

# 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* 

# **TABLE OF CONTENTS**

ACRONYMS AND ABBREVIATIONS ii
EXECUTIVE SUMMARYiii
INTRODUCTION AND PURPOSE1
LOCATION
METHODS
STUDY CONDITIONS
VEGETATION
SOILS
HYDROLOGY/WATER RESOURCES
WETLANDS ON THE SS
CONCLUSION
REFERENCES
FIGURES
FIGURE 2. LOCATION OF THE STAGECOACH SITE (SS)
FIGURE 3. TOPOGRAPHY OF THE STAGECOACH SITE (SS)
FIGURE 4. ANTECEDENT PRECIPITATION FOR THE SS AT THE TIME OF KE'S SITE VISIT.
FIGURE 5. WETLAND ASSESSMENT MAP12
FIELD DATA FORMS



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

## **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:Joshua WiscombePhone: 801-808-6906Lync 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 83442Note that the second sec

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

Environmental Laboratory. 1987. *Corps of Engineers wetlands delineation manual*. Technical Report Y-87-1. Vicksburg, MS: U.S. Army Engineer Waterways Experiment Station.

Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. *Official Soil Series Descriptions*.

U. S. Army Corps of Engineers. 2008. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)*, ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-10-16. Vicksburg, MS: U.S. Army Engineer Research and Development Center.

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.



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

FIGURES





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



# 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	ite: UT	Sampling Point: 01
Investigator(s): Kagel Environmental LLC	Section,	Township, Range: S21	T6N R2W	
Landform (hillslope, terrace, etc.): Lake Terra	ice Local re	lief (concave, convex, nc	ne): none	Slope (%): 0-1
Subregion (LRR): LRR D (Interior deserts)	Lat: 41.235094	Long:1	12.072385	Datum: WGS84
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 No	s the Sampled Area		
Hydric Soil Present? Yes	3 No <u>X</u> W	vithin a Wetland?	Yes 🗌	No
Wetland Hydrology Present? Yes	3 No <u>X</u>			
Remarks:				

Drier than normal.

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 radius )	% Cover	Species?	Status	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				Percent of Dominant Species
50% = 0 $20% = 0Sapling/Shrub Stratum (Plot size: 15' radius )$	0	= Total Co	ver	That Are OBL, FACW, or FAC: 50% (A/B)
1 Sarcobatus vermiculatus	10	X	FACU	Prevalence Index worksheet:
2				Total % Cover of Multiply by
3				$\begin{array}{c} \hline \hline \\ $
а				EACW species $x_2 = 0$
4				$EAC species \qquad 63 \qquad x = 189$
50% = 5 20% = 2		- Total Co	vor	EACLI species $11$ x 4 = $44$
Herb Stratum (Plot size: <u>5' radius</u> )		10tal C0	vei	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
1 Distichlis spicata	60	×	FAC	Column Totals: 77 (A) 248 (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 data in Remarks or on a separate sheet)
8. $-\frac{50\%}{50\%} = 335$ 20% = 134	67			Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum (Plot size: 15' radius )		= I otal Co	ver	
1				<sup>1</sup> Indicators of hydric soil and wetland hydrology must
2				
50% = 0 $20% = 0$	0	= Total Co	ver	Hydrophytic
% Bare Ground in Herb Stratum30 % Cove	er of Biotic C	rust		Present? Yes <u>No X</u>
Remarks:				

Indexes       Color (moist)       %       Color (moist)       %       Type <sup>1</sup> Loc <sup>2</sup> Texture       Remarks         0-9       10YR4/2       100       NA       Silt Loam       Silt Loam         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	ches)	Color (moist) 10YR4/2 10YR2/2 7.5YR 4/3 7.5YR4/3	% 100 99 99 99 92	Color (moist) NA 7.5YR4/3 10YR6/8 7.5YR6/1	<u>%</u> <u>1</u> 1	Type <sup>1</sup>	<u>Loc<sup>2</sup></u>	Texture     Remarks       Silt Loam
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	0-9 9-17 17-27 27-39	10YR4/2 10YR2/2 7.5YR 4/3 7.5YR4/3	100 99 99 92	NA 7.5YR4/3 10YR6/8 7.5YR6/1	1	C	М	Silt LoamSilt 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	9-17 17-27 27-39	10YR2/2 7.5YR 4/3 7.5YR4/3	99 99 92	7.5YR4/3 10YR6/8 7.5YR6/1	1 1	<u> </u>	Μ	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         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         201       201       201       201       201       201       201       201         202       201       201       201       201       201       201       201         202       201       201       201       201       201       201       201         203       203       203       203       203       201       201       201         204       203       201       201       201       201       201       201       201         204       203       203       203       201       201       201       201       201       201       201       <	17-27 27-39	7.5YR 4/3 7.5YR4/3	99 92	10YR6/8 7.5YR6/1	1	<u> </u>		
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, M=Matrix.         rdric Soil Indicators:       (Applicable to all LRRs, unless otherwise noted.)       Indicators for Problematic Hydric Soils <sup>3</sup> :         Histic Epipedon (A2)       Stripped Matrix (S6)       1 cm Muck (A9) (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)         2 mMuck (A9) (LRR D)       Redox Depressions (F8) <sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.         strictive Layer (If present):       Type:       Hydric Soil Present? Yes       No         Type:	27-39	7.5YR4/3	92	7.5YR6/1		C	Μ	Silt Clay Loam
ype:       C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location:       PL=Pore Lining, M=Matrix.         rdric Soil Indicators:       (Applicable to all LRRs, unless otherwise noted.)       Indicators for Problematic Hydric Soils <sup>3</sup> :         - Histosol (A1)					8	D	М	Silt Clay Loam
ype: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.         rdric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)       Indicators for Problematic Hydric Soils <sup>3</sup> :         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)       String Mucky Mineral (S1)       Vernal Pools (F9)         Sandy Mucky Mineral (S1)       Vernal Pools (F9)       wetland hydrology must be present, unless disturbed or problematic.         Type:						·		·
Histosol (A1)	pe: C=Conce	entration, D=Dep	letion, RM=	Reduced Matrix, CS	S=Covere	d or Coate	d Sand G	Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.
Histosof (A1)				Sondy Rody		eu.)		1 om Muck (AQ) (I PP C)
Histic Lippedin (A2)	Histosof (AT)	$\frac{1}{2}$		Sanuy Reut	JX(33)			2 cm Muck (A10) (LRR C)
Black Histic (A3)		(A2)			ku Minora			2 clinindex (A10) (LRK B)
Stratified Layers (A5) (LRR C)		(A3)				(F1) (F2)		Reduced Vellic (F18)
Stratified Layers (A5) (LRR C)	Hydrogen St		•	Loanty Gley		(FZ)		Red Parent Material (TF2)
1 cm Muck (A9) (LRR D)	Stratified Lay		•)		atrix (F3)	(= -)		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)         Sandy Gleyed Matrix (S4)       vernal Pools (F9)         strictive Layer (if present):	1 cm Muck (	A9) ( <b>LRR D</b> )		Redox Dark	Surface	(F6)		
Thick Dark Surface (A12)       Redox Depressions (F8)       3 Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.         Sandy Mucky Mineral (S1)       Vernal Pools (F9)       wetland hydrology must be present, unless disturbed or problematic.         Sandy Gleyed Matrix (S4)       Vernal Pools (F9)       unless disturbed or problematic.         strictive Layer (if present):       Pople       Pople         Depth (inches):       No	Depleted Be	low Dark Surface	e (A11)	Depleted Date	ark Surfac	ce (F7)		
Sandy Mucky Mineral (S1)       Vernal Pools (F9)       wetland hydrology must be present, unless disturbed or problematic.         Sandy Gleyed Matrix (S4)       unless disturbed or problematic.         strictive Layer (if present):	Thick Dark S	Surface (A12)		Redox Dep	ressions (	F8)		'Indicators of hydrophytic vegetation and
Sandy Gleyed Matrix (S4)     unless disturbed or problematic.       strictive Layer (if present):	Sandy Muck	y Mineral (S1)		Vernal Pool	s (F9)			wetland hydrology must be present,
strictive Layer (if present):         Type:         Depth (inches):         Model         Model         Model	Sandy Gleye	ed Matrix (S4)						unless disturbed or problematic.
Type:	strictive Laye	er (if present):						
Depth (inches): No	Туре:							
	Depth (inches	s):						Hydric Soil Present? Yes No
		,						

# HYDROLOGY

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one required; che	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	Example 2 Depth (inches):	
Water Table Present? Yes D No	X Depth (inches):	
Saturation Present? Yes <u>No</u> No (includes capillary fringe)	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:
39" Excavated pit.		
Remarks:		

![](_page_19_Picture_0.jpeg)

# **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.

![](_page_19_Picture_3.jpeg)

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: 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	No within a Wetland? Yes No X
Wetland Hydrology Present? Yes	
Remarks:	
Drier than normal.	

