

**NOXIOUS WEED MANAGEMENT PLAN  
FOR THE DOLORES CANYON SOLAR PROJECT  
DOLORES COUNTY, COLORADO**

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**&**

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## **1.0 INTRODUCTION**

JSI Construction Group LLC (Company) is developing a utility-scale photovoltaic (PV) solar energy facility (Project) within the Dolores Canyon Solar Study Area (referred to in this report as “Study Area” or “Dolores Canyon”). The Study Area is located in Dolores County, Colorado and consists of approximately 1,762 acres (ac: 713 hectares [ha]; Figure 1). At the request of the Company, Western EcoSystems Technology, Inc. (WEST) has prepared the following Noxious Weed Management Plan (Plan). The purpose of this Plan is to provide guidance for controlling noxious weeds during construction and operation of the Project and to ensure compliance with state and county regulations.

### **1.1 Study Area Location and Description**

The Project will be developed entirely on private lands located approximately 8 miles (mi; 13 kilometers [km]) southeast of Dove Creek in west-central Dolores County, Colorado (Figure 1). The Project is located at the convergence of two ecoregions, the Colorado Plateau and Southern Rockies ecoregions (U.S. Environmental Protection Agency 2016). Topography across the Study Area consists of rolling hills with gentle valleys with elevations ranging from 7,020 feet (ft; 2,140 meters [m]) in the southern portion to 7,380 ft (2,249 m) in the far eastern portion. The Study Area drains to the south and includes several unnamed, ephemeral drainages and stock ponds. It is predominantly composed of agricultural fields (e.g., winter wheat and hay), but includes some pinyon and juniper woodland with interspersed oak, and small patches of big sagebrush.

## **2.0 NOXIOUS WEED REGULATIONS**

### **2.1 State of Colorado**

The Colorado Noxious Weed Act (CNWA; Colorado Revised Statutes [CRS] Title 35, Article 5.5) is administered by the Colorado Department of Agriculture (CDA). The Commissioner of the CDA makes the Rules Pertaining to the Administration and Enforcement of the CNWA (Rules) based on recommendations from the State Weed Coordinator and the State Noxious Weed Committee. The Rules prioritize management of noxious weed species at a state and county level by species designation.

The CDA designate four categories of noxious weeds (Appendix A):

- List A - species that must be managed for eradication with the goal of elimination from the state. It is considered a violation of the Rules to allow any List A plant to produce seed or develop other reproductive propagules (CDA 2020).
- List B - species for which the Commissioner develops and implements state noxious weed management plans with the intent of stopping their spread. The plans include county containment maps depicting areas designated for eradication and suppression. Species designated for suppression must be stopped from spreading onto adjacent properties;

species designated for elimination must not be allowed to produce seed or develop other reproductive propagules after the time specified in the state management plan for elimination. The Commissioner updates state noxious weed management plans for List B species based on information reported annually.

- List C - species are widespread and common within the state. They are recommended for management, but management is not required by law and is left to the governing entity's discretion.
- Watch List - species that pose a potential threat to the agricultural productivity and environmental values of the lands of the state; identification and reporting of these species are encouraged by the CDA.

A noxious weed species list designation is based on reported occurrence throughout the state, invasion potential, and associated risks. The CNWA (CRS 35-5.5-102) describes four management strategies relating to noxious weed species, including:

- Eradication – Permanently eliminating the species, populations, and seed bank within a specified period of time. Eradication is a management strategy selected in largely uninfested areas, and is intended to reduce the reproductive success of a noxious weed species to zero.
- Elimination – The removal or destruction of all growing plants within a population of List A or List B species that has been designated for Eradication by the Commissioner. Elimination focuses on aboveground weed control and is the first step in achieving Eradication. Following successful Elimination of growing plants, efforts focus on detecting and destroying newly emerged plants arising from seed, reproductive propagule, or remaining root stock.
- Containment – Maintaining a buffer zone (i.e., containment area, List B) that separates infested regions (where Suppression is the management strategy) from largely uninfested regions (where Eradication is the management strategy).
- Suppression – Reducing the vigor of noxious weed populations within an infested region, decreasing the spread of noxious weed species, and mitigating the negative effects of noxious weed populations on infested lands.

