Shaw Alaska, Inc.

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DATE: August 28, 2006

TO: Forest Heights, LLC

- FROM: Shaw Alaska, Inc. Pat Athey, Senior Scientist
- PROJECT: Wetland Delineation, Legacy Pointe, Anchorage, Alaska
- RE: Wetland Delineation Report

Shaw Alaska, Inc.

Pat Athey, Senior Scientist patrick.athey@shawgrp.com

Introduction

This report summarizes a wetland investigation delineation performed for Forest Heights, LLC at the Legacy Pointe Tracts A & B parcel located in Anchorage, Alaska during June and July 2006.

Methods

Wetland determination and mapping was performed at the site during June and July of 2006. Determination of wetlands and the boundaries of wetlands with non-wetlands were made according to the *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Alaska Region* (February 2006) and the *1987 Corps of Engineers Wetland Delineation Manual.*

The primary tasks for the work included: 1) a review of existing maps and ecological data, 2) collection of field data at observation points to determine the presence or absence of wetlands, and 3) field delineation of the boundaries separating wetlands and uplands. Boundary points were staked and flagged in the field, and coordinates recorded with a hand-held GPS unit; a Professional Land Surveyor would map the locations at a later date.

Parcel information was obtained from the Municipality of Anchorage's parcel information web site (<u>http://munimaps.muni.org/website/anchorage/application/map.htm</u>) and is provided below:

Parcel ID: 02018119-000 Legal Description: T11N R3W SEC 10, NW¹/₄ NE¹/₄ S¹/₂ NE ¹/₄ Area: 5,227,200 ft² (120 acres)

A location map for the parcel was extracted from the MOA site and is provided in Figure 1. Existing data that were reviewed as part of this work included:

- 1. Preliminary Wetland Delineation Report (CH2MHill, 2005)
- 2. Soil Survey of Anchorage, Alaska published by the Natural Resources Conservation Service (2001).
- 3. Anchorage Wetland Atlas Online
- 4. National Wetlands Inventory (NWI) Maps Online

The preliminary wetland delineation report of 2005 did not identify all potential jurisdictional wetlands on the parcel. An inspection of the parcel in May 2006 was performed to review the preliminary delineation results. Unmapped wetlands were observed in areas adjacent to the two creeks that extend across the parcel, indicating the need to perform additional wetland delineation at the parcel to identify that all potential jurisdictional wetlands.

The Soil Survey mapping was obtained online from NRCS Web Soil Survey site (<u>http://websoilsurvey.nrcs.usda.gov/app/</u>). An extracted image for the parcel area is provided in Figure 2.

The NWI mapping was reviewed and not indicate the presence of wetlands in the inspection area. The NWI maps are made from satellite photography and are useful for identifying relatively large and obvious wetland areas for planning purposes; the wetland boundaries depicted on these maps are not considered accurate and must be delineated on the ground.

The methodology used for delineating wetlands is known as the triple parameter approach. The premise of this approach is that the three essential characteristics of wetlands (hydrophytic

vegetation, hydric soils, and wetland hydrology) must all be present to have a positive wetland determination.

These methods were used to achieve accurate characterization of the wetland community at specific observation points and to correlate the findings with existing data (aerial photography, soils mapping, and other maps where these were available). The determination points were numbered sequentially (e.g., DP-1) for tracking on wetland determination data forms published in the Alaska Regional Supplement. A map of the approximate location of determination points is provided in Figure 4. Completed data forms are provided in Attachment 2.

Hydric soils were identified by digging test pits and comparing the soil to the listed indicators of hydric soils. Correlations of observations with the soil type descriptions in the Anchorage Soil Survey were used to identify mapped soil types. Water must be present in order for wetlands to exist; however, it does not need to be present throughout the entire year. Wetland hydrology is considered to be present when there is permanent or periodic inundation or soil saturation for a significant period of time (usually more than a week) during the growing season. Indicators of wetland hydrology include areas of ponding or soil saturation, evidence of previous water inundation such as dry algae on bare soil, watermarks on soils or leaves, and drainage patterns. Where positive indicators are observed, it is assumed that wetland hydrology occurs for a significant period of the growing season. Where indicators of wetland hydrology were not visible above ground surface (*e.g.* drainage patterns, watermarks, etc.) test pits were dug to confirm the presence of indicators below ground surface (*i.e.* saturation in the top twelve inches).

Findings

Potential jurisdictional wetlands were found within the subject parcel as determined by a detailed evaluation of vegetation, soils, and hydrology at established determination points and supported with observations and soil probing throughout the area. The boundaries of the identified wetlands with adjacent uplands were flagged in the field and were subsequently surveyed by a Professional Land Surveyor. The resulting wetland polygons are presented in the survey plat provided in Attachment 1.

The preliminary wetlands mapping performed in 2005 by CH2MHill identified twelve (12) separate wetland polygons (areas) on the parcel, indicated as "A", "B", "C", "D", "E", "F1", "F2", "G1", "G2", "H", "I", and "J".

The results of the mapping conducted by Shaw Alaska in 2006 identified six (6) additional wetland areas designated as "N", "O", "P", "Q", "R", and "S". Three (3) of these areas encompassed smaller wetland areas mapped in 2006, including Wetland "B" contained within Wetland "R", Wetland "H" contained within Wetland "Q", and Wetland "I" contained within Wetland "O". This resulted in a total of 15 wetland areas identified on the parcel.

