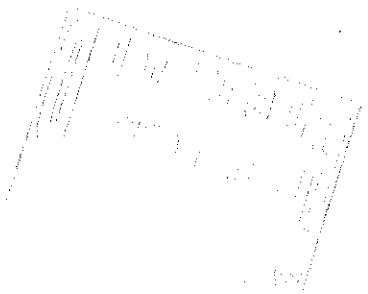

# Floristic Inventory and Habitat Assessment

## for the

# Clear Creek Corridor

## Coralville, Iowa

Prepared for:

City of Coralville
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January 1998

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***Conservation Design Forum***
**January 1998**

## Table of Contents

# Introduction

## Project Location

Clear Creek is a major watercourse that flows west-to-east across west-central Johnson County, Iowa. The creek ends in the City of Coralville near the Iowa City border, where it flows into the Iowa River. In general, the project site includes an approximately 3.5 mile-long section of Clear Creek, from Deer Creek Road on the west, to the Chicago, Rock Island, and Pacific Railroad near 4th Avenue (see Exhibit A). The northern and southern boundaries of the project area vary depending upon land ownership. In general, however, the "corridor" includes the adjacent lands within a 1/4 mile-distance of the creek channel.

## Statement of Purpose

This region of the Coralville/Iowa City area is undergoing rapid growth from residential and commercial development. The Clear Creek Corridor is one of the largest and richest remnant areas in all of Johnson County, providing habitat for dozens of uncommon or rare species in this region of the state. The purpose of this study is to collect baseline data on the plant communities and habitats across the project area, primarily from direct observations during a series of site visits. The information presented herein can be referenced by the City and used to assist in land use planning, so that the ongoing development can be planned to occur without compromising Iowa's native biodiversity. Indeed, it is expected that with careful planning and management the remnant heritage of Iowa can thrive as an incorporated amenity of the City of Coralville.

# Methods

## Background Document Review

Several documents were reviewed for initial site orientation and to familiarize ourselves with the general character of the project area. These documents include both the US Geological Survey (USGS) topographic map and the National Wetlands Inventory (NWI) map of the region, the US Department of Agriculture (USDA) soil survey of Johnson County, and aerial photographs taken in 1988 and 1997.

In addition, three other sources were referenced regarding the vegetation of Johnson County. These include *The Flora of Johnson County* (Thorne 1955), *Endangered and Threatened Plant and Animal Species* (Iowa Administrative Code 1994), and *The Vascular Plants of Iowa* (Eilers and Roosa 1994).

## Field Observations

Three visits to the site were conducted in order to collect information on the existing conditions across the project area. The method used to traverse the project area was simply to meander across the landscape so as to record the species encountered in all habitats and community types. Information gathered in the field included vegetation inventories, plant community descriptions and mapping, and notes concerning habitat quality and potential land use.

Floristic Quality Assessment

The overall floristic quality of the project area was determined through an analysis of the conservatism of the species appearing in the inventory (Wilhelm and Masters 1996). Conservatism is defined by the confidence one has about how restricted a species is to high-quality, remnant habitats (i.e., those natural areas with intact presettlement structure, composition, and processes). Native plants of a defined geographic region exhibit an observable range of conservatism and, therefore, each may be assigned a "coefficient of conservatism" (c value) from 0 to 10, "weedy" to "conservative."

The overall floristic quality of an area is determined through an analysis of the conservatism of the species appearing in an inventory, with the mean c or average coefficient of conservatism determined arithmetically from the species inventory. The floristic quality index (*FQI*) is a statistic derived by multiplying the mean c by the square root of the number of native species recorded. If a site has a large proportion of conservative plants, the mean c and *FQI* values will be higher. On the contrary, if a site has a large proportion of adventive and non-conservative native species, these values will be lower and imply that the area is degraded.

## Results and Discussion

Part A includes a summary of the background mapping information. The floristic inventory of the corridor is presented in Part B, and descriptions of the various plant communities and habitats are presented in Part C.

Part A Background Document Review

Exhibit B is a copy of the USGS topographic map of the site. The bluffs and ravines south of the creek are readily apparent. Also evident are the existing natural meanders of the Clear Creek waterway within the project area, with the exception of the western end along Deer Creek Road where the creek has been channelized.

Exhibit C is a copy of the NWI map that identifies several wetland habitats within the project area. The classification of these wetlands is presented in the table below along with their mapping symbol and description.

| Symbol | Definition |
|---|---|
| R2UBG | Riverine, lower perennial, unconsolidated bottom, intermittently exposed |
| R2UBGx | Riverine, lower perennial, unconsolidated bottom, intermittently exposed, excavated |
| R2USA | Riverine, lower perennial, unconsolidated shore, temporarily flooded |
| PABG | Palustrine, aquatic bed, intermittently exposed |
| PEMA | Palustrine, emergent, temporarily flooded |
| PEMC | Palustrine, emergent, seasonally flooded |
| PEMCd | Palustrine, emergent, seasonally flooded, partially drained/ditched |
| PEMF | Palustrine, emergent, semipermanently flooded |
| PFO1A | Palustrine, forested, broad-leaved deciduous, temporarily flooded |

| Symbol | Definition |
|---|---|
| PFO1C | Palustrine, forested, broad-leaved deciduous, seasonally flooded |

The riverine wetlands include Clear Creek and its significant tributaries. The palustrine wetlands include vegetated wetland habitats such as remnant depressions and artificial ponds. In general, NWI maps such as this are based primarily upon aerial photographic interpretation and can be used as a guide to locate likely regulatory wetlands. The specific location and characterization of any of these areas must be determined by field observation, and the NWI wetland borders may or may not circumscribe jurisdictional boundaries.

Exhibit D is a copy of the Johnson County soil survey map of the project area (USDA 1983). The majority of the soils across the project area are of either the Fayette-Downs association, located along the bluffs and ravines south of the creek, or of the Nodaway-Lawson-Waukee association, located in alluvial soils along Clear Creek. Other soil series found within the project area and comprising primarily agricultural lands are presented in the table below along with their mapping symbol.

| Symbol | Soil Series |
|---|---|
| 133 | Colo |
| 163 | Fayette |
| 220 | Nodaway |
| 293C3 | Chelsea-Lamont-Fayette |
| 453 | Tuskeego |
| 484 | Lawson |
| 520 | Coppock |
| 688 | Koszta |
| 729B | Nodaway-Arenzville |
| 778 | Sattre |
| 793 | Bertrand |
| 826 | Rowley |
| 1315 | Perks-Spillville |

Part B Floristic Inventory

Information on the vegetation and plant communities was gathered during three visits to the site, conducted on May 6–7, July 24–25, and on the 17th of December, 1997. A list of the plants recorded from across the project area is included in Appendix I. Also included with the species list is a summary of the floristic quality data. A total of 426 species were recorded, 338 of which are native (79.3%).

The floristic quality assessment data is based upon assigned values for the Chicago Region flora (Swink and Wilhelm 1994). Nevertheless, the use of this method of land assessment is generally applicable to the vegetation in east-central Iowa (i.e., the assigned c values for each native species is likely to be

the same or similar in these two regions). This being the case, the results indicate that a significant portion of the lands within the project area represent high-quality, remnant plant communities. As is discussed below, some areas (e.g., old fields) within the Corridor are highly-modified from their presettlement conditions and are dominated by non-native plants. Nevertheless, it is likely that less than 0.5% of the landscape across Johnson County, Iowa is as rich and diverse in native vegetation and remnant plant communities as the project area, as indicated by native mean c and *FQI* values of 4.4, and 81, respectively. Although based upon visits to the site during just one growing season, it is likely that this inventory represents no less than three-quarters of the vegetation within the project area, and that contemporary impressions of floristic quality will not change significantly with subsequent botanical inventories.

According to the Iowa Administrative Code (1994), two of the plants listed in Appendix I are classified as "special concern species." These include smooth clustered sedge (*Carex aggregata*), and narrow-leaved oval sedge (*Carex tenera*). In addition, several species are noted as being "infrequent" or "rare" to either Johnson County (Thorne 1955) and/or east-central Iowa (Eilers and Roosa 1994). These "special status species" are presented in Appendix II, and represent conservative native plants typically found in relatively intact, remnant plant communities.

Part C Plant Communities and Habitats

Several plant communities and habitat types exist within the project area. These include both natural, remnant areas as well as modified, cultural landscapes. Each of these areas are described below, and their locations depicted on Exhibits E through H. Several photographs taken during the site visits are included at the back of the report.

NATURAL PLANT COMMUNITIES/HABITATS:

**Wooded Bluffs and Ravines**

These areas comprise, perhaps, the most significant portions of the project site in terms of remnant, natural character. In general, the vegetation can be characterized as oak-dominated woodland. Other plants relatively common across these bluffs and ravines include the following:

> *Acer saccharum, Allium canadense, Arisaema triphyllum, Asarum canadense, Aster sagittifolius, Carex cephalophora, C. grisea, C. hirtifolia, C. pensylvanica, Carya cordiformis, Circaea lutetiana* var. *canadensis, Cystopteris fragilis* var. *protrusa, Eupatorium rugosum, Festuca obtusa, Galium concinnum, Geum canadense, Osmorhiza longistylis, Ostrya virginiana, Parthenocissus quinquefolia, Podophyllum peltatum, Polygonatum canaliculatum, Polygonum virginianum, Prunus americana, Rhus radicans, Smilacina racemosa, Sphenopholis intermedia, Tilia americana, and Viola sororia.*

Across some of the less-disturbed areas of these woods the common Spring flora includes such plants as rue anemone (*Anemonella thalictroides*), spring beauty, (*Claytonia virginica*), toothwort (*Dentaria laciniata*), Dutchman's breeches (*Dicentra cucullaria*), wild geranium (*Geranium maculatum*), sharp-lobed hepatica (*Hepatica acutiloba*), false rue anemone (*Isopyrum biternatum*), woodland phlox (*Phlox divaricata*), Jacob's ladder (*Polemonium reptans*), bloodroot (*Sanguinaria canadensis*), broad-leaved goldenrod (*Solidago flexicaulis*), and bellwort (*Uvularia grandiflora*).

Some plant species recorded from these woods that are considered to be infrequent to rare in this portion of Iowa include maidenhair fern (*Adiantum pedatum*), spikenard (*Aralia racemosa*), wood sandwort (*Arenaria lateriflora*), poke milkweed (*Asclepias exaltata*), blue cohosh (*Caulophyllum thalictroides*), shooting star (*Dodecatheon meadia*), spinulose shield fern (*Dryopteris spinulosa*), and snow trillium (*Trillium nivale*).

Unfortunately, portions of these bluffs and ravines are severely degraded and do not support a rich native flora as described above. Fire suppression, grazing, and the cultivation of adjacent lands have caused soil erosion, all of which have destabilized these slopes.

**Bottomland Woods and Terraces**

This plant community includes all of the woodland areas along Clear Creek that are prone to regular or occasional flooding. The common trees across these floodplain woods include box elder (*Acer negundo*), silver maple (*Acer saccharinum*), river birch (*Betula nigra*), hackberry (*Celtis occidentalis*), green ash (*Fraxinus pennsylvanica*), honey locust (*Gleditsia triacanthos*), black walnut (*Juglans nigra*), cottonwood (*Populus deltoides*), bur oak (*Quercus macrocarpa*), and American elm (*Ulmus americana*). Some of these trees represent fine examples of old-growth timber and include a number of specimen trees. The common understory vegetation in these woods includes the following:

> *Actinomeris alternifolia, Amphicarpaea bracteata* var. *comosa, Apios americana, Arisaema triphyllum, Asarum canadense, Aster ontarionis, Campanula americana, Carex radiata, Crataegus mollis, Cryptotaenia canadensis, Elymus villosus, Galium aparine, Hackelia virginiana, Hydrophyllum virginianum, Impatiens capensis, Laportea canadensis, Parthenocissus quinquefolia, Pilea pumila, Ranunculus septentrionalis, Rhus radicans, Ribes missouriense, Rudbeckia laciniata, Sanicula gregaria, Smilax tamnoides* var. *hispida, Urtica procera, Viola sororia*, and *Vitis riparia*.

As with the wooded bluffs, these bottomland woods and terraces suffer from fire suppression and grazing. In some areas, these "woodlands" are best characterized as thickets of silver maple, box elder, river birch, and sandbar willow (*Salix interior*). In addition, the ground cover is much disturbed in areas from excessive and erratic episodes of sediment-laden stormwater from upstream development and agriculture. Lastly, beaver activity, in particular east of Camp Cardinal Road, has caused severe damage to many of the trees.

**Ox-bows and Vegetated Wetlands**

These areas are located within the bottomland woods or adjacent agricultural lands along Clear Creek and include ox-bows or old meanders of the creek, woodland depressions, a marsh, and seeps along the bases of the bluffs. The ox-bow wetlands are best defined on the Greer Property, north of the creek, west of Camp Cardinal Road. These areas support sedge meadows dominated by blue joint grass (*Calamagrostis canadensis*) and various sedges (especially *Carex emoryi*), as well as forested wetland habitat dominated by river birch, rough-leaved dogwood (*Cornus drummondii*), and various willows (*Salix* spp.). A disturbed marsh located south of the JLS Property, east of Camp Cardinal Road, north of the creek is characterized by reed canary grass (*Phalaris arundinacea*) and cattails (*Typha* spp.).

In a few areas along the base of the bluffs are groundwater-discharge seeps and wetland depressions. In addition to many woodland species described above, these areas support a diverse native flora that

includes false nettle (*Boehmeria cylindrica*), bulbous cress (*Cardamine bulbosa*), common hop sedge (*Carex lupulina*), buttonbush (*Cephalanthus occidentalis*), black ash (*Fraxinus nigra*), bugle weed (*Lycopus virginicus*), sensitive fern (*Onoclea sensibilis*), arrow-leaved tear thumb (*Polygonum sagittatum*), cup plant (*Silphium perfoliatum*), and rough hedge nettle (*Stachys tenuifolia* var. *hispida*).

### Creek

The banks along Clear Creek are steep and severely eroded (see photographs). The soils vary from a sandy alluvium to silty clays that are prone to chronic flooding and disturbance, and under such conditions there is little if any vegetation of note within the stream. The same conditions apply to a few small tributaries that flow into the creek.

CULTURAL LANDSCAPES:

### Old-field Habitats and Pasture

Agricultural fields comprise most of the non-forested lands across the corridor. In general, these areas are dominated by Eurasian vegetation and have little in common with any presettlement plant communities. Most of these fields within the project area lie within the floodplain of Clear Creek and are regulatory wetlands. Woody plant succession has and continues to take place in some of these fields, resulting in weedy, depauperate "thickets." A few of these old fields represent artificially-filled land where soil and various debris have been deposited.

