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# Vegetation & Wildlife Habitat Existing Conditions

Hogan Pancost Property  
Boulder County, Colorado

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*prepared for:*

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## 1.0 Introduction

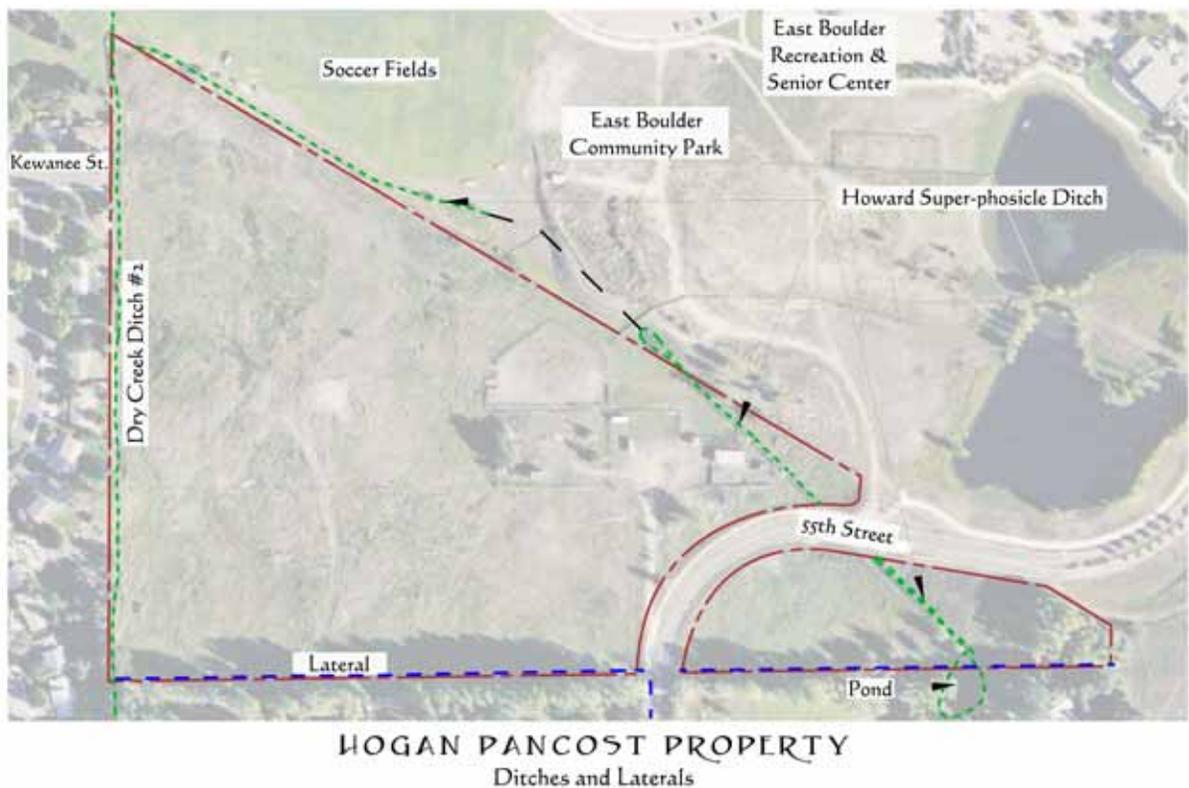
BCC, LLC has plans to develop the 22.17 acre Hogan Pancost property located in Boulder County, Colorado, southwest of the East Boulder Community Park (Figure 1). 55<sup>th</sup> Street bisects the property to create a 2.73 acre East Parcel and a 19.44 acre West Parcel. Specifically, the property is located in parts of Sections 3 and 4 of Township 1 North and Range 70 West in Boulder County (Figure 2).

Please note, Figures are located in Section 6.0 and Tables are in Section 7.0.

## 2.0 Environmental Setting

The West Parcel, which ranges from a high of 5,323 feet on the south to a low of 5,312 feet on the northwest, has a vertical relief of 11 feet. This parcel, which slopes and drains to the north, is characterized by numerous small swales 12-24 inches deep. The relatively flat East Parcel extends from a high of 5,325 feet on the southwest to a low of 5,319 feet on the north along 55<sup>th</sup> Street, and thus has a vertical relief of six feet and slopes and drains to the north. There are no streams on the project site. However, South Boulder Creek flows north 180 feet east of the East Parcel and a small irrigation water storage pond occurs on the property to the south and extends into the East Parcel.