Wetlands "O", "P", and "Q" are contiguous wetland boundaries but were mapped as separate areas due to minor topographic and drainage characteristics.

The characteristics of Wetlands "A" through "J" are described in the 2005 report by CH2MHill. The characteristics of Wetlands "N" through "S" are described in the following discussion.

<u>Wetland "N"</u> is located in the central part of the parcel. It is positioned in a depressional area at the base of a slope that extends north to south through the central portion of the parcel. The characteristics of this wetland area are documented data recorded for determination points DP-36 and DP-37. A small seep with surface water and associated wet meadow are located at the north side of this wetland (DP-36). The area of surface water observed during late June was limited to less than 100 square feet and about 4-inches in depth. The soils in this wetland consist of Histic Epipedon type hydric soils with a histic layer 10 inches in depth overlying dark colored silt-loams. The vegetation in this wetland is a mixture of emergent persistent grasses and sedges surrounding the seep area and shrub-scrub wetland dominated by alders. This wetland area may be characterized as a mixed Palustrine Shrub-Scrub and Persistent Emergent type according to U.S. Fish and Wildlife Service classification system. Wetland "N" is bounded on the west side by a slight rise that appears to prevent storm runoff and snowmelt from draining down slope, resulting in water accumulation. The north and south boundary of this wetland are indistinct on the surface, as the topography is contiguous with adjacent uplands; soil and hydrology features that lose wetland characteristics establish the boundary.

Groundwater is expected to flow subsurface (i.e., *interflow*) from this Wetland "N" to the north into Wetland "O". This interflow toward the north establishes a connection with Wetland "O", which is an *adjacent wetland* to a small creek that flows west into Potter Marsh, which discharges into Navigable Waters in Cook Inlet.

Wetland "O" is part of a wetland complex located adjacent to a small creek that extends from the east to the west across the north-central portion of the property. The characteristics of this wetland area are documented by several determination points, including DP-30, -35, -38, -39, -40, -41, -42, -43, -45, -46, -48, and -49. The eastern portion of Wetland "O" is located at the base of a slope and is relatively flat terrain. This area is a slope discharge area where interflow water emerges from

several seeps and the topographic rise to the west side prevents surface runoff and snowmelt from flowing downhill, except where the small creek extends to the west. Soils in this eastern portion of Wetland "O" are mostly hydric lack muck extending to depths of 20 inches or more below surface. Surface water was absent except in the creek channel during late June, but soils were saturated to the surface and a shallow water table was observed within 12 inches of surface in test pits. Vegetation consists of a mosaic of alder-devils club thickets, and open areas of herb-grass meadows that include bluejoint reed grass, horsetail, and other FAC and FACW herbs. Stands of paper birch and white spruce occur in this area also. The occurrence of Angelica genuflexa (FACW; kneeling angelica) was found to be a good indicator of saturation and black muck soils in this wetland area, as well throughout the parcel. This wetland area may be characterized as a mixed Palustrine Shrub-Scrub and Persistent Emergent type according to U.S. Fish and Wildlife Service classification system. The north side of this wetland area may be associated with the second creek, located to the north. Due to the relatively flat topography across this eastern portion of Wetland "O" it is not obvious if surface water or interflow moves into the north creek. Because of this, a somewhat artificial boundary was established between Wetland "O" and Wetland "Q" that is associated with the north creek. Wetland "O" and "Q" are contiguous.

The western portion of Wetland "O" is adjacent to the small creek that flows east to west across the parcel. The characteristics of this part of the wetland are similar to eastern portion, with the exception that an obvious surface water feature is located within it and the wetland boundary is associated with a topographic rise that becomes better defined downhill toward the west side of the parcel. A branch of this wetland extends to the south just down slope (west) of the eastern portion; this is associated with a small seep that does not flow into the creek but disappears into the ground a short distance from its source. The thickness of the histic soil layer is variable in the eastern portion, in some areas becoming a hydric histic epipedon soil. The wetland is bounded on the west side by the gas line ROW where vehicle travel and other disturbances have altered the soils and hydrology, resulting in non-wetland conditions. Immediately above this gas line ROW, the creeks and the adjacent wetlands split to the north and south, resulting in a triangular area of upland.

<u>Wetland "P"</u> is a small finger of Wetland "O" that extends to the west near its north end and is contiguous with Wetland "O". The characteristics of Wetland "P" are similar to Wetland "O" and consist of an area of alder thickets and a bluejoint reed grass meadow and saturated histic epipedon and histosol soils. This wetland area may be characterized as a mixed Palustrine Shrub-Scrub and Persistent Emergent type according to U.S. Fish and Wildlife Service classification system. This wetland area is contiguous with Wetland "O" and Wetland "Q", which is an adjacent wetland to the north creek, a tributary of Little Rabbit Creek that discharges to Navigable Waters in Cook Inlet.

