

**U.S. Department of the Interior  
Bureau of Land Management  
White River Field Office  
73544 Hwy 64  
Meeker, CO 81641**

## **ENVIRONMENTAL ASSESSMENT**

**NUMBER:** CO-110-2004-069-EA

**CASEFILE/PROJECT NUMBER** (optional):

**PROJECT NAME:** Weed control on reclaimed Oil and Gas disturbance

**LEGAL DESCRIPTION:** Douglas Creek, Piceance Creek and Figure 4 Unit (See Attached Map)

**APPLICANT:** EnCana Oil and Gas(USA) Inc.

### **DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES:**

This EA is tiered to and incorporates by reference, Vegetation Treatment on BLM Lands in Thirteen Western States, July 1991. The Vegetation Treatment EIS (1991) analyzed both the cumulative and generalized impacts of various methods of noxious weed treatment.

The applicant intends to use the herbicides described below to control weeds on 10 acres around their oil and gas locations, facilities, roads, pipeline rights of way and reclaimed areas (see attached map for exact locations). All applications will be spot treatments as needed to control noxious weeds.

Application would be by a combination of backpack, truck or ATV sprayer. The method of herbicide application would be dependant on the size and location of the weeds to be treated.

The chemical that is proposed for use is Tordon 22K and 2,4-D. The labels identify the use rates, application, hazards and precautions as identical. Tordon 22K and 2,4-D are liquid products to be mixed with water for application. The applicant will use these chemicals to control broadleaf weeds as needed on previously disturbed areas. Total acres affected would be less than 10 per year.

The active ingredient of Tordon 22K is picloram. The maximum rate is up to 2 qt. per acre of Tordon and 2 2/3 pt. 2, 4-d per acre. The carrier would be water.

All spraying will be under the control of a certified herbicide applicator.

### Mitigation and Stipulations Associated with the Proposed Action Alternative:

- Only federally registered herbicides would be used.
- Herbicides would be applied as per label instructions and restrictions.
- Label directions would be followed even when additional restrictions are required.
- The intake operation of water for mixing would be arranged so that an air gap or reservoir would be placed between the live water intake and the mixing tank to prevent back flow or siphoning of chemical into the water source.
- Chemical containers will be disposed of as required by the Environmental Protection Agency.
- To minimize drift, application of all herbicides would be confined to periods when wind speed is less than 6 miles per hour. Application would not occur during precipitation, or if there is a threat of precipitation.
- Label directions would be followed as additional restrictions are required.
- Efforts should be taken to avoid or minimize involvement and damage to woody riparian shrubs and tree regeneration, where appropriate, using mechanical control, minimizing the wetting of desirable plant foliage, or using less persistent herbicides beneath or within 25' of desirable plant canopies.
- As a means of being able to validate control action to the U.S. Fish and Wildlife Service, the location, extent, and manner of application for all treatment areas should be documented and mapped using GPS technology and this information provided to BLM annually for review within the timeframe specified in the noxious weed section below.
- Herbicide application on the White River's 100-year floodplain (i.e., endangered Colorado pike-minnow and other Colorado River fishes) or within 100 feet of floodplains of systems that are occupied by BLM sensitive species (see Threatened and Endangered Species section below) will require a separate NEPA analysis. Although label and BLM-imposed application measures are generally considered adequate to prevent any direct or indirect impact to these aquatic communities from spot treatments, site-specific review of proposed actions is necessary to make Endangered Species Act determinations.
- The following buffer strips will be provided for streams and riparian areas that are not associated with a special status fishery (see Aquatic Wildlife section): a minimum buffer strip of 25 feet wide will be provided for vehicle spraying and 10 feet for hand application. Any deviations must be in accordance with the label for the herbicide. Herbicides will be wiped on individual plants within 10 feet of water where application is critical.

- In the event raptor nest activity is discovered within treatment areas, restrictions on motorized application equipment and approach to the nest site would be applied until nest functions are complete.

### ***Safeguard Measures***

- All individuals associated with the handling or application of herbicides on public lands would be familiar with the chemicals used and emergency procedures to be used in case of herbicide spill.
- The safe use of herbicides includes precautionary measures to prevent accidental spills. The following written precautions describe measures that would be used to reduce the chance of such accidents.
- The applicable Federal regulations concerning the storage and disposal of herbicides and herbicide containers would be followed. These are described in the EPA's "Regulations for acceptance and Procedures for Disposal and Storage", Federal Register notices as amended. It is essential to prevent damage to containers so that leaks do not develop; care would be exercised so that containers would not be punctured or ruptured, and so that the lids or caps would not be loosened.
- Precautions would be taken in the loading and stacking of herbicide containers in the transporting vehicle to assure that they would not fall as the vehicle moves.
- Open containers would not be transported. Partly empty containers would be securely re-sealed before transportation.
- Mixed herbicide will not be transported.

**NEED FOR THE ACTION:** EnCana has requested the use of chemicals to control unwanted vegetation.

**PLAN CONFORMANCE REVIEW:** The Proposed Action is subject to and has been reviewed for conformance with the following plan (43 CFR 1610.5, BLM 1617.3):

Name of Plan: White River Record of Decision and Approved Resource Management Plan (ROD/RMP).

Date Approved: July 1, 1997

Decision Number/Page: Chapter 2, Page 13,

Decision Language: Manage noxious weeds so that they cause no further negative environmental, aesthetic or economic impact.