Dry Creek Ditch #2 (Ditch) parallels the western boundary of the West Parcel, and the Howard Super-phosticle Ditch bisects the East Parcel, the east end of the West Parcel, and the northwest corner of the West Parcel. The CD Bodam Lateral (Lateral) occurs along the south boundary of the West Parcel.



The project site is undeveloped except for several small sheds associated with historic agricultural land uses. Numerous barbed wire steel fences partition the property into various sized lots. Historically, the parcel has had an agricultural land use which likely extends back to the settlement era in the late 1800's (Hogan 2008). Recent agricultural uses include flood irrigation to grow introduced agricultural grasses and livestock grazing.

### 3.0 Vegetation

The vegetation of the project area is characterized by 10.588 acres of a degraded agricultural seeding, 8.355 acres of Colorado noxious and other weeds, 0.324 acres of plains cottonwood trees (*Populus deltoides*) on the east end of the East Parcel, 1.957 acres of man-induced jurisdictional wetlands in and along active irrigation ditches, and 0.465 acres of non-jurisdictional wetlands due to flood irrigation activities (Table 1 and Figure 3). The upland pasture areas are best developed in swales just north of the Lateral where they have been historically flood irrigated, often with up to 24 inches of standing water (CD Bodam 2008) and receive subsurface water from the unlined Lateral. Please note, this Lateral has now been lined and the flood irrigation has been terminated. The swale areas are characterized by agricultural and native wetland and facultative plants such as meadow fescue (*Festuca pratensis*), redtop (*Agrostis gigantea*), Baltic rush (*Juncus arcticus subsp. ater*) and numerous upland species, including timothy (*Phleum pratense*), Kentucky bluegrass (*Poa pratensis*), chicory (*Cichorium intybus*), narrow-leaf birds-foot trefoil (*Lotus tenuis*), curly dock (*Rumex crispus*), and red clover (*Trifolium pratense*). The wetland vegetation occurring in some of the swales is due to the historic flood irrigation practices and will not persist in this area now that flood irrigation practices have been terminated. In fact, the lack of flood irrigation water during the 2008 growing season affected the vigor of these wetland plants (less robust and less flowering) and resulted in an increase in weedy plant cover.

Weedy areas occur in the slightly higher elevations of the project site where prairie dogs have created disturbed habitats. The weed areas have significantly increased in size due to the termination of flood irrigation and the increased prairie dog activity. These areas have a low vegetation cover composed of a diversity of Colorado state listed noxious weeds and other introduced plants. The most abundant weeds in the West Parcel include Scotch thistle (*Onopordum acanthium*), diffuse knapweed (*Acosta diffusa*), Canada thistle (*Cirsium arvense*), mullein (*Verbascum thapsus*), chicory, and field bindweed (*Convolvulus arvensis*). See Photo 4. The East Parcel has large stands of teasel (*Dipsacus fullonum*) intermixed with the wetland plants, as well as stands of Canada thistle and a few Russian olive (*Elaeagnus angustifolia*) trees.

Finally, a small stand of plains cottonwood trees occur in the eastern portion of project area. The understory is comprised of upland and facultative plants such as smooth brome (*Bromus inermis*), meadow fescue (*Festuca pratensis*), Canada goldenrod (*Solidago canadensis*), and goldenbanner (*Thermopsis divaricarpa*).

### 4.0 Wildlife

Figure 3 illustrates the vegetation and habitat types present on the project site. The native prairie which once dominated this site has been replaced by introduced agricultural communities, disturbed weedy areas, and structures. Flood irrigation practices and the seepage of water from irrigation ditches has resulted in the development of a small acreage of wetland and a small stand of plains cottonwood trees.

The disturbed areas do not provide habitat for most species of wildlife, but typically support those species which are habitat generalists. In the disturbed areas it is likely that the most represented wildlife is small rodents. Black-tailed prairie dogs (*Cynomys ludovicianus*) are present within the West Parcel. This area most likely has high numbers of deer mouse (*Peromyscus maniculatus*) and house mouse (*Mus musculus*). The East Parcel is more mesic, therefore it is expected that because of the better habitat, the prairie vole (*Microtus ochrogaster*) and/or meadow vole (*Microtus pennsylvanicus*) may be present. With the diverse prey base, predators and scavengers likely use the property. Raccoons (*Procyon lotor*), striped skunks (*Mephitis mephitis*), coyotes (*Canis latrans*), and red foxes (*Vulpes vulpes*) likely use both parcels for hunting and denning. Fox squirrels (*Sciurus niger*) use the trees on the southern side of the property for nesting and foraging.