	Absolute	Dominan	t Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size: 30 radius )	% Cover	Species?	Status	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			·	Percent of Dominant Species	
Sapling/Shrub Stratum (Plot size: 15' radius )		= 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 $x = 0$	-
4			·	FACW species $x 2 = 0$	
5			·	FAC species $20 \times 3 = 60$	
50% = 0 20% = 0	0	= Total Co	wer	FACU species $20 \times 4 = 80$	
Herb Stratum (Plot size: <u>5' radius</u> )				UPL species 50 x 5 = 250	
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 (Explain	)
Woody Vine Stratum (Plot size: 15' radius )				1	
1			·	'Indicators of hydric soil and wetland hydrology mu	ust
2	·		·		
50% = 0 $20% = 0$	0	= Total Co	over	Hydrophytic	
% Bare Ground in Herb Stratum10 % Cover	of Biotic C	rust		Present? Yes No X	
Remarks:				1	

#### Sampling Point: 02

Profile Desc	ription: (Describe	to the depth	needed to docur	nent the i	indicator	or confir	m the absence of indicators.)
Depth (inchos)	Matrix Color (moist)	0/	Redo	x Feature:	S Typo <sup>1</sup>		- Toyturo Pomarka
<u>(inclies)</u> 0-2	10YR2/2	<u> </u>		70	<u> </u>		Sandy Loam
2-11	10YR4/2	95	10YR6/8	5	<u> </u>	м	Sandy Loam
11_10	10785/3	<u> </u>	10VP3/2	- <del></del> 5	<u> </u>	M	Silt Loam
11-19	101K3/3		10183/2		<u> </u>		
	101R 3/2			·			
19-28	10YR 5/4	95	10YR 6/8	5	C	M	Silt Loam
28-35	10YR6/3	50	10YR 5/4	10	<u> </u>	М	Silg Loam
17 0.0		- <u> </u>		·			
Hydric Soil	Incentration, D=Dep	bletion, RM=R	Reduced Matrix, CS	S=Covered	d or Coate	d Sand G	Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.
			Sandy Pod		eu.)		1 cm Muck (AQ) (I PP C)
Histosof Histic Fr	(AT) bipedon (A2)		Stripped Ma	atrix (S6)			2 cm Muck (A9) (LRR C)
Black Hi	stic (A3)		Loamy Muc	ky Minera	ll (F1)		Reduced Vertic (F18)
Hydroge	n Sulfide (A4)		Loamy Gley	/ed Matrix	(F2)		Red Parent Material (TF2)
Stratified	Layers (A5) (LRR (	C)	X Depleted M	atrix (F3)			Other (Explain in Remarks)
1 cm Mu	ick (A9) (LRR D)		Redox Dark	Surface (	(F6)		
Depleted	Below Dark Surfac	e (A11)	Depleted Da	ark Surfac	ce (F7)		31 It to
TRICK Da	Irk Sufface (A12)		Redox Depr	essions (I	F8)		wotland bydrology must be present
Sandy M	leved Matrix (S4)			5 (1 9)			unless disturbed or problematic
Restrictive I	Laver (if present):						
Type:							
Depth (inc	ches):		_				Hydric Soil Present? Yes X No
Remarks:							,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
HYDROLO	GY						
Wetland Hyd	drology Indicators:						
Primary Indic	ators (minimum of c	one required;	check all that apply	y)			Secondary Indicators (2 or more required)
Surface	Water (A1)		Salt Crust	(B11)			Water Marks (B1) ( <b>Riverine</b> )
High Wa	ter Table (A2)		Biotic Crus	st (B12)			Sediment Deposits (B2) ( <b>Riverine</b> )
Saturatio	on (A3)		Aquatic Inv	vertebrate	es (B13)		Drift Deposits (B3) ( <b>Riverine</b> )
Water M	arks (B1) (Nonriver	ine)	Hydrogen	Sulfide Oo	dor (C1)	· · _	Drainage Patterns (B10)
Sedimen	it Deposits (B2) (No	nriverine)	Oxidized H	{hizosphe	res along	Living Ro	bots (C3) Dry-Season Water Table (C2)
Drift Dep	osits (B3) (Nonrive	rine)	Presence	of Reduce	ed Iron (C4	) ! 0 - ! = (0	Crayfish Burrows (C8)
Sunace	Soll Cracks (Bo)		Recent iro	n Reducii		1 50lis (U	(Us) Saturation Visible on Aerial Imagery (Us)
Inundatio	tained Leaves (R0)	magery (B7)	Thin Muck	Surrace (	(C7)		Shallow Aquitard (D3)
					lliaiks)	- T	
Surface Wate	r Drocont? V		Donth (in	choo).			
Sullater Table		$es$ $\square$ $N_{rad}$		-hee).		-	
Water Table	Present? T		) Ceptri (ini	cnes):		-	
(includes cap	resent? Y villary fringe) corded Data (stream	n gauge, mon	itoring well, aerial	ches): photos, pr	evious ins	pections)	), if available:

Remarks:

35" Excavated pit.

![](_page_22_Picture_0.jpeg)

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.

![](_page_22_Picture_2.jpeg)

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

Project/Site: Stagecoach		City/County:	Weber County, C	Ogden, UT	Sampling Date: 8/3/	21
Applicant/Owner: Lync Development			St	ate: UT	Sampling Point: 03	
Investigator(s): Kagel Environmental L	LC	Section, Tow	nship, Range: <u>\$2</u> 1	T6N R2W		
Landform (hillslope, terrace, etc.): Lake T	Ferrace	Local relief (	concave, convex, n	ione): Flat	Slope (	%): <b>0-1</b>
Subregion (LRR): LRR D (Interior dese	rts) Lat: <u>4</u>	1.236949	Long: _	112.072913	Datum:	NGS84
Soil Map Unit Name: WaA: Warm Spring	s fine sandy loam, 0 to 1	percent slopes	(481674)	NWI classifi	cation: N/A	
Are climatic / hydrologic conditions on the	site typical for this time of	year? Yes	No <u>X</u> (If	no, explain in F	Remarks.)	
Are Vegetation, Soil, or Hy	drology significant	tly disturbed?	Are "Normal C	Circumstances"	present? Yes X	No
Are Vegetation, Soil, or Hy	drology naturally	problematic?	(If needed, ex	plain any answe	ers in Remarks.)	
SUMMARY OF FINDINGS – Atta	ach site map showir	ng sampling	point location	is, transects	s, important featu	res, etc.
Hydrophytic Vegetation Present?	Yes No _ X	ls the	Sampled Area			
Hydric Soil Present?	Yes No X	- withir	a Wetland?	Yes 🗌	No X	
Wetland Hydrology Present?	Yes <u>No X</u>					
Remarks:						
Drier than normal.						

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 radius )	% Cover	Species?	Status	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			·	Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: 15' radius )		= Total Co	over	That Are OBL, FACW, or FAC: <u>33%</u> (A/B)
1				Prevalence Index worksheet:
2			·	Total % Cover of Multiply by
3				$\begin{array}{c} \hline \hline \\ $
а			·	EACW species $x^2 = 0$
+			·	FAC species $25 \times 3 = 75$
50% = 0 20% = 0	0	- Total Co		$\frac{1}{16} \times 4 = \frac{64}{16}$
Herb Stratum (Plot size: <u>5' radius</u> )		10tai Ct		$100 \text{ species} \qquad 10 \qquad x 5 = 50$
1. Distichlis spicata	25	×	FAC	$\begin{array}{c c} \hline column Totals \\ \hline 51 \\ \hline (\Delta) \\ \hline 189 \\ \hline (B) \\ \hline \end{array}$
2. Elymus lanceolatus	10	×	UPL	
3. Poa bulbosa	10	×	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				Problematic Hydrophytic Vegetation <sup>1</sup> (Evplain)
50% = 25.5 $20% = 10.2$	51	= Total Co	over	
Woody Vine Stratum (Plot size: 13 Taulus )				<sup>1</sup> Indicators of hydric soil and wotland hydrology must
1			·	be present, unless disturbed or problematic.
2			·	
3070 - 0 2070 - 0		_ = Total Co	over	Hydrophytic Vegetation
% Bare Ground in Herb Stratum 49 % Cove	er of Biotic C	rust		Present? Yes <u>No X</u>
Remarks:				1

