



Mr. Ric Hattman
Gefroh Hattman
145 W. Swallow Rd
Fort Collins, Colorado 80525

October 10, 1997

Dear Mr. Hattman:

At your request, Cedar Creek Associates, Inc. (Cedar Creek) completed a Corps of Engineers (COE) jurisdictional wetland survey and delineation of a parcel of land located along South Mason Street in Fort Collins in the NE 1/4 of Section 3, T7N, R69W. The project area consists of two lots (approximately 1.08 acres) immediately north of the new Ramada Inn. This survey was conducted to fulfill the requirements of Section 404 of the Clean Water Act regarding the delineation of wetlands prior to potential development activities.

Study Methodology

Wetland mapping and delineation work was completed using the methods and techniques specified for "routine on-site delineations" in the publication *Corps of Engineers Wetlands Delineation Manual* (1987). Prior to field work, project mapping was reviewed to familiarize field personnel with the project site, and a cursory examination of the property was made prior to field mapping to provide background information on any influencing circumstances as well as to allow verification of property boundaries and access points through the project area. Following reconnaissance work, normal mapping activity was initiated.

To properly characterize the wetland, a sample point was selected in the Southwest quarter of the area whereby percent cover and composition of dominant plant species was estimated and a soil pit excavated. Only one sample point was deemed necessary to represent the overall wetland given the obvious nature of the wetland conditions. Species were classed as OBL (obligate wetland species), FACW (facultative wetland species), FAC (facultative species), FACU (facultative upland species) or UPL (upland species). Wetland soil indicators potentially included the presence of a histic epipedon, mottling, gleying, and high organic matter content and/or organic matter streaking in the surface layers of sandy soils. Potential wetland hydrologic indicators included topographic position, presence of standing water and/or saturated soil profile conditions, drainage patterns, and oxidized root channels in the upper 12 inches of the soil profile. A formal field data sheet was completed for the sampling point and is included with this document.

In conjunction with the formal sampling site, several "check holes" were excavated to further aid in the wetland delineation. Check holes provided additional soil and hydrologic information useful for refining boundaries indicated by surface vegetation patterns extant about the wetland area. Such information was also used to better characterize wetland conditions as a whole. Formal sample site data sheets were not completed for check holes.

Following the analysis of site characteristics, the currently existing wetland boundary was marked with orange flagging. It is expected that these locations will be formally recorded through land surveying efforts provided by Gefroh Hattman or other contractor. The results of these field analyses are summarized in the following section.

Results

Overall, the entire project area is composed of wetlands likely to be considered jurisdictional by the COE or fill material which has been placed over wetlands, perhaps without proper authorization. If these areas of fill were unauthorized by the COE, then the entire property would count toward the acreage classifying as wetland. In essence, it appears that the wetlands present within the confines of this property are all that remains of a much larger wetland which historically existed in the area. As observable on Figure 1 and readily apparent in the field, it appears that when Mason street to the east was constructed, wetlands underlying the street's planned location were destroyed. Furthermore, on the east side of the property, a large amount of fill material has been deposited within a half-moon-shaped area exhibiting dimensions of approximately 58 feet (east to west) and 147 feet (north to south).

Similarly, the older development along north boundary of the property exhibits at least four vertical feet of fill material overlying the wetland area. This fill extends into the property a distance ranging from two to five feet. To the west, the existing railroad grade appears to have been constructed over the historic wetland. The edge of the railroad right-of-way (i.e. boundary of the subject property) is difficult to determine in this area due to the existence of a tall and dense cattail marsh which is continuous with the wetland internal to the property (see Figure 1). To the south, the recent construction for the new Ramada Inn was facilitated by placement of up to an estimated six vertical feet of fill material which also extends into the subject property from two to five feet.

As a result of these fills, the existing expression of wetland is substantially reduced from its historic boundaries. This remaining expression of wetland was flagged by Cedar Creek on October 8, 1997. If the aforementioned fills were authorized by the COE, then the flagged boundary is the only area which must be addressed by 404 permitting efforts. If any of the four fill areas were unauthorized by the COE, then that portion of the property could also count as wetland area. The most conservative call in this

regard is to consider that the entire acreage (1.08 acres) would need to be considered as wetland for permitting efforts.

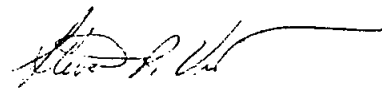
With regard to the remaining wetland, it is a combination of open water, cattail marsh, sedge/grass meadow, and mudflat. At the time of survey, six mallards were utilizing the open water (approximately 12" - 18" deep) and raccoon tracks were observed along the shoreline. However, owing to the wetland's position within the confines of Fort Collins, in association with its small size, it does not offer significant value as wildlife habitat. The sample point placed in the southwest quadrant of the wetland area was selected to represent overall wetland conditions. This sample point is dominated by herbaceous wetland species which comprise 96% of the relative cover. Three species dominate at this point including *Phalaris arundinacea*, *Typha latifolia*, and *Scirpus pungens* with 20%, 15%, and 15% relative cover, respectively. As observable on the data sheet attached to this letter, several additional wetland species were noted within the sample point.

Soil matrix colors are 10YR 3/2 to a depth of 8 inches and 10YR 3/1 from 8 to 16 inches, and 5Y 4/1 gleyed conditions below 16 inches. Soil mottles in the upper 16 inches are abundant and strong exhibiting colors of 10YR 4/6. Free water was observed in the soil pit at a level of 16 inches, saturated conditions were observed extending to the surface, and surface indications of springtime inundation are evident.

Once you have had a chance to review this material, please give me a call if you have any questions. I am reasonably sure given that the project area is over 0.33 acres, the COE will likely require an individual permit for project development. Depending on the COE's requirements as they relate to this project, such a permitting effort may be relatively easy or may become more involved. We cannot tell until further discussion with COE has occurred. If we can help you with this permitting, please let us know, however, for your planning purposes you should be aware that our schedules in the near term are quite busy.

I hope that this meets your needs at this time.

Sincerely,
CEDAR CREEK ASSOCIATES, INC.



Steven R. Viert
Principal

DATA FORM
ROUTINE WETLAND DETERMINATION
 (1987 COE Wetlands Delineation Manual)

Project/Site: <u>2 lots N. of New Remuda Inn on Mason</u> Applicant/Owner: <u>Geoffrey Holtzman</u> Investigator: <u>Steve Vicit - Cedar Creek</u>	Date: <u>10/8/97</u> County: <u>Larimer</u> State: <u>Colorado</u>						
Do Normal Circumstances exist on the site? Is the site significantly disturbed (Atypical Situation)? Is the area a potential Problem Area? (If needed, explain on reverse.)	<table style="width: 100%; border: none;"> <tr> <td style="text-align: center;">Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/></td> <td style="text-align: center;">Community ID: _____</td> </tr> <tr> <td style="text-align: center;">Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/></td> <td style="text-align: center;">Transect ID: _____</td> </tr> <tr> <td style="text-align: center;">Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/></td> <td style="text-align: center;">Plot ID: _____</td> </tr> </table> <p style="margin-left: 20px;">Fill Area on Notes</p>	Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	Community ID: _____	Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____	Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	Plot ID: _____
Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	Community ID: _____						
Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	Transect ID: _____						
Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	Plot ID: _____						

Rel. cov. **VEGETATION**

	Dominant Plant Species	Stratum	Indicator	Dominant Plant Species	Stratum	Indicator	
15%	1. <u>Typha latifolia</u>	H	Obl	9. <u>Potamogeton spp.</u>	H	Obl	5%
15%	2. <u>S. Purpurea (Throssgras)</u>		Obl	10. <u>Equisetum hyemale / lae</u>		FACW	2%
10%	3. <u>Juncus balticus</u>		Obl	11. <u>Phalaris arvensis</u>		Up	1%
6%	4. <u>Polygonum aviculare</u>		FACW	12. <u>Sisymbrium o. it.</u>	↓	Up	1%
20%	5. <u>Phalaris arund.</u>		FACW+	13. <u>S. scaber</u>	↓	Obl	21%
8%	6. <u>Rumex crispus</u>		FACW	14. <u>Other</u>	↓	FACW	0.15%
10%	7. <u>Distichlis spicata</u>		FACW	15. _____			
21%	8. <u>Bromus inermis</u>	↓	Up	16. _____			

100

Percent of Dominant Species that are OBL, FACW or FAC (excluding FAC-): 96% Relative Cover

Remarks:

HYDROLOGY

<p>___ Recorded Data (Describe in Remarks):</p> <p style="margin-left: 20px;">___ Stream, Lake, or Tide Gauge</p> <p style="margin-left: 20px;">___ Aerial Photographs</p> <p style="margin-left: 20px;">___ Other</p> <p>___ No Recorded Data Available</p>	<p>Wetland Hydrology Indicators:</p> <p>Primary Indicators:</p> <p><input checked="" type="checkbox"/> Inundated</p> <p><input checked="" type="checkbox"/> Saturated in Upper 12 Inches</p> <p>___ Water Marks</p> <p>___ Drift Lines</p> <p>___ Sediment Deposits</p> <p><input checked="" type="checkbox"/> Drainage Patterns in Wetlands</p> <p>Secondary Indicators (2 or more required):</p> <p>___ Oxidized Root Channels in Upper 12 Inches</p> <p>___ Water-Stained Leaves</p> <p>___ Local Soil Survey Data</p> <p>___ FAC-Neutral Test</p> <p>___ Other (Explain in Remarks)</p>
<p>Field Observations:</p> <p style="margin-left: 20px;">Depth of Surface Water: <u>≈ 1 ft</u> (in.)</p> <p style="margin-left: 20px;">Depth to Free Water in Pit: <u>16"</u> (in.)</p> <p style="margin-left: 20px;">Depth to Saturated Soil: <u>0"</u> (in.)</p>	<p style="margin-left: 20px;"><i>Pool Area</i></p>

Remarks: Open water is ≈ 40' x 60' in center of Property ≈ 12-18" Deep
Obs - 6 Mallards, Raccoon Tracks, several odd. FACW - Obl species

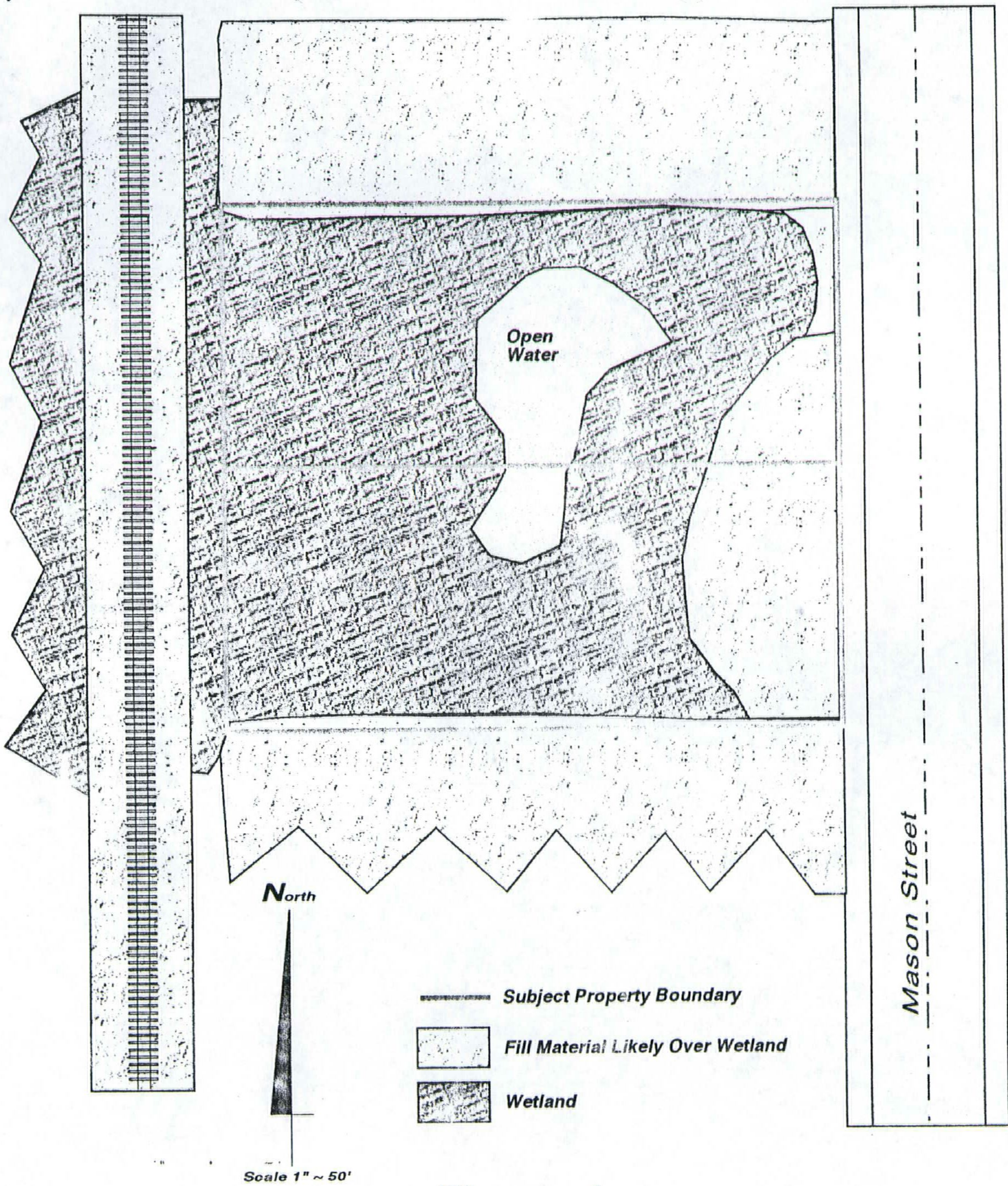


Figure 1
Approximate Location of Wetlands Within the Subject Property