

APPENDIX N
FRAMEWORK NOXIOUS WEED MANAGEMENT
PLAN

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ACRONYMS

°F	degrees Fahrenheit
APHIS	Animal and Plant Health Inspection Services
Applicant	TransWest Express LLC, also TransWest
BA	Biological Assessment
BE	Biological Evaluation
BLM	Bureau of Land Management
BMP	Best Management Practice
BO	Biological Opinion
CCR	Colorado Code of Regulations
CFR	Code of Federal Regulations
CWA	Clean Water Act
DEIS	Draft Environmental Impact Statement
EDRR	Early Detection Rapid Response
EMM	Environmental Mitigation Measure
EPA	Environmental Protection Agency
ESA	Endangered Species Act of 1973
FEIS	Final Environmental Impact Statement
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
FLPMA	Federal Land Policy and Management Act of 1976
GPS	global positioning system
mph	miles per hour
MSDSs	Material Safety Data Sheets
NEPA	National Environmental Policy Act
NISIMS	National Invasive Species Information Management System
NPS	National Park Service
NTP	Notice to Proceed
Plan	Noxious Weed Management Plan
PAR	Pesticide Application Record
POD	Plan of Development
POEA	polyoxyethyleneamine
Project	TransWest Express Transmission Project, also TWE Project
psi	pounds per square inch
PUP	Pesticide Use Proposal
Reclamation	Bureau of Reclamation
ROD	Record of Decision
ROW	right-of-way
SUP	Special Use Permit
TransWest	TransWest Express LLC, also Applicant
TWE Project	TransWest Express Transmission Project, also Project
U.S.C.	United States Code
URMCC	Utah Reclamation Mitigation and Conservation Commission
USDA	United States Department of Agriculture
USDOI	United States Department of Interior
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
WEAP	Worker Environmental Awareness Program
WWPC	Wyoming Weed and Pest Control Act of 1973

N1.0 INTRODUCTION

This framework Noxious Weed Management Plan (Plan) sets forth the methods TransWest Express LLC (TransWest or Applicant) and its Construction Contractor(s) will undertake to prevent, mitigate and control the spread of noxious and invasive weeds during construction, operation and maintenance of the TransWest Express Transmission Project (TWE Project or Project).

Federal Invasive Species Executive Order 13112 defines an invasive plant as an alien, non-native, species whose introduction causes or is likely to cause economic or environmental damage or harm to human health (U.S. Federal Register 1999). A noxious weed is any plant designated by a federal, state, or county government as injurious to public health, agriculture, recreation, wildlife or property.

Road construction and other ground-disturbing activities associated with construction, operation and maintenance of the Project could potentially allow noxious weed species to establish in new locations or for a pre-existing noxious weed location to increase in extent and/or density. Prevention, treatment, monitoring, and documentation measures, as described in this Plan, would reduce the probability of this occurring as a result of the TWE Project. This Plan describes the status of noxious weed species in the Project area, the regulatory agencies responsible for the control of noxious and invasive weeds, and steps that TransWest and its Construction Contractor(s) would take to prevent the establishment and spread of noxious weed species due to Project construction, operation and maintenance activities. In addition to providing updated information contained within this framework, the final Plan would include information on locations of weed problem areas within the Project footprint and proposed treatment methods as applicable.

N1.1 Plan Purpose

The purpose of this framework Plan is to describe and recommend methods for managing noxious weeds during and after construction of the TWE Project that would meet federal and state regulatory requirements and guidelines for noxious weed management. These methods are described in this Plan as follows: 1) plan purpose, goals, and timeline; 2) noxious weed management practices and agency requirements; 3) the use of herbicides; and 4) monitoring. This document provides a template for the final Plan to be developed by the Construction Contractor(s).

The focus of noxious weed control efforts is to prevent new infestations and to prevent existing infestations from expanding (as documented by pre-construction surveys) as a result of Project activities. TransWest is only responsible for the control of noxious weeds that are a result of construction-related, surface-disturbing activities. TransWest is not responsible for noxious weed species that occur adjacent to Project areas or for controlling or eradicating a species that was present prior to the Project. For example, Canada thistle (*Cirsium arvense*) is widespread across large portions of the Project area. Eradication of these infestations is not the responsibility of TransWest and would not be attempted, although containment would be the goal where required by state regulations.

Table N1 provides the best management practices (BMPs) and environmental mitigation measures (EMMs) identified in the Draft Environmental Impact Statement (DEIS) which may be applicable to this Plan. These BMPs and EMMs have not been finalized at this time and may be updated, changed, or eliminated as the Plan is further developed.

TABLE N1 APPLICABLE NOXIOUS WEED MANAGEMENT MEASURES IDENTIFIED IN DRAFT EIS

MEASURE CATEGORY	NOXIOUS WEED BMP, DESIGN FEATURES, AND STATE AND BLM FO-SPECIFIC STIPULATIONS, AND FOREST STANDARDS AND GUIDELINES
West-wide Energy Corridor	
General	GEN-1, GEN-3, GEN-7
Soils, Excavation, and Blasting	VEG-1
Vegetation Management, Pesticide and Herbicide Use	VEG-3, VEG-4
Mitigation and Monitoring	MIT-1
Public Health and Safety	PHS-4, PHS-7
Hazardous Materials and Wastewater Management	PHS-10, PHS-11, PHS-12, PHS-13
Hazardous Materials and Waste Management	PHS-14, PHS-15
Applicant Committed Environmental Protection Measures	
General Design Features (general, environmental training)	TWE-4
Project Design, Access, and Construction (site restoration and clean-up)	TWE-17
Groundwater, Surface Water, and Wetlands (water quality)	TWE-22
Vegetation and Soils Management (vegetation management and noxious weeds)	TWE-26
Ecological Resources (ecological, special status species and habitats)	TWE-33
Cultural Resources – Historic, Archeological, and Tribal Traditional (general, cultural)	TWE-37
Public Health and Safety (worker health and safety)	TWE-56
Hazardous Materials, Waste, and Wastewater Management (hazardous materials, waste management)	TWE-57, TWE-58, TWE-59, TWE-60, TWE-61, TWE-62
Fire Protection	TWE-64
Additional Mitigation Measures	
Vegetation	NX-1, NX-2, NX-3, NX-4
Aquatic Biological Resources	AB-3, AB-4
Recreation Resources	REC-1
Social and Economic Resources	SOCIO-3
Wyoming BLM Field Offices	
BLM Rawlins Field Office	OHV use limited to designated roads and vehicle routes.
Colorado BLM Field Offices	
BLM Little Snake Field Office	Developed recreation sites are NSU.
Utah National Forests	
Ashley NF	Only land application of approved herbicides to control noxious weeds would be allowed provided that herbicides are not allowed to contaminate surface water.

N1.2 Plan Updates

The Plan will be updated for the Record of Decision (ROD) Plan of Development (POD) based on the selected Agency Preferred Alternative, BMPs, and EMMs defined in the Final Environmental Impact Statement (FEIS), Biological Assessment (BA), Biological Opinion (BO), Biological Evaluation (BE), and through consultation with various state and federal agencies. Plan updates for the ROD POD may include: defined noxious weed areas, applicable mitigation, pre-construction requirements, and additional pre- and post-construction monitoring.

The Plan will be updated for the Notice to Proceed (NTP) POD based on the final engineering and design and results of pre-construction field surveys. The Construction Contractor will be responsible for preparing and implementing the final Plan.

N1.3 Goals

The goals of this Plan are to: 1) prevent the spread of existing noxious weeds; and 2) avoid noxious weed invasion into new sites during and following construction of the TWE Project. This would be accomplished by executing agency requirements to:

- Prevent and manage the spread of noxious weeds;
- Implement weed control measures for the TWE Project;
- Use herbicides safely; and
- Monitor noxious weed management effectiveness.

Information gathered during pre-construction surveys and provided by the Bureau of Land Management (BLM) may be used to monitor and control the spread of noxious weeds on the TWE Project right-of-way (ROW). Proposed noxious weed management measures are listed in this document along with relevant regulatory requirements.

N1.4 Agency Regulations

Federal and state agency regulations are presented in the following section. If any special management areas are crossed by the TWE Project, then additional requirements would be coordinated with the appropriate agency. In addition, Table N2 provides a list of jurisdictions, contacts, and weed management requirements for the TWE Project. Table N2 is incomplete at this time and will be filled in once the selected Agency Preferred Alternative has been identified.

TABLE N2 WEED PERSONNEL CONTACT INFORMATION AND COMMENTS PROVIDED BY AGENCY FOR THE TWE PROJECT

AGENCY	CONTACT/NUMBER	WEED MANAGEMENT REQUIREMENTS/REQUESTS	TYPE OF GIS DATA PROVIDED	COMMENTS
Wyoming				
BLM Wyoming State Office				
BLM Rawlins Field Office				
Wyoming State Weed and Pest Control Council				
Carbon County Weed and Pest Control District				
Sweetwater County Weed and Pest Control District				
NRCS Wyoming State Office				
Red-Rim-Daley SMA/ACEC				
BOR Wyoming State Office				
Colorado				
BLM Colorado State Office				
BLM Little Snake Field Office				
BLM White River Field Office				
Colorado Department of Agriculture				
Moffat County Noxious Weed Management Program				
NRCS Colorado State Office				
Dinosaur National Monument				
BOR Colorado State Office				
Utah				
BLM Utah State Office				
BLM Cedar City Field Office				
BLM Fillmore Field Office				
BLM Richfield Field Office				
BLM Salt Lake Field Office				
BLM Vernal Field Office				
BLM St. George Field Office				
Ashley National Forest				
Dixie National Forest				
Fishlake National Forest				
Manti La Sal National Forest				
Uinta National Forest				
Dinosaur National Monument				

AGENCY	CONTACT/NUMBER	WEED MANAGEMENT REQUIREMENTS/REQUESTS	TYPE OF GIS DATA PROVIDED	COMMENTS
Beaver Dam Slope ACEC				
Currant Creek WMA				
Dairy Fork WMA				
Iron County Agricultural Protection Areas				
Jackson WMA				
Lake Fork WMA				
Lears Canyon ACEC				
Little Sahara National Recreation Area				
Lower Green River Wild and Scenic River				
Lower Green River Corridor ACEC				
Mona Front WMA				
Rabbit Gulch WMA				
Red Creek WMA				
Sand Wash/Sink Draw Conservation Easement				
Spencer Fork WMA				
Starvation WMA				
Triangle Ranch WMA				
Wildcat WMA				
Utah Weed Control Association				
Utah Reclamation Mitigation and Conservation Commission				
County Weed Supervisor for Beaver County				
County Weed Supervisor for Duchesne County				
County Weed Supervisor for Iron County				
County Weed Supervisor for Juab County				
County Weed Supervisor for Millard County				
County Weed Supervisor for Sanpete County				
County Weed Supervisor for Uintah				

AGENCY	CONTACT/NUMBER	WEED MANAGEMENT REQUIREMENTS/REQUESTS	TYPE OF GIS DATA PROVIDED	COMMENTS
County				
County Weed Supervisor for Utah				
County				
County Weed Supervisor for Wasatch				
County				
County Weed Supervisor for				
Washington County				
Utah Department of Agriculture and				
Food				
NRCS Utah State Office				
BOR Utah State Office				
Nevada				
BLM Nevada State Office				
BLM Ely Field Office				
BLM Las Vegas Field Office				
Beaver Dam Slope ACEC				
Clark County Wetlands Park				
Clover Mountains Wilderness Area				
Las Vegas Valley SRMA				
Mormon Mesa ACEC				
Mormon Mesa ACEC				
Muddy Mountains SRMA				
Nelson/Eldorado SRMA				
Rainbow Gardens ACEC				
River Mountains ACEC				
Sunrise Mountain ISA				
Sunrise Mountain SRMA				
Clark County Weed Management Area				
Lincoln County Weed Management				
Area				
NRCS Nevada State Office				
Nevada Department of Agriculture				
BOR Nevada State Office				

N1.4.1 All Lands

Relevant regulations applicable to all lands include:

- Noxious Weed Act of 1974 -- Public Law 93-629 (7 United States Code [U.S.C.] §2801 et seq.; 88 Stat. 2148)
- U.S. Environmental Protection Agency (EPA) Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA; 7 Code of Federal Regulations [CFR] Part 136, 40 CFR Parts 140-189)
- Clean Water Act (CWA) Sections 303(d) and 404
- Endangered Species Act (ESA) of 1973, as amended Section 7(a)(2)
- U.S. Department of Agriculture (USDA) State Noxious-Weed Seed Requirements Recognized in the Administration of the Federal Seed Act – 7 CFR Part 201 (USDA 2011)
- Noxious Weed Control and Eradication Act of 2004, 7 U.S.C. §§7781-7786, Subtitle E
- Plant Protection Act of 2000, 7 U.S.C. §7701 *et seq.* (supersedes the Federal Executive Order 13112 of February 3, 1999, on Invasive Species)
- National Invasive Species Act of 1996, 16 U.S.C. § 4701
- Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990, 16 U.S.C. §4701

N1.4.2 Bureau of Land Management

Relevant regulations applicable to BLM lands include:

- Federal Land Policy and Management Act (FLPMA) Sec. 101(a)(8)
- U.S. Department of Interior (USDOI) Manual 517 DM 1—Integrated Pest Management Policy (USDOI 2007)
- Final Vegetation Treatments Using Herbicides Programmatic EIS (BLM 2007)
- BLM Integrated Vegetation Management Handbook H1740-2 (BLM 2008)
- BLM Terms and Conditions of Right-of-Way Grants and Temporary Use Permits 43 CFR 2881.2
- BLM Field Office Resource Management Plans

N1.4.3 United States Forest Service

Relevant regulations applicable to U.S. Forest Service (USFS) lands include:

- FLPMA Sec. 101(a)(8)
- Forest Service Handbook 2109.14 (USFS 1994)