Avian use and diversity associated with the property is also limited because of the current environmental condition. Non-native invasive species including European starlings (*Sturnus vulgaris*), English sparrows (*Passer domesticus*), and rock pigeons (*Columba livia*) are likely the most abundant species within the property. The trees south of the property boundary do provide suitable nesting habitat for warblers, vireos, orioles, etc. No raptor nests were observed within or near the property. Raptors including American kestrels (*Falco sparverius*), red-tailed hawks (*Buteo jamaicensis*), and Swainson's hawks (*Buteo swainsoni*) likely incorporate the property into their home ranges and use it for hunting.

In its current degraded state, most of the property does not offer useable habitat to most wildlife species except those capable of existing within highly modified landscapes. Since these species are generalists, they are capable of existing across a wide range of the landscape. Therefore, development of this property is likely not to have a negative impact on the local wildlife population.

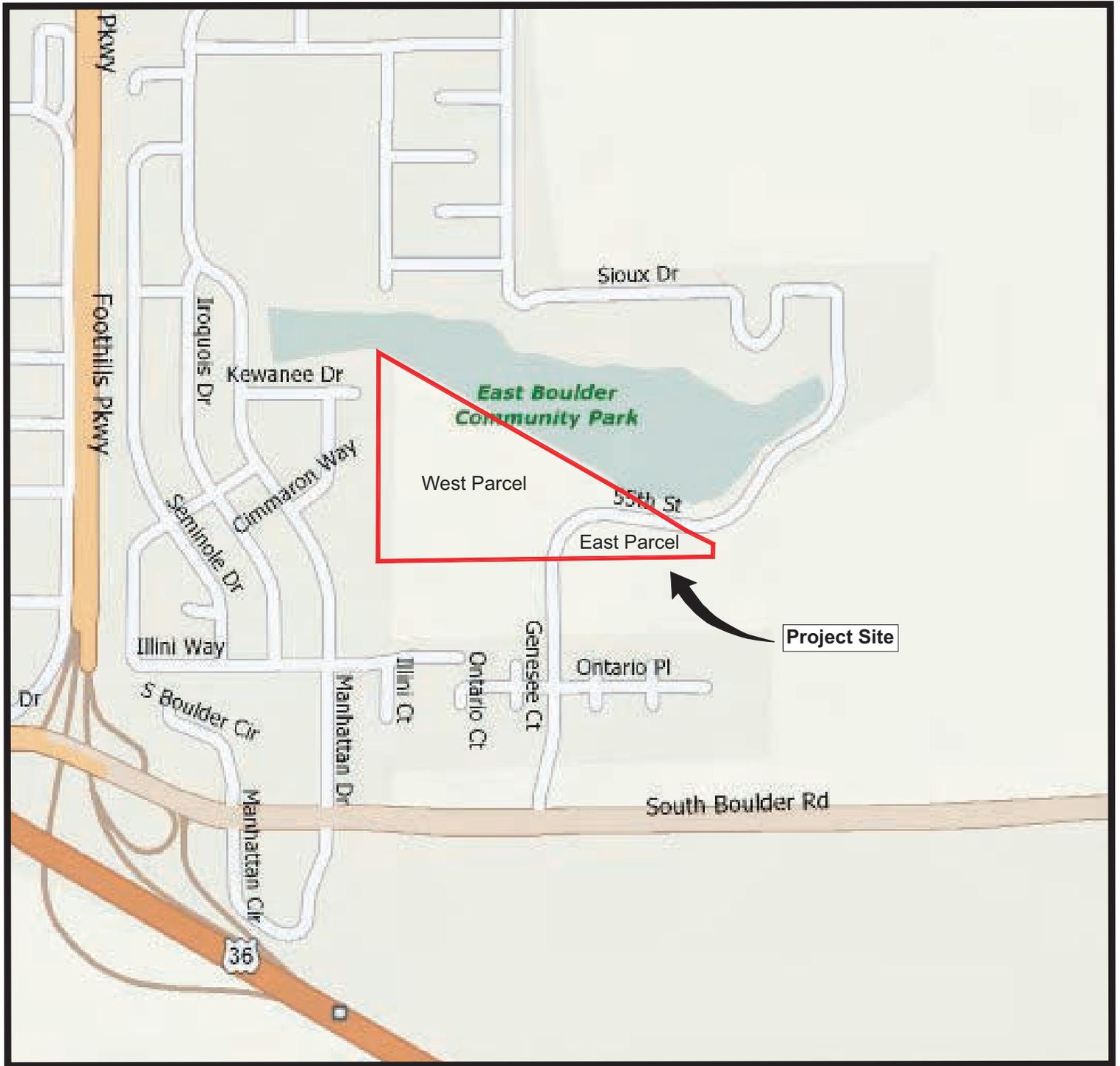
## 5.0 References

Bodam, CD. 2008. Personal Communication. Owner of property to south of project site.