### Cultivated Land

A few areas of cultivated land exist within the project area as depicted on the exhibits. These are of note primarily because their continued use for row-crop agriculture will further diminish the water quality and habitat stability of adjacent habitats within the corridor and beyond.

### Artificial Waterways

Several artificial tributaries flow into the creek within the project area. In general, these waterways suffer from streambank erosion and erratic stormwater events that result from upstream land use practices. A sterile, artificial pond is located along the east side of Camp Cardinal Road, south of the creek.

## Summary

As supported by our field observations and data analysis, the Clear Creek Corridor includes within it high-quality, remnant landscapes of significant importance to the region's native biodiversity. The specific areas within the corridor that are most important in terms of protection and ecological restoration are the bluffs and ravines south of the creek, as well as the bottomland woods and terraces, and various wetlands within the floodplain.

The Clear Creek Corridor contains within it a variety of natural amenities, which include large specimen trees, uncommon plants, a diversity of species, and natural belvederes, and it is the default refugium for much of the remnant biodiversity that is the native legacy of Johnson County. Indeed, its species richness places it among the more notable areas in Iowa. The Corridor is also the site for

ongoing development and probably for future development. Short-term and long-term economic goals and sustainable use of the Corridor are questions that deserve integrated attention, so that economic amenities can be planned to occur in concert with the enfranchisement of irreplaceable resources such as remnant biodiversity, and the overall long-term livability of Coralville.

We recommend that a team of planners and practitioners be deployed to think through the specifics of currently planned development. We should make certain that current plans do not purloin from the next generation of Iowan's natural assets that are currently present, but not fully recognized for their full potential and value. There is every good reason to believe that these amenities can be nourished, stewarded, and integrated into an overall Corridor master plan.

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# Appendices

# Appendix I

**Floristic Quality Assessment - Inventory Data Summary**

**Clear Creek Corridor - Coralville, Iowa**

The following is a summary of the inventory data generated using Wilhelm and Masters's *Floristic Quality Assessment in the Chicago Region and Application Computer Programs*, 1996. Plant nomenclature follows Swink and Wilhelm's *Plants of the Chicago Region*, 1994.

**Section 1** includes three tables that summarize the inventory assessment data. The table to the left is an analysis of the floristic quality of the project area. In addition to listing the number of native species and total number of species, the mean coefficient of conservatism (MEAN C), floristic quality index (FQI), and mean wetness (MEAN W) values are presented. These are calculated once for native species only, and a second time including adventive species (W/Adventives). The two other tables summarize the number and percent of species in each physiognomic group (A = annual, B = biennial, P = perennial, W = woody, H = herbaceous).

**Section 2** includes the species inventory arranged alphabetically, with each species preceded by its database acronym and coefficient of conservatism (C = 0 to 10, weedy to conservative), and followed by its wetness coefficient (W = -5 to +5, wet to dry), corresponding national wetland indicator status (OBL = obligate wetland species, FAC = facultative species, UPL = upland species), physiognomic group, and common name. Adventive species are written in ALL CAPS and have an asterisk (*) for their C value.

The mean C is the average coefficient of conservatism for the site. The *FQI* is derived by multiplying the mean C by the square root of the number of species present. In general, if the mean C is 3.5 or higher, or the *FQI* registers in the middle thirties or higher, it is relatively certain that there is sufficient native character in the site to be important in terms of a regional natural area perspective. The vast majority of land in the region registers *FQI* values less than 20 and essentially has no significance from a natural area perspective. Areas with *FQI* values in the fifties or higher are extremely rare and of paramount importance; they represent less than 0.5% of the land area in the Chicago region.

**SITE:** Clear Creek Corridor
**LOCALE:** Coralville, Johnson County, Iowa
**DATE:** 1997
**BY:** Conservation Design Forum (Johnson & Wilhelm)
**FILE:** clrcrk

## Section 1. Summary Tables

| FLORISTIC QUALITY DATA | | NATIVE | | ADVENTIVE | |
|---|---|---|---|---|---|
| 338 | NATIVE SPECIES | 36 Tree | 8.5% | 7 Tree | 1.6% |
| 426 | Total Species | 20 Shrub | 4.7% | 7 Shrub | 1.6% |
| 4.41 | NATIVE MEAN C | 10 W-Vine | 2.3% | 1 W-Vine | 0.2% |
| 3.50 | W/Adventives | 4 H-Vine | 0.9% | 1 H-Vine | 0.2% |
| 81.05 | NATIVE FQI | 154 P-Forb | 36.2% | 22 P-Forb | 5.2% |
| 72.19 | W/Adventives | 7 B-Forb | 1.6% | 12 B-Forb | 2.8% |
| 0.0 | NATIVE MEAN W | 36 A-Forb | 8.5% | 23 A-Forb | 5.4% |
| 0.5 | W/Adventives | 18 P-Grass | 4.2% | 10 P-Grass | 2.3% |
| AVG: | FAC. WETLAND | 5 A-Grass | 1.2% | 5 A-Grass | 1.2% |
| | | 38 P-Sedge | 8.9% | 0 P-Sedge | 0.0% |
| | | 1 A-Sedge | 0.2% | 0 A-Sedge | 0.0% |
| | | 9 Cryptogam | 2.1% | | |

## Section 2. Species Inventory

| ACRONYM | C | SCIENTIFIC NAME | W | WETNESS | PHYSIOG. | COMMON NAME |
|---|---|---|---|---|---|---|
| ABUTHE | * | ABUTILON THEOPHRASTI | 4 | FACU- | Ad A-FORB | VELVETLEAF |
| ACARHO | 0 | Acalypha rhomboidea | 3 | FACU | Nt A-FORB | THREE-SEEDED MERCURY |
| ACENEG | 0 | Acer negundo | -2 | FACW- | Nt TREE | BOX ELDER |
| ACESAI | 0 | Acer saccharinum | -3 | FACW | Nt TREE | SILVER MAPLE |
| ACESAU | 3 | Acer saccharum | 3 | FACU | Nt TREE | SUGAR MAPLE |
| ACHMIL | * | ACHILLEA MILLEFOLIUM | 3 | FACU | Ad P-FORB | YARROW |
| ACOCAL | 7 | Acorus calamus | -5 | OBL | Nt P-FORB | SWEET FLAG |
| ACTPAC | 7 | Actaea pachypoda | 5 | UPL | Nt P-FORB | WHITE BANEBERRY |
| ACTALT | 5 | Actinomeris alternifolia | -3 | FACW | Nt P-FORB | WINGSTEM |
| ADIPED | 10 | Adiantum pedatum | 1 | FAC- | CRYPTOGAM | MAIDENHAIR FERN |
| AGATEN | 7 | Agalinis tenuifolia | -3 | FACW | Nt A-FORB | SLENDER FALSE FOXGLOVE |
| AGASCR | 5 | Agastache scrophulariaefolia | 5 | UPL | Nt P-FORB | PURPLE GIANT HYSSOP |
| AGRGRY | 2 | Agrimonia gryposepala | 2 | FACU+ | Nt P-FORB | TALL AGRIMONY |
| AGRPAR | 7 | Agrimonia parviflora | -1 | FAC+ | Nt P-FORB | SWAMP AGRIMONY |
| AGRSMI | * | AGROPYRON SMITHII | 4 | FACU- | Ad P-GRASS | WESTERN WHEAT GRASS |
| AGRALA | * | AGROSTIS ALBA | -3 | FACW | Ad P-GRASS | REDTOP |
| AGRHYE | 1 | Agrostis hyemalis | 1 | FAC- | Nt P-GRASS | TICKLE GRASS |
| AGRPER | 3 | Agrostis perennans | 1 | FAC- | Nt P-GRASS | THIN GRASS |
| ALISUB | 4 | Alisma subcordatum | -5 | OBL | Nt P-FORB | COMMON WATER PLANTAIN |
| ALLPET | * | ALLIARIA PETIOLATA | 0 | FAC | Ad B-FORB | GARLIC MUSTARD |
| ALLCAN | 2 | Allium canadense | 3 | FACU | Nt P-FORB | WILD ONION |
| ALOCAR | 0 | Alopecurus carolinianus | -3 | FACW | Nt A-GRASS | ANNUAL FOXTAIL |
| AMAGRA | * | AMARANTHUS GRAECIZANS | 5 | UPL | Ad A-FORB | CREEPING AMARANTH |
| AMBARE | 0 | Ambrosia artemisiifolia elatior | 3 | FACU | Nt A-FORB | COMMON RAGWEED |
| AMBTRI | 0 | Ambrosia trifida | -1 | FAC+ | Nt A-FORB | GIANT RAGWEED |
| AMOFRU | 6 | Amorpha fruticosa | -4 | FACW+ | Nt SHRUB | INDIGO BUSH |
| AMPBRB | 4 | Amphicarpaea bracteata | 0 | FAC | Nt H-VINE | UPLAND HOG PEANUT |
| AMPBRC | 5 | Amphicarpaea bracteata comosa | -3 | [FACW] | Nt H-VINE | LOWLAND HOG PEANUT |
| ANEQUI | 7 | Anemone quinquefolia | 5 | [UPL] | Nt P-FORB | WOOD ANEMONE |
| ANEVIR | 5 | Anemone virginiana | 5 | UPL | Nt P-FORB | TALL ANEMONE |
| ANETHA | 7 | Anemonella thalictroides | 5 | UPL | Nt P-FORB | RUE ANEMONE |
| ANTCOT | * | ANTHEMIS COTULA | 3 | FACU | Ad A-FORB | DOG FENNEL |
| APIAME | 7 | Apios americana | -3 | FACW | Nt P-FORB | GROUND NUT |
| APOAND | 5 | Apocynum androsaemifolium | 5 | UPL | Nt P-FORB | SPREADING DOGBANE |
| AQUCAN | 6 | Aquilegia canadensis | 1 | FAC- | Nt P-FORB | WILD COLUMBINE |
| ARANUD | 8 | Aralia nudicaulis | 3 | FACU | Nt SHRUB | WILD SARSAPARILLA |
| ARARAC | 10 | Aralia racemosa | 5 | UPL | Nt P-FORB | SPIKENARD |
| ARCMIN | * | ARCTIUM MINUS | 5 | UPL | Ad B-FORB | COMMON BURDOCK |
| ARELAT | 8 | Arenaria lateriflora | 5 | UPL | Nt P-FORB | WOOD SANDWORT |
| ARIDRA | 7 | Arisaema dracontium | -3 | FACW | Nt P-FORB | GREEN DRAGON |
| ARITRI | 4 | Arisaema triphyllum | -2 | FACW- | Nt P-FORB | JACK-IN-THE-PULPIT |
| ASACAN | 7 | Asarum canadense | 5 | UPL | Nt P-FORB | WILD GINGER |
| ASCAMP | 7 | Asclepias amplexicaulis | 5 | UPL | Nt P-FORB | SAND MILKWEED |
| ASCEXA | 9 | Asclepias exaltata | 5 | UPL | Nt P-FORB | POKE MILKWEED |
| ASCINC | 4 | Asclepias incarnata | -5 | OBL | Nt P-FORB | SWAMP MILKWEED |
| ASCSYR | 0 | Asclepias syriaca | 5 | UPL | Nt P-FORB | COMMON MILKWEED |
| ASTCOR | 7 | Aster cordifolius | 5 | UPL | Nt P-FORB | HEART-LEAVED ASTER |
| ASTLAT | 4 | Aster lateriflorus | -2 | FACW- | Nt P-FORB | SIDE-FLOWERING ASTER |