- Forest Service Manual 2000 Zero Code 2080 – Servicewide and Region 4 (USFS 2001, 2011a)
- Forest Service Manual 2000 Zero Code 2150 - Servicewide, Regions 2 & 4, and Uinta National Forest (USFS 1988, 2003, 2012, 2013a)
- Forest Service Manual 2000 Zero Code 2900 – Servicewide (USFS 2011b)
- National Forest Resource Management Plans

N1.4.4 National Park Service

Relevant regulations applicable to National Park Service (NPS) lands include:

- FLPMA Sec. 101(a)(8)
- USDOJ Manual 517 DM 1—Integrated Pest Management Policy (USDOJ 2007)
- National Park Service Director’s Order 77-7 Natural Resource Protection—Integrated Pest Management
- National Park Service Resource Management Plans

N1.4.5 Bureau of Reclamation

Relevant regulations applicable to Bureau of Reclamation (Reclamation) lands include:

- FLPMA Sec. 101(a)(8)
- USDOJ Manual 517 DM 1—Integrated Pest Management Policy (USDOJ 2007)

N1.4.6 Utah Reclamation Mitigation and Conservation Commission

Relevant regulations applicable to Utah Reclamation Mitigation and Conservation Commission (URMCC) lands include:

- FLPMA Sec. 101(a)(8)
- US Department of Interior Department Manual 517 DM 1—Integrated Pest Management Policy (USDOJ 2007)

N1.4.7 State of Colorado

Relevant regulations applicable to State of Colorado lands include:

- Colorado Noxious Weed Act (Title 35, Article 5.5, Sections 35-5.5-104.5 to 35-5.5-118)
- Colorado Pesticide Act, Title 35, Article 9, Section 35-9-118
- Colorado Code of Regulations (CCR) 8 CCR 1206-2

N1.4.8 State of Nevada

Relevant regulations applicable to State of Nevada lands include:

- Nevada Revised Statutes: Chapter 555.005-555.5570 —Control of Insects, Pests, and Noxious Weeds

N1.4.9 State of Utah

Relevant regulations applicable to State of Utah lands include:

- Utah Noxious Weed Act (Rule R68-9, Title 4, Chapter 17, Sections 1 to 11)
- Utah Pesticide Control Act (Rule R68-7, Title 4, Chapter 14, Sections 1 to 13)
- County Weed Supervisors from Beaver, Duchesne, Iron, Juab, Millard, Sanpete, Uintah, Utah, Wasatch, and Washington counties

N1.4.10 State of Wyoming

Relevant regulations applicable to State of Wyoming lands include:

- Wyoming Weed and Pest Control Act of 1973 (Title 11, Chapter 5, Section 11-5-101 to 11-5-406)
- Wyoming Environmental Pesticide Control Act of 1973 (Title 35, Chapter 7, Section 35-7-350 to 35-7-376)
- Carbon County Declared List (Carbon County 2013)
- County Weed and Pest Control Districts in Carbon and Sweetwater counties

N1.5 Timeline

TransWest may be required to treat noxious weeds within the ROW, access roads, and all other areas disturbed during construction, operation and maintenance of the TWE Project. The schedule and timing of such treatments will be determined during the National Environmental Policy Act (NEPA) review process and set forth as conditions of approval in the ROW grants or special use authorizations.

N1.6 Responsible Parties

TransWest will have the overall responsibility of directing and monitoring noxious weed management efforts for the TWE Project. The Construction Contractor(s) may retain the services of a company who specializes in noxious weed management to implement the protocols identified in this Plan during and following construction. It is anticipated that post-construction noxious weed monitoring would occur concurrently with the practices outlined in the Reclamation Plan (Appendix Q), as appropriate.

N2.0 NOXIOUS WEED MANAGEMENT PLAN

N2.1 State- and County-Listed Noxious Weeds

Tables N3 through N6 contain a list of all listed federal, state, and county noxious weed species for all Project states and identifies whether they are known or expected to occur within the Project area based on their recorded presence in the counties where the TWE Project is located. The BLM and USFS use the most current federal and state noxious weed lists for managing weeds on federal lands.

TABLE N3 COLORADO NOXIOUS WEEDS AND POTENTIAL FOR OCCURRENCE IN COLORADO PROJECT COUNTY (MOFFAT)

SPECIES NAME ¹	FEDERAL NOXIOUS STATUS ²	COLORADO NOXIOUS STATUS ³	PRESENCE IN COLORADO PROJECT COUNTY ^{4,5}	REGIONS IN WHICH KNOWN TO PROJECT COUNTY(S) ^{4,5,6,7,8}	MANAGEMENT TECHNIQUES PERMITTED AND REQUIRED BY COLORADO NOXIOUS WEED ACT
Velvetleaf (<i>Abutilon theophrasti</i>)	-	C	-	2 & 3	Elimination not required
Hardheads, Russian knapweed (<i>Acroptilon repens</i>)	-	B	Moffat	1, 2, 3, & 4	Herbicides approved by Commissioner and mowing, or other mechanical techniques recommended by Commissioner
Jointed goatgrass (<i>Aegilops cylindrica</i>)	-	B	-	2 & 3	Elimination required, but no specific techniques specified
Camelthorn (<i>Alhagi maurorum</i>)	-	A	-	3 & 4	Herbicides approved by Commissioner and digging, or other mechanical techniques recommended by Commissioner
Common bugloss (<i>Anchusa officinalis</i>)	-	Watch	-	2 & 3	Elimination not required
Crested anoda (<i>Anoda cristata</i>)	-	B	-	Not known	Herbicides approved by Commissioner and hand-pulling, digging, sawing, or other mechanical techniques recommended by Commissioner
Corn chamomile (<i>Anthemis arvensis</i>)	-	B	-	Not known	Herbicides approved by Commissioner and hand-pulling, digging, or other mechanical techniques recommended by Commissioner
Stinking chamomile (<i>Anthemis cotula</i>)	-	B	-	2	Herbicides approved by Commissioner and hand-pulling, digging, or other mechanical techniques recommended by Commissioner
Lesser burdock (<i>Arctium minus</i>)	-	C	Moffat	1, 2, 3, & 4	Elimination not required
Absinthium (<i>Artemisia absinthium</i>)	-	B	-	1, 2, & 3	Herbicides approved by Commissioner and hand-pulling, digging, or other mechanical techniques recommended by Commissioner
Giant reed (<i>Arundo donax</i>)	-	A	-	2, 3, & 4	Herbicides approved by Commissioner and hand-pulling, digging, or other mechanical techniques recommended by Commissioner
Onionweed (<i>Asphodelus fistulosus</i>)	Noxious – Terrestrial	Watch	-	Not known	
Elongated mustard (<i>Brassica elongata</i>)	-	A	-	Not known	Herbicides approved by Commissioner and hand-pulling, digging, or other mechanical techniques recommended by Commissioner
Asian mustard (<i>Brassica tournefortii</i>)	-	Watch	-	2, 3, & 4	Elimination not required

SPECIES NAME ¹	FEDERAL NOXIOUS STATUS ²	COLORADO NOXIOUS STATUS ³	PRESENCE IN COLORADO PROJECT COUNTY ^{4,5}	REGIONS IN WHICH KNOWN TO PROJECT COUNTY(S) ^{4,5,6,7,8}	MANAGEMENT TECHNIQUES PERMITTED AND REQUIRED BY COLORADO NOXIOUS WEED ACT
Cheatgrass (<i>Bromus tectorum</i>)	-	C	Moffat	1, 2, 3, & 4	Elimination not required
White bryony (<i>Bryonia alba</i>)	-	Watch	-	2	Elimination not required
Flowering rush (<i>Butomus umbellatus</i>)	-	Watch	-	Not known	Elimination not required
Whitetop (<i>Cardaria draba</i> , <i>Cardaria</i> spp.)	-	B	Moffat	1, 2, 3, & 4	Herbicides approved by Commissioner and hand-pulling, digging, or other mechanical techniques recommended by Commissioner
Spiny plumeless thistle (<i>Carduus acanthoides</i>)	-	B	Moffat	1 & 2	Herbicides approved by Commissioner and hand-pulling, digging, or other mechanical techniques recommended by Commissioner
Nodding plumeless thistle, musk thistle (<i>Carduus nutans</i>)	-	B	Moffat	1, 2, 3, & 4	Herbicides approved by Commissioner and hand-pulling, digging, or other mechanical techniques recommended by Commissioner
Woolly distaff thistle (<i>Carthamus lanatus</i>)	-	Watch	-	Not known	Elimination not required
Caraway (<i>Carum carvi</i>)	-	B	-	1 & 2	Elimination required, but no specific techniques specified
Diffuse knapweed (<i>Centaurea diffusa</i>)	-	B	Moffat	1, 2, 3, & 4	Herbicides approved by Commissioner, hand-pulling, digging, or other mechanical techniques recommended by Commissioner
Tyrol knapweed (<i>Centaurea nigrescens</i> , SYN= <i>C. pratensis</i>)	-	A	-	Not known	Herbicides approved by Commissioner, hand-pulling, digging, or other mechanical techniques recommended by Commissioner
Yellow star-thistle (<i>Centaurea solstitialis</i>)	-	A	-	2 & 3	Herbicides approved by Commissioner and prescribed fire used with herbicide, hand-pulling, digging, or other mechanical techniques recommended by Commissioner
Squarrose knapweed (<i>Centaurea virgata</i> , SYN= <i>C. squarrosa</i>)	-	A	-	2 & 3	Herbicides approved by Commissioner and prescribed fire used with herbicide, hand-pulling, digging, or other mechanical techniques recommended by Commissioner
Spotted knapweed (<i>Centaurea stoebe</i> ssp. <i>micranthos</i> , SYN= <i>C. maculosa</i>)	-	B	Moffat	1, 2, 3, & 4	Herbicides approved by Commissioner and hand-pulling, digging, or other mechanical techniques recommended by Commissioner

SPECIES NAME ¹	FEDERAL NOXIOUS STATUS ²	COLORADO NOXIOUS STATUS ³	PRESENCE IN COLORADO PROJECT COUNTY ^{4,5}	REGIONS IN WHICH KNOWN TO PROJECT COUNTY(S) ^{4,5,6,7,8}	MANAGEMENT TECHNIQUES PERMITTED AND REQUIRED BY COLORADO NOXIOUS WEED ACT
Rush skeletonweed (<i>Chondrilla juncea</i>)	-	A	-	Not known	Herbicides approved by Commissioner and hand-pulling, digging, or other mechanical techniques recommended by Commissioner
Chicory (<i>Cichorium intybus</i>)	-	C	-	2 & 3	Elimination not required
Canada thistle (<i>Cirsium arvense</i>)	-	B	Moffat	1, 2, 3, & 4	Elimination not required
Bull thistle (<i>Cirsium vulgare</i>)	-	B	Moffat	1, 2, & 3	Herbicides approved by Commissioner and hand-pulling, digging, or other mechanical techniques recommended by Commissioner
Oriental virginsbower (<i>Clematis orientalis</i>)	-	B	Moffat	1, 2, & 3	Herbicides approved by Commissioner and digging, or other mechanical techniques recommended by Commissioner
Poison hemlock (<i>Conium maculatum</i>)	-	C	-	1, 2, & 3	Elimination not required
Field bindweed (<i>Convolvulus arvensis</i>)	-	C	Moffat	1, 2, 3, & 4	Elimination not required
Purple pampas grass (<i>Cortaderia jubata</i>)	-	Watch	-	Not known	Elimination not required
Common crupina (<i>Crupina vulgaris</i>)	Noxious – Terrestrial	A	-	Not known	Herbicides approved by Commissioner and hand-pulling, digging, or other mechanical techniques recommended by Commissioner
Dodder (<i>Cuscuta</i> spp. – except for natives)	Noxious – Parasitic	-	-	1, 2, 3, & 4	Elimination not required
Gypsyflower, houndstongue (<i>Cynoglossum officinale</i>)	-	B	Moffat	1, 2, & 3	Herbicides approved by Commissioner and hand-pulling, digging, or other mechanical techniques recommended by Commissioner
Yellow nutsedge (<i>Cyperus esculentus</i>)	-	B	-	2	Elimination not required
Scotch broom (<i>Cytisus scoparius</i>)	-	Watch	-	Not known	Elimination not required
Fuller's teasel (<i>Dipsacus fullonum</i>)	-	B	-	2	Elimination required, but no specific techniques specified
Cutleaf teasel (<i>Dipsacus laciniatus</i>)	-	B	-	Not known	Elimination required, but no specific techniques specified