**AFFECTED ENVIRONMENT / ENVIRONMENTAL CONSEQUENCES /  
MITIGATION MEASURES:**

**STANDARDS FOR PUBLIC LAND HEALTH:** In January 1997, Colorado Bureau of Land Management (BLM) approved the Standards for Public Land Health. These standards cover upland soils, riparian systems, plant and animal communities, threatened and endangered species, and water quality. Standards describe conditions needed to sustain public land health and relate to all uses of the public lands. Because a standard exists for these five categories, a finding must be made for each of them in an environmental analysis. These findings are located in specific elements listed below:

**CRITICAL ELEMENTS**

**AIR QUALITY**

*Affected Environment:* There are no special designation air sheds or non-attainment areas nearby that would be affected by the proposed action.

*Environmental Consequences of the Proposed Action:* Impacts from the proposed action are not anticipated.

*Environmental Consequences of the No Action Alternative:* Impacts from not permitting the area wide pesticide permit are not anticipated.

*Mitigation:* No additional mitigation is needed.

**AREAS OF CRITICAL ENVIRONMENTAL CONCERN**

*Affected Environment:* The proposed areas do not fall into any special designated ACEC's.

*Environmental Consequences of the Proposed Action:* None

*Environmental Consequences of the No Action Alternative:* None

*Mitigation:* None

**CULTURAL RESOURCES**

*Affected Environment:* The areas proposed for weeds, noxious weeds and undesirable vegetation are areas that have been disturbed during oil and gas development. As such all of the areas should have had archaeological inventory and appropriate mitigation prior to the original

disturbance. Therefore all resources should have been previously identified and appropriate mitigation has already been completed.

*Environmental Consequences of the Proposed Action:* There will be no new impacts to cultural resources provided that all vehicular traffic is confined to the previously inventoried and disturbed areas.

*Environmental Consequences of the No Action Alternative:* There would be no new impacts to cultural resources under the No Action Alternative.

*Mitigation:* None

## **INVASIVE, NON-NATIVE SPECIES**

*Affected Environment:* All treatments associated with this project would be on disturbed soils. Disturbed sites provide suitable habitat for noxious weed establishment. Weed outbreaks on well pads and associated facilities correlate with construction equipment and support vehicles.

Introduction of non-native species during reclamation was analyzed in the environmental assessment and decision document authorizing the individual development.

*Environmental Consequences of the Proposed Action:* By the applicant requesting a pesticide use proposal to control noxious weeds on their facilities there is a positive acknowledgement of the need to inventory, control and monitor outbreaks. With proper weed management there would be a benefit to native plant communities.

With overuse of herbicides there are expected to be problems in reclamation as seedlings tend to be sensitive to herbicides. The applicant would still be required to meet the reclamation requirements within their existing permit.

*Environmental Consequences of the No Action Alternative:* There could be an increase of noxious weeds which could spread to adjacent areas. The permit holder would be required to control these outbreaks which could have spread over a large area and be significantly more expensive to control than if caught at the initial infestation.

*Mitigation:* None

## **MIGRATORY BIRDS**

*Affected Environment:* A large array of migratory birds fulfills nesting functions throughout the Resource Area's woodland and shrubland habitats during the months of May, June, and July. Generally, species associated with the more extensive shrubland and woodland communities in the Resource Area are typical and widely represented in the region. Those migratory bird populations associated with this Resource Area's riparian communities and higher-elevation woodlands identified as having higher conservation interest (i.e., Rocky

Mountain Bird Observatory, Partners in Flight program) appear to be stable, but in some cases are uncommon and inconsistently distributed due to specialized habitat preferences (e.g., martin, sapsucker).

**Migratory Birds with High Conservation Priority by Habitat Association in WRR**

| Salt desert  | Sagebrush  | Pinyon-juniper  | Mountain shrub  | Aspen/fir   |
|--|--|---|---|---|
| burrowing owl<br>loggerhead shrike<br>sage sparrow | sage grouse<br>Brewer’s sparrow<br>green-tailed towhee | gray flycatcher<br>gray vireo<br>pinyon jay<br>juniper titmouse<br>black-throated gray<br>warbler<br>violet-green swallow | blue grouse<br>common poorwill<br>Virginia’s warbler<br>MacGillivray’s<br>warbler | broad-tld<br>hummingbird<br>red-naped sapsucker<br>purple martin<br>Cordilleran<br>flycatcher |

*Environmental Consequences of the Proposed Action:* Current noxious weed infestations are small and, in this case, confined to that acreage previously disturbed by oil and gas developments (i.e., disturbed ground or herb-dominated reclaimed areas). Because migratory bird populations tend to be more abundant and diverse as vegetation volume and stratification increase, bird nesting activity in areas most likely infested with these weeds tends to be limited.

Short-duration, non-repetitive, and localized herbicide applications or mechanical removal activities during early to mid-summer may cause temporary displacement of adult birds attending nests in nearby habitats, but these episodes would have a low probability of disrupting an individual nesting effort or adversely influencing a nest’s outcome. Because these weeds have no functional value as nesting substrate and suppress native vegetation by dominating sites of infestation, localized control activities are viewed as a desirable trade-off in preventing further seed dissemination and continued expansion of weed-related influences.

*Environmental Consequences of the No Action Alternative:* In the absence of weed control work, there would be no potential to disrupt breeding activities of migratory birds. Unabated, the spread of noxious weeds across the landscape would eventually necessitate broader scale and more aggressive herbicide application practices at increasing distance from activity centers, which would invariably involve longer duration and more extensive application activities in suitable nesting habitats—drastically increasing the probability that ongoing nesting attempts would be adversely affected.

*Mitigation:* none

**THREATENED, ENDANGERED, AND SENSITIVE ANIMAL SPECIES** (includes a finding on Standard 4)

*Affected Environment:* All perennial and intermittent stream systems within the Resource Area eventually contribute to endangered Colorado River fisheries in the Colorado, White, Green, and Yampa Rivers. The White River between Rio Blanco Lake and the Utah state line is designated critical habitat for the endangered Colorado pike-minnow, although present occupation is confined to the reach below Taylor Draw dam. Maintenance of proper bank,

channel and floodplain function is specifically identified as essential to the continued existence of this fishery.

