

APPENDIX T Herbicide Use Plan

Appendix T

Herbicide Use Plan

Mountain Valley Pipeline Project

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1.0 INTRODUCTION

Mountain Valley Pipeline, LLC (MVP), a joint venture between EQT Midstream Partners, LP and affiliates of NextEra Energy, Inc.; Con Edison Gas Midstream LLC; WGL Holdings, Inc.; and RGC Midstream, LLC (collectively referred to as MVP), is seeking a Certificate of Public Convenience and Necessity (Certificate) from the Federal Energy Regulatory Commission (FERC) pursuant to Section 7(c) of the Natural Gas Act authorizing it to construct and operate the proposed Mountain Valley Pipeline Project (Project) located in 17 counties in West Virginia and Virginia. MVP plans to construct an approximately 303-mile, 42-inch-diameter natural gas pipeline to provide timely, cost-effective access to the growing demand for natural gas for use by local distribution companies, industrial users, and power generation in the Mid-Atlantic and southeastern markets, as well as potential markets in the Appalachian region. Construction is anticipated to begin in 2017 and conclude in the fourth quarter of 2018. Construction on National Forest System lands will occur in 2018.

The proposed pipeline will extend from the existing Equitrans, L.P. transmission system and other natural gas facilities in Wetzel County, West Virginia to Transcontinental Gas Pipe Line Company, LLC's (Transco) Zone 5 compressor station 165 in Pittsylvania County, Virginia. In addition to the pipeline, the Project will include approximately 171,600 horsepower of compression at three compressor stations currently planned along the route, as well as measurement, regulation, and other ancillary facilities required for the safe and reliable operation of the pipeline. The pipeline is designed to transport up to 2.0 million dekatherms per day of natural gas.

A 3.5-mile long segment of the Project will cross portions of the Jefferson National Forest (JNF) in Monroe County in southern West Virginia and in Giles, Craig, and Montgomery counties in southwestern Virginia. The JNF is managed by the U.S. Forest Service (USFS) of the U.S. Department of Agriculture. Another 60-foot segment of the Project will cross the Weston and Gauley Bridge Turnpike Trail (Weston and Gauley Turnpike) in Braxton County, West Virginia, which is administered by the U.S. Army Corps of Engineers (USACE). Approval to cross land managed by two or more federal agencies is the responsibility of the U.S. Department of the Interior, Bureau of Land Management (BLM) through issuance of a Right-of-Way Grant. Project-wide construction environmental compliance will be the responsibility of the FERC. The USFS and USACE will also ensure compliance across lands managed or administered by those agencies. Because the majority of federal lands crossed are managed by the USFS, this plan focuses on the JNF, noting any additional or different requirements that are specific to the crossing of the Weston and Gauley Turnpike.

The USFS will be responsible for enforcement of the terms and conditions of the BLM's right-of-way Grant on National Forest System lands during the term of the right-of-way Grant for the Mountain Valley Pipeline project. Compliance will be monitored on the JNF portion of this project by the USFS Project Manager and the Authorized Officer's designated compliance monitors. USFS will have stop work authority per terms outlined in the BLM right-of-way grant. USFS will also have stop work authority if unsafe work conditions are encountered during construction.

The Project has potential to impact sensitive environmental resources and, as a result, environmental protection measures have been developed to minimize potential impacts on these resources and will be applied, as applicable, to the Project.

1.1 Plan Purpose

This Plan was developed to identify how herbicide use to control noxious weed and invasive species will be implemented for the Project on the JNF. Federal and state policies require that measures be taken to control the spread of noxious weeds. Noxious weeds have the potential to invade areas disturbed by construction and may spread along the cleared areas of the pipeline right-of-way. Soil disturbance may also allow weed seed already present to germinate and grow.

This Plan is applicable to the installation of the pipeline and ancillary facilities within the temporary construction right-of-way, permanent operational right-of-way, staging areas, access roads, and any other disturbed areas associated with the Project on the JNF. This Plan is consistent with the 2004 Land and Resource Management Plan for the JNF and USDA Forest Service stipulations regarding herbicide use.