<u>Wetland "Q"</u> is an adjacent wetland to the creek on the north side of the parcel and extends from the eastern parcel boundary along Bettijean Street west to the small road that extends from the north along the parcel boundary at 172nd St. to the south. A culvert conveys the creek flow under the road. The characteristics of Wetland "Q" are identical to the western portion of Wetland "O" and consist of a mosaic of alder thickets and herb-grass meadows dominated by FAC and FACW species. Soils are histic epipedons and histosols that are saturated near the surface, with a high water table present in areas near the creek flow. The wetland boundary is indicated by a well-defined topographic break in most areas. The adjacent uplands are similar to the upland areas throughout the parcel, generally dominated by paper birch and white spruce forest with bluejoint

reed grass dominating the groundcover. This wetland is adjacent to the north creek, a tributary of Little Rabbit Creek that discharges to Navigable Waters in Cook Inlet.

<u>Wetland "R"</u> is an adjacent wetland to the north creek that extends to the west and north past the culvert crossing under the road through the north side of the parcel. The characteristics of this wetland are similar to Wetland "Q", dominated by alder and devil's club thickets with saturated histic soils. The creek transforms into a small pond at the north side of the parcel at 172nd St. The pond was estimated to be more than 24 inches in depth during late June and is surrounded by a band of persistent emergent species including sedges. A perched culvert that appears to allow flow through only during high water events forms the pond. A small arm of wetland "R" extends to the south immediately down slope of the road crossing and consists of a bluejoint reed grass meadow and alder thicket. The boundary of Wetland "R" is formed by very steep topographic rise on either side of the creek and wetland. This wetland area may be characterized as a mixed Palustrine Shrub-Scrub and Persistent Emergent type according to U.S. Fish and Wildlife Service classification system. This wetland is adjacent to the north creek, a tributary of Little Rabbit Creek that discharges to Navigable Waters in Cook Inlet.

<u>Wetland "S"</u> is located in the west-central portion of the parcel and consists of a mosaic of alder thickets and bluejoint reed grass – herb meadows. Several small seeps are located along the east boundary of this wetland at the base of a steep slope within dense stands of alder. Soils are saturated to the surface in most areas with a high water table present near the seeps. Soils consist of histic epipedons and histosols. This wetland area may be characterized as a mixed Palustrine Shrub-Scrub and Persistent Emergent type according to U.S. Fish and Wildlife Service classification system. This wetland area is directly upslope from the headwaters of a small stream and Wetland "A" mapped in 2005 by CH2MHill. Groundwater flow (interflow) from this wetland is expected to flow down slope into this stream/wetland complex, which flows into Potter Marsh and Cook Inlet, forming the connection with Navigable Waters.

Data sheets for representative wetland determination points are provided in Attachment 2. Photographs of the wetland areas and determination points are provided in Attachment 3 (on CD only). Selected pictures of wetlands and other relevant features are provided below (a full set of pictures from the investigation are provided as Attached 3 on CD).



Typical non-hydric Deception-Estelle-Kichatna complex type soils encountered.



Typical upland terrain and vegetation encountered.



Seep at DP-33 (Wetland "A")



Seep at DP-36 (Wetland "N")



Seep at DP-35 (Wetland "O")



Creek and adjacent Wetland "O"



Seep at DP-34 in Wetland "O"



Seep at DP-41 in Wetland "O"



Histic soil at DP-42 in Wetland "O"



Typical shrub-scrub vegetation found in Wetland "O"



Vegetation at DP-51 in Wetland "P"



Typical vegetation along creek in Wetland "Q"



Creek channel in Wetland "R"



Seep at DP-53 in Wetland "S"



Typical vegetation found in Wetland "S"



Angelica genuflexa (FACW) – a common indicator of saturated histic soils



Wildlife use in Wetland "N"



Bear sign in Wetland "N"