US Fish and Wildlife Service. 1988. National List of Vascular Plant Species that Occur in Wetlands. 1988 List. Great Plains (R5) Region. US Fish and Wildlife Service Biological Report 88 (24). <http://www.nwi.fws.gov/>.

Weber, W.A. & R.C. Wittmann, 2001. Colorado Flora: Western Slope. Third Edition. University Press of Colorado, Boulder, Colorado.

6.0 Figures



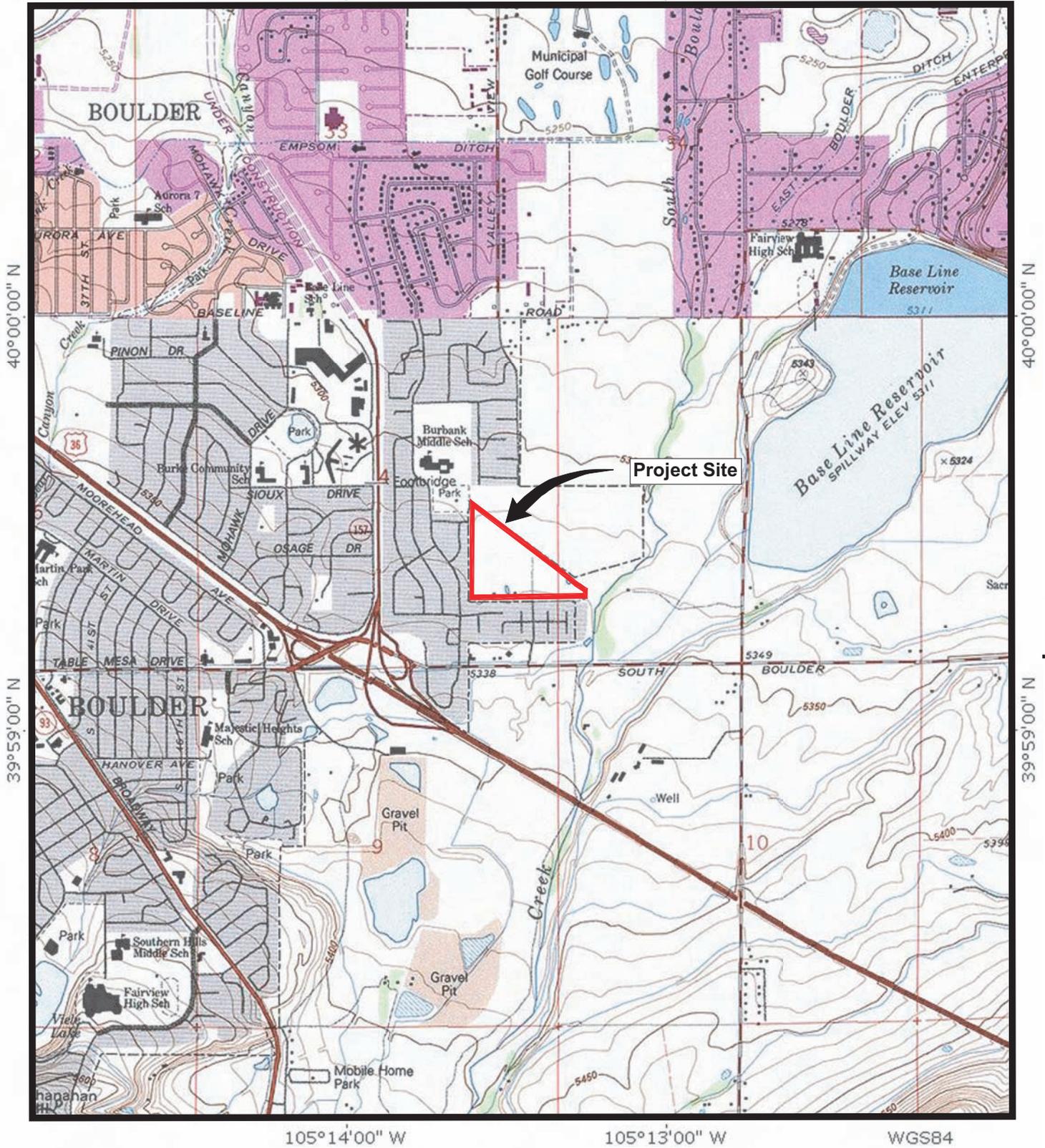
BASE: Map Data Mapquest 2008 NAVETQ or TeleAtlas