1.2 Objectives

The objectives of this Herbicide Use Plan include:

1. Conduct all herbicide-use activities using an integrated pest management approach to improve overall treatment effectiveness and to reduce health risks for both humans and the environment.
2. Conduct all herbicide-use activities in full compliance with applicable Federal laws, regulations, and policies including EPA pesticide label restrictions, personnel training, and licensing. Relevant State and local laws pertaining to the use of herbicides will be followed when not in conflict with Forest Service management authorities and objectives.
3. Require that all personnel who use any herbicide in terrestrial or aquatic areas of the National Forest System be trained in the proper, safe, and effective use of the respective pesticides being applied for the management activity. Herbicide-use training and certification will be accomplished through an appropriate EPA-approved state program.
4. Incorporate pertinent herbicide-use policy and related handbook guidance into all management activities on the National Forest System lands, waters, or facilities administered by the USFS.

2.0 WEED INVENTORY

MVP has conducted field studies, file searches, and weed consultations to identify existing weed infestations along the pipeline right-of-way and adjacent extra workspaces, along new or improved access roads, and within ancillary facility locations where clearing will be required on federal land crossed by the Project. A weed inventory can be located in the Exotic and Invasive Species Control Plan (Appendix S).

3.0 WEED MANAGEMENT

Weeds are spread by a variety of means including pedestrian vectors (e.g., hiking, recreation, etc.), construction equipment, construction and reclamation materials, livestock, and wildlife. Implementation of preventative measures to control the spread of weeds is the most cost-effective management approach. The Project will implement weed control management measures that are consistent with the standards and guidelines included in the Land and Resource Management Plan for the JNF regarding noxious weeds and invasive species.

MVP will coordinate site-specific treatment measures with the Forest Service when an invasive species is located and complete a Pesticide Use Proposal (form FS-2100-2) for each activity involving the use of herbicides. Forest-wide Standards for herbicide use are listed below.

3.1 Herbicide Use Standards in the Jefferson National Forest

FW-94: Method and timing of application are chosen to achieve Project objectives while minimizing effects on non-target vegetation and other environmental elements. Selective treatment is preferred over broadcast treatment.

Application methods from most to least selective are:

- Cut surface treatments;
- Basal stem treatments;
- Directed foliar treatments;
- Soil spot (spot around) treatments;
- Soil spot (spot grid) treatments;
- Manual granular treatments;
- Manual/mechanical broadcast treatments;
- Helicopter treatments.

FW-95: Herbicides and application methods are chosen to minimize risk to human and wildlife health and the environment. No class B, C, or D chemical (see Table 2-6 from the JNF Land and Resource Management Plan) may be used on any Project without the approval of the Regional Forester. Vegetable oil is used as the herbicide carrier when available and compatible with the proposed application.

JNF Land and Resource Management Plan Table 2-6. Classification of chemical/method combinations when used at typical rates and exposures^{*/}

Application Method	Class			
	A	B	C	D
Manual Ground: Cut Surface	Dicamba Glyphosate Imazpyr	Picloram Triclopyr Amine	2, 4-D Amine	
Basal Stem	Diesel Kerosene Limonene	Triclopyr Ester 2, 4-DP	2, 4-D Ester	
Soil Spot	Hexazonone			
Foliar Spray	Fosamine Glyphosate Hexazonone Imazpyr Kerosene	Limonene Picloram Sulfometuron Methyl Triclopyr Amine Triclopyr Ester	2, 4-D Amine 2, 4-D Ester 2, 4-DP	Tebuthiuron
Mechanical ground	Diesel Dicamba Fosamine Glyphosate Hexazonone Imazpyr	Picloram Sulfometuron Methyl Triclopyr Amine Triclopyr Ester 2, 4-DP	2, 4-D Amine 2, 4-D Ester Tebuthiuron	
Aerial	Diesel Fosamine Glyphosate Hexazonone Imazpyr Kerosene	Limonene Picloram Sulfometuron Methyl Triclopyr Amine Triclopyr Ester 2, 4-DP	2, 4-D Amine 2, 4-D Ester Tebuthiuron	

^{*}Reproduced from Table 2-6 of the JNF Land and Resource Management Plan, page 2-28.

[/] The Project will implement herbicide use measures that are consistent with the standards and guidelines included in the Land and Resource Management Plan for the JNF and the USFS Human Health and Ecological Risk Assessments.

FW-96: Areas do not undergo prescribed burning for at least 30 days after herbicide treatment.