The White River corridor serves as an activity hub for nesting and wintering populations of threatened bald eagles. A number of nest and winter roost sites are associated with the river's cottonwood galleries.

Riparian/wetland habitats above 8000 feet possess general potential for occupation by the candidate boreal toad. However, there are no historical or recent indications (e.g., 1996 Natural Heritage Program inventory on the Roan Plateau) that boreal toad occupied such habitats on the Piceance/Douglas divides or Roan Plateau.

Under the auspices of a non-essential, experimental population rule and a cooperatively developed ferret management plan, black-footed ferrets have been released (or dispersed from Utah releases) annually in the Coyote Basin and Wolf Creek Management Areas since 1999. Ferret distribution is confined to the Area's lower elevation salt desert communities that support white-tailed prairie dogs, essentially a narrow corridor along Highway 40 from Elk Springs to the Utah line. Ferrets have successfully reproduced in Coyote Basin and although not yet established, a small number of ferrets are thought to persist in the Wolf Creek area. These prairie dog communities also support nesting populations of burrowing owl, an uncommon species that has high conservation priority in both the Colorado Division of Wildlife and BLM. These birds return to occupy a prairie dog burrow system in early April and begin nesting soon after. By October, the birds leave for southern wintering grounds.

There are a number of fishes that have been petitioned for listing under the Endangered Species Act (Colorado River cutthroat trout) or are listed by BLM as sensitive (effectively the same status as species candidate for listing), including: roundtail chub, and bluehead, flannelmouth, and mountain suckers. The following stream systems harbor populations of these fishes: the White River and its 100-year floodplain (Colorado pike-minnow and other upper Colorado River fishes), Bitter Creek, Piceance Creek, Crooked Wash, Big Beaver Creek, Trapper's Creek, East Douglas Creek and its tributaries, and Black Sulphur Creek and its tributaries.

*Environmental Consequences of the Proposed Action:* Salt formulations of picloram are slightly to practically non-toxic and 2,4-D is moderately toxic to birds and mammals. However, because these weeds possess no attributes attractive to special status species and their extent is confined to small, isolated patches, herbicide exposure in terrestrial situations is improbable. Owing to these chemicals' relatively nontoxic character and the limited likelihood for animal exposure, application of these chemicals as proposed poses no conceivable threat to black-footed ferret, bald eagle, or burrowing owl. Summer control activities would be short term and dispersed and do not represent activity levels or time frames that would have any substantive influence on sensitive habitats and/or breeding activities of special status species.

Aquatic organisms are usually more susceptible to the toxic effects of herbicide than terrestrial wildlife. Chemical can enter aquatic systems through direct application, drift, surface runoff, or percolation/leaching. In particular, aquatic invertebrates and fish are vulnerable to very low concentrations of 2,4-D in ester formulations (0.5 ppm LD<sub>50</sub> for fish, 1.5 ppm LD<sub>50</sub> for

macroinvertebrates). Although the ester formulations are considerably more toxic to aquatic organisms than alternate formulation of 2,4-D (amine or acid forms), within a few days or weeks esters tend to hydrolyze in soil to an acid form which is one-fiftieth to one-hundredth the toxicity of ester formulations. Picloram is moderately to slightly toxic to freshwater fish. Picloram is soluble and highly mobile in water and can persist for long periods in the soil profile, but the product does adsorb to clay particles (a consistent feature of the predominant shale-based soils in this Resource Area) and organic matter, which substantially reduces or attenuates the potential for fugitive release to associated stream systems. Sunlight readily breaks down picloram in water with a reported half-life of between 2 and 3 days. There is no evidence suggesting that either compound bioaccumulates.

Considering the relatively small acreage being treated, required adherence to label restrictions, and Bureau-imposed mitigation and safeguards listed in the proposed action (i.e., >100' beyond occupied systems), treatment of noxious weeds with picloram and 2,4-D would pose no direct threat to special status fisheries, including the Colorado River fishes. Treatments proposed adjacent to occupied or contributing streams would be reviewed separately to insure that protection measures are adequate to avoid risk of exposure. Additional mitigation may be applied to these actions if warranted. The potential for anything but trace and short-term contamination to enter streams that indirectly contribute to systems that host special status species would also be improbable. As conditioned, this project would pose no conceivable risk of larger order aquatic communities (identified above) being exposed to herbicide at concentrations and duration capable of exerting adverse influence on aquatic plants, vertebrates, or invertebrates. Vigilant suppression of small-scale weed infestations would help prevent weeds from compromising channel and floodplain functions that are key to maintaining suitable habitat conditions for sensitive fishes, and listed Colorado River pike-minnow and bald eagle along the White River. See additional discussion in Aquatic Habitat section below.

Although highly unlikely that a population of boreal toad would exist in any treatment site, much less be exposed to herbicide, available literature suggests that amphibia are generally less sensitive to herbicide exposure than are aquatic invertebrates or fish (*USFWS, 1986. Manual of Acute Toxicity. Resource Publ. 160*). The provisions under which herbicides would be applied under either alternative would be sufficient to avoid any reasonable likelihood of boreal toads or their habitat being adversely affected by weed control efforts.

*Environmental Consequences of the No Action Alternative:* Under this alternative there would be no potential for exposing special status species to fugitive herbicide in the near term. However, once entrenched, subsequent control of these weeds would almost surely necessitate more intensive and widespread use of herbicides in increasingly close association with occupied habitats—increasing the likelihood of direct toxicity to the fish or other important aquatic constituents (e.g., amphibians, invertebrates). Such situations invariably necessitate more costly resource tradeoffs to gain acceptable levels of weed control. Relatedly, maintenance of proper functioning riparian processes along the White River is considered paramount in maintaining the long term suitability of the 100-year floodplain for endangered Colorado River fishes and riverine galleries for bald eagle use (continued availability of sites for cottonwood regeneration).