SPECIES NAME ¹	FEDERAL NOXIOUS STATUS ²	COLORADO NOXIOUS STATUS ³	PRESENCE IN COLORADO PROJECT COUNTY ^{4,5}	REGIONS IN WHICH KNOWN TO PROJECT COUNTY(S) ^{4,5,6,7,8}	MANAGEMENT TECHNIQUES PERMITTED AND REQUIRED BY COLORADO NOXIOUS WEED ACT
Common water hyacinth (<i>Eichhornia crassipes</i>)	-	Watch	-	Not known	Elimination not required
Russian olive (<i>Elaeagnus angustifolia</i>)	-	B	Moffat	1, 2, 3, & 4	Elimination not required
Quackgrass (<i>Elymus repens</i>)	-	B	Moffat	1, 2, & 3	Elimination not required
Codlins and cream, hairy wouldow-herb (<i>Epilobium hirsutum</i>)	-	Watch	-	Not known	Elimination not required
Redstem stork's bill (<i>Erodium cicutarium</i>)	-	C	Moffat	1, 2, 3, & 4	Elimination not required
Cypress spurge (<i>Euphorbia cyparissias</i>)	-	A	-	1 & 2	Herbicides approved by Commissioner and hand-pulling, digging, or other mechanical techniques recommended by Commissioner
Leafy spurge (<i>Euphorbia esula</i>)	-	B	Moffat	1, 2, & 3	Herbicides approved by Commissioner and digging, or other mechanical techniques recommended by Commissioner
Myrtle spurge (<i>Euphorbia myrsinites</i>)	-	A	-	2 & 3	Herbicides approved by Commissioner and hand-pulling, digging, or other mechanical techniques recommended by Commissioner
Baby's breath (<i>Gypsophila paniculata</i>)	-	Watch	Moffat	1, 2, & 3	Elimination not required
Saltlover (<i>Halogeton glomeratus</i>)	-	C	Moffat	1, 2, 3, & 4	Elimination not required
Dames rocket (<i>Hesperis matronalis</i>)	-	B	Moffat	1, 2, & 3	Elimination required, but no specific techniques specified
Flower of an hour, Venice mallow (<i>Hibiscus trionum</i>)	-	B	-	2 & 3	Herbicides approved by Commissioner and hand-pulling, digging, sawing, or other mechanical techniques recommended by Commissioner
Orange hawkweed (<i>Hieracium aurantiacum</i>)	-	A	-	Not known	Herbicides approved by Commissioner
Meadow hawkweed (<i>Hieracium caespitosum</i>)	-	Watch	-	Not known	Elimination not required
Waterthyme (<i>Hydrilla verticillata</i>)	Noxious – Aquatic	A	-	Not known	Herbicides approved by Commissioner and water drawdown (controlled water drainage), and hand-removal, or other mechanical techniques recommended by Commissioner

SPECIES NAME ¹	FEDERAL NOXIOUS STATUS ²	COLORADO NOXIOUS STATUS ³	PRESENCE IN COLORADO PROJECT COUNTY ^{4,5}	REGIONS IN WHICH KNOWN TO PROJECT COUNTY(S) ^{4,5,6,7,8}	MANAGEMENT TECHNIQUES PERMITTED AND REQUIRED BY COLORADO NOXIOUS WEED ACT
Black henbane (<i>Hyoscyamus niger</i>)	-	B	Moffat	1, 2, & 3	Herbicides approved by Commissioner and hand-pulling, digging, or other mechanical techniques recommended by Commissioner
Common St. Johnswort (<i>Hypericum perforatum</i>)	-	C	-	Not known	Elimination not required
Cogongrass, Japanese blood grass (<i>Imperata cylindrica</i>)	Noxious – Terrestrial	Watch	-	Not known	Elimination not required
Dyer's woad (<i>Isatis tinctoria</i>)	-	A	-	1, 2, & 3	Herbicides approved by Commissioner and hand-pulling, digging, or other mechanical techniques recommended by Commissioner
Broadleaved pepperweed (<i>Lepidium latifolium</i>)	-	B	Moffat	1, 2, 3, & 4	Herbicides approved by Commissioner
Sericea lespedeza (<i>Lespedeza cuneata</i>)	-	Watch	-	Not known	Elimination not required
Oxeye daisy (<i>Leucanthemum vulgare</i> , SYN= <i>Chrysanthemum leucanthemum</i>)	-	B	Moffat	1 & 2	Herbicides approved by Commissioner and hand-pulling, digging, or other mechanical techniques recommended by Commissioner
Dalmation toadflax (<i>Linaria dalmatica</i>)	-	B	Moffat	1, 2, & 3	Herbicides approved by Commissioner and hand-pulling, digging, or other mechanical techniques recommended by Commissioner
Broomleaf toadflax (<i>Linaria genistifolia</i>)	-	B	-	2 & 3	Herbicides approved by Commissioner and hand-pulling, digging, or other mechanical techniques recommended by Commissioner
Butter and eggs, yellow toadflax (<i>Linaria vulgaris</i>)	-	B	Moffat	1, 2, & 3	Herbicides approved by Commissioner
Purple loosestrife (<i>Lythrum salicaria</i> and cultivars)	-	A	-	2, 3, & 4	Herbicides approved by Commissioner and hand-pulling, digging, or other mechanical techniques recommended by Commissioner
Eurasian watermilfoil (<i>Myriophyllum spicatum</i>)	-	B	-	1, 2, & 3	Herbicides approved by Commissioner and hand-pulling, or other mechanical techniques recommended by Commissioner
Scotch coltonthistle (<i>Onopordum acanthium</i>)	-	B	-	1, 2, 3, & 4	Herbicides approved by Commissioner and hand-pulling, digging, or other mechanical techniques recommended by

SPECIES NAME ¹	FEDERAL NOXIOUS STATUS ²	COLORADO NOXIOUS STATUS ³	PRESENCE IN COLORADO PROJECT COUNTY ^{4,5}	REGIONS IN WHICH KNOWN TO PROJECT COUNTY(S) ^{4,5,6,7,8}	MANAGEMENT TECHNIQUES PERMITTED AND REQUIRED BY COLORADO NOXIOUS WEED ACT
					Commissioner
Bull cottonthistle (<i>Onopordum tauricum</i>)	-	B	-	Not known	Herbicides approved by Commissioner and hand-pulling, digging, or other mechanical techniques recommended by Commissioner
Broomrape (<i>Orobancha</i> spp. – except for natives)	Noxious – Parasitic	-	Moffat	1, 2, 3, & 4	Elimination not required
Proso millet (<i>Panicum miliaceum</i>)	-	C	-	1, 2, 3, & 4	Elimination not required
Harmal peganum, African rue (<i>Peganum harmala</i>)	-	A	-	3 & 4	Herbicides approved by Commissioner and digging, or other mechanical techniques recommended by Commissioner
Common reed (<i>Phragmites australis</i>)	-	Watch	Moffat	1, 2, 3, & 4	Elimination not required
Water lettuce (<i>Pistia stratiotes</i>)	-	Watch	-	Not known	Elimination not required
Bulbous bluegrass (<i>Poa bulbosa</i>)	-	C	Moffat	1, 2, & 3	Elimination not required
Bohemium knotweed (<i>Polygonum x bohemicum</i>)	-	A	-	Not known	Herbicides approved by Commissioner and hand-pulling, digging, or other mechanical techniques recommended by Commissioner
Japanese knotweed (<i>Polygonum cuspidatum</i>)	-	A	-	1 & 2	Herbicides approved by Commissioner and hand-pulling, digging, or other mechanical techniques recommended by Commissioner
Giant knotweed (<i>Polygonum sachalinense</i>)	-	A	-	Not known	Herbicides approved by Commissioner and hand-pulling, digging, or other mechanical techniques recommended by Commissioner
Sulphur cinquefoil (<i>Potentilla recta</i>)	-	B	-	2 & 3	Herbicides approved by Commissioner and hand-pulling, digging, or other mechanical techniques recommended by Commissioner
Himalayan blackberry (<i>Rubus armeniacus</i>)	-	Watch	-	2, 3, & 4	Elimination not required
Mediterranean sage (<i>Salvia aethiopsis</i>)	-	A	-	3 & 4	Herbicides approved by Commissioner and digging, or other mechanical techniques recommended by Commissioner

SPECIES NAME ¹	FEDERAL NOXIOUS STATUS ²	COLORADO NOXIOUS STATUS ³	PRESENCE IN COLORADO PROJECT COUNTY ^{4,5}	REGIONS IN WHICH KNOWN TO PROJECT COUNTY(S) ^{4,5,6,7,8}	MANAGEMENT TECHNIQUES PERMITTED AND REQUIRED BY COLORADO NOXIOUS WEED ACT
Kariba-weed, giant salvinia (<i>Salvinia molesta</i>)	Noxious – Aquatic	A	-	Not known	Herbicides approved by Commissioner and water drawdown (controlled water drainage), and hand-removal, or other mechanical techniques recommended by Commissioner
Bouncingbet (<i>Saponaria officinalis</i>)	-	B	-	2 & 3	Elimination required, but no specific techniques specified
Stinking wouldie, tansy ragwort (<i>Senecio jacobaea</i>)	-	A	-	Not known	Herbicides approved by Commissioner, hand-pulling, digging, or other mechanical techniques recommended by Commissioner
Field sowthistle (<i>Sonchus arvensis</i>)	-	C	Moffat	1, 2, & 3	Elimination not required
Johnson grass (<i>Sorghum halepense</i>) and all other perennial <i>Sorghum</i> spp.	-	C	-	2, 3, & 4	Elimination not required
Alkali swainsonpea (<i>Sphaerophysa salsula</i>)	-	Watch	-	1 & 2	Elimination not required
Medusahead (<i>Taeniatherum caput-medusae</i>)	-	A	-	2	Herbicides approved by Commissioner and prescribed fire used with herbicide, hand-pulling, digging, or other mechanical techniques recommended by Commissioner
Tamarisk, salt cedar (<i>Tamarix</i> spp.)	-	B	Moffat	1, 2, 3, & 4	Herbicides approved by Commissioner and sawing, digging, or other mechanical techniques recommended by Commissioner
Common tansy (<i>Tanacetum vulgare</i>)	-	B	-	1, 2, & 3	Elimination required, but no specific techniques specified
Puncturevine (<i>Tribulus terrestris</i>)	-	C	-	2, 3, & 4	Elimination not required
Scentless false mayweed (<i>Tripleurospermum perforatum</i> , SYN= <i>Matricaria perforata</i>)	-	B	-	1, 2, & 3	Herbicides approved by Commissioner and hand-pulling, digging, or other mechanical techniques recommended by Commissioner
Moth mullein (<i>Verbascum blattaria</i>)	-	B	-	2	Elimination required, but no specific techniques specified
Common mullein (<i>Verbascum thapsus</i>)	-	C	Moffat	1, 2, 3, & 4	Elimination not required

SPECIES NAME ¹	FEDERAL NOXIOUS STATUS ²	COLORADO NOXIOUS STATUS ³	PRESENCE IN COLORADO PROJECT COUNTY ^{4,5}	REGIONS IN WHICH KNOWN TO PROJECT COUNTY(S) ^{4,5,6,7,8}	MANAGEMENT TECHNIQUES PERMITTED AND REQUIRED BY COLORADO NOXIOUS WEED ACT
Spiny cocklebur (<i>Xanthium spinosum</i>)	-	Watch	-	Not known	Elimination not required
Syrian beancaper (<i>Zygophyllum fabago</i>)	-	Watch	-	Not known	Elimination not required

Sources:

¹Species common and scientific name is from the USDA Plants Database (2013). If a synonymous name is used by a state for designating noxious status and is substantially different from the USDA Plants Database name, then these names are listed after the USDA Plants Database name.

²APHIS (2010)

³The following weeds are officially designated by the State of Colorado. **List A:** Designated by the Commissioner for eradication. **List B:** Species for which the Commissioner, in consultation with the state noxious weed advisory committee, local governments, and other interested parties, develops and implements state noxious weed management plans designed to stop the continued spread of these species. **List C:** Species for which the Commissioner, in consultation with the state noxious weed advisory committee, local governments, and other interested parties, would develop and implement state noxious weed management plans designed to support the efforts of local governing bodies to facilitate more effective integrated weed management on private and public lands. The goal of such plans would not be to stop the continued spread of these species but to provide additional education, research, and biological control resources to jurisdictions that choose to require management of List C species. **Watch List:** Determined to pose a potential threat to the agricultural productivity and environmental values of the lands of the state. The Watch List is intended to serve advisory and educational purposes only. Its purpose is to encourage the identification and reporting of these species to the Commissioner in order to facilitate the collection of information to assist the Commissioner in determining which species should be designated as noxious weeds (Colorado Department of Agriculture 2013a,b).

⁴Consortium of Intermountain Herbaria and Southwestern Environmental Information Network (2013), USDA Plants Database (2013)

⁵Colorado Department of Agriculture (2013a)

⁶University of Nevada Cooperative Extension (2010)

⁷Utah State University Cooperative Extension (2009)

⁸INVADERS Database (Rice 2013), University of Wyoming Extension (2013)

TABLE N4 NEVADA NOXIOUS WEEDS AND POTENTIAL FOR OCCURRENCE IN NEVADA PROJECT COUNTIES (CLARK, LINCOLN)

SPECIES NAME ¹	FEDERAL NOXIOUS STATUS ²	NEVADA NOXIOUS STATUS ³	PRESENCE IN NEVADA PROJECT COUNTIES ^{4,6}	REGIONS IN WHICH KNOWN TO PROJECT COUNTY(S) ^{4,5,6,7,8}
Hardheads, Russian knapweed (<i>Acroptilon repens</i>)	-	B	Clark, Lincoln	1, 2, 3, & 4
Camelthorn (<i>Alhagi maurorum</i>)	-	A	Clark	3 & 4
Stinking chamomile (<i>Anthemis cotula</i>)	-	A	-	2
Giant reed (<i>Arundo donax</i>)	-	A	Clark	2, 3, & 4
Asian mustard (<i>Brassica tournefortii</i>)	-	B	Clark, Lincoln	2, 3, & 4
Whitetop (<i>Cardaria draba</i> , <i>Cardaria</i> spp.)	-	C	Clark, Lincoln	1, 2, 3, & 4
Nodding plumeless thistle, musk thistle (<i>Carduus nutans</i>)	-	B	Clark, Lincoln	1, 2, 3, & 4
Red star-thistle (<i>Centaurea calcitrapa</i>)	-	A	-	2 & 3
Diffuse knapweed (<i>Centaurea diffusa</i>)	-	B	Clark, Lincoln	1, 2, 3, & 4
Iberian knapweed (<i>Centaurea iberica</i>)	-	A	-	Not known
Maltese star-thistle (<i>Centaurea melitensis</i>)	-	A	Clark, Lincoln	2, 3, & 4
Yellow star-thistle (<i>Centaurea solstitialis</i>)	-	A	-	2 & 3
Squarrose knapweed (<i>Centaurea virgata</i> , SYN= <i>C. squarrosa</i>)	-	A	-	2 & 3
Spotted knapweed (<i>Centaurea stoebe</i> ssp. <i>micranthos</i> , SYN= <i>C. maculosa</i>)	-	A	Clark, Lincoln	1, 2, 3, & 4
Rush skeletonweed (<i>Chondrilla juncea</i>)	-	A	-	Not known
Spotted water hemlock (<i>Cicuta maculata</i>)	-	C	Lincoln	1, 2, & 3
Canada thistle (<i>Cirsium arvense</i>)	-	C	Clark, Lincoln	1, 2, 3, & 4
Poison hemlock (<i>Conium maculatum</i>)	-	C	Lincoln	1, 2, & 3
Common crupina (<i>Crupina vulgaris</i>)	Noxious – Terrestrial	A	-	Not known
Dodder (<i>Cuscuta</i> spp. – except for natives)	Noxious – Parasitic	-	Clark, Lincoln	1, 2, 3, & 4
Gypsyflower, Houndstongue (<i>Cynoglossum officinale</i>)	-	A	Lincoln	1, 2, & 3
Leafy spurge (<i>Euphorbia esula</i>)	-	B	-	1, 2, & 3