**FIGURE 1. Vicinity Map  
Hogan Pancost Property**



Scale 1" = 600'





BASE: USGS 7.5 Minute Louisville, Colorado Quadrangle  
 Photorevised: 1990

**FIGURE 2. Project Location Map  
 Hogan Pancost Property**

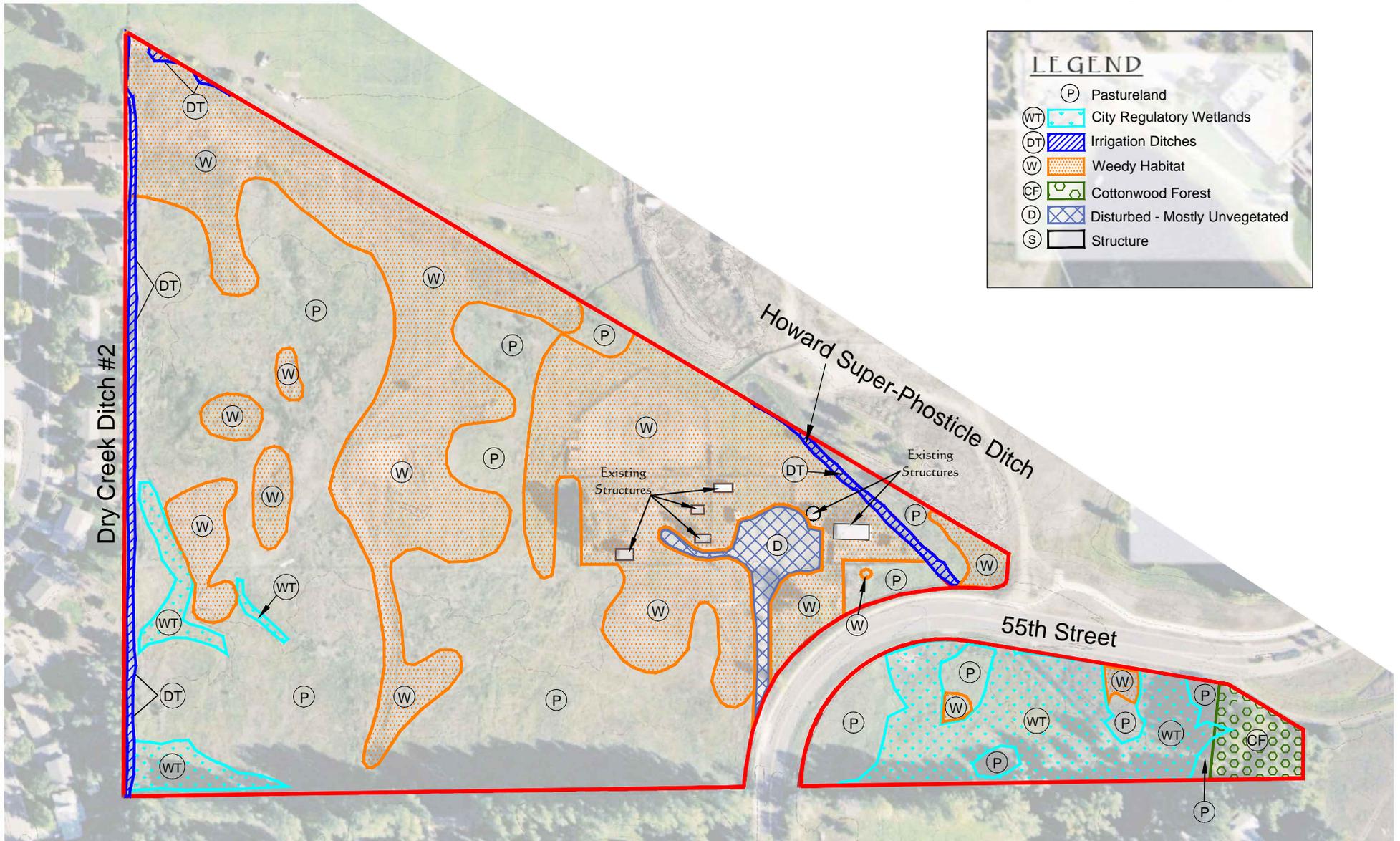


Map Location



Scale 1" = 2000'  
 Contour Interval = 10'