# Sampling Point: 03

Inches       Color (moist)       %       Color (moist)       %       Type <sup>1</sup> Loc <sup>2</sup> Texture       Remarks         0-2       10YR2/2       100       NA       Silt Loam       Silt Loam       Image: Silt Loam       Silt Loam         2-11       7.5YR2.5/2       100       NA       Silt Loam       Silt Loam       Image: Silt Loam       Silt Loam         11-30       7.5YR4/3       100       NA       Silt Loam       Silt Loam       Image: Silt Loam       <		Matrix		Redox Fe	atures	0		
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       7.5YR4/3       100       NA       Silt Loam	nches)	Color (moist)	%	Color (moist)	<u>% Type<sup>1</sup></u>	Loc <sup>2</sup>	Texture	Remarks
2-11       7.5YR2.5/2       100       NA       Silt Loam         11-30       7.5YR4/3       100       NA       Silt Loam	0-2	10YR2/2	100	NA			Silt Loam	
11-30       7.5YR4/3       100       NA       Silt Loam	2-11	7.5YR2.5/2	100	NA			Silt Loam	
Type:       C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. <sup>2</sup> Location:       PL=Pore Lining, M=Matrix.         ydric Soil Indicators:       (Applicable to all LRRs, unless otherwise noted.)       Indicators for Problematic Hydric Soils <sup>3</sup> :	11-30	7.5YR4/3	100	NA			Silt Loam	
yp:       O'Contentration, D'Depiction, Nutrictedecer matrix, Co-Content of content of notated of and oftains.       Indicators: (Applicable to all LRRs, unless otherwise noted.)								PI =Pore Lining M=Matrix
	ydric Soil	Indicators: (Applic	able to all	LRRs, unless otherwis	e noted.)		Indicators for Pi	roblematic Hydric Soils <sup>3</sup> :
Sandy Gleyed Matrix (S4) unless disturbed or problematic.  estrictive Layer (if present): Type: Depth (inches): Hydric Soil Present? Yes No emarks:	<ul> <li>Histosol</li> <li>Histic Ep</li> <li>Black Hi</li> <li>Hydroge</li> <li>Stratified</li> <li>1 cm Mu</li> <li>Depleted</li> <li>Thick Data</li> </ul>	(A1) bipedon (A2) istic (A3) en Sulfide (A4) d Layers (A5) ( <b>LRR 0</b> ) d Below Dark Surface ark Surface (A12) Mucky Mineral (S1)	C) e (A11)	Sandy Redox (S Stripped Matrix Loamy Mucky M Loamy Gleyed I Depleted Matrix Redox Dark Su Depleted Dark S Redox Depress Vernal Pools (F	85) (S6) Matria (F1) Matrix (F2) (F3) face (F6) Surface (F7) ions (F8) 9)		<ul> <li>1 cm Muck (A</li> <li>2 cm Muck (A</li> <li>Reduced Ve</li> <li>Red Parent I</li> <li>Other (Expla</li> </ul> <sup>3</sup> Indicators of hydrol	A9) ( <b>LRR C</b> ) A10) ( <b>LRR B</b> ) rtic (F18) Material (TF2) in in Remarks) drophytic vegetation and logy must be present,
Type:	Sandy M	Bleyed Matrix (S4)					unless disturbe	ed or problematic.
Depth (inches):      Hydric Soil Present? Yes No       emarks:	Sandy M Sandy G	aver (if present)						
emarks:	_ Sandy M _ Sandy G estrictive I Type:	Layer (if present):						
	_ Sandy M _ Sandy G estrictive I Type: Depth (ind	Layer (If present):					Hydric Soil Prese	ent? Yes <u>No</u>
	Sandy M Sandy G Restrictive I Type: Depth (ind Remarks:	Layer (if present):					Hydric Soil Prese	ent? Yes No _>

Primary Indicators (minimum of one required; ch	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 Livin	g Roots (C3) Dry-Season Water Table (C2)
Drift Deposits (B3) (Nonriverine)	Crayfish Burrows (C8)	
Surface Soil Cracks (B6)	Recent Iron Reduction in Tilled So	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	Depth (inches):	
Saturation Present? Yes No _ (includes capillary fringe)	X Depth (inches):	Wetland Hydrology Present? Yes No
Describe Recorded Data (stream gauge, monito	ring well, aerial photos, previous inspect	ions), if available:
30" Excavated pit.		
Remarks:		

Wetland Hydrology Indicators:

![](_page_25_Picture_0.jpeg)

# **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

Project/Site: Stagecoach	City/County:	Weber County, Ogden, UT	Sampling Date: 8/3/21
Applicant/Owner: Lync Development		State: UT	Sampling Point: 04
Investigator(s): Kagel Environmental LLC	Section, Tow	nship, Range: S21 T6N R2W	
Landform (hillslope, terrace, etc.): Lake Terrace	e Local relief (	concave, convex, none): Flat	Slope (%): <u>0-1</u>
Subregion (LRR): LRR D (Interior deserts)	Lat: 41.237922	Long: -112.071557	Datum: WGS84
Soil Map Unit Name: Le: Leland silt loam, 0 to 1	I percent slopes (481612)	NWI clas	sification: N/A
Are climatic / hydrologic conditions on the site typ	pical for this time of year? Yes	No <u>X</u> (If no, explain i	n Remarks.)
Are Vegetation, Soil, or Hydrolog	y significantly disturbed?	Are "Normal Circumstance	s" present? Yes X No
Are Vegetation, Soil, or Hydrolog	y naturally problematic?	(If needed, explain any ans	swers in Remarks.)
SUMMARY OF FINDINGS – Attach s	ite map showing sampling	point locations, transe	cts, important features, etc.
Hydrophytic Vegetation Present?       Yes _         Hydric Soil Present?       Yes _         Wetland Hydrology Present?       Yes _	No         X         Is the           No         X         within	Sampled Area n a Wetland? Yes _	<u>No X</u>
Remarks:			

Drier than normal.

	Absolute	Dominan	t Indicator	Dominance Test worksheet:	
<u>Tree Stratum</u> (Plot size: <u>30 radius</u> ) 1	<u>% Cover</u>	Species?	Status	Number of Dominant Species That Are OBL, FACW, or FAC:1	(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	over	That Are OBL, FACW, or FAC: 50%	(A/B)
Saping/Shrub Stratum (Plot size: 10 radius )				Prevalence Index worksheet:	
1				Total % Cover of Multiply by:	
2			·	$\frac{1}{10000000000000000000000000000000000$	
3				EACW species $x_2 = 0$	_
4			·	$FAC species \qquad 40 \qquad x = 120$	_
50% = 0 20% = 0	0	- Total Co		FACU species $51 \times 4 = 204$	_
Herb Stratum (Plot size: <u>5' radius</u> )		10tai Ct	Jvei	$\frac{1}{1} \text{ UPL species} \qquad x = 0$	_
1 Distichlis spicata	40	X	FAC	Column Totals: 91 (A) 324	– (B)
2. Bassia hyssopifolia	30	X	FACU		_ (0)
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 <sup>1</sup>	
7				Morphological Adaptations <sup>1</sup> (Provide suppor data in Remarks or on a separate sheet)	ting
$\frac{6.}{50\%} = 45.5 \qquad 20\% = 18.2$	91	- Total C		Problematic Hydrophytic Vegetation <sup>1</sup> (Explai	n)
Woody Vine Stratum (Plot size: 15' radius	•••		Jvei		
12				<sup>1</sup> Indicators of hydric soil and wetland hydrology n be present, unless disturbed or problematic.	nust
50% = 0 20% = 0	0	= Total Co	over	Hydrophytic	
% Bare Ground in Herb Stratum 9 % Cove	er of Biotic C	rust		Vegetation Present? Yes <u>No X</u>	
Remarks:					

