



**Black Canyon Audubon Society Preliminary Ecological  
Observations and Recommendations for Montrose City  
Park along Marine Drive**

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## **Black Canyon Audubon Society Core Contributors**

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## **Property Description**

The site is an 18-acre parcel on the east side of Marine Drive and extends eastward onto the floodplain of the Uncompahgre River, but does not quite reach the river. The uplands portion of the site, the western portion, is rather flat near the road, but drops in elevation slightly in natural and man-made benches. Much of the upland is covered in grasses with some greasewood and rabbitbrush shrubs and Russian olive trees. Variable amounts of invasive cheatgrass, Russian knapweed, white top, and thistle are present.



A travel route eastward in the southwestern portion of the parcel passes over a culvert that allows water to flow in a northward direction in a probably man-made channel that includes cattails. With travel eastward, vegetation becomes lush. The water table must be quite shallow judging from the riparian species present. Along the south boundary of the parcel is a rather deep channel that runs from west to east into a pond. It contains a considerable amount of water that appears rather stagnant and has considerable algae growth, duckweed, and an unusual fern that grows in nitrogen rich environments as a companion to algae. The channel terminates in a small pond that has live water entering it from a well-kept pond on the adjacent property to the south.

A second pond is present adjacent to the east, most of which is within the parcel. An unidentified species of fish was observed in the western pond, which indicates that the ponds do not freeze entirely during the winter and that water quality suitable for fish life exists. Water from the western pond flows through a concrete culvert into a probably man-made channel that is quite wide. This channel flows northward into a pond on the northern side of the parcel. Within the channel, an invasive nightshade plant is growing profusely. A few young cottonwood trees were observed to the east that may or may not be within the parcel. Also observed in this eastern portion are several young tamarisks.

Some beaver activity has been noted, but only a small amount appears to be recent. Heavy tree, shrub, and other vegetative growth along with marshy ground make travel difficult, but not impossible to the east. Two ponds are present along the northern boundary of the parcel. They are shallow, but do not contain nearly the quantity of algae as the ponds on the south boundary. All of the ponds have good vantages for viewing from the west.

The northern edge of the property abuts partly developed land. Some heavy equipment is present and travel into the parcel by ATVs is evident from the north. Some dumping of refuse and dirt/rock has taken place along the northern portion of the property, but is not extensive. Two large areas of wild iris and milkweed have been identified in the west-central portion of the parcel.



## Assessments/Recommendations

### *Wetlands*

The wetland area has seen considerable modification in the past to enhance it for waterfowl habitat. The channels and ponds in the eastern portion of the parcel are productive wetlands. Wetland bird species observed include Great Blue Heron, Marsh Wren, Common Yellowthroat, Red-winged Blackbird, and Virginia Rail.

At present, it appears that the wetlands are functioning well and, despite algae, no immediate improvements are thought necessary. All of the ponds will eventually fill and cease to be ponds at some point in the future, so deepening them may be something to think about. It is thought that the water entering the system is largely groundwater, probably originating from flood irrigation throughout the valley. Storm water from nearby developments is not a regular source. Water probably fluctuates throughout the year on a cyclical basis that coincides roughly with the irrigation season, but is ameliorated by its being groundwater. Water flow is attenuated in to later seasons of the year because of it being slower moving groundwater. As a result, water probably continues to enter the system late in the fall and early winter and then, when the wetlands become dormant in the winter, is supplemented by rain and snow sufficient to last until replenished with the resumption of irrigation season.

Because water in the system is largely ground water, which would have a warmer temperature in the winter than surface water, the ponds may stay ice free longer and may not freeze as deeply as ponds that are fed by surface water. Although algae are not inhibiting the function of the wetlands, they are likely the result of nitrogen and phosphates being introduced by irrigation-sourced groundwater. It is recommended that the water be tested for nitrogen and phosphates and dissolved oxygen. Additional hydrological information could be obtained through NAPP-USGS infrared aerial photos of the site.

With the goal in mind of maintaining or improving habitat for birds and other wildlife it is recommended to remove all tamarisk as soon as possible.

### *Uplands*

Russian olive could be controlled with strategically pruning the larger trees by removing all branches below about 10 ft. above the ground. This will provide shade, nesting and resting habitat, and room for understory to grow. It is recommended to cut down the small trees and immediately treat the stumps with herbicide. One Siberian elm has been found on the site, which should be removed.