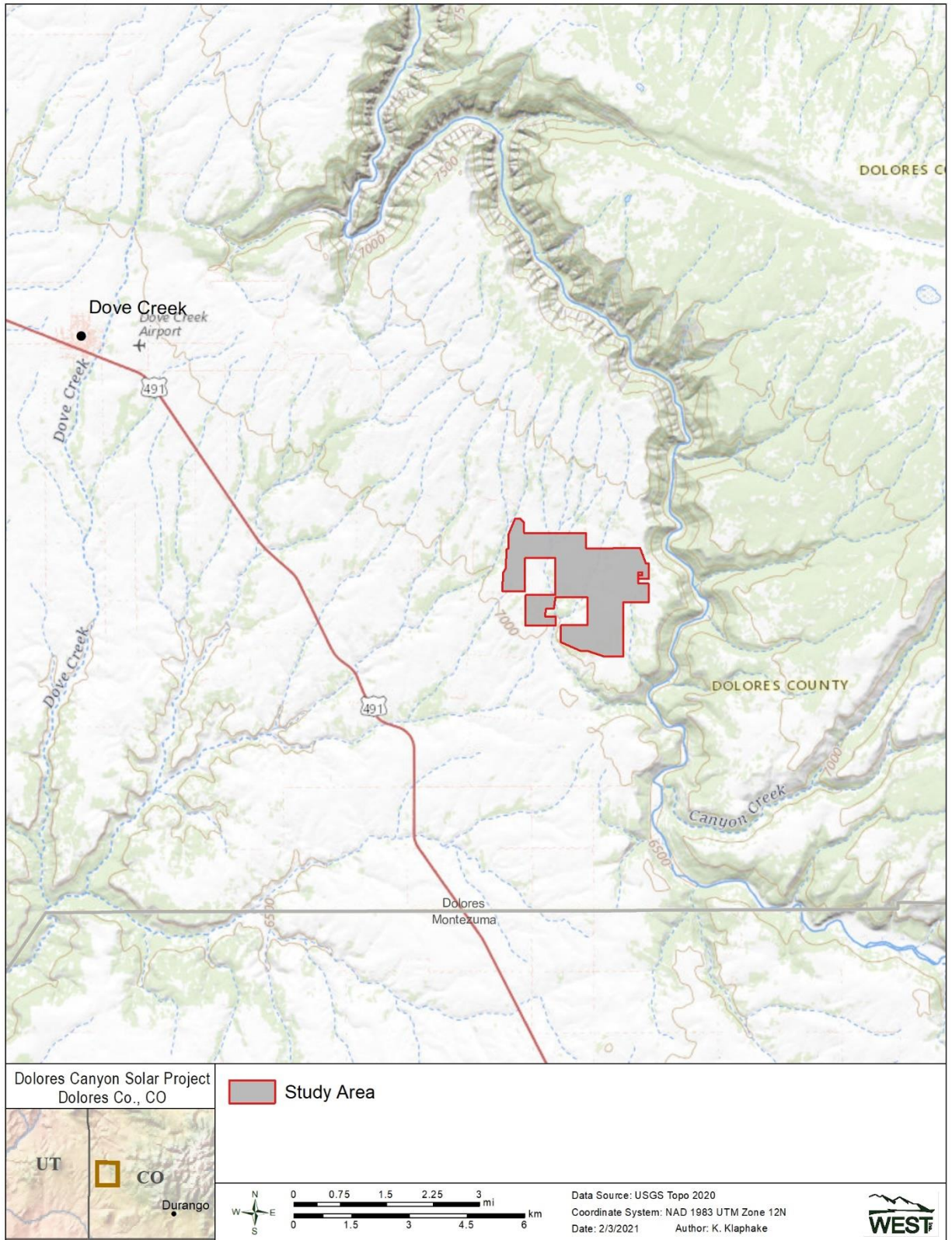
The CDA will provide technical support, including the most cost-effective techniques for eradication, to local governing bodies and affected landowners regarding the eradication of List A species and List B species designated for eradication. Coordination for management of noxious weeds in Colorado is conducted at the county level.