Figure 3. Vegetation Type Map



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# BOULDER CREEK COMMONS VEGETATION TYPE MAP

Scale: 1" = 200 ft  
 Contour Interval: 1 ft  
 Date: November 2010



## 7.0 Tables

**Table 1  
Vegetation Types  
Hogan Pancost Property**

<u>Vegetation Type</u>	<u>West Parcel (acres)</u>	<u>East Parcel (acres)</u>	<u>Total</u>	<u>% Total</u>
Pastureland	9.899	0.689	10.588	47.763
Weeds	8.260	0.095	8.355	37.689
Cottonwood Forest	----	0.324	0.324	1.462
Jurisdictional Wetlands	0.335 <sup>#</sup>	1.622	1.957	8.828
Non-jurisdictional Wetlands	0.465	----	0.465	2.098
<b>Subtotal</b>	<b>18.959</b>	<b>2.730</b>	<b>21.689</b>	<b>97.840</b>
 <u>Other Habitats/Features</u>				
Structures	0.058	----	0.058	0.261
Disturbed Areas	0.421	----	0.421	1.899
<b>Subtotal</b>	<b>0.479</b>	<b>----</b>	<b>0.479</b>	<b>2.160</b>
<b>Total</b>	<b>19.438</b>	<b>2.730</b>	<b>22.168</b>	<b>100.000</b>

# Please note, all the jurisdictional wetlands on the West Parcel are irrigation ditches.

TABLE 2  
 Plant Species List  
 Hogan-Pancost Property  
 Boulder, Colorado  
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<u>Scientific Name</u>	<u>Common Name</u>	<u>Family</u>	<u>Origin<sup>+</sup></u>	<u>Wetland Status<sup>++</sup></u>
<b>Trees</b>				
<i>Acer negundo</i>	Boxelder	Aceraceae	N	FACW*
<i>Elaeagnus angustifolia</i>	Russian olive	Eleagnaceae	I+	FAC
<i>Fraxinus pennsylvanica</i>	Green Ash	Oleaceae	I	FACW
<i>Populus deltoides</i>	Plains cottonwood	Salicaceae	N	FAC
<i>Salix fragilis</i>	Crack willow	Salicaceae	I	FAC
<i>Ulmus pumila</i>	Chinese elm	Ulmaceae	I	NL
<b>Shrubs/Subshrubs</b>				
<i>Prunus virginiana</i> var. <i>melanocarpa</i>	Native chokecherry	Rosaceae	N	FACU
<i>Rosa woodsii</i>	Wood rose	Rosaceae	N	FACU
<i>Salix exigua</i>	Sandbar willow	Salicaceae	N	OBL
<b>Perennial Graminoids</b>				
<i>Agrostis gigantea</i> (alba)	Redtop	Poaceae	I	FACW
<i>Alopecurus pratensis</i>	Meadow foxtail	Poaceae	I	FACW
<i>Andropogon gerardii</i>	Big bluestem	Poaceae	N	FAC-
<i>Bromus inermis</i>	Smooth brome	Poaceae	I	NL
<i>Carex bebbii</i>	Bebb sedge	Cyperaceae	N	OBL
<i>Carex emoryi</i>	Emory sedge	Cyperaceae	N	OBL
<i>Carex lanuginosa</i>	Woolly sedge	Cyperaceae	N	OBL
<i>Carex nebrascensis</i>	Nebraska sedge	Cyperaceae	N	OBL
<i>Carex praegracilis</i>	Clustered field sedge	Cyperaceae	N	FACW
<i>Carex vulpinoidea</i>	Fox sedge	Cyperaceae	N	OBL
<i>Catabrosa aquatica</i>	Brook grass	Poaceae	N	OBL
<i>Chondrosum gracile</i>	Blue grama	Poaceae	N	NL
<i>Dactylis glomerata</i>	Orchardgrass	Poaceae	I	FACU
<i>Eleocharis macrostachya</i> (= <i>E.</i> <i>palustris</i> )	Creeping spikerush	Cyperaceae	N	OBL
<i>Elytrigia repens</i>	Quackgrass	Poaceae	I+	FAC
<i>Festuca pratensis</i>	Meadow fescue	Poaceae	I	FAC
<i>Glyceria grandis</i> (maxima)	American mannagrass	Poaceae	N	OBL
<i>Juncus arcticus</i> subsp. <i>ater</i> (= <i>J.</i> <i>balticus</i> )	Baltic rush	Juncaceae	N	OBL
<i>Juncus articulatus</i>	Jointed rush	Juncaceae	I	NO, (OBL)
<i>Juncus tennis</i>	Slender rush	Juncaceae	N	FAC
<i>Panicum virgatum</i>	Switchgrass	Poaceae	N	FAC