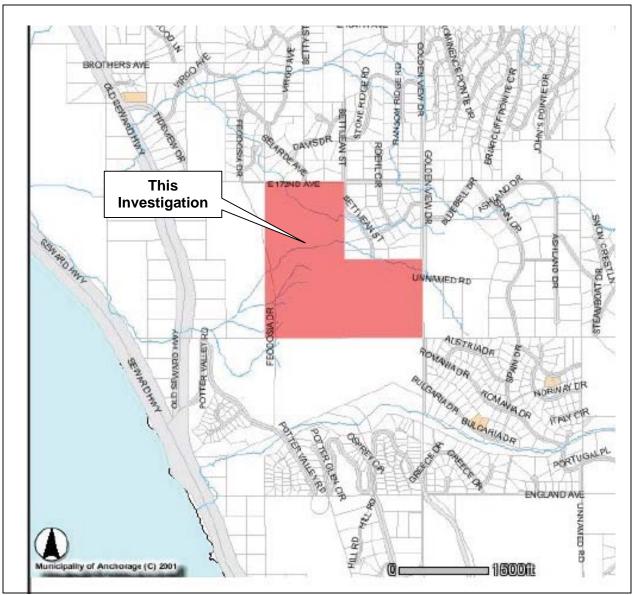


Figure 1. Location of Investigation

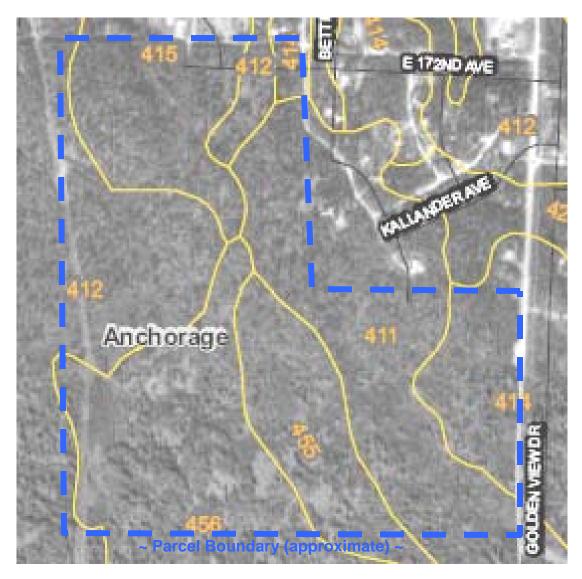


Figure 2. NRCS Soils Mapping

Map Key:

<u>Map Unit</u>	Name
411	Deception-Estelle-Kichatna complex, 12 to 20 percent slopes
412	Deception-Estelle-Kichatna complex, 20 to 45 percent slopes
414 415	Deception-Estelle-Kichatna complex, undulating and hilly Deception-Estelle-Kichatna complex, undulating and steep
455	Talkeetna-Chugach-Deneka complex, 12 to 20 percent slopes
456	Talkeetna-Chugach-Deneka complex, 12 to 20 percent slopes
-00	raikeetila ehagaen beneka complex, 20 to 40 percent slopes

* None of these soils types are designated as hydric, but may include Histic Cryaquept inclusions that are hydric.