## **2.2 Dolores County**

Management and control of noxious weeds in Dolores County is coordinated through the Dove Creek Mandatory Weed Control District (District), located in Dove Creek, Colorado. The District

will provide guidance to landowners in Dolores County for noxious weed control. Per the District, if they receive a complaint or if one of their agents observes an area of uncontrolled noxious weeds, they will send a Control Notice to the landowner of the property. The landowner will then have 10 days to eliminate the problem weeds. If no action is taken by the landowner within the 10 day period, the District will then use herbicides to control the problem weeds and subsequently submit a bill to the landowner. Although the District manages and provides guidance for all CDA listed weed species, they have identified a number of species as their primary focus. The District targeted noxious weed species and corresponding CDA listing include:

- Canada thistle (*Cirsium arvense*; CDA List B)
- musk thistle (*Carduus nutans*; CDA List B)
- scotch thistle (*Onopordium acanthium*; CDA List B)
- bull thistle (*Cirsium vulgare*; CDA List B)
- leafy spurge (*Euphorbia esula*; CDA List B)
- diffuse knapweed (*Centaurea diffusa*; CDA List B)
- field bindweed (*Convolvulus arvensis*; CDA List C)
- mouse-ear chickweed (*Cerastium fontanum* ssp. *vulgare*; No CDA listing)
- yellow starthistle (*Centaurea solstitialis*; CDA List A)
- white top ([hoary cress] *Cardaria draba*; CDA List B)
- western whirled milkweed ([horsetail milkweed] *Asclepias subverticillata*; No CDA listing)
- halogeton (*Halogeton glomeratus*; CDA List C)
- Russian knapweed (*Acroptilon repens*; CDA List B)
- spotted knapweed (*Centaurea maculosa*; CDA List B)
- poverty weed (*Iva axillaris*; No CDA listing)
- dalmation toadflax (*Linaria dalmatica*; CDA List B)
- jointed goatgrass (*Aegilops cylindrica*; CDA List B)
- houndstongue (*Cynoglossum officinale*; CDA List B)
- Dyer's woad (*Isatis tinctoria*; CDA List A)
- oxeye daisy (*Chrysanthemum leucanthemum*; CDA List B)



**Figure 1. Location of the Dolores Canyon Solar Study Area, Dolores County, Colorado.**



### 3.0 NOXIOUS WEEDS ENCOUNTERED IN THE STUDY AREA

#### 3.1 Methods

Although a baseline noxious weed inventory was not conducted for the Study Area, a list of plant species encountered was maintained by WEST during two site visits to the Study Area in 2020 to document aquatic resources, vegetation communities, and wildlife habitats. The first visit extended from June 23-24 and the second visit from November 16-18. During the two site visits, WEST ecologists walked throughout the Study Area to document the above resources and recorded plant species encountered, including noxious weed species. Population estimates and locations of noxious weed species were not recorded but no large infestations were encountered. The *Flora of Colorado* (Ackerfield 2015) was the primary authority used for plant species identification.

#### 3.2 Results

No CDA List A noxious weed species were encountered within the Study Area. Six List B weed species were encountered, including Canada thistle, dalmation toadflax, Russian knapweed, musk thistle, jointed goatgrass, and salt cedar (*Tamarix chinensis*) (Table 1). All but one of the List B species (salt cedar) are also on the District targeted list (Table 1). Three CDA List C weed species were detected, including redstem filaree (*Erodium cicutarium*), common mullein (*Verbascum thapsus*), and cheatgrass (*Bromus tectorum*). None of the List C weed species is on the District list. No CDA Watch List noxious weed species were observed within the Study Area.

As previously mentioned, no mapping of noxious weeds was conducted; however, noxious weeds observed within the Study Area were typically located near impoundments, along margins of crop fields, and within other generally disturbed areas. Representative photographs of the Study Area are provided in Appendix B.

**Table 1. Noxious weed species encountered within the Dolores Canyon Solar Study Area.**

Common Name	Scientific Name	CDA Classification	District List (yes/no)
Canada thistle	<i>Cirsium arvense</i>	List B	Yes
dalmation toadflax	<i>Linaria dalmatica</i>	List B	Yes
Russian knapweed	<i>Acroptilon repens</i>	List B	Yes
musk thistle	<i>Carduus nutans</i>	List B	Yes
jointed goatgrass	<i>Aegilops cylindrica</i>	List B	Yes
salt cedar	<i>Tamarix chinensis</i>	List B	No
cheatgrass	<i>Bromus tectorum</i>	List C	No
common mullein	<i>Verbascum thapsus</i>	List C	No
redstem filaree	<i>Erodium cicutarium</i>	List C	No

CDA = Colorado Department of Agriculture

District = Dove Creek Mandatory Weed Control District (Dolores County)

## **4.0 GUIDANCE FOR CONTROLLING NOXIOUS WEEDS**

The intent of this management plan is to assist the Company in controlling noxious weeds within the Study Area while complying with state and county noxious weed management regulations. The primary objectives of the plan are to detect and control any new noxious weed infestations in the Study Area and to contain the spread of existing noxious weed populations on site during the operation of the project.