Profile Desc	ription: (Describe t	o the dept	h needed to docur	nent the i	ndicator	or confirn	n the absence	of indicator	s.)	
Depth	Matrix		Redo	x Feature	s					
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks	
0-32	7.5YR4/3	100	NA				Silt Clay			
<sup>1</sup> Type: C=Cd Hydric Soil Histic Ep Black Hi Histic Ep Stratified Stratified Chick Da Sandy M Sandy G Restrictive I Type: Depth (ind Remarks:	Dipedon (A2) stic (A3) stic (A3) d Layers (A5) (LRR C) d Layers (A5) (LRR C) d Layers (A5) (LRR C) d Layers (A5) (LRR C) d Below Dark Surface ark Surface (A12) fucky Mineral (S1) deved Matrix (S4) Layer (if present):		Reduced Matrix, CS RRs, unless otherSandy RedoStripped MaLoamy MucLoamy GleyDepleted MRedox DarkDepleted DaRedox Depleted DaRedox Depleted DaNedox Depleted DaNNB	S=Covered rwise noto bx (S5) atrix (S6) ky Minera ved Matrix atrix (F3) c Surface ( ark Surfac ressions (l s (F9)	d or Coate ed.)		rains. <sup>2</sup> Loc Indicators 1 cm M 2 cm M Reduce Red Pa Other ( <sup>3</sup> Indicators di wetland H unless di	ation: PL=P for Problem luck (A9) (LI luck (A10) (I arent Materia Explain in R of hydrophyt hydrology mu isturbed or p Present?	Pore Lining, Manatic Hydric S RR C) RR B) al (TF2) emarks) ic vegetation ust be present roblematic.	=Matrix. Soils <sup>3</sup> :
Type: Depth (ind	ches):						Hydric Soil	Present?	Yes	No X
Depth (ind	ches):						Hydric Soil	Present?	Yes	No <u>X</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:		

![](_page_28_Picture_0.jpeg)

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

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, Township, Range: S21 T6N R2W
Landform (hillslope, terrace, etc.): Lake Terrace	Local relief (concave, convex, none): Flat Slope (%): 0-1
Subregion (LRR): LRR D (Interior deserts)	237405 Long: -112.069719 Datum: WGS84
Soil Map Unit Name: Le: Leland silt Ioam, 0 to 1 percent slopes (481	612) NWI classification: N/A
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? 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 pro	oblematic? (If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	g sampling point locations, transects, important features, etc.
Hydrophytic Vegetation Present?       Yes       No       X         Hydric Soil Present?       Yes       No       X         Wetland Hydrology Present?       Yes       No       X         Remarks:       Ketter       Ketter       Ketter       Ketter	Is the Sampled Area within a Wetland? Yes No

Drier than normal.

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 radius )	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: (A)
2			. <u> </u>	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: (A/B)
Sapling/Shrub Stratum (Plot size: 13 radius )	5	$\mathbf{\vee}$	EACU	Development had a second dealer of the
1. Sarcobalus vermiculatus			FACU	Prevalence Index worksheet:
2				Total % Cover of: Multiply by:
3				OBL species x 1 =
4				FACW species x 2 =
5				FAC species 30 x 3 = 90
50% = 2.5 $20% = 1$	5	= Total Co	ver	FACU species 65 x 4 = 260
Herb Stratum (Plot size: <u>5' radius</u> )				UPL species x 5 =0
1. Poa bulbosa	60	<u> </u>	FACU	Column Totals: (A) (B)
2. Distichlis spicata	30	<u> </u>	FAC	
3				Prevalence Index = B/A = <u>3.68</u>
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				Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum (Plot size: 15' radius	90	_ = Total Co	ver	
1				<sup>1</sup> Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
50% = 0 20% = 0	0	- Total Ca		Hydrophytic
			ver	Vegetation
% Bare Ground in Herb Stratum10 % Cove	r of Biotic C	rust		Present? Yes <u>No X</u>
Remarks:				1

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	rks	
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			
<sup>1</sup> Type: C=C	Concentration, D=Dep	letion, RM=	Reduced Matrix, C	S=Covere	d or Coate	d Sand G	rains. <sup>2</sup> Location:	PL=Pore Linir	ng, M=Matrix.	<u> </u>
Histoso	·····································		Sandy Red	ov (S5)	,		1 cm Muck (A	19) (I BB C)		
Histic E	ninedon ( $\Delta 2$ )		Stripped M	atrix (S6)			2 cm Muck (/	(10) (I <b>RR B</b> )		
Flack H				atrix (00) sky Minora			2 cm widek (/	tic (E18)		
	$\operatorname{nsub}(A3)$				(( ( ) ( ( )			Actorial (TE2)		
		•	Loanly Gle		(FZ)					
Stratifie		•)		latrix (F3)	(50)		Other (Explai	n in Remarks)		
1 cm M	uck (A9) ( <b>LRR D</b> )		Redox Dar	k Surface	(+6)					
Deplete	ed Below Dark Surface	e (A11)	Depleted D	ark Surfac	ce (F7)		<u>^</u>			
Thick D	ark Surface (A12)		Redox Dep	ressions (	F8)		°Indicators of hyd	rophytic vegeta	ation and	
Sandy M	Mucky Mineral (S1)		Vernal Poo	ls (F9)			wetland hydrol	ogy must be pr	esent,	
Sandy (	Gleyed Matrix (S4)						unless disturbe	d or problemat	tic.	
Restrictive	Layer (if present):									
Туре:										
Depth (in	nches):						Hydric Soil Prese	nt? Yes	No	<u>&lt;                                    </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	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 D 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 inspec	tions), if available:
36" Excavated pit.		
Remarks:		

![](_page_31_Picture_0.jpeg)

# **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

Project/Site: Stagecoach	City/County:	Weber County, Ogden, UT	Sampling Date: 8/3/21
Applicant/Owner: Lync Development		State: UT	Sampling Point: 06
Investigator(s): Kagel Environmental LLC	Section, Tow	vnship, Range: S21 T6N R2W	
Landform (hillslope, terrace, etc.): Lake Terrace	Local relief (	(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 _	× within	n a Wetland? Yes	No X
Wetland Hydrology Present? Yes No _	<u>×</u>		
Remarks:			
Drier than normal.			

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30' radius )	% Cover	Species?	Status	Number of Dominant Species
1				That Are OBL, FACW, or FAC: 2 (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: <u>67%</u> (A/B)
Sapling/Shrub Stratum (Plot size: 10 radide )				Brovalanco Index workshoot:
1				Total % Cover of: Multiply by:
2				
3				$\begin{array}{c} \text{OBL species} \\ \text{SAOW species} \\ \end{array} \\ \begin{array}{c} 20 \\ \text{SAOW species} \\ \end{array} \\ \begin{array}{c} 0 \\ \text{SAOW species} \\ \end{array} \\ \end{array} \\ \begin{array}{c} 0 \\ \text{SAOW species} \\ \end{array} \\ \end{array} \\ \begin{array}{c} 0 \\ \text{SAOW species} \\ \end{array} \\ \end{array} \\ \begin{array}{c} 0 \\ \end{array} \\ \end{array} \\ \end{array} \\ \begin{array}{c} 0 \\ \ \end{array} \\ \end{array} \\ \end{array} \\ \begin{array}{c} 0 \\ \end{array} \\ \end{array} \\ \end{array} \\ \end{array} \\ \end{array} $ \\ \begin{array}{c} 0 \\ \end{array} \\ \end{array} \\ \end{array} \\ \end{array} \\ \end{array}  \\ \begin{array}{c} 0 \\ \end{array} \\ \end{array} \\ \end{array} \\
4				FACW species $20$ $x^2 = 40$
5				FAC species $40$ x 3 = $120$
50% = 0 $20% = 0$	0	= Total Co	ver	FACU species <u>13</u> x 4 = <u>32</u>
A Atriplex micrantha	25	×	UPL	UPL species x 5 =
1. Juncus balticus	20	<u> </u>	FACW	Column Totals: <u>98</u> (A) <u>337</u> (B)
2. Polygonum ramosissimum	20	<u> </u>	FAC	Prevalence Index = B/A = 3.44
A Hordeum murinum	10		FACU	Hydrophytic Vegetation Indicators:
5 Rumex crispus	6		FAC	× 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% = 47 20% = 18.8	94	= Total Co	ver	Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
Woody Vine Stratum (Plot size: 15' radius )			VCI	
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 2% % Cover	r of Biotic C	rust		Vegetation Present? Yes X No
Remarks:				1
No indicator for Atriplex micrantha = UPL				
Additional Herb: Lactuca serriola 3% FACU, Bassia sco	oparia 1% I	FAC		
50% = 49,20% = 19.6				
Technically hydrophytic by the Dominance Test, but the	e Prevalen	ce Index sl	nows this i	is <u>NOT</u> actually a wetland plant community.