TABLE 2  
 Plant Species List  
 Hogan-Pancost Property  
 Boulder, Colorado  
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<u>Scientific Name</u>	<u>Common Name</u>	<u>Family</u>	<u>Origin<sup>+</sup></u>	<u>Wetland Status<sup>++</sup></u>
<i>Pascopyrum smithii</i> ( <i>Agropyron</i> )	Western wheatgrass	Poaceae	N	FACU
<i>Phalaris arundinacea</i>	Reed Canarygrass	Poaceae	[N]	FACW+
<i>Phleum pratense</i>	Timothy	Poaceae	I	FACU
<i>Poa pratensis</i>	Kentucky bluegrass	Poaceae	I	FACU
<i>Scirpus acutus</i>	Hardstem bulrush	Cyperaceae	N	OBL
<i>Sorghastrum nutans</i>	Indian grass	Poaceae	N	FACU
<i>Typha latifolia</i>	Broadleaf cattail	Typhaceae	N	OBL
<b>Perennial Forbs</b>				
<i>Achillea lanulosa</i>	Yarrow	Asteraceae	N	FACU
<i>Ambrosia psilostachya</i>	Naked spike ragweed	Asteraceae	N	FAC
<i>Asclepias speciosa</i>	Showy milkweed	Asclepiadaceae	N	FAC
<i>Asparagus officinalis</i>	Asparagus	Liliaceae	I	FACU-
<i>Aster lanceolatus ssp.</i> <i>hesperius</i>	Siskiyou aster	Asteraceae	N	OBL
<i>Barbarea orthoceras</i>	Wintercress	Brassicaceae	N	OBL
<i>Cardaria draba</i>	Hoary cress; Whitetop	Brassicaceae	I+	
<i>Cichorium intybus</i>	Chicory	Asteraceae	I+	NL
<i>Cirsium arvense (Breea)</i>	Canada thistle	Asteraceae	I+	FACU
<i>Convolvulus arvensis</i>	Field bindweed	Convolvulaceae	I+	NL
<i>Daucus carota</i>	Wild carrot	Apiaceae	I	
<i>Epilobium ciliatum</i>	Northern willowherb	Onagraceae	N	OBL
<i>Erigeron flagellaris</i>	Running fleabane	Asteraceae	N	FAC
<i>Gaura mollis (parviflora)</i>	Velvetleaf butterfly weed	Onagraceae	N	NI
<i>Geum macrophyllum var.</i> <i>perincisum</i>	Largeleaf avens	Rosaceae	N	OBL
<i>Glycyrrhiza lepidota</i>	Wild licorice	Fabaceae	N	FACU
<i>Grindelia squarrosa</i>	Sticky gumweed	Asteraceae	N	FACU-
<i>Heterotheca villosa</i>	Golden aster	Asteraceae	N	NL
<i>Leucanthemum vulgare</i> ( <i>Chrysanthemum</i> <i>leucanthemum</i> )	Ox-eye daisy	Asteraceae	I+	NL
<i>Linaria genistifolia subsp.</i> <i>dalmatica (L. dalmatica)</i>	Dalmatian toadflax	Scrophulariaceae	I+	NL
<i>Lotus tenuis</i>	Narrow-leaf birds-foot trefoil	Fabaceae	I	NL
<i>Malva neglecta</i>	Cheeseweed	Malvaceae	I	NL
<i>Marrubium vulgare</i>	Horehound	Lamiaceae	I	NL
<i>Mentha arvensis</i>	Field mint	Lamiaceae	N	FACW