## Clear Creek Corridor - Appendix I Species List (cont.):

| | | | | | | |
|---|---|---|---|---|---|---|
| ASTONT | 4 | Aster ontarionis | 0 | FAC | Nt P-FORB | ONTARIO ASTER |
| ASTPIL | 0 | Aster pilosus | 2 | FACU+ | Nt P-FORB | HAIRY ASTER |
| ASTSAS | 5 | Aster sagittifolius | 5 | UPL | Nt P-FORB | ARROW-LEAVED ASTER |
| ASTSAD | 2 | Aster sagittifolius drummondii | 3 | [FACU] | Nt P-FORB | DRUMMOND'S ASTER |
| ASTSIS | 3 | Aster simplex | -5 | OBL | Nt P-FORB | PANICLED ASTER |
| ATHFIM | 8 | Athyrium filix-femina michauxii | 0 | FAC | CRYPTOGAM | LADY FERN |
| ATRPAT | * | ATRIPLEX PATULA | -2 | FACW- | Ad A-FORB | COMMON ORACH |
| BARVUL | * | BARBAREA VULGARIS | 0 | FAC | Ad B-FORB | YELLOW ROCKET |
| BERTHU | * | BERBERIS THUNBERGII | 4 | FACU- | Ad SHRUB | JAPANESE BARBERRY |
| BETNIG | 7 | Betula nigra | -3 | FACW | Nt TREE | RIVER BIRCH |
| BIDCER | 5 | Bidens cernua | -5 | OBL | Nt A-FORB | NODDING BUR MARIGOLD |
| BIDCOM | 5 | Bidens comosa | -5 | [OBL] | Nt A-FORB | SWAMP TICKSEED |
| BIDFRO | 1 | Bidens frondosa | -3 | FACW | Nt A-FORB | COMMON BEGGAR'S TICKS |
| BOECYC | 2 | Boehmeria cylindrica | -5 | OBL | Nt P-FORB | FALSE NETTLE |
| BOLLAR | 9 | Boltonia latisquama recognita | -5 | [OBL] | Nt P-FORB | FALSE ASTER |
| BOTVIR | 6 | Botrychium virginianum | 3 | FACU | CRYPTOGAM | RATTLESNAKE FERN |
| BRAKAB | 0 | Brassica kaber | 5 | UPL | Nt A-FORB | CHARLOCK |
| BRANIG | * | BRASSICA NIGRA | 5 | UPL | Ad A-FORB | BLACK MUSTARD |
| BROINE | * | BROMUS INERMIS | 5 | UPL | Ad P-GRASS | HUNGARIAN BROME |
| BROJAP | * | BROMUS JAPONICUS | 3 | FACU | Ad A-GRASS | JAPANESE CHESS |
| BROPUB | 5 | Bromus pubescens | 2 | FACU+ | Nt P-GRASS | WOODLAND BROME |
| BROTEC | * | BROMUS TECTORUM | 5 | UPL | Ad A-GRASS | DOWNY BROME |
| CALCAN | 3 | Calamagrostis canadensis | -5 | OBL | Nt P-GRASS | BLUE JOINT GRASS |
| CAMAME | 3 | Campanula americana | 0 | FAC | Nt A-FORB | TALL BELLFLOWER |
| CAPBUR | * | CAPSELLA BURSA-PASTORIS | 1 | FAC- | Ad A-FORB | SHEPHERD'S PURSE |
| CARBUL | 6 | Cardamine bulbosa | -5 | OBL | Nt P-FORB | BULBOUS CRESS |
| CARPEN | 4 | Cardamine pensylvanica | -4 | FACW+ | Nt B-FORB | PENNSYLVANIA BITTER CRESS |
| CXAGGR | 5 | Carex aggregata | 5 | UPL | Nt P-SEDGE | SMOOTH CLUSTERED SEDGE |
| CXANNX | 7 | Carex annectens xanthocarpa | 0 | [FAC] | Nt P-SEDGE | SMALL YELLOW FOX SEDGE |
| CXBLAN | 1 | Carex blanda | 0 | FAC | Nt P-SEDGE | COMMON WOOD SEDGE |
| CXBREV | 4 | Carex brevior | 3 | [FACU] | Nt P-SEDGE | PLAINS OVAL SEDGE |
| CXCEPP | 3 | Carex cephalophora | 3 | FACU | Nt P-SEDGE | SHORT-HEADED BRACTED SEDGE |
| CXCRIS | 4 | Carex cristatella | -4 | FACW+ | Nt P-SEDGE | CRESTED OVAL SEDGE |
| CXDAVI | 7 | Carex davisii | -1 | FAC+ | Nt P-SEDGE | AWNED GRACEFUL SEDGE |
| CXEMOR | 6 | Carex emoryi | -5 | OBL | Nt P-SEDGE | RIVERBANK SEDGE |
| CXFRAN | 8 | Carex frankii | -5 | OBL | Nt P-SEDGE | BRISTLY CATTAIL SEDGE |
| CXGRIS | 2 | Carex grisea | 1 | [FAC-] | Nt P-SEDGE | WOOD GRAY SEDGE |
| CXHIRT | 5 | Carex hirtifolia | 5 | UPL | Nt P-SEDGE | HAIRY WOOD SEDGE |
| CXJAME | 5 | Carex jamesii | 5 | UPL | Nt P-SEDGE | GRASS SEDGE |
| CXLACU | 6 | Carex lacustris | -5 | OBL | Nt P-SEDGE | COMMON LAKE SEDGE |
| CXLUPN | 7 | Carex lupulina | -5 | OBL | Nt P-SEDGE | COMMON HOP SEDGE |
| CXMOLE | 2 | Carex molesta | -1 | FAC+ | Nt P-SEDGE | FIELD OVAL SEDGE |
| CXNORM | 5 | Carex normalis | 0 | [FAC] | Nt P-SEDGE | SPREADING OVAL SEDGE |
| CXPENS | 5 | Carex pensylvanica | 5 | UPL | Nt P-SEDGE | COMMON OAK SEDGE |
| CXRADI | 6 | Carex radiata | 1 | [FAC-] | Nt P-SEDGE | STRAIGHT-STYLED WOOD SEDGE |
| CXROSE | 4 | Carex rosea | 5 | UPL | Nt P-SEDGE | CURLY-STYLED WOOD SEDGE |
| CXSCOP | 7 | Carex scoparia | -3 | FACW | Nt P-SEDGE | LANCE-FRUITED OVAL SEDGE |
| CXSHOR | 10 | Carex shortiana | 0 | [FAC] | Nt P-SEDGE | SHORT'S SEDGE |
| CXSPAR | 3 | Carex sparganioides | 0 | FAC | Nt P-SEDGE | LOOSE-HEADED BRACTED SEDGE |
| CXSPRE | 9 | Carex sprengelii | 3 | [FACU] | Nt P-SEDGE | LONG-BEAKED SEDGE |
| CXSTIP | 3 | Carex stipata | -5 | OBL | Nt P-SEDGE | COMMON FOX SEDGE |
| CXSTRI | 5 | Carex stricta | -5 | OBL | Nt P-SEDGE | COMMON TUSSOCK SEDGE |
| CXTENE | 8 | Carex tenera | 1 | [FAC-] | Nt P-SEDGE | NARROW-LEAVED OVAL SEDGE |
| CXTRIB | 3 | Carex tribuloides | -4 | FACW+ | Nt P-SEDGE | AWL-FRUITED OVAL SEDGE |
| CXTRIC | 7 | Carex trichocarpa | -5 | OBL | Nt P-SEDGE | HAIRY-FRUITED LAKE SEDGE |
| CXVESM | 10 | Carex vesicaria monile | -5 | OBL | Nt P-SEDGE | TUFTED LAKE SEDGE |
| CXVULP | 2 | Carex vulpinoidea | -5 | OBL | Nt P-SEDGE | BROWN FOX SEDGE |
| CARCOR | 7 | Carya cordiformis | 3 | [FACU] | Nt TREE | BITTERNUT HICKORY |
| CAROVT | 5 | Carya ovata | 3 | FACU | Nt TREE | SHAGBARK HICKORY |
| CASFAS | 5 | Cassia fasciculata | 4 | FACU- | Nt A-FORB | PARTRIDGE PEA |
| CATSPE | * | CATALPA SPECIOSA | 3 | FACU | Ad TREE | HARDY CATALPA |
| CAUTHA | 8 | Caulophyllum thalictroides | 5 | UPL | Nt P-FORB | BLUE COHOSH |
| CELSCA | 4 | Celastrus scandens | 5 | [UPL] | Nt W-VINE | CLIMBING BITTERSWEET |
| CELOCC | 3 | Celtis occidentalis | 1 | FAC- | Nt TREE | HACKBERRY |
| CENLON | 0 | Cenchrus longispinus | 5 | UPL | Nt A-GRASS | SANDBUR |
| CEPOCC | 5 | Cephalanthus occidentalis | -5 | OBL | Nt SHRUB | BUTTONBUSH |
| CERVUL | * | CERASTIUM VULGATUM | 3 | FACU | Ad P-FORB | MOUSE-EAR CHICKWEED |
| CHAMIN | * | CHAENORRHINUM MINUS | 5 | UPL | Ad A-FORB | SMALL SNAPDRAGON |
| CHAPRO | 5 | Chaerophyllum procumbens | -1 | FAC+ | Nt A-FORB | STREAM BANK CHERVIL |
| CHEALB | * | CHENOPODIUM ALBUM | 1 | FAC- | Ad A-FORB | LAMB'S QUARTERS |
| CINARU | 5 | Cinna arundinacea | -3 | FACW | Nt P-GRASS | COMMON WOOD REED |
| CIRLUC | 1 | Circaea lutetiana canadensis | 3 | FACU | Nt P-FORB | ENCHANTER'S NIGHTSHADE |
| CIRARV | * | CIRSIUM ARVENSE | 5 | UPL | Ad P-FORB | FIELD THISTLE |
| CIRDIS | 2 | Cirsium discolor | 5 | UPL | Nt B-FORB | PASTURE THISTLE |
| CIRVUL | * | CIRSIUM VULGARE | 4 | FACU- | Ad B-FORB | BULL THISTLE |
| CLAVIR | 2 | Claytonia virginica | 3 | FACU | Nt P-FORB | SPRING BEAUTY |
| CLEPIT | 10 | Clematis pitcheri | 3 | FACU | Nt W-VINE | LEATHER FLOWER |
| CLEVIR | 4 | Clematis virginiana | 0 | FAC | Nt W-VINE | VIRGIN'S BOWER |

## Clear Creek Corridor - Appendix I Species List (cont.):

| | | | | | | |
|---|---|---|---|---|---|---|
| COMCOM | * | COMMELINA COMMUNIS | 0 | FAC | Ad A-FORB | COMMON DAY FLOWER |
| CONMAC | * | CONIUM MACULATUM | -3 | FACW | Ad B-FORB | POISON HEMLOCK |
| CONMAJ | * | CONVALLARIA MAJALIS | 5 | UPL | Ad P-FORB | LILY-OF-THE-VALLEY |
| CONSEP | 1 | Convolvulus sepium | 0 | FAC | Nt P-FORB | HEDGE BINDWEED |
| CORALT | 9 | Cornus alternifolia | 1 | [FAC-] | Nt TREE | PAGODA DOGWOOD |
| CORDRU | 2 | Cornus drummondii | 0 | FAC | Nt SHRUB | ROUGH-LEAVED DOGWOOD |
| COROBL | 6 | Cornus obliqua | -4 | FACW+ | Nt SHRUB | BLUE-FRUITED DOGWOOD |
| CORRAC | 1 | Cornus racemosa | -2 | FACW- | Nt SHRUB | GRAY DOGWOOD |
| CORVAR | * | CORONILLA VARIA | 5 | UPL | Ad P-FORB | CROWN VETCH |
| CORAME | 5 | Corylus americana | 4 | FACU- | Nt SHRUB | AMERICAN HAZELNUT |
| CRACHR | 6 | Crataegus chrysocarpa | 5 | UPL | Nt TREE | FIREBERRY HAWTHORN |
| CRACRU | 2 | Crataegus crus-galli | 0 | FAC | Nt TREE | COCKSPUR HAWTHORN |
| CRAMOL | 2 | Crataegus mollis | 4 | FACU- | Nt TREE | DOWNY HAWTHORN |
| CRYCAN | 2 | Cryptotaenia canadensis | 0 | FAC | Nt P-FORB | HONEWORT |
| CYPESC | 0 | Cyperus esculentus | -1 | [FAC+] | Nt P-SEDGE | FIELD NUT SEDGE |
| CYSFRP | 6 | Cystopteris fragilis protrusa | 3 | FACU | CRYPTOGAM | FRAGILE FERN |
| DACGLO | * | DACTYLIS GLOMERATA | 3 | FACU | Ad P-GRASS | ORCHARD GRASS |
| DATSTR | * | DATURA STRAMONIUM | 5 | UPL | Ad A-FORB | JIMSON WEED |
| DAUCAR | * | DAUCUS CAROTA | 5 | UPL | Ad B-FORB | QUEEN ANNE'S LACE |
| DENLAC | 5 | Dentaria laciniata | 3 | FACU | Nt P-FORB | TOOTHWORT |
| DESPIB | * | DESCURAINIA PINNATA BRACHYCARPA | 5 | UPL | Ad A-FORB | TANSY MUSTARD |
| DESCAA | 4 | Desmodium canadense | 1 | FAC- | Nt P-FORB | SHOWY TICK TREFOIL |
| DESGLU | 5 | Desmodium glutinosum | 5 | UPL | Nt P-FORB | POINTED TICK TREFOIL |
| DICCUC | 6 | Dicentra cucullaria | 5 | UPL | Nt P-FORB | DUTCHMAN'S BREECHES |
| DIGSAS | * | DIGITARIA SANGUINALIS | 3 | FACU | Ad A-GRASS | HAIRY CRAB GRASS |
| DIOVIL | 7 | Dioscorea villosa | 1 | FAC- | Nt H-VINE | WILD YAM |
| DODMEA | 6 | Dodecatheon meadia | 3 | FACU | Nt P-FORB | SHOOTING STAR |
| DRYSPI | 8 | Dryopteris spinulosa | -2 | FACW- | CRYPTOGAM | SPINULOSE SHIELD FERN |
| DRYTHP | 6 | Dryopteris thelypteris pubescens | -5 | [OBL] | CRYPTOGAM | MARSH SHIELD FERN |
| ECHCRU | 0 | Echinochloa crusgalli | -3 | FACW | Nt A-GRASS | BARNYARD GRASS |
| ECLPRO | * | ECLIPTA PROSTRATA | -3 | FACW | Ad A-FORB | YERBA DE TAJO |
| ELEACI | 2 | Eleocharis acicularis | -5 | OBL | Nt P-SEDGE | NEEDLE SPIKE RUSH |
| ELEERY | 2 | Eleocharis erythropoda | -5 | OBL | Nt P-SEDGE | RED-ROOTED SPIKE RUSH |
| ELEOBT | 3 | Eleocharis obtusa | -5 | OBL | Nt A-SEDGE | BLUNT SPIKE RUSH |
| ELLNYC | 2 | Ellisia nyctelea | -1 | FAC+ | Nt A-FORB | AUNT LUCY |
| ELYVIL | 5 | Elymus villosus | 3 | FACU | Nt P-GRASS | SILKY WILD RYE |
| ELYVIR | 4 | Elymus virginicus | -2 | FACW- | Nt P-GRASS | VIRGINIA WILD RYE |
| EPICOL | 3 | Epilobium coloratum | -5 | OBL | Nt P-FORB | CINNAMON WILLOW HERB |
| EQUARV | 0 | Equisetum arvense | 0 | FAC | CRYPTOGAM | HORSETAIL |
| ERAHYP | 5 | Eragrostis hypnoides | -5 | OBL | Nt A-GRASS | CREEPING LOVE GRASS |
| ERAPEC | 0 | Eragrostis pectinacea | 0 | FAC | Nt A-GRASS | SMALL LOVE GRASS |
| ERIANS | 0 | Erigeron annuus | 1 | FAC- | Nt B-FORB | ANNUAL FLEABANE |
| ERICAN | 0 | Erigeron canadensis | 1 | FAC- | Nt A-FORB | HORSEWEED |
| ERYALB | 5 | Erythronium albidum | 5 | UPL | Nt P-FORB | WHITE TROUT LILY |
| EUOALA | * | EUONYMUS ALATUS | 5 | UPL | Ad SHRUB | BURNING BUSH |
| EUOATR | 8 | Euonymus atropurpureus | 1 | FAC- | Nt SHRUB | WAHOO |
| EUPALT | 0 | Eupatorium altissimum | 3 | [FACU] | Nt P-FORB | TALL BONESET |
| EUPPER | 4 | Eupatorium perfoliatum | -4 | FACW+ | Nt P-FORB | COMMON BONESET |
| EUPPUR | 7 | Eupatorium purpureum | 5 | UPL | Nt P-FORB | PURPLE JOE PYE WEED |
| EUPRUG | 4 | Eupatorium rugosum | 5 | UPL | Nt P-FORB | WHITE SNAKEROOT |
| FESELA | * | FESTUCA ELATIOR | 2 | FACU+ | Ad P-GRASS | TALL FESCUE |
| FESOBT | 5 | Festuca obtusa | 2 | FACU+ | Nt P-GRASS | NODDING FESCUE |
| FRAVIR | 1 | Fragaria virginiana | 1 | FAC- | Nt P-FORB | WILD STRAWBERRY |
| FRAAMA | 5 | Fraxinus americana | 3 | FACU | Nt TREE | WHITE ASH |
| FRANIG | 10 | Fraxinus nigra | -4 | FACW+ | Nt TREE | BLACK ASH |
| FRAPEP | 5 | Fraxinus pennsylvanica | -3 | FACW | Nt TREE | RED ASH |
| FRAPES | 1 | Fraxinus pennsylvanica subintegerrima | 0 | FAC | Nt TREE | GREEN ASH |
| GALAPA | 1 | Galium aparine | 3 | FACU | Nt A-FORB | ANNUAL BEDSTRAW |
| GALCON | 5 | Galium concinnum | 5 | [UPL] | Nt P-FORB | SHINING BEDSTRAW |
| GALOBT | 5 | Galium obtusum | -4 | FACW+ | Nt P-FORB | WILD MADDER |
| GALTRF | 5 | Galium triflorum | 2 | FACU+ | Nt P-FORB | SWEET-SCENTED BEDSTRAW |
| GERMAC | 4 | Geranium maculatum | 5 | [UPL] | Nt P-FORB | WILD GERANIUM |
| GEUCAN | 1 | Geum canadense | 0 | FAC | Nt P-FORB | WOOD AVENS |
| GEULAT | 2 | Geum laciniatum trichocarpum | -3 | FACW | Nt P-FORB | ROUGH AVENS |
| GLEHED | * | GLECHOMA HEDERACEA | 3 | FACU | Ad P-FORB | CREEPING CHARLIE |
| GLETRI | 2 | Gleditsia triacanthos | 0 | FAC | Nt TREE | HONEY LOCUST |
| GLYSTR | 4 | Glyceria striata | -3 | [FACW] | Nt P-GRASS | FOWL MANNA GRASS |
| GRANEG | 7 | Gratiola neglecta | -5 | OBL | Nt A-FORB | CLAMMY HEDGE HYSSOP |
| HACVIR | 0 | Hackelia virginiana | 1 | FAC- | Nt B-FORB | STICKSEED |
| HELAUT | 5 | Helenium autumnale | -4 | FACW+ | Nt P-FORB | SNEEZEWEED |
| HELSTR | 5 | Helianthus strumosus | 5 | UPL | Nt P-FORB | PALE-LEAVED SUNFLOWER |
| HELTUB | 3 | Helianthus tuberosus | 0 | FAC | Nt P-FORB | JERUSALEM ARTICHOKE |
| HEPACU | 6 | Hepatica acutiloba | 5 | UPL | Nt P-FORB | SHARP-LOBED HEPATICA |
| HERMAX | 5 | Heracleum maximum | 5 | UPL | Nt P-FORB | COW PARSNIP |
| HESMAT | * | HESPERIS MATRONALIS | 5 | UPL | Ad P-FORB | DAME'S ROCKET |
| HETDUB | 8 | Heteranthera dubia | -5 | OBL | Nt P-FORB | WATER STAR GRASS |
| HORJUB | * | HORDEUM JUBATUM | -1 | FAC+ | Ad P-GRASS | SQUIRREL-TAIL GRASS |
| HUMJAP | * | HUMULUS JAPONICUS | 3 | FACU | Ad H-VINE | JAPANESE HOP |