SPECIES NAME ¹	FEDERAL NOXIOUS STATUS ²	NEVADA NOXIOUS STATUS ³	PRESENCE IN NEVADA PROJECT COUNTIES ^{4,6}	REGIONS IN WHICH KNOWN TO PROJECT COUNTY(S) ^{4,5,6,7,8}
Professor-weed, goats rue (<i>Galega officinalis</i>)	Noxious – Terrestrial	A	-	Not known
Waterhyme (<i>Hydrilla verticillata</i>)	Noxious – Aquatic	A	-	Not known
Black henbane (<i>Hyoscyamus niger</i>)	-	A	Lincoln	1, 2, & 3
Common St. Johnswort (<i>Hypericum perforatum</i>)	-	A	-	Not known
Dyer's woad (<i>Isatis tinctoria</i>)	-	A	-	1, 2, & 3
Broadleaved pepperweed (<i>Lepidium latifolium</i>)	-	C	Clark, Lincoln	1, 2, 3, & 4
Dalmation toadflax (<i>Linaria dalmatica</i>)	-	A	Lincoln	1, 2, & 3
Butter and eggs, yellow toadflax (<i>Linaria vulgaris</i>)	-	A	-	1, 2, & 3
Purple loosestrife (<i>Lythrum salicaria</i> and cultivars)	-	A	Clark	2, 3, & 4
European wand loosestrife (<i>Lythrum virgatum</i> and cultivars)	-	A	-	Not known
Eurasian watermilfoil (<i>Myriophyllum spicatum</i>)	-	A	-	1, 2, & 3
Scotch coltonthistle (<i>Onopordum acanthium</i>)	-	B	Clark, Lincoln	1, 2, 3, & 4
Broomrape (<i>Orobanch</i> spp. – except for natives)	Noxious – Parasitic	-	Clark, Lincoln	1, 2, 3, & 4
Harmal peganum, African rue (<i>Peganum harmala</i>)	-	A	Clark	3 & 4
Crimson fountaingrass (<i>Pennisetum setaceum</i>)	-	A	Clark	3 & 4
Sulphur cinquefoil (<i>Potentilla recta</i>)	-	A	-	2 & 3
Austrian yellowcress (<i>Rorippa austriaca</i>)	-	A	-	Not known
Mediterranean sage (<i>Salvia aethiopsis</i>)	-	A	Clark	3 & 4
Kariba-weed, giant salvinia (<i>Salvinia molesta</i>)	Noxious – Aquatic	A	-	Not known
Carolina horsenettle (<i>Solanum carolinense</i>)	-	B	-	Not known
Silverleaf nightshade (<i>Solanum elaeagnifolium</i>)	-	B	Clark, Lincoln	2, 3, & 4
Field sowthistle (<i>Sonchus arvensis</i>)	-	A	Lincoln	1, 2, & 3
Johnson grass (<i>Sorghum halepense</i>) and all other perennial <i>Sorghum</i> spp.	-	C	Clark, Lincoln	2, 3, & 4
Alkali swainsonpea (<i>Sphaerophysa salsula</i>)	-	A	-	1 & 2

SPECIES NAME ¹	FEDERAL NOXIOUS STATUS ²	NEVADA NOXIOUS STATUS ³	PRESENCE IN NEVADA PROJECT COUNTIES ^{4,6}	REGIONS IN WHICH KNOWN TO PROJECT COUNTY(S) ^{4,5,6,7,8}
Medusahead (<i>Taeniatherum caput-medusae</i>)	-	B	-	2
Tamarisk, salt cedar (<i>Tamarix</i> spp.)	-	C	Clark, Lincoln	1, 2, 3, & 4
Puncturevine (<i>Tribulus terrestris</i>)	-	C	Clark, Lincoln	2, 3, & 4
Syrian beancaper (<i>Zygophyllum fabago</i>)	-	A	-	Not known

Sources:

¹Species common and scientific name is from the USDA Plants Database (2013). If a synonymous name is used by a state for designating noxious status and is substantially different from the USDA Plants Database name, then these names are listed after the USDA Plants Database name.

²APHIS (2010)

³Officially designated and published as noxious by the State of Nevada (State of Nevada Department of Agriculture 2012). **Category A:** Noxious weeds that are generally not found or that are limited in distribution throughout the State. **Category B:** Noxious weeds that are generally established in scattered populations in some counties of the State. **Category C Weeds:** Noxious weeds that are generally established and generally widespread in many counties of the State.

⁴Consortium of Intermountain Herbaria and Southwestern Environmental Information Network (2013), USDA Plants Database (2013)

⁵Colorado Department of Agriculture (2013a)

⁶University of Nevada Cooperative Extension (2010)

⁷Utah State University Cooperative Extension (2009)

⁸INVADEERS Database (Rice 2013), University of Wyoming Extension (2013)

TABLE N5 UTAH NOXIOUS WEEDS AND POTENTIAL FOR OCCURRENCE IN UTAH PROJECT COUNTIES

SPECIES NAME ¹	FEDERAL NOXIOUS STATUS ²	UTAH NOXIOUS STATUS ³	PRESENCE IN UTAH PROJECT COUNTIES ^{4,7}	REGIONS IN WHICH KNOWN TO PROJECT COUNTY(S) ^{4,5,6,7,8}
Hardheads, Russian knapweed (<i>Acroptilon repens</i>)	-	B	All project counties	1, 2, 3, & 4
Whorled milkweed (<i>Asclepias verticillata</i>)	-	X-County (Iron & Washington)	-	-
Whitetop (<i>Cardaria draba</i> , <i>Cardaria</i> spp.)	-	B	All project counties	1, 2, 3, & 4
Nodding plumeless thistle, musk thistle (<i>Carduus nutans</i>)	-	B	All project counties	1, 2, 3, & 4
Diffuse knapweed (<i>Centaurea diffusa</i>)	-	A	Beaver, Iron, Juab, Uintah, Utah	1, 2, 3, & 4
Yellow star-thistle (<i>Centaurea solstitialis</i>)	-	A	Utah, Wasatch, Washington	2 & 3
Squarrose knapweed (<i>Centaurea virgata</i> , SYN= <i>C. squarrosa</i>)	-	B	Juab, Millard, Sanpete, Utah, Wasatch, Washington	2 & 3
Spotted knapweed (<i>Centaurea stoebe</i> ssp. <i>micranthos</i> , SYN= <i>C. maculosa</i>)	-	A	All project counties	1, 2, 3, & 4

SPECIES NAME ¹	FEDERAL NOXIOUS STATUS ²	UTAH NOXIOUS STATUS ³	PRESENCE IN UTAH PROJECT COUNTIES ^{4,7}	REGIONS IN WHICH KNOWN TO PROJECT COUNTY(S) ^{4,5,6,7,8}
Crossflower, blue flowering mustard (<i>Chorsipora tenella</i>)	-	X-County (Juab)	All project counties	1, 2, 3, & 4
Spotted water hemlock (<i>Cicuta maculata</i>)	-	X-County (Duchesne)	Beaver, Duchesne, Juab, Millard, Sanpete, Uintah, Utah, Wasatch, Washington	1, 2, & 3
Canada thistle (<i>Cirsium arvense</i>)	-	C	All project counties	1, 2, 3, & 4
Bull thistle (<i>Cirsium vulgare</i>)	-	X-County (Beaver & Iron)	All project counties	1, 2, & 3
Poison hemlock (<i>Conium maculatum</i>)	-	B	All project counties	1, 2, & 3
Field bindweed (<i>Convolvulus arvensis</i>)	-	C	All project counties	1, 2, 3, & 4
Dodder (<i>Cuscuta</i> spp. – except for natives)	Noxious – Parasitic	-	Duchesne, Iron, Millard, Sanpete, Uintah, Utah, Washington	1, 2, 3, & 4
Bermudagrass (<i>Cynodon dactylon</i>)	-	B (except not in Washington County)	Millard, Uintah, Utah, Washington	2, 3, & 4
Gypsyflower, Houndstongue (<i>Cynoglossum officinale</i>)	-	C	All project counties	1, 2, & 3
Russian olive (<i>Elaeagnus angustifolia</i>)	-	X-County (Duchesne & Uintah)	All project counties	1, 2, 3, & 4
Quackgrass (<i>Elymus repens</i>)	-	C	All project counties	1, 2, & 3
Leafy spurge (<i>Euphorbia esula</i>)	-	A	Duchesne, Juab, Millard, Sanpete, Uintah, Utah, Wasatch, Washington	1, 2, & 3
Black henbane (<i>Hyoscyamus niger</i>)	-	A	Beaver, Duchesne, Juab, Sanpete, Uintah, Utah, Wasatch	1, 2, & 3
Common St. Johnswort (<i>Hypericum perforatum</i>)	-	A	-	Not known
Dyer's woad (<i>Isatis tinctoria</i>)	-	B	All project counties	1, 2, & 3
Broadleaved pepperweed (<i>Lepidium latifolium</i>)	-	B	Beaver, Duchesne, Iron, Juab, Sanpete, Uintah, Utah, Wasatch, Washington	1, 2, 3, & 4
Oxeye daisy (<i>Leucanthemum vulgare</i> , SYN= <i>Chrysanthemum leucanthemum</i>)	-	A	Sanpete, Uintah, Utah, Wasatch	1 & 2
Dalmation toadflax (<i>Linaria dalmatica</i>)	-	B	Beaver, Uintah, Utah, Wasatch	1, 2, & 3
Butter and eggs, yellow toadflax (<i>Linaria vulgaris</i>)	-	A	Beaver, Duchesne, Millard, Sanpete, Utah, Wasatch	1, 2, & 3

SPECIES NAME ¹	FEDERAL NOXIOUS STATUS ²	UTAH NOXIOUS STATUS ³	PRESENCE IN UTAH PROJECT COUNTIES ^{4,7}	REGIONS IN WHICH KNOWN TO PROJECT COUNTY(S) ^{4,5,6,7,8}
Purple loosestrife (<i>Lythrum salicaria</i> and cultivars)	-	A	Juab, Millard, Uintah, Utah, Wasatch	2, 3, & 4
Scotch cottonthistle (<i>Onopordum acanthium</i>)	-	B	All project counties	1, 2, 3, & 4
Broomrape (<i>Orobancha</i> spp. – except for natives)	Noxious – Parasitic	-	All project counties	1, 2, 3, & 4
Common reed (<i>Phragmites australis</i>)	-	X-County (Utah)	Duchesne, Juab, Millard, Sanpete, Uintah, Utah, Washington	1, 2, 3, & 4
Sulphur cinquefoil (<i>Potentilla recta</i>)	-	A	Utah, Washington	2 & 3
Silverleaf nightshade (<i>Solanum elaeagnifolium</i>)	-	X-County (Washington)	Washington	2, 3, & 4
Johnson grass (<i>Sorghum halepense</i>) and all other perennial <i>Sorghum</i> spp.	-	A	Beaver, Juab, Sanpete, Uintah, Utah, Washington	2, 3, & 4
Medusahead (<i>Taeniatherum caput-medusae</i>)	-	A	Utah	2
Tamarisk, salt cedar (<i>Tamarix</i> spp.)	-	C	All project counties	1, 2, 3, & 4
Puncturevine (<i>Tribulus terrestris</i>)	-	X-County (Iron)	Duchesne, Millard, Uintah, Utah, Washington	2, 3, & 4

Sources:

¹Species common and scientific name is from the USDA Plants Database (2013). If a synonymous name is used by a state for designating noxious status and is substantially different from the USDA Plants Database name, then these names are listed after the USDA Plants Database name.

²APHIS (2010)

³The following weeds are officially designated and published as noxious for the State of Utah, as per the authority vested in the Commissioner of Agriculture under Section 4-17-3, Utah Noxious Weed Act (Utah Department of Agriculture 2010). **Class A Early Detection Rapid Response (EDRR):** Early Detection Rapid Response (EDRR) Declared noxious weeds not native to the state of Utah that pose a serious threat to the state and should be considered as a very high priority. **Class B (Control):** Declared noxious weeds not native to the state of Utah, that pose a threat to the state and should be considered a high priority for control. **Class C (Containment):** Declared noxious weeds not native to the state of Utah that are widely spread but pose a threat to the agricultural industry and agricultural products with a focus on stopping expansion. There are additional noxious weeds designated by Project counties (Utah Department of Agriculture 2009).

