APPENDIX S Exotic and Invasive Species Control Plan Appendix S

# Exotic and Invasive Species Control Plan Mountain Valley Pipeline Project

Prepared by:



May 10, 2023

# TABLE OF CONTENTS

| 1.0 | INTRC  | DUCTION                     | 5-1 |  |
|-----|--|-----------------------------|-----|--|
| 2.0 | FS GU  | IDANCE                      | 5-2 |  |
| 3.0 | POTENTIAL EXOTIC AND INVASIVE SPECIES ALONG THE PROJECT RIGHT-OF-WAY |                             |     |  |
| 4.0 | STRAT  | TEGIES AND CONTROL MEASURES | 5-7 |  |
|     | 4.1  | Strategies                  | S-7 |  |
|     | 4.2  | Control Measures            | 5-8 |  |
|     | 4.3  | Use of Pesticides           | 5-9 |  |
| 5.0 | REFER  | ENCES                       | 5-9 |  |

# LIST OF TABLES

| Table 3-1 | Exotic and Invasive Species with the Potential to Occur Along the Project Right-of- |   |
|-----------|---|---|
|           | Way   | ; |

#### ACRONYMS AND ABBREVIATIONS

| BLM               | U.S. Department of the Interior, Bureau of Land Management        |
|-------------------|---|
| Certificate       | Certificate of Public Convenience and Necessity                   |
| FERC              | Federal Energy Regulatory Commission                              |
| FERC Plan         | FERC Upland Erosion Control Revegetation and Maintenance Plan     |
| FERC Procedures   | FERC Wetland and Waterbody Construction and Mitigation Procedures |
| FS                | U.S. Forest Service of the U.S. Department of Agriculture         |
| JNF               | Jefferson National Forest <sup>1</sup>                            |
| MVP               | Mountain Valley Pipeline, LLC                                     |
| POD               | Plan of Development   |
| Project           | Mountain Valley Pipeline Project                                  |
| Transco           | Transcontinental Gas Pipe Line Company, LLC                       |
| USACE             | U.S. Army Corps of Engineers                                      |
| Weston and Gauley | Weston and Gauley Bridge Turnpike Trail                           |
| Turnpike          |   |
| WHC               | Wildlife Habitat Council  |

<sup>&</sup>lt;sup>1</sup> Jefferson National Forest refers to the southern portion of the current George Washington & Jefferson National Forests throughout this document. Originally two separate national forests, the JNF and the George Washington National Forest were administratively combined in 1995 and are administered as a single national forest unit.

# Mountain Valley Pipeline Project Exotic and Invasive Species Control Plan

#### 1.0 INTRODUCTION

Mountain Valley Pipeline, LLC (MVP), a joint venture between EQM Midstream Partners, LP; NextEra Capital Holdings, Inc.; Con Edison Gas Midstream LLC; WGL Midstream; and RGC Midstream, LLC (collectively referred to as MVP), was issued a Certificate of Public Convenience and Necessity (Certificate) from the Federal Energy Regulatory Commission (FERC) on October 13, 2017, pursuant to Section 7(c) of the Natural Gas Act authorizing it to construct and operate the Mountain Valley Pipeline Project (Project) located in 17 counties in West Virginia and Virginia. The Project is 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.

The pipeline extends 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 includes approximately 171,600 horsepower of compression at three compressor stations 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 crosses 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 (FS) of the U.S. Department of Agriculture. Another 60-foot segment of the Project crosses 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 is the responsibility of the FERC. The FS 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 FS, this plan focuses on the JNF, noting any additional or different requirements that are specific to the crossing of the Weston and Gauley Turnpike.

Construction of the Project segment that crosses the Weston and Gauley Turnpike was completed in 2018. Construction of the Project segments across the JNF began in 2018 but were not completed and progress is on hold due to a July 27, 2018, order by the U.S. Court of Appeals for the Fourth Circuit vacating and remanding the Right-of-Way Grant and a subsequent Stop Work Order issued by FERC.

The FS is 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 FS Project Manager and the Authorized Officer's designated compliance monitors. FS will have stop work authority per terms outlined in the BLM Right-of-Way Grant. The FS 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.