### **4.1 Priority Species**

Generally, all CDA List B and District listed weed species are considered priority species within the Study Area. However, priority should be given to such species that occur within or near areas that will be impacted by the project, as the populations in these areas will have the greatest potential for spread and/or expansion.

### **4.2 Recommended Management Techniques**

A summary of CDA recommended control methods (CDA 2019) for the CDA List B and District listed noxious weed species observed within the Study Area are provided in the following section. A single management technique may be effective in some cases, but an integrated management approach is sometimes required for successful weed control. The CDA recommendations listed below are not project specific. Application rates for chemical treatments are not provided, but can be found on the CDA website (<https://ag.colorado.gov/conservation/noxious-weeds/species-id>) or through District coordination. It is recommended that proposed weed control measures to be used for the Project be coordinated with the District. Management techniques are not provided for the three CDA List C noxious weed species as they are not targeted by the District and no large infestations were observed.

#### *4.2.1 Canada thistle*

Canada thistle is one of the most problematic noxious weeds in the U.S. (CDA 2019). It is a deep-rooted perennial that can reproduce by seed and by its extensive underground root system (rhizomes). An individual plant can produce up to 1,500 seeds that can remain viable in the soil for up to 20 years. It often forms dense patches that crowd out other vegetation. Its reproductive capabilities make Canada thistle extremely difficult to control, and eradication is often not a viable option for large infestations.

CDA identifies biological and mechanical control methods for Canada thistle. Such methods would not be recommended for the Project because they are labor-intensive and better suited for large infestations, which are not present in the Study Area. Additionally, biological and mechanical control methods can stimulate root activity and often require chemical treatments as well. CDA recommends the following herbicides for Canada thistle control: Milestone – applied in the spring at the pre-bud growth stage until flowering, and/or to fall regrowth; Prescott, Redeem (and others) – applied until flowering and/or to fall regrowth; Perspective – applied to spring rosettes until flower bud growth stage.

#### *4.2.2 Dalmation toadflax*

Dalmation toadflax is a perennial herb that reproduces by seed and by extensive, creeping rhizomes. Each plant can produce 500,000 seeds that can remain viable in the soil for at least 10 years. Seeds are typically distributed within 1 to 2 feet (less than 1 m) from the plant.

CDA recommends integrating a variety of management strategies for control or eradication of dalmation toadflax. Seeding competitive grasses in conjunction with herbicide treatment can be an effective management tool. Several biological control methods exist for dalmation toadflax and have been shown to be effective, including a predatory moth that feeds on leaves and flowers. For smaller infestations, hand-pulling of dalmation toadflax over a 5-6 year period can be effective. The site must be monitored in subsequent years to remove seedlings from dormant seeds. Several herbicides, including Perspective, Tordon/Picloram 22K, Telar, Plateau and Panoramic, are recommended for dalmation toadflax control. These are typically applied when flowering in the spring or for fall regrowth. Perspective and Tordon/Picloram 22K should not be used near desirable trees and shrubs.

#### *4.2.3 Musk thistle*

Musk thistle is a tap-rooted biennial that reproduces solely by seed and produces rosettes in the first year. Rosettes form in early spring and plants bolt from March through May. An individual plant can produce up to 20,000 seeds that can remain viable for up to 10 years.

Since musk thistle is a poor competitor, maintaining and/or restoring a combination of forbs and cool and warm season grasses can be an effective management technique. There is one species of weevil recommended in Colorado for musk thistle control, but because of the scattered distribution of musk thistle within the Study Area biological control is not recommended. For infestations less than 0.5 acre, tilling, hoeing, and digging can be effective in removal of musk thistle, but consideration should be given to the surrounding ecology and site condition. CDA recommends four herbicides for musk thistle control, including Milestone, Telar, Transline, and Perspective, all of which can be applied from the spring rosette to early bolting growth stages, or in the fall to rosettes. Perspective is not recommended for use around desirable trees and shrubs.

#### *4.2.4 Russian knapweed*

Russian knapweed is a deep-rooted perennial that spreads primarily by aggressive, creeping rhizomes. It emerges in early spring, flowers from June to August, and subsequently sets seed from late summer to early fall. Its seeds can remain viable in the soil for up to three years.