## Sampling Point: 06

Depth	Matrix		Redo	x Features	<b>.</b>		
(inches)	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
		·		·			
		·		·			·
Type: C=Co	oncentration, D=Dep	letion, RM=	Reduced Matrix, CS	S=Covered	l or Coate	d Sand G	Brains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.
Histosol	(A1)		Sandy Red	(S5)	a.)		1 cm Muck (A9) (LRR C)
_ Histic Ep	pipedon (A2)		Stripped Ma	atrix (S6)			2 cm Muck (A10) (LRR B)
Black His	stic (A3)		Loamy Muc	ky Mineral	(F1)		Reduced Vertic (F18)
_ Hydroge	n Sulfide (A4)		Loamy Gley	ed Matrix	(F2)		Red Parent Material (TF2)
Stratified	I Layers (A5) ( <b>LRR (</b>	<b>C</b> )	Depleted M	atrix (F3)			Other (Explain in Remarks)
1 cm Mu	ck (A9) ( <b>LRR D</b> )		Redox Dark	Surface (	F6)		
_ Depleted	Below Dark Surface	e (A11)	Depleted D	ark Surfac	e (F7)		2
_ Thick Da	rk Surface (A12)		Redox Dep	ressions (F	-8)		Indicators of hydrophytic vegetation and
_ Sandy M	lucky Mineral (S1)		Vernal Pool	s (F9)			wetland hydrology must be present,
_ Sandy G	leyed Matrix (S4)						unless disturbed or problematic.
estrictive L	ayer (if present):						
i ype:							
Depth (inc	ches):						Hydric Soil Present? Yes No
Remarks:							

Wetland Hydrology Indicators:				
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) ( <b>Riverine</b> )		
Water Marks (B1) (Nonriverine)	Hydrogen Sulfide Odor (C1)	Drainage Patterns (B10)		
Sediment Deposits (B2) (Nonriverine)	Oxidized Rhizospheres along Livit	ng Roots (C3) Dry-Season Water Table (C2)		
Drift Deposits (B3) (Nonriverine)	Drift Deposits (B3) (Nonriverine) Presence of Reduced Iron (C4)			
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 No _	Depth (inches):			
Saturation Present? Yes <u>No</u> No (includes capillary fringe)	Example 2 Depth (inches):	Wetland Hydrology Present? Yes NoX		
Describe Recorded Data (stream gauge, monito	oring well, aerial photos, previous inspec	tions), if available:		
34" Excavated pit.				
Remarks:				

![](_page_34_Picture_0.jpeg)

# **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

Project/Site: Stagecoach	City/County:	Weber County, Ogden, UT	Sampling Date: 8/3/21
Applicant/Owner: Lync Development		State: UT S	Sampling Point: 07
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 (%): 0-1
Subregion (LRR): LRR D (Interior deserts)	Lat: 41.23534	Long: -112.070525	Datum: WGS84
Soil Map Unit Name: Ac: Airport silt loam, 0 to 2 percent slo	pes (481538)	NWI classificat	ion: PEM1C
Are climatic / hydrologic conditions on the site typical for this ti	me of year? Yes	NoX (If no, explain in Rer	narks.)
Are Vegetation, Soil, or Hydrology sign	nificantly disturbed?	Are "Normal Circumstances" pre	esent? Yes X No
Are Vegetation, Soil, or Hydrology nat	urally problematic?	(If needed, explain any answers	in Remarks.)
SUMMARY OF FINDINGS – Attach site map sh	nowing sampling	point locations, transects, i	important features, etc.
Hydrophytic Vegetation Present? Yes No	× la tha	Sampled Area	
Hydric Soil Present? Yes <u>No</u>	X within	a Wetland? Yes	No X
Wetland Hydrology Present? Yes No	<u>×</u>		
Remarks:			
Drier than normal.			

	Absolute	Dominant	Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size: 30 radius )	% Cover	Species?	Status	Number of Dominant Species	
1				That Are OBL, FACW, or FAC: 2 (A	A)
2				Total Number of Dominant	
3				Species Across All Strata:4 (I	B)
4				Percent of Dominant Species	
50% = 0 $20% = 0Sapling/Shruh Stratum (Plot size: 15' radius )$	0	= Total Co	over	That Are OBL, FACW, or FAC: 50% (A	A/B)
1				Prevalence Index worksheet	
2				Total % Cover of Multiply by	
2				$\frac{1}{\text{OBL species}} = \frac{1}{\text{VIII}}$	
3				$EACW \text{ species} \qquad x^2 = 0$	
4				FAC species 17   x 3 = 51	
5.	0	- Total Ca		$FACU \text{ species } 21 \qquad x 4 = 84$	
Herb Stratum (Plot size: 5' radius )			JVEI	$\frac{112}{112} \text{ species} \qquad \frac{3}{15} \text{ species} \\ \frac{3}{15}  spec$	
1. Helianthus annuus	10	×	FACU	Column Totals: 41 (A) 150	(B)
2. Lactuca serriola	10	×	FACU		(D)
3. Polygonum aviculare	5	×	FAC	Prevalence Index = B/A =3.66	
4. Rumex crispus	5	×	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 supportin	g
8. Bassia hyssopifolia	1		FACU	data in Remarks or on a separate sheet)	
50% = <sub>20</sub> 20% = <sub>8</sub>	40	= Total Co	over	Problematic Hydrophytic Vegetation' (Explain)	
Woody Vine Stratum (Plot size: 15' radius )		-			
1				<sup>1</sup> Indicators of hydric soil and wetland hydrology mu	st
2					
50% = 0 $20% = 0$	0	= Total Co	over	Hydrophytic	
% Bare Ground in Herb Stratum % Cove	r of Biotic C	rust		Present? Yes No X	
Remarks:					
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		Redo	x Features	3		
(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
		· ·					
		· ·					
		· ·					
$\frac{1}{1}$		lotion PM-	Poducod Matrix C		d or Coato	d Sand Cr	raine <sup>2</sup> Location: PL-Pore Lining M-Matrix
Hydric Soil	ndicators: (Application)	able to all I	-RRs. unless other	rwise note	ad.)	u Sanu Gi	Indicators for Problematic Hydric Soils <sup>3</sup> :
Histosol	(Δ1)		Sandy Red	ov (S5)	,		1  cm  Muck (A9) (I  BR C)
Histic Er	bipedon (A2)		Stripped Ma	$\frac{1}{3}$			2 cm Muck (A10) ( <b>I BB B</b> )
Black Hi	stic (A3)		Loamv Muc	kv Mineral	l (F1)		Reduced Vertic (F18)
Hydroge	n Sulfide (A4)		Loamy Glev	ed Matrix	(F2)		Red Parent Material (TF2)
Stratified	Layers (A5) (LRR C	<b>C</b> )	Depleted M	atrix (F3)	( )		Other (Explain in Remarks)
1 cm Mu	ick (A9) ( <b>LRR D</b> )	,	Redox Dark	surface (	F6)		
Depleted	Below Dark Surface	e (A11)	Depleted D	ark Surfac	é (F7)		
Thick Da	ark Surface (A12)	. ,	Redox Dep	ressions (F	-8)		<sup>3</sup> Indicators of hydrophytic vegetation and
Sandy M	lucky Mineral (S1)		Vernal Pool	s (F9)	,		wetland hydrology must be present,
Sandy G	leyed Matrix (S4)						unless disturbed or problematic.
Restrictive I	_ayer (if present):						
Туре:							
Depth (ind	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	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 D No	Depth (inches):	
Water Table Present? Yes 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	y well, aerial photos, previous inspect	ions), if available:
44" Excavated pit.		
Remarks:		

![](_page_37_Picture_0.jpeg)

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	UT Sampling Date: 8/3/21				
Applicant/Owner: Lync Development		State: UT	Sampling Point: 08				
Investigator(s): Kagel Environmental LLC	Section, To	Section, Township, Range: S21 T6N R2W					
Landform (hillslope, terrace, etc.): Lake Terrace	Local relief	Local relief (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?	(If needed, explain any answe	ers 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		ie Sampleu Area	No X				
Wetland Hydrology Present? Yes	No X						
Remarks:							
Drier than normal.							

	Absolute	Dominant	Indicator	Dominance Test worksheet:		
Tree Stratum (Plot size: 30 radius )	<u>% Cover</u>	<u>Species?</u>	Status	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				Percent of Dominant Species	4000/	
Sapling/Shrub Stratum (Plot size: 15' radius )		= 1 otal 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 =	0	
5.				FAC species 83 x 3 =	249	
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 $\leq 3.0^1$		
7. Ambrosia artemisiifolia	2		FACU	Morphological Adaptations <sup>1</sup> (Pro	vide suppor	rting
8. Hordeum murinum	2		FACU	Data in Remarks of on a sepa	arate sneet)	i
50% = 53.5 $20% = 21.4$	107	= Total Co	ver		ition (Expla	in)
Woody Vine Stratum (Plot size: 15 radius )					hu dan baru d	
1				be present. unless disturbed or prob	lematic.	nust
2. $20\% = 0$ 20% = 0						
3070 - 0 2070 - 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	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.		