### 2.0 FS GUIDANCE

The FS developed a National Strategic Framework for Invasive Species Management in 2013 to guide the FS in responding to the invasive species problem in the United States. This guidance document identifies the most significant strategic actions that should be undertaken to reduce the threat of invasive species (FS 2013). The FS's national strategy encompasses four program elements:

- Prevention;
- Detection;
- Control and management; and
- Restoration and rehabilitation.

This Plan is based on the 2013 FS guidance document as well as the procedures and measures identified in the FERC's *Upland Erosion Control, Revegetation and Maintenance Plan* (FERC Plan) and was prepared with the support of the Wildlife Habitat Council (WHC).

#### 3.0 POTENTIAL EXOTIC AND INVASIVE SPECIES ALONG THE PROJECT RIGHT-OF-WAY

Table 3-1 lists the weeds that are known to occur or have the potential to occur along the pipeline route as identified through agency consultations. This table includes weed species along the entire 303-mile long Project route; however, only the multiflora rose, Japanese honeysuckle, garlic mustard, and mile-a-minute vine have been observed along the portion of the Project's survey corridor on the JNF. These weed species were observed scattered throughout the survey corridor through the JNF.

| Table 3-1  |                              |                |   |  |  |
|--|------------------------------|----------------|---|--|--|
| Exotic and Invasive Species with the Potential to Occur Along the Project Right-of-Way |                              |                |   |  |  |
| Common Name  | Scientific Name              | Growth<br>Form | Typical Habitat(s)  |  |  |
| Amur Honeysuckle   | Lonicera maackii             | Shrub          | Pastures, fields, forest, forest edges, roadsides                         |  |  |
| Autumn Olive   | Elaeagnus umbellata          | Shrub          | Pastures, fields, roadsides   |  |  |
| Asian Bittersweet  | Celastrus orbiculata         | Vine           | Fields, forest edges, roadsides, grasslands                               |  |  |
| Beefsteak Plant  | Perilla frutescens           | Herb           | Roadsides   |  |  |
| Bell's Honeysuckle   | Lonicera bella               | Shrub          | Fields, pastures, forest edge, roadsides                                  |  |  |
| Bishop's Goutweed  | Aegopodium podagraria        | Herb           | Forests   |  |  |
| Border Privet  | Ligustrum obtusifolium       | Shrub          | Old fields, forest gaps   |  |  |
| Bradford Pear  | Pyrus calleryana             | Tree           | Full sun, orchards, parks, roadsides, yards, forest edge                  |  |  |
| Brittle Naiad  | Najas minor                  | Herb           | Ponds, streams, lakes, wetlands   |  |  |
| Bull Thistle   | Cirsium vulgare              | Herb           | Pastures, fields  |  |  |
| Bush Honeysuckles  | Lonicera spp.                | Shrub          | Pastures, fields, forest edges, roadsides                                 |  |  |
| Butter-and-Eggs  | Linaria vulgaris             | Herb           | Fields, pastures, roadsides, disturbed areas                              |  |  |
| Canada Bluegrass   | Poa compressa                | Grass          | Fields, pastures, forest edge, wet sites,<br>forest openings, waste areas |  |  |
| Canada Thistle   | Cirsium arvense              | Herb           | Pastures, fields  |  |  |
| Celandine  | Chelidonium majus var. majus | Herb           | Fields, roadsides, waste areas, dry to moist woodlands                    |  |  |
| Cheatgrass   | Bromus tectorum              | Grass          | Pastures, fields  |  |  |
| Chinese Bushclover   | Lespedeza cuneata            | Herb           | Roadsides, rights-of-way, old fields,<br>pasture, woodlands               |  |  |
| Chinese Privet   | Ligustrum sinense            | Shrub          | Pastures, fields, forest, forest edges, roadsides                         |  |  |
| Chinese Wisteria   | Wisteria sinensis            | Woody Vine     | Forest, forest edges, roadsides, disturbed areas                          |  |  |
| Chinese Yam  | Dioscorea oppositifolia      | Vine           | Streambanks, floodplain forests   |  |  |
| Cinnamon Vine  | Dioscorea polystachya        | Vine           | Forests, woodlands, thickets  |  |  |
| Colonial Bent-grass  | Agrostis capillaris          | Grass          | Pastures, fields  |  |  |
| Common Buckthorn   | Rhamnus catharticus          | Shrub          | Wetlands, old fields  |  |  |
| Common Chickweed   | Stellaria media              | Herb           | Fields, floodplain forests, disturbed areas, waste areas                  |  |  |
| Common Privet  | Ligustrum vulgare            | Shrub          | Forests, fields, rights-of-way  |  |  |
| Common Reed  | Phragmites australis         | Grass          | Wetlands  |  |  |
| Common Sheep Sorrel  | Rumex acetosella             | Herb           | Fields, roadsides, disturbed areas, waste areas                           |  |  |
| Common Velvetgrass   | Holcus lanatus               | Grass          | Meadows, wetlands, riparian areas   |  |  |