## Clear Creek Corridor - Appendix I Species List (cont.):

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| HYDVIR | 5 | Hydrophyllum virginianum | 0 | [FAC] | Nt | P-FORB | VIRGINIA WATERLEAF |
| HYPPER | * | HYPERICUM PERFORATUM | 5 | UPL | Ad | P-FORB | COMMON ST. JOHN'S WORT |
| HYPPUN | 4 | Hypericum punctatum | 3 | [FACU] | Nt | P-FORB | SPOTTED ST. JOHN'S WORT |
| HYPPYR | 10 | Hypericum pyramidatum | -1 | FAC+ | Nt | P-FORB | GREAT ST. JOHN'S WORT |
| HYSPAT | 5 | Hystrix patula | 5 | UPL | Nt | P-GRASS | BOTTLEBRUSH GRASS |
| IMPCAP | 3 | Impatiens capensis | -3 | FACW | Nt | A-FORB | ORANGE JEWELWEED |
| IMPPAL | 6 | Impatiens pallida | -1 | [FAC+] | Nt | A-FORB | YELLOW JEWELWEED |
| IRIVIS | 5 | Iris virginica shrevei | -5 | OBL | Nt | P-FORB | BLUE FLAG |
| ISOBIT | 8 | Isopyrum biternatum | 5 | UPL | Nt | P-FORB | FALSE RUE ANEMONE |
| JUGCIN | 8 | Juglans cinerea | 2 | FACU+ | Nt | TREE | BUTTERNUT |
| JUGNIG | 5 | Juglans nigra | 3 | FACU | Nt | TREE | BLACK WALNUT |
| JUNDUD | 4 | Juncus dudleyi | 0 | [FAC] | Nt | P-FORB | DUDLEY'S RUSH |
| JUNTEN | 0 | Juncus tenuis | 2 | [FACU+] | Nt | P-FORB | PATH RUSH |
| JUNVIC | 2 | Juniperus virginiana crebra | 3 | FACU | Nt | TREE | RED CEDAR |
| LACCAN | 2 | Lactuca canadensis | 2 | FACU+ | Nt | B-FORB | WILD LETTUCE |
| LACSER | * | LACTUCA SERRIOLA | 0 | FAC | Ad | B-FORB | PRICKLY LETTUCE |
| LAPCAN | 3 | Laportea canadensis | -3 | FACW | Nt | P-FORB | WOOD NETTLE |
| LEEORY | 4 | Leersia oryzoides | -5 | OBL | Nt | P-GRASS | RICE CUT GRASS |
| LEEVIR | 7 | Leersia virginica | -3 | FACW | Nt | P-GRASS | WHITE GRASS |
| LEMMIO | 5 | Lemna minor | -5 | OBL | Nt | A-FORB | SMALL DUCKWEED |
| LEOCAR | * | LEONURUS CARDIACA | 5 | UPL | Ad | P-FORB | MOTHERWORT |
| LEPCAM | * | LEPIDIUM CAMPESTRE | 5 | UPL | Ad | B-FORB | FIELD CRESS |
| LEPDEN | * | LEPIDIUM DENSIFLORUM | 0 | FAC | Ad | A-FORB | SMALL PEPPERCRESS |
| LILMIC | 6 | Lilium michiganense | -1 | FAC+ | Nt | P-FORB | TURK'S CAP LILY |
| LINDUB | 5 | Lindernia dubia | -5 | OBL | Nt | A-FORB | FALSE PIMPERNEL |
| LIPLAN | 6 | Lippia lanceolata | -5 | OBL | Nt | P-FORB | FOG FRUIT |
| LOBINF | 4 | Lobelia inflata | 4 | FACU- | Nt | A-FORB | INDIAN TOBACCO |
| LOBSIP | 6 | Lobelia siphilitica | -4 | FACW+ | Nt | P-FORB | GREAT BLUE LOBELIA |
| LOBSPS | 6 | Lobelia spicata | 0 | FAC | Nt | P-FORB | PALE SPIKED LOBELIA |
| LONPRO | 7 | Lonicera prolifera | 5 | UPL | Nt | W-VINE | YELLOW HONEYSUCKLE |
| LONBEL | * | LONICERA X BELLA | 4 | FACU- | Ad | SHRUB | SHOWY FLY HONEYSUCKLE |
| LONMUE | * | LONICERA X MUENDENIENSIS | 5 | UPL | Ad | SHRUB | COMMON FLY HONEYSUCKLE |
| LOTCOR | * | LOTUS CORNICULATUS | 1 | FAC- | Ad | P-FORB | BIRD'S FOOT TREFOIL |
| LUDALT | 6 | Ludwigia alternifolia | -5 | OBL | Nt | P-FORB | SEEDBOX |
| LUDPAA | 5 | Ludwigia palustris americana | -5 | OBL | Nt | P-FORB | MARSH PURSLANE |
| LYCAME | 5 | Lycopus americanus | -5 | OBL | Nt | P-FORB | COMMON WATER HOREHOUND |
| LYCVIR | 9 | Lycopus virginicus | -5 | OBL | Nt | P-FORB | BUGLE WEED |
| LYSCIL | 4 | Lysimachia ciliata | -3 | FACW | Nt | P-FORB | FRINGED LOOSESTRIFE |
| LYSHYB | 10 | Lysimachia hybrida | -5 | OBL | Nt | P-FORB | RIVER LOOSESTRIFE |
| LYSNUM | * | LYSIMACHIA NUMMULARIA | -4 | FACW+ | Ad | P-FORB | MONEYWORT |
| LYSTHY | 9 | Lysimachia thyrsiflora | -5 | OBL | Nt | P-FORB | TUFTED LOOSESTRIFE |
| LYTALA | 7 | Lythrum alatum | -5 | OBL | Nt | P-FORB | WINGED LOOSESTRIFE |
| MACPOM | * | MACLURA POMIFERA | 3 | FACU | Ad | TREE | OSAGE ORANGE |
| MALIOE | 3 | Malus ioensis | 5 | UPL | Nt | TREE | IOWA CRAB |
| MATMAT | * | MATRICARIA MATRICARIOIDES | 3 | FACU | Ad | A-FORB | PINEAPPLE WEED |
| MEDLUP | * | MEDICAGO LUPULINA | 1 | FAC- | Ad | A-FORB | BLACK MEDICK |
| MELLOF | * | MELILOTUS OFFICINALIS | 3 | FACU | Ad | B-FORB | YELLOW SWEET CLOVER |
| MENCAN | 6 | Menispermum canadense | -1 | FAC+ | Nt | W-VINE | MOONSEED |
| MERVIR | 5 | Mertensia virginica | -3 | FACW | Nt | P-FORB | VIRGINIA BLUEBELLS |
| MIMRIN | 6 | Mimulus ringens | -5 | OBL | Nt | P-FORB | MONKEY FLOWER |
| MOLVER | * | MOLLUGO VERTICILLATA | 0 | FAC | Ad | A-FORB | CARPET WEED |
| MONFIS | 4 | Monarda fistulosa | 3 | FACU | Nt | P-FORB | WILD BERGAMOT |
| MORALB | * | MORUS ALBA | 0 | FAC | Ad | TREE | WHITE MULBERRY |
| MUHSCH | 0 | Muhlenbergia schreberi | 3 | [FACU] | Nt | P-GRASS | NIMBLEWILL |
| MYOAQU | * | MYOSOTON AQUATICUM | -1 | FAC+ | Ad | P-FORB | WATER CHICKWEED |
| NEPCAT | * | NEPETA CATARIA | 1 | FAC- | Ad | P-FORB | CATNIP |
| OENBIE | 0 | Oenothera biennis | 3 | FACU | Nt | B-FORB | COMMON EVENING PRIMROSE |
| ONOSEN | 8 | Onoclea sensibilis | -3 | FACW | | CRYPTOGAM | SENSITIVE FERN |
| OSMCLO | 3 | Osmorhiza claytonii | 4 | FACU- | Nt | P-FORB | HAIRY SWEET CICELY |
| OSMLON | 3 | Osmorhiza longistylis | 4 | FACU- | Nt | P-FORB | SMOOTH SWEET CICELY |
| OSMCLI | 9 | Osmunda claytoniana | -1 | FAC+ | | CRYPTOGAM | INTERRUPTED FERN |
| OSTVIR | 5 | Ostrya virginiana | 4 | FACU- | Nt | TREE | HOP HORNBEAM |
| OXAEUR | 0 | Oxalis europaea | 3 | FACU | Nt | P-FORB | TALL WOOD SORREL |
| OXASTR | 0 | Oxalis stricta | 5 | UPL | Nt | P-FORB | COMMON WOOD SORREL |
| PANLAT | 5 | Panicum latifolium | 3 | FACU | Nt | P-GRASS | BROAD-LEAVED PANIC GRASS |
| PANVIR | 5 | Panicum virgatum | -1 | FAC+ | Nt | P-GRASS | SWITCH GRASS |
| PARPEN | 3 | Parietaria pensylvanica | 3 | FACU | Nt | A-FORB | PELLITORY |
| PARINS | 1 | Parthenocissus inserta | 3 | FACU | Nt | W-VINE | THICKET CREEPER |
| PARQUI | 2 | Parthenocissus quinquefolia | 1 | FAC- | Nt | W-VINE | VIRGINIA CREEPER |
| PASSAT | * | PASTINACA SATIVA | 5 | UPL | Ad | B-FORB | WILD PARSNIP |
| PENSED | 5 | Penthorum sedoides | -5 | OBL | Nt | P-FORB | DITCH STONECROP |
| PHAARU | * | PHALARIS ARUNDINACEA | -4 | FACW+ | Ad | P-GRASS | REED CANARY GRASS |
| PHLPRA | * | PHLEUM PRATENSE | 3 | FACU | Ad | P-GRASS | TIMOTHY |
| PHLDIV | 5 | Phlox divaricata | 3 | FACU | Nt | P-FORB | WOODLAND PHLOX |
| PHRLEP | 4 | Phryma leptostachya | 5 | UPL | Nt | P-FORB | LOPSEED |
| PHYHET | 3 | Physalis heterophylla | 5 | UPL | Nt | P-FORB | CLAMMY GROUND CHERRY |
| PHYAME | 1 | Phytolacca americana | 1 | FAC- | Nt | P-FORB | POKEWEED |
| PILPUM | 5 | Pilea pumila | -3 | FACW | Nt | A-FORB | CLEARWEED |