Figure 3. Anchorage Wetland Atlas Mapping

Attachment 1

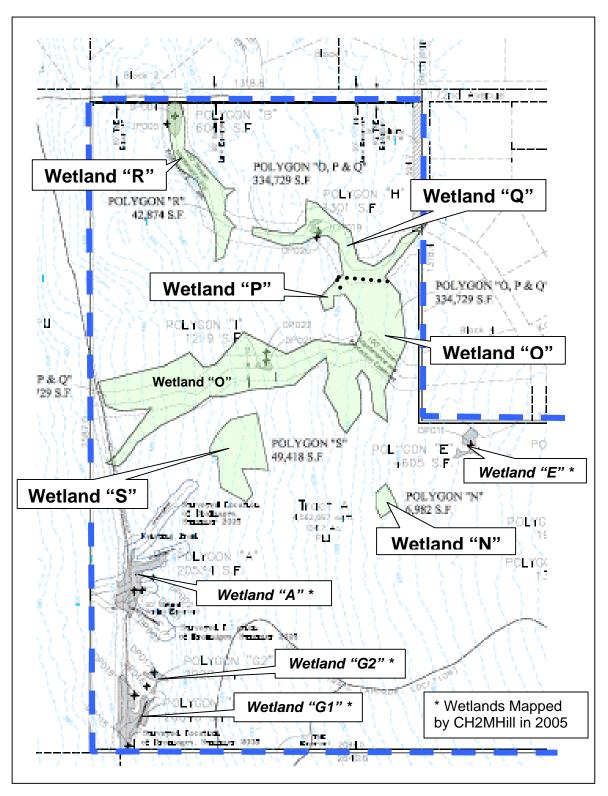
Wetland Delineation

Legacy Pointe Tracts A & B Anchorage, Alaska

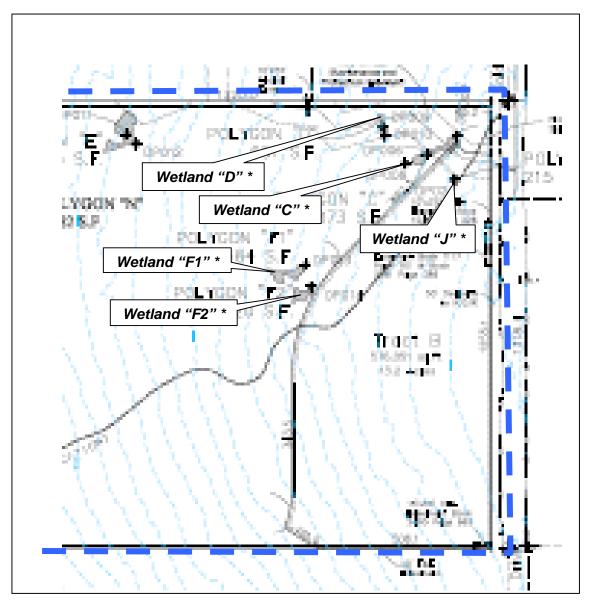
Forest Heights, LLC

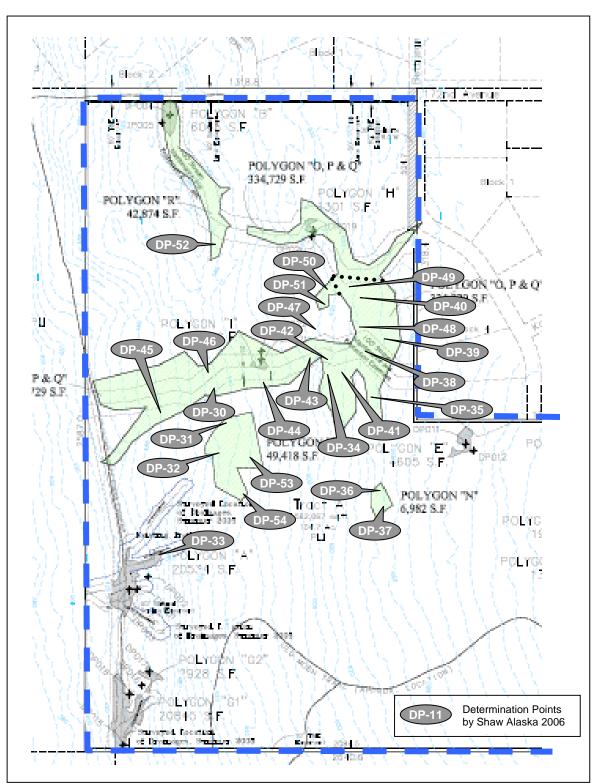
August 2006

West Part









Determination Points – West Part

<u>Attachment 2</u> Data Sheets for Wetland Determinations Legacy Pointe Tracts A & B Anchorage, Alaska

Forest Heights, LLC

August 2006

Project/Site: Legacy Pointe Tracts A & B	Borough/City:	Anchorage, Alaska	Sampling Date:	24-Jun-06
Applicant/Owner: Forest Heights, LLC			Sampling Point:	DP-30 (#527)
Investigator(s): Pat Athey	Landform (hills	ide, terrace, hummocks, etc.):		20 F
Local relief (concave, convex, none): Gentle slope to wes				
Subregion: Southcentral La	t: <u>N61.06264</u>	Long: <u>W149.78405</u>	Datum:	NAD 27 Alaska
Are climatic / hydrologic conditions on the site typical for th	is time of year? Yes <u>X</u>	_ No (If no, explain in	n Remarks.)	
Are Vegetation, Soil, or Hydrolcgy	significantly disturbed?	Are "Normal Circumstances	s" present? Yes X	No
Are Vegetation, Soil, or Hydrolcgy	naturally problematic?	(If needed, explain any ans	wers in Remarks.)	
SUMMARY OF FINDINGS – Attach site map	showing sampling p	ooint locations, transec	ts, important fe	eatures, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X Yes X Yes X	No No No	Is the Sampled Area within a Wetland?	Yes X	No
Remarks: Wetland associated with a small creek.					

Species (Use scientific names. List all species in plot.)	Absolute % Cover	Indicator Status	Prevalence Index:				
1 Alnus sinuata - FAC	40	FAC	Total % Cover	of:	Multi	ply by:	
2 Oplopanax horridus - FACU	20	FACU	OBL species	0	x 1 =	0	
3. Angelica genuflexa - FACW	20	FACW	FACW species				20
4 Calamagrostis canadensis - FAC	90	FAC	FAC species	150	x 3 =	450	
5 Athyrium filix-femina - FAC	20	FAC	FACU species		 3246.263 		
6			UPL species	0	x 5 =	0	
7			Column Totals:	190	(A)	570	(B)
8							
9			Prevalence Ir	dex = B/A	A = 3.0		-
10							
11			Other Indicators of	fHydrop	hytic Vege	atation:	
12			(Record supporting sheet.)	data in R	emarks or	on a sepa	rate
13			Contraction of the second s	(
14			Wetland Crypter	igams (re	cord speci	es and cov	ver
15				Adaptatio			
16			Morphological Problematic Hy			n (Evoloin	N
17				drophytic	vegetation	n (Explain))
18							
19							
20							
Total Cover	r: 190		Hydrophytic				
Plot size _30 ft radius % Bare 0	Ground		Vegetation Present?	Yes	X N	0	
% Cover of Wetland Bryophytes Total Cover of Bryo	phytes						_
Remarks:			·				
Herb-grass meadow							

-		-	
-	r	1	
J		•	L

Profile Desc	cription: (Describe	to the depth	needed to docu	ment the in	ndicator.)				
Depth	Matrix		Redox Features						
(inches)	Color (moist)		Color (moist)		_Type ¹	Loc ²	Texture	Remark	s
0-10	black						muck/peat		
10-20	black						silt loam & muck		
	5. 			-					
	1. 			tot di			lo <u>z</u>		0
	° <u></u>						101 <u></u>		
	S.t						2. <u></u>		
							· ·		7
TT 0.0				2		<u></u>			
	oncentration, D=Depl	etion, RM=Re	Indicators for I				RC=Root Channel, M	A=Matrix.	
Hydric Soil						5011S :			
TTT	or Histel (A1)		Alaska Col		· · · · · · · · · · · · · · · · · · ·			yed Without Hue 5	Y or Redder
X Histic E	pipedon (A2)		Alaska Alpi				Underlying	• •	
Hydroge	en Sulfide (A4)		Alaska Rec	lox With 2.5	5Y Hue		Other (Expla	ain in Remarks)	
Thick D	ark Surface (A12)								
Alaska (Gleyed (A13)		³ One indicator of	of hydrophy	tic vegeta	tion, one	primary indicator of	wetland hydrology	r,
	Redox (A14)		and an appro				A CHARLEN AND A CONTRACTOR OF A CONTRACT		
	Gleyed Pores (A15)		⁴ Give details of color change in Remarks.						
	Layer (if present):				ge in their				
Depth (in			_				Hydric Soil Pres	ent? Yes X	No
Remarks:	quept inclusion with	in Decention	Estalla Kichet	na complex	mannad	by NPC	'S (2001)		
insue cryat	Aucht meinsion with	in Deception	-Estene-Kichati	ia complex	mapped	i by INRC	.5 (2001).		