*Great Blue Heron  
and water fern  
(Azolla filiculoides -  
Azollaceae)*



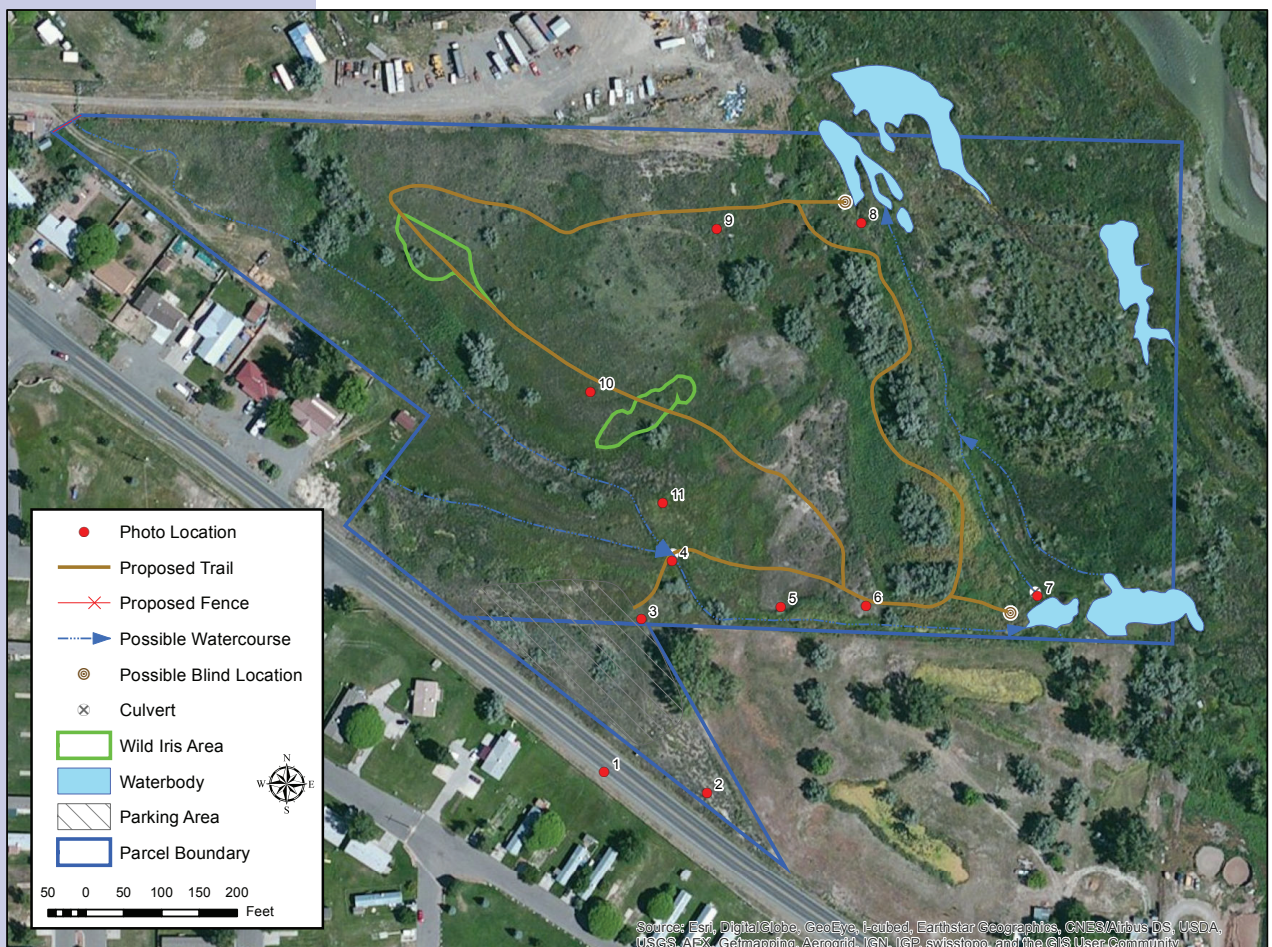
*Russian Olive Trees*

Further study is required to determine the best approach to enhancing tree and shrub communities that would support wildlife in the area. Monitoring beaver activity and their effects on the habitat are also recommended.

A number of invasive and noxious species need to be managed. Mechanical, chemical, and possibly biological control measures should be followed by establishment of native woody and herbaceous species. Some of the low-lying areas with Bulrush and cattails that have an understory of white top and thistle might have potential for control by diverting water into them, thereby promoting the wetland species/habitat and drowning the noxious weeds.

