herbicide application
Tyler	22.8	*Ailanthus altissima, Microstegium vimineum*	50-75, 75-100	Mechanical	Ground herbicide application
Tyler	22.9	*Microstegium vimineum*	25-50	Ground herbicide application	Spot herbicide application
Tyler	23.1	*Rosa multiflora*	25-50	Ground herbicide application	Spot herbicide application
Tyler	23.4	*Microstegium vimineum*	50-75	Mechanical	Ground herbicide application
Tyler	23.5	*Ailanthus altissima, Microstegium vimineum, Rosa multiflora*	10-25, 25-50, 25-50	Ground herbicide application	Spot herbicide application
Wetzel	23.8	*Microstegium vimineum, Rosa multifora*	25-50, 0-10	Ground herbicide application	Spot herbicide application
Wetzel	24.0	*Microstegium vimineum*	25-50	Ground herbicide application	Spot herbicide application
Wetzel	25.6	*Microstegium vimineum, Rosa multiflora*	25-50, 0-10	Ground herbicide application	Spot herbicide application
Wetzel	28.4	*Ailanthus altissima, Microstegium vimineum, Rosa multiflora*	0-10, 0-10, 0-10	Ground herbicide application	Spot herbicide application
Wetzel	28.8	*Microstegium vimineum*	50-75	Mechanical	Ground herbicide application
Wetzel	29.0	*Microstegium vimineum, Rosa multiflora, Ailanthus altissima*	25-50, 10-25, 10-25	Ground herbicide application	Spot herbicide application
Wetzel	29.4	*Microstegium vimineum*	25-50	Ground herbicide application	Spot herbicide application
Wetzel	29.6	*Rosa multiflora, Elaeagnus umbellata, Microstegium vimineum, Ailanthus altissima*	25-50, 25-50, 10-25, 0-10	Ground herbicide application	Spot herbicide application
Wetzel	29.9	*Microstegium vimineum, Elaeagnus umbellata*	25-50, 0-10	Ground herbicide application	Spot herbicide application
Wetzel	31.1	*Elaeagnus umbellata, Lonicera morrowii, Rosa multiflora*	0-10, 0-10, 0-10	Ground herbicide application	Spot herbicide application
Wetzel	32.2	*Microstegium vimineum, Ailanthus altissima, Polygonum cuspidatum*	25-50, 10-25, 0-10	Ground herbicide application	Spot herbicide application
Wetzel	32.5	*Microstegium vimineum*	10-25	Ground herbicide application	Spot herbicide application
Wetzel	32.8	*Microstegium vimineum*	25-50	Ground herbicide application	Spot herbicide application
Wetzel	32.9	*Microstegium vimineum*	25-50	Ground herbicide application	Spot herbicide application
Wetzel	33.1	*Microstegium vimineum*	25-50	Ground herbicide application	Spot herbicide application
Wetzel	33.5	*Microstegium vimineum, Rosa multiflora, Polygonum cuspidatum, Lonicera tartarica,*	50-75, 0-10, 0-10, 25-50	Mechanical	Ground herbicide application

[a] Information related to invasive plant species within U.S. Forest Service lands is included in the *Construction, Operations, and Maintenance Plan*.