*Mitigation:* Integral with proposed action

*Finding on the Public Land Health Standard for Threatened & Endangered species:* This standard is being met across the Resource Area. Populations and habitat suitability for the special status species discussed above are generally stable. Weaknesses in securing population viability in the case of boreal toad and perhaps black-footed ferret are not attributable to authorized land uses, but diseases that are beyond the scope of BLM management. Recognizing the progressive deterioration of rangeland and aquatic habitats attributable to the proliferation of noxious weeds, a prominent indicator for determining Public Land health, the BLM is aggressive in pursuing management that minimizes noxious weed expression in the overall plant community. The proposed action complements this goal and, as mitigated, has appropriate safeguards that would effectively avoid those influences chemical exposure may have on individual animals or habitat conditions, thereby maintaining a situation where the standard is met through time. Conversely, the no action alternative would promote incremental increases in acreage supporting weed monocultures, and over time, increasingly large landscape parcels would fail to meet this standard.

**THREATENED, ENDANGERED, AND SENSITIVE PLANT SPECIES** (includes a finding on Standard 4)

*Affected Environment:* Habitats within the White River Resource Area have been identified for 19 plant species that are either rare and endemic or rare and are considered as a BLM sensitive species. Many of these sensitive species are endemic to the Green River geologic formation. This formation is limited to the Uintah Basin of Utah and the Piceance Basin/Roan Plateau of Colorado and contains several locations of threatened or sensitive plant species. Most of the Green River shale formations in Piceance Basin have been inventoried with locations of known populations of sensitive plants and potential habitats identified. The Figure Four Federal Exploration unit is located on the western flank of the Piceance basin of northwestern Colorado. Formation beds in Figure Four dip at an average of 6° to the east. Tertiary-aged Green River formation lithologies are exposed at the surface within the unit. There is potential for threatened and endangered plants to occur within the proposed areas.

*Environmental Consequences of the Proposed Action:* There will no consequences provided that inventories and mitigation from construction is completed and safeguards are practiced that are identified in the proposed action.

*Environmental Consequences of the No Action Alternative:* No disturbance would occur and the environment would stay the same.

*Mitigation:* Integral with proposed action.

*Finding on the Public Land Health Standard for Threatened & Endangered species:* The oil and gas development in the proposed areas will have been analyzed through Environmental Assessments. Potential impacts to threatened and endangered plants will have been mitigated during the construction process. With the mitigation and the prior analysis there is no likelihood that the proposed action or no action alternative would have an influence on the

condition or function of Threatened, Endangered, or Sensitive plant species. Thus there would be no effect on achieving the land health standard.

## **WASTES, HAZARDOUS OR SOLID**

*Affected Environment:* Under the proposed action, Tordon 22K and 2,4D would be used for herbicidal weed control. These chemicals are approved for use on public lands and were analyzed in the EIS for Vegetation Treatments on BLM Lands in the 13 Western States (BLM 1991).

*Environmental Consequences of the Proposed Action:* Use of herbicides for control of noxious weeds is a common and reasonable practice. Use of these chemicals as detailed in this environment assessment would prevent any generation of hazardous wastes.

Since these chemicals will be used as per label instructions, a reportable release will not occur.

*Environmental Consequences of the No Action Alternative:* There would be no opportunity for development of hazardous waste.

*Mitigation:* None

## **WATER QUALITY, SURFACE AND GROUND (includes a finding on Standard 5)**

*Affected Environment:* Surface water quality data is available for several sites on the White River, Piceance Creek, and many ephemeral drainage in the Piceance Basin through various USGS publications. The Colorado Department of Public Health, Water Quality Control Commission, has adopted (Colorado Department of Public Health 2004) basic standards and an antidegradation rule for all surface waters in the resource area. These standards reflect the ambient water quality and define maximum allowable concentrations for various water quality parameters. Most surface water segments on BLM lands are in the "use protected" category that states, at a minimum, all state surface waters shall be maintained and protected. No further water quality degradation is allowable that would further interfere with or become harmful to that streams designated use.

*Environmental Consequences of the Proposed Action:* Drift into drainage bottoms or springs may occur, altering water quality temporarily. Use of best management practices outlined as mitigation in the proposed action would eliminate negative impacts imposed by the proposed action.

*Environmental Consequences of the No Action Alternative:* There would be no opportunity for drift of herbicides into drainage bottoms or springs, and no impacts on water quality.

*Mitigation:* None.

*Finding on the Public Land Health Standard for water quality:* Implementation of the proposed action would not cause water quality to be outside the standards set by the State of Colorado, which is the standard for water quality on public lands.

## **WETLANDS AND RIPARIAN ZONES (includes a finding on Standard 2)**

*Affected Environment:* The White River Resource Area contains a number of riparian zones. Table 2-9, Appendix D, page 8 of the White River ROD/RMP shows the high priority riparian habitats, Functioning Condition, acres and ecological condition. Twenty eight riparian areas are identified containing 719 acres of riparian habitat.

*Environmental Consequences of the Proposed Action:* During preparation of a site-specific Pesticide Use Proposal, affected riparian areas would be identified along with precautions and measures to avoid impact to these sensitive areas. Precautions would be imposed, in addition to the buffer strips identified in the mitigation section. With the mitigation and stipulations identified within the proposed action, there is no reasonable likelihood for substantive short or long-term damage to riparian habitats (see also discussion in Aquatic Wildlife section). Although chemical treatment may suppress or destroy desirable broadleaf vegetation interspersed with weeds, timely control of small or confined infestations would ultimately benefit long-term riparian values by minimizing the detrimental aspects of noxious weeds on riparian function and the subsequent extent and duration of herbicide treatment.