| Table 3-1  |                          |                |   |  |  |
|--|--------------------------|----------------|---|--|--|
| Exotic and Invasive Species with the Potential to Occur Along the Project Right-of-Way |                          |                |   |  |  |
| Common Name  | Scientific Name          | Growth<br>Form | Typical Habitat(s)  |  |  |
| Cork Tree  | Phellodendron japonicum  | Tree           | Residential, parks, open woodlands, roadsides                     |  |  |
| Crown Vetch  | Coronilla varia          | Herb           | Pastures, fields  |  |  |
| Curled Thistle   | Carduus crispus          | Herb           | Pastures, fields  |  |  |
| Curlyleaf Pondweed   | Potamogeton crispus      | Herb           | Wetlands, ponds, lakes  |  |  |
| Cut-leaf Teasel  | Dipsacus laciniatus      | Herb           | Fields, pastures, roadsides, waste areas                          |  |  |
| Dame's Rocket  | Hesperis matronalis      | Herb           | Fields, forest edges  |  |  |
| Drooping Star of<br>Bethlehem  | Ornithogalum nutans      | Herb           | Fields, floodplains, waste areas                                  |  |  |
| English Ivy  | Hedera helix             | Vine           | Forests, disturbed areas  |  |  |
| Eurasian Water-milfoil   | Myriophyllum spicatum    | Herb           | Aquatic ponds, ditches, wetlands                                  |  |  |
| European Barberry  | Berberis vulgaris        | Shrub          | Forests, wetlands, pastures                                       |  |  |
| European Privet  | Ligustrum vulgare        | Shrub          | Pastures, fields, forests, forest edges, roadsides, streams       |  |  |
| European Stinging Nettle   | Urtica dioica            | Herb           | Stream edges, marsh, meadows, moist woodlands                     |  |  |
| Field Hawkweed   | Hieracium caespitosum    | Herb           | Fields, pastures, prairies, waste areas, disturbed areas          |  |  |
| Fiveleaf Akebia  | Akebia quinata           | Vine           | Forests   |  |  |
| Fuller's Teasel  | Dipsacus fullonum        | Herb           | Riparian areas, meadows, fields, forest openings, disturbed areas |  |  |
| Garden Yellow-rocket   | Barbarea vulgaris        | Herb           | Pastures, fields, roadsides, moist meadows                        |  |  |
| Garlic Mustard   | Alliaria petiolata       | Herb           | Forests   |  |  |
| Giant Hogweed  | Heracleum mantegazzianum | Herb           | Right-of-ways, riverbanks, ditches                                |  |  |
| Glossy Buckthorn   | Frangula alnus           | Shrub          | Wetlands, old fields  |  |  |
| Goatsrue   | Galaga officinalis       | Herb           | Pastures, streambanks   |  |  |
| Goldern Bamboo   | Phyllostachys aurea      | Grass          | Roadsides, disturbed areas, forest openings, forest edge          |  |  |
| Great Mullein  | Verbascum thapsus        | Herb           | Fields, meadows, forests, roadsides, disturbed areas              |  |  |
| Ground Ivy   | Glechoma hederacea       | Herb           | Open forests, disturbed areas, waste areas, lawn                  |  |  |
| Guelder Rose   | Viburnum opulus          | Shrub          | Forests, wetlands, fields   |  |  |
| Gypsy-flower   | Cynoglossum officinale   | Herb           | Fields, pastures, forest edge, roadsides, disturbed areas         |  |  |
| Hairy Cat's Ear  | Hypochaeris radicata     | Herb           | Fields, pastures, grasslands, roadsides, disturbed areas          |  |  |
| Hydrilla   | Hydrilla verticulata     | Herb           | Wetlands, ponds   |  |  |

