



June 9, 2008

Napa Gateway Partners LLC
c/o Kris Pigman
The Pigman Companies
2481 Sunrise Boulevard, Suite 200
Gold River, CA 95670

**Subject: Greenwood Commerce Center – Special-Status Plant Survey Addendum
Napa County, California**

Dear Mr. Pigman:

The Biological Resources Assessment for the Greenwood Commercial Center (North Fork Associates 2008) determined that five special-status plant species known to occur in the area had at least some potential to occur within the study area or on the property to the west. That assessment recommended additional rare plant surveys. The purpose of this addendum is to describe the methods used to survey the study area and the results of those surveys.

Methods

Rare plant surveys were conducted on March 25, 2008 by Barry Anderson and on May 6, 2008 by Barry Anderson and Melissa Hostler. The surveys were floristic according to guidelines for rare plant surveys issued by the California Department of Fish and Game and the U.S. Fish and Wildlife Service. Floristic surveys require that each individual plant encountered be identified to the extent needed to determine its rarity status. The purpose of floristic surveys is to capture all special-status species present, even those not otherwise expected to occur. A list of all species observed is attached to this addendum. Plant names follow *The Jepson Manual* (Hickman 1993) as updated by the Jepson Online Interchange for California Floristics, a database maintained by The University and Jepson Herbaria of the University of California.

Results

The entire area, including the Greenwood Commercial Center and the adjacent property, is highly disturbed. Disking occurs annually to reduce the fire hazard, and the flora present is evidence of this land use practice. The majority of species on the attached plant list are non-native species often considered ruderal by botanists. In addition, some of the native species on the plant list tend to grow in disturbed habitats.

For the most part, rare plant species are not found in highly disturbed habitats. Within the area studied, the large wetland swale flowing east to west across the site is much less disturbed than

the surrounding uplands, and several potentially-occurring species are found in wetlands. Table 1 is a list of plant species determined to have some potential to occur in the area studied.

Table 1: Potentially-Occurring Special-Status Plants

Species	Status*			Habitat	Potential for Occurrence**
	Federal	State	Other		
Big-scale balsam-root <i>Balsamorhiza macrolepis</i> var. <i>macrolepis</i>	-	-	CNPS List 1B.2	Valley and foothill grassland	Unlikely. Marginal habitat is present. Not observed during surveys.
Pappose tarplant <i>Centromadia parryi</i> subsp. <i>parryi</i>	-	-	CNPS List 1B.2	Vernally wet grasslands.	Possible. Wetlands in the study area may provide suitable habitat. Not observed during surveys.
Contra Costa Goldfields <i>Lasthenia conjugens</i>	FE	-	CNPS List 1B.1	Vernal pools and seasonal wetlands.	Unlikely. Some wetlands in the study area may provide suitable habitat. Not observed during surveys.
Dwarf downingia <i>Downingia pussilla</i>	-	-	CNPS List 2.2	Vernal pools and seasonal wetlands.	Unlikely. Swales in the study area may provide habitat. Not observed during surveys.
Showy Indian clover <i>Trifolium amoenum</i>	FE	-	CNPS List 1B.1	Valley and foothill grasslands.	Possible. Marginal habitat is present, and the species in known historically from nearby locations. Not observed during surveys.

*Status Codes:

Federal

FE Federal Endangered

CNPS

List 1B Rare, Threatened, or Endangered in California

1- Seriously threatened in California

2- Fairly threatened in California

3- Not very threatened in California

**Definitions for the Potential to Occur:

Unlikely. Some habitat may occur, but disturbance or other activities may restrict or eliminate the possibility of the species occurring. Habitat may be very marginal, or the study area may be outside the range of the species.

Possible. Marginal to suitable habitat occurs, and the study area occurs within the range of the species.

Big-scale balsam-root. This species is found in grasslands and open woodlands. Like other members of the genus, it probably does not tolerate the high amount of disturbance found in

the area surveyed. No members of the genus *Balsamorhiza* or the similar genus *Wyethia* were observed during surveys. Big-scale balsam-root is assumed to be absent.