⁴Consortium of Intermountain Herbaria and Southwestern Environmental Information Network (2013), USDA Plants Database (2013)

⁵Colorado Department of Agriculture (2013a)

⁶University of Nevada Cooperative Extension (2010)

⁷Utah State University Cooperative Extension (2009)

⁸INVADERS Database (Rice 2013), University of Wyoming Extension (2013)

TABLE N6 WYOMING NOXIOUS WEEDS AND POTENTIAL FOR OCCURRENCE IN WYOMING PROJECT COUNTIES (CARBON, SWEETWATER)

SPECIES NAME ¹	FEDERAL NOXIOUS STATUS ²	WYOMING NOXIOUS STATUS ³	PRESENCE IN WYOMING PROJECT COUNTIES ^{4,8}	REGIONS IN WHICH KNOWN TO PROJECT COUNTY(S) ^{4,5,6,7,8}
Hardheads, Russian knapweed (<i>Acroptilon repens</i>)	-	X	Carbon, Sweetwater	1, 2, 3, & 4
Skeletonleaf bur ragweed (<i>Ambrosia tomentosa</i>)	-	X	Carbon, Sweetwater	1 & 2
Lesser burdock (<i>Arctium minus</i>)	-	X	Carbon	1, 2, 3, & 4
Whitetop (<i>Cardaria draba</i> , <i>Cardaria</i> spp.)	-	X	Carbon, Sweetwater	1, 2, 3, & 4
Hairy whitetop (<i>Cardaria pubescens</i>)	-	X	Carbon, Sweetwater	1, 2, 3, & 4
Spiny plumeless thistle (<i>Carduus acanthoides</i>)	-	X	Carbon	1 & 2
Nodding plumeless thistle, musk thistle (<i>Carduus nutans</i>)	-	X	Carbon, Sweetwater	1, 2, 3, & 4
Diffuse knapweed (<i>Centaurea diffusa</i>)	-	X	Carbon, Sweetwater	1, 2, 3, & 4
Spotted knapweed (<i>Centaurea stoebe</i> ssp. <i>micranthos</i> , SYN= <i>C. maculosa</i>)	-	X	Carbon, Sweetwater	1, 2, 3, & 4
Canada thistle (<i>Cirsium arvense</i>)	-	X	Carbon, Sweetwater	1, 2, 3, & 4
Field bindweed (<i>Convolvulus arvensis</i>)	-	X	Carbon, Sweetwater	1, 2, 3, & 4
Dodder (<i>Cuscuta</i> spp. – except for natives)	Noxious – Parasitic	-	Carbon, Sweetwater	1, 2, 3, & 4
Gypsyflower, Houndstongue (<i>Cynoglossum officinale</i>)	-	X	Carbon, Sweetwater	1, 2, & 3
Geyer's larkspur (<i>Delphinium geyeri</i>)	-	X-County (Carbon)	Carbon, Sweetwater	1 & 2
Russian olive (<i>Elaeagnus angustifolia</i>)	-	X	Carbon, Sweetwater	1, 2, 3, & 4
Quackgrass (<i>Elymus repens</i>)	-	X	Carbon, Sweetwater	1, 2, & 3
Leafy spurge (<i>Euphorbia esula</i>)	-	X	Carbon, Sweetwater	1, 2, & 3
Saltlover (<i>Halogeton glomeratus</i>)	-	X-County (Carbon)	Carbon, Sweetwater	1, 2, 3, & 4
Black henbane (<i>Hyoscyamus niger</i>)	-	X-County (Carbon)	Carbon, Sweetwater	1, 2, & 3
Common St. Johnswort (<i>Hypericum perforatum</i>)	-	X	-	Not known
Dyer's woad (<i>Isatis tinctoria</i>)	-	X	Carbon, Sweetwater	1, 2, & 3

SPECIES NAME ¹	FEDERAL NOXIOUS STATUS ²	WYOMING NOXIOUS STATUS ³	PRESENCE IN WYOMING PROJECT COUNTIES ^{4,8}	REGIONS IN WHICH KNOWN TO PROJECT COUNTY(S) ^{4,5,6,7,8}
Broadleaved pepperweed (<i>Lepidium latifolium</i>)	-	X	Carbon, Sweetwater	1, 2, 3, & 4
Oxeye daisy (<i>Leucanthemum vulgare</i> , SYN= <i>Chrysanthemum leucanthemum</i>)	-	X	Carbon	1 & 2
Dalmation toadflax (<i>Linaria dalmatica</i>)	-	X	Carbon, Sweetwater	1, 2, & 3
Butter and eggs, yellow toadflax (<i>Linaria vulgaris</i>)	-	X	Carbon	1, 2, & 3
Wyeth's lupine (<i>Lupinus wyethii</i>)	-	X-County (Carbon)	Carbon	1 & 2
Purple loosestrife (<i>Lythrum salicaria</i> and cultivars)	-	X	-	2, 3, & 4
Scotch cottonthistle (<i>Onopordum acanthium</i>)	-	X	Carbon	1, 2, 3, & 4
Plains pricklypear (<i>Opuntia polyacantha</i>)	-	X-County (Carbon)	Carbon, Sweetwater	1, 2, 3, & 4
Broomrape (<i>Orobanche</i> spp. – except for natives)	Noxious – Parasitic	-	Carbon, Sweetwater	1, 2, 3, & 4
Field sowthistle (<i>Sonchus arvensis</i>)	-	X	Carbon, Sweetwater	1, 2, & 3
Tamarisk, salt cedar (<i>Tamarix</i> spp.)	-	X	Carbon, Sweetwater	1, 2, 3, & 4
Common tansy (<i>Tanacetum vulgare</i>)	-	X	Carbon	1, 2, & 3
Rough cocklebur (<i>Xanthium strumarium</i>)	-	X-County (Carbon)	Carbon, Sweetwater	1, 2, 3, & 4

Sources:

¹Species common and scientific name is from the USDA Plants Database (2013). If a synonymous name is used by a state for designating noxious status and is substantially different from the USDA Plants Database name, then these names are listed after the USDA Plants Database name.

²APHIS (2010)

³The following weeds are officially designated and published as noxious for the State of Wyoming, per the Wyoming Weed and Pest Control Act Designated List (Designated Noxious Weeds .S. 11-5-102 (a)(xi) and Prohibited Noxious Weeds W.S. 11-12-104)(Wyoming Weed and Pest Council 2013). In Wyoming, 26 plant species are designated as noxious weeds under the authority of the Wyoming Weed and Pest Control Act of 1973 (Wyoming Weed and Pest Control 2013). Six additional noxious weeds are designated by Carbon County (Carbon County 2013). The State of Wyoming designates certain species as noxious weeds but does not further classify them.

⁴Consortium of Intermountain Herbaria and Southwestern Environmental Information Network (2013), USDA Plants Database (2013)

⁵Colorado Department of Agriculture (2013a)

⁶University of Nevada Cooperative Extension (2010)

⁷Utah State University Cooperative Extension (2009)

⁸INVADERS Database (Rice 2013), University of Wyoming Extension (2013)

N2.1.1 APHIS

Animal and Plant Health Inspection Services (APHIS) designates nine noxious weed species that either occur or have the potential to occur in Project states (APHIS 2010). These noxious weeds are designated under the authority of the Federal Noxious Weed Act, and require federal land management agencies to control such plants and complement cooperative agreements with state agencies.

N2.1.2 State of Wyoming

In Wyoming, 26 plant species are designated as noxious weeds under the authority of the Wyoming Weed and Pest Control Act (WWPC) of 1973 (WWPC 2013). The State of Wyoming designates certain species as noxious weeds but does not further classify them. Six additional noxious weeds are designated by Carbon County (Carbon County 2013).

N2.1.3 State of Colorado

In Colorado, a total of 76 plant species are designated as noxious weeds under the authority of the Colorado Noxious Weed Act (Colorado Department of Agriculture 2013a, 2013b). These include 22 List A species, 39 List B species, and 15 List C species. In addition, there are 20 Watch List species that have the potential to be designated as noxious in the future. These classifications are defined as follows:

List A: Designated by the Commissioner for eradication.

List B: Species for which the Commissioner, in consultation with the state noxious weed advisory committee, local governments, and other interested parties, develops and implements state noxious weed management plans designed to stop the continued spread of these species.

List C: Species for which the Commissioner, in consultation with the state noxious weed advisory committee, local governments, and other interested parties, would develop and implement state noxious weed management plans designed to support the efforts of local governing bodies to facilitate more effective integrated weed management on private and public lands. The goal of such plans would not be to stop the continued spread of these species but to provide additional education, research, and biological control resources to jurisdictions that choose to require management of List C species.

Watch List: Determined to pose a potential threat to the agricultural productivity and environmental values of the lands of the state. The Watch List is intended to serve advisory and educational purposes only. Its purpose is to encourage the identification and reporting of these species to the Commissioner in order to facilitate the collection of information to assist the Commissioner in determining which species should be designated as noxious weeds.

N2.1.4 State of Utah

In Utah, a total of 27 plant species are designated as noxious weeds under the authority of the Utah Noxious Weed Act (Utah Department of Agriculture 2010). These include 12 Class A species, 10 Class B species, and 5 Class C species, as per the authority vested in the State of Utah Commissioner of Agriculture and Food under Section 4-17-3. These classifications are defined as follows:

Class A Early Detection Rapid Response (EDRR): EDRR Declared noxious weeds not native to the state of Utah that pose a serious threat to the state and should be considered as a very high priority.

Class B (Control): Declared noxious weeds not native to the state of Utah that pose a threat to the state and should be considered a high priority for control.

Class C (Containment): Declared noxious weeds not native to the state of Utah that are widely spread but pose a threat to the agricultural industry and agricultural products with a focus on stopping expansion.

In addition, there are eight additional noxious weeds designated by Project counties (Utah Department of Agriculture 2009).

N2.1.5 State of Nevada

In Nevada, a total of 48 plant species are designated as noxious weeds under the authority of the Nevada Revised Statutes: Chapter 555.005-555.5570 —Control of Insects, Pests, and Noxious Weeds (State of Nevada Department of Agriculture 2012). These include 31 Category A species, nine Category B species, and eight Category C species. These classifications are defined as follows:

Category A: Noxious weeds that are generally not found or that are limited in distribution throughout the State.

Category B: Noxious weeds that are generally established in scattered populations in some counties of the State.

Category C Weeds: Noxious weeds that are generally established and generally widespread in many counties of the State.

N2.1.6 BLM or Forest Service Invasive Weeds

Updated Plans will identify invasive weeds for each affected BLM Field Office and USFS National Forest and would focus monitoring and control methods on these species.

N2.2 Noxious Weed Management

The requirements for Noxious Weed Management will be determined based on information provided in the FEIS, BA, BO, BE, and agency consultation. Updated information on Noxious Weed Management will be included in the NTP POD version of this Plan. Section N2.2 provides a description of what may be required in future versions of this Plan. All actions described below are subject to change in future versions of this Plan.

The various regulatory agencies with jurisdiction over the Project have different noxious weed management requirements. TransWest would adhere to all EPA, USDA, USDOJ and state agricultural agencies' (Wyoming, Colorado, Utah, and Nevada) requirements during all components of the TWE Project. In addition, TransWest would adhere to BLM, USFS, NPS, URMCC, or Reclamation requirements when crossing lands managed by these agencies. All four TWE Project states require that all noxious weeds designated for that state (except for Colorado List C and Watch List species) are eradicated before such weeds propagate and spread, and some Project counties have additional county-declared noxious weeds that require treatment. The following sections outline TransWest's

approach to identifying problem areas, preventative strategies, and treatment measures for noxious weeds.

N2.2.1 Weed Management Personnel Requirements

Weed management actions would be carried out by weed management specialist(s) with the following qualifications:

- Training and experience in native plant taxonomy/identification;
- Training and experience in field ecology and plant community mapping;
- Training in weed management or Integrated Pest Management with an emphasis on weeds; Experience in coordination with agency and private landowners; and,
- Additional requirements depending on roles and responsibilities of personnel, as described later in this Plan.

N2.2.2 Pre-Construction Noxious Weed Surveys

Prior to construction activities, TransWest will be required to conduct pre-construction surveys for noxious weeds in the footprints of the ROW, access roads, and temporary work areas associated with Project facilities. For all federal lands, TransWest will collect weed inventory data so that it meets both project needs and is compatible with use in BLM's National Invasive Species Information Management System (NISIMS) (BLM 2014). Survey information collected during pre-construction surveys may include species name, global positioning system (GPS) location of weed infestations, percent cover, and approximate size of weed infestations in acres. Noxious weed GPS location information would be listed in Table N7, plotted on maps, and included in Pesticide Use Proposals (PUPs) to be submitted and approved by the appropriate land management agency before any pesticide treatments are conducted. Information in Table N7 will be provided in updated versions of this Plan when pre-construction noxious weed surveys have been completed, if necessary.

TABLE N7 NOXIOUS WEED PROBLEM AREAS IDENTIFIED IN THE TWE PROJECT FOOTPRINT (ROW, ACCESS ROADS, STAGING AREAS, MATERIAL STORAGE AREAS, ETC.)

COUNTY / STATE	MILE-POST	PROJECT FEATURE TYPE ¹	SPECIES	WEED CLASS ²	WEED COVER ³	SIZE (ACRES) ⁴	DATA SOURCE ⁵	LOCATION	
								LATITUDE	LONGITUDE

¹Project feature types: ROW; permanent access road; temporary access road; ground electrode system; staging area; material storage area; fly yard; pulling, tensioning, and splicing site; communication and regeneration site; and batch plant.

²Location of Class A, B, C, Watch, or county weed species per state/county noxious weed list where weed is located. The state of Wyoming does not classify noxious weeds beyond state vs. county.

³Percent cover was used to determine weed abundance. The following categories were used: Trace = <1%, Low = 1-5%, Moderate = 6-25%, and High = 26-100% (may be modified depending on agency-provided data).

⁴Size (acres) refers to the approximate land area of the weed problem area.