## Clear Creek Corridor - Appendix I Species List (cont.):

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| PLALAN | * | PLANTAGO LANCEOLATA | 0 | FAC | Ad | P-FORB | ENGLISH PLANTAIN |
| PLARUG | 0 | Plantago rugelii | 0 | FAC | Nt | A-FORB | RED-STALKED PLANTAIN |
| PLAOCC | 9 | Platanus occidentalis | -3 | FACW | Nt | TREE | SYCAMORE |
| POACOM | * | POA COMPRESSA | 2 | FACU+ | Ad | P-GRASS | CANADA BLUE GRASS |
| POAPAS | 9 | Poa palustris | -4 | FACW+ | Nt | P-GRASS | MARSH BLUE GRASS |
| POAPRA | * | POA PRATENSIS | 1 | FAC- | Ad | P-GRASS | KENTUCKY BLUE GRASS |
| PODPEL | 4 | Podophyllum peltatum | 3 | FACU | Nt | P-FORB | MAY APPLE |
| POLREP | 5 | Polemonium reptans | 0 | FAC | Nt | P-FORB | JACOB'S LADDER |
| POLCAL | 3 | Polygonatum canaliculatum | 3 | FACU | Nt | P-FORB | SMOOTH SOLOMON'S SEAL |
| POLAVI | * | POLYGONUM AVICULARE | 1 | FAC- | Ad | A-FORB | COMMON KNOTWEED |
| POLCOC | 4 | Polygonum coccineum | -5 | OBL | Nt | P-FORB | WATER HEARTSEASE |
| POLHYR | 2 | Polygonum hydropiper | -3 | FACW | Nt | A-FORB | WATER PEPPER |
| POLHYS | 7 | Polygonum hydropiperoides | -5 | OBL | Nt | P-FORB | MILD WATER PEPPER |
| POLPEN | 0 | Polygonum pensylvanicum | -4 | FACW+ | Nt | A-FORB | PINKWEED |
| POLPUN | 6 | Polygonum punctatum | -5 | OBL | Nt | A-FORB | SMARTWEED |
| POLSAG | 8 | Polygonum sagittatum | -5 | OBL | Nt | A-FORB | ARROW-LEAVED TEAR-THUMB |
| POLGVI | 2 | Polygonum virginianum | 0 | FAC | Nt | P-FORB | WOODLAND KNOTWEED |
| POPDEL | 2 | Populus deltoides | -1 | FAC+ | Nt | TREE | EASTERN COTTONWOOD |
| POPGRA | 6 | Populus grandidentata | 3 | FACU | Nt | TREE | LARGE-TOOTHED ASPEN |
| POTNOR | 0 | Potentilla norvegica | 0 | FAC | Nt | A-FORB | NORWAY CINQUEFOIL |
| POTSIS | 4 | Potentilla simplex | 4 | FACU- | Nt | P-FORB | COMMON CINQUEFOIL |
| PREALB | 5 | Prenanthes alba | 3 | FACU | Nt | P-FORB | LION'S FOOT |
| PRUVLA | 0 | Prunella vulgaris lanceolata | 3 | [FACU] | Nt | P-FORB | SELF HEAL |
| PRUAME | 5 | Prunus americana | 5 | UPL | Nt | TREE | WILD PLUM |
| PRUSER | 1 | Prunus serotina | 3 | FACU | Nt | TREE | WILD BLACK CHERRY |
| PRUVIR | 3 | Prunus virginiana | 3 | [FACU] | Nt | SHRUB | CHOKE CHERRY |
| PYCPIL | 5 | Pycnanthemum pilosum | 5 | UPL | Nt | P-FORB | HAIRY MOUNTAIN MINT |
| QUEALB | 5 | Quercus alba | 0 | FAC | Nt | TREE | WHITE OAK |
| QUEMAC | 5 | Quercus macrocarpa | 1 | FAC- | Nt | TREE | BUR OAK |
| QUEPAU | 8 | Quercus palustris | -3 | FACW | Nt | TREE | PIN OAK |
| QUERUB | 7 | Quercus rubra | 3 | FACU | Nt | TREE | RED OAK |
| QUEVEL | 6 | Quercus velutina | 5 | UPL | Nt | TREE | BLACK OAK |
| RANABO | 0 | Ranunculus abortivus | -2 | FACW- | Nt | A-FORB | SMALL-FLOWERED BUTTERCUP |
| RANFAS | 6 | Ranunculus fascicularis | 3 | FACU | Nt | P-FORB | EARLY BUTTERCUP |
| RANSCE | 6 | Ranunculus sceleratus | -5 | OBL | Nt | A-FORB | CURSED BUTTERCUP |
| RANSEP | 5 | Ranunculus septentrionalis | -4 | FACW+ | Nt | P-FORB | SWAMP BUTTERCUP |
| RHACAT | * | RHAMNUS CATHARTICA | 3 | FACU | Ad | SHRUB | COMMON BUCKTHORN |
| RHUGLA | 1 | Rhus glabra | 5 | UPL | Nt | SHRUB | SMOOTH SUMAC |
| RHURAD | 2 | Rhus radicans | -1 | FAC+ | Nt | W-VINE | POISON IVY |
| RIBMIS | 5 | Ribes missouriense | 5 | UPL | Nt | SHRUB | WILD GOOSEBERRY |
| ROBPSE | * | ROBINIA PSEUDOACACIA | 4 | FACU- | Ad | TREE | BLACK LOCUST |
| RORPAF | 4 | Rorippa palustris fernaldiana | -5 | OBL | Nt | A-FORB | MARSH CRESS |
| RORSES | 4 | Rorippa sessiliflora | -5 | OBL | Nt | A-FORB | SESSILE-FLOWERED CRESS |
| ROSMUL | * | ROSA MULTIFLORA | 3 | FACU | Ad | SHRUB | MULTIFLORA ROSE |
| RUBALL | 3 | Rubus allegheniensis | 2 | FACU+ | Nt | SHRUB | COMMON BLACKBERRY |
| RUBOCC | 2 | Rubus occidentalis | 5 | UPL | Nt | SHRUB | BLACK RASPBERRY |
| RUBPEN | 3 | Rubus pensilvanicus | 3 | FACU | Nt | SHRUB | YANKEE BLACKBERRY |
| RUDHIR | 1 | Rudbeckia hirta | 3 | FACU | Nt | P-FORB | BLACK-EYED SUSAN |
| RUDLAC | 5 | Rudbeckia laciniata | -4 | FACW+ | Nt | P-FORB | WILD GOLDEN GLOW |
| RUMALT | 2 | Rumex altissimus | -2 | FACW- | Nt | P-FORB | PALE DOCK |
| RUMCRI | * | RUMEX CRISPUS | -1 | FAC+ | Ad | P-FORB | CURLY DOCK |
| RUMOBT | * | RUMEX OBTUSIFOLIUS | -3 | FACW | Ad | P-FORB | BITTER DOCK |
| RUMVER | 6 | Rumex verticillatus | -5 | OBL | Nt | P-FORB | SWAMP DOCK |
| SAGBRE | 7 | Sagittaria brevirostra | -5 | OBL | Nt | P-FORB | SHORT-BEAKED ARROWHEAD |
| SALAMY | 5 | Salix amygdaloides | -3 | FACW | Nt | TREE | PEACH-LEAVED WILLOW |
| SALERI | 5 | Salix eriocephala | -3 | FACW | Nt | SHRUB | HEART-LEAVED WILLOW |
| SALFRA | * | SALIX FRAGILIS | -1 | FAC+ | Ad | TREE | CRACK WILLOW |
| SALINT | 1 | Salix interior | -5 | OBL | Nt | SHRUB | SANDBAR WILLOW |
| SALNIG | 4 | Salix nigra | -5 | OBL | Nt | TREE | BLACK WILLOW |
| SALRUB | * | SALIX X RUBENS | -4 | FACW+ | Ad | TREE | HYBRID CRACK WILLOW |
| SAMCAN | 1 | Sambucus canadensis | -2 | FACW- | Nt | SHRUB | ELDERBERRY |
| SANCAD | 6 | Sanguinaria canadensis | 4 | FACU- | Nt | P-FORB | BLOODROOT |
| SANCAA | 7 | Sanicula canadensis | 2 | FACU+ | Nt | B-FORB | CANADIAN BLACK SNAKEROOT |
| SANGRE | 2 | Sanicula gregaria | -1 | FAC+ | Nt | P-FORB | CLUSTERED BLACK SNAKEROOT |
| SANMAR | 6 | Sanicula marilandica | 3 | [FACU] | Nt | P-FORB | BLACK SNAKEROOT |
| SCIATR | 4 | Scirpus atrovirens | -5 | OBL | Nt | P-SEDGE | DARK GREEN RUSH |
| SCICYP | 6 | Scirpus cyperinus | -5 | OBL | Nt | P-SEDGE | WOOL GRASS |
| SCIFLU | 4 | Scirpus fluviatilis | -5 | OBL | Nt | P-SEDGE | RIVER BULRUSH |
| SCIPEN | 4 | Scirpus pendulus | -5 | OBL | Nt | P-SEDGE | RED BULRUSH |
| SCIVAC | 5 | Scirpus validus creber | -5 | OBL | Nt | P-SEDGE | GREAT BULRUSH |
| SCRMAR | 4 | Scrophularia marilandica | 4 | FACU- | Nt | P-FORB | LATE FIGWORT |
| SCUEPI | 5 | Scutellaria epilobiifolia | -5 | OBL | Nt | P-FORB | MARSH SKULLCAP |
| SCULAT | 5 | Scutellaria lateriflora | -5 | OBL | Nt | P-FORB | MAD-DOG SKULLCAP |
| SENAUR | 7 | Senecio aureus | -3 | FACW | Nt | P-FORB | GOLDEN RAGWORT |
| SENPAU | 6 | Senecio pauperculus | -1 | FAC+ | Nt | P-FORB | BALSAM RAGWORT |
| SETFAB | * | SETARIA FABERI | 2 | FACU+ | Ad | A-GRASS | GIANT FOXTAIL |
| SETGLA | * | SETARIA GLAUCA | 0 | FAC | Ad | A-GRASS | YELLOW FOXTAIL |
| SILANT | 1 | Silene antirrhina | 5 | UPL | Nt | A-FORB | SLEEPY CATCHFLY |

## Clear Creek Corridor - Appendix I Species List (cont.):

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| SILNIV | 10 | Silene nivea | -3 | FACW | Nt | P-FORB | SNOWY CAMPION |
| SILPER | 5 | Silphium perfoliatum | -2 | FACW- | Nt | P-FORB | CUP PLANT |
| SISLOE | * | SISYMBRIUM LOESELII | 5 | UPL | Ad | A-FORB | TALL HEDGE MUSTARD |
| SMIRAC | 3 | Smilacina racemosa | 3 | FACU | Nt | P-FORB | FEATHERY FALSE SOLOMON'S SEAL |
| SMISTE | 5 | Smilacina stellata | 1 | FAC- | Nt | P-FORB | STARRY FALSE SOLOMON'S SEAL |
| SMIECI | 5 | Smilax ecirrhata | 5 | UPL | Nt | P-FORB | UPRIGHT CARRION FLOWER |
| SMILAS | 5 | Smilax lasioneura | 5 | [UPL] | Nt | H-VINE | COMMON CARRION FLOWER |
| SMITAH | 5 | Smilax tamnoides hispida | 5 | UPL | Nt | W-VINE | BRISTLY CAT BRIER |
| SOLAME | 0 | Solanum americanum | 4 | FACU- | Nt | A-FORB | BLACK NIGHTSHADE |
| SOLCAR | * | SOLANUM CAROLINENSE | 4 | FACU- | Ad | P-FORB | HORSE NETTLE |
| SOLDUL | * | SOLANUM DULCAMARA | 0 | FAC | Ad | W-VINE | BITTERSWEET NIGHTSHADE |
| SOLALT | 1 | Solidago altissima | 3 | FACU | Nt | P-FORB | TALL GOLDENROD |
| SOLCAN | 1 | Solidago canadensis | 3 | FACU | Nt | P-FORB | CANADA GOLDENROD |
| SOLFLE | 7 | Solidago flexicaulis | 3 | FACU | Nt | P-FORB | BROAD-LEAVED GOLDENROD |
| SOLGIG | 4 | Solidago gigantea | -3 | FACW | Nt | P-FORB | LATE GOLDENROD |
| SOLGYM | 5 | Solidago gymnospermoides | 0 | FAC | Nt | P-FORB | VISCID GRASS-LEAVED GOLDENROD |
| SOLULM | 5 | Solidago ulmifolia | 5 | UPL | Nt | P-FORB | ELM-LEAVED GOLDENROD |
| SPACHL | 10 | Sparganium chlorocarpum | -5 | OBL | Nt | P-FORB | DWARF BUR REED |
| SPAPEC | 4 | Spartina pectinata | -4 | FACW+ | Nt | P-GRASS | PRAIRIE CORD GRASS |
| SPEPER | 4 | Specularia perfoliata | 0 | FAC | Nt | A-FORB | VENUS'S LOOKING GLASS |
| SPHINT | 4 | Sphenopholis intermedia | 0 | FAC | Nt | P-GRASS | SLENDER WEDGE GRASS |
| STAPAH | 5 | Stachys palustris homotricha | -5 | OBL | Nt | P-FORB | WOUNDWORT |
| STATET | 8 | Stachys tenuifolia | -3 | [FACW] | Nt | P-FORB | SMOOTH HEDGE NETTLE |
| STATEH | 5 | Stachys tenuifolia hispida | -4 | FACW+ | Nt | P-FORB | MARSH HEDGE NETTLE |
| STATRI | 7 | Staphylea trifolia | 0 | FAC | Nt | SHRUB | BLADDERNUT |
| STEMED | * | STELLARIA MEDIA | 3 | FACU | Ad | A-FORB | COMMON CHICKWEED |
| TAROFF | * | TARAXACUM OFFICINALE | 3 | FACU | Ad | P-FORB | COMMON DANDELION |
| TEUCAN | 3 | Teucrium canadense | -3 | FACW | Nt | P-FORB | GERMANDER |
| THADAH | 5 | Thalictrum dasycarpum hypoglaucum | -2 | FACW- | Nt | P-FORB | SMOOTH MEADOW RUE |
| THABAR | 8 | Thaspium barbinode | 5 | UPL | Nt | P-FORB | HAIRY MEADOW PARSNIP |
| THLARV | * | THLASPI ARVENSE | 5 | UPL | Ad | A-FORB | PENNY CRESS |
| TILAME | 5 | Tilia americana | 3 | FACU | Nt | TREE | AMERICAN LINDEN |
| TRAOHI | 2 | Tradescantia ohiensis | 2 | FACU+ | Nt | P-FORB | COMMON SPIDERWORT |
| TRIHYB | * | TRIFOLIUM HYBRIDUM | 1 | FAC- | Ad | P-FORB | ALSIKE CLOVER |
| TRIPRA | * | TRIFOLIUM PRATENSE | 5 | UPL | Ad | P-FORB | RED CLOVER |
| TRIREP | * | TRIFOLIUM REPENS | 2 | FACU+ | Ad | P-FORB | WHITE CLOVER |
| TRINIV | 10 | Trillium nivale | 5 | UPL | Nt | P-FORB | SNOW TRILLIUM |
| TRIAUA | 5 | Triosteum aurantiacum | 5 | UPL | Nt | P-FORB | EARLY HORSE GENTIAN |
| TRIPER | 5 | Triosteum perfoliatum | 5 | UPL | Nt | P-FORB | LATE HORSE GENTIAN |
| TYPANG | 1 | Typha angustifolia | -5 | OBL | Nt | P-FORB | NARROW-LEAVED CATTAIL |
| TYPLAT | 1 | Typha latifolia | -5 | OBL | Nt | P-FORB | BROAD-LEAVED CATTAIL |
| TYPGLA | 1 | Typha X glauca | -5 | OBL | Nt | P-FORB | HYBRID CATTAIL |
| ULMAME | 3 | Ulmus americana | -2 | FACW- | Nt | TREE | AMERICAN ELM |
| ULMPUM | * | ULMUS PUMILA | 5 | UPL | Ad | TREE | SIBERIAN ELM |
| ULMRUB | 4 | Ulmus rubra | 0 | FAC | Nt | TREE | SLIPPERY ELM |
| URTPRO | 2 | Urtica procera | -1 | FAC+ | Nt | P-FORB | TALL NETTLE |
| UVUGRA | 7 | Uvularia grandiflora | 5 | UPL | Nt | P-FORB | BELLWORT |
| VERPHL | * | VERBASCUM PHLOMOIDES | 5 | UPL | Ad | B-FORB | CLASPING MULLEIN |
| VERTHA | * | VERBASCUM THAPSUS | 5 | UPL | Ad | B-FORB | COMMON MULLEIN |
| VERHAS | 4 | Verbena hastata | -4 | FACW+ | Nt | P-FORB | BLUE VERVAIN |
| VERSTR | 4 | Verbena stricta | 5 | UPL | Nt | P-FORB | HOARY VERVAIN |
| VERURU | 5 | Verbena urticifolia | 5 | UPL | Nt | P-FORB | HAIRY WHITE VERVAIN |
| VERFAS | 5 | Vernonia fasciculata | -3 | FACW | Nt | P-FORB | COMMON IRONWEED |
| VERARV | * | VERONICA ARVENSIS | 3 | FACU | Ad | A-FORB | CORN SPEEDWELL |
| VERPEE | 0 | Veronica peregrina | 5 | UPL | Nt | A-FORB | PURSLANE SPEEDWELL |
| VERSER | * | VERONICA SERPYLLIFOLIA | 0 | [FAC] | Ad | P-FORB | THYME-LEAVED SPEEDWELL |
| VIBLEN | 5 | Viburnum lentago | -1 | FAC+ | Nt | SHRUB | NANNYBERRY |
| VIBOPU | * | VIBURNUM OPULUS | 3 | [FACU] | Ad | SHRUB | EUROPEAN HIGHBUSH CRANBERRY |
| VICVIL | * | VICIA VILLOSA | 5 | UPL | Ad | A-FORB | WINTER VETCH |
| VIOMIS | 4 | Viola missouriensis | 0 | [FAC] | Nt | P-FORB | MISSOURI VIOLET |
| VIOPUB | 5 | Viola pubescens | 4 | FACU- | Nt | P-FORB | YELLOW VIOLET |
| VIOSOR | 3 | Viola sororia | 1 | FAC- | Nt | P-FORB | COMMON BLUE VIOLET |
| VIOSTR | 6 | Viola striata | -3 | FACW | Nt | P-FORB | CREAM VIOLET |
| VITRIP | 2 | Vitis riparia | -2 | FACW- | Nt | W-VINE | RIVERBANK GRAPE |
| XANSTR | * | XANTHIUM STRUMARIUM | 0 | FAC | Ad | A-FORB | COCKLEBUR |
| XANAME | 3 | Xanthoxylum americanum | 5 | UPL | Nt | SHRUB | PRICKLY ASH |