CDA recommends an integrated management approach for control of Russian knapweed. Repeated mowing before the plant bolts can force it to use up stored nutrient reserves in the roots, but will require an herbicide application as well. Although tilling and disking can create resprouting root segments, repeated deep tilling (1 feet) over 3 years can kill the majority of the root system (CDA 2019). CDA recommends two herbicides, Milestone and Perspective, for Russian knapweed control. The herbicides should be applied in the fall when the stems die back and the plant is translocating nutrients to its roots. Both herbicides can also be applied during the

bud to senescence stages and in the spring during early bolt. Perspective is not recommended for use around desirable trees and shrubs.

#### *4.2.5 Jointed goatgrass*

Jointed goatgrass is a winter annual grass that emerges in late summer or fall and remains active through the winter. Its seeds can remain viable for up to nine years (CDA 2019).

Cultural, biological, and mechanical control methods for jointed goatgrass can be labor-intensive and have limited effectiveness (CDA 2019). Two non-selective herbicides, Roundup (and other Glyphosates) and Journey, can be used before spikelets begin to emerge from the boot, which is typically from late winter to early spring. Plateau and Panoramic can be effective when applied pre-emergence (late summer or fall) or early post-emergence (late winter). Perspective can be applied from the seedling to the bolting stage but should not be used around desirable trees and shrubs application.

#### *4.2.6 Salt cedar*

Salt cedar is a dense-growing shrub or tree that occurs along streams and lake shores. Salt cedars are aggressive plants that consume large amounts of water and are considered to be allelopathic, secreting high concentrations of salt into the soil to prevent other species from establishing. They reproduce by seed and root sprouts, but salt cedars can also resprout after mechanical cutting.

The CDA identifies cultural, biological, mechanical and chemical control methods for salt cedar. Loppers and/or chainsaws can be used to cut the stems slightly above the soil surface and herbicides can then be applied immediately after cutting. This method is referred to as the cut-stump treatment and can be very effective as long as the herbicide is applied immediately after cutting the stump in the summer through the fall. Appropriate herbicides for cut-stump treatments include Garlon 4, Remedy, and Rodeo. Broadcast foliar applications with Garlon 4, Remedy, or Milestone can also be used to control salt cedar. Broadcast treatments should be applied while the plant is actively growing, from May to September.

### **4.3 Revegetation Recommendations**

#### *4.3.1 Seeding Techniques*

The success of any seeding method is largely dependent on soil temperature and soil moisture. In Colorado, successful seeding periods for cool and warm season species include early to late spring, early summer, and late fall (CPW 2020).

#### Drill Seeding

The Company has indicated that drill seeding is their preferred seeding technique. Drill seeding has also been recommended by the local (Cortez, CO) NRCS District Conservationist (pers comm. Joel Lee). The NRCS recommends drill seeding between November and March in the

region. Benefits of drill seeding include proven high revegetation rates, good control of seeding depths and rates, and high seed to soil contact (CPW 1995). Drill seeding is not recommended for slopes greater than 3:1 and for extremely rocky areas. Drill seeding also results in having rows of vegetation, which can persist for years and create a greater potential for competition between emerging seeds within rows (USDOT 2017; CPW 1995).

### Broadcast Seeding

Broadcast seeding is often the least expensive method of seeding. Seedbed preparation is key to successful broadcast seeding. Harrowing/raking of the soil is critical both before and after seeding to create good seed to soil contact and to achieve appropriate seeding depths (CPW 1995). Broadcast seeding can be used on steep slopes, rocky areas, and inaccessible areas. Broadcast seeding typically requires double to triple the seeding rate of drill seeding (USDOT 2017; CPW 1995).

### Hydroseeding

The main benefits of hydroseeding are the ease of application and the ability to reach areas that may be inaccessible to drill seeding. To maximize good germination, it is recommended to apply seeds during the initial pass over the site and cover with hydromulch on a second pass. Hydroseeding in the fall increases establishment rates, as over-wintered seeds will be ready to germinate on the first warm days of late winter or early spring (USDOT 2017). Hydroseeding results can be less satisfactory than broadcast and drill seeding because the hydroseeding slurry provides a diminished seed to soil contact, and thus lower seed germination. According to Colorado Parks and Wildlife (1995), hydroseeding in areas receiving less than 20 in (51 cm) of annual precipitation is not recommended. The Study Area receives approximately 14 in (36 cm) of annual precipitation (US Climate Data 2021).