FW-97: Aerial application with herbicides is allowed only in utility corridors. Each aerial herbicide application must have an operations plan to ensure that:

- Adequate precautions are taken to protect the crew, including equipment certification and hazard identification;
- Areas to be aerially treated are clearly marked; and
- Methods used to avoid buffers and other sensitive areas are safe and effective.

FW-98: No herbicide is aerially applied within 200 horizontal feet of an open road or designated trail. Buffers are clearly marked before treatment so applicators can easily see and avoid them.

FW-99: No herbicide is aerially applied within 300 feet, nor ground-applied within 60 feet, of any known threatened, endangered, proposed, or sensitive plant, except where its use

is necessary to control non-native invasive species affecting federally listed or sensitive species. Buffers are clearly marked before treatment so applicators can easily see and avoid them.

FW-100: No herbicide is aerially applied within 200 horizontal feet, nor ground-applied within 30 horizontal feet, of lakes, wetlands, perennial or intermittent springs and streams. No herbicide is applied within 100 horizontal feet of any public or domestic water source. Selective treatments (which require added site-specific analysis and use of aquatic labeled pesticides) may occur within these buffers only to prevent significant environmental damage such as nonnative invasive plant infestations. Buffers are clearly marked before treatment, so applicators can easily see and avoid them.

FW-101: With the exception of utility corridor and road rights-of-way, no herbicide is broadcast within 100 feet of private land or 300 feet of a private residence, unless agreed to by the landowner. Buffers are clearly marked so applicators can easily see and avoid them.

FW-102: No soil-active herbicide is applied within 30 feet of the drip line of reserved vegetation (e.g. den trees or hardwood inclusions) or within 30 feet of the drip line of vegetation adjacent to the treated area.

FW-103: Aquifers and public water sources are identified and protected.

FW-104: Application equipment, empty herbicide containers, clothes worn during treatment, and skin are not cleaned in open water or wells. Mixing and cleaning water must come from a public water supply and be transported in separate labeled containers.

FW-105: Herbicide mixing, loading, or cleaning areas in the field are not located within 200 feet of private land, riparian corridors, open water or wells, or other sensitive areas.

FW-106: No herbicide is broadcast on rock outcrops or sinkholes. No soil-active herbicide with a half-life longer than 3 months is broadcast on slopes over 45%, erodible soils, or aquifer recharge zones. Such areas are clearly marked before treatment so applicators can easily see and avoid them.

FW-107: Weather is monitored and the Project is suspended if temperature, humidity, or wind becomes unfavorable as shown in Table 2-7 from the JNF Land and Resource Management Plan.

JNF Land and Resource Management Plan Table 2-7. Unacceptable Weather Conditions for Herbicide Application*

	Temps Higher Than	Humidity Less Than	Wind (at Target) Greater Than
Ground: Hand (cut surface)	N.A.	N.A.	N.A.
Hand (other)	98F	20%	15 mph
Mechanical (liquid)	95F	30%	10 mph
Mechanical (granular)	N.A.	N.A.	10 mph
Aerial: Granular	N.A.	N.A.	N.A.

*Reproduced from Table 2-7 of the JNF Land and Resource Management Plan, page 2-30.

FW-107: Weather is monitored and the Project is suspended if temperature, humidity, or wind becomes unfavorable as shown in Table 2-7.

MVP will utilize Krenite and Glyphosate herbicides to control invasive species on the MVP right-of-way.

3.2 Preventative Measures

The preventative measures that will be used to prevent the spread of invasive species along the MVP Project right-of-way and within ancillary facilities on the JNF are discussed in the Project's *Exotic and Invasive Species Control Plan (Appendix R)*.

Equipment-cleaning stations will be established along the pipeline corridor to ensure equipment is clean before being transported to a new construction spread. One cleaning station will be located at the intersection of Clendennin and Pocahontas roads. During construction, the environmental inspector will ensure all contractors either (1) clean the tracks, tires, and blades of equipment to remove any excess soil prior to movement of equipment out of areas with known weed infestations, herbicide use, or soil-borne pest infestations or (2) utilize designated cleaning stations to remove vegetative materials using high-pressure washing equipment. No equipment will be allowed to enter the JNF until it has been inspected and approved by the USFS Project Manager or an Authorized Officer.