# Appendix II

## Special Status Species

### Clear Creek Corridor - Coralville, Iowa

Native plants recorded from within the project are that are classified as either infrequent or rare to Johnson County (Thorne 1955), and/or infrequent or rare to this region of the state, i.e., east-central Iowa (Eilers and Roosa 1994). In general, these species are not common due to their conservative habitat requirements. The plants are listed alphabetically by species. Nomenclature follows Swink and Wilhelm (1994). An "x" in a column indicates that the species is "infrequent" or "rare" according to the literature, and a "-" indicates it is not. Three plants listed as "UNK" are not listed in Thorne (1955) as species known from Johnson County.

Two sedges in this list (*Carex aggregata* and *C. tenera*) are classified as "special concern species" for the State of Iowa (Iowa Administrative Code 1994).

| Species | Common Name | Literature | |
|---|---|---|---|
| | | Thorne | Eilers & Roosa |
| *Acorus calamus* | SWEET FLAG | x | - |
| *Actinomeris alternifolia* | WINGSTEM | x | - |
| *Agalinis tenuifolia* | SLENDER FALSE FOXGLOVE | x | - |
| *Allium canadense* | WILD ONION | x | - |
| *Alopecurus carolinianus* | ANNUAL FOXTAIL | x | x |
| *Apocynum sibiricum* | PRAIRIE INDIAN HEMP | x | - |
| *Aralia racemosa* | SPIKENARD | x | - |
| *Arenaria lateriflora* | WOOD SANDWORT | x | - |
| *Asclepias amplexicaulis* | SAND MILKWEED | x | - |
| *Asclepias exaltata* | POKE MILKWEED | x | x |
| *Aster lateriflorus* | SIDE-FLOWERING ASTER | x | - |
| *Aster ontarionis* | ONTARIO ASTER | x | - |
| *Boehmeria cylindrica* | FALSE NETTLE | x | - |
| *Boltonia latisquama* var. *recognita* | FALSE ASTER | x | x |
| *Cardamine bulbosa* | BULBOUS CRESS | x | x |
| *Cardamine pensylvanica* | PENNSYLVANIA BITTER CRESS | x | - |
| *Carex aggregata* | SMOOTH CLUSTERED SEDGE | - | x |
| *Carex annectans* var. *xanthocarpa* | SMALL YELLOW FOX SEDGE | x | x |

Clear Creek Corridor - Appendix II (cont.):

| Species | Common Name | Literature | |
|---|---|---|---|
| | | Thorne | Eilers & Roosa |
| *Carex emoryi* | RIVERBANK SEDGE | - | x |
| *Carex frankii* | BRISTLY CATTAIL SEDGE | UNK | x |
| *Carex jamesii* | GRASS SEDGE | x | x |
| *Carex lacustris* | COMMON LAKE SEDGE | x | - |
| *Carex lupulina* | COMMON HOP SEDGE | x | - |
| *Carex normalis* | SPREADING OVAL SEDGE | x | x |
| *Carex scoparia* | LANCE-FRUITED OVAL SEDGE | x | - |
| *Carex shortiana* | SHORT'S SEDGE | x | x |
| *Carex sprengelii* | LONG-BEAKED SEDGE | x | - |
| *Carex trichocarpa* | HAIRY-FRUITED LAKE SEDGE | x | x |
| *Carex vescicaria* var. *monile* | TUFTED LAKE SEDGE | x | x |
| *Caulophyllum thalictroides* | BLUE COHOSH | x | x |
| *Cirsium discolor* | FIELD THISTLE | x | - |
| *Clematis pitcheri* | LEATHER FLOWER | x | x |
| *Cornus obliqua* | BLUE-FRUITED DOGWOOD | x | - |
| *Desmodium canadense* | SHOWY TICK TREFOIL | x | - |
| *Dodecatheon meadia* | SHOOTING STAR | x | x |
| *Dryopteris spinulosa* | SPINULOSE SHIELD FERN | x | x |
| *Dryopteris thelypteris* var. *pubescens* | MARSH SHIELD FERN | x | x |
| *Eleocharis erythropoda* | RED-ROOTED SPIKE RUSH | x | x |
| *Fraxinus nigra* | BLACK ASH | x | - |
| *Galium obtusum* | WILD MADDER | x | - |
| *Geum laciniatum* var. *trichocarpum* | ROUGH AVENS | x | - |
| *Heracleum maximum* | COW PARSNIP | x | x |
| *Hypericum pyramidatum* | GREAT ST. JOHN'S WORT | x | x |
| *Juncus dudleyi* | DUDLEY'S RUSH | x | - |
| *Lilium michiganense* | MICHIGAN LILY | x | - |
| *Lobelia spicata* | PALE SPIKED LOBELIA | x | - |
| *Ludwigia alternifolia* | SEEDBOX | x | x |

Clear Creek Corridor - Appendix II (cont.):

| Species | Common Name | Literature | |
|---|---|---|---|
| | | Thorne | Eilers & Roosa |
| *Ludwigia palustris* var. *americana* | MARSH PURSLANE | x | x |
| *Lycopus virginicus* | BUGLE WEED | x | x |
| *Lysimachia hybrida* | RIVER LOOSESTRIFE | x | - |
| *Lysimachia thyrsiflora* | TUFTED LOOSESTRIFE | x | x |
| *Polygonum hydropiperoides* | MILD WATER PEPPER | UNK | x |
| *Polygonum sagittatum* | ARROW-LEAVED TEAR THUMB | x | - |
| *Sagittaria brevirostra* | SHORT-BEAKED ARROW HEAD | x | x |
| *Sanicula marilandica* | BLACK SNAKEROOT | x | - |
| *Scirpus fluviatlis* | RIVER BULRUSH | x | - |
| *Scutellaria epilobiifolia* | MARSH SKULLCAP | x | x |
| *Silene nivea* | SNOWY CAMPION | x | x |
| *Sparganium chlorocarpum* | DWARF BUR REED | UNK | x |
| *Sphenopholus intermedia* | SLENDER WEDGE GRASS | x | - |
| *Stachys palustris* var. *homotricha* | WOUNDWORT | x | - |
| *Thaspium barbinode* | HAIRY MEADOW PARSNIP | x | - |
| *Trillium nivale* | SNOW TRILLIUM | x | x |
| *Triosteum aurantiacum* | EARLY HORSE GENTIAN | x | x |
| *Viburnum lentago* | NANNYBERRY | x | - |