HYDROLOGY

Wetland Hydrology Indicate	ors:	Secondary Indicators (2 or more required)
Primary Indicators (any one i	ndicator is sufficient)	Water-stained Leaves (B9)
 Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Mat or Crust of Algae or Iron Deposits (B5) 	 Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B3) Sparsely Vegetated Concave Surface (B3) Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Other (Explain in Remarks) 	
Field Observations:	5	
Surface Water Present?	Yes No X Depth (inches):	
Water Table Present?	Yes No X Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes X No Depth (inches): 2	Wetland Hydrology Present? Yes X No
Describe Recorded Data (stre	eam gauge, monitoring well, aerial photos, previous inspec	tions), if available:
Remarks: Site located in measow are	a adjacent to small creek.	

Project/Site: Legacy Pointe Tracts A & B		Borough/City:	Anchorage, Alaska	Sampling Date: 24-Jun-06
Applicant/Owner: Forest Heights, LLC				Sampling Point: DP-31 (#528)
Investigator(s): Pat Athey		Landform (hills	ide, terrace, hummocks	
Local relief (concave, convex, none): Gentle slo	ope to west			
Subregion: Southcentral	Lat: <u>N61.06</u> 2	231	Long:W149.7835	1 Datum: NAD 27 Alaska
Are climatic / hydrologic conditions on the site ty Are Vegetation, Soil, or Hydrolog Are Vegetation, Soil, or Hydrolog SUMMARY OF FINDINGS – Attach s	gy significantly gy naturally pr	y disturbed? roblematic?	Are "Normal Circums (If needed, explain a	stances" present? Yes X No ny answers in Remarks.)
Hydric Soil Present? Yes	X No X No X No	within a	ampled Area a Wetland?	Yes X No

Species (Use scientific names. List all species in plot.)	Absolute % Cover	Indicator Status	Prevalence Index	:			
1. Alnus sinuata - FAC	20	FAC	Total % Cover	of:	Mul	tiply by:	
2 Alnus tenuifolia - FAC	80	FAC	OBL species		S 24	0	
3. Oplopanax horridus - FACU	50	FACU	FACW species	20	x 2 =	40	
4 Calamagrostis canadensis - FAC	50	FAC	FAC species				
5 Athyrium filix-femina - FAC	20	FAC	FACU species		A 1997 AND 1997		-
6 Angelica genuflexa - FACW	20	FACW	UPL species		x 5 =	0	
7			Column Totals:				(B)
8							
9			Prevalence II	ndex = B//	A = 3.	1	
10							
11			Other Indicators	of Hydrop	hytic Ve	getation:	
12			(Record supporting	data in R	emarks o	or on a sepa	arate
13			sheet.)				
14			Wetland Crypt	ogams (re	cord spe	cies and co	ver
15			at left)				
16			Morphological				
17			X Problematic H	yaropnytic	vegetat	on (Explain)
18							
19							
20							
Total Cov	er: 240		Hydrophytic				
Plot size _30 ft radius % Bare	Ground		Vegetation Present?	Yes	x	No	
% Cover of Wetland Bryophytes Total Cover of Bry	ophytes			/2074/791		202 (73) -	_
Remarks:							
Alder thicket with herb-grass meadows.							

SC	DI	L
-		_

	cription: (Describe t	o the de	•						
Depth (inches)	Matrix Color (moist)	%	Color (moist)	ox Features %	Type ¹	Loc ²	Texture	Remarks	
0-10	black						muck	rtomarko	
10-20	black		dark gray				silt loam		*
							<u> </u>		<u>_</u>
	oktii - S						ala ala		0* .
	· · · · · · · · · · · · · · · · · · ·		· ·			-			
							. <u> </u>		
									- C.
Type: C=C	Concentration, D=Depl	etion, RM	Reduced Matrix.	² Location	PL=Por	e Lining, I	RC=Root Channel, M=	Matrix.	<u></u>
	Indicators:		Indicators for I						
Histoso	l or Histel (A1)		Alaska Col	or Change	(TA4) ⁴		Alaska Gleye	d Without Hue 5Y	or Redder
X Histic E	pipedon (A2)		Alaska Alpi	Alaska Alpine Swales (TA5)			Underlying Layer		
Hydrog	en Sulfide (A4)		Alaska Rec	dox With 2.	5Y Hue		Other (Explai	in in Remarks)	
Thick D	ark Surface (A12)								
Alaska	Gleyed (A13)		³ One indicator of	of hydrophy	tic vegeta	ation, one	primary indicator of w	etland hydrology,	
Alaska	Redox (A14)		and an appro	priate land	scape pos	sition mus	st be present.		
Alaska	Gleyed Pores (A15)		⁴ Give details of	color chan	ge in Rem	narks.			
Restrictive	Layer (if present):								
Type:									
Depth (ir	nches):						Hydric Soil Prese	nt? Yes X	No
Remarks:	quept inclusion with	in Docon	tion Estalla Kichat	na complex	, mannad	by NDC	rs (2001)		
Thsue erya	quept metusion with	in Decep	dion-Estene-Kienati	la complez	x mapped	i by INIC	.5 (2001).		