Pappose tarplant. Members of the composite subtribe Madiinae, which includes species known as tarweeds and tarplants) often tolerate some levels of disturbance. The pappose tarplant occurs in vernal wet grasslands, a habitat that occurs in the area surveyed. However, no members of the genus *Centromadia* were observed during surveys. *Madia elegans* was the only species in the subtribe found. Pappose tarplant is assumed to be absent.

Contra Costa goldfields. Contra Costa goldfields is known to grow in vernal pools and swales disked during the construction of fire breaks, so that it appears to tolerate at least some level of disturbance. The wetland swale in the survey area does provide marginal habitat for this species. No members of the genus *Lasthenia* were observed during field surveys, and the Contra Costa goldfields is assumed to be absent.

Dwarf downingia. The wetland swale in the area surveyed provides at least some habitat for this species, as does the seasonal wetland on the property to the east of the Greenwood Commercial Center parcel. No members of the genus *Downingia* were observed during field surveys. Dwarf downingia is assumed to be absent.

Showy Indian clover. Showy Indian clover is a distinct and very rare species in Sonoma and Napa Counties. In Napa County it is known only from historical locations, and was thought to be extinct until a population was found in Sonoma County. This species probably does not tolerate heavy disturbance. The only member of the genus *Trifolium* observed during surveys was *T. subterraneum*. Showy Indian clover is assumed to be absent.

No other special-status plant species were observed during floristic field surveys of the Greenwood Commercial Center property and an adjacent parcel. No further plant surveys are recommended. If you have any questions, or need more information, please call me or Pat Britton at (530)887-8500.

Sincerely:

A handwritten signature in dark ink, appearing to read "Barry Anderson", with a stylized, flowing script.

Barry Anderson
Senior Biologist

Attachment A

Plant Species Observed During Surveys

Angiosperms - Dicots

Apiaceae

**Foeniculum vulgare* Sweet fennel

Asteraceae

<i>Baccharis pilularis</i>	Coyote brush
<i>*Carduus pycnocephalus</i>	Italian thistle
<i>*Centaurea calcitrapa</i>	Purple star-thistle
<i>*Centaurea solstitialis</i>	Yellow star-thistle
<i>*Cichorium intybus</i>	Chicory
<i>*Cirsium vulgare</i>	Bull thistle
<i>*Cotula coronopifolia</i>	Brass-buttons
<i>*Dittrichia graveolens</i>	Stinkwort
<i>*Helminthotheca echioides</i>	Bristly ox-tongue
<i>*Hypochaeris glabra</i>	Smooth cat's-ear
<i>*Hypochaeris radicata</i>	Rough cat's-ear
<i>*Lactuca serriola</i>	Prickly lettuce
<i>Madia elegans</i>	Common madia
<i>*Senecio vulgaris</i>	Common groundsel
<i>*Silybum marianum</i>	Milk thistle
<i>*Soliva sessilis</i>	Field burrweed
<i>*Sonchus asper</i>	Prickly sow-thistle
<i>*Sonchus oleraceus</i>	Common sow-thistle
<i>Xanthium strumarium</i>	Cocklebur

Boraginaceae

Amsinckia menziesii Common fiddleneck

Brassicaceae

<i>*Brassica rapa</i>	Field mustard
<i>*Hirschfeldia incana</i>	Short-podded mustard
<i>*Raphanus raphanistrum</i>	Jointed charlock
<i>*Raphanus sativus</i>	Wild radish
<i>*Sinapis arvensis</i>	Wild mustard
<i>*Sisymbrium officinale</i>	Hedge mustard

Callitrichaceae

Callitriche sp. Water-starwort

Caryophyllaceae

<i>*Spergula arvensis subsp. arvensis</i>	Stickwort
<i>*Stellaria media</i>	Common chickweed