| Table 3-1  |                                      |                 |   |  |
|--|--------------------------------------|-----------------|---|--|
| Exotic and Invasive Species with the Potential to Occur Along the Project Right-of-Way |                                      |                 |   |  |
| Common Name  | Scientific Name                      | Growth<br>Form  | Typical Habitat(s)  |  |
| Indian-strawberry  | Duchesnea indica                     | Herb            | Fields, prairies, open woodlands, disturbed areas                             |  |
| Ivy-leaved Speedwell   | Veronica hederifolia                 | Herb            | Fields, forest edge, roadsides, disturbed areas                               |  |
| Japanese Barberry  | Berberis thunbergii                  | Shrub           | Forests, wetlands, pastures   |  |
| Japanese Bromegrass  | Bromus japonicus                     | Grass           | Pastures, fields  |  |
| Japanese Honeysuckle   | Lonicera japonica                    | Vine            | Forests, wetlands, fields   |  |
| Japenese Hops  | Humulus japonicus                    | Vine            | Roadsides, streambanks, drainage ditch, meadows, disturbed areas, waste areas |  |
| Japanese Knotweed  | Polygonum cuspidatum                 | Shrubby<br>herb | Wetlands, streambanks, roadsides  |  |
| Japanese Spiraea   | Spiraea japonica                     | Shrub           | Fields, forest openings   |  |
| Japanese Stilt Grass   | Microstegium vimineum                | Grass           | Pastures, fields, forests, wetlands   |  |
| Jetbead  | Rhodotypos scandens                  | Shrub           | Forests, forest edge, roadsides   |  |
| Jimsonweed   | Datura stramonium                    | Herb            | Pastures, fields  |  |
| Johnson Grass  | Sorghum halepense                    | Grass           | Fields, wetlands, open forests  |  |
| Kentucky Bluegrass   | Poa pratensis ssp. pratensis         | Grass           | Fields, grasslands, forest edge   |  |
| Kudzu  | Pueraria lobata                      | Vine            | Forests   |  |
| Lesser Burdock   | Arctium minus                        | Herb            | Fields, meadows, disturbed areas  |  |
| Lesser Celandine   | Ranunculus ficaria var.<br>bulbifera | Herb            | Forests   |  |
| Lesser Periwinkle  | Vinca minor                          | Vine            | Fields, forest edge, forest openings  |  |
| Linden Arrowwood   | Viburnum dilatatum                   | Shrub           | Forests, wetlands, disturbed areas  |  |
| Long-bristled Smartweed  | Persicaria longiseta                 | Herb            | Lawns, roadsides, wet meadows, waste areas                                    |  |
| Maiden Grass   | Miscanthus sinensis                  | Grass           | Pastures, fields  |  |
| Marsh Dewflower  | Murdannia keisak                     | Herb            | Wetlands  |  |
| Meadow Brome   | Bromus commutatus                    | Grass           | Pastures, fields  |  |
| Meadow Fescue  | Schedonorus pratensis                | Grass           | Pastures, fields  |  |
| Mile-a-minute Vine   | Polygonum perfoliatum                | Vine            | Fields, forest edges, roadsides, ditches                                      |  |
| Mimosa   | Albizia julibrissin                  | Tree            | Forest edges, residential areas, roadsides                                    |  |
| Moneywort  | Lysimachia nummularia                | Herb            | Moist forests, streambanks, wet meadows, wetlands, roadsides, fields          |  |
| Multiflora Rose  | Rosa multiflora                      | Shrub           | Pastures, fields, forest edges  |  |
| Musk Thistle   | Carduus nutans                       | Herb            | Pastures, fields  |  |
| Nodding Plumeless-<br>thistle  | Carduus nutans ssp.<br>marcolepis    | Herb            | Disturbed sites, waste areas, roadsides                                       |  |