HYDROLOGY

Wetland Hydrology Indicat	ors:		Secondary Indicators (2 or more required)
Primary Indicators (any one	indicator is su	ufficient)	Water-stained Leaves (B9)
Surface Water (A1)		Surface Soil Cracks (B6)	Drainage Patterns (B10)
High Water Table (A2)		Inundation Visible on Aerial Imagery (B7) Oxidized Rhizospheres on Living Roots (C3)
X Saturation (A3)		Sparsely Vegetated Concave Surface	(B8) Presence of Reduced Iron (C4)
Water Marks (B1)		Hydrogen Sulfide Odor (C1)	Salt Deposits (C5)
Sediment Deposits (B2)		Dry-Season Water Table (C2)	Stunted or Stressed Plants (D1)
Drift Deposits (B3)		Other (Explain in Remarks)	Geomorphic Position (D2)
Mat or Crust of Algae or	Marl (B4)		Shallow Aquitard (D3)
Iron Deposits (B5)			Microtopographic Relief (D4)
			FAC-Neutral Test (D5)
Field Observations:			
Surface Water Present?	Yes	No X Depth (inches):	-
Water Table Present?	Yes	No X Depth (inches):	_
Saturation Present? (includes capillary fringe)	Yes X	_ No Depth (inches):	Wetland Hydrology Present? Yes X No
Describe Recorded Data (str	eam gauge,	monitoring well, aerial photos, previous insp	ections), if available:
Remarks:			
Seeps located in area.			

Project/Site: Legacy Pointe Tracts A & B	Borough/City:	Anchorage, Alaska	Sampling Date:	24-Jun-06
Applicant/Owner: Forest Heights, LLC			Sampling Point:	DP-32 (#531)
Investigator(s): Pat Athey	Landform (hills	ide, terrace, hummocks, etc.):	Hillside Slope	7
Local relief (concave, convex, none): <u>Sloping to west</u>	Slope (%): _5%			
Subregion: Southcentral La	at: N61.06198	Long: <u>W149.78371</u>	Datum:	NAD 27 Alaska
Are climatic / hydrologic conditions on the site typical for th	nis time of year? Yes <u>X</u>	_ No (If no, explain ir	Remarks.)	
Are Vegetation, Soil, or Hydrolcgy	significantly disturbed?	Are "Normal Circumstances	" present? Yes 🚺	No
Are Vegetation, Soil, or Hydrology	naturally problematic?	(If needed, explain any ans	wers in Remarks.)	
SUMMARY OF FINDINGS – Attach site map	showing sampling p	point locations, transec	ts, important fe	eatures, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X Yes X Yes X	No No No	Is the Sampled Area within a Wetland?	Yes X	No
Remarks: Wetland associated with nearby seep.					

Species (Use scientific names. List all species in plot.)	Absolute % Cover	Indicator Status	Prevalence Index:				
1. Alnus sinuata - FAC	50	FAC	Total % Cover	of:	Mult	iply by:	
2 Angelica genuflexa - FACW	20	FACW	OBL species			0	
3 Oplopanax horridus - FACU	20	FACU	FACW species	80	x 2 =	160	22
4 Equisetum palustre - FACW	40	FACW	FAC species	50	x 3 =		
5 Carex laeviculmis - FACW	20	FACW	FACU species		A		
6			UPL species				51 51
7			Column Totals:				(B)
8							
9			Prevalence In	dex = B/A	A = 2.6		-
10							
11			Other Indicators o	fHydrop	hytic Veg	etation:	
12			(Record supporting	data in R	emarks or	on a sepa	rate
13			sheet.)				
14			Wetland Crypto	ogams (re	cora spec	les and cov	ver
15			at left)	Adamtatia			
16			Morphological			n (Evolain)	v
17			Problematic Hy	arophytic	vegetatio	in (Explain))
18							
19							
20	. <u> </u>						
Total Cover	: 150		Hydrophytic				
Plot size _30 ft radius % Bare G	Fround	-	Vegetation Present?	Yes	X N	lo	
% Cover of Wetland Bryophytes Total Cover of Bryo	phytes			1000.		50 A.C.	_
Remarks:							
Small marsh associated with seep.							

s	O	L
0		-

Depth	Matrix		Red	ox Features	5			
(inches)	Color (moist)	%	Color (moist)	%	_Type ¹	Loc ²	Texture	Remarks
0-24	black							
	Concentration, D=Depl	etion, RM=					RC=Root Channel, M	1=Matrix.
	il Indicators:		Indicators for			Soils [°] :		
X Histose	ol or Histel (A1)		Alaska Col	lor Change	$(TA4)^4$		Alaska Gley	ed Without Hue 5Y or Redder
_ Histic E	Epipedon (A2)		Alaska Alp	ine Swales	(TA5)		Underlying	g Layer
	gen Sulfide (A4) Dark Surface (A12)		Alaska Re	dox With 2.	5Y Hue		Other (Expla	ain in Remarks)
	Gleyed (A13)		³ One indicator	of hydrophy	tic vegeta	tion, one	primary indicator of	wetland hydrology,
Alaska	Redox (A14)		and an appro	opriate land	scape po	sition mus	st be present.	
	Gleyed Pores (A15)		⁴ Give details of				encedadea - Cena Presidenday	
Restrictive	e Layer (if present):							
Type:								
Depth (i	inches):						Hydric Soil Pres	ent? Yes X No
Remarks: Histic crya	aquept inclusion withi	n Deceptio	on-Estelle-Kichat	na comple:	x mapped	by NRC	CS (2001).	
YDROL	OGY							
Matland L	udrology Indicators						Secondary India	ators (2 or more required)