#### *Access and Trails*

The parcel is currently not fenced off, which has allowed unrestrained access by ATV users. In order to curb such activities fencing the area soon is suggested. Potential foot trails should provide as good access as possible with the least amount of disturbance to wildlife, particularly during bird nesting and brood-rearing season. Viewing blinds could provide areas of wildlife observation and minimize wildlife disturbance. Keeping the park free of dogs and allowing pedestrian access only would also minimize wildlife disturbance. BCAS has developed a map that indicates proposed trail routes as well as a parking area.





## Strengths, Opportunities, and Challenges

### *Strengths*

- A park focused on the natural environment will be an important addition to the diversity of open spaces managed by the Parks Department and available to the public.
- The parcel is in a relatively healthy natural state, not requiring extensive restoration.
- The parcel is city owned and will likely be managed by the existing Parks Department.
- Present use is minimal and not counter to use as a wildlife park.
- The parcel has its own source of water that maintains the diverse wildlife habitats and ecosystems.
- The mixture of drier uplands, wetter riparian, and wetlands areas provides a variety of habitats and ecosystems.
- A well-designed, sustainable trail system can enable high-quality visitor experiences with minimal impacts to wildlife and sensitive habitats.

### *Opportunities*

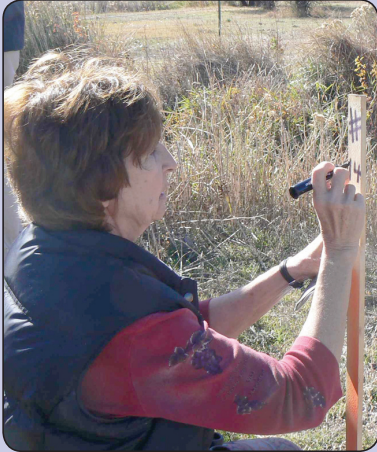
- Partnerships with conservation organizations can bring greater capabilities and resources to this project.
- A park managed for wildlife offers opportunities for environmental education partnerships with local schools and other organizations.
- Well-planned improvements will enhance wildlife habitat.
- This type of project will be attractive to other partners for development and management funding.
- Excellent wildlife and birdwatching opportunities can be a tourist draw for the community.

### *Challenges*

- A wildlife park will require a different management approach from other city parks.
- Invasive plant species will require management to maintain the health of the natural ecosystems.
- Increased use by the public needs to be managed to maintain the integrity of the habitat and to protect wildlife; the parcel has no current infrastructure to accommodate public use.
- Incompatible uses are currently taking place. For example, ATV use and unrestricted dog use can cause significant impacts to soils, vegetation, and wildlife.
- Water rights are unsecured. Adverse filing on water rights may result in change or loss of habitats.



*Mapping photo points*



*Marking photo point stake*

## Recommendations

### *Overall:*

- Develop parcel as a park managed for wildlife with improvements for recreational visitation in as unobtrusive a manner as possible given the variable sensitivity of the habitat.

### *Short-term:*

- File on water rights (city)
- Remove dumped items (city with BCAS assistance)
- Fence northwestern corner at a minimum, and perhaps more of the boundary (city)
- Continue plant, bird, animal, insect, and general habitat observations (BCAS)
- Continue photography from photo points (BCAS)
- Install protective signage (i.e., no motorized vehicles, no hunting, no dogs) (city)
- Neighbor contacts (city)

### *Long-term:*

- Overall park management plan that incorporates (city, BCAS, and consultants):
- Infrastructure development plan
  - > Hydrology plan to insure long-term viability of ecosystem
  - > Invasive species control/eradication plan
  - > Habitat restoration/improvement plan
- Develop park with parking, trails, observation blinds, and interpretive signs (city, BCAS, and others).