| Table 3-1  |  |                |  |  |  |
|--|--|----------------|--|--|--|
| Exotic and Invasive Species with the Potential to Occur Along the Project Right-of-Wav |  |                |  |  |  |
| Common Name  | Scientific Name                          | Growth<br>Form | Typical Habitat(s)   |  |  |
| Norway Maple   | Acer platanoides                         | Tree           | Forests  |  |  |
| Oriental Bittersweet   | Celastrus orbiculatus                    | Vine           | Forest edges, old fields   |  |  |
| Oriental Lady's Thumb  | Polygonum caespitosum var.<br>longisetum | Herb           | Wetlands, floodplain forests, upland forests                             |  |  |
| Oxeye Daisy  | Leucanthemum vulgare                     | Herb           | Fields, pastures, grasslands, roadsides, disturbed areas                 |  |  |
| Parrot Feather   | Myriophyllum aquaticum                   | Herb           | Wetlands, ponds  |  |  |
| Perennial Ryegrass   | Lolium perenne ssp.<br>multiflorum       | Grass          | Pastures, fields   |  |  |
| Plumeless Thistle  | Carduus acanthoides                      | Herb           | Pastures, fields, roadsides  |  |  |
| Poison-hemlock   | Conium maculatum                         | Herb           | Fields, pastures, roadsides, forest edge, degraded wetlands and prairies |  |  |
| Porcelain Berry  | Ampelopsis brevipedunculata              | Vine           | Forests, stream banks, old fields  |  |  |
| Poverty Brome  | Bromus sterilis                          | Grass          | Pastures, fields   |  |  |
| Princess Tree  | Paulownia tomentosa                      | Tree           | Forests  |  |  |
| Purple Crown-vetch   | Coronilla varia                          | Herb           | Pastures, fields, roadsides, utility right-of-<br>ways                   |  |  |
| Purple Loosestrife   | Lythrum salicaria                        | Herb           | Aquatic ponds, ditches, wetlands   |  |  |
| Reed Canary Grass  | Phalaris arundinacea                     | Grass          | Wetlands   |  |  |
| Rough Bluegrass  | Poa trivialis                            | Grass          | Pastures, fields, roadsides,   |  |  |
| Russian Olive  | Elaeagnus angustifolia                   | Shrub          | Pastures, fields, roadsides  |  |  |
| Rye Brome  | Bromus secalinus                         | Grass          | Pastures, fields   |  |  |
| Shattercane  | Sorghum bicolor                          | Grass          | Pastures, fields   |  |  |
| Shrubby Bushclover   | Lespedeza bicolor                        | Shrub          | Forest edges, field edges, forest openings                               |  |  |
| Siberian Elm   | Ulmus pumila                             | Tree           | Forests  |  |  |
| Small Carpgrass  | Arthraxon hispidus                       | Grass          | Wetlands, ponds, streams, river floodplains                              |  |  |
| Smooth Brome   | Bromus inermis ssp. inermis var. inermis | Grass          | Fields, Pastures   |  |  |
| Spotted Knapweed   | Centaurea stoebe ssp.<br>micranthos      | Herb           | Pastures, fields, roadsides  |  |  |
| Star of Bethlehem  | Ornithogallum umbellatum                 | Herb           | Forests, fields  |  |  |
| Standish's Honeysuckle   | Lonicera standishii                      | Shrub          | Fields, pastures, forest edge, roadsides, disturbed areas                |  |  |
| St. John's-Wort  | Hypericum perforatum                     | Herb           | Fields, pastures, disturbed areas  |  |  |
| Stonecrop  | Sedum sarmentosum                        | Herb           | Forest, forest edge  |  |  |
| Sweetclover  | Melilotus officinalis                    | Herb           | Fields, pastures, roadsides, waste areas                                 |  |  |
| Sycamore Maple   | Acer Pseudoplatanus                      | Tree           | Forests  |  |  |