⁵Agency abbreviations (TBD)

N2.2.3 Identification of Problem Weed Areas

Before vegetation and soil disturbance activities began, noxious weed problem areas may be identified and marked with signs by Project construction personnel, Project biologists, or Environmental Inspectors. Weed problem areas would include all locations where noxious weed species (or other invasive weed species per agreement with agencies) would need to be controlled (supports BLM 2007). Signs placed on the ROW (or on the edge of the ROW after clearing and grading activities) and other Project areas would alert construction personnel to the locations and types of weed infestations.

N2.2.4 Preventative Measures

TransWest recognizes that prevention is the most effective approach to noxious weed management. The following preventive measures would be implemented to minimize the spread of both terrestrial and aquatic noxious weeds:

- Prevent the introduction and spread of weeds caused by moving weed-infested sand, gravel, borrow, and fill material. Active gravel and borrow sources should be visually inspected and determined to be noxious weed free before use. If possible, borrow materials should be verified weed seed free by sending samples to a laboratory. A source supporting noxious weeds should be considered for closure until it is weed free (supports BLM 2007 and Forest Service Manual 2080 – Region 4 (USFS 2001)).
- Signs would identify the locations (or segments of ROW) of weed problem areas where separate topsoil segregation must occur before earth disturbance may take place.
- Inspect material sources on site (e.g., soil stockpiles, mulches), and ensure that they are weed-free before use and transport. Treat weed-infested sources to eradicate weed seed and plant parts, and strip and stockpile contaminated material before any use of pit material (supports BLM 2007).
- Prevent weed establishment by minimizing driving through weed-infested areas. Additional measures may include limiting or implementing additional restrictions on vehicle movement through weed-infested areas when the spread of seeds or propagules is most likely (supports BLM 2007).
- Avoid acquiring water for dust abatement where access to the water is through weed-infested sites (supports BLM 2007).

Worker Environmental Awareness Program (WEAP) Training

TransWest would conduct an Worker Environmental Awareness Program (WEAP) before surface disturbance activities begin to educate all Project personnel regarding environmental concerns and requirements, including weed identification, prevention, control methods, and the potential impacts of noxious weeds on agriculture, livestock, and wildlife. All personnel would be informed of the importance of and techniques in preventing the spread of noxious weeds to uncontaminated areas and of controlling the proliferation of weeds already present. No personnel would be allowed to enter the TWE Project ROW before first taking part in the WEAP, at any point during the Project. Qualified biological monitors approved by the BLM, USFS, NPS, Reclamation, and URMCC, as appropriate, would conduct training for the WEAP program.

Cleaning Equipment, Vehicles, and Personnel

The following measures specify procedures for cleaning equipment and vehicles to prevent noxious weeds from spread or invasion as a result of the TWE Project (supports BLM 2007 and Forest Service Manual 2900 (USFS 2011b)):

- Before construction activities start, TransWest would identify sites where construction vehicles and equipment can be cleaned. These sites would be reviewed and approved by the landowner or appropriate land management agency. Sites would not be located in sensitive resource areas such as wetlands. All cleaning stations shall be allowed only in designated areas at least 100 feet from streams and wetlands. Cleaning stations would be identified by signs on the edge of the ROW for the duration of the Project, and GPS locations of cleaning stations provided in each PUP (supports BLM 2007; see Attachments A & B). Cleaning stations shall be contained with barriers to prevent migration of wastewater and/or sediments into water bodies. Waste concrete material shall be removed and properly disposed of once it has hardened.
- At cleaning sites, a high-pressured washer would be used to clean construction vehicles and equipment before entering and leaving the ROW, and before entering public lands.
- It is assumed that any water body could contain aquatic invasive species (e.g., zebra and quagga mussels) and invasive weed species. If work occurs in or near a water body, all equipment would be decontaminated at a cleaning station. Decontamination would occur before arrival at a Project site to avoid the transfer of aquatic invasive species from a previous work site in or near water. Decontamination would consist of either of these actions: 1) Drain all water from equipment and compartments; clean equipment of all mud, plants, debris, and aquatic organisms; and dry equipment for specified time by season (five days in June through August, 18 days in March through May, and three days in December through February when temperatures are at or below freezing); or 2) Use a high pressure (2,500 pounds per square inch [psi]) hot water (140 degrees Fahrenheit [°F]) pressure washer to thoroughly clean equipment and flush all compartments that may hold water. A field monitor would be present to ensure that the cleaning was completed prior to vehicle and equipment moving to other streams and drainages.
- Inspect, remove, and properly dispose of weed seed and plant parts found on workers' clothing and equipment. Proper disposal entails bagging the seeds and plant parts and incinerating them (supports BLM 2007 and Colorado Noxious Weed Act).

N2.2.5 Treatment Measures

TransWest may be required to implement noxious weed treatment measures in accordance with existing regulations and jurisdictional land management agency or landowner agreements. TransWest would focus treatment efforts on areas with designated noxious weed species unless other agreements have been made with the jurisdictional agencies. Special attention would be given to state- and federal-designated noxious weeds (versus county-listed noxious weeds), and noxious weeds listed as higher priority species, if applicable (Category A weeds in Tables Q3 through Q6). TransWest would continue coordinating with appropriate agencies to determine which of the species would require treatment and to determine appropriate treatment schedules.

Where there is a pre-existing high occurrence of noxious weeds in the vicinity of the TWE Project, eradication would be difficult or impossible unless performed on a scale well beyond that of the TWE Project timeline. At a minimum, the preventative measures outlined in Section N2.2.4 would be

implemented for such species. TransWest would consult with the appropriate agency personnel in situations where herbicide treatment may not be an appropriate option (e.g., near known special status species locations). TransWest would obtain agency concurrence before deciding to forego herbicide treatment of any widespread noxious weed species. Alternative treatments (e.g., biological controls, mechanical treatments) may be implemented if recommended by the appropriate agency where herbicide treatment is not an option. General treatment methods that may be used include:

- Noxious weed problem areas would be pre-treated with pesticides before implementing construction activities (supports BLM 2007; also see Table N1).
- Control of noxious weeds could include chemical, physical, and biological methods and would be developed in consultation with the land agencies and private landowners (supports USDOI 2007; BLM 2007; Forest Service Manual 2150 (USFS 2013a), Forest Service Manual 2900 (USFS 2011b), also see Table N1).
- When necessary to blade noxious weed infested roadsides or ditches, work would be scheduled for spring or early summer prior to the seed-set stage or later in the fall after seeds have fallen. Surface disturbance would be minimized and bladed material isolated in weed infested sites (supports Forest Service 2150 – Region 4).
- Timing of treatment for noxious weeds on the TWE Project would vary depending on species targeted, and may require multiple treatments in a given year to effectively treat all noxious weeds.

N2.2.6 Reclamation Measures

The Reclamation Plan (Appendix Q) describes detailed procedures for revegetation and handling of soil and mulches (e.g., hay, straw) to prevent noxious weed spread or invasion as a result of the TWE Project.

N3.0 PESTICIDE APPLICATION, HANDLING, SPILLS, AND CLEANUP

N3.1 Pesticide Applicator Training

The following measures for pesticide applicator training procedures may be required for the TWE Project. All pesticide applicators would also be required to undergo the standard health and safety training procedures required for all Project workers.

- All pesticide applicator personnel would take training required for all workers and additional hazard training specific to safe pesticide use and reporting serious accidents, which would be documented. Following training, pesticide applicators would be certified by the state where pesticides are to be applied, per the jurisdictional agency's requirements.
- Prior to work activities, all pesticide applicator personnel would be instructed on the protection of cultural, paleontological, ecological resources, fire safety, and other natural resources in accordance with POD provisions. To assist in this effort, the Construction Contractor(s) would address (a) federal, state, and tribal laws regarding cultural resources, fossils, wetlands, plants, and wildlife, including collection and removal; and (b) the importance of these resources and the purpose and necessity of protecting them. All pesticide applicator personnel would specifically be instructed on avoidance areas and/or timing

restrictions for the protection of humans, wildlife, special status species, wetlands, and other sensitive areas.

- Prior to work activities, all pesticide applicator personnel would be instructed where/if there is a known occurrence of protected species or habitat in the construction area. Sensitive areas would be considered avoidance areas and would be marked on the ground and maintained through the duration of the Contract.

N3.2 Pesticide Application and Handling

Pesticide application and handling procedures for the TWE Project follow numerous federal and state regulations. The following measures for pesticide application and handling may be required for the TWE Project.

- Pesticides would only be applied by state-certified pesticide applicators using protective equipment as directed by the herbicide product label.
- Only EPA-registered pesticides that are applied within the framework of agency policies, registered in the state where they are used, are applied in a manner consistent with label directions and state pesticide regulations would be used, and following all “advisory statements”. Only BLM-approved pesticides listed in Table N8 would be used on all land ownerships, unless otherwise approved by the appropriate land management agency (BLM 2007, 2012). Pesticide use would be limited to non-persistent immobile pesticides that are applied only in accordance with label and application permit directions for terrestrial and aquatic applications. This includes applying herbicides on a spot treatment basis, suspending herbicide applications whenever weather conditions may cause off-site drift, using drift control agents, and using low volatile formulations.
- Treat individual plants rather than broadcast application in areas where special status species occur. Prior to herbicide use within federally listed occupied habitat the Applicant will coordinate with the USFWS and BLM to minimize impacts to federally listed species.
- For BLM lands, all pesticide application and handling would be consistent with the Standard Operating Procedures, Mitigation Measures and Conservation Measures contained in Vegetation Treatments Using Herbicides on BLM Lands in 17 Western States Programmatic EIS and with any locally overriding conservation measures from site specific NEPA documents.
- Use herbicides of low toxicity to humans, wildlife, fish, and livestock, where feasible. See Table N8 for herbicides approved on the TWE Project.
- All applications would be avoided near sole source aquifer areas.
- When mixing and applying pesticides, the herbicide label would be adhered to for protective equipment, re-entry period, and environmental protection constraints. Pesticides would not be stored, mixed, or loaded, or equipment rinsed near or on stream banks, lake shorelines, ditches, irrigation canals, or other areas where runoff could impact an aquatic body.
- On lands managed by Ashley National Forest, only land application of approved herbicides to control noxious weeds would be allowed. Herbicides are not allowed to contaminate surface water.

- To improve coordination and avoid potential conflicts and safety concerns during implementation of the treatment, livestock permittees would be notified of the herbicide treatment. Coordinate with BLM and USFS to obtain permittee's name and contact information for notification. Design treatments to take advantage of normal livestock grazing rest periods, when possible. Avoid use of diquat in riparian pasture while pasture is being used by livestock.
- A copy of Material Safety Data Sheets (MSDSs) would be kept at work sites. MSDSs are available for review at <http://www.cdms.net/>.
- Pesticides and pesticide containers would be transported, stored, and disposed of in accordance with applicable state, local, and federal laws and regulations.
- Proper application equipment would be used to minimize herbicide drift (e.g., spray equipment that produces 200- to 800-micron diameter droplets [spray droplets of 100 microns and less are most prone to drift]). Proper application methods would be implemented (e.g., set maximum spray heights, use appropriate buffer distances between spray sites and non-target resources).
- Granular herbicides would not be applied on slopes of more than 15% where there is the possibility of runoff carrying the granules into non-target areas.
- Weather forecasts would be reviewed daily before pesticide application to evaluate conditions for pesticide drift or runoff and general fire safety. Pesticides would not be applied when winds exceed 10 miles per hour (mph), or when a serious rainfall event is imminent, and treatments on steep slopes would be minimized.
- Pesticide applicator personnel may only operate vehicles on designated roads and park in areas free of vegetation.
- A no-spray buffer would be maintained between treatment areas and human residences or crops, with a minimum buffer of 100 feet for ground applications, unless a written waiver is granted. If a written waiver is granted, land management agencies, landowners, adjacent landowners, and/or other appropriate parties must be notified before pesticide treatment.
- Post treated areas with appropriate signs at common public access areas and observe restricted entry intervals specified by the product label. When possible, spray applications would be accomplished when human or livestock use is likely to be low. Notify land management agencies, landowners, adjacent landowners, and/or other appropriate parties before pesticide treatment.
- Buffer zones would be provided along streams, rivers, lakes, and riparian areas, including riparian areas along ephemeral and intermittent streams, as well as downstream habitats and species/populations of interest. Use appropriate herbicide-free buffer zones for herbicides not labeled for aquatic use, with minimum widths of 25 feet for vehicle and 10 feet for hand spray applications. Wild and Scenic Rivers require a buffer of 0.25 mile on either side of river.
- Maintain Pesticide Application Records (PARs). All herbicide treatments would be documented in daily logs, which include the type of herbicide, formulation, pounds of active ingredient applied per acre, gallons of solution applied, method of application, date, time, and

location. Pesticide use reports would be completed at the end of the treatment season to summarize types and amount of herbicides applied. Pesticide use report and Pesticide Application Records would be submitted to the appropriate agency by annually for the life of the Special Use Permit (SUP). If NISIMS is used to record treatments, it would eliminate the need for daily completion of a PAR.

- Herbicide products would be selected that are least damaging to the environment while providing the desired results, using the least amount of herbicide needed to achieve the desired result, and for minimizing additional impacts from herbicide degradates, adjuvants, inert ingredients, and tank mixtures. Only BLM-approved adjuvants would be used. Spot applications or low-boom broadcast operations would be preferred to limit contamination of wildlife food sources.
- TransWest would prepare a PUP for each land management agency or land owner before pesticide spraying or on the schedule required. Each PUP would identify a list of approved herbicides that may be used as well as site-specific information about the herbicides to be used, timing and locations where specific herbicides would be used, other weed treatments that would be used (e.g., biocontrol), maximum application rate, targeted species, general site characteristics, description of sensitive resources present and protective measures, and effects of the treatment. PUPs for BLM lands must be signed by a certified weed applicator, the field office manager, state coordinator, and deputy state director before the treatment can go forward, and by District and Forest pesticide use coordinators on USFS lands. The Pesticide Application Record, which must be completed within 24 hours after completion of the application, documents the actual rate of application and that all the above factors have been taken into account. The PUPs and associated reporting requirements would be submitted on the schedule required for each BLM Field Office or National Forest office.
- Buffer zones would be provided around hibernacula and important pollinator nesting habitat.
- Herbicide spraying in desert tortoise habitat in Nevada would require consultation with the BLM and U.S. Fish and Wildlife Service (USFWS).
- The cut-stumps of mature salt cedar stands that are cut as part of vegetation clearing would be immediately painted with herbicides. The specific control methods and herbicide to be used would be determined in consultation with the Nevada BLM State and Field Office offices. Additional control measures could include planting native or desired plant species following treatment to provide erosion control and the use of biocontrols.
- Cleaning sites, access roads, staging areas, mulch and soil stockpiles, and special status plant occurrences and other sensitive sites would be prioritized for weed treatment to reduce the potential of weeds spreading or affecting sensitive areas.