**TABLE 2**  
**Plant Species List**  
**Hogan-Pancost Property**  
**Boulder, Colorado**  
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<u>Scientific Name</u>	<u>Common Name</u>	<u>Family</u>	<u>Origin<sup>+</sup></u>	<u>Wetland Status<sup>++</sup></u>
<i>Persicaria mphibian var. stipulaceum</i>	Water smartweed	Polygonaceae	N	OBL
<i>Plantago lanceolata</i>	English plantain	Plantaginaceae	I	FAC
<i>Plantago major</i>	Common plantain	Plantaginaceae	I	FAC
<i>Potentilla recta</i>	Sulphur cinquefoil	Rosaceae	I+	
<i>Ranunculus macounii</i>	Macoun's buttercup	Ranunculaceae	N	OBL
<i>Rumex crispus</i>	Curly dock	Polygonaceae	I	FACW
<i>Securigera varia</i>	Crown vetch	Fabaceae	I	NL
<i>Solidago canadensis</i>	Canada goldenrod	Asteraceae	N	FACU
<i>Tanacetum vulgare</i>	Common tansy	Asteraceae	I+	
<i>Thermopsis divaricarpa</i>	Spreading goldenbanner	Fabaceae	N	NL
<i>Trifolium pratense</i>	Red clover	Fabaceae	I	FACU
<i>Trifolium repens</i>	White Dutch clover	Fabaceae	I	FACU
<i>Verbena hastata</i>	Blue vervain	Verbenaceae	N	FACW
<b>Ferns and Fern Allies</b>				
<i>Equisetum arvense</i>	Field horsetail	Equisetaceae	N	FAC
<i>Hippochaete hyemalis</i>	Scouring rush	Equisetaceae	N	FACW
<b>Cacti</b>				
<i>Opuntia polyacantha</i>	Prickly pear	Cactaceae	N	NL
<b>Annual/Biennial Forbs</b>				
<i>Acosta diffusa (Centaurea)</i>	Diffuse knapweed	Asteraceae	I+	NL
<i>Alyssum desertorum</i>	Desert madwort	Brassicaceae	I	
<i>Amaranthus retroflexus</i>	Red-root pigweed	Amaranthaceae	I	FACU
<i>Arctium minus</i>	Common burdock	Asteraceae	I+	NL
<i>Bidens cernua</i>	Nodding beggar tick	Asteraceae	N	OBL
<i>Camelina microcarpa</i>	False flax	Brassicaceae	I	NL
<i>Carduus nutans ssp. macrolepis</i>	Musk thistle	Asteraceae	I+	NL
<i>Chenopodium album</i>	Lambs quarters	Chenopodiaceae	I	FAC
<i>Conyza canadensis</i>	Canada horseweed	Asteraceae	I	FACU-
<i>Cynoglossum officinale</i>	Houndstongue	Boraginaceae	I+	NL
<i>Dipsacus fullonum (D. sylvestris)</i>	Common Teasel	Dipsacaceae	I+	
<i>Erodium cicutarium</i>	Redstem filaree	Geraniaceae	I+	NL
<i>Impatiens capensis</i>	Jewelweed	Balsaminaceae	N	FACW
<i>Lactuca serriola</i>	Prickly lettuce	Asteraceae	I	FAC

TABLE 2  
 Plant Species List  
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 Boulder, Colorado  
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<u>Scientific Name</u>	<u>Common Name</u>	<u>Family</u>	<u>Origin<sup>+</sup></u>	<u>Wetland Status<sup>++</sup></u>
<i>Oenothera villosa</i>	Hairy evening primrose	Onagraceae	N	FAC
<i>Onopordum acanthium</i>	Scotch thistle	Asteraceae	I+	NL
<i>Persicaria lapathifolia</i>	Curlytop knotweed	Polygonaceae	N	OBL
<i>Persicaria pensylvanica</i>	Pennsylvania smartweed	Polygonaceae	N	FACW+
<i>Rorippa sphaerocarpa</i>	Roundfruit yellowcress	Brassicaceae	N	NO
<i>Sisymbrium altissimum</i>	Tumble mustard	Brassicaceae	I	FACU
<i>Thlaspi arvense</i>	Pennycress	Brassicaceae	I	NI
<i>Tragopogon dubius</i>	Salsify	Asteraceae	I	NL
<i>Verbascum thapsus</i>	Common mullein	Scrophulariaceae	I+	NL
<b>Annual Graminoids</b>				
<i>Anisantha tectorum (Bromus)</i>	Cheatgrass; Downy brome	Poaceae	I+	NL

<sup>+</sup> Origin

N = Native; [N] = Naturalized, native?  
 I = Introduced  
 I+ = Colorado State Noxious Weed

<sup>++</sup> Wetland Status (R5 Great Plains Region)

OBL = Obligate Wetland  
 FACW = Facultative Wetland  
 FAC = Facultative  
 FACU = Facultative Upland  
 UPL = Obligate Upland  
 NL = Not listed on USFWS Regional Hydrophyte List  
 NI = No Indicator (insufficient information)  
 NO = Non-occurrence (species does not occur in this region)  
 \* = tentative assignment  
 + = frequency toward the higher end of the category  
 - = frequency toward the lower end of the category