Convolvulaceae

**Convolvulus arvensis* Bindweed

Dipsacaceae

**Dipsacus fullonum* Wild teasel

Euphorbiaceae

Croton setigerus

Turkey mullein

Fabaceae

**Lotus corniculatus*

Birdfoot trefoil

Lotus purshianus var. *purshianus*

Spanish-clover

Lupinus bicolor

Miniature lupine

**Medicago polymorpha*

California burclover

**Trifolium dubium*

Little hop clover

**Trifolium subterraneum*

Subterranean clover

**Vicia benghalensis*

Purple vetch

**Vicia sativa*

Common vetch

**Vicia* sp.

Vetch

**Vicia villosa*

Winter vetch

Fagaceae

Quercus agrifolia var. *agrifolia*

Coast live oak

Geraniaceae

**Erodium botrys*

Broad-leaf filaree

**Erodium moschatum*

White-stem filaree

**Geranium dissectum*

Cut-leaf geranium

Lamiaceae

**Mentha pulegium*

Pennyroyal

Stachys ajugoides var. *ajugoides*

Bugle hedge-nettle

Lythraceae

**Lythrum hyssopifolia*

Hyssop loosestrife

Myrsinaceae

**Anagallis arvensis*

Scarlet pimpernel

Myrtaceae

**Eucalyptus* sp.

Eucalyptus

Onagraceae

Epilobium brachycarpum

Summer cottonweed

Epilobium ciliatum

Hairy willow-herb

Papaveraceae

Eschscholzia californica

California poppy

Plantaginaceae

**Plantago lanceolata*

English plantain

Polygonaceae

Persicaria amphibia

Water smartweed

**Polygonum aviculare*

Common knotweed

**Rumex acetosella*

Sheep sorrel

**Rumex crispus*

Curly dock

**Rumex pulcher*

Fiddle dock

Ranunculaceae

**Ranunculus muricatus*

Spiny-fruit buttercup

Rosaceae**Rubus discolor*

Himalayan blackberry

Rubiaceae**Galium aparine*

Goose grass

Salicaceae*Salix sp.*

Willow

Scrophulariaceae**Parentucellia viscosa*

Yellow glandweed

Triphysaria versicolor subsp. versicolor

Triphysaria

Solanaceae*Solanum americanum*

Black nightshade

Angiosperms -Monocots

Araceae*Lemna sp.*

Duckweed

Cyperaceae*Cyperus eragrostis*

Tall flatsedge

Eleocharis macrostachya

Creeping spikerush

Schoenoplectus acutus var. occidentalis

Hard-stem tule

Juncaceae*Juncus bufonius*

Toad rush

Juncus mexicanus

Mexican rush

Juncus oxymeris

Pointed rush

Juncaginaceae*Lilaea scilloides*

Flowering quillwort

Poaceae**Aira caryophyllea*

Silver European hairgrass

Alopecurus aequalis

Short-awn foxtail

**Avena barbata*

Slender wild oat

**Avena fatua*

Wild oat

**Briza minor*

Small quaking grass

**Bromus diandrus*

Ripgut grass

**Bromus hordeaceus*

Soft chess

**Dactylis glomerata*

Orchard grass

Distichlis spicata

Saltgrass

Hordeum brachyantherum

Meadow barley

**Hordeum marinum subsp. gussoneanum*

Mediterranean barley

**Hordeum murinum*

Foxtail barley

Leymus triticoides

Creeping wildrye

**Lolium multiflorum*

Italian ryegrass

**Paspalum dilatatum*

Dallis grass

**Phalaris aquatica*

Harding grass

**Phalaris paradoxa*

Paradox canary-grass

Pleuropogon californicus

Annual semaphore grass

**Poa annua*

Annual bluegrass

**Polypogon monspeliensis*

Annual beard grass

**Vulpia bromoides*

**Vulpia myuros*

Themidaceae

Brodiaea elegans subsp. elegans

Typhaceae

Typha angustifolia

Typha latifolia

Brome fescue

Rattail fescue

Harvest brodiaea

Narrow-leaved cattail

Broad-leaved cattail