Profile Desc	ription: (Describe t	o the dept	h needed to docur	nent the i	ndicator	or confirn	n the absence o	f indicators	.)	
Depth	Matrix		Redo	x Features	S .					
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture		Remarks	
0-36	7.5YR3/1	100	NA				Silt Clay			
U-30	2.5TR3/1		Reduced Matrix, CS .RRs, unless other Sandy Redo Stripped Ma	G=Covered wise note ox (S5)				tion: PL=Po or Problema uck (A9) (LRI	re Lining, M= tic Hydric S R C) R B)	Matrix.
Black Hi	stic (A3)		Loamy Muc	ky Minera	l (F1)		Reduced	d Vertic (F18	<i>-</i> ,	
Hydroge	n Sulfide (A4)		Loamy Gley	ed Matrix	(F2)		Red Par	ent Material	, (TF2)	
Stratified	Layers (A5) (LRR C	)	Depleted M	atrix (F3)			Other (E	xplain in Rei	marks)	
1 cm Mu Depleted Thick Da Sandy M Sandy G	ck (A9) ( <b>LRR D</b> ) I Below Dark Surface Irk Surface (A12) Iucky Mineral (S1) Ileyed Matrix (S4)	(A11)	Redox Dark Depleted Da Redox Depr Vernal Pool	Surface ( ark Surfac ressions (I s (F9)	F6) e (F7) F8)		<sup>3</sup> Indicators of wetland hy unless dis	f hydrophytic ydrology mus turbed or pro	vegetation a st be present oblematic.	ind
Restrictive L	.ayer (if present):									
Type: Depth (inc	ches):						Hydric Soil P	resent?	(es	No <u>×</u>
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 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 <u>X</u>
Describe Recorded Data (stream gauge, monitoring	well, aerial photos, previous inspec	tions), if available:
36" Excavated pit.		
Remarks:		

![](_page_40_Picture_0.jpeg)

# **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		State: UT	_ Sampling Point: 09
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 (%): 0-1
Subregion (LRR): LRR D (Interior deserts)	41.234865	Long: -112.070935	Datum: WGS84
Soil Map Unit Name: Ac: Airport silt loam, 0 to 2 percent slopes (	481538)	NWI classifi	cation: PEM1C
Are climatic / hydrologic conditions on the site typical for this time of	f year? Yes	No <u>X</u> (If no, explain in I	Remarks.)
Are Vegetation, Soil, or Hydrology significar	ntly disturbed?	Are "Normal Circumstances"	present? Yes X No
Are Vegetation, Soil, or Hydrology naturally	problematic?	(If needed, explain any answ	ers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showi	ng sampling	point locations, transect	s, important features, etc.
Hydrophytic Vegetation Present? Yes <u>X</u> No	ls the	Sampled Area	
Hydric Soil Present? Yes No X	— within	a Wetland? Yes	No X
Wetland Hydrology Present? Yes No _X			
Remarks:			
Drier than normal.			

	Absolute	Dominant Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 radius )	<u>% Cover</u>	Species? Status	Number of Dominant Species
1			That Are OBL, FACW, or FAC: (A)
2			Total Number of Dominant
3			Species Across All Strata: <u>2</u> (B)
4			Percent of Dominant Species
Sapling/Shrub Stratum (Plot size: 15' radius )	0	_ = Total Cover	That Are OBL, FACW, or FAC: 100% (A/B)
1			Prevalence Index worksheet:
2			Total % Cover of Multiply by
3			$\begin{array}{c} \hline \hline \\ $
а			FACW species x 2 = 0
4			$FAC species \qquad x = 0$
50% = 0 20% = 0	0		FACU species x 4 = 0
Herb Stratum (Plot size: 5' radius )			$IPI species \qquad x = 0$
1. Suaeda calceoliformis	60	× FACW	$\begin{array}{c} \text{Colump Totals:}  0  (A)  0  (B) \end{array}$
2. Distichlis spicata	30	X FAC	
3			Prevalence Index = B/A =
4			Hydrophytic Vegetation Indicators:
5.			X Dominance Test is >50%
6.			Prevalence Index is ≤3.0 <sup>1</sup>
7			Morphological Adaptations <sup>1</sup> (Provide supporting
8			Problematic Hydrophytic Vegetation <sup>1</sup> (Explain)
50% = 45 $20% = 18$	90	= Total Cover	
Woody Vine Stratum (Plot size: 13 radius )			<sup>1</sup> Indicators of hydric soil and wetland hydrology must
1			be present, unless disturbed or problematic.
2. $20\% = 0$			
0070 - 0 2070 - 0		= Total Cover	Hydrophytic Vegetation
% Bare Ground in Herb Stratum 10 % Cove	er of Biotic C	rust	Present? Yes X No
Remarks:			1

Profile Des	cription: (Describe	to the dep	th needed to docu	ment the i	ndicator	or confirm	m the absence of indicators.)
Depth (inches)	Color (moist)	%	Color (moist)	<u>ox Feature</u> %	s Tvpe <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	10VP5/3	100					Silt Clay Loam
20-30	10113/3	100					
	· · · · · · · · · · · · · · · · · · ·						
1 <del></del>							
Type: C=C	oncentration, D=Dep	able to all	Reduced Matrix, C	S=Covered	d or Coate	d Sand G	Grains. <sup>-</sup> Location: PL=Pore Lining, M=Matrix.
		able to all	Candy Dad		eu.)		
HISTOSO	(A1)		Sandy Red	OX (55)			1 cm Muck (A9) (LRR C)
	pipedon (A2)		Stripped IVI	atrix (S6)			2 cm Muck (A10) (LRR B)
васк н	listic (A3)		Loamy Mu	cky Minera	1 (F1)		Reduced Venic (F18)
Hydrog	en Sulfide (A4)		Loamy Gle	yed Matrix	(F2)		Red Parent Material (TF2)
Stratifie	d Layers (A5) (LRR	C)	Depleted N	latrix (F3)			Other (Explain in Remarks)
1 cm M	uck (A9) ( <b>LRR D</b> )		Redox Dar	k Surface	(F6)		
Deplete	ed Below Dark Surfac	e (A11)	Depleted D	ark Surfac	æ (F7)		2
Thick D	ark Surface (A12)		Redox Dep	pressions (	F8)		Indicators of hydrophytic vegetation and
Sandy I	Mucky Mineral (S1)		Vernal Poo	ols (F9)			wetland hydrology must be present,
Sandy	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	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)	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:		

![](_page_43_Picture_0.jpeg)

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: 10
Investigator(s): Kagel Environmental LLC	Section, Tov	vnship, Range: <b>S21 T6N R2W</b>	
Landform (hillslope, terrace, etc.): Lake Terrace	Local relief	(concave, convex, none): Flat	Slope (%): 0-1
Subregion (LRR): LRR D (Interior deserts)	Lat: 41.234813	Long: 112.069098	Datum: WGS84
Soil Map Unit Name: Ac: Airport silt loam, 0 to 2 percent slo	pes (481538)	NWI classif	ication: N/A
Are climatic / hydrologic conditions on the site typical for this til	me of year? Yes	No <u>X</u> (If no, explain in I	Remarks.)
Are Vegetation, Soil, or Hydrology sign	ificantly disturbed?	Are "Normal Circumstances"	present? Yes X No
Are Vegetation, Soil, or Hydrology natu	urally problematic?	(If needed, explain any answ	ers in Remarks.)
SUMMARY OF FINDINGS – Attach site map sh	lowing 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 P	resent?	Yes	No X	Within a Welland.			
Remarks:							
Drier than normal.	Although vegetatio	n was <5% co	over, this is not a c	losed basin and thus in KF's o	oninion it is not	a plava, Plavas can	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.

20' rodius	Absolute	Dominant Indicator	Dominance Test worksheet:
Tree Stratum     (Plot size:)       1	<u>% Cover</u>	<u>Species?</u> Status	Number of Dominant Species That Are OBL, FACW, or FAC:0 (A)
23			Total Number of Dominant Species Across All Strata: (B)
4	0	= 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 = <b>0</b>
4			FACW species $x 2 = 0$
5			FAC species $x_3 = 0$
50% = 0 20% = 0	0		FACU species x 4 = 0
Herb Stratum (Plot size: 5' radius )			
1 Suaeda calceoliformis	3	FACW	$\begin{array}{c} \text{OFL species} \\ \text{Colump Totalo} \\ \text{O} \\ \text{(A)} \\ \text{(D)} $
2			
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% = 1.5 20% = 0.6	3	- Total Causar	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		Hydrophytic
			Vegetation
% Bare Ground in Herb Stratum97% % Cove	er of Biotic C	rust	Present? Yes <u>No X</u>
Remarks:			
Vegetation too sparse to actually qualify as a relevant	parameter.		