# Exhibits

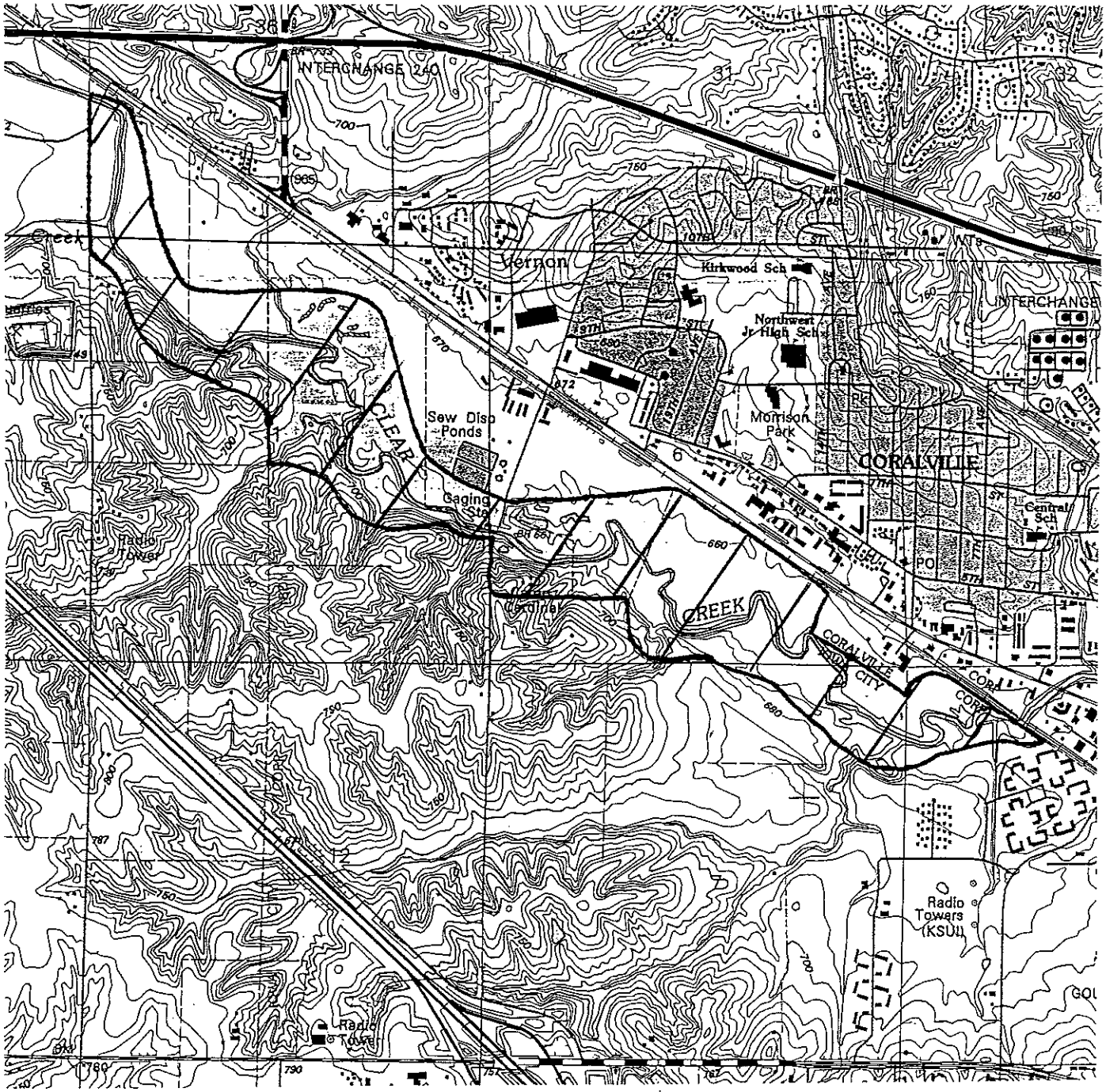



**Exhibit B USGS Topographic Map**

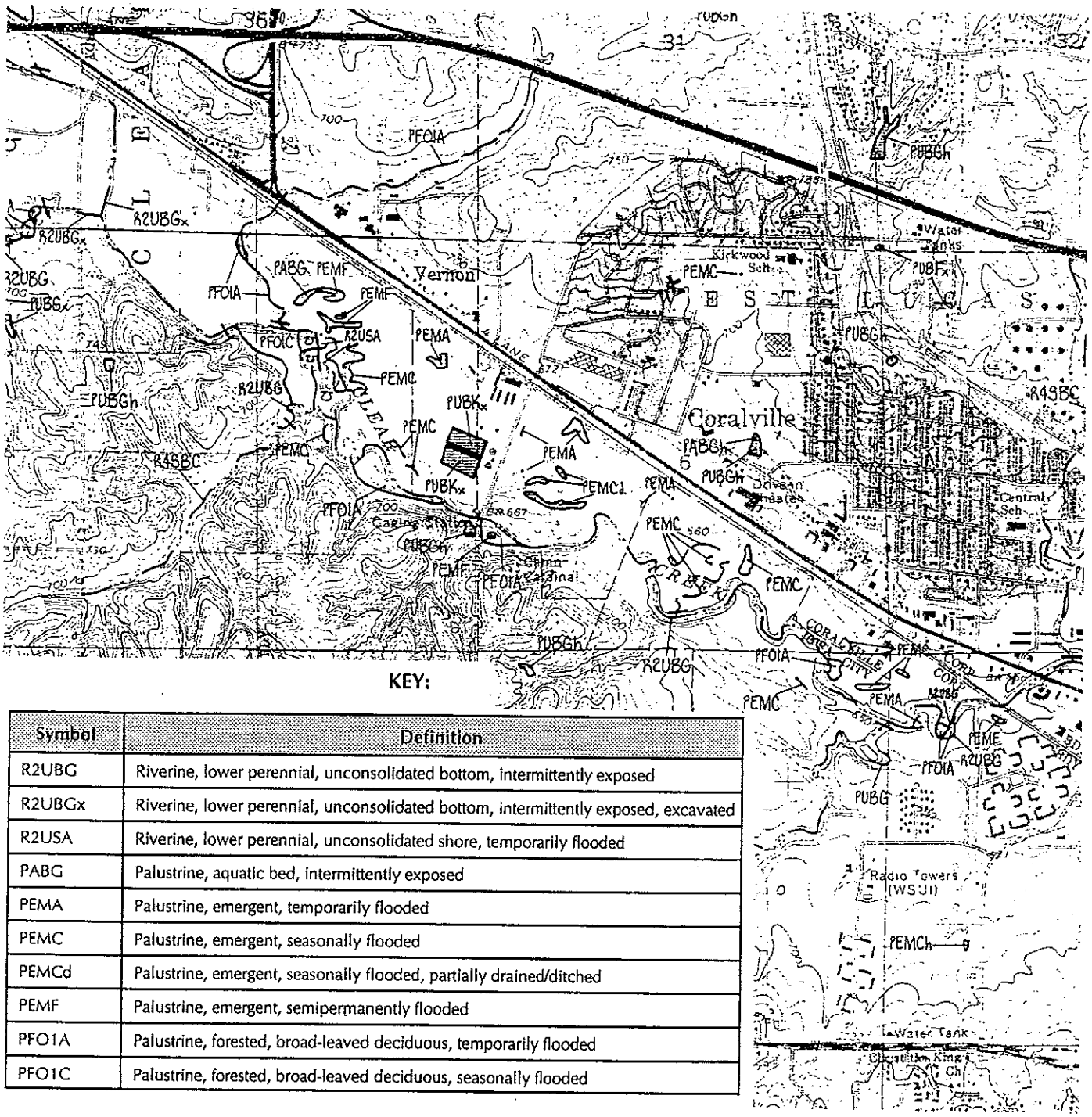
Iowa City West Quadrangle, 7.5 Minute Series (scale: 1" = 2000')

Clear Creek Corridor - Coralville, Iowa

*Conservation Design Forum*
January 1998

**Above:** Fill piles and weedy vegetation near Camp Cardinal Road at south end of JLS Property.

**Below:** Recently-created artificial drainageway north of creek in eastern portion of project area.




**KEY:**

| Symbol | Definition |
|---|---|
| R2UBG | Riverine, lower perennial, unconsolidated bottom, intermittently exposed |
| R2UBGx | Riverine, lower perennial, unconsolidated bottom, intermittently exposed, excavated |
| R2USA | Riverine, lower perennial, unconsolidated shore, temporarily flooded |
| PABG | Palustrine, aquatic bed, intermittently exposed |
| PEMA | Palustrine, emergent, temporarily flooded |
| PEMC | Palustrine, emergent, seasonally flooded |
| PEMCd | Palustrine, emergent, seasonally flooded, partially drained/ditched |
| PEMF | Palustrine, emergent, semipermanently flooded |
| PFO1A | Palustrine, forested, broad-leaved deciduous, temporarily flooded |
| PFO1C | Palustrine, forested, broad-leaved deciduous, seasonally flooded |

## Exhibit C NWI Map

Wetland habitat overlay on topographic map (scale: 1" = 2000')

Clear Creek Corridor - Coralville, Iowa

*Conservation Design Forum*
January 1998

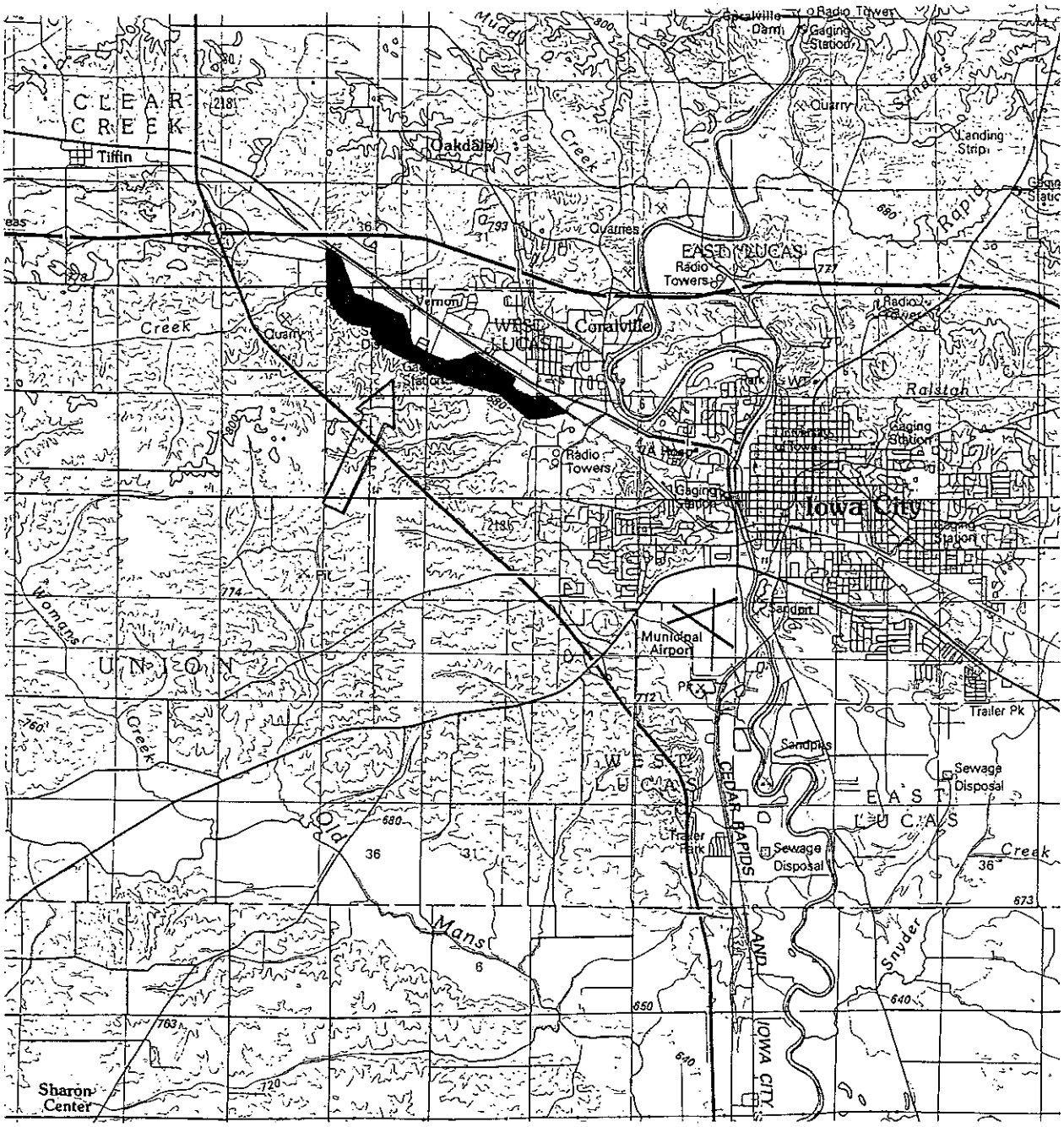



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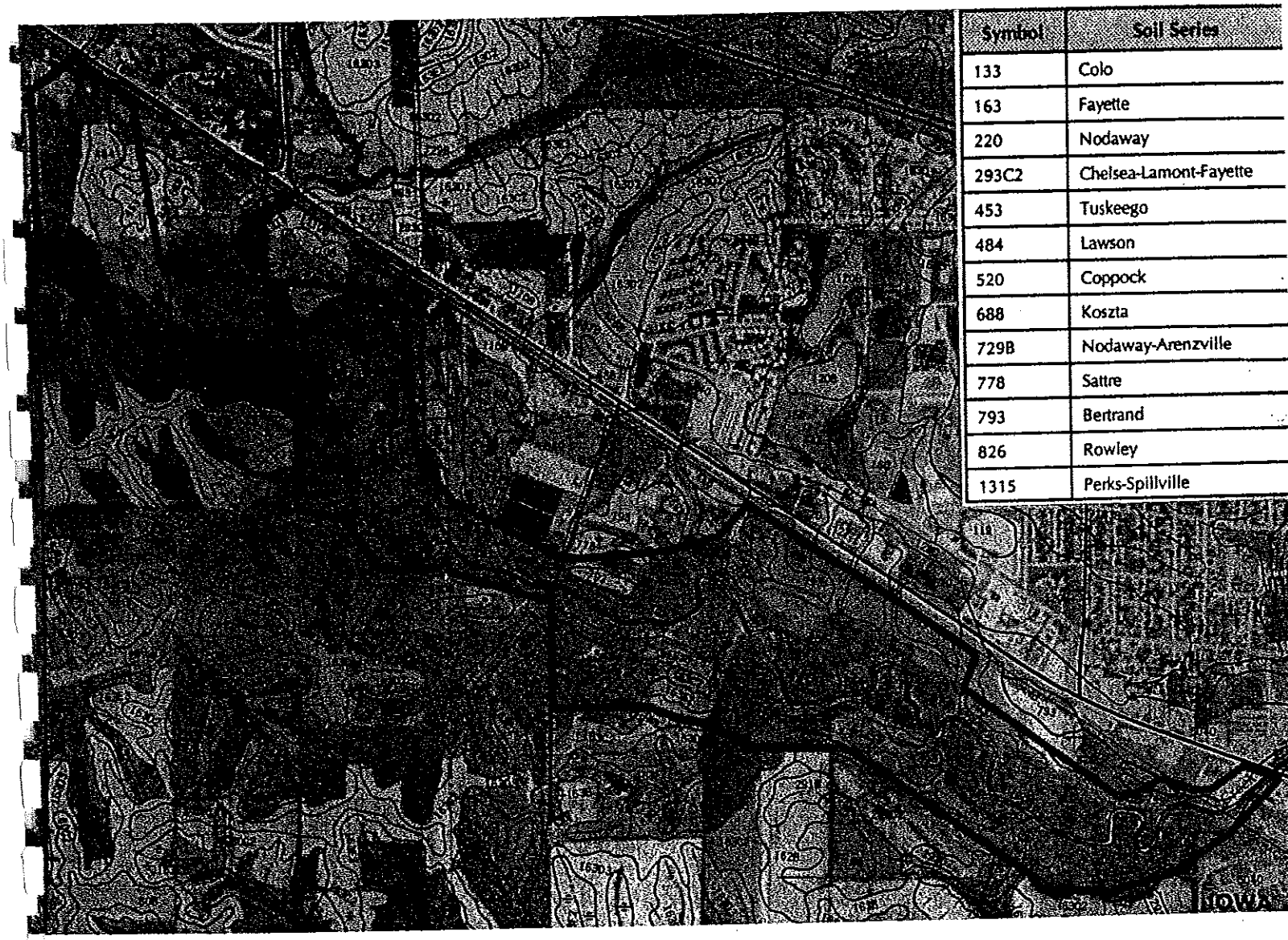
**Exhibit A Project Location Map**

Clear Creek Corridor - Coralville, Iowa

*Conservation Design Forum*
January 1998



| Symbol | Soil Series |
|---|---|
| 133 | Colo |
| 163 | Fayette |
| 220 | Nodaway |
| 293C2 | Chelsea-Lamont-Fayette |
| 453 | Tuskeego |
| 484 | Lawson |
| 520 | Coppock |
| 688 | Koszta |
| 729B | Nodaway-Arenzville |
| 778 | Sattre |
| 793 | Bertrand |
| 826 | Rowley |
| 1315 | Perks-Spillville |

N

**Exhibit D Johnson County Soil Survey Map** (not to scale)

Existing Site Conditions Key

- Wooded Bluffs & Ravines
- Bottomland Woods & Terraces
- Ox-bows & Vegetated Wetlands
- Clear Creek
- Old-field Habitats & Pasture
- Cultivated Land
- Artificial Waterways

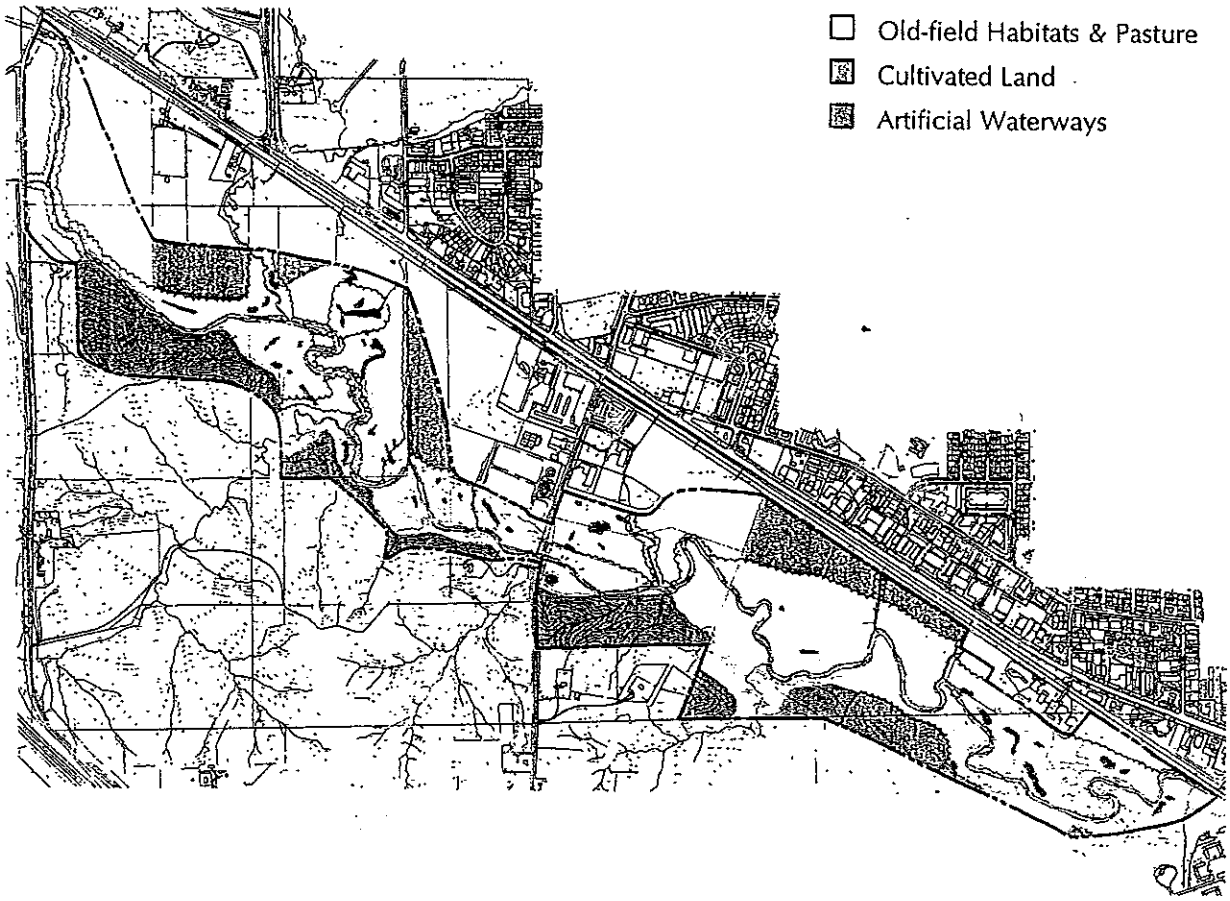


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**Exhibit E Existing Site Condions Map** (not to scale)