3.3 Treatment Methods

If noxious or invasive species are found in the ROW, appropriate control measures will be implemented in an attempt to eradicate the identified weed infestations along the right-of-way and to reduce the spread or proliferation of weeds. If a location is discovered prior to, during, or post-construction, MVP will provide a treatment plan to the USFS that will include a map and any mechanical or herbicides intended for use at that location and treat the location accordingly. The plan will also include a monitoring plan for that area to ensure that the invasive species has been removed and new vegetation has begun to establish. Control measures may include one or more of the following methods:

- Mechanical methods reliant on the use of equipment to disk or excavate weed populations. If this method is used, subsequent seeding will be conducted to re-establish a desirable vegetative cover, which will stabilize the soils and slow the potential re-invasion of weeds. Seed selection will be based on site-specific conditions, and the appropriate seed mix identified for those conditions, as presented in the Project's *Restoration Plan*.
- Herbicide application is an effective means of reducing the size of weed populations. Herbicide application and handling methods are described in Section 6.0 below.

3.4 Reporting

Reporting and record keeping of herbicide usage will be completed as directed in the Forest Service Manual, Title 2100 – Chapter 2150, Pesticide-Use Management and Coordination.

4.0 MONITORING

Following herbicide use prior to the start of construction on federal lands, MVP will monitor the area to ensure that herbicides and invasive species are not transferred elsewhere

during construction. Areas where herbicides have been utilized will be stockpiled in a different location from other topsoil. Following construction, the area will be monitored annually as determined by the USFS Authorized Officer. Locations of infestations on federal land crossed by the Project, and extent of infestations, will be submitted to the USFS. If species or colonies of species are found, MVP will conduct spot eradication of those species.

5.0 HERBICIDE SELECTION, DISPOSAL, AND CLEANUP

Herbicide selection will be consistent with the USFS's stipulations for herbicide use as found in Table 2.6 of the JNF Land and Resource Management Plan (see Section 3 above). Herbicides will be disposed per the Hazardous Materials Management Plan (Appendix Y). Should an herbicide spill occur, it will be addressed using the policies and procedures outlined in the West Virginia and Virginia Spill Prevention, Control, and Countermeasure Plans (Appendices D-1 and D-2).

6.0 HERBICIDE APPLICATION AND HANDLING

MVP or its contractor will submit a site-specific herbicide use plan to document its use of herbicide on federally administered lands, as well as a pesticide application report within 24 hours following application. The chemical application will be done by a licensed contractor in accordance with all applicable laws and regulations. Any herbicide application will also adhere to the herbicide-use provisions from the Land and Resource Management Plan for the JNF listed in Section 3 above. MVP will limit the use of herbicides in areas where prior known occurrences of the Rusty Patch Bumblebee have been recorded.

Herbicide label instructions and manufacturer's guidelines will be strictly adhered to. For example, manufacturer's guidelines recommend that herbicides only be applied under appropriate weather conditions (i.e., periods of low wind speeds, when precipitation is not imminent, etc.), that application sprayers be mounted low to the ground, and that sprayer booms incorporate specialized nozzles designed to produce large droplet sizes with limited drift potential. Adherence to these specifications and manufacturer label directions will minimize the potential for drift or transport of herbicides to off right-of-way areas.

Vehicle-mounted sprayers (e.g., handgun, boom, and injector) will be used primarily in open areas that are readily accessible by vehicle. Hand-application methods (e.g., backpack spraying) that target individual plants will be used to treat small scattered weed populations in rough terrain. Calibration checks of equipment will be conducted at the beginning of spraying and periodically thereafter to ensure proper application rates are being achieved.

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

- Herbicides will be mixed onsite as instructed by the manufacture by a licensed individual.
- Herbicides will be transported in a manner that will prevent tipping or spilling;
- Mixing of surfactants or other additives with water or other carriers and refilling of containers will typically be conducted at road crossings, and no mixing or filling will

occur within 200 feet of open or flowing water, wetlands, or other sensitive resources; and

- Mixing and application procedures will be supervised by a licensed commercial applicator, and monitoring will be conducted to ensure that proper mixing, application, cleanup, personal protection and safety procedures are followed;
- All herbicide equipment and containers will be inspected daily for leaks.