|  | Tabl                         | e 3-1          |   |  |
|--|------------------------------|----------------|---|--|
| Exotic and Invasive Species with the Potential to Occur Along the Project Right-of-Way |                              |                |   |  |
| Common Name  | Scientific Name              | Growth<br>Form | Typical Habitat(s)  |  |
| Tall Fescue  | Schedonorus phoenix          | Grass          | Pastures, fields  |  |
| Tartarian Honeysuckle  | Lonicera tatarica            | Shrub          | Pastures, fields, roadsides, utility right-of-<br>ways, forest edge |  |
| Tree of Heaven   | Ailanthus altissima          | Tree           | Forests   |  |
| Viper's Bugloss  | Echium vulgare               | Herb           | Pastures, fields, roadsides, waste areas                            |  |
| Water Chestnut   | Trapa natans                 | Herb           | Wetlands  |  |
| Watercress   | Rorippa nasturtium-aquaticum | Herb           | Wetlands, streams, springs  |  |
| Water Shield   | Brasenia schreberi           | Herb           | Ponds, lakes  |  |
| Wild Carrot  | Daucus carota                | Herb           | Fields, pastures, roadsides, degraded prairie, forest edge          |  |
| Wild Parsnip   | Pastinaca sativa             | Herb           | Roadsides   |  |
| Wine Berry   | Rubus phoenicolasius         | Shrub          | Forests, fields   |  |
| Winged Euonymus  | Euonymus alatus              | Shrub          | Forests   |  |
| Winter Creeper   | Euonymus fortunei            | Vine           | Forests, fields   |  |
| Wocheiner Knapweed   | Centaurea nigrescens         | Herb           | Fields, pastures, grasslands, field edge, open forests              |  |
| Yellow Flag  | Iris pseudocorus             | Herb           | Wetlands  |  |
| Sources: USDA 2015; V  | DCR-DNH 2015; WVDNR 2009, 2  | 2010           | ·   |  |

#### 4.0 STRATEGIES AND CONTROL MEASURES

#### 4.1 Strategies

MVP has identified the following four principal strategies for exotic, noxious, and invasive plant species control:

- 1. The first strategy that will be implemented is to minimize the extent and scope of invasive plant infestations that will have to be managed during the construction of the Project. This will be accomplished by first identifying the exotic, noxious, and moderately to highly invasive plant species that occur along the Project's right-of-way through pre-construction surveys (see Section 3.0 and Table 3-1) and then working with the FS to identify the existing infestations that should be treated before construction begins. Only those infestations identified by the FS authorized representative would be treated prior to construction, while the remaining infestations would be treated during construction (as described below for the third strategy).
- 2. The second strategy that will be used is the avoidance of exotic and invasive species in materials brought on site during construction. For example, certified weed-free mulch and straw bales will be used to construct sediment control devices during construction, and equipment will be thoroughly cleaned prior to mobilization to the Project area (see section 4.2 for more details). In addition, MVP does not intend to use imported topsoil for agricultural or residential lands. All

additional topsoil for agricultural or residential lands will be locally sourced to prevent the introduction of foreign species.

- 3. The third strategy to be used involves the monitoring and selective spot treatment/eradication of any exotic or invasive species encountered during construction and post-construction. MVP will monitor and record the success of revegetation and any areas where exotic and invasive species have become an issue on FS-managed lands for up to five growing seasons or until the area is 80% revegetated. Inspection frequency will be determined by the FS Authorized Officer. MVP will submit a status report to the FS following each inspection. MVP will conduct selective spot eradications of invasive species infestations or outbreaks that are identified along the right-of-way. Eradication measures will include hand cutting and the use herbicides. An Herbicide Use Plan is included in the Plan of Development (POD) as Appendix T. All herbicides will be applied by applicators appropriately licensed or certified by the state in which the work is conducted. In addition, all label instructions from the manufacturer will be followed while using herbicides. Vehicles entering the FS for post-construction monitoring purposes will be required to remain on existing roadways and will need to be checked for non-native species.
- 4. The fourth strategy to be used in this plan involves MVP's commitment to using seed mixes during restoration that do not contain any invasive plant species and which have been approved by the FS for use on the JNF. Along with implementing restoration measures contained in the FERC Plan and *Wetland and Waterbody Construction and Mitigation Procedures* (FERC Procedures), MVP is partnering with the WHC, a nonprofit organization dedicated to assisting organizations and individuals with the restoration and enhancement of wildlife habitat. The WHC is working with MVP on its commitment toward native restoration of the pipeline right-of-way using seed mixes tailored to meet construction specifications, budgetary targets, and stakeholder desires while also providing local wildlife with native habitat. Working with the WHC, MVP will also incorporate principles of Integrated Vegetation Management into MVP's right-of-way maintenance. Integrated Vegetation Management incorporates seed-mix selection, vegetation maintenance scheduling, and selection of mechanical vegetation maintenance techniques to encourage a low ground cover of native species that flower for a long duration of the growing season. However, the successful stabilization of slopes and disturbed areas will be the primary goal of restoration efforts, and all seed mixed used on the JNF will be approved by the FS prior to their use.