*Environmental Consequences of the No Action Alternative:* Under this alternative there would be no opportunity for herbicides to contaminate riparian zones, and there would be no opportunity for non-target plants to be affected.

*Mitigation:* See the mitigation and stipulations identified in the proposed action.

*Finding on the Public Land Health Standard for riparian systems:* Using the mitigation requirements of the proposed action, there are no expected negative impacts to riparian areas.

## **WILDERNESS**

*Affected Environment:* No wilderness study areas exist within proposed project areas.

*Environmental Consequences of the Proposed Action:* None.

*Environmental Consequences of the No Action Alternative:* None.

*Mitigation:* None.

## **CRITICAL ELEMENTS NOT PRESENT OR NOT AFFECTED:**

No flood plains, prime and unique farmlands, or Wild and Scenic Rivers exist within the area affected by the proposed action. There are also no Native American religious or environmental justice concerns associated with the proposed action.

## **NON-CRITICAL ELEMENTS**

The following elements **must** be addressed due to the involvement of Standards for Public Land Health:

### **SOILS** (includes a finding on Standard 1)

*Affected Environment:* Soils in the area of the proposed action are generally deep and well drained with a loam surface texture and a channery sandy clay loam subsoil extending to greater than 30 inches. In an undisturbed condition runoff is slow and the erosion hazard is slight. However, if the surface is disturbed, and runoff is rapid the erosion hazard can be severe.

*Environmental Consequences of the Proposed Action:* Little if any negative impacts are expected as a result of the proposed action. A temporary increase in sedimentation could be expected from post-treatment vegetation loss, which would continue until successful revegetation has occurred. In the long term, controlling weeds on reclaimed pads would allow a more protective vegetation species to grow, which would reduce erosion and sedimentation over the long term.

*Environmental Consequences of the No Action Alternative:* As a cover of undesirable weeds increase there will be a corresponding decrease in soil stability and increase in long term erosion and sedimentation problems.

*Mitigation:* None

*Finding on the Public Land Health Standard for upland soils:* Proposed action will help soils to meet Public Land Health Standard by allowing a more productive vegetation to grow.

### **VEGETATION** (includes a finding on Standard 3)

*Affected Environment:* The project sites would be existing disturbed soils with either bare ground trying to be maintained or initial reclamation to stabilize the soils. Seeded species could be native or non-native depending on the reclamation requirements.

*Environmental Consequences of the Proposed Action:* Spot spraying of noxious weeds would eliminate the majority of broadleaf species. Only those resistant to the proposed herbicides would remain. Grass species could be killed or show indications of being sprayed

(chlorosis). Controlling of noxious weed species during initial invasion would prevent the spread to the adjacent plant communities.

*Environmental Consequences of the No Action Alternative:* With the no action alternative noxious weeds that are introduced onto the project sites, and are not controlled, are expected to invade the adjacent plant communities. Invasion of the adjacent plant communities would decrease the productivity and value of these sites. Weed control costs would be proportional to the area on which the weeds have invaded.

*Mitigation:* None

*Finding on the Public Land Health Standard for plant and animal communities* (partial, see also Wildlife, Aquatic and Wildlife, Terrestrial): The disturbed sites associated with this proposal meet the standards for plant communities in that this disturbance is authorized and not creating offsite impacts. At such time as these developments are relinquished they would have to meet the standards for plant communities. The killing of undesirable species will help meet the Public Land Health Standard.

**WILDLIFE, AQUATIC** (includes a finding on Standard 3)

*Affected Environment:* Streams that support aquatic habitats are distributed across the Resource Area (Tables 2-24, 25, and 26 in draft RMP). Essentially all perennial and some of the larger intermittent streams support simple invertebrate-based aquatic communities, but in the context of herbicide application, of most concern are those that directly or indirectly support vertebrate forms (i.e., mammals, amphibians, sport or native nongame fish). The following table lists those systems that are known to support higher order aquatic habitats by Geographic Reference Area (GRA).

| Douglas GRA             | Piceance GRA        | Danforth Hills GRA       |
|-------------------------|---------------------|--------------------------|
| Douglas Ck              | Cow Ck and tribs    | Flag Ck and tribs        |
| West Ck                 | Fawn Ck and tribs   | Wilson Ck and tribs      |
| West Douglas Ck         | Dry Fork and tribs  | Good Spring Ck and tribs |
| West Evacuation Ck      | Willow Ck and tribs | Fawn Ck reservoir        |
| Bitter Ck               | Hunter Ck and tribs |                          |
| Spring Ck               | Clear Ck            | Crooked Wash GRA         |
|                         | Ryan Gulch          | Deep Channel Ck          |
| Blue Mountain GRA       | Stake Springs Draw  | Tschuddi Gulch           |
| Meadow Ck               | Duck Ck and tribs   | Scenery Gulch            |
| Divide Ck reservoir     |                     | Black's Gulch            |
| Peterson Draw reservoir |                     |                          |

*Environmental Consequences of the Proposed Action:* Aquatic organisms are usually more susceptible to direct exposure and the toxic effects of herbicide than terrestrial wildlife. Chemical can enter aquatic systems through direct application, drift, surface runoff, or percolation/leaching.

Picloram is moderately to slightly toxic to freshwater fish (e.g., 10-100 ppm in most sensitive species, 26 ppm in trout) and slightly toxic to aquatic invertebrates; formulated products (e.g., Tordon 22K) are generally less toxic than the technical grade of picloram. Aquatic invertebrates and fish are vulnerable to very low concentrations of 2,4-D in ester formulations (0.5 ppm LD<sub>50</sub> for fish, 1.5 ppm LD<sub>50</sub> for macroinvertebrates). Although the ester formulations are considerably more toxic to aquatic organisms than alternate formulation of 2,4-D (amine or acid forms), within a few days or weeks esters tend to hydrolyze in soil to an acid form which is one-fiftieth to one-hundredth the toxicity of ester formulations.

