

# AQUATIC RESOURCES ASSESSMENT REPORT LYNC CONSTRUCTION STAGECOACH SITE SEPTEMBER 3, 2021

Prepared for: Joshua Wiscombe Lync Construction 1407 Mountain Road Ogden, UT 84414 801-808-6906 joshuajwiscombe@gmail.com Prepared by:

Kagel Environmental, LLC

Wetlands, Wildlife and Permitting Specialists wetlands@kagelenvironmental.com PO Box 597 Rigby, ID 83442 Phone (208) 745 0076 Office

Phone (208) 745-0076 Office Phone (406) 920-1439 Mobile





**Kagel Environmental, LLC** *Wetlands, Wildlife and Permitting Specialists* 

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### **ACRONYMS AND ABBREVIATIONS**

Corps:	United States Army Corps of Engineers
KE:	Kagel Environmental, LLC
Manual:	1987 Corps of Engineers Wetlands Delineation Manual
MU:	Soil Map Unit
NWI:	National Wetlands Inventory
P.W.S.:	Professional Wetland Scientist
SS:	Stagecoach Site
Supplement:	Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Version 2.0, September 2008.
USGS:	United States Geological Survey



#### **EXECUTIVE SUMMARY**

This report describes vegetative, edaphic, and hydrologic parameters pursuant to current federal wetlands regulations associated with an approximately 40-acre study area, referred to as the Stagecoach Site (SS). The focus of this report is the identification and delineation of waters of the U.S., including wetlands that are *potentially* located within the site as indicated by National Wetland Inventory (NWI) mapping.

The purpose of this aquatic resources study is to provide the owner with enough information to determine if a full wetland delineation is economically warranted and there is potential land usability for development.

The following wetland assessment report, including figures, photos and suggestions, have been submitted to the client for review. The following paragraphs describe KE's methods, findings, and conclusions.

KE performed the wetland [Aquatic Resources] assessment in accordance with the 1987 "Corps of Engineers Wetland Delineation Manual" and in accordance with the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0). KE's field visit, field data collection and assessment were conducted during seasonally hot, sunny weather conditions on August 3 and 4, 2021. Based upon all data available to KE, there are wetlands that are potentially jurisdictional in the very northwestern corner of the site. Those wetlands are associated with the Walker Slough. The attached Wetland Assessment Map shows what is KE's best professional judgement where most of the jurisdictional wetlands are located.

KE recommends that a detailed wetland delineation be performed, the wetland/upland boundaries flagged, and those boundaries surveyed by a licensed surveyor. KE will then compile all the collected data into the appropriate figures, data forms, and narrative for submission of a completed wetland delineation report to the Corps of Engineers for official/federal approval. Upon approval, the client will be able to know with certainty where work may and may not be conducted without risk of violating the Clean Water Act. Additionally, if it is necessary to disturb (fill) an area of wetland, a delineation will be required to submit a PCN (pre-construction notification for a nationwide permit) or apply for an individual permit.



#### **INTRODUCTION AND PURPOSE**

Contact:Phone: 801-808-6906Joshua Wiscombejoshuajwiscombe@gmail.comLync Constructionjoshuajwiscombe@gmail.com1407 N Mountain RoadOgden, UT 84404Wetland Consultants:Susan Kagel M.S., Ph.D. Ray Kagel, Jr., M.S.,(208) 745-0076 Office\_P.W.S., Kagel Environmental, LLC PO Box 597wetlands@kagelenvironmental.comRigby, ID 83442Wetlands@kagelenvironmental.com

The wetland investigative field survey for this report was requested by Mr. Joshua Wiscombe on behalf of Lync Construction. Mr. Wiscombe was KE's main point-of-contact during the study. The purpose of the wetland assessment study was to provide the landowner with reliable information regarding the approximate location(s) and size(s) of any areas that might contain regulated waters of the U.S., including wetlands, so that such areas would be avoided where practicable, and for determining whether a full wetland delineation was warranted for determining land usability. KE was asked to identify potential federally regulated waters and wetlands throughout the formerly irrigated livestock pasture/grazing land that has been historically in agricultural use. Since the site includes a few areas previously mapped as *potential* wetlands, i.e., the National Wetland Inventory (NWI), KE made specific effort to focus our wetland assessment on those areas (Figure 1).

This brief report contains KE's methods, findings, and conclusions pertaining to the limits of regulated waters and wetlands within the subject Stagecoach Site (SS).

# LOCATION

The SS is located near the town of West Haven, Weber County, Utah at approximately 4,200 feet above sea level, and it lies within Section 21, Township 6 North, Range 2 West, Salt Lake Meridian. More precisely, the approximate center of the project is located at 41.23644310°, -112.07109757° in decimal degrees. (Figure 2).



# METHODS

The methodology used for identifying and delineating wetlands on the subject site was the three parameter [factor] approach promulgated and approved by the U.S. Army Corps of Engineers and described in the official 1987 Corps of Engineers Wetlands Delineation Manual (Manual), including the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region – September 2008 (Supplement). To meet the Corps' definition of a wetland, under normal circumstances all three of the following factors: wetland vegetation, hydric [wetland] soils, and wetland hydrology must be satisfied (re: Manual & Supplement).

Field work was conducted in the mid-summer growing season on August 3 and 4, 2021, and KE collected field data from a total of thirteen (13) soil sampling sites. All soil sampling points involved excavating soil pits utilizing a small backhoe mounted on a 4-wheel drive tractor. The backhoe bucket was 20-inches wide, and this mechanical excavation of sampling pits enables KE to describe soils more accurately due to the benefit of being able to physically stand within a soil pit with access to clearly view and describe soil horizons from three [clean] vertical walls. Soil sampling test pits were an average depth of 36-inches.

Sampling locations were specifically selected to include the lowest elevation sites occurring within the NWI mapped areas of *potential* wetlands. Additionally, KE conducted sampling within any area of the site that might have had the "appearance" as *potential* wetland.

# **STUDY CONDITIONS**

The SS site is a 40-acre parcel of historically flood irrigated livestock pastureland that is crossed by Walker Slough in the northwest corner. There was no evidence of irrigation water flowing to the site during KE's site visit, and it is KE's belief that artificial irrigation water was likely not applied to the site during either the previous [2020] or current growing season. KE would expect that the absence of artificial irrigation for two consecutive growing seasons should help to allow soil hydrology to be returning to *natural* conditions.

Topographically, the site presents as basically flat, e.g., 0-1% slope (Figure 3). It is covered by herbaceous vegetation, and a few scattered trees were found mostly along the Slough. KE describes the study site and overall adjacent landscape as exhibiting an extremely gentle, almost imperceptible downward slope of less than 1% towards the southeast.

The National Wetland Inventory (NWI) mapped about 1.5 acre of the site as being *potential* Palustrine Emergent Persistent Unconsolidated Shore Temporary Flooded (PEM1C, Figure 1). Another approximate 0.28 acre (Walker Slough) and 0.39 acre of irrigation ditch is mapped as riverine wetlands.

Conditions on the day of KE's field study were dry, sunny, and hot, ideal for accurately matching and identifying moist soil colors with the appropriate color chip in the Munsell Color Book. However, as stated on the attached Wetland Determination Data Forms – Arid West Region (Summary of Findings), the antecedent precipitation was less, i.e., *drier*, than normal (Figure 4).



# VEGETATION

Scattered Russian Olive (*Elaeagnus angustifolia*-FAC) trees and shrubs were present near the Walker Slough. Although this species is technically considered a wetland plant, it is not strongly so and is found almost equally in wetlands and uplands. The most common herbaceous wetland vegetative species included Saltgrass (*Distichlis spicata*-FAC), and Tall Wheatgrass (*Elymus lanceolatus*-UPL), and Bulbous Bluegrass (*Poa bulbosa*-FACU). Saltgrass is also found frequently in both uplands and wetlands, while Tall Wheatgrass and Bulbous Bluegrass are predominantly upland plants.

#### SOILS

According to the Web Soil Survey, there are five mapped soil series underlying the site: Kidman fine sandy loam, (KaA), Warm Springs fine sandy loam (WaA and WgA), Leland silt loam, (Le), and Airport silt loam (Ac). These soils range from pH 7.3 (neutral) to nearly pH 10 (extremely alkaline). Alkaline soils are sometimes considered "problem" soils by the Corps of Engineers. Overly alkaline soils ( $\geq$  pH 8.3-8.4) can have the formation of hydric features suppressed by high pH, thus making the identification of a soils hydric properties much more difficult. The Corps will sometimes argue that these high-pH soils can be considered hydric even in the absence of any evidence that they are consistent with being in a wetland. Thus, although KE only found a hydric soil at a single sample point (#02), the Corps could disagree and claim much more widespread presence of soils with characteristics consistent with wetlands.

# HYDROLOGY/WATER RESOURCES

The hydrology of the site, like all other properties throughout the Greater Salt Lake area, has been affected to an unknown degree by the severe drought of the last two years. Thus, any hydrological data must be evaluated considering the unusual circumstances. There are numerous wetlands in the area that will not exhibit their normal hydrological regime at this time, and the lack of hydrological indicators this year cannot be considered proof that an area is not a wetland. Vegetative and edaphic (soil) characteristics will generally carry more weight in a wetland determination in a drought. However, KE believes that none of the sample points had wetland hydrology, despite some points (#06, #08, #09, and #13) having technically wetland vegetation and another sample point (#02) having hydric soils. It is possible that the Corps will not agree with KE's assessment without hydrological analysis during a normal precipitation period.

The study site's most obvious hydrological features are Walker Slough which crosses the northwest corner of the site and an active irrigation ditch along the southern property border. There is a leak in the southern irrigation ditch that appears to increase seasonal hydrology to the area around sample point #08, although KE did not find actual wetland hydrology. The property is otherwise absent of any other surface hydrologic features such as rivers, streams, creeks, springs, intermittent or ephemeral tributaries, or any open water areas such as lakes or ponds. Therefore,



the only other definitive source(s) of wetland hydrology would be seasonal precipitation, occasional slough flooding and/or artificial irrigation, i.e., an endosauration regime.

The source of hydrology that is suggested by historic Google Earth images has obviously been former artificial flood irrigation and lateral sub-surface water movement from the Walker Slough. It appears that artificial flood irrigation has been withdrawn [turned off] from this site, as well as from surrounding/adjacent areas that have been subdivided for single family home construction and commercial development.

All of KE's upland soil sampling pits were at least 30-inches below the ground surface to ensure that our excavated pits reached deeper than a "dry-season" water table (24-inches depth). Although some soil pits were intentionally excavated within identified NWI *potential* wetland areas, KE did not encounter any wetland hydrology, free water, nor any saturated soils, within the dry season water table at any of our sampling sites.

# WETLANDS ON THE SS

The Wetland Assessment Map is attached as Figure 5. Although some sample points (#06, #08, #09, and #13) have technically hydrophytic vegetation and sample point #02 clearly has hydric soils, no sample points met more than a single wetland parameter. KE does not believe that any of the sample points have wetland hydrology even considering the ongoing drought. It should be noted that there are wetlands associated with the Walker Slough, although KE did not actually place any sample points in the slough itself. The <u>estimated</u> area of the aquatic resources (wetlands) on the approximately 40-acre site is likely between 0.25 and 0.40 acre, and are appear to be significantly associated with the Walker Slough.

#### CONCLUSION

Mr. Joshua Wiscombe, has requested this assessment on behalf of Lync Construction. Their goal is to understand where potential wetlands may be located as well as determine if a full comprehensive type wetland delineation is warranted.

KE collected field data at thirteen (13) separate sampling sites on August 3, 2021. The *estimated* area of the aquatic resources (wetlands) on the approximately 40-acre site as being between 0.25 and 0.40 acre. The exact amount and location of jurisdictional wetlands on the site will require a more intensive study as well as the determination and establishment of the precise wetland/ upland boundaries.

This study was conducted in accordance with the guidance provided in the 1987 Corps Wetland Delineation Manual and Arid West Supplement (Version 2.0). However, KE emphasizes that **this is <u>not</u> a wetland delineation that is approved by the Corps of Engineers**. It is *possible* that the Corps could determine considerably more of the site is wetland, particularly if they do not have the opportunity to review a wetland study prior to any work commencing on the property. If the Corps determines fill is placed within an area that *could* have been wetland, it is likely that the property owner and any contractors would be charged with a violation of the Clean Water Act. Such violations are subject to fines up to \$53,000 per each day the violation is in existence.



**Kagel Environmental, LLC** *Wetlands, Wildlife and Permitting Specialists* 

Respectfully submitted,

-Ray Kagel, Jr., M.S., P.W.S. #2234 -Susan Kagel, M.S., Ph.D. -Todd Housley, M.S.



### REFERENCES

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United States Department of Agriculture, Natural Resources Conservation Service. 2018. *Field Indicators of Hydric Soils in the United States, Version 8.2.* L.M. Vasilas, G.W. Hurt, and J.F. Berkowitz (eds.). USDA, NRCS, in cooperation with the National Technical Committee for Hydric Soils.



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FIGURES





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# FIGURE 2. LOCATION OF THE STAGECOACH SITE (SS).

The SS is located northwest of Ogden, Weber County, Utah within Section 21, Township 6 North, Range 2 West, Salt Lake Meridian. More precisely, the approximate center of the project is located at 41.23644310°, -112.07109757° in decimal degrees. To reach the site, from I-15, take Exit 344 for Highway 145, State Highway 39. Turn west on Highway 39 and drive approximately 2.5 miles, and turn south (left) on S 3500 W. Go approximately 2/3 mile to W 1800 S and turn right on W 1800 S. The entrance will be 0.5 mile on the right (north). A photograph of the entrance is shown on the right.







# VISIT.

The figure is derived using the Antecedent Precipitation Tool developed by Jason Deters of the Corps.

# FIGURE 5. WETLAND ASSESSMENT MAP.

LYNC CONSTRUCTION For Joshua Wiscombe 1407 Mountain Road Ogden, UT 84414 801-808-6906

The approximate center of the project is located at 41.23644310°, -112.07109757° in decimal degrees. The project is in Weber County, Utah, S21, T6N, R2W, Salt Lake Meridian.







# Assessment by:

**Kagel Environmental, LLC** *Wetlands, Wildlife and Permitting Specialists* PO Box 597, Rigby, ID 83442 208-745-0076 Office wetlands@kagelenvironmental.com



FIELD DATA FORMS

Project/Site: Stagecoach	City/Cou	nty: Weber County, Og	gden, UT	Sampling Date: 8/3/21
Applicant/Owner: Lync Development		Sta		Sampling Point: 01
Investigator(s): Kagel Environmental LLC	Section,	Township, Range: S21	T6N R2W	
Landform (hillslope, terrace, etc.): Lake Terra				Slope (%): 0-1
Subregion (LRR): LRR D (Interior deserts)				
Soil Map Unit Name: Ac: Airport silt loam, 0 t	o 2 percent slopes (481538)		NWI classifica	ation: N/A
Are climatic / hydrologic conditions on the site	typical for this time of year? Yes	No (If r	ιο, explain in Rε	emarks.)
Are Vegetation, Soil, or Hydrold	ogy significantly disturbe	d? Are "Normal Ci	rcumstances" pr	resent? Yes X No
Are Vegetation, Soil, or Hydrold	ogy naturally problematic	? (If needed, exp	lain any answer	s in Remarks.)
SUMMARY OF FINDINGS – Attach	site map showing samp	ling point locations	s, transects,	important features, etc
Hydrophytic Vegetation Present? Yes	s NoX	s the Sampled Area		
-	s No <u>X</u> w	vithin a Wetland?	Yes 🗌	No
Wetland Hydrology Present? Yes	s NoX "			
Remarks:				

Drier than normal.

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30' radius</u> )		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC: <u>1</u> (A)
2				Total Number of Dominant
3				Species Across All Strata: 2 (B)
4				Percent of Dominant Species
50% = 0 20% = 0	0	= Total Co	ver	That Are OBL, FACW, or FAC: <b>50%</b> (A/B)
Sapling/Shrub Stratum (Plot size: 15' radius )	10	$\sim$	FACU	
1. Sarcobatus vermiculatus	10	<u> </u>		Prevalence Index worksheet:
2				Total % Cover of: Multiply by:
3				OBL species x 1 =
4				FACW species x 2 =0
5				FAC species63 x 3 =189
50% = 5 20% = 2	10	= Total Co	ver	FACU species x 4 =44
Herb Stratum (Plot size: <u>5' radius</u> )				UPL species <u>3</u> x 5 = <u>15</u>
1. Distichlis spicata	60	<u> </u>	FAC	Column Totals: <b>77</b> (A) <b>248</b> (B)
2. Elymus lanceolatus	3		UPL	
3. Bassia scoparia	2		FAC	Prevalence Index = B/A =3.22
4. Poa bulbosa	1		FACU	Hydrophytic Vegetation Indicators:
5. Symphyotrichum ascendens	1		FAC	Dominance Test is >50%
6				Prevalence Index is ≤3.0 <sup>1</sup>
7				Morphological Adaptations <sup>1</sup> (Provide supporting
8.				data in Remarks or on a separate sheet)
50% = 33.5 20% = 13.4	67	= Total Co	Ver	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum (Plot size: 15' radius		_ 10101 00		
1				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
2.				be present, unless disturbed or problematic.
50% = 0 $20% = 0$	0	= Total Co	ver	Hydrophytic
20				Vegetation
% Bare Ground in Herb Stratum % Cove	er of Biotic C	rust		Present? Yes <u>No X</u>
Remarks:				

#### SOIL

0-9       10YR4/2       100       NA       Silt Loam         9-17       10YR2/2       99       7.5YR4/3       1       C       M       Silt Loam         17-27       7.5YR 4/3       99       10YR6/8       1       C       M       Silt Clay Loam         27-39       7.5YR4/3       92       7.5YR6/1       8       D       M       Silt Clay Loam         27-39       7.5YR4/3       92       7.5YR6/1       8       D       M       Silt Clay Loam         ype: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, Indicators: (Applicable to all LRRs, unless otherwise noted.)       Indicators for Problematic Hydric         Histic Epipedon (A2)       Stripped Matrix (S6)       _1 cm Muck (A9) (LRR C)         Black Histic (A3)       Loamy Gleyed Matrix (F2)       Reduced Vertic (F18)         Hydrogen Sulfide (A4)       Loamy Gleyed Matrix (F2)       Red Parent Material (TF2)         Stratified Layers (A5) (LRR C)       Depleted Matrix (F3)       Other (Explain in Remarks)         1 cm Muck (A9) (LRR C)       Redox Dark Surface (F6)       Silndicators of hydrophytic vegetation wetland hydrology must be pressions (F8)         Sandy Mucky Mineral (S1)       Vernal Pools (F9)       Silndicators of hydrophytic vegetation wetland hydrology must be presoun	epth	Matrix		Redo	x Feature	s		_
9-17       10YR2/2       99       7.5YR4/3       1       C       M       Silt Loam         17-27       7.5YR 4/3       92       7.5YR6/1       8       D       M       Silt Clay Loam         27-39       7.5YR4/3       92       7.5YR6/1       8       D       M       Silt Clay Loam         ype:       C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, Indicators for Problematic Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)       Indicators for Problematic Hydric Hydric (A3)         Histosol (A1)       Sandy Redox (S5)       1 cm Muck (A9) (LRR C)       1 cm Muck (A9) (LRR C)         Black Histic (A3)       Loamy Mucky Mineral (F1)       Redox Dark Surface (F6)       2 cm Muck (A10) (LRR B)         Hydrogen Sulfide (A4)       Loamy Gleyed Matrix (F3)       Other (Explain in Remarks)         1 cm Muck (A9) (LRR D)       Redox Dark Surface (F6)       Other (Explain in Remarks)         Depleted Below Dark Surface (A11)       Depleted Dark Surface (F7)       3 <sup>1</sup> Indicators of hydrophytic vegetation wetland hydrology must be prese unless disturbed or problematic.         Sandy Mucky Mineral (S1)       Vernal Pools (F9) <sup>3</sup> Indicators of hydrophytic vegetation wetland hydrology must be prese unless disturbed or problematic.	nches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture Remarks
17-27       7.5YR 4/3       99       10YR6/8       1       C       M       Silt Clay Loam         27-39       7.5YR4/3       92       7.5YR6/1       8       D       M       Silt Clay Loam         ype:       C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, Indicators for Problematic Hydric         ydric Soil Indicators:       (Applicable to all LRRs, unless otherwise noted.)       Indicators for Problematic Hydric         Histosol (A1)       Sandy Redox (S5)       1 cm Muck (A9) (LRR C)         Black Histic (A3)       Loamy Mucky Mineral (F1)       Reduced Vertic (F18)         Hydrogen Sulfide (A4)       Loamy Gleyed Matrix (F2)       Red Parent Material (TF2)         1 cm Muck (A9) (LRR C)       Depleted Matrix (F3)       Other (Explain in Remarks)         1 cm Muck (A9) (LRR D)       Redox Dark Surface (F6)       Other (Explain in Remarks)         1 cm Muck (A9) (LRR D)       Redox Dark Surface (F7) <sup>3</sup> Indicators of hydrophytic vegetation wetland hydrology must be prese         Sandy Mucky Mineral (S1)       Vernal Pools (F9) <sup>3</sup> Indicators of nydrophytic vegetation wetland hydrology must be prese         Sandy Gleyed Matrix (S4)       Vernal Pools (F9) <sup>3</sup> Indicators of nydrophytic vegetation wetland hydrology must be prese	0-9	10YR4/2	100	NA				Silt Loam
27-39       7.5YR4/3       92       7.5YR6/1       8       D       M       Silt Clay Loam         ype:       C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, I         ype:       C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, I         ype:       C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, I         ype:       C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, I         ype:       C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, I         ype:       C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, I         ype:       C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, I         understand       Sandy Redox (S5)       Indicators for Problematic Hydric         Histosol (A1)       Loamy Mucky Mineral (F1)       Red Parent Material (TF2)         Stratified Layers (A5) (LRR C)       Depleted Matrix (F3)       Other (Explain in Remarks)         1 cm Muck (A9) (LRR D)       Redox Depressions (F8) <sup>3</sup> Indicators of hydrophytic vegetation wetland hydrology must be presequ	9-17	10YR2/2	99	7.5YR4/3	1	С	Μ	Silt Loam
ype:       C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, I         ydric Soil Indicators:       (Applicable to all LRRs, unless otherwise noted.)       Indicators for Problematic Hydric	17-27	7.5YR 4/3	99	10YR6/8	1	С	М	Silt Clay Loam
ydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)       Indicators for Problematic Hydrid         _ Histosol (A1)	27-39	7.5YR4/3	92	7.5YR6/1	8	D	М	Silt Clay Loam
dric Soil Indicators:       (Applicable to all LRRs, unless otherwise noted.)       Indicators for Problematic Hydric	·		- <u> </u>			·		
Histosol (A1)       Sandy Redox (S5)       1 cm Muck (A9) (LRR C)         Histic Epipedon (A2)       Stripped Matrix (S6)       2 cm Muck (A10) (LRR B)         Black Histic (A3)       Loamy Mucky Mineral (F1)       Reduced Vertic (F18)         Hydrogen Sulfide (A4)       Loamy Gleyed Matrix (F2)       Red Parent Material (TF2)         Stratified Layers (A5) (LRR C)       Depleted Matrix (F3)       Other (Explain in Remarks)         1 cm Muck (A9) (LRR D)       Redox Dark Surface (F6)       Other (Explain in Remarks)         Depleted Below Dark Surface (A11)       Depleted Dark Surface (F7)       3Indicators of hydrophytic vegetation wetland hydrology must be presed unless disturbed or problematic.         Sandy Gleyed Matrix (S4)       Vernal Pools (F9)       unless disturbed or problematic.	71	<i>i</i> 1	,	,			d Sand G	Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils <sup>3</sup> :
Histic Epipedon (A2)       Stripped Matrix (S6)       2 cm Muck (A10) (LRR B)         Black Histic (A3)       Loamy Mucky Mineral (F1)       Reduced Vertic (F18)         Hydrogen Sulfide (A4)       Loamy Gleyed Matrix (F2)       Red Parent Material (TF2)         Stratified Layers (A5) (LRR C)       Depleted Matrix (F3)       Other (Explain in Remarks)         1 cm Muck (A9) (LRR D)       Redox Dark Surface (F6)       Other (Explain in Remarks)         Depleted Below Dark Surface (A11)       Depleted Dark Surface (F7)       Thick Dark Surface (A12)         Sandy Mucky Mineral (S1)       Vernal Pools (F9)       "alndicators of hydrophytic vegetation" wetland hydrology must be presed unless disturbed or problematic.         strictive Layer (if present):       Strictive Layer (if present):       Stripped Matrix (S4)						,		•
Black Histic (A3)       Loamy Mucky Mineral (F1)       Reduced Vertic (F18)         Hydrogen Sulfide (A4)       Loamy Gleyed Matrix (F2)       Red Parent Material (TF2)         Stratified Layers (A5) (LRR C)       Depleted Matrix (F3)       Other (Explain in Remarks)         1 cm Muck (A9) (LRR D)       Redox Dark Surface (F6)       Other (Explain in Remarks)         Depleted Below Dark Surface (A11)       Depleted Dark Surface (F7)       Thick Dark Surface (A12)         Sandy Mucky Mineral (S1)       Vernal Pools (F9)       wetland hydrology must be presedules disturbed or problematic.         strictive Layer (if present):       Strictive Layer (if present):       Strictive Layer (if present):	•	•						
Hydrogen Sulfide (A4)       Loamy Gleyed Matrix (F2)       Red Parent Material (TF2)         Stratified Layers (A5) (LRR C)       Depleted Matrix (F3)       Other (Explain in Remarks)         1 cm Muck (A9) (LRR D)       Redox Dark Surface (F6)       Other (Explain in Remarks)         Depleted Below Dark Surface (A11)       Depleted Dark Surface (F7)       Thick Dark Surface (A12)       Redox Depressions (F8)         Sandy Mucky Mineral (S1)       Vernal Pools (F9)       wetland hydrology must be prese unless disturbed or problematic.         strictive Layer (if present):       Strictive Layer (if present):       Strictive Layer (if present):		,				al (F1)		
Stratified Layers (A5) (LRR C)       Depleted Matrix (F3)       Other (Explain in Remarks)         1 cm Muck (A9) (LRR D)       Redox Dark Surface (F6)          Depleted Below Dark Surface (A11)       Depleted Dark Surface (F7)          Thick Dark Surface (A12)		· · ·			•	. ,		
1 cm Muck (A9) (LRR D)       Redox Dark Surface (F6)         Depleted Below Dark Surface (A11)       Depleted Dark Surface (F7)         Thick Dark Surface (A12)       Redox Depressions (F8)         Sandy Mucky Mineral (S1)       Vernal Pools (F9)         Sandy Gleyed Matrix (S4)       unless disturbed or problematic.			<b>C</b> )			· (• =)		
Depleted Below Dark Surface (A11)       Depleted Dark Surface (F7)         Thick Dark Surface (A12)       Redox Depressions (F8)         Sandy Mucky Mineral (S1)       Vernal Pools (F9)         Sandy Gleyed Matrix (S4)       unless disturbed or problematic.	-	• • • •	0)	·	. ,	(E6)		
Thick Dark Surface (A12)       Redox Depressions (F8) <sup>3</sup> Indicators of hydrophytic vegetation wetland hydrology must be preserved unless disturbed or problematic.         Sandy Mucky Mineral (S1)       Vernal Pools (F9)       wetland hydrology must be preserved unless disturbed or problematic.         Sandy Gleyed Matrix (S4)       unless disturbed or problematic.	=		0 (11)			( )		
Sandy Mucky Mineral (S1)       Vernal Pools (F9)       wetland hydrology must be prese         Sandy Gleyed Matrix (S4)       unless disturbed or problematic.         strictive Layer (if present):			e (ATT)					31 diastars of budger budie up retation and
Sandy Gleyed Matrix (S4)     unless disturbed or problematic.       strictive Layer (if present):		, ,				F8)		
strictive Layer (if present):					s (F9)			
	-							uniess disturbed or problematic.
Tymor		ayer (it present):						
rype	Туре:							
Depth (inches): Yes	Depth (inch	hes):						Hydric Soil Present? Yes No 🗡
marks:								

# HYDROLOGY

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one required; check	k all that apply)	Secondary Indicators (2 or more required)
Surface Water (A1)	Salt Crust (B11)	Water Marks (B1) ( <b>Riverine</b> )
High Water Table (A2)	Biotic Crust (B12)	Sediment Deposits (B2) ( <b>Riverine</b> )
Saturation (A3)	Aquatic Invertebrates (B13)	Drift Deposits (B3) (Riverine)
Water Marks (B1) (Nonriverine)	Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)
Sediment Deposits (B2) (Nonriverine)	Oxidized Rhizospheres along Livir	ng Roots (C3) Dry-Season Water Table (C2)
Drift Deposits (B3) (Nonriverine)	Presence of Reduced Iron (C4)	Crayfish Burrows (C8)
Surface Soil Cracks (B6)	Recent Iron Reduction in Tilled Sc	bils (C6) Saturation Visible on Aerial Imagery (C9)
Inundation Visible on Aerial Imagery (B7)	Thin Muck Surface (C7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Other (Explain in Remarks)	FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes 🗌 No 🗵	Depth (inches):	
Water Table Present? Yes D No	Depth (inches):	
Saturation Present? Yes <u>No </u> Xes <u>Ves</u> No <u>No</u>	Depth (inches):	Wetland Hydrology Present? Yes No
Describe Recorded Data (stream gauge, monitoring	g well, aerial photos, previous inspec	tions), if available:
39" Excavated pit.		
Remarks:		



# **PHOTOGRAPHS OF SAMPLE SITE #01.**

Upper left: Southern view of sample point #01, an upland. Upper right: Label flag for the pit. Lower left: Northern view of the same point. Lower right: Location of the sample site relative to the other points is indicated by the pink arrow. No wetland parameters were met.



Kagel Environmental, LLC

Wetlands, Wildlife and Permitting Specialists

SAMPLE POINT #01

Project/Site: Stagecoach	City/County: Weber County, Ogden, UT Sampling Date: 8/3/21
Applicant/Owner: Lync Development	State: UT Sampling Point: 02
Investigator(s): Kagel Environmental LLC	Section, Township, Range: S21 T6N R2W
Landform (hillslope, terrace, etc.): Lake Terrace	Local relief (concave, convex, none): none Slope (%): 0-1
Subregion (LRR): LRR D (Interior deserts)	Lat: 41.236067 Long: -112.073268 Datum: WGS84
Soil Map Unit Name: WaA: Warm Springs fine sandy lo	am, 0 to 1 percent slopes (481674) NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for	his time of year? Yes NoX (If no, explain in Remarks.)
Are Vegetation, Soil, or Hydrology	_significantly disturbed? Are "Normal Circumstances" present? Yes X No
Are Vegetation, Soil, or Hydrology	_naturally problematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site ma	o showing sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present? Yes	No X la the Sempled Area
Hydric Soil Present? Yes X	
Wetland Hydrology Present? Yes	
Remarks:	
Drier than normal.	

	Absolute		t Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size: <u>30' radius</u> )	% Cover			Number of Dominant Species	
1				That Are OBL, FACW, or FAC: (	(A)
2			·	Total Number of Dominant	
3			·	Species Across All Strata: <u>3</u>	(B)
4. $50\% = 0$ 20% = 0			·	Percent of Dominant Species	
Sapling/Shrub Stratum (Plot size: 15' radius )	0	= Total Co	over	That Are OBL, FACW, or FAC: 33%	(A/B)
1				Prevalence Index worksheet:	
2				Total % Cover of: Multiply by:	
3.				OBL species         x 1 =0	
4			·	FACW species x 2 =0	
5			·	FAC species 20 x 3 = 60	
50% = 0 20% = 0	0	= Total Co	wer	FACU species <b>20</b> x 4 = <b>80</b>	
Herb Stratum (Plot size: <u>5' radius</u> )				UPL species <b>50</b> x 5 = <b>250</b>	
1. Medicago sativa	30	×	UPL	Column Totals: 90 (A) 390	(B)
2. Cichorium intybus	20	×	FACU		(=)
3. Trifolium fragiferum	20	×	FAC	Prevalence Index = B/A = 4.33	-
4. Daucus carota	10		UPL	Hydrophytic Vegetation Indicators:	
5. Elymus lanceolatus	10		UPL	Dominance Test is >50%	
6				Prevalence Index is ≤3.0 <sup>1</sup>	
7				Morphological Adaptations <sup>1</sup> (Provide supportin	ng
8			·	data in Remarks or on a separate sheet)	
50% = 45 20% = 18	90	= Total Co	over	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	)
Woody Vine Stratum (Plot size: 15' radius )				1	
1			·	<sup>1</sup> Indicators of hydric soil and wetland hydrology mube present, unless disturbed or problematic.	ust
2	·		·		
50% = 0 $20% = 0$	0	= Total Co	over	Hydrophytic Vegetation	
% Bare Ground in Herb Stratum 10 % Cover	of Biotic C	rust		Present? Yes No X	
Remarks:				1	

#### SOIL

#### Sampling Point: 02

		to the depth				or confir	m the absence of indicators.)	
Depth (inches)	Matrix Color (moist)	%	Color (moist)	<u>x Feature</u> %	s Type <sup>1</sup>	Loc <sup>2</sup>	- Texture Remarks	
0-2	10YR2/2	100					Sandy Loam	
2-11	10YR4/2	95	10YR6/8	5	С	М	Sandy Loam	
11-19	10YR5/3	60	10YR3/2	5	C	М	Silt Loam	
	10YR 3/2	35						
19-28	10YR 5/4	95	10YR 6/8	5	С	М	Silt Loam	
					·			
28-35	10YR6/3	50	10YR 5/4	10	С	M	Silg Loam	
<sup>1</sup> Type: C=C	oncentration, D=Dep	letion, RM=F	Reduced Matrix, C	S=Covered	d or Coate	d Sand (	Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.	
	Indicators: (Applic						Indicators for Problematic Hydric Soils <sup>3</sup> :	
Histosol	(A1)		Sandy Red	ox (S5)			1 cm Muck (A9) ( <b>LRR C</b> )	
Histic Ep	pipedon (A2)		Stripped Ma	atrix (S6)			2 cm Muck (A10) (LRR B)	
	stic (A3)		Loamy Muc	-			Reduced Vertic (F18)	
	en Sulfide (A4)		Loamy Gley	ed Matrix	: (F2)		Red Parent Material (TF2)	
	d Layers (A5) (LRR (	<b>C</b> )	X Depleted M		(50)		Other (Explain in Remarks)	
	uck (A9) ( <b>LRR D</b> )	o (A11)	Redox Dark Depleted D					
	d Below Dark Surfac ark Surface (A12)	e (ATT)	Redox Dep		. ,		<sup>3</sup> Indicators of hydrophytic vegetation and	
	lucky Mineral (S1)		Vernal Poo	•	10)		wetland hydrology must be present,	
-	Bleyed Matrix (S4)			0(10)			unless disturbed or problematic.	
	Layer (if present):							
Type:	<b>, , , , , , , ,</b>							
Depth (in	ches):						Hydric Soil Present? Yes X No	
Remarks:							,	
Relict hydric								
IYDROLO								
Wetland Hy	drology Indicators:							
Primary India	cators (minimum of o	ne required;	check all that appl	y)			Secondary Indicators (2 or more required	l)
Surface	Water (A1)		Salt Crust	(B11)			Water Marks (B1) (Riverine)	
High Wa	ater Table (A2)		Biotic Cru	st (B12)			Sediment Deposits (B2) ( <b>Riverine</b> )	
Saturatio	on (A3)		Aquatic In	vertebrate	es (B13)		Drift Deposits (B3) ( <b>Riverine</b> )	
Water M	larks (B1) ( <b>Nonriver</b>	ine)	Hydrogen	Sulfide O	dor (C1)		Drainage Patterns (B10)	
Sedimer	nt Deposits (B2) (No	nriverine)	Oxidized F	Rhizosphe	res along	Living Ro	oots (C3) Dry-Season Water Table (C2)	
	posits (B3) (Nonrive	rine)	Presence				Crayfish Burrows (C8)	
	Soil Cracks (B6)		Recent Irc			l Soils (C	· _ ·	(C9)
	on Visible on Aerial I	magery (B7)			. ,		Shallow Aquitard (D3)	
	tained Leaves (B9)		Other (Exp	plain in Re	emarks)	r	FAC-Neutral Test (D5)	
Field Obser		_	—					
Surface Wat			o 💌 Depth (in			-		
Water Table	Present? Y	_	o 🔀 Depth (in			_		
Saturation P	resent? Y pillary fringe)	es 🔼 N	o 🗵 Depth (in	ches):		We	tland Hydrology Present? Yes No	<u>×</u>

Remarks:

35" Excavated pit.



Upper left: Western view of sample point #02, an upland. Upper right: Label flag for the pit. Lower left: Eastern view of the same point. Lower right: Location of the sample site relative to the other points is indicated by the pink arrow. A relict hydric soil was present, but no other wetland parameters were met.



**Kagel Environmental, LLC** *Wetlands, Wildlife and Permitting Specialists* 

SAMPLE POINT #02

Project/Site: Stagecoach		_ City/County: V	/eber County, Og	gden, UT	Sampling Date: 8/3	/21
Applicant/Owner: Lync Development			Sta	te: <b>UT</b>	Sampling Point: 03	
Investigator(s): Kagel Environmental	LLC	Section, Town	ship, Range: <b>S21</b> <sup>•</sup>	T6N R2W		
Landform (hillslope, terrace, etc.): Lake	Terrace				Slope	(%): <u>0-1</u>
Subregion (LRR): LRR D (Interior des	erts) Lat: 4	1.236949	Long: <u>-1</u>	12.072913	Datum:	WGS84
Soil Map Unit Name: WaA: Warm Spring	s fine sandy loam, 0 to 1 j	percent slopes (4	81674)	NWI classific	ation: N/A	
Are climatic / hydrologic conditions on the	e site typical for this time of	year? Yes	No (If r	no, explain in R	emarks.)	
Are Vegetation, Soil, or H	ydrology significant	tly disturbed?	Are "Normal Cir	rcumstances" p	oresent? Yes X	No
Are Vegetation, Soil, or H	ydrology naturally į	problematic?	(If needed, expl	lain any answe	rs in Remarks.)	
SUMMARY OF FINDINGS - Att	ach site map showir	ng sampling p	oint locations	s, transects	, important feat	ures, etc.
Hydrophytic Vegetation Present?	Yes No	ls the S	ampled Area			
Hydric Soil Present?	Yes <u>No X</u>		a Wetland?	Yes	No 🗵	
Wetland Hydrology Present?	Yes No	_	i i i i i i i i i i i i i i i i i i i			
Remarks:						
Drier than normal.						

	Absolute		t Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30' radius</u> )	% Cover			Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3			·	Species Across All Strata: <u>3</u> (B)
4. $50\% = 0$ 20% = 0			·	Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: 15' radius )	0	= Total Co	over	That Are OBL, FACW, or FAC: (A/B)
1,				Prevalence Index worksheet:
2				Total % Cover of: Multiply by:
3				OBL species         x 1 =         0
4			·	FACW species x 2 =
5			·	FAC species $25 \times 3 = 75$
50% = 0 20% = 0	0	= Total Co	wer	FACU species 16 x 4 = 64
Herb Stratum (Plot size: <u>5' radius</u> )				UPL species $10 \times 5 = 50$
1. Distichlis spicata	25	×	FAC	Column Totals: 51 (A) 189 (B)
2. Elymus lanceolatus	10	×	UPL	、,
<sub>3.</sub> Poa bulbosa	10	X	FACU	Prevalence Index = B/A =3.71
4. Grindelia squarrosa	6		FACU	Hydrophytic Vegetation Indicators:
5				Dominance Test is >50%
6				Prevalence Index is ≤3.0 <sup>1</sup>
7				Morphological Adaptations <sup>1</sup> (Provide supporting
8.				data in Remarks or on a separate sheet)
50% = 25.5 20% = 10.2	51	= Total Co	over	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum (Plot size: 15' radius )		_		
1				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2				be present, unless disturbed of problematic.
50% = 0 20% = 0	0	= Total Co	over	Hydrophytic Versetation
% Bare Ground in Herb Stratum 49 % Cov	er of Biotic C	rust		Vegetation Present? Yes <u>No X</u>
Remarks:				

#### SOIL

### Sampling Point: 03

0-2       10YR2/2       100       NA       Silt Loam         2-11       7.5YR2.5/2       100       NA       Silt Loam         11-30       7.5YR4/3       100       NA       Silt Loam         11-30       D=Depletion.RM=Reduced Matrix, CS=Covered or Coated Sand Grains.       *Location: PL=Pore Lining, M=Ma         ydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)       Indicators for Problematic Hydric Soils         Histisc Epipedon (A2)       Sandy Redox (S5)       _1 cm Muck (A9) (LRR C)       2 cm Muck (A9) (LRR B)         Black Histi		Matrix		Redox Fe		. 2		
2-11       7.5YR2.5/2       100       NA       Silt Loam         11-30       7.5YR4/3       100       NA       Silt Loam         ype:       C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Ma         ydric Soil Indicators:       (Applicable to all LRRs, unless otherwise noted.)       Indicators for Problematic Hydric Soils         Histosol (A1)       Sandy Redox (S5)       1 cm Muck (A9) (LRR C)         Histosol (A2)       Stripped Matrix (S6)       2 cm Muck (A10) (LRR B)         Black Histic (A3)       Loamy Mucky Mineral (F1)       Reduced Vertic (F18)         Hydrogen Sulfide (A4)       Loamy Gleyed Matrix (F2)       Red Parent Material (TF2)         Stratified Layers (A5) (LRR C)       Depleted Matrix (F3)       Other (Explain in Remarks)         1 cm Muck (A9) (LRR C)       Redox Dark Surface (F6)       Other (Explain in Remarks)         1 cm Muck (A9) (LRR C)       Redox Dark Surface (F6)       Other (Explain in Remarks)         1 cm Muck (A9) (LRR C)       Redox Dark Surface (F7)       *         Thick Dark Surface (A11)       Depleted Dark Surface (F7)       *         Sandy Mucky Mineral (S1)       Vernal Pools (F9)       *       *         Sandy Mucky Mineral (S1)       Vernal Pools (F9)       *       *       *		Color (moist)	<u>%</u>		% Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
11-30       7.5YR4/3       100       NA       Silt Loam         ype:       Silt Loam       Silt Loam         ype:       C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Ma         ydric Soil Indicators:       (Applicable to all LRRs, unless otherwise noted.)       Indicators for Problematic Hydric Soils         Histosol (A1)       Sandy Redox (S5)       1 cm Muck (A9) (LRR C)         Black Histic (A3)       Loamy Mucky Mineral (F1)       Reduced Vertic (F18)         Hydrogen Sulfide (A4)       Loamy Gleyed Matrix (F2)       Red Parent Material (TF2)         Stratified Layers (A5) (LRR C)       Depleted Matrix (F3)       Other (Explain in Remarks)         1 cm Muck (A9) (LRR D)       Redox Dark Surface (F7)       Thick Dark Surface (A11)       Depleted Dark Surface (F7)         Thick Dark Surface (A12)       Redox Depressions (F8) <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.         sandy Mucky Mineral (S1)       Vernal Pools (F9) <sup>3</sup> Indicators of problematic.	0-2	10YR2/2	100	NA			Silt Loam	
Note in the indicators       Note in the indicators       Note in the indicators       Provide indindicators       Provide indicators	2-11	7.5YR2.5/2	100	NA			Silt Loam	
ydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)       Indicators for Problematic Hydric Soils	11-30	7.5YR4/3	100	NA			Silt Loam	
vdric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)       Indicators for Problematic Hydric Soils         _ Histosol (A1)      Sandy Redox (S5)      1 cm Muck (A9) (LRR C)	 ype: C=Cc		letion, RM=	Reduced Matrix, CS=Co	vered or Coate		rains. <sup>2</sup> Location:	PL=Pore Lining, M=Matrix.
Histic Epipedon (A2)       Stripped Matrix (S6)       2 cm Muck (A10) (LRR B)         Black Histic (A3)       Loamy Mucky Mineral (F1)       Reduced Vertic (F18)         Hydrogen Sulfide (A4)       Loamy Gleyed Matrix (F2)       Red Parent Material (TF2)         Stratified Layers (A5) (LRR C)       Depleted Matrix (F3)       Other (Explain in Remarks)         1 cm Muck (A9) (LRR D)       Redox Dark Surface (F6)       Other (Explain in Remarks)         Depleted Below Dark Surface (A11)       Depleted Dark Surface (F7)       Thick Dark Surface (A12)         Sandy Mucky Mineral (S1)       Vernal Pools (F9) <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.         strictive Layer (if present):       Stripped Matrix (S4)       Stripped Matrix (S4)								· · · · ·
Sandy Mucky Mineral (S1)       Vernal Pools (F9)       wetland hydrology must be present, unless disturbed or problematic.         Sandy Gleyed Matrix (S4)       unless disturbed or problematic.	Histic Ep Black His Hydroge Stratified 1 cm Mu Depleted	bipedon (A2) stic (A3) in Sulfide (A4) d Layers (A5) ( <b>LRR (</b> ick (A9) ( <b>LRR D</b> ) d Below Dark Surface		Stripped Matrix ( Loamy Mucky M Loamy Gleyed M Depleted Matrix Redox Dark Sur Depleted Dark S	S6) ineral (F1) Matrix (F2) (F3) face (F6) surface (F7)		2 cm Muck (A Reduced Vert Red Parent M Other (Explain	.10) ( <b>LRR B</b> ) tic (F18) laterial (TF2) n in Remarks)
	Sandy M Sandy G	lucky Mineral (S1) Bleyed Matrix (S4)					wetland hydrold	ogy must be present,
Type:		_ayer (if present):						
Depth (inches): Hydric Soil Present? Yes No		cnes):					Hydric Soll Presei	nt? Yes No 🗡

Primary Indicators (minimum of one required; che	Secondary Indicators (2 or more required)	
Surface Water (A1)	Salt Crust (B11)	Water Marks (B1) (Riverine)
High Water Table (A2)	Biotic Crust (B12)	Sediment Deposits (B2) (Riverine)
Saturation (A3)	Aquatic Invertebrates (B13)	Drift Deposits (B3) (Riverine)
Water Marks (B1) (Nonriverine)	Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)
Sediment Deposits (B2) (Nonriverine)	Oxidized Rhizospheres along Livin	g Roots (C3) Dry-Season Water Table (C2)
Drift Deposits (B3) (Nonriverine)	Presence of Reduced Iron (C4)	Crayfish Burrows (C8)
Surface Soil Cracks (B6)	Recent Iron Reduction in Tilled Sol	ls (C6) Saturation Visible on Aerial Imagery (C9)
Inundation Visible on Aerial Imagery (B7)	Thin Muck Surface (C7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Other (Explain in Remarks)	FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes No	Example 2 Depth (inches):	
Water Table Present? Yes D No	Example 2 Depth (inches):	
Saturation Present? Yes <u>Ves</u> No <u>(includes capillary fringe)</u>	Depth (inches):	Wetland Hydrology Present? Yes No X
Describe Recorded Data (stream gauge, monitori	ng well, aerial photos, previous inspect	ions), if available:
30" Excavated pit.		
Remarks:		

Wetland Hydrology Indicators:



# **PHOTOGRAPHS OF SAMPLE SITE #03.**

Upper left: Western view of sample point #03, an upland. Upper right: Label flag for the pit. Lower left: Eastern view of the same point. Lower right: Location of the sample site relative to the other points is indicated by the pink arrow. No wetland parameters were met.

# Kagel Environmental, LLC

Wetlands, Wildlife and Permitting Specialists

SAMPLE POINT #03

Project/Site: Stagecoach		City/0	County: Weber Cou	unty, Ogden, UT	Sampling Date:
Applicant/Owner: Lync Developmer	t			State: UT	Sampling Point: 04
Investigator(s): Kagel Environmenta	al LLC	Secti	on, Township, Rang	e: S21 T6N R2W	
Landform (hillslope, terrace, etc.): Lak	e Terrace	Loca	al relief (concave, co	nvex, none): Flat	Slope (%): 0-1
Subregion (LRR): LRR D (Interior de	Lat: 41.23792	2 <u></u>	_ong: _ <b>-112.071557</b>	Datum: WGS84	
Soil Map Unit Name: Le: Leland silt lo	oam, 0 to 1 perc	ent slopes (481612)		NWI classi	fication: N/A
Are climatic / hydrologic conditions on	the site typical fo	or this time of year?	res No	(If no, explain in	Remarks.)
Are Vegetation, Soil, o	· Hydrology	significantly distu	rbed? Are "No	ormal Circumstances	" present? Yes X No
Are Vegetation, Soil, o	· Hydrology	naturally problem	atic? (If need	led, explain any ansv	vers in Remarks.)
SUMMARY OF FINDINGS - A	Attach site m	ap showing sar	npling point loc	ations, transec	ts, important features, etc
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes	No X No X No X	Is the Sampled A within a Wetland		□ No×
Remarks:			•		

Drier than normal.

	Absolute		t Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30' radius</u> )		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2			·	Total Number of Dominant
3			·	Species Across All Strata: 2 (B)
4. $50\% = 0$ 20% = 0			·	Percent of Dominant Species
So% = 0 20% = 0 Sapling/Shrub Stratum (Plot size: 15' radius )	0	= Total Co	over	That Are OBL, FACW, or FAC: (A/B)
				Prevalence Index worksheet:
1				Total % Cover of: Multiply by:
2				OBL species         x 1 =         0
3			·	FACW species x 2 =
4 5.			·	FAC species $40 \times 3 = 120$
50% = 0 20% = 0	0	= Total Co		FACU species         51         x 4 =         204
Herb Stratum (Plot size: <u>5' radius</u> )		10tai 0t		UPL species         x 5 =         0
1. Distichlis spicata	40	×	FAC	Column Totals: 91 (A) 324 (B)
2. Bassia hyssopifolia	30	X	FACU	
3. Hordeum murinum	10		FACU	Prevalence Index = B/A = 3.56
4. Poa bulbosa	8		FACU	Hydrophytic Vegetation Indicators:
5. Lepidium perfoliatum	3		FACU	Dominance Test is >50%
6				Prevalence Index is $≤3.0^{1}$
7				Morphological Adaptations <sup>1</sup> (Provide supporting
8.				data in Remarks or on a separate sheet)
50% = 45.5 20% = 18.2	91	= Total Co	over	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum (Plot size: 15' radius )		_		
1				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2				
50% = 0 20% = 0	0	= Total Co	over	Hydrophytic
% Bare Ground in Herb Stratum 9 % Cover	r of Biotic C	rust		Vegetation Present? Yes <u>No X</u>
Remarks:				

#### SOIL

Depth	cription: (Describe t Matrix			x Feature:				ormalouto		
(inches)	Color (moist)	%	Color (moist)	<u>% 8 1 eature</u>	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks	
0-32	7.5YR4/3	100	NA				Silt Clay			
	oncentration, D=Depl								Pore Lining, M natic Hydric S	
Histosol			Sandy Red		su.)			luck (A9) (L	-	50115 .
	pipedon (A2)		Stripped Ma	. ,				luck (A3) (L	,	
	istic (A3)		Loamy Muc	. ,	(F1)			ed Vertic (F		
	en Sulfide (A4)		Loamy Gley	•	. ,			arent Materia		
	d Layers (A5) ( <b>LRR C</b>	:)	Depleted M		(12)			Explain in R	. ,	
	uck (A9) (LRR D)	•)	Redox Dark	. ,	E6)				cinarks)	
	d Below Dark Surface	(Δ11)	Depleted Da							
	ark Surface (A12)	- (,,,,)	Redox Dep		. ,		<sup>3</sup> Indicators	of hydrophy	tic vegetation	and
	Aucky Mineral (S1)		Vernal Pool		0)			• • •	ust be presen	
	Gleyed Matrix (S4)			3 (1 3)				sturbed or p	•	ι,
	Layer (if present):							sturbed of p		
Type:										
	ches):						Hydric Soil	Present?	Yes	No <u>×</u>
Remarks:										

# HYDROLOGY

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one required; check	all that apply)	Secondary Indicators (2 or more required)
Surface Water (A1)	_ Salt Crust (B11)	Water Marks (B1) ( <b>Riverine</b> )
High Water Table (A2)	Biotic Crust (B12)	Sediment Deposits (B2) ( <b>Riverine</b> )
Saturation (A3)	Aquatic Invertebrates (B13)	Drift Deposits (B3) ( <b>Riverine</b> )
Water Marks (B1) (Nonriverine)	_ Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)
Sediment Deposits (B2) (Nonriverine)	Oxidized Rhizospheres along Livi	ng Roots (C3) Dry-Season Water Table (C2)
Drift Deposits (B3) (Nonriverine)	Presence of Reduced Iron (C4)	Crayfish Burrows (C8)
Surface Soil Cracks (B6)	Recent Iron Reduction in Tilled Sc	bils (C6) Saturation Visible on Aerial Imagery (C9)
Inundation Visible on Aerial Imagery (B7)	_ Thin Muck Surface (C7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Other (Explain in Remarks)	FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes D No	_ Depth (inches):	
Water Table Present? Yes No	_ Depth (inches):	
Saturation Present? Yes <u>No</u> No	_ Depth (inches):	Wetland Hydrology Present? Yes No <u>X</u>
Describe Recorded Data (stream gauge, monitoring	well, aerial photos, previous inspec	tions), if available:
32" Excavated pit.		
Remarks:		



Upper left: Western view of sample point #04. Upper right: Label flag for the pit. Lower left: Eastern view of the same point. Lower right: Location of the sample site relative to the other points is indicated by the pink arrow. No wetland parameters were met.

# Kagel Environmental, LLC

Wetlands, Wildlife and Permitting Specialists

SAMPLE POINT #04

Project/Site: Stagecoach	City/County:	Weber County, Ogden, UT	Sampling Date: 8/3/21
Applicant/Owner: Lync Development		State: UT	Sampling Point: 05
Investigator(s): Kagel Environmental LLC	Section, Tow	nship, Range: S21 T6N R2W	
Landform (hillslope, terrace, etc.): Lake Terrace	Local relief (	concave, convex, none): Flat	Slope (%): <u>0-1</u>
Subregion (LRR): LRR D (Interior deserts)	Lat: 41.237405	Long: -112.069719	Datum: WGS84
Soil Map Unit Name: Le: Leland silt loam, 0 to 1 percent slop	pes (481612)	NWI clas	ssification: N/A
Are climatic / hydrologic conditions on the site typical for this ti	me of year? Yes	No <u>X</u> (If no, explain	in Remarks.)
Are Vegetation, Soil, or Hydrology sign	nificantly disturbed?	Are "Normal Circumstance	es" present? Yes <u>X</u> No
Are Vegetation, Soil, or Hydrology nati	urally problematic?	(If needed, explain any an	swers in Remarks.)
SUMMARY OF FINDINGS – Attach site map sh	owing sampling	point locations, transe	ects, important features, etc.
Hydrophytic Vegetation Present?       Yes No _         Hydric Soil Present?       Yes No _         Wetland Hydrology Present?       Yes No _		Sampled Area n a Wetland? Yes _	No <u>×</u>
Remarks:			

Drier than normal.

	Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size: <u>30' radius</u> )	% Cover	Species?	Status	Number of Dominant Species	
1		. <u> </u>		That Are OBL, FACW, or FAC: (A)	
2				Total Number of Dominant	
3				Species Across All Strata: <u>3</u> (B)	
4				Percent of Dominant Species	
50% = 0 20% = 0	0	= Total Co	ver	That Are OBL, FACW, or FAC:33% (A/B)	)
Sapling/Shrub Stratum (Plot size: 15' radius )	-	X	FACU		
1. Sarcobatus vermiculatus	5	<u> </u>	FACU	Prevalence Index worksheet:	
2				Total % Cover of: Multiply by:	
3				OBL species x 1 =0	
4				FACW species x 2 =0	
5				FAC species 30 x 3 = 90	
50% = 2.5 20% = 1	5	= Total Co	ver	FACU species65 x 4 =260	
Herb Stratum (Plot size: <u>5' radius</u> )		•		UPL species x 5 = 0	
1. Poa bulbosa	60	X	FACU	Column Totals: 95 (A) 350 (B)	
2. Distichlis spicata	30	X	FAC		
3				Prevalence Index = B/A = 3.68	
4				Hydrophytic Vegetation Indicators:	
5				Dominance Test is >50%	
6				Prevalence Index is ≤3.0 <sup>1</sup>	
7				Morphological Adaptations <sup>1</sup> (Provide supporting	
				data in Remarks or on a separate sheet)	
8. $50\% = 45$ 20% = 18	90	= Total Co		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)	
Woody Vine Stratum (Plot size: 15' radius			ver		
1,				<sup>1</sup> Indicators of hydric soil and wetland hydrology must	
2.				be present, unless disturbed or problematic.	
50% = 0 20% = 0	0	= Total Co		Hydrophytic	
	-			Vegetation	
% Bare Ground in Herb Stratum % Cove	r of Biotic C	rust		Present? Yes <u>No X</u>	
Remarks:					

#### SOIL

Profile Des	cription: (Describe	to the dep	th needed to docu	ment the	indicator	or confirm	n the absence of ind	icators.)		
Depth	Matrix		Redo	ox Feature	s					
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Rema	irks	
0-11	7.5YR3/2	100	NA				Silt Loam			
11-15	10YR3/2	50	NA				Natrix, clay/sil	t loam		
	10YR4/2	50								
15-36	7.5YR4/3	100	NA				Silt Loam			
		·			·					
	oncentration, D=Dep					d Sand G	rains. <sup>2</sup> Location: Indicators for Pr	PL=Pore Linir		
Histoso			Sandy Red				1 cm Muck (/	A9) ( <b>LRR C</b> )		
	pipedon (A2)		Stripped M				2 cm Muck (/			
	listic (A3)		Loamy Muo		al (F1)		Reduced Ver			
	en Sulfide (A4)		Loamy Gle	-				Material (TF2)		
	d Layers (A5) ( <b>LRR (</b>	<b>~</b> )	Depleted N	•	(i <u>~</u> )			in in Remarks)		
		•)	Redox Dar	• •						
	uck (A9) ( <b>LRR D</b> )	- (			· · /					
·	d Below Dark Surface	e (A11)	Depleted D		. ,		3			
	ark Surface (A12)		Redox Dep		F8)		<sup>3</sup> Indicators of hyd			
-	Mucky Mineral (S1)		Vernal Poo	ls (F9)			wetland hydrol			
	Gleyed Matrix (S4)						unless disturbe	d or problemat	tic.	
Restrictive	Layer (if present):									
Туре:										
Depth (in	iches):						Hydric Soil Prese	ent? Yes	No	<u>×</u>
Remarks:										

# HYDROLOGY

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one required; check	ck all that apply)	Secondary Indicators (2 or more required)
Surface Water (A1)	Salt Crust (B11)	Water Marks (B1) ( <b>Riverine</b> )
High Water Table (A2)	Biotic Crust (B12)	Sediment Deposits (B2) (Riverine)
Saturation (A3)	Aquatic Invertebrates (B13)	Drift Deposits (B3) (Riverine)
Water Marks (B1) (Nonriverine)	Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)
Sediment Deposits (B2) (Nonriverine)	Oxidized Rhizospheres along Livir	ng Roots (C3) Dry-Season Water Table (C2)
Drift Deposits (B3) (Nonriverine)	Presence of Reduced Iron (C4)	Crayfish Burrows (C8)
Surface Soil Cracks (B6)	Recent Iron Reduction in Tilled Sc	bils (C6) Saturation Visible on Aerial Imagery (C9)
Inundation Visible on Aerial Imagery (B7)	Thin Muck Surface (C7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Other (Explain in Remarks)	FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes D No	Depth (inches):	
Water Table Present? Yes No	Depth (inches):	
Saturation Present? Yes <u>No</u> (includes capillary fringe)	Depth (inches):	Wetland Hydrology Present? Yes No
Describe Recorded Data (stream gauge, monitoring	ng well, aerial photos, previous inspec	tions), if available:
36" Excavated pit.		
Remarks:		



# **PHOTOGRAPHS OF SAMPLE SITE #05.**

Upper left: Northern view of sample point #05, an upland. Upper right: Label flag for the pit. Lower left: Southern view of the same point. Lower right: Location of the sample site relative to the other points is indicated by the pink arrow. No wetland parameters were met.

# Kagel Environmental, LLC

Wetlands, Wildlife and Permitting Specialists

SAMPLE POINT #05

Project/Site: Stagecoach	City/County:	Weber County, Ogden, UT	Sampling Date: 8/3/21
Applicant/Owner: Lync Development		State: UT	
Investigator(s): Kagel Environmental LLC	Section, Tow	vnship, Range: S21 T6N R2W	
Landform (hillslope, terrace, etc.): Lake Terrace		(concave, convex, none): Flat	Slope (%): 0-1
Subregion (LRR): LRR D (Interior deserts)	Lat: 41.235548	Long: -112.069121	Datum: WGS84
Soil Map Unit Name: Ac: Airport silt loam, 0 to 2 percent slo	pes (481538)	NWI classific	ation: N/A
Are climatic / hydrologic conditions on the site typical for this til	me of year? Yes	No X (If no, explain in R	emarks.)
Are Vegetation, Soil, or Hydrology sign	ificantly disturbed?	Are "Normal Circumstances" p	resent? Yes X No
Are Vegetation, Soil, or Hydrology natu	arally problematic?	(If needed, explain any answe	rs in Remarks.)
SUMMARY OF FINDINGS – Attach site map sh	owing sampling	g point locations, transects	, important features, etc.
Hydrophytic Vegetation Present? Yes X No	is the	Sampled Area	
Hydric Soil Present? Yes No	X within	•	No 🗵
Wetland Hydrology Present? Yes No _	<u>×</u>		
Remarks:			
Drier than normal.			

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30' radius</u> )		Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: <u>2</u> (A)
2				Total Number of Dominant
3				Species Across All Strata: <u>3</u> (B)
4. $50\% = 0$ 20% = 0				Percent of Dominant Species
Solve = 0 20% = 0 Sapling/Shrub Stratum (Plot size: 15' radius )	0	= Total Co	ver	That Are OBL, FACW, or FAC: 67% (A/B)
1				Prevalence Index worksheet:
2				Total % Cover of: Multiply by:
3			·	OBL species         x 1 =         0
4				FACW species $20$ x 2 = $40$
				FAC species $40 \times 3 = 120$
5	0	= Total Co	vor	FACU species 13 x 4 = 52
Herb Stratum (Plot size: <u>5' radius</u> )		10tai 00	vei	UPL species         25 $x = 125$
1. Atriplex micrantha	25	×	UPL	Column Totals: 98 (A) 337 (B)
2. Juncus balticus	20	×	FACW	
3. Polygonum ramosissimum	20	X	FAC	Prevalence Index = B/A =3.44
4. Hordeum murinum	10		FACU	Hydrophytic Vegetation Indicators:
5. Rumex crispus	6		FAC	X Dominance Test is >50%
6. Distichlis spicata	5		FAC	Prevalence Index is ≤3.0 <sup>1</sup>
7. Polygonum ramosissimum	5		FAC	Morphological Adaptations <sup>1</sup> (Provide supporting
8. Hordeum jubatum	3		FAC	data in Remarks or on a separate sheet)
50% = <sub>47</sub> 20% = <sub>18.8</sub>	94	= Total Co	ver	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum (Plot size: 15' radius )		-		
1				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2				
<b>50%</b> = 0 <b>20%</b> = 0	0	= Total Co	ver	Hydrophytic
% Bare Ground in Herb Stratum 2% % Cover	r of Biotic C	rust		Vegetation Present? Yes X No
Remarks:				
No indicator for Atriplex micrantha = UPL				
Additional Herb: Lactuca serriola 3% FACU, Bassia sco Total: 98%	oparia 1% I	-AC		
50% = 49, 20% = 19.6				
Technically hydrophytic by the Dominance Test, but th	e Prevalen	ce Index sl	hows this i	is <u>NOT</u> actually a wetland plant community.

#### SOIL

### Sampling Point: 06

epth	Matrix			Features		0	
nches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture Remarks
0-15	10YR2/1	100	NA				Silt Clay Loam
15-30	10YR2/1	100	NA				Silt Loam
30-34	10YR4/2	100	NA				Silt Loam
			Reduced Matrix, CS: LRRs, unless other			d Sand G	Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils <sup>3</sup> :
Histosol			Sandy Redo		- /		1 cm Muck (A9) ( <b>LRR C</b> )
-	ipedon (A2)		Stripped Mat				2 cm Muck (A10) ( <b>LRR B</b> )
Black His	stic (A3)		Loamy Muck	y Mineral	(F1)		Reduced Vertic (F18)
_ Hydroge	n Sulfide (A4)		Loamy Gleye	ed Matrix	(F2)		Red Parent Material (TF2)
Stratified	Layers (A5) (LRR (	C)	Depleted Ma	trix (F3)			Other (Explain in Remarks)
1 cm Mu	ck (A9) ( <b>LRR D</b> )		Redox Dark	Surface (I	=6)		
Depleted	Below Dark Surfac	e (A11)	Depleted Da	rk Surface	e (F7)		
Thick Da	rk Surface (A12)		Redox Depre	essions (F	8)		<sup>3</sup> Indicators of hydrophytic vegetation and
_ Sandy M	lucky Mineral (S1)		Vernal Pools	(F9)			wetland hydrology must be present,
Sandy G	leyed Matrix (S4)						unless disturbed or problematic.
strictive L	ayer (if present):						
Туре:							
Depth (inc	ches):						Hydric Soil Present? Yes No
emarks:							•

Wetland Hydrology Indicators:						
Primary Indicators (minimum of one required; check a	Secondary Indicators (2 or more required)					
Surface Water (A1)	Salt Crust (B11)	Water Marks (B1) (Riverine)				
High Water Table (A2)	Biotic Crust (B12)	Sediment Deposits (B2) (Riverine)				
Saturation (A3)	Aquatic Invertebrates (B13)	Drift Deposits (B3) ( <b>Riverine</b> )				
Water Marks (B1) (Nonriverine)	Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)				
Sediment Deposits (B2) (Nonriverine)	Oxidized Rhizospheres along Livir	ing Roots (C3) Dry-Season Water Table (C2)				
Drift Deposits (B3) (Nonriverine)	Presence of Reduced Iron (C4)	Crayfish Burrows (C8)				
Surface Soil Cracks (B6)	Recent Iron Reduction in Tilled So	oils (C6) Saturation Visible on Aerial Imagery (C9)				
Inundation Visible on Aerial Imagery (B7)	Thin Muck Surface (C7)	Shallow Aquitard (D3)				
Water-Stained Leaves (B9)	Other (Explain in Remarks)	FAC-Neutral Test (D5)				
Field Observations:						
Surface Water Present? Yes No _ 🗵	_ Depth (inches):					
Water Table Present? Yes D No	Depth (inches):					
Saturation Present? Yes No (includes capillary fringe)	_ Depth (inches):	Wetland Hydrology Present? Yes No <u>X</u>				
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:						
34" Excavated pit.						
Remarks:						



# **PHOTOGRAPHS OF SAMPLE SITE #06.**

Upper left: Northwestern view of sample point #06, an upland. Upper right: Label flag for the pit. Lower left: Southeastern view of the same point. Lower right: Location of the sample site relative to the other points is indicated by the pink arrow. Vegetation was technically hydrophytic by the Dominance Test, but the Prevalence Index showed that this is not a wetland plant community. No other wetland parameters were met.

# Kagel Environmental, LLC

Wetlands, Wildlife and Permitting Specialists

SAMPLE POINT #06

Project/Site: Stagecoach	City/County:	Weber County, Ogden, UT Sa	mpling Date: 8/3/21				
Applicant/Owner: Lync Development		State: UT Sampling Point: 07					
Investigator(s): Kagel Environmental LLC	Environmental LLC Section, Township, Range: S21 T6N R2W						
		concave, convex, none): Flat	Slope (%): 0-1				
Subregion (LRR): LRR D (Interior deserts)	Lat: <b>41.23534</b>	Long: <u>-112.070525</u>	Datum: WGS84				
Soil Map Unit Name: Ac: Airport silt loam, 0 to 2 percent slo	NWI classification: <b>PEM1C</b>						
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No X (If no, explain in Remarks.)							
Are Vegetation, Soil, or Hydrology sigr	ificantly disturbed?	Are "Normal Circumstances" prese	ent? Yes X No				
Are Vegetation, Soil, or Hydrology nate	urally problematic?	(If needed, explain any answers in	Remarks.)				
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.							
Hydrophytic Vegetation Present? Yes No _	× la tha	Sompled Area					
Hydric Soil Present? Yes <u>No</u>	X within	Is the Sampled Area within a Wetland? Yes NoX					
Wetland Hydrology Present? Yes No _	<u>×                                    </u>						
Remarks:							
Drier than normal.							

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30' radius )		Species?		Number of Dominant Species
1			. <u> </u>	That Are OBL, FACW, or FAC: 2 (A)
2				Total Number of Dominant
3				Species Across All Strata: (B)
4				Percent of Dominant Species
50% = 0 20% = 0	0	= Total Co	ver	That Are OBL, FACW, or FAC: <b>50%</b> (A/B)
Sapling/Shrub Stratum (Plot size: 15' radius )				Prevalence Index worksheet:
1				
2				
3				
4				
5. $50\% = 0$ 20% = 0				
Herb Stratum (Plot size: 5' radius )	0	= Total Co	ver	
<u>1 Helianthus annuus</u>	10	×	FACU	UPL species X 5 =
2. Lactuca serriola	10	<u> </u>	FACU	Column Totals: (A) (B)
3. Polygonum aviculare	5	<u> </u>	FAC	Prevalence Index = B/A = 3.66
4. Rumex crispus	5	<u> </u>	FAC	Hydrophytic Vegetation Indicators:
5 Atriplex micrantha	3		UPL	Dominance Test is >50%
6 Distichlis spicata	3		FAC	Prevalence Index is ≤3.0 <sup>1</sup>
7 Polygonum ramosissimum	3		FAC	Morphological Adaptations <sup>1</sup> (Provide supporting
8 Bassia hyssopifolia	1		FACU	data in Remarks or on a separate sheet)
$\frac{50\%}{50\%} = \frac{20\%}{20\%} = \frac{8}{8}$	40	= Total Co	ver	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum (Plot size: 15' radius )				
1				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
2				be present, unless disturbed or problematic.
50% = 0 20% = 0	0	= Total Co	ver	Hydrophytic
% Bare Ground in Herb Stratum 59 % Cover of Biotic Crust		Vegetation Present? Yes <u>No X</u>		
Remarks:				1
No indicator for Atriplex micrantha = UPL				
Additional Herb: Hordeum jubatum 1% FAC Total Cover: 41% 50% = 20.5, 20% = 8.2				
### Sampling Point: 07

Profile Desc	ription: (Describe	to the dept	h needed to docur	nent the i	ndicator	or confirm	n the absence of indicators.)		
Depth	Matrix			x Features					
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture Remarks		
0-17	10YR2/1	100	NA				Silt Clay Loam		
17-44	10YR2/1	100	NA				Silty Clay		
		· ·							
		· <u> </u>				<u> </u>			
						<u> </u>			
				- <u></u>					
$^{1}$ Type: C=C	oncentration, D=Dep	letion RM=	Reduced Matrix C		l or Coate	d Sand Gr	rains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.		
	Indicators: (Application)					u Sanu Gi	Indicators for Problematic Hydric Soils <sup>3</sup> :		
•			Sandy Red		,		1 cm Muck (A9) ( <b>LRR C</b> )		
Histosol (A1) Histic Epipedon (A2)			Stripped Matrix (S6)				2 cm Muck (A10) ( <b>LRR B</b> )		
Black Hi			Loamy Mucky Mineral (F1)				Reduced Vertic (F18)		
	n Sulfide (A4)		Loamy Gleyed Matrix (F2)				Red Parent Material (TF2)		
	Layers (A5) (LRR C	<b>C</b> )	Depleted Matrix (F3)				Other (Explain in Remarks)		
	ck (A9) ( <b>LRR D</b> )	,	Redox Dark Surface (F6)						
Depleted	Below Dark Surface	e (A11)	Depleted Dark Surface (F7)						
Thick Da	ark Surface (A12)		Redox Depressions (F8)				<sup>3</sup> Indicators of hydrophytic vegetation and		
Sandy M	lucky Mineral (S1)		Vernal Pools (F9)				wetland hydrology must be present,		
Sandy G	leyed Matrix (S4)						unless disturbed or problematic.		
Restrictive L	_ayer (if present):								
Туре:									
Depth (inc	ches):						Hydric Soil Present? Yes No		
Remarks:									

#### HYDROLOGY

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one required; check	Secondary Indicators (2 or more required)	
Surface Water (A1)	_ Salt Crust (B11)	Water Marks (B1) (Riverine)
High Water Table (A2)	Biotic Crust (B12)	Sediment Deposits (B2) (Riverine)
Saturation (A3)	_ Aquatic Invertebrates (B13)	Drift Deposits (B3) (Riverine)
Water Marks (B1) (Nonriverine)	_ Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)
Sediment Deposits (B2) (Nonriverine)	Oxidized Rhizospheres along Livir	ng Roots (C3) Dry-Season Water Table (C2)
Drift Deposits (B3) (Nonriverine)	Presence of Reduced Iron (C4)	Crayfish Burrows (C8)
Surface Soil Cracks (B6)	_ Recent Iron Reduction in Tilled Sc	bils (C6) Saturation Visible on Aerial Imagery (C9)
Inundation Visible on Aerial Imagery (B7)	Thin Muck Surface (C7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Other (Explain in Remarks)	FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes D No	Depth (inches):	
Water Table Present? Yes No	Depth (inches):	
(includes capillary fringe)	Depth (inches):	Wetland Hydrology Present? Yes No <u>X</u>
Describe Recorded Data (stream gauge, monitoring	well, aerial photos, previous inspec	tions), if available:
44" Excavated pit.		
Remarks:		



relative to the other points is indicated by the pink arrow. No wetland parameters were met.

# Kagel Environmental, LLC

Wetlands, Wildlife and Permitting Specialists

Project/Site: Stagecoach	City/County	/: Weber County, Ogden, UT	Sampling Date: 8/3/21			
Applicant/Owner: Lync Development		State: UT	Sampling Point: 08			
Investigator(s): Kagel Environmental LLC	Section, To	wnship, Range: S21 T6N R2W				
Landform (hillslope, terrace, etc.): Lake Terrace		f (concave, convex, none): Flat	Slope (%):			
Subregion (LRR): LRR D (Interior deserts)	Lat: 41.23472	Long: -112.070455	Datum: WGS84			
Soil Map Unit Name: Ac: Airport silt loam, 0 to 2 percer	nt slopes (481538)	NWI classifi	cation: N/A			
Are climatic / hydrologic conditions on the site typical for	this time of year? Yes	No X (If no, explain in F	Remarks.)			
Are Vegetation, Soil, or Hydrology	_significantly disturbed?	Are "Normal Circumstances"	present? Yes X No			
Are Vegetation, Soil, or Hydrology	_naturally problematic?	oroblematic? (If needed, explain any answers in Remarks.)				
SUMMARY OF FINDINGS – Attach site ma	p showing samplin	g point locations, transects	s, important features, etc.			
Hydrophytic Vegetation Present? Yes X	No	a Compled Area				
Hydric Soil Present? Yes		ne Sampled Area nin a Wetland?    Yes <u> </u>	No 🗵			
Wetland Hydrology Present? Yes	No X					
Remarks:						
Drier than normal.						

	Absolute			Dominance Test worksheet:		
Tree Stratum (Plot size: <u>30' radius</u> )		Species?		Number of Dominant Species	2	(
1				That Are OBL, FACW, or FAC:	2	(A)
2				Total Number of Dominant	•	
3				Species Across All Strata:	2	(B)
4. $50\% = 0$ 20% = 0	0			Percent of Dominant Species	4000/	
Sapling/Shrub Stratum (Plot size: 15' radius )		= Total Co	ver	That Are OBL, FACW, or FAC:	100%	(A/B)
1,				Prevalence Index worksheet:		
2				Total % Cover of:M	ultiply by:	
3				OBL species x 1 =	0	
4.				FACW species x 2 =	-	
5.				FAC species 83 x 3 =		
50% = 0 20% = 0	0	= Total Co	ver	FACU species 6 x 4 =	24	
Herb Stratum (Plot size: <u>5' radius</u> )				UPL species <b>20</b> x 5 =	100	
1. Distichlis spicata	50	<u> </u>	FAC	Column Totals: <b>109</b> (A)	373	(B)
2. Hordeum jubatum	20	<u> </u>	FAC			,
3. Elymus lanceolatus	15		UPL	Prevalence Index = B/A =	3.42	_
4. Polygonum aviculare	10		FAC	Hydrophytic Vegetation Indicators	5:	
5. Atriplex micrantha	5		UPL	<u>×</u> Dominance Test is >50%		
6. Elymus repens	3		FAC	Prevalence Index is $≤3.0^1$		
7. Ambrosia artemisiifolia	2		FACU	Morphological Adaptations <sup>1</sup> (Pro		
8. Hordeum murinum	2		FACU	data in Remarks or on a sepa	,	
50% = 53.5 $20% = 21.4$	107	= Total Co	ver	Problematic Hydrophytic Vegeta	ition (Expla	in)
Woody Vine Stratum (Plot size: 15' radius )					hu dan baru d	
1				<sup>1</sup> Indicators of hydric soil and wetland be present, unless disturbed or prob		nust
2. $\frac{2}{50\%} = 0$ 20% = 0						
3070 - 0 2070 - 0	0	= Total Co	ver	Hydrophytic Vegetation		
% Bare Ground in Herb Stratum0 % Cove	r of Biotic C	rust		Present? Yes $\times$ N	lo	
Remarks:						
No indicator for Atriplex micrantha = UPL. Additional Total Cover: 109%	Herb: Lepic	lium perfol	iatum 2% I	FACU.		
50% = 54.5, 20% = 21.8						
	<b>.</b> .					
Technically hydrophytic by the Dominance Test, but the	ie Prevalen	ce Index sh	nows this i	is not a wetland plant community.		

Depth	ription: (Describe t Matrix	o the dep		x Feature		or comm	ii the absence o		5.)		
(inches)	Color (moist)	%	Color (moist)	<u>% % 8 % 8 % 8 % 8 % 8 % 8 % 8 % 8 % 8 %</u>	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks		
0-36	7.5YR3/1	100	NA				Silt Clay				
	oncentration, D=Depl Indicators: (Applica					ed Sand G			ore Lining, M: atic Hydric S		
Histosol	( )		Sandy Rede	· ,				uck (A9) ( <b>LF</b>	,		
	pipedon (A2)		Stripped Ma	• •				uck (A10) ( <b>L</b>			
	stic (A3)		Loamy Muc	•	. ,			d Vertic (F1			
	en Sulfide (A4)	•\	Loamy Gley		(FZ)			ent Materia	. ,		
	d Layers (A5) ( <b>LRR C</b> ick (A9) ( <b>LRR D</b> )	•)	Depleted Matrix (F3) Redox Dark Surface (F6)					Explain in Re	emarks)		
	d Below Dark Surface	(A11)	Depleted Dark		, ,						
	ark Surface (A12)	; (ATT)			. ,		<sup>3</sup> Indicators o	f hydronhyti	ic vegetation :	and	
	lucky Mineral (S1)		Redox Depressions (F8) Vernal Pools (F9)			<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present,					
	Bleyed Matrix (S4)							unless disturbed or problematic.			
	Layer (if present):										
Type:											
Depth (in	ches):						Hydric Soil P	Present?	Yes	No <u>×</u>	
Remarks:							1				

## HYDROLOGY

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one required; check	Secondary Indicators (2 or more required)	
Surface Water (A1)	_ Salt Crust (B11)	Water Marks (B1) ( <b>Riverine</b> )
High Water Table (A2)	Biotic Crust (B12)	Sediment Deposits (B2) ( <b>Riverine</b> )
Saturation (A3)	_ Aquatic Invertebrates (B13)	Drift Deposits (B3) ( <b>Riverine</b> )
Water Marks (B1) (Nonriverine)	_ Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)
Sediment Deposits (B2) (Nonriverine)	Oxidized Rhizospheres along Livi	ng Roots (C3) Dry-Season Water Table (C2)
Drift Deposits (B3) (Nonriverine)	Presence of Reduced Iron (C4)	Crayfish Burrows (C8)
Surface Soil Cracks (B6)	_ Recent Iron Reduction in Tilled So	bils (C6) Saturation Visible on Aerial Imagery (C9)
Inundation Visible on Aerial Imagery (B7)	_ Thin Muck Surface (C7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Other (Explain in Remarks)	FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes 🗌 No 🗵	Depth (inches):	
Water Table Present? Yes D No	_ Depth (inches):	
Saturation Present? Yes No (includes capillary fringe)	_ Depth (inches):	Wetland Hydrology Present? Yes No
Describe Recorded Data (stream gauge, monitoring	well, aerial photos, previous inspec	tions), if available:
36" Excavated pit.		
Remarks:		



## PHOTOGRAPHS OF SAMPLE SITE #08.

Upper left: Northwestern view of sample point #08. Upper right: Label flag for the pit. Lower left: Southeastern view of the same point. Lower right: Location of the sample site relative to the other points is indicated by the pink arrow. Vegetation was technically hydrophytic by the Dominance Test, but the Prevalence Index showed this is not a wetland plant community. No other wetland parameters were met.

# Kagel Environmental, LLC

Wetlands, Wildlife and Permitting Specialists

Project/Site: Stagecoach	City/County:	Weber County, Ogden, UT	Sampling Date: 8/3/21		
Applicant/Owner: Lync Development	cant/Owner: Lync Development State: UT Sampling Point:				
Investigator(s): Kagel Environmental LLC	Section, Tow	nship, Range: S21 T6N R2W			
			Slope (%): _0-1		
Subregion (LRR): LRR D (Interior deserts)	41.234865	34865 Long: -112.070935 Date			
Soil Map Unit Name: Ac: Airport silt loam, 0 to 2 percent slopes (	(481538)	NWI clas	ssification: PEM1C		
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No $X_{}$ (If no, explain in Remarks.)					
Are Vegetation, Soil, or Hydrology significa	ntly disturbed?	Are "Normal Circumstanc	es" present? Yes <u>X</u> No		
Are Vegetation, Soil, or Hydrology naturally	problematic?	(If needed, explain any ar	swers in Remarks.)		
SUMMARY OF FINDINGS – Attach site map show	ing sampling	point locations, transe	ects, important features, etc.		
Hydrophytic Vegetation Present? Yes X No	la tha	Compled Area			
Hydric Soil Present? Yes No X		e Sampled Area n a Wetland? Yes	□ No ×		
Wetland Hydrology Present? Yes No X					
Remarks:					
Drier than normal.					

	Absolute			Dominance Test worksheet:
Tree Stratum (Plot size: <u>30' radius</u> )		Species?		Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2				Total Number of Dominant
3				Species Across All Strata: 2 (B)
4. $50\% = 0$ 20% = 0				Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: 15' radius )	0	= Total Co	ver	That Are OBL, FACW, or FAC: 100% (A/B)
				Prevalence Index worksheet:
1				Total % Cover of: Multiply by:
2				OBL species         x 1 =         0
3				FACW species $x 2 = 0$
4				FAC species x 2 =
5	0	= Total Co	vor	FACU species         x 4 =         0
Herb Stratum (Plot size: 5' radius )			vei	$\begin{array}{c} 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 $
1. Suaeda calceoliformis	60	×	FACW	Column Totals:         O         (A)         O         (B)
2. Distichlis spicata	30	×	FAC	
3				Prevalence Index = B/A =
4				Hydrophytic Vegetation Indicators:
5				× Dominance Test is >50%
6				Prevalence Index is ≤3.0 <sup>1</sup>
7				Morphological Adaptations <sup>1</sup> (Provide supporting
8.				data in Remarks or on a separate sheet)
50% = 45 20% = 18	90	= Total Co	ver	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum (Plot size: 15' radius )		-		
1				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2				be present, unless disturbed of problematic.
50% = 0 $20% = 0$	0	= Total Co	ver	Hydrophytic
% Bare Ground in Herb Stratum 10 % Cover	r of Biotic C	rust		Vegetation Present? Yes X No
Remarks:				

		to the dep				or confirm	m the absence of indicators.)
Depth (inches)	<u>Matrix</u> Color (moist)	%	Color (moist)	<u>ox Feature</u> %	s Type <sup>1</sup>	Loc <sup>2</sup>	Texture Remarks
0-11	10YR3/1	100	NA				Silty Clay Loam
11-20	2.5YR5/2	50	NA				Natrix, clay/silt loam
	10YR2/1	50					
20-36	10YR5/3	100	NA				Silt Clay Loam
20-30	10113/3	100					
	· · · · · · · · · · · · · · · · · · ·						
1 <del></del>							
	Concentration, D=Dep Indicators: (Applic					d Sand G	Brains. <sup>2</sup> Location:         PL=Pore Lining, M=Matrix.           Indicators for Problematic Hydric Soils <sup>3</sup> :
-		able to all			eu.)		-
Histoso	( )		Sandy Red	. ,			1 cm Muck (A9) (LRR C)
	pipedon (A2)		Stripped M				2 cm Muck (A10) ( <b>LRR B</b> )
	listic (A3)		Loamy Mu				Reduced Vertic (F18)
	en Sulfide (A4)		Loamy Gle		(F2)		Red Parent Material (TF2)
	d Layers (A5) (LRR	C)	Depleted M	. ,			Other (Explain in Remarks)
	uck (A9) ( <b>LRR D</b> )		Redox Dark Surface (F6)				
·	ed Below Dark Surfac	e (A11)	Depleted D		• •		2
	ark Surface (A12)		Redox Dep		F8)		<sup>3</sup> Indicators of hydrophytic vegetation and
	Mucky Mineral (S1)		Vernal Poo	ols (F9)			wetland hydrology must be present,
	Gleyed Matrix (S4)						unless disturbed or problematic.
Restrictive	Layer (if present):						
Туре:							
Depth (ir	nches):						Hydric Soil Present? Yes No X
Remarks:							

## HYDROLOGY

Wetland Hydrology Indicators:				
Primary Indicators (minimum of one required; check	Secondary Indicators (2 or more required)			
Surface Water (A1)	Salt Crust (B11)	Water Marks (B1) ( <b>Riverine</b> )		
High Water Table (A2)	Biotic Crust (B12)	Sediment Deposits (B2) ( <b>Riverine</b> )		
Saturation (A3)	Aquatic Invertebrates (B13)	Drift Deposits (B3) ( <b>Riverine</b> )		
Water Marks (B1) (Nonriverine)	Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)		
Sediment Deposits (B2) (Nonriverine)	Oxidized Rhizospheres along Livi	ng Roots (C3) Dry-Season Water Table (C2)		
Drift Deposits (B3) (Nonriverine)	Presence of Reduced Iron (C4)	Crayfish Burrows (C8)		
Surface Soil Cracks (B6)	Recent Iron Reduction in Tilled Sc	bils (C6) Saturation Visible on Aerial Imagery (C9)		
Inundation Visible on Aerial Imagery (B7)	Thin Muck Surface (C7)	Shallow Aquitard (D3)		
Water-Stained Leaves (B9)	Other (Explain in Remarks)	X FAC-Neutral Test (D5)		
Field Observations:				
Surface Water Present? Yes D No	_ Depth (inches):			
Water Table Present? Yes D No	_ Depth (inches):			
Saturation Present? Yes <u>No</u> <u>X</u> (includes capillary fringe)	_ Depth (inches):	Wetland Hydrology Present? Yes No $X$		
Describe Recorded Data (stream gauge, monitoring	well, aerial photos, previous inspec	tions), if available:		
36" Excavated pit.				
Remarks:				



Project/Site: Stagecoach	City/County:	Weber County, Ogden, UT	_ Sampling Date: <b>8/3/21</b>
Applicant/Owner: Lync Development		State: UT	_ Sampling Point: 10
Investigator(s): Kagel Environmental LLC	Section, Tov	vnship, Range: S21 T6N R2W	
Landform (hillslope, terrace, etc.): Lake Terrace		(concave, convex, none): Flat	Slope (%): 0-1
Subregion (LRR): LRR D (Interior deserts)	at: 41.234813	Long: 112.069098	Datum: WGS84
Soil Map Unit Name: Ac: Airport silt loam, 0 to 2 percent slop	es (481538)	NWI classif	ication: N/A
Are climatic / hydrologic conditions on the site typical for this tim	ne of year? Yes	No X (If no, explain in	Remarks.)
Are Vegetation, Soil, or Hydrology signi	ficantly disturbed?	Are "Normal Circumstances"	present? Yes X No
Are Vegetation, Soil, or Hydrology natu	rally problematic?	(If needed, explain any answ	ers in Remarks.)
SUMMARY OF FINDINGS – Attach site map she	owing sampling	g point locations, transect	s, important features, etc.
Hydrophytic Vegetation Present?       Yes No         Hydric Soil Present?       Yes No	X Is the	e Sampled Area n a Wetland? Yes	No X

Wetland Hydrology F	Present?	Yes	No X				
Remarks:							
Drier than normal.	Although vegetatio	n was <5% co	over, this is not a c	losed basin and thus in KF's o	poinion it is not	a plava. Plavas c	an be

Drier than normal. Although vegetation was <5% cover, this is not a closed basin and thus in KE's opinion it is not a playa. Playas can be regulated waters of the US.

201 redius	Absolute	Dominant Indicato	
<u>Tree Stratum</u> (Plot size: <u>30' radius</u> ) 1		Species? Status	Number of Dominant Species           That Are OBL, FACW, or FAC:         0         (A)
23			Total Number of Dominant Species Across All Strata:1(B)
4 50% = 0 20% = 0 <u>Sapling/Shrub Stratum</u> (Plot size: <u>15' radius</u> )		= Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC:0% (A/B)
1			Prevalence Index worksheet:
2			Total % Cover of: Multiply by:
3.			OBL species x 1 =0
4			FACW species x 2 =0
			FAC species x 3 =
5		= Total Cover	FACU species x 4 =
Herb Stratum (Plot size: 5' radius )			UPL species x 5 =
1 Suaeda calceoliformis	3	FACW	- Column Totals: 0 (A) 0 (B)
2			
3.			Prevalence Index = B/A =
4			Hydrophytic Vegetation Indicators:
5			Dominance Test is >50%
6			Prevalence Index is ≤3.0 <sup>1</sup>
			Morphological Adaptations <sup>1</sup> (Provide supporting
7 8.			data in Remarks or on a separate sheet)
50% = 1.5 20% = 0.6	3	= Total Cover	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
		= Total Cover	
			<sup>1</sup> Indicators of hydric soil and wetland hydrology must
			be present, unless disturbed or problematic.
50% = 0 20% = 0	0	= Total Cover	- Hydrophytic
% Bare Ground in Herb Stratum 97% % Cove			Vegetation Present? Yes <u>No X</u>
Remarks:			•
Vegetation too sparse to actually qualify as a relevant	parameter.		
	p		
	0	= Total Cover	be present, unless disturbed or problematic. Hydrophytic Vegetation

### Sampling Point: 10

Profile Desc	ription: (Describe	to the dep				or confirn	n the absence of indica	tors.)
Depth	Matrix			x Feature		. 2		
(inches)	Color (moist)	<u>%</u>	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-16	10YR2/1	100	NA				Silt Loam	
16-25	10YR5/2	90	NA	<u> </u>	<u></u>		Sandy Loam	
	10YR2/1	10					Sandy Loam	
25-35	2.5YR5/2	100	10YR5/8	<1	С	М	Sandy Loam	
		letion, RM=	Reduced Matrix. C	S=Covere	d or Coate		rains. <sup>2</sup> Location: PL	.=Pore Lining, M=Matrix.
	Indicators: (Applic							lematic Hydric Soils <sup>3</sup> :
Black Hi Black Hi Hydroge Stratified	pipedon (A2)	C)	Sandy Red Stripped Ma Loamy Muc Loamy Gley Depleted M Redox Darl	atrix (S6) cky Minera yed Matrix latrix (F3)	(F2)		1 cm Muck (A9)     2 cm Muck (A10     Reduced Vertic     Red Parent Mate     Other (Explain in	) ( <b>LRR B</b> ) (F18) erial (TF2)
Depleted Thick Da Sandy M Sandy G	d Below Dark Surfac ark Surface (A12) Mucky Mineral (S1) Gleyed Matrix (S4)	e (A11)	<ul> <li>Redox Dark Surface (F6)</li> <li>Depleted Dark Surface (F7)</li> <li>Redox Depressions (F8)</li> <li>Vernal Pools (F9)</li> </ul>		<sup>3</sup> Indicators of hydrop wetland hydrology unless disturbed o	must be present,		
	Layer (if present):							
Type: Depth (in	ches):						Hydric Soil Present?	? Yes No
Remarks:								
Soil Cracks,	Playa							
HYDROLO	GY							
Wetland Hy	drology Indicators:							
Primary India	cators (minimum of c	ne required	I; check all that appl	y)			Secondary India	cators (2 or more required)
Surface			Salt Crust				Water Mark	(s (B1) ( <b>Riverine</b> )
	ater Table (A2)		Biotic Cru					Deposits (B2) (Riverine)
Saturatio	, ,		Aquatic In		es (B13)			sits (B3) ( <b>Riverine</b> )

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one required; che	Secondary Indicators (2 or more required)	
Surface Water (A1)	Salt Crust (B11)	Water Marks (B1) ( <b>Riverine</b> )
High Water Table (A2)	Biotic Crust (B12)	Sediment Deposits (B2) (Riverine)
Saturation (A3)	Aquatic Invertebrates (B13)	Drift Deposits (B3) ( <b>Riverine</b> )
Water Marks (B1) (Nonriverine)	Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)
Sediment Deposits (B2) (Nonriverine)	Oxidized Rhizospheres along Livir	ng Roots (C3) Dry-Season Water Table (C2)
Drift Deposits (B3) (Nonriverine)	Presence of Reduced Iron (C4)	Crayfish Burrows (C8)
Surface Soil Cracks (B6)	Recent Iron Reduction in Tilled Sc	ils (C6) Saturation Visible on Aerial Imagery (C9)
Inundation Visible on Aerial Imagery (B7)	Thin Muck Surface (C7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Other (Explain in Remarks)	FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes 🗌 No 🗌	Example 2 Depth (inches):	
Water Table Present? Yes 🗌 No 🗌	Example 2 Depth (inches):	
Saturation Present? Yes <u>No</u> No <u>Ves</u>	Example 2 Depth (inches):	Wetland Hydrology Present? Yes No $X$
Describe Recorded Data (stream gauge, monitori	ng well, aerial photos, previous inspec	tions), if available:
35" Excavated pit.		
Remarks:		



# **PHOTOGRAPHS OF SAMPLE SITE #10**

Upper left: Western view of sample point #10, a questionable upland. Upper right: Label flag for the pit. Lower left: Eastern view of the same point. Lower right: Location of the sample site relative to the other points is indicated by the pink arrow. Although vegetation was very sparse (<5%), KE does not believe this is a regulated playa as it does not appear to be a closed basin. Soils were not hydric and wetland hydrology was not present.

# A.

## Kagel Environmental, LLC

Wetlands, Wildlife and Permitting Specialists

Project/Site: Stagecoach	City/County: V	Veber County, Ogden, UT	Sampling Date: 8/3/21
Applicant/Owner: Lync Development		State: UT	Sampling Point: 11
Investigator(s): Kagel Environmental LLC	Section, Town	ship, Range: S21 T6N R2W	
Landform (hillslope, terrace, etc.): Lake Terrace	Local relief (c	oncave, convex, none): Flat	Slope (%): 0-1
Subregion (LRR): LRR D (Interior deserts)	Lat: 41.236312	Long: -112.069418	Datum: WGS84
Soil Map Unit Name: Ac: Airport silt loam, 0 to 2 p	percent slopes (481538)	NWI clas	sification: N/A
Are climatic / hydrologic conditions on the site typica	al for this time of year? Yes	NoX (If no, explain i	n Remarks.)
Are Vegetation, Soil, or Hydrology _	significantly disturbed?	Are "Normal Circumstance	s" present? Yes <u>X</u> No
Are Vegetation, Soil, or Hydrology _	naturally problematic?	(If needed, explain any and	swers in Remarks.)
SUMMARY OF FINDINGS – Attach site	e map showing sampling	point locations, transe	cts, important features, etc.
	No X Is the S	Sampled Area	
	No <u>×</u> within	a Wetland? Yes _	<u>No X</u>
Remarks:			

Drier than normal.

20' rodius	Absolute		Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size: <u>30' radius</u> )		Species?		Number of Dominant Species	
1			·	That Are OBL, FACW, or FAC: 1	(A)
2			·	Total Number of Dominant	
3			·	Species Across All Strata: 2	(B)
4. $50\% = 0$ 20% = 0			·	Percent of Dominant Species	
Some 0 20% = 0 Sapling/Shrub Stratum (Plot size: 15' radius )	0	= Total Co	over	That Are OBL, FACW, or FAC: 50%	(A/B)
				Prevalence Index worksheet:	
1 2				Total % Cover of: Multiply by:	
				OBL species         x 1 =         0	
3				FACW species         x 2 =         0	
4				FAC species $56 \times 3 = 168$	_
5	0	= Total Co		FACU species $32 \times 4 = 128$	
Herb Stratum (Plot size: <u>5' radius</u> )			lvei	UPL species $x = $	
1. Distichlis spicata	45	×	FAC	Column Totals: 103 (A) 371	(B)
2. Hordeum murinum	25	×	FACU		(D)
3. Atriplex micrantha	15		UPL	Prevalence Index = B/A = 3.60	
4. Hordeum jubatum	10		FAC	Hydrophytic Vegetation Indicators:	
5. Lactuca serriola	6		FACU	Dominance Test is >50%	
6. Lepidium perfoliatum	1		FACU	Prevalence Index is ≤3.0 <sup>1</sup>	
7. Symphyotrichum ascendens	1		FAC	Morphological Adaptations <sup>1</sup> (Provide suppo	
8.				data in Remarks or on a separate sheet	
50% = <sub>51.5</sub> 20% = <sub>20.6</sub>	103	= Total Co	over	Problematic Hydrophytic Vegetation <sup>1</sup> (Expl	ain)
Woody Vine Stratum (Plot size: 15' radius )					
1				<sup>1</sup> Indicators of hydric soil and wetland hydrology	must
2				be present, unless disturbed or problematic.	
50% = 0 $20% = 0$	0	= Total Co	over	Hydrophytic	
% Bare Ground in Herb Stratum0 % Cove	r of Biotic C	rust		Vegetation Present? Yes <u>No X</u>	
Remarks:				•	
No indicator for Atriplex micrantha = UPL					

Depth	Matrix			x Feature			-
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	
0-23	10YR2/1	100	NA				Silt Clay Loam
23-36	10YR4/1*	100	NA				Silt Clay Loam (calcic horizon)
36-39	10YR4/1	98	7.5YR5/2	2			Silt Clay Loam
		·			·		
	oncentration, D=Dep Indicators: (Application)					d Sand G	Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix. Indicators for Problematic Hydric Soils <sup>3</sup> :
Histosol Histic Eg Black Hi Stratified Stratified Depleted Thick Da Sandy N Sandy C Restrictive		C)	Sandy Red Stripped Ma Loamy Muc Loamy Gley Depleted M Redox Darl Depleted D Redox Dep Vernal Poo	ox (S5) atrix (S6) xky Minera yed Matrix latrix (F3) < Surface ark Surfac ressions (	al (F1) (F2) (F6) ce (F7)		<ul> <li>1 cm Muck (A9) (LRR C)</li> <li>2 cm Muck (A10) (LRR B)</li> <li>Reduced Vertic (F18)</li> <li>Red Parent Material (TF2)</li> <li>Other (Explain in Remarks)</li> <li><sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</li> </ul>
Type: Depth (in	ches):						Hydric Soil Present? Yes No $ imes$
Remarks: The 23-36" h	orizon is calcic, an	d thus mu	st have at least 2%	redox fo	r 10YR 4/1	to quali	ify as a depleted matrix.

Primary Indicators (minimum of one required; ch	Secondary Indicators (2 or more required)	
Surface Water (A1)	Salt Crust (B11)	Water Marks (B1) (Riverine)
High Water Table (A2)	Biotic Crust (B12)	Sediment Deposits (B2) (Riverine)
Saturation (A3)	Aquatic Invertebrates (B13)	Drift Deposits (B3) (Riverine)
Water Marks (B1) (Nonriverine)	Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)
Sediment Deposits (B2) (Nonriverine)	Oxidized Rhizospheres along Livir	ng Roots (C3) Dry-Season Water Table (C2)
Drift Deposits (B3) (Nonriverine)	Presence of Reduced Iron (C4)	Crayfish Burrows (C8)
Surface Soil Cracks (B6)	Recent Iron Reduction in Tilled Sc	ils (C6) Saturation Visible on Aerial Imagery (C9)
Inundation Visible on Aerial Imagery (B7)	Thin Muck Surface (C7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Other (Explain in Remarks)	FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes 🗌 No	🗵 Depth (inches):	
Water Table Present? Yes D	Example 2 Depth (inches):	
	Example 2 Depth (inches):	Wetland Hydrology Present? Yes No
(includes capillary fringe)		viewe) if even letter
Describe Recorded Data (stream gauge, monito	ring well, aerial photos, previous inspec	lions), if available:
39" Excavated pit.		
Remarks:		



Project/Site: Stagecoach	City/County:	Weber County, Og	den, UT	Sampling Date: 8/3/21		
Applicant/Owner: Lync Development		State	<u>;</u> UT	Sampling Point: 12		
Investigator(s): Kagel Environmental LLC	Section, Tow	nship, Range: <b>S21 T</b>	6N R2W			
Landform (hillslope, terrace, etc.): Lake Terrace	Local relief (	concave, convex, non	e): Flat	Slope (%):		
Subregion (LRR): LRR D (Interior deserts) Lat: 41.2	236977	Long: <u>-11</u>	2.071022	Datum: WGS84		
Soil Map Unit Name: Le: Leland silt loam, 0 to 1 percent slopes (481)	612)		NWI classifi	cation: N/A		
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No $X_{}$ (If no, explain in Remarks.)						
Are Vegetation, Soil, or Hydrology significantly	disturbed?	Are "Normal Circ	umstances"	present? Yes X No		
Are Vegetation, Soil, or Hydrology naturally pro	oblematic?	(If needed, expla	in any answe	ers in Remarks.)		
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.						
Hydrophytic Vegetation Present?     Yes No       Hydric Soil Present?     Yes No		Sampled Area	Yes	<u>No X</u>		
Wetland Hydrology Present?       Yes No         Remarks:						

Drier than normal.

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: <u>30' radius</u> )		Species?		Number of Dominant Species
1. Ulmus pumila	20	X	UPL	That Are OBL, FACW, or FAC: <b>0</b> (A)
2			·	Total Number of Dominant
3				Species Across All Strata: (B)
4				Percent of Dominant Species
50% = 10 $20% = 4$	20	= Total Co	over	That Are OBL, FACW, or FAC: <b>0%</b> (A/B)
Sapling/Shrub Stratum (Plot size: 15' radius )				
1				Prevalence Index worksheet:
2				Total % Cover of: Multiply by:
3			·	OBL species x 1 =
4			·	FACW species x 2 =0
5			·	FAC species <u>3</u> x 3 = <u>9</u>
50% = 0 20% = 0	0	= Total Co	over	FACU species x 4 = 80
Herb Stratum (Plot size: <u>5' radius</u> )				UPL species <b>80</b> x 5 = <b>400</b>
1. Elymus lanceolatus	60	X	UPL	Column Totals: <b>103</b> (A) <b>489</b> (B)
2. Poa bulbosa	20	X	FACU	
3. Distichlis spicata	3		FAC	Prevalence Index = B/A = 4.75
4				Hydrophytic Vegetation Indicators:
5				Dominance Test is >50%
6				Prevalence Index is ≤3.0 <sup>1</sup>
7			·	Morphological Adaptations <sup>1</sup> (Provide supporting
				data in Remarks or on a separate sheet)
8. $50\% = 41.5$ 20% = 16.6	83	= Total Co		Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum (Plot size: 15' radius		10(a) C(		
1				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
2.			·	be present, unless disturbed or problematic.
$\frac{2}{50\%} = 0$ 20% = 0	0	= Total Co	wer	Hydrophytic
47		-		Vegetation
% Bare Ground in Herb Stratum17 % Cove	er of Biotic C	rust		Present? Yes No
Remarks:				

### Sampling Point: 12

Depth	Matrix		Redox Fea	tures				
inches)	Color (moist)	%	Color (moist) %	<u>Type<sup>1</sup></u>	Loc <sup>2</sup>	Texture	Remarks	
0-12	7.5YR4/3	100	<u>NA</u>			Silt Loam		
12-37	7.5YR5/4	100	NA			Silt Loam		
						· ·		
						· ·		
			·			· ·		
		·				· ·		
ype: C=C	Concentration, D=Dep	letion, RM:		ered or Coate	d Sand G	rains. <sup>2</sup> Location: I	PL=Pore Lining, M=Matrix.	
			LRRs, unless otherwise				blematic Hydric Soils <sup>3</sup> :	
Histoso	l (A1)		Sandy Redox (S5	)		1 cm Muck (As	9) ( <b>LRR C</b> )	
_ Histic E	pipedon (A2)		Stripped Matrix (S			2 cm Muck (A	10) ( <b>LRR B</b> )	
Black H	listic (A3)		Loamy Mucky Mir	neral (F1)		Reduced Verti		
_ Hydrog	en Sulfide (A4)		Loamy Gleyed Ma	atrix (F2)		Red Parent Ma	aterial (TF2)	
Stratifie	d Layers (A5) (LRR (	<b>C</b> )	Depleted Matrix (	F3)		Other (Explain	in Remarks)	
	uck (A9) (LRR D)	,	Redox Dark Surfa			、 .	,	
	d Below Dark Surface	e (A11)	Depleted Dark Su	( )				
	ark Surface (A12)	- ( )	Redox Depressio			<sup>3</sup> Indicators of hydro	ophytic vegetation and	
	Mucky Mineral (S1)		Vernal Pools (F9)	. ,		wetland hydrology must be present.		
	Gleyed Matrix (S4)					unless disturbed	<b>5</b> 1 <i>7</i>	
-	Layer (if present):							
Туре:								
Depth (in	iches):					Hydric Soil Presen	nt? Yes <u>No X</u>	
emarks:								

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one required; che	eck all that apply)	Secondary Indicators (2 or more required)
Surface Water (A1)	Salt Crust (B11)	Water Marks (B1) (Riverine)
High Water Table (A2)	Biotic Crust (B12)	Sediment Deposits (B2) (Riverine)
Saturation (A3)	Aquatic Invertebrates (B13)	Drift Deposits (B3) (Riverine)
Water Marks (B1) (Nonriverine)	Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)
Sediment Deposits (B2) (Nonriverine)	Oxidized Rhizospheres along Livit	ing Roots (C3) Dry-Season Water Table (C2)
Drift Deposits (B3) (Nonriverine)	Presence of Reduced Iron (C4)	Crayfish Burrows (C8)
Surface Soil Cracks (B6)	Recent Iron Reduction in Tilled Sc	coils (C6) Saturation Visible on Aerial Imagery (C9)
Inundation Visible on Aerial Imagery (B7)	Thin Muck Surface (C7)	Shallow Aquitard (D3)
Water-Stained Leaves (B9)	Other (Explain in Remarks)	FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes No	Depth (inches):	
Water Table Present? Yes No	Depth (inches):	
Saturation Present? Yes No (includes capillary fringe)	Depth (inches):	Wetland Hydrology Present? Yes No
Describe Recorded Data (stream gauge, monitor	ing well, aerial photos, previous inspec	ctions), if available:
37" Excavated pit.		
Remarks:		



## **PHOTOGRAPHS OF SAMPLE SITE #12**

Upper left: Northern view of sample point #12. Upper right: Label flag for the pit. Lower left: Southern view of the same point. Lower right: Location of the sample site relative to the other points is indicated by the pink arrow. No wetland parameters were met.

# Kagel Environmental, LLC

Wetlands, Wildlife and Permitting Specialists

Project/Site: Stagecoach	City/County:	Weber County, Ogden, UT	Sampling Date: 8/3/21
Applicant/Owner: Lync Development		State: UT	Sampling Point: 13
Investigator(s): Kagel Environmental LLC	Section, Tow	vnship, Range: S21 T6N R2W	
Landform (hillslope, terrace, etc.): Lake Terrace		(concave, convex, none): Flat	Slope (%):
Subregion (LRR): LRR D (Interior deserts)	Lat: 41.237482	Long: -112.073211	Datum: WGS84
Soil Map Unit Name: WaA: Warm Springs fine sandy loan	n, 0 to 1 percent slopes	(481674) NWI classifi	cation: N/A
Are climatic / hydrologic conditions on the site typical for thi	s time of year? Yes	No <u>X</u> (If no, explain in F	Remarks.)
Are Vegetation, Soil, or Hydrologys	significantly disturbed?	Are "Normal Circumstances"	present? Yes X No
Are Vegetation, Soil, or Hydrology r	naturally problematic?	(If needed, explain any answe	ers in Remarks.)
SUMMARY OF FINDINGS – Attach site map	showing sampling	g point locations, transects	s, important features, etc.
Hydrophytic Vegetation Present? Yes X N		Compled Area	
Hydric Soil Present? Yes N		e Sampled Area n a Wetland? Yes 🛛	No 🗵
Wetland Hydrology Present? Yes N			
Remarks:			
Drier than normal.			

### **VEGETATION – Use scientific names of plants.**

	Absolute	Dominant		Dominance Test worksheet:		
Tree Stratum (Plot size: <u>30' radius</u> )		Species?		Number of Dominant Species		
1. Elaeagnus angustifolia	10	<u> </u>	FAC	That Are OBL, FACW, or FAC: <u>3</u> (A)		
2				Total Number of Dominant		
3			. <u> </u>	Species Across All Strata: (B)		
4						
50% = 5 20% = 2	10	_ = Total Co	ver	Percent of Dominant Species That Are OBL, FACW, or FAC: <b>75%</b> (A/B)		
Sapling/Shrub Stratum (Plot size: 15' radius )		_				
1. Elaeagnus angustifoia	5	<u> </u>	FAC	Prevalence Index worksheet:		
2		. <u></u>		Total % Cover of: Multiply by:		
3				OBL species6 x 1 =6		
4				FACW species3 x 2 =6		
5				FAC species 60 x 3 = 180		
50% = 2.5 $20% = 1$	5	= Total Co	ver	FACU species 35 x 4 = 140		
Herb Stratum (Plot size: <u>5' radius</u> )				UPL species 13 x 5 = 65		
1. Trifolium fragiferum	40	X	FAC	Column Totals: 117 (A) 397 (B)		
2. Elymus lanceolatus	35	X	FACU			
3. Colvolvulus arvensis	10		UPL	Prevalence Index = B/A = 3.39		
4. Schoenoplectus acutus	6		OBL	Hydrophytic Vegetation Indicators:		
5. Symphyotrichum ascendens	5		FAC	× Dominance Test is >50%		
6. Daucus carota	3		UPL	Prevalence Index is ≤3.0 <sup>1</sup>		
7. Phragmites australis	3		FACW	Morphological Adaptations <sup>1</sup> (Provide supporting		
8.				data in Remarks or on a separate sheet)		
50% = 51 $20% = 20.4$	102	= Total Co	ver	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)		
Woody Vine Stratum (Plot size: 15' radius )						
1				<sup>1</sup> Indicators of hydric soil and wetland hydrology must		
2				be present, unless disturbed or problematic.		
50% = 0 20% = 0	0	= Total Co	ver	Hydrophytic		
% Bare Ground in Herb Stratum 0 % Cove	Vegetation Present? Yes X No					
Remarks:				1		
No indicator for Convolvulus arvensis = UPL.						

Technically hydrophytic by the Dominance Test, but the Prevalence Index shows this is not a wetland plant community.

### Sampling Point: 13

Profile Desc Depth	ription: (Describe Matrix	to the dep				or confirm	m the absence of indicators.)	
(inches)	Color (moist)	%	Color (moist)	<u>x Feature</u> %	Type <sup>1</sup>	Loc <sup>2</sup>	Texture Remarks	
0-15	10YR3/2	97	10YR6/8	3			Silt Loam	
15-26	10YR5/2	100	NA				Silt Clay	
26-36	7.5YR5/4	80	NA				Loam	
	7.5YR5/2	20				. <u></u>		
					- <u> </u>			
							·	
						. <u></u>		
1 <b>T</b>				0-				
	ncentration, D=Dep ndicators: (Applic					d Sand G	Grains. <sup>2</sup> Location: PL=Pore Lining, M=Mati Indicators for Problematic Hydric Soils <sup>3</sup>	
Histosol			Sandy Red		,		1 cm Muck (A9) ( <b>LRR C</b> )	-
	pipedon (A2)		Stripped M				2 cm Muck (A10) ( <b>LRR B</b> )	
Black Histic (A3) Loamy Mucky Mineral (F1)					Reduced Vertic (F18)			
Loamy Gleyed Matrix (F2)					Red Parent Material (TF2)			
Stratified Layers (A5) (LRR C) Depleted Matrix (F3)					Other (Explain in Remarks)			
	ck (A9) ( <b>LRR D</b> )	-)	Redox Darl	. ,	(F6)			
	Below Dark Surfac	ο (Δ11)	Depleted D		• •			
·			·		. ,		<sup>3</sup> Indicators of hydrophytic vegetation and	
Thick Dark Surface (A12)       Redox Depressions (F8)         Sandy Mucky Mineral (S1)       Vernal Pools (F9)					wetland hydrology must be present,			
	leyed Matrix (S4)			15 (1 9)				
	ayer (if present):						unless disturbed or problematic.	
Type:	ujer (il present).							
Depth (inc							Hydric Soil Present? Yes No	×
Remarks:	,							
HYDROLO	GY							

Wetland Hydrology Indicators:						
Primary Indicators (minimum of one required; ch	Secondary Indicators (2 or more required)					
<ul> <li>Surface Water (A1)</li> <li>High Water Table (A2)</li> <li>Saturation (A3)</li> <li>Water Marks (B1) (Nonriverine)</li> <li>Sediment Deposits (B2) (Nonriverine)</li> <li>Drift Deposits (B3) (Nonriverine)</li> <li>Surface Soil Cracks (B6)</li> <li>Inundation Visible on Aerial Imagery (B7)</li> <li>Water-Stained Leaves (B9)</li> </ul>	<ul> <li>Salt Crust (B11)</li> <li>Biotic Crust (B12)</li> <li>Aquatic Invertebrates (B13)</li> <li>Hydrogen Sulfide Odor (C1)</li> <li>Oxidized Rhizospheres along Livia</li> <li>Presence of Reduced Iron (C4)</li> <li>Recent Iron Reduction in Tilled So</li> <li>Thin Muck Surface (C7)</li> <li>Other (Explain in Remarks)</li> </ul>	Water Marks (B1) (Riverine)         Sediment Deposits (B2) (Riverine)         Drift Deposits (B3) (Riverine)         Drainage Patterns (B10)         ng Roots (C3)         Dry-Season Water Table (C2)         Crayfish Burrows (C8)         Saturation Visible on Aerial Imagery (C9)         Shallow Aquitard (D3)         FAC-Neutral Test (D5)				
Field Observations:						
Water Table Present? Yes No	X         Depth (inches):           X         Depth (inches):           X         Depth (inches):	Wetland Hydrology Present? Yes No				
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:						
36" Excavated pit.						
Remarks:						



# **PHOTOGRAPHS OF SAMPLE SITE #13**

Upper left: Northern view of sample point #13. Upper right: Label flag for the pit. Lower left: Southern view of the same point. Lower right: Location of the sample site relative to the other points is indicated by the pink arrow. Although vegetation was technically hydrophytic by the Dominance Test, the Prevalence Index showed this was not a wetland plant community. No other wetland parameters were met.

# Kagel Environmental, LLC

Wetlands, Wildlife and Permitting Specialists