TABLE N8 HERBICIDE ACTIVE INGREDIENTS PERMITTED FOR TREATING WEEDS FOR THE TWE PROJECT

HERBICIDE ACTIVE INGREDIENTS	TRADE NAME	ADDITIONAL RESTRICTIONS AFTER FOLLOWING MSDS AND LABEL
2,4-D	Agrisolution 2,4-D LV6, 2,4-D Amine 4, Five Star, ,4-D Amine, HardBall, Saber, Aqua-Kleen, Weedar 64, and others	Minimize the size of application areas, where practical, when applying to limit impacts to wildlife and livestock, particularly through contamination of food items. Do not exceed the typical application rate when applying in known traditional use areas, and to reduce risk to occupational and public receptors.
bromacil	Bromacil 80DF, Hyvar X, Hyvar XL, others	Minimize use in watersheds with downgradient ponds and streams if potential impacts to aquatic plants or fish are identified, particularly during periods when fish are in sensitive life stages. Minimize the size of application areas, where practical, to limit impacts to wildlife and livestock, particularly through contamination of food items. Use the typical application rate, where feasible, when applying to reduce risk to occupational and public receptors. Do not exceed the typical application rate when applying in known traditional use areas. Do not apply in rangelands, and use appropriate buffer zones if used to limit contamination of off-site rangeland or wildlife vegetation.
bromacil + diuron	Bromacil/Diuron 40/40, Krovar I DF, DiBro 4+4, DiBro 4+2, Weed Blast 4G, others	See restrictions for each active ingredient.
chlorsulfuron	Alligare Chlorsulfuron , Telar DF , Chlorsulfuron E-Pro 75 WDG, others	N/A
clopyralid	Spur, Pyramid R&P, Clopyralid 3, Reclaim, Stinger, Transline, others	N/A
clopyralid + 2,4-D	Commando, Curtail, Cutback	See restrictions for each active ingredient.
dicamba	Banvel, Clarity, others	To minimize risks to terrestrial wildlife, do not exceed the typical application rate for applications. Do not apply across large application areas, where feasible, to limit impacts to livestock, particularly through the contamination of food items.
dicamba + 2,4-D	Range Star, Weedmaster, Outlaw, others	See restrictions for each active ingredient.
diflufenzopyr + dicamba	Distinct, Overdrive	Aerial application of this herbicide is prohibited on BLM lands. Minimize the size of application areas, where practical to limit impacts to wildlife and livestock, particularly through contamination of food items.
diquat	Alligare Diquat, NuFarm Diquat SPC 2 L Herbicide, Reward, others	Limit use in water bodies that have native fish and aquatic resources. Limit application to ATV, truck spraying, and boat applications to reduce risks to occupational receptors. Limit applications to areas away from high residential, subsistence, or traditional use to reduce risks to public receptors. Use the typical application rate, where feasible, when applying to reduce risk to occupational and public receptors.

HERBICIDE ACTIVE INGREDIENTS	TRADE NAME	ADDITIONAL RESTRICTIONS AFTER FOLLOWING MSDS AND LABEL
diuron	Diuron 80DF, Karmex DF, Direx 4L, others	<p>Minimize use in watersheds with downgradient ponds and streams if potential impacts to aquatic plants or fish are identified, particularly during periods when fish are in sensitive life stages.</p> <p>To minimize risks to terrestrial wildlife and livestock, do not exceed the typical application rate for applications.</p> <p>Minimize the size of application areas, where practical, when applying to limit impacts to wildlife and livestock, particularly through contamination of food items.</p> <p>Evaluate applications on a site-by-site basis to avoid risks to humans. There appear to be few scenarios where can be applied without risk to occupational receptors.</p> <p>Do not exceed the typical application rate when applying in known traditional use areas, and to reduce risk to occupational and public receptors.</p> <p>Do not apply in rangelands, and use appropriate buffer zones if used to limit contamination of off-site rangeland or wildlife vegetation.</p>
fluridone	Avast!, Sonar AS, others	Do not exceed the typical application rate when applying in known traditional use areas, and to reduce risk to occupational and public receptors.
glyphosate	Aqua Star, GlyStar Gold, Accord SP, Rodeo, Mirage, Roundup Original, Honcho, others	<p>Only use adjuvants BLM has approved for aquatic environments, and either avoid using glyphosate formulations containing polyoxyethyleneamine (POEA), or use formulations with the least amount of POEA, to reduce risks to aquatic organisms in aquatic environments.</p> <p>To minimize risks to terrestrial wildlife and livestock, do not exceed the typical application rate for applications.</p> <p>Where practical, limit to spot applications in rangeland and wildlife habitat areas to avoid contamination of wildlife food items.</p>
glyphosate + 2,4-D	Campaign, Landmaster BW	See restrictions for each active ingredient.
hexazinone	Velpar ULW, Velossa, Pronone MG, others	<p>To minimize risks to terrestrial wildlife and livestock, do not exceed the typical application rate for applications.</p> <p>Where practical, limit to spot applications in rangeland and wildlife habitat areas to avoid contamination of wildlife food items.</p> <p>Do not apply with an over-the-shoulder broadcast applicator.</p> <p>Do not exceed the typical application rate when applying in known traditional use areas, and to reduce risk to occupational and public receptors.</p>
hexazinone + sulfometuron methyl	Oustar, Westar	<p>See restrictions for each active ingredient.</p> <p>Aerial application of this herbicide is prohibited on BLM lands.</p>
imazapic	Panoramic 2SL, Plateau	N/A
imazapic + glyphosate	Journey	See restrictions for glyphosate.
imazapyr	Arsenal, Chopper, Imazapyr 2SL, Polaris, others	N/A

HERBICIDE ACTIVE INGREDIENTS	TRADE NAME	ADDITIONAL RESTRICTIONS AFTER FOLLOWING MSDS AND LABEL
imazapyr + diuron	Imazuron E-Pro , Mojave 70 EG, Sahara DG, SSI Maxim Topside 2.5G	See restrictions for diuron.
imazapyr + metsulfuron methyl	Lineage Clearstand	N/A
imazapyr + sulfometuron methyl + metsulfuron methyl	Lineage HWC, Lineage Prep	See restrictions for sulfometuron methyl. Aerial application of this herbicide is prohibited on BLM lands.
metsulfuron methyl	Escort DF, Patriot, PureStand, Metsulfuron Methyl DF, others	N/A
metsulfuron methyl + chlorsulfuron	Cimarron Extra, Cimarron Plus	N/A
metsulfuron methyl + dicamba + 2,4-D	Cimarron MAX	See restrictions for dicamba and 2,4-D.
picloram	Grazon PC, Picloram K, Tordon 22K, Triumph K, others	Do not apply across large application areas, where feasible, to limit impacts to livestock, particularly through the contamination of food items.
picloram + 2,4-D	Gunslinger, Picloram + D, Grazon P+D, Trooper 101, others	See restrictions for each active ingredient.
picloram + 2,4-D + dicamba	Trooper Extra	See restrictions for each active ingredient.
sulfometuron methyl	Oust XP, SFME E-Pro 75EG, Spyder, others	Aerial application of this herbicide is prohibited on BLM lands. Minimize use in watersheds with downgradient ponds and streams if potential impacts to aquatic plants or fish are identified, particularly during periods when fish are in sensitive life stages.
sulfometuron methyl + chlorsulfuron	Landmark XP	See restrictions for sulfometuron methyl. Aerial application of this herbicide is prohibited on BLM lands.
sulfometuron methyl + metsulfuron methyl	Oust Extra	See restrictions for sulfometuron methyl. Aerial application of this herbicide is prohibited on BLM lands.
tebuthiuron	Alligare Tebuthiuron 80 WG , Spike 20P, SpraKil S-5 Granules, others	To minimize risks to terrestrial wildlife and livestock, do not exceed the typical application rate for applications. Do not exceed the typical application rate when applying in known traditional use areas, and to reduce risk to occupational and public receptors.
tebuthiuron + diuron	SpraKil SK-13 Granular, SpraKil SK-26 Granular	See restrictions for each active ingredient.
triclopyr	Element 3A, Garlon 4, Pathfinder, Remedy, Tahoe 3A, Triclopyr 3, others	To minimize risks to terrestrial wildlife and livestock, do not exceed the typical application rate for applications. Do not apply across large application areas, where feasible, to limit impacts to livestock, particularly through the contamination of food items. Do not exceed the typical application rate when applying in known traditional use areas, and to reduce risk to

HERBICIDE ACTIVE INGREDIENTS	TRADE NAME	ADDITIONAL RESTRICTIONS AFTER FOLLOWING MSDS AND LABEL
		occupational and public receptors.
triclopyr +2,4-D	Aquasweep, Candor, Crossbow, Everett	See restrictions for each active ingredient.
triclopyr + clopyralid	Prescott Herbicide, Redeem R&P, Brazen	See restrictions for triclopyr.

N3.3 Pesticide Spills and Cleanup

The following measures for pesticide spills and cleanup may be required for the TWE Project. Additional details regarding spills and cleanup are provided in the Spill Prevention and Response Plan (Appendix S).

- TransWest would address the potential of pesticide spills and cleanup during annual coordination meetings with local emergency management officials.
- TransWest would report to all appropriate land owners or agencies immediately if there are any pesticide spills, unplanned non-target pesticide applications, unusual occurrences of drift, unforeseen effects on wildlife or other resources, or any other situation that may affect public welfare. Pesticide clean-up and disposal is the responsibility of TransWest and would comply with all federal, state, and county requirements.
- In the event of an accidental release to the environment, spill cleanup procedures and documentation of the event would be implemented, including a cause analysis; appropriate corrective actions taken; and a characterization of the resulting environmental or health and safety impacts. Documentation of the event would be provided to the land management agency's authorized officer and other federal and state agencies, as required.
- Construction Contractor(s) would possess a spill kit. At a minimum the following items are suggested: shovel, 10 pounds of absorbent material (cat litter, soil, sawdust, or absorbent clay), large polyethylene bags with ties, safety goggles, rubber gloves, protective overalls, rubber boots, 5-gallon pail, respirator and cartridges suited to the chemical composition of the pesticide(s), dust pan, shop brush, portable eyewash, blank labels, first aid kit, apron, soap, water, and phone numbers of appropriate emergency personnel and CHEMTREC. At all times, the Construction Contractor(s) would maintain the spill kits where pesticide spills are most likely to occur.

N4.0 MONITORING

The purpose of TransWest's noxious weed monitoring program would be to ensure that Project areas containing identified problem weeds are progressing toward the long-term goal of appropriate vegetative cover and diversity, and that existing weed populations are not spreading to new areas as a result of Project construction. While TransWest's primary goal would be to eradicate noxious weed populations within Project areas, a secondary and likely more realistic goal would be to prevent the introduction of new weed populations and spreading of existing populations (containment).

The noxious weed monitoring program would also help TransWest assess its noxious weed management approach. In the event that large infestations occur or reoccur, an evaluation would be performed to determine what caused the infestation, and a new strategy may be implemented. Any significant shift in weed management treatment would be discussed with the appropriate agencies prior to being implemented.

Noxious weed sites that would be prioritized for monitoring include cleaning sites, access roads, staging areas, mulch and soil stockpiles, and special status plant occurrences and other sensitive sites (which are also prioritized for treatment), so that these sites can be re-treated as needed during the season.

In areas of disturbance, TransWest would conduct noxious weed monitoring as specified in the ROD, ROW grants or special use authorizations for the Project. Annual monitoring would be conducted until vegetation has successfully reestablished. General monitoring for noxious weeds would occur during routine operations and maintenance of the project facilities.

PUPs and PARs may be used for more site-specific implementation monitoring. For example, the PARs can be used to track whether the application was made at the correct time and if mitigation for sensitive wildlife concerns is included in the PUP (see Appendices A and B; BLM 2007; Forest Service Manual 2150 (USFS 2013a)).

N5.0 REFERENCES

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**ATTACHMENT A
BLM PESTICIDE USE PROPOSAL (PUP) TEMPLATE**

UNITED STATE DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
PESTICIDE USE PROPOSAL

STATE: _____

COUNTY: _____

DISTRICT: _____

DURATION OF PROPOSAL: _____

LOCATION: _____

DATE:

PROPOSAL NUMBER:

EA REFERENCE NUMBER:

DECISION RECORD (DR) NUMBER: _____

ORIGINATOR – NAME:

ORIGINATOR – COMPANY:

ORIGINATOR – CONTACT INFORMATION:

PROPOSAL PREPARER - NAME:

PROPOSAL PREPARER – COMPANY:

PROPOSAL PREPARER – CONTACT INFORMATION:

.....