Applications of Tordon and 2,4-D at agricultural-scales can result in accumulations of 1-2 ppm in receiving catchments. The potential for the proposed action to involve fugitive releases at these or higher concentrations, especially in lotic situations, is improbable. Due to its less toxic nature, small-scale applications of Tordon consistent with those safeguards integral with the proposed action would pose virtually no toxic threat to aquatic wildlife, including amphibians, fish, or macro-invertebrates, or to those resident birds and mammals that may be associated with riparian or aquatic systems (see also discussion in Threatened and Endangered Species).

In those situations where higher order aquatic habitats are involved or in areas that might be expected to contribute to downstream aquatic habitats (as listed above), it would be preferable to use alternate herbicides that are less toxic to aquatic organisms (e.g., metsulfuron methyl rather than 2,4-D). As an example, label-consistent application of metsulfuron methyl (without a surfactant) poses virtually no toxic threat to aquatic wildlife, including amphibians, fish, or macro invertebrates or to those resident birds and mammals that may be associated with riparian or aquatic systems. The use of alternate chemicals, such as metsulfuron methyl, is advocated only in those instances where effective control can be gained by the alternate compounds (i.e., significant sacrifices in weed control efficacy not desirable).

Consistent and effective spot treatment of noxious weeds would sharply limit the development and/or influence of weed populations in aquatic and associated riparian communities. Weeds on bank and floodplain features contribute to the instability of bank and incise walls by suppressing vegetation that provides effective erosion resistance. Left unattended, weeds would likely assume a primary role in aggravated bank and channel erosion, disrupting channel stability, and degrading conditions conducive to the support of aquatic organisms (e.g., unstable bed substrate, decreasing depths, increasing and more widely fluctuating water temperatures). Woody riparian growth normally associated with properly functioning aquatic and riparian communities (e.g. chokecherry, dogwood, willow, cottonwood regeneration) is susceptible to damage by these herbicides. Because riparian woody growth is an integral feature of good condition riparian and aquatic habitats, efforts should be taken to avoid (i.e. using mechanical control) or minimize involvement and damage to woody riparian shrubs and tree regeneration.

*Environmental Consequences of the No Action Alternative:* It is assumed that vegetation on these sites would be treated mechanically, and there would be no potential for direct adverse impacts related to chemical exposure. However, less effective forms of control would have the tendency to allow further weed proliferation that would ultimately necessitate broader scale treatment, perhaps with stronger, more persistent herbicides. More aggressive weed control

strategies would dramatically increase the likelihood that aquatic communities would be exposed, at the very least, to elevated herbicide levels. Weed proliferation in channel systems supporting aquatic habitats would impoverish riparian character and compromise channel function, virtually eliminating any short term prospect for improving riparian or aquatic conditions.

*Mitigation:*

--In those situations where higher order aquatic habitats are involved (as listed in Affected Environment section above) or in areas that might be expected to contribute to these aquatic habitats, alternate herbicides that are less toxic to aquatic organisms should be used (e.g., metsulfuron methyl rather than 2,4-D). Label consistent application of metsulfuron methyl poses virtually no toxic threat to aquatic wildlife, including amphibians, fish, or macro invertebrates or to those resident birds and mammals that may be associated with riparian or aquatic systems. The use of alternate chemicals, such as metsulfuron methyl, is advocated only in those instances where targeted weeds are effectively controlled by the alternate compounds.

--See also mitigation and stipulations identified in the proposed action.

*Finding on the Public Land Health Standard for plant and animal communities* (partial, see also Vegetation and Wildlife, Terrestrial): Overall aquatic habitat conditions within the Resource Area are generally meeting or moving toward meeting Standard 3. The proposed action would complement the meeting of this standard by minimizing occupation of aquatic habitats by noxious weeds and reducing the adverse influences of these weeds on riparian and channel functions. Safeguards incorporated within the proposed action would prevent aquatic organisms from being exposed to harmful levels of chemical such that weed control would have no effective influence on the demographics or distribution of aquatic organisms in the White River Resource Area.

The no action alternative may aggravate the dissemination of noxious weed seeds throughout a watershed and allow for increasing establishment and expression of undesirable vegetation forms in riparian and aquatic communities. Over time, this alternative would promote a situation where increasingly large landscape parcels would fail to meet this standard and increase the risk of aquatic communities becoming exposed to damaging levels of herbicide.

**WILDLIFE, TERRESTRIAL** (includes a finding on Standard 3)

*Affected Environment:* The Resource Area supports a season long use by big game, sage and blue grouse, as well as a diverse assemblage of non-game birds and mammals. Importantly, animal use associated with the late spring through early fall periods (at least) are in many ways tied to the availability, condition, and form of herbaceous and woody broadleaf vegetation as a component of cover and/or forage.

Well-distributed supplies of broadleaf forage are important to big game for prolonging adequate nutritional planes during the winter (deciduous browse) and sustaining high nutritional levels during spring recovery, the reproductive period, and fat accumulation for winter (primarily succulent herbaceous forms).

Nongame and small game populations are typically more abundant and diverse in shrub and woodland communities with well-developed herbaceous understories and woody canopies. These small mammal and bird populations are important prey items for all raptors found in the area, and are integral with the maintenance of high levels of community diversity.

*Environmental Consequences of the Proposed Action:* Salt formulations of picloram (e.g., Tordon 22K) are slightly to practically non-toxic to mammals and birds; 2,4-D esters are moderately toxic to birds and mammals. Owing to these chemicals' relatively nontoxic character, the fact that the weeds possess no attraction to wildlife as forage and cover, and because treatment areas would be small, dispersed, and generally associated with development features and concentrated human activity, it is inconceivable that terrestrial animals would be exposed to potentially damaging levels of herbicide.