Entire project area

Clear Creek Corridor - Coralville, Iowa

*Conservation Design Forum*
January 1998

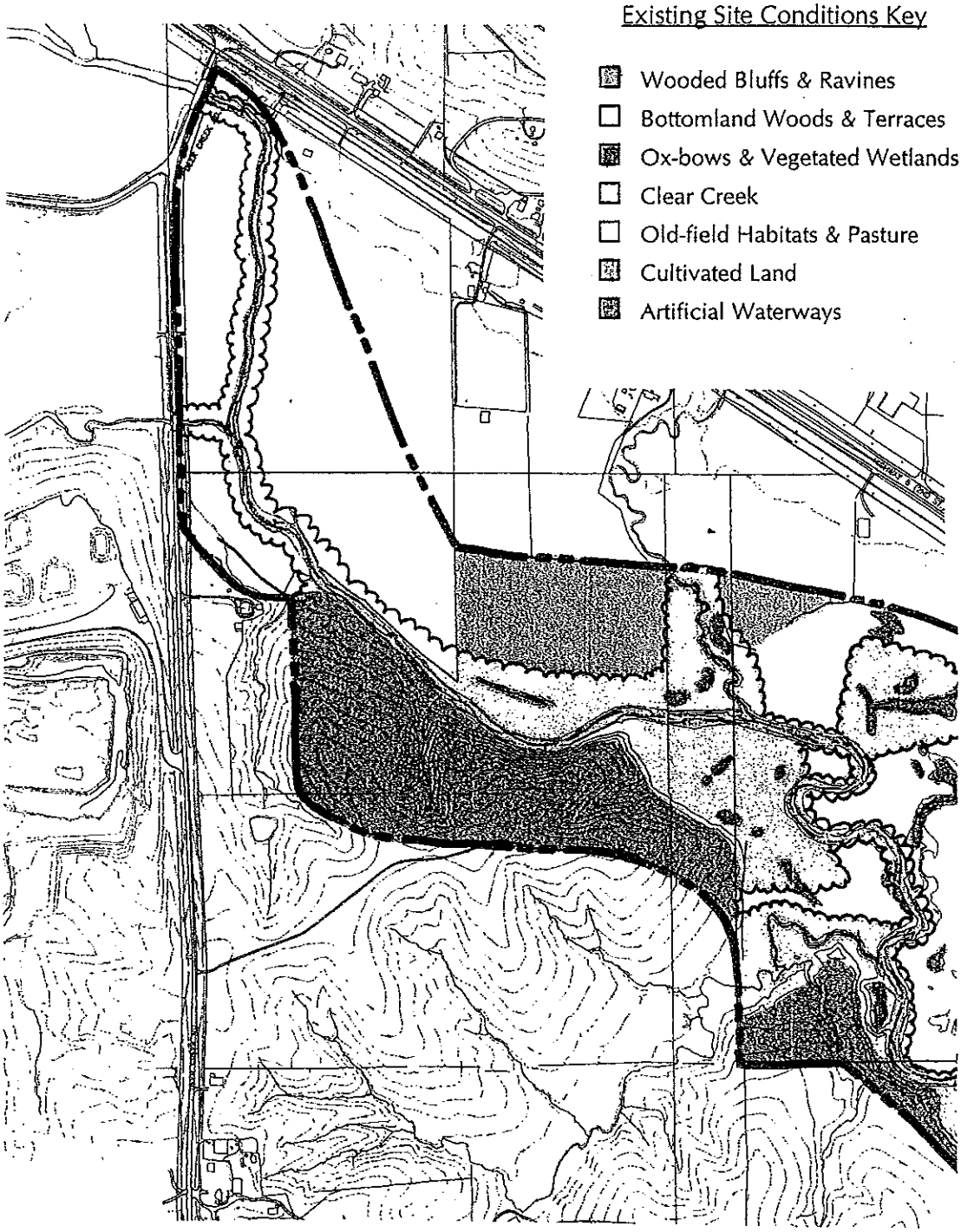


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**Exhibit F Existing Site Condions Map** (not to scale)

Western 1/3 of project area

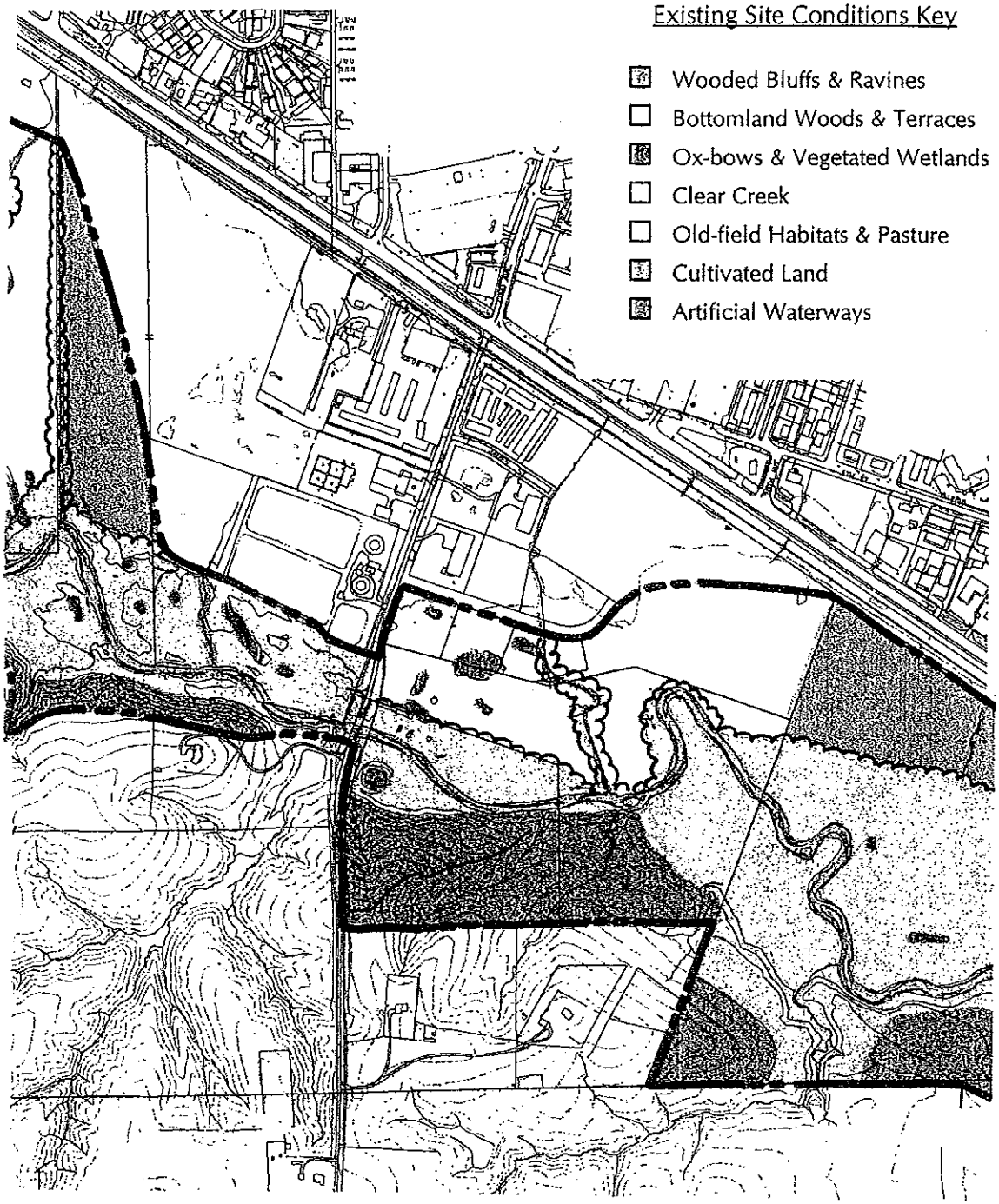
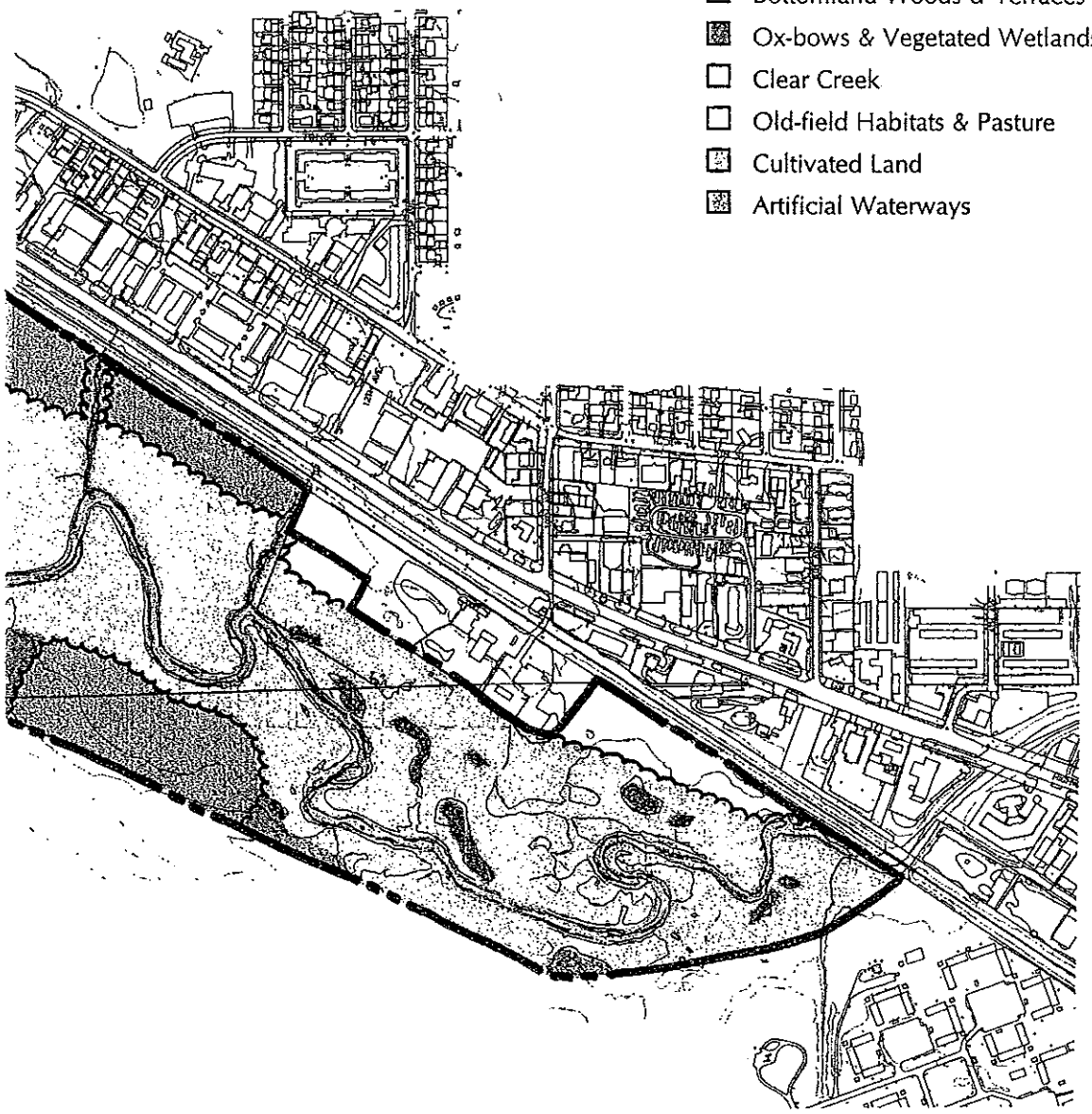



**Exhibit G Existing Site Condions Map** (not to scale)

Central 1/3 of project area

Existing Site Conditions Key

- Wooded Bluffs & Ravines
- Bottomland Woods & Terraces
- Ox-bows & Vegetated Wetlands
- Clear Creek
- Old-field Habitats & Pasture
- Cultivated Land
- Artificial Waterways



N

**Exhibit H Existing Site Condions Map** (not to scale)

Eastern 1/3 of project area

# Photographs

**Above:** Upland woods at former Camp Cardinal.

**Below:** Top of wooded bluff near agricultural land west of Camp Cardinal Road showing erosion gully.

**Above:** Bottomland woods along Clear Creek showing sandy alluvium.

**Below:** Erosion gully within bottomland woods.

Clear Creek Corridor - Coralville, Iowa

**Above:** Cattail marsh north of creek, east of Camp Cardinal Road.

**Below:** Clear Creek, showing typical streambank erosion.

**Above:** Ox-bow wetland on Greer Property.

**Below:** Remnant sedge meadow wetland north of creek, west of Camp Cardinal Road.

**Above:** Old-field habitat at west end of site.

**Below:** Rolling upland in cultivation south of creek at east end of site.