#### *4.3.2 Seed Mix*

Table 2 includes native and introduced species identified by the local NRCS as suitable for potential inclusion in the seed mix for the site. Based on their knowledge of regional climatic trends and seeding successes, the majority of recommended species are cool seasons, which are able to take advantage of spring soil moisture. Although there are several warm season grasses native to the region, they tend to not re-establish well because of long-term summer drought (pers comm. Joel Lee). Care should be given in the use of introduced species, particularly smooth brome, as they can outcompete native grasses and often form monospecific stands. Additionally, native grasses often provide more palatable and nutritious forage for wildlife and livestock. Although only a handful of native forbs are included on the list, they are considered important for wildlife and pollinator species. Additional forbs suitable for seeding can be provided by WEST on request, or consult with a local seed supplier for further recommendations.

**Table 2. Native and introduced species recommended for potential inclusion in the Dolores Canyon Solar Project seed mix.**

<b>Common Name</b>	<b>Scientific Name</b>	<b>Cool/Warm Season<sup>1</sup></b>	<b>PLS<sup>2</sup> Pounds/Acre<sup>3</sup></b>
Native			
western wheatgrass	<i>Pascopyrum smithii</i>	cool	8.0
slender wheatgrass	<i>Elymus trachycaulus</i>	cool	6.0
thickspike wheatgrass	<i>Elymus lanceolatus</i>	cool	6-8
bluebunch wheatgrass	<i>Pseudoregneria spicata</i>	cool	7.0
blue grama	<i>Bouteloua gracilis</i>	warm	5.0
Indian ricegrass	<i>Achnatherum hymenoides</i>	cool	8.0
Sandberg bluegrass	<i>Poa secunda</i>	cool	0.10
Lewis flax	<i>Linum lewisii</i>	cool	2.5
sulfur buckwheat	<i>Eriogonum umbellatum</i>	warm	n/a
prairie coneflower	<i>Ratibida columnifera</i>	warm	2.0
Eaton’s penstemon	<i>Pestemon eatonii</i>	cool	1.5
fourwing saltbush	<i>Atriplex canescens</i>	cool	0.25-0.50
big sagebrush	<i>Artemisia tridentata</i>	cool	0.2-0.5
Introduced			
intermediate wheatgrass	<i>Thinopyrum intermedium</i>	cool	8.0
Russian wildrye	<i>Psathyrostachys junceus</i>	cool	4.0
crested wheatgrass	<i>Agropyron cristatum</i>	cool	5-7
smooth brome	<i>Bromus inermis</i>	cool	6
alfalfa	<i>Medicago sativa</i>	cool	10.0
sanfoin	<i>Onobrychis viciaefolia</i>	cool	5.0

<sup>1</sup>Cool/warm season refers to the time of year that a species typically experiences optimal growth; spring/early summer for cool season species and mid/late summer for warm season species.

<sup>2</sup>PLS represents the percentage of the gross seed weight that is composed of viable seed.

<sup>3</sup>Seeding rates were taken from NRCS fact sheets and are not necessarily appropriate for the project site. Consult with local seed supplier for more appropriate seeding rates for the project.

#### **4.4 General Weed Management Practices**

Prevention measures can be one of the most cost-effective and ecologically viable methods for invasive plant species control. The Company is committed to noxious weed control within the Study Area. To achieve this goal, it is necessary to promote and establish a growing environment that encourages a healthy native plant community while preventing the introduction of new noxious weeds and containing the spread of existing weeds on site. In this effort, the Company will implement all or a combination of the following best management practices during all phases of construction and reclamation:

- Minimize ground disturbance and revegetate as much disturbed area as possible
- (At a minimum) treat/control noxious weed infestations within and adjacent to areas that will be impacted during construction
- Develop a weed-resistant seed mix by using a combination of native grasses and forbs; incorporate pollinator plant species
- Use certified weed-free mulch

- Wash construction equipment before entering Dolores County; Maintain portable wash stations for vehicles and equipment; strategically place them at staging areas or designated entrance/exit locations
- Salvage topsoil only for locations dominated by native vegetation; avoid known noxious weed infestation areas when salvaging topsoil
- Store salvaged topsoil in a manner to discourage weed establishment
- Train on-site staff during project operation to help identify CDA List A, List B, and District listed noxious weed species for successful long-term vegetation management

#### **4.5 Post-construction Noxious Weed Monitoring**

Post-construction monitoring completes the project cycle by providing insight on pre-construction noxious weed control efforts. Monitoring for up to 3 years post-construction is recommended for all areas adjacent to and within areas impacted by project construction. Annual monitoring may require two site visits to capture noxious weed species in rosette and bolting stages (spring/early summer) and during fall regrowth (late August/early September). A memorandum reporting the results of the monitoring and providing management recommendations would be prepared after the annual monitoring is completed. The first year of post-construction monitoring should be conducted by a professional botanist, but depending on the first year results, subsequent monitoring could potentially be performed by trained, on-site staff. Per CDA requirements, noxious weed management will have to occur through the lifetime of the project.

## **5.0 DISCUSSION**

Per CDA and District guidance, priority should be given to any CDA List A, List B, or District listed noxious weed species identified within the Study Area. Habitats containing such species that are located adjacent to and within areas that will be impacted by construction should receive the highest priority, as these areas will have the greatest potential for spread and/or expansion of noxious weed populations. Local staff at the District and NRCS have expressed (and demonstrated) their willingness to provide guidance, and coordination with them is recommended.

## **6.0 REFERENCES**

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**Appendix A: Colorado Noxious Weed List (Effective June 2020)**

## **Colorado List A Noxious Weed Species**

<b><u>Common</u></b>	<b><u>Scientific</u></b>
African rue	( <i>Peganum harmala</i> )
Bohemian knotweed	( <i>Fallopia x bohemicum</i> )
Camelthorn	( <i>Alhagi maurorum</i> )
Common crupina	( <i>Crupina vulgaris</i> )
Cypress spurge	( <i>Euphorbia cyparissias</i> )
Dyer's woad	( <i>Isatis tinctoria</i> )
Elongated mustard	( <i>Brassica elongata</i> )
Flowering rush	( <i>Butomus umbellatus</i> )
Giant knotweed	( <i>Fallopia sachalinensis</i> )
Giant reed	( <i>Arundo donax</i> )
Giant salvinia	( <i>Salvinia molesta</i> )
Hairy willow-herb	( <i>Epilobium hirsutum</i> )
Hydrilla	( <i>Hydrilla verticillata</i> )
Japanese knotweed	( <i>Fallopia japonica</i> )
Meadow knapweed	( <i>Centaurea x moncktonii</i> )
Mediterranean sage	( <i>Salvia aethiopsis</i> )
Medusahead	( <i>Taeniatherum caput-medusae</i> )
Myrtle spurge	( <i>Euphorbia myrsinites</i> )
Orange hawkweed	( <i>Hieracium aurantiacum</i> )
Parrotfeather	( <i>Myriophyllum aquaticum</i> )
Purple loosestrife	( <i>Lythrum salicaria</i> )
Rush skeletonweed	( <i>Chondrilla juncea</i> )
Squarrose knapweed	( <i>Centaurea virgata</i> )
Tansy ragwort	( <i>Senecio jacobaea</i> )
Yellow starthistle	( <i>Centaurea solstitialis</i> )

## **Colorado List B Noxious Weed Species**

<b><u>Common</u></b>	<b><u>Scientific</u></b>
Absinth wormwood	( <i>Artemisia absinthium</i> )
Black henbane	( <i>Hyoscyamus niger</i> )
Bouncingbet	( <i>Saponaria officinalis</i> )
Bull thistle	( <i>Cirsium vulgare</i> )
Canada thistle	( <i>Cirsium arvense</i> )
Chinese clematis	( <i>Clematis orientalis</i> )
Common tansy	( <i>Tanacetum vulgare</i> )
Common teasel	( <i>Dipsacus fullonum</i> )
Cutleaf teasel	( <i>Dipsacus laciniatus</i> )
Dalmatian toadflax, broad-leaved	( <i>Linaria dalmatica</i> )
Dalmatian toadflax, narrow-leaved	( <i>Linaria genistifolia</i> )
Dame's rocket	( <i>Hesperis matronalis</i> )
Diffuse knapweed	( <i>Centaurea diffusa</i> )
Eurasian watermilfoil	( <i>Myriophyllum spicatum</i> )
Hoary cress	( <i>Cardaria draba</i> )
Houndstongue	( <i>Cynoglossum officinale</i> )

### **Colorado List B Noxious Weed Species Continued**

<b><u>Common</u></b>	<b><u>Scientific</u></b>
Jointed goatgrass	( <i>Aegilops cylindrica</i> )
Leafy spurge	( <i>Euphorbia esula</i> )
Mayweed chamomile	( <i>Anthemis cotula</i> )
Moth mullein	( <i>Verbascum blattaria</i> )
Musk thistle	( <i>Carduus nutans</i> )
Oxeye daisy	( <i>Leucanthemum vulgare</i> )
Perennial pepperweed	( <i>Lepidium latifolium</i> )
Plumeless thistle	( <i>Carduus acanthoides</i> )
Russian knapweed	( <i>Rhaponticum repens</i> )
Russian-olive	( <i>Elaeagnus angustifolia</i> )
Salt cedar	( <i>Tamarix. ramosissima</i> )
Salt cedar	( <i>T. chinensis</i> )
Scentless chamomile	( <i>Tripleurospermum inodorum</i> )
Scotch thistle	( <i>Onopordum acanthium</i> )
Scotch thistle	( <i>O. tauricum</i> )
Spotted knapweed	( <i>Centaurea stoebe L. ssp. micranthos</i> )
Spotted x diffuse knapweed hybrid	( <i>Centaurea x psammogena</i> )
Sulfur cinquefoil	( <i>Potentilla recta</i> )
Wild caraway	( <i>Carum carvi</i> )
Yellow nutsedge	( <i>Cyperus esculentus</i> )
Yellow toadflax	( <i>Linaria vulgaris</i> )
Yellow x Dalmatian toadflax hybrid	( <i>Linaria vulgaris x L. dalmatica</i> )

### **Colorado List C Noxious Weed Species**

<b><u>Common</u></b>	<b><u>Scientific</u></b>
Bulbous bluegrass	( <i>Poa bulbosa</i> )
Chicory	( <i>Cichorium intybus</i> )
Common burdock	( <i>Arctium minus</i> )
Common mullein	( <i>Verbascum thapsus</i> )
Common St. Johnswort	( <i>Hypericum perforatum</i> )
Downy brome, cheatgrass	( <i>Bromus tectorum</i> )
Field bindweed	( <i>Convolvulus arvensis</i> )
Halogeton	( <i>Halogeton glomeratus</i> )
Johnsongrass	( <i>Sorghum halepense</i> )
Perennial sowthistle	( <i>Sonchus arvensis</i> )
Poison hemlock	( <i>Conium maculatum</i> )
Puncturevine	( <i>Tribulus terrestris</i> )
Quackgrass	( <i>Elymus repens</i> )
Redstem filaree	( <i>Erodium cicutarium</i> )
Velvetleaf	( <i>Abutilon theophrasti</i> )
Wild proso millet	( <i>Panicum miliaceum</i> )

## **Colorado Watch List Noxious Weed Species**

<b><u>Common</u></b>	<b><u>Scientific</u></b>
Baby's breath	( <i>Gypsophila paniculata</i> )
Caucasian bluestem	( <i>Bothriochloa bladhii</i> )
Common bugloss	( <i>Anchusa officinalis</i> )
Common reed	( <i>Phragmites australis</i> )
Garden loosestrife	( <i>Lysimachia vulgaris</i> )
Garlic mustard	( <i>Alliaria petiolata</i> )
Himalayan blackberry	( <i>Rubus armeniacus</i> )
Hoary alyssum	( <i>Berteroa incana</i> L.)
Meadow hawkweed	( <i>Hieracium caespitosum</i> )
Onionweed	( <i>Asphodelus fistulosus</i> )
Siberian elm	( <i>Ulmus pumila</i> )
Scotch broom	( <i>Cytisus scoparius</i> )
Swainsonpea	( <i>Sphaerophysa salsula</i> )
Syrian beancaper	( <i>Zygophyllum fabago</i> )
Tree of Heaven	( <i>Ailanthus altissima</i> )
Ventenata grass	( <i>Ventenata dubia</i> )
White bryony	( <i>Bryonia alba</i> )
Yellow bluestem	( <i>Bothriochloa ischaemum</i> )
Yellow flag iris	( <i>Iris pseudacorus</i> )

**Appendix B: Representative Photographs of the  
Dolores Canyon Solar Study Area**



**Appendix B-1. Shows winter wheat field in the northeastern portion of the Study Area (November 2020).**



**Appendix B-2. Shows hay field planted with yellow sweetclover and alfalfa in the northern portion of the Study Area (June 2020).**



**Appendix B-3. Shows pinyon and juniper woodland in the central portion of the Study Area (November 2020).**



**Appendix B-4. Shows fallow crop field in the northeastern portion of the Study Area (June 2020).**



**Appendix B-5. Shows hay field dominated by smooth brome in the central portion of the Study Area (June 2020).**



**Appendix B-6. Shows tree farm in the southeastern portion of the Study Area with rubber rabbitbrush and yellow sweetclover in the foreground (June 2020).**