Summer spot-control activities would be short term, localized and widely dispersed and do not represent activity levels that would have any meaningful influence on the use of sensitive habitats and/or reproductive functions of big game. Because nongame and small game mammal and bird populations tend to be more abundant and diverse as vegetation volume and structural complexity increase, the likelihood of control activities substantially involving reproductive habitats or functions of nongame and small game wildlife is low (i.e., most control confined to roadsides, recently reclaimed pipeline right-of-ways, etc.). Short duration and localized herbicide applications or mechanical removal activities during early to mid-summer may cause temporary displacement of adult animals from adjacent habitats, but these episodes would have no reasonable probability of adversely affecting local reproductive efforts or recruitment.

The capacity for rapid expansion and domination of native plant communities by noxious weeds poses a serious short and long term threat to virtually all the area's wildlife--the severity and scope of which hinges on timely containment and effective long-term control of current infestations. Important seasonal nutritional demands of big game, grouse, and nongame mammals and birds are, to a large degree, directly or indirectly satisfied by broadleaf forbs and shrubs--components of native rangeland most susceptible to decline in weed-dominated landscapes. Because these weeds have little, if any, functional forage or cover value and suppress native vegetation by dominating sites of infestation, localized and temporary control activities are viewed as a desirable trade-off in preventing further seed dissemination and continued expansion of weed-related influences. Although chemical treatment would suppress or destroy desirable broadleaf vegetation interspersed with weeds, timely control of small or confined infestations would ultimately benefit all wildlife values by minimizing the extent of subsequent herbicide treatment and maintaining the diversity and productivity of adjacent rangeland. Isolated and small-scale mortality of desirable upland vegetation and reductions in cover and forage bases would be insignificant at any scale.

*Environmental Consequences of the No Action Alternative:* Targeted noxious weeds provide no wildlife cover or forage values and, left unattended, dominate sites of infestation by suppressing successful reproduction and establishment of native vegetation. Isolated noxious weed infestations, although not now exerting any marked influence on adjacent rangeland

communities, represent potential for exponential spread and becoming an influential landscape component.

Unabated, the spread of these weeds across the landscape would eventually necessitate broader scale herbicide application that would involve more severe wildlife concessions manifested by more extensive and longer term losses of forage and cover provided by broadleaf woody and herbaceous vegetation and increasingly expansive and intensive control activity. Eliminating this threat while the weed is generally confined to inconsequential acreage is vastly superior to the alternative of widespread herbicide application across the landscape and its functional wildlife habitats.

*Mitigation:* Mitigation and stipulations integral with the proposed action.

*Finding on the Public Land Health Standard for plant and animal communities* (partial, see also Vegetation and Wildlife, Aquatic): Currently, Standard 3 is being met broadly across the Resource Area. Resident wildlife populations are appropriate to the region and there are no known instances where population viability is in question. The extent and distribution of suitable habitat is generally stable and consistent with landscape capability. Recognizing the progressive deterioration of rangeland and aquatic habitats attributable to the proliferation of noxious weeds, a prominent indicator for determining Public Land health, the BLM is aggressive in pursuing management that minimizes noxious weed expression in the overall plant community. The proposed action complements this goal and, as mitigated, has appropriate safeguards that would effectively avoid those adverse influences chemical exposure may have on individual animals, thereby maintaining a situation where the standard is met through time. Conversely, the no action alternative would promote incremental increases in acreage supporting weed monocultures, and over time, increasingly large landscape parcels would fail to meet this standard.

**OTHER NON-CRITICAL ELEMENTS:** For the following elements, those brought forward for analysis will be formatted as shown above.

| Non-Critical Element      | NA or Not Present | Applicable or Present, No Impact | Applicable & Present and Brought Forward for Analysis |
|---------------------------|-------------------|----------------------------------|---|
| Access and Transportation |                   | X                                |   |
| Cadastral Survey          | X                 |                                  |   |
| Fire Management           | X                 |                                  |   |
| Forest Management         | X                 |                                  |   |
| Geology and Minerals      | X                 |                                  |   |
| Hydrology/Water Rights    |                   | X                                |   |
| Law Enforcement           |                   | X                                |   |
| Paleontology              | X                 |                                  |   |
| Rangeland Management      |                   |                                  | X   |
| Realty Authorizations     | X                 |                                  |   |
| Recreation                |                   | X                                |   |
| Socio-Economics           |                   | X                                |   |

| Non-Critical Element | NA or Not Present | Applicable or Present, No Impact | Applicable & Present and Brought Forward for Analysis |
|----------------------|-------------------|----------------------------------|---|
| Visual Resources     | X                 |                                  |   |
| Wild Horses          |                   |                                  | X   |

## RANGELAND MANAGEMENT

*Affected Environment:* The proposed project area contains numerous grazing allotments, grazed primarily by cattle, during various times of the year.

*Environmental Consequences of the Proposed Action:* Controlling noxious weeds and preventing their spread to plant communities on which livestock forage is produced, is critical to maintaining the viability of the dependant livestock operations. With spot weed control the amount of chemical used on any site would not affect livestock for two reasons, one the small area of control and secondly the amount of forage on these sited is highly limited.

*Environmental Consequences of the No Action Alternative:* Impacts to rangeland management from failing to control noxious weeds include decreased forage production and associated red meat production, difficulties in maintaining livestock distribution, and increased costs of weed control.