I. APPLICATION INFORMATION – Including mixtures and adjuvants):

1. TRADE NAME(S):

2. COMMON NAME(S)

3. EPA REGISTRATION NUMBER(S):

4. MANUFACTURER(S):

5. METHOD OF APPLICATION:

6. MAXIMUM RATE OF APPLICATION – AS STATED IN THE EIS:

a. Pounds Active Ingredient or Acid Equivalent:

7. MAXIMUM RATE OF APPLICATION – AS STATED ON THE LABEL:

a. Formulated Product:

b. Pounds Active Ingredient or Acid Equivalent:

8. INTENDED RATE OF APPLICATION:

a. Formulated Product:

b. Pounds Active Ingredient or Acid Equivalent:

9. APPLICATION DATE(S):

10. NUMBER OF APPLICATIONS: _____

II. PEST [List specific pest(s) and reason(s) for the proposed application of the pesticide]:

III. DESIRED RESULTS OF THE APPLICATION – LINKED TO THE OBJECTIVES OF THE APPLICATION:

IV. APPLICATION SITE DESCRIPTION:

- 1. ESTIMATED NUMBER OF ACRES: _____
- 2. GENERAL DESCRIPTION (Describe land type or use, size, stage of growth of target species, soil characteristics, and any additional information that may be important in describing the area to be treated.)

V. SENSITIVE ASPECTS AND PRECAUTIONS (Describe sensitive areas – marsh, endangered, threatened, candidate, and sensitive species habitat – and distance to application site. List measures to be taken to avoid impact to these areas):

VI. NON-TARGET VEGETATION (Describe potential immediate and cumulative impacts to non-target pests in project area as a result of the pesticide application. Identify any planned mitigation measures that would be employed – BE GENERAL, SPECIFICS DISCUSSED IN THE EA):

VII. INTEGRATED PEST MANAGEMENT PRACTICES CONSIDERED IN THE OVERALL PROJECT :



VIII. SIGNATURES:

1. Pesticide Use Proposal's Originator: _____
Date: _____
 - a. Company: _____
2. Certified Pesticide Applicator: _____ Date: _____
 - a. License Number: _____
 - b. Certifying Organization: _____
3. Field Office Pesticide/Noxious Weed Coordinator:

Date: _____
4. Field Office Manager:

Date: _____
5. BLM State Pesticide Coordinator:

Date: _____

6. Deputy State Director:

_____ Date: _____

- Concur or Approved
- Not Concur or Disapproved
- Concur or Approved With Modifications
 - Any changes (modifications) to this proposal by the State Pesticide Coordinator would be listed in an attached memo to the manager requesting approval from the Deputy State Director.

**ATTACHMENT B
FOREST SERVICE PESTICIDE USE PROPOSAL (PUP)
INSTRUCTIONS AND TEMPLATE**

USDA Forest Service FS-2100-2 (date)

Instructions for Form FS-2100-2, Pesticide-Use Proposal (Forest Service 2013b)

AGENCY INFORMATION (Header)

Provide requested information.

OBJECTIVE (Block 1)

a) Project name and/or identifier – Include the local project name and/or identifying name such as the name of the relevant NEPA compliance document and date of decision. [Note—Environmental analyses (EA's and/or EIS's) may be cited within the Pesticide-Use Proposal for additional information.]

b) Specific target pest(s) – Identify target pest(s) by the common and scientific name. Also identify the life cycle stage for animals (adult, larva, etc.) or stage of growth for plants (pre-emergent, seedling, sapling, etc.) at the time of application. A table may be attached to list information for multiple targets.

c) Purpose – State exact purpose of pesticide use.

PESTICIDE PRODUCT(S) (Block 2)

a) Trade name – State the trade name(s) exactly as shown on container (e.g., Roundup Ultra, Tordon 22k, Sevin SL).

b) Formulation as purchased – State the formulation (liquid, dust, granule, pellet, emulsion, bait, solution (ready-to-use without dilution), gas, flakes, packets, etc.) of each pesticide product as purchased.

c) Restricted-use pesticide (yes/no) – Specify whether the pesticide is a restricted-use pesticide or not.

d) EPA registration number – State the EPA registration number from the pesticide label.

e) Common name of chemical(s) – State the common name (glyphosate, picloram, carbaryl, etc.) of active ingredient(s) as given on the pesticide label. When more than one pesticide active ingredient would be used during treatment of a single pest, list active ingredients separately by placing the word "and" between them to indicate the different pesticide names (e.g., aminopyralid and 2, 4-D). When alternative materials are proposed for the application, use the word "or" in listing the names.

f) AI, AE, IU, or PIB expressed as % or concentration – State the percentage (%) or concentration (lb/gal, oz/oz, etc.) of any active ingredient (AI), acid equivalent (AE), international units (IU), or polyhedral inclusion bodies (PIB) as shown on the pesticide label. For herbicides, report as acid equivalent rather than active ingredient when available. IU may be expressed as billion international units/gal for bacteria, and PIB may be expressed as billion polyhedral inclusion bodies/oz for viruses, as appropriate.

TYPE OF APPLICATION (Block 3)

a) Method – Indicate the specific method of application to be used (aerial, ground, aquatic, etc.).

b) Equipment – Indicate the specific type of equipment to be used such as backpack sprayer, helicopter, fixed-wing aircraft, mist blower, hydraulic sprayer, injector, packets, etc.

FIELD APPLICATION INFORMATION (Block 4)

a) Formulation of material to be applied – Indicate the pesticide material to be applied in the field (spray liquid, pellets, granules, dust, bait, gas, flakes, packets, etc.).

b) Planned application rate – Indicate the amount of liquid or dry material to be applied on a per unit area basis (gal/acre, lbs/acre, oz/1,000 ft², etc.). In general, calibration of liquid sprayers requires determination of the application rate in gallons per acre (GPA).

c) Dilution rate – Indicate the pesticide concentration to be applied in the field as the amount of concentrate to be mixed with a specified amount of diluent (e.g., 1 qt. Tordon 22K/25 gallons of total mix).

d) Diluent – Identify the material (water, oil, talc, etc.) that would be used to reduce the concentration of a pesticide formulation at the time of application.

e) Pounds of AI or AE per acre (or other applicable rate) – State the pounds of active ingredient (AI) or acid equivalent (AE) (specify which) to be applied on a per acre basis, unless some other unit is indicated on the label. If reporting acreage is not appropriate, indicate units used. If a pesticide for trees or brush is to be applied by aircraft or mist blower, express as pounds of AI or AE per acre. For outdoor spot applications, the rate of application should also be expressed in pounds of AI or AE per acre. For pesticide treatment of individual trees, the application rate for AI or AE is described as number of trees and rate per tree (or an equivalent measure).

Indoor applications of residual sprays may be expressed as gallons per 1,000 square feet (at whatever percent AI in the prepared spray) or simply as pounds AI per 1,000 square feet. For spraying pesticide on most indoor surfaces to the point of runoff, assume the rate to be 1 gallon of formulation per 1,000 square feet. If a dust is being used, express as ounces or pounds of AI in prepared dust per M (1,000) square feet. The AI rate of application for fumigants or indoor aerosols is expressed as pounds AI per M (1,000) cubic feet. Rodent baits should be given as ounces or pounds of AI in the prepared bait per bait station.

The rate of application of AI for pesticide treatments in water may be expressed in parts per million (ppm) or parts per billion (ppb). Specify whether ppm or ppb is by weight or volume.

f) Other pesticides being applied to proposed treatment site(s) – Indicate other pesticides currently being applied or would be applied to the same site(s) proposed for treatment within the same year (e.g., ongoing carbaryl treatment of trees in the same campground where invasive plants would be treated; pesticides applied under other Pesticide-Use Proposals within the same treatment area).

TREATMENT AREA DESCRIPTION (Block 5)

a) Targeted treatment area – Specify area(s) to be treated (wilderness area, stretch of river, grazing allotment, etc.).

b) State and county – Indicate State(s), county(ies), and any other geographic jurisdictions involved with the area(s) to be treated.

c) Site description – Provide information on the type of area (rangeland, tree nursery, etc.) to be treated and any specific parts or portions of the area that would be treated such as ditch banks, rights-of-way, etc. When applicable, specify whether the pesticide would be applied directly to water or near the water's edge (e.g., riparian area). State the distance to nearest surface water (lakes, streams, etc.) or wetland. Where applicable, indicate the general slope of the treated area(s). For aquatic applications, indicate water quality (hardness and pH) of treated water body if available or applicable.

d) Estimate of acres (or other unit) to be treated – Provide an estimate for acres to be treated, unless other units are otherwise applicable. When projects require repeat applications, estimate only those acres to be treated in the first application.

e) Number of applications – For projects that would require repeat applications within the same area, provide an estimate of the number of treatments that would be used per season.

f) Month(s) and year(s) of application – Indicate the month(s) and year(s) that applications are planned. If necessary, provide general season of treatment (e.g., spring, summer, or fall) or an estimate of the range of years for treatment (e.g., 2011 through 2019).

SENSITIVE AREAS (Block 6)

a) Special designated area (if applicable) – Identify any wilderness area, Research Natural Area (RNA), botanical area, or other similar designated area that is in proximity to areas to be treated.

Describe specific precautionary measures that would be taken to protect identified special designated area (e.g., no pesticide application with mechanical ground equipment inside wilderness area).

b) Areas to be avoided – Identify specific areas to be protected from direct application, drift, or runoff (waterbodies, private property, T&E species habitat, etc.). Describe specific precautionary measures that would be taken to avoid presence of pesticide in identified area (e.g., no application within 100 feet of stream).

c) Areas to be treated with caution – Identify sensitive areas (riparian areas, areas with a shallow water table, T&E species habitat, etc.) that require special precautions during treatment to avoid undue impacts or contamination. Describe specific precautionary measures that would be taken to protect identified area (e.g., use of pesticides with an aquatic label in riparian areas).

PROJECT IMPLEMENTATION (Block 7)

a) Trained/certified personnel to be used – Provide information regarding personnel who would be performing the actual pesticide work. Applicators and personnel serving as supervisors must be trained in the proper application of pesticides. Personnel handling or applying a restricted-use pesticide must be state or Federally certified for restricted-use pesticide operations.

b) Personal safety – State any restricted entry interval (REI) required by the pesticide label following application. If additional personal protection equipment other than what is on the label is proposed, please describe.

c) State and local coordination – Indicate any coordination at the State or local level that would be made for the project.

d) Best management practices – Describe or reference the best management practices that would be followed for pesticide application such as lowest effective application rate, equipment calibration, field scouting/monitoring before pesticide application, buffer zones, and weather restrictions (wind speed limit, inversion avoidance, etc.).

e) Monitoring – Describe monitoring required for treatment effectiveness and any other monitoring that would be conducted.

f) Additional project information – Describe other information pertinent to the project that is not addressed in sections above (e.g., information as to whether the project would be conducted by force account or through a contract).

REVIEWER(S) (Block 8)

a) Pesticide use coordinator – A pesticide use coordinator’s signature at the district, forest, or regional level (as appropriate) is required before final approval.

b) Other reviewers (as necessary) – Include any necessary signature(s) of specialists in pertinent programs such as biologists, entomologists, agronomists, wilderness program managers, or Research Natural Area (RNA) program managers that are required before final approval.

APPROVAL (signature of approving official) (Block 9)

SIGNATURE OF APPROVING LINE OFFICER WITH DELEGATED SIGNING AUTHORITY

PESTICIDE-USE PROPOSAL (REFERENCE FSM 2150) (FOREST SERVICE 2013C)				
TO COMPLETE THIS FORM, SEE INSTRUCTIONS FOR FORM FS-2100-2, PESTICIDE-USE PROPOSAL				
AGENCY/ COOPERATOR	CONTACT NAME, PHONE NUMBER, AND E-MAIL	REGION	FOREST/ DISTRICT	DATE SUBMITTED
1) OBJECTIVE A) PROJECT NAME AND/OR IDENTIFIER B) SPECIFIC TARGET PEST(S) C) PURPOSE		A) B) C)		
2) PESTICIDE PRODUCT(S) A) TRADE NAME B) FORMULATION AS PURCHASED C) RESTRICTED-USE PESTICIDE (YES/NO) D) EPA REGISTRATION NUMBER E) COMMON NAME OF CHEMICAL(S) F) AI, AE, IU, OR PIB EXPRESSED AS % OR CONCENTRATION		A) B) C) D) E) F)		
3) TYPE OF APPLICATION A) METHOD B) EQUIPMENT		A) B)		
4) FIELD APPLICATION INFORMATION A) FORMULATION OF MATERIAL TO BE APPLIED B) PLANNED APPLICATION RATE C) DILUTION RATE D) DILUENT E) POUNDS OF AI OR AE PER ACRE (OR OTHER APPLICABLE RATE) F) OTHER PESTICIDES BEING APPLIED TO PROPOSED TREATMENT SITE(S)		A) B) C) D) E) F)		
5) TREATMENT AREA DESCRIPTION A) TARGETED TREATMENT AREA B) STATE AND COUNTY C) SITE DESCRIPTION D) ESTIMATE OF ACRES (OR OTHER UNIT) TO BE TREATED E) NUMBER OF APPLICATIONS F) MONTH(S) AND YEAR(S) OF APPLICATION		A) B) C) D) E) F)		
6) SENSITIVE AREAS A) SPECIAL DESIGNATED AREA (IF APPLICABLE) B) AREAS TO BE AVOIDED		A) B) C)		

<p>C) AREAS TO BE TREATED WITH CAUTION</p>	
<p>7) PROJECT IMPLEMENTATION A) TRAINED/CERTIFIED PERSONNEL TO BE USED B) PERSONAL SAFETY C) STATE AND LOCAL COORDINATION D) BEST MANAGEMENT PRACTICES E) MONITORING F) ADDITIONAL PROJECT INFORMATION</p>	<p>A) B) C) D) E) F)</p>
<p>8) REVIEWER(S) SIGNATURE(S) A) PESTICIDE USE COORDINATOR DATE: B) OTHER REVIEWER(S) (AS NECESSARY) DATE:</p>	
<p>9) APPROVAL (SIGNATURE OF APPROVING OFFICIAL) DATE:</p>	