*West side pond*

Marine Road Park Plant Inventory as of November 2014 by Amanda Clements, Tony Hoag, Abbie Harrison, and Aysun Patterson

Species	Family	Common name	Origin	Growth Form	Pollinators	Weed of concern	Habitat value browsing	Human uses	Wetland	Habitat value hiding cover	Other wildlife use
Agropyron cristatum	Poaceae	crested wheatgrass	Nonnative	perennial grass	no	no	low	no	upland	low	
Asclepias speciosa	Asclepiadaceae	showy milkweed	Native	perennial forb	yes	no	no	ornamental	facultative	low	
Asparagus officinalis	Liliaceae	garden asparagus	Nonnative	perennial forb	yes	no	no	edible	facultative	low	
Azolla microphylla	Azollaceae	Mexican mosquito fern	native	annual forb	no	no	no	no	obligate	no	
Bassia scoparia	Chenopodiaceae	forage kochia	Nonnative	subshrub	no	no	medium	no	upland	yes	
Bromus tectorium	Poaceae	cheatgrass	Nonnative	annual grass	no	yes	no	no	upland	low	
Cardaria draba	Brassicaceae	whitetop	Nonnative	perennial forb	yes	yes	no	no	upland	low	
Centaurea sp.	Centaurea repens	Russian knapweed	Nonnative	perennial forb	yes	yes	no	no	upland	low	
Chenopodium album	Chenopodiaceae	lamb's quarter	Nonnative	annual forb	no	no	no	edible	facultative	low	
Chrysothamnus nauseosus	Asteraceae	rabbitbrush	Native	shrub	yes	no	medium	baskets, dye, chewing gum, tea, rubber, ornamental	upland	moderate	
Cirsium arvense	Asteraceae	Canada thistle	Nonnative	perennial forb	yes	yes	no	medicinal	facultative upland	low	
Convolvulus arvensis	Convolvulaceae	field bindweed	Nonnative	perennial forb	yes	yes	no	medicinal	upland	low	
Cynoglossum officinale	Boraginaceae	houndstongue	Nonnative	perennial forb	yes	yes	no	medicinal	facultative upland	low	
Elaeagnus angustifolia	Elaeagnaceae	Russian olive	Nonnative	tree	yes	yes	no	ornamental	facultative	high	
Hippochaete laevigata	Equisitaceae	scouringrush horsetail	native	perennial herb	no	no	no	scouring, polishing, medicinal	obligate	low	
Iris missouriensis	Iridaceae	Rocky Mountain iris	native	perennial forb	yes	no	no	ornamental	facultative wetland	low	
Juncus sp.	Juncaceae	rush	native	perennial herb	no	no	no	baskets, tying, thatch,	obligate	low	
Lactuca serriola	Asteraceae	prickly lettuce	Nonnative	annual forb	yes	no	no	edible, medicinal	facultative upland	low	
Lemna minor	Lemnaceae	duckweed	native	perennial forb	no	no	no	edible, medicinal	obligate	no	
Lepidium perfoliatum	Brassicaceae	clasping pepperweed	Non-native	annual forb	yes	no	no	edible, medicinal	facultative upland	low	
Leymus cinereus	Poaceae	basin wildrye	native	perennial grass	no	no	low	no	facultative	moderate	

Species	Family	Common name	Origin	Growth Form	Pollinators	Weed of concern	Habitat value browsing	Human uses	Wetland	Habitat value hiding cover	Other wildlife use
Lonicera involucrata	Caprifoliaceae	honeysuckle	native	shrub	yes	no	low	no	facultative	high	berries for wildlife
Lonicera morrowii	Caprifoliaceae	honeysuckle	is this really here?								
Melilotus officinalis	Fabaceae	yellow sweet clover	Non-native	perennial forb	yes	no	medium	no	facultative upland	low	
Phleum pratense	Poaceae	timothy	Non-native	perennial grass	no	no	no	no	facultative upland	low	
Phragmites australis	Poaceae	common reed	native/non-native	perennial grass	no	no/yes	no	arrows, weaving mats, carrying nets	facultative wetland	moderate	
Pleuraphis jamesii	Poaceae	James' galleta	native	perennial grass	no	no	no	no	upland	low	
Poa pratensis - Poaceae	Poaceae	Kentucky bluegrass	native/nonnative	perennial grass	no	no	no	lawn grass	facultative	low	
Populus sp. - Salicaceae	Salicaceae	cottonwood	native	tree	no	no	medium	shade tree	not listed	high	
Rosa woodsii - Rosaceae	Rosaceae	Woods' rose	native	shrub	yes	no	medium	ornamental, food, medicine, ceremonial	facultative wetland	mod	berries for wildlife
Salix alba	Salicaceae	white willow	Non-native	tree	no	no	no	unknown	facultative wetland	high	
Salix exigua Salicaceae	Salicaceae	sandbar willow	native	shrub	no	no	medium	erosion control	facultative wetland	moderate	
Sarcobatus vermiculatus	Chenopodiaceae	black greasewood	native	shrub	no	no	low	hard wood for tools	facultative	moderate	
Sidalcea neomexicana	Malvaceae	New Mexican checkermallow	native	perennial forb	yes	no	no	edible, medicinal	facultative wetland	low	
Solanum dulcamara	Solanaceae	climbing nightshade	Non-native	perennial forb/vine	yes	no	no		facultative	low	berries eaten by wildlife
Taraxacum officinale	Asteraceae	common dandelion	native/nonnative	perennial forb	yes	no	no	edible, medicinal	facultative upland	low	
Thermopsis rhombifolia or montanum	Fabaceae	prairie thermopsis	native	perennial forb	yes	no	no	medicinal, ornamental	facultative	low	
Tragopogon dubius	Asteraceae	yellow salsify	Non-native	annual forb	yes	no	no	edible	upland	low	
Triglochin maritima	Juncaginaceae	seaside arrow grass	native	perennial grasslike	possible	no	no		obligate	low	
Typha latifolia	Typhaceae	cattail	native	perennial forb	no	no	no	edible, woven mats, cordage, boats	obligate	moderate	
Vulpia octoflora	Poaceae	six weeks fescue	native	annual grass	no	no	no		upland	low	