Wetland Hydrology Indica	ors:			Secondary Indicators (2 or more required)			
Primary Indicators (any one	indicator is suf		Water-stained Leaves (B9)				
X Surface Water (A1) X High Water Table (A2) X Saturation (A3)		 Surface Soil Cracks (B6) Inundation Visible on Aeri Sparsely Vegetated Cond 	ia⊢Imagery (B7)	 Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) Presence of Reduced Iron (C4) 			
Water Marks (B1)		Hydrogen Sulfide Odor (0	21)	Salt Deposits (C5)			
Sediment Deposits (B2)		Dry-Season Water Table	(C2)	Stunted or Stressed Plants (D1)			
Drift Deposits (B3)		Other (Explain in Remark	s)	Geomorphic Position (D2)			
Mat or Crust of Algae or	Marl (B4)			Shallow Aquitard (D3)			
Iron Deposits (B5)				Microtopographic Relief (D4)			
				FAC-Neutral Test (D5)			
Field Observations:							
Surface Water Present?	Yes X	No Depth (inches):	2				
Water Table Present?	Yes X	No Depth (inches):	4				
Saturation Present? (includes capillary fringe)	Yes X	No Depth (inches):	0 Wetlan	nd Hydrology Present? Yes X No			
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:							
Remarks:							
Adjacent to small seep.							

Project/Site: Legacy Pointe Tracts A & B	Borough/City:	Anchorage, Alaska	Sampling Date:	24-Jun-06
Applicant/Owner: Forest Heights, LLC			_ Sampling Point:	DP-33 (#532)
Investigator(s): Pat Athey	Landform (hills	ide, terrace, hummocks, etc.): <u> </u>	Hillside Slope	
Local relief (concave, convex, none): <u>Sloping to west</u>				
Subregion: Southcentral	Lat: <u>N61.06114</u>	Long: W149.78392	Datum:	NAD 27 Alaska
Are climatic / hydrologic conditions on the site typical fo	r this time of year? Yes X	_ No (If no, explain in F	Remarks.)	
Are Vegetation, Soil, or Hydrology	significantly disturbed?	Are "Normal Circumstances"	present? Yes 🚺	No
Are Vegetation, Soil, or Hydrology	naturally problematic?	(If needed, explain any answe	ers in Remarks.)	
SUMMARY OF FINDINGS – Attach site m	ap showing sampling p	point locations, transects	, important fe	eatures, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X Yes X Yes X	_ No _ No _ No	Is the Sampled Area within a Wetland?	Yes X	No
Remarks: Wetland associated with nearby seep.					

Species (Use scientific names. List all species in plot.)	Absolute <u>% Cover</u>	Indicator Status	Prevalence Index:				
1 Alnus sinuata - FAC	50	FAC	Total % Cover		2.4	ply by:	-
2 Heracleum lanatum - FACU	30	FACU	OBL species	0	x 1 =	0	-0
3 Carex laeviculmis - FACW	20	FACW	FACW species	40	x 2 =	80	2
4 Calamagrostis canadensis - FAC	30	FAC	FAC species	80	x 3 =	240	
5 Angelica genuflexa - FACW	20	FACW	FACU species	30	x 4 =	120	
6	. <u> </u>		UPL species	4	x 5 =	0	
7			Column Totals:	150	(A)	440	(B)
8			2 2 3		2.0		
9			Prevalence In	dex = B//	A = <u>2.9</u>		-
10							
11	3 		Other Indicators o				
12			(Record supporting sheet.)	data in R	emarks or	on a sepa	rate
13			Wetland Crypto	ogams (re	cord speci	es and cov	/or
14			at left)	syanis (ie	cord speci	es and co	
15			Morphological	Adaptatio			
16			Problematic Hy			n (Evoloin)	v
17				landbulk	vegetatio	n (Explain))
18							
19							
20							
Total Cover	: 150		Hydrophytic				
Plot size 30 ft radius % Bare G	Fround		Vegetation Present?	Yes	X N	0	
% Cover of Wetland Bryophytes Total Cover of Bryo	phytes					•	_
Remarks:							
Small marsh associated with seep.							

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Profile Descript	Matrix	o ule deptil		ox Features					
	Color (moist)	%	Color (moist)	<u>%</u>		Loc ²	Texture	Remar	ks
0-24 bla	ack						muck		
<u> </u>							· · · · · ·		
<u> </u>					<u> </u>				
							· <u>······</u>		
Type: C=Conce		etion, RM=Re					RC=Root Channel, M	1=Matrix.	
Hydric Soil India			Indicators for			Soils":			
X Histosol or H	and the second		Children and