#### 4.2 Control Measures

In addition to the strategies described above, the following control measures will be used to further minimize introduction and/or spread of these species:

- The contractor will adhere to erosion control measures in the FERC Plan and Procedures and the Project-specific erosion and sedimentation control plans to ensure that sediment movement and the associated movement of non-native seeds into newly disturbed soils are minimized.
- Prior to mobilization to the Project area, contractors shall thoroughly clean all construction equipment with high-pressure washing equipment in order to limit the potential for the spread of noxious weeds, insects, or other soil-borne pests.
- Equipment cleaning stations will be established along the pipeline to ensure equipment is free of debris before being transported to a new construction spread. During construction, the environmental inspector will ensure all contractors clean the tracks, tires, and blades of equipment to remove any excess soil prior to movement of equipment out of known weed or soil-borne pest

infested areas, or utilize designated cleaning stations to remove vegetative materials using highpressure washing equipment. No equipment will be allowed to enter the JNF until it has been inspected and approved by the FS Project Manager or an Authorized Officer.

- The contractor will use construction techniques along the pipeline route that minimize the time that bare soil is exposed and, therefore, minimize the opportunity for exotic species to become established.
- All disturbed areas will be reseeded promptly after final grading, weather and soil conditions permitting. Prompt reseeding will ensure that bare soil is not available for exotic or invasive species for an extended period of time. Reseeding will be done in compliance with FS Standards and Guidelines in the JNF Land and Resource Management Plan (e.g., FS Standards and Guidelines FW-86, FW-87, and FW-88).

As described in the FERC Plan, mulch will be applied if final grading and installation of permanent erosion control measures are not completed within 20 days after the trench is backfilled or seeding cannot be completed properly due to scheduling outside of recommended seeding dates.

#### 4.3 Use of Pesticides

MVP has committed to not using pesticides during routine right-of-way maintenance along portions of the Project located outside of the JNF; however, the FS has requested that pesticides be incorporated into the management plan for maintenance of the right-of-way and treatment of invasive species on the JNF. Therefore, MVP will use pesticides for the control of non-native invasive plants and for the treatment of insect infestations along the right-of-way on the JNF. Pesticides would be applied in compliance with the FS Standards and Guidelines (e.g., FS Standards and Guidelines FW-89 through FW-110) and will comply with all label instructions as well as applicable state and federal regulations. The Project's *Herbicide Use Plan* (Appendix T of the POD) identifies how herbicide use to control noxious weed and invasive species will be implemented on the JNF.

# 5.0 REFERENCES

- USDA (United States Department of Agriculture). 2015. Natural Resources Conservation Service. Invasive and Noxious Weeds. Available online at: http://plants.usda.gov/java/noxiousDriver. Accessed October 6, 2015.
- FS (United States Forest Service). 2013. National Strategic Framework for Invasive Species Management. Available online at: http://www.fs.fed.us/foresthealth/ publications/Framework\_for\_Invasive\_Species\_FS-1017.pdf. Accessed May 10, 2016.
- VDCR-DNH (Virginia Department of Conservation and Recreation, Division of Natural Heritage). 2015. Virginia Invasive Plant Species List. Available online at: http://www.dcr.virginia.gov/natural\_heritage/invsppdflist.shtml. Accessed October 6, 2015.
- WVDNR (West Virginia Department of Natural Resources), Division of Natural Heritage. 2009. Invasive Plants Species of West Virginia. Available online at: http://www.wvdnr.gov/wildlife/Handout Invasive Plants of WV 2009.pdf. Accessed October 6, 2015.
- WVDNR. 2010. Invasive Plants: Dirty Dozen. Available online at: http://www.wvdnr.gov/Wildlife/DirtyDozen.shtm. Accessed October 6, 2015.