Species	Family	Common name	Origin	Growth Form	Pollinators	Weed of concern	Habitat value browsing	Human uses	Wetland	Habitat value hiding cover	Other wildlife use
Pascopyrum smithii	Poaceae	western wheatgrass	native	perennial grass	no	no	no	reclamation-erosion control	facultative	low	
Muhlenbergia asperifolia	Poaceae	scratchgrass	native	perennial grass	no	no	no	reclamation	facultative wetland	low	
Sporobolus airoides	Poaceae	alkali sacaton	native	perennial grass	no	no	no	no	facultative	low	
Schedonorus pratensis	Poaceae	meadow fescue	Non-native	perennial grass	no	no	no	no	facultative upland	low	
Phalaris arundinaceae	Poaceae	reed canarygrass	native (?)	perennial grass	no	no	no	erosion control, filter fields/nutrient uptake		moderate	
Salsola tragus	Chenopodiaceae	prickly Russian thistle	Non-native	annual forb	no	no	no		facultative upland	low	
Grindelia squarrosa	Asteraceae	curlycup gumweed	native	perennial forb	yes	no	no	medicinal, gum, brooms	facultative upland	low	
Apocynum cannabinum	Apocynaceae	Indianhemp	native	perennial forb	yes	no	no	fiber for cordage, clothing, medicinal, ceremonial, erosion control	facultative	low	
Ulmus pumila	Ulmaceae	Siberian elm	Non-native	tree	no	yes	no	ornamental	upland	high	
Glycyrrhiza lepidota	Fabaceae	American licorice	native	perennial forb	yes	no	no	medicinal	facultative	low	seeds
Clematis ligusticifolia-possibly the noxious invasive Clematis orientalis	Ranunculaceae	western white clematis	native	perennial vine	yes	no	low	medicinal, horse stimulant, erosion controlled ornamental	facultative	high	
Elytorgia repens	Poaceae	quackgrass	Non-native	perennial grass	no	yes	no	edible roots	facultative upland	low	
Veronica americana	Scrophulariaceae	American speedwell	native	perennial forb	yes	no	no	edible, medicinal	obligate	low	

## 41 Species of Birds Identified to Date

Pied-billed Grebe  
Canada Goose  
Mallard  
Great Blue Heron  
Sharp-shinned Hawk  
Red-tailed Hawk  
Virginia Rail  
Sandhill Crane  
Killdeer  
Rock Pigeon  
Eurasian Collared-Dove  
Mourning Dove  
Black-chinned Hummingbird  
Belted Kingfisher  
Northern Flicker  
Western Wood-Pewee  
Western Kingbird  
Western Scrub-Jay  
Black-billed Magpie  
Common Raven  
Northern Rough-winged Swallow  
Barn Swallow  
Cliff Swallow  
Mountain Chickadee  
White-breasted Nuthatch  
Marsh Wren  
Ruby-crowned Kinglet  
American Robin  
Gray Catbird  
European Starling  
Common Yellowthroat  
Yellow Warbler  
Yellow-rumped Warbler  
Spotted Towhee  
Song Sparrow  
Dark-eyed Junco  
Black-headed Grosbeak  
Red-winged Blackbird  
Brown-headed Cowbird  
Bullock's Oriole  
House Finch