*Mitigation:* None

## WILD HORSES

*Affected Environment:* The White River Field Office supports season long use by the Piceance-East Douglas wild horse herd on 158,347 acres of public land. The wild horse population relies primarily on grass plant species for the majority of the year. The exception to grass being the predominant source of nutrition for wild horses is seen during varying spans of time during the winter months when snowfall is exceptionally high or when snow becomes crusted to the point that wild horses are unable to paw and expose the dormant grasses. During these times wild horses will utilize browse plant species in addition to grasses. During the spring and summer months wild horse foals rely on herbaceous and woody vegetation for cover from the elements and protection against predation.

*Environmental Consequences of the Proposed Action:* Because the chemicals analyzed in this document appear to be relatively non-toxic; the treatment locations are dispersed and small in size; and the treatment sites are in locations associated with human activity wild horses are expected to be largely unaffected by the proposed action.

Wild horses may be temporarily displaced while the spraying activity is ongoing in the different areas. The temporary displacement does not would require mitigative actions.

The invasion of noxious weeds poses both an immediate and a long-term threat to the wild horse habitat, and thus to the wild horse herd. Weeds not only invade native grass and browse

colonies; specific noxious weeds are toxic to wild horses; particularly foals and older horses with decreased resistance. During periods of drought, when all plants contain less water, noxious weeds can increase in toxicity. At the very least these weeds contain little, or no, nutritional value. Although chemical treatment could hinder desirable vegetation where it is interspersed with weeds, the control of isolated weed communities would directly benefit the wild horse population by encouraging desirable plant species.

*Environmental Consequences of the No Action Alternative:* Noxious weeds would be left unattended. The weeds would increase in density and frequency. Wild horse forage needs would be negatively impacted as desirable, nutritious forage became less available. Competition between grazing and browse animal species would increase and would result in areas initially less weed-infested being heavily utilized by the competing users. These less weed-infested areas would be grazed beyond their capacity; an event that would encourage infestation of undesirable annual plant species and noxious weeds.

*Mitigation:* Mitigation measures are satisfactorily addresses in the EA within the proposed action.

**CUMULATIVE IMPACTS SUMMARY:** Proliferation of Noxious Weeds is a problem throughout the State of Colorado and the Western United States. Control of weeds by oil and gas operators will contribute to State-wide and Nation-wide efforts to reduce this proliferation and its impacts on the environment and natural resources.

**INTERDISCIPLINARY REVIEW:**

| <b>Name</b>     | <b>Title</b>                | <b>Area of Responsibility</b>                                    |
|-----------------|-----------------------------|--|
| Carol Hollowed  | Hydrologist                 | Air Quality  |
| Tamara Meagley  | NRS                         | Areas of Critical Environmental Concern                          |
| Tamara Meagley  | NRS                         | Threatened and Endangered Plant Species                          |
| Michael Selle   | Archaeologist               | Cultural Resources<br>Paleontological Resources                  |
| Robert Fowler   | Forester                    | Invasive, Non-Native Species                                     |
| Ed Hollowed     | Wildlife Biologist          | Migratory Birds  |
| Ed Hollowed     | Wildlife Biologist          | Threatened, Endangered and Sensitive Animal<br>Species, Wildlife |
| Marty O'Mara    | Hazmat Collateral           | Wastes, Hazardous or Solid                                       |
| Carol Hollowed  | Hydrologist                 | Water Quality, Surface and Ground<br>Hydrology and Water Rights  |
| Glen Klingler   | Biologist                   | Wetlands and Riparian Zones                                      |
| Chris Ham       | Recreation Planner          | Wilderness   |
| Carol Hollowed  | Hydrologist                 | Soils  |
| Robert Fowler   | Forester                    | Vegetation   |
| Ed Hollowed     | Wildlife Biologist          | Wildlife Terrestrial and Aquatic                                 |
| Chris Ham       | Recreation Planner          | Access and Transportation  |
| Ken Holsinger   | Natural Resource Specialist | Fire Management  |
| Robert Fowler   | Forester                    | Forest Management  |
| Paul Daggett    | Mining Engineer             | Geology and Minerals   |
| Robert Fowler   | Forester                    | Rangeland Management   |
| Penny Brown     | Realty Specialist           | Realty Authorizations  |
| Chris Ham       | Recreation Planner          | Recreation   |
| Max McCoy       | NRS                         | Visual Resources   |
| Valerie Dobrich | Natural Resource Specialist | Wild Horses  |

**Finding of No Significant Impact/Decision Record  
(FONSI/DR)**

**CO-110-2004-069-EA**

**FINDING OF NO SIGNIFICANT IMPACT (FONSI)/RATIONALE:** The environmental assessment and analyzing the environmental effects of the proposed action have been reviewed, resulting in a Finding of No Significant Impact on the human environment. Therefore, an environmental impact statement is not necessary to further analyze the environmental effects of the proposed action.

**DECISION/RATIONALE:** It is my decision to implement the proposed action for the control of Russian, Spotted and Diffuse Knapweed using cultivation and herbicidal control. This alternative is approved, subject to the mitigation, stipulations, and safeguard measures identified in proposed action and the Final Environmental Impact Statement Vegetation Treatment on BLM Lands in Thirteen Western States (1991). With these mitigation, stipulations and safeguard measures, the potential environmental impacts from implementing the proposed action are expected to be minimal. Control of noxious weeds is in compliance with the White River ROD/RMP which identifies an objective to "Manage noxious weeds so that they cause no further negative environmental, aesthetic or economic impact".

**NAME OF PREPARER:** Max McCoy

**NAME OF ENVIRONMENTAL COORDINATOR:** *CA Followed*

**SIGNATURE OF AUTHORIZED OFFICIAL:** *Kent E. Walter*  
Field Manager

**DATE SIGNED:** *4/20/04*

**ATTACHMENTS:** Map of proposed treatment sites.

# Location of Proposed Action CO-110-2004-069-EA