## Sampling Point: 10

Depth	Matrix		Redo	ox Feature	s			
(inches)	Color (moist)	%	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	_			Sandy Loam	
	10YR2/1	10					Sandy Loam	
25-35	2.5YR5/2	100	10YR5/8	<1	С	Μ	Sandy Loam	
		- <u> </u>			·			
<sup>1</sup> Type: C=Ce	oncentration, D=Dep	letion, RM=	Reduced Matrix, C	S=Covere	d or Coate	d Sand G	rains. <sup>2</sup> Location:	PL=Pore Lining, M=Matrix.
Hydric Soil	Indicators: (Applic	able to all	LRRs, unless othe	rwise not	ed.)		Indicators for Pro	oblematic Hydric Soils <sup>°</sup> :
Histosof Histic Ep Black Hi Hydroge Stratified	pipedon (A2) istic (A3) en Sulfide (A4) d Layers (A5) ( <b>LRR (</b>	C)	Stripped M. Loamy Muc Loamy Gle Depleted M Bedox Dari	atrix (S6) cky Minera yed Matrix latrix (F3) k Surface	ul (F1) (F2) (F6)		2 cm Muck (A 2 cm Muck (A Reduced Vert Red Parent M Other (Explain	n in Remarks)
Depleted Thick Da Sandy M Sandy G	d Below Dark Surfac ark Surface (A12) /lucky Mineral (S1) Gleyed Matrix (S4)	e (A11)	Depleted D Redox Dep Vernal Poo	ark Surfac pressions ( ls (F9)	(F7) F8)		<sup>3</sup> Indicators of hydr wetland hydrolc unless disturbed	ophytic vegetation and gy must be present, d or problematic.
Restrictive	Layer (if present):							
Type:	ches):						Hydric Soil Prese	nt? Vas No X
Remarks:	ciic <i>3)</i> .						riyune con rieser	
Soil Cracks,	Playa							
HYDROLO	GY							
Wetland Hy	drology Indicators:							
Primary India	cators (minimum of o	one required	l; check all that app	ly)			Secondary In	dicators (2 or more required)
Surface	Water (A1)		Salt Crust	: (B11)			Water M	arks (B1) ( <b>Riverine</b> )
High Wa	ater Table (A2)		Biotic Cru	st (B12)			Sedimer	nt Deposits (B2) ( <b>Riverine</b> )
Saturatio	on (A3)		Aquatic Invertebrates (B13)				Drift Dep	oosits (B3) ( <b>Riverine</b> )

Wetland Hydrology Indicators:		
Primary Indicators (minimum of one required; check	Secondary Indicators (2 or more required)	
Surface Water (A1)	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	Depth (inches):	
Water Table Present? Yes D No	Example 2 Depth (inches):	
Saturation Present? Yes <u>No</u> No <u>Saturation</u> Yes <u>No</u> <u>Saturation</u> No <u>No</u> <u>Saturation</u> No <u>No</u> <u>No</u> <u>Saturation</u> No	Depth (inches):	Wetland Hydrology Present? Yes No $\_$ X
Describe Recorded Data (stream gauge, monitorin	ng well, aerial photos, previous inspec	ions), if available:
35" Excavated pit.		
Remarks:		

![](_page_46_Picture_0.jpeg)

# **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:	Weber County, Ogo	len, UT	Sampling Date: 8/3/21
Applicant/Owner: Lync Development			State	UT	Sampling Point: 11
Investigator(s): Kagel Environmental	LLC	Section, Tov	wnship, Range: <b>S21 T</b>	6N R2W	
Landform (hillslope, terrace, etc.): Lake	Terrace	Local relief	(concave, convex, non	e): Flat	Slope (%): <u>0-1</u>
Subregion (LRR): LRR D (Interior des	erts) La	at: 41.236312	Long: <u>-11</u> :	2.069418	Datum: WGS84
Soil Map Unit Name: Ac: Airport silt loa	m, 0 to 2 percent slope	es (481538)		NWI classifica	ation: N/A
Are climatic / hydrologic conditions on the	e site typical for this tim	e of year? Yes	No <u>X</u> (If no	, explain in Re	emarks.)
Are Vegetation, Soil, or H	ydrology signif	icantly disturbed?	Are "Normal Circ	umstances" pr	resent? Yes X No
Are Vegetation, Soil, or H	ydrology natur	ally problematic?	(If needed, expla	in any answers	s in Remarks.)
SUMMARY OF FINDINGS - Att	tach site map sho	wing sampling	g point locations,	transects,	important features, etc.
Hydrophytic Vegetation Present? Hydric Soil Present?	Yes <u>No</u> Yes No	X Is the	e Sampled Area		
Wetland Hydrology Present?	Yes No	× withi	within a Wetland? Yes No		
Remarks:					

Drier than normal.

	Absolute	Dominan	t Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size: 30' radius )	% Cover	Species?	Status	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				Percent of Dominant Species	
50% = 0 $20% = 0$	0	= Total Co	over	That Are OBL, FACW, or FAC: 50%	(A/B)
Sapling/Shrub Stratum (Plot size: 15 radius )					
1			<u> </u>	Prevalence Index worksheet:	
2				Total % Cover of: Multiply by	<u> </u>
3				OBL species x 1 =	
4			- <u> </u>	FACW species $x 2 = 0$	
5				FAC species $56 \times 3 = 168$	<u>}</u>
50% = 0 $20% = 0$	0	= Total Co	over	FACU species $32 \times 4 = 128$	<u> </u>
Herb Stratum (Plot size: <u>5' radius</u> )	45	$\sim$	FAC	UPL species 15 x 5 = 75	
	40	<u> </u>		Column Totals: 103 (A) 371	(B)
2. Hordeum murinum		<u> </u>	FACU	3.60	
3. Atripiex micrantha	15			Prevalence index = B/A =	
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>+</sup>	
7. Symphyotrichum ascendens	1		FAC	Morphological Adaptations <sup>1</sup> (Provide sup data in Remarks or on a separate she	porting et)
8. $50\% = 515$ 20% = 20.6	103			Problematic Hydrophytic Vegetation <sup>1</sup> (Ex	plain)
Woody Vine Stratum (Plot size: 15' radius	105	= 1 otal Co	over		
1				<sup>1</sup> Indicators of hydric soil and wetland hydrolo	gy 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		Present? Yes No X	_
Remarks:				1	
No indicator for Atriplex micrantha = UPL					
No indicator for Atriplex micrantha = UPL					

Depth	Matrix		Redo	x Feature	S 1		-
(inches)	Color (moist)	%	Color (moist)	%	Type'	Loc <sup>2</sup>	Texture Remarks
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
		·			·		
Type: C=C	oncentration, D=Dep	letion, RM=	Reduced Matrix, C	S=Covere	d or Coate	d Sand G	Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.
<ul> <li>Histosol</li> <li>Histic Eg</li> <li>Black Hi</li> <li>Hydroge</li> <li>Stratified</li> <li>1 cm Mu</li> <li>Depleted</li> <li>Thick Da</li> <li>Sandy M</li> <li>Sandy C</li> </ul>	(A1) bipedon (A2) istic (A3) en Sulfide (A4) d Layers (A5) (LRR 0) d Below Dark Surface ark Surface (A12) Mucky Mineral (S1) Bleyed Matrix (S4) Layer (if present):	C) e (A11)	Sandy Red Stripped Ma Loamy Muc Loamy Gley Depleted M Redox Darl Depleted D Redox Dep Vernal Poo	ox (S5) atrix (S6) cky Minera yed Matrix latrix (F3) < Surface ark Surfac ressions ( Is (F9)	al (F1) (F2) (F6) (F6) (F8)		<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) ( <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	Depth (inches):	
Water Table Present? Yes D	Depth (inches):	
Saturation Present? Yes No	Depth (inches):	Wetland Hydrology Present? Yes No $\_$ X
(includes capillary fringe)	ring well, aprial photog, providua inapag	tiona) if available:
Describe Recorded Data (stream gauge, monito	ning wen, aenai priotos, previous inspec	tions), il avallable.
39" Excavated pit.		
Remarks:		

