3.8 Noxious and Invasive Plant Species

3.8.1 Affected Environment

Noxious weeds are undesirable, non-native plant species that have negative impacts on crops, native plant communities, livestock, and the management of natural or agricultural systems. Federal and State of Colorado regulations exist that address the problems created by noxious weeds: Presidential Executive Order 13112 - Invasive Species, the Federal Noxious Weed Act (7 U.S.C. 2801 *et seq.*), and the Colorado Noxious Weed Act (Colorado Revised Statutes, Title 35, Article 5.5). These regulations aim to prevent the introduction of noxious weeds and to minimize and manage their ecological, economic, agricultural, and human health impacts.

Noxious Weeds

The Colorado Noxious Weed Act (Title 35, Article 5.5) defines noxious weeds as plant species that are not indigenous to the state of Colorado and meet at least one of several criteria regarding their negative impacts upon crops, native plant communities, livestock, and the management of natural or agricultural systems.

Table 3.8-1
Impacts to Noxious and Invasive Plant Species

Topic	No Action Alternative Impacts	Proposed Action Impacts	Proposed Action Mitigation Measures
Noxious Weeds	Construction activities associated with interesetion improvements may spread noxious weeds.	Construction activities associated with improvements to Woodmen Road may spread noxious weeds.	Implement erosion control measures to decrease weed propagation from wind. Revegetate all areas per the Revegetation Plan and Weed Management Plan. All salvaged topsoil used for revegetation must be weed free.

The Colorado Noxious Weed Act states "noxious weeds have become a threat to the natural resources of Colorado, as thousands of acres of crop, rangeland, and natural habitats are being destroyed by noxious weeds each year." Furthermore, the Act cites motor vehicles as one of the biggest sources for spreading noxious seed and plant parts. Long, linear transportation improvement projects spread noxious weeds from ground disturbances during construction activities, such as creating medians or shoulders.

In order to slow or reverse the proliferation of noxious weeds in the state, Colorado's Governor issued Executive Order D006-99 requiring various agencies to develop weed management plans applicable to their developmental projects and activities. Recognizing that motor vehicles and transportation related activities contribute to the spread of noxious weeds, the Colorado Department of Transportation (CDOT) is one of the agencies specifically responsible for noxious weed management.

Table 3.8-2
Noxious Weed Species of Concern

Common Name	Presence Within the Study Area
Diffuse knapweed	Observed in study area
Canada thistle	Observed in study area
Musk thistle	Observed in study area
Russian knapweed	Not observed
Spotted knapweed	Not observed
Leafy spurge	Not observed
Purple loosestrife	Not observed
Yellow toadflax	Not observed

To assist weed management efforts, the State maintains a Noxious Weed List that identifies the most widespread and harmful species. Eight species from the Noxious Weeds List were determined to potentially occur within the project corridor, and three species were actually observed during field observations in 2001 and 2002 (Table 3.8-2).

Canada Thistle

Diffuse knapweed and Canada thistle are the principle problem weeds in the project area (Overman 2002). Most of the noxious weed species were observed between I-25 and Powers Boulevard in disturbed or developed land or in other areas where ground disturbance had recently occurred. Canada thistle was observed in numerous locations east of Powers Boulevard, often in proximity to wetlands. Relatively large stands were recorded north of Woodmen Road, approximately 0.5 mile east of Black Forest Road, approximately 0.3 mile east of Brule Road, and south of Woodmen Road near Marksheffel Road. This species is also scattered at numerous sites along Woodmen Road from Powers Boulevard to US 24. This weed can quickly displace native plants if not managed carefully. Musk thistle was also observed in a few, scattered locations near Marksheffel Road.

3.8.2 Environmental Impacts

Weed species are of concern during new construction and ground disturbance activities. Under both the No Action and Proposed Action Alternatives, the spread of noxious weeds is likely to continue in the project area unless controlled.

3.8.3 Cumulative Impacts

As noted in *Sustaining Nature and Community in the Pikes Peak Region* (RCEA), the spread and infestation of noxious weeds threatens biodiversity and is a recognized threat in the State of Colorado, as indicated by the various regulations to control them. There are few natural areas within the urban and urbanizing portions of the region that support native species, rather, these areas are dominated by exotic or weedy species. Ultimately, this conversion of vegetation cover may impact the wildlife that depends on native species.

The Proposed Action will directly impact nearly 108 acres of the existing land cover, while other actions, such as residential and commercial construction and the roads, streets and infrastructure that support them, will ultimately disturb and remove an additional several thousand acres of native and weedy vegetation cover along the Woodmen Road corridor (see Table 1-1 for a summary of development actions). The construction activities associated with these actions disturb land, expose soils, and invite the invasion of noxious weeds. Wind and water erosion from exposed soils spread weed seed, while motor vehicles are also a common transporter of noxious weeds. Both the No Action Alternative and the Proposed Action Alternative will accommodate increased traffic and will have construction activities associated with them that can spread noxious weeds.

To maintain biodiversity, the study, *Sustaining Nature and Community in the Pikes Peak Region*, recommends that noxious weeds be managed on a regional level, and on the project level, managed aggressively. Project level mitigation measures for the Proposed Action respond to these recommendations and are described in section 3.8.4 below.

3.8.4 Mitigation for the Proposed Action

The following are mitigation measures for the Proposed Action that would be implemented to minimize the impacts to vegetation and to reduce weed infestations:

- Erosion control measures such as those outlined in Section 3.7.5 would be implemented during clearing and earth-moving activities to decrease the potential for soil losses and weed propagation from wind.
- A Revegetation Plan that follows Best Management Practices, developed for construction areas that would be temporarily disturbed, would be approved by a City or County Landscape Architect or designee. The plan would address selecting appropriate native species adapted to the local environment, including shrubs and trees where appropriate, soil preparation, seeding rates and methods, planting protocols (including mulching and soil amendments), watering frequency and duration (if needed), and success monitoring.
- All revegetation areas would be seeded and/or planted as soon as possible. Seeding would be phased to occur throughout construction. Temporary seeding with sterile species or mulching may also be required to protect soil piles or bare areas from erosion and weed invasion.
- A Weed Management Plan would be developed in cooperation with the El Paso County Weed Coordinator during final design, and control measures would be implemented on existing infestations before construction begins. Proper implementation of a weed management plan that incorporates appropriate methods (i.e. biological controls) would mitigate the potential adverse effects of earth disturbance and the resulting invasion of noxious weeds.
- All equipment used for construction must be free of noxious weed seed and reproductive plant parts. The contractor would be required to wash all equipment prior to mobilization onto the construction site and when moving equipment from areas with existing populations of noxious weeds to areas relatively free of these species.
- Topsoil from disturbed areas would be salvaged wherever practicable and reused as part of the revegetation effort. All salvaged topsoil would either be free of noxious weeds (as determined by a visual inspection) or treated for noxious weeds prior to reuse, and protected from erosion and weed seed invasion.
- Mulch, fill soil, sod, hay, seed, bedding, and other construction materials used for the project would be inspected and certified as defined by the Weed Free Forage Crop Certification Act, Title 35, Article 27.5, Colorado Revised Statutes.

Revegetation

The City and the County, or their designees, would oversee all revegetation operations and subsequent monitoring.