![](_page_49_Picture_0.jpeg)

Project/Site: Stagecoach	City/County:	Weber County, Ogden	, UT Sampling [	Date: 8/3/21
Applicant/Owner: Lync Development		State: U	IT Sampling F	Point: 12
Investigator(s): Kagel Environmental LLC	Section, Tow	vnship, 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: 41.236977	Long: -112.07	/1022	Datum: WGS84
Soil Map Unit Name: Le: Leland silt loam, 0 to 1 percent slo	pes (481612)	NW	/I classification: N/A	
Are climatic / hydrologic conditions on the site typical for this t	ime of year? Yes	No <u>X</u> (If no, ex	plain in Remarks.)	
Are Vegetation, Soil, or Hydrologysig	nificantly disturbed?	Are "Normal Circums	stances" present? Ye	es X No
Are Vegetation, Soil, or Hydrology nat	urally problematic?	(If needed, explain a	ny answers in Remar	ks.)
SUMMARY OF FINDINGS – Attach site map sl	nowing sampling	) point locations, tra	ansects, importa	nt features, etc.
Hydrophytic Vegetation Present? Yes No	X Is the	Sampled Area		
Hydric Soil Present?   Yes No	× within	n a Wetland?	Yes 🔲 No 🔤	×
Wetland Hydrology Present? Yes <u>No</u>	<u>×                                    </u>			
Remarks:				

Drier than normal.

	Absolute	Dominant	Indicator	Dominance Test worksheet:
Tree Stratum (Plot size: 30 radius )	<u>% Cover</u>	Species?	<u>Status</u>	Number of Dominant Species
1. Uimus pumila	20	X	UPL	That Are OBL, FACW, or FAC: 0 (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 Taulus )				
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
8				data in Remarks or on a separate sheet)
50% = 41.5 20% = 16.6	83	- Total Ca		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 Stratum % Cove	er of Biotic C	rust	<u> </u>	Present? Yes <u>No X</u>
Remarks:				

#### Sampling Point: 12

Depth	Matrix		Redox Fe	eatures			
inches)	Color (moist)	%	Color (moist)	<u>%</u> Type <sup>1</sup>	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	
						·	
		· <u> </u>				<u> </u>	
		· <u> </u>					
ype: C=C	Concentration, D=Dep	letion, RM	Reduced Matrix, CS=C	overed or Coate	d Sand G	rains. <sup>2</sup> Location: I	PL=Pore Lining, M=Matrix.
yaric Soli	Indicators: (Applic	able to all	LRRS, unless otherwis	se notea.)		Indicators for Pro	Diematic Hydric Solis :
Histosol (A1)			Sandy Redox (	S5)		1 cm Muck (As	9) (LRR C) 10) (LRR C)
Histic Epipedon (A2) S				(50) Minoral (E1)		2 CITI MUCK (A	$(\mathbf{LKK} \mathbf{D})$
	an Sulfido (A4)			Matrix (E2)		Reduced Vent	atorial (TE2)
_ Tryurog	d Lavore (A5) (LPP (	•)	Loany Gleyeu	(E3)			aleriar (112)
_ Sualine		•)	Depieted Wath	rface (E6)			
_ T CHI IVI	uck (A9) (LKK D) d Rolow Dark Surface	- (A11)	Reuox Dark Su	Surface (F0)			
Depieted Below Dark Surface (A11) Depieted Dark Surface (F7)						<sup>3</sup> Indicators of hydro	analytic vocatation and
I NICK DARK SUFFACE (A12) Redox Depressions (F8)						wetland hydrolog	av must be present
Sandy Mucky Mineral (S1) Vernal Pools (F9)				5)			yy musi be present, I or problematic
estrictive	Layer (if present):						
Туре:							
Depth (in	nches):					Hydric Soil Presen	nt? Yes <u>No X</u>
lemarks:						•	

Wetland Hydrology Indicators:							
Primary Indicators (minimum of one required; ch	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	X Depth (inches):						
Water Table Present? Yes No	Depth (inches):						
Saturation Present? Yes <u>No</u> No _	Depth (inches):	Wetland Hydrology Present? Yes No					
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:							
37" Excavated pit.							
Remarks:							

![](_page_52_Picture_0.jpeg)

# **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, Tov	vnship, Range: S21 T6N R2W				
Landform (hillslope, terrace, etc.): Lake Terrace	Local relief	Local relief (concave, convex, none): Flat Slope (%): 0-				
Subregion (LRR): LRR D (Interior deserts)	Lat: 41.237482	7482 Long: -112.073211 Datur				
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 samplinç	point locations, transects	s, important features, etc.			
Hydrophytic Vegetation Present? Yes X N		Compled Area				
Hydric Soil Present? Yes N	lo X withi	within a Wetland? Yes <u>No X</u>				
Wetland Hydrology Present? Yes N						
Remarks:						
Drier than normal.						

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

	Absolute	Dominant	Indicator	Dominance Test worksheet:		
Tree Stratum (Plot size: 30 radius )	<u>% Cover</u>	Species?	<u>Status</u>	Number of Dominant Species		
1. Elaeagnus angustifolia	10	X	FAC	That Are OBL, FACW, or FAC: <u>3</u> (A)		
2				Total Number of Dominant		
3				Species Across All Strata:4 (B)		
4						
50% = 5 20% = 2	10	= Total Cover		That Are OBL_EACW_or_EAC: 75% (A/B)		
Sapling/Shrub Stratum (Plot size: 15' radius )		_				
1. Elaeagnus angustifoia	5	<u> </u>	FAC	Prevalence Index worksheet:		
2				Total % Cover of: Multiply by:		
3.				OBL species <u>6</u> x 1 = <u>6</u>		
4.				FACW species 3 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 $13 \times 5 = 65$		
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	X 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:						
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	ription: (Describe	to the dep	th needed to docu	ment the	indicator	or confirm	m the absence of indicators.)	
(inches)	Color (moist)	%	Color (moist)	<u>% reature</u>	Type <sup>1</sup>	Loc <sup>2</sup>	Texture Remarks	
0-15	10YR3/2	97	10YR6/8	3	. <u></u>		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>		
1 <b>T</b>				0-				
Hvdric Soil I	ncentration, D=Dep ndicators: (Applic	able to all	EREGUCED Matrix, C	s=Covere rwise not	a or Coate ed.)	d Sand G	Indicators for Problematic Hydric Soils <sup>3</sup>	1x. :
Histosol	(A1)		Sandy Red	ox (S5)	,		1 cm Muck (A9) (LRR C)	-
Histic Ep	pipedon (A2)		Stripped Matrix (S6)				2 cm Muck (A10) ( <b>LRR B</b> )	
Black His	stic (A3)		Loamy Mucky Mineral (F1)				Reduced Vertic (F18)	
Hydroge	n Sulfide (A4)		Loamy Gleyed Matrix (F2)				Red Parent Material (TF2)	
Stratified	Lavers (A5) (LRR	C)	Depleted Matrix (F3)				Other (Explain in Remarks)	
$\frac{1}{1} \operatorname{cm} \operatorname{Muck} (AQ) (I BP D) $				k Surface	(F6)			
Depleted	Below Dark Surfac	ο (Δ11)	Depleted D	ark Surfa	(F7)			
Depicted	ark Surface (A12)		Beday Den		F8)		<sup>3</sup> Indicators of hydrophytic vegetation and	
Inick Dark Surrace (A12)     R     Sondy Musicy Minorel (S1)				Vernal Pools (F9) wetland hydrology must be present				
Sandy O	lucky Matrix (S4)		15 (1 9)			welland hydrology must be present,		
Restrictive I	aver (if present):							
Type <sup>.</sup>								
Depth (inches):							Hydric Soil Present? Yes No	×
Remarks:	,							
	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 Livin</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>	<ul> <li>Water Marks (B1) (Riverine)</li> <li>Sediment Deposits (B2) (Riverine)</li> <li>Drift Deposits (B3) (Riverine)</li> <li>Drainage Patterns (B10)</li> <li>Dry-Season Water Table (C2)</li> <li>Crayfish Burrows (C8)</li> <li>Soils (C6)</li> <li>Saturation Visible on Aerial Imagery (C9)</li> <li>Shallow Aquitard (D3)</li> <li>EAC-Neutral Test (D5)</li> </ul>				
Field Observations:						
Surface Water Present?       Yes       No         Water Table Present?       Yes       No         Saturation Present?       Yes       No         (includes capillary fringe)       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:						

![](_page_55_Picture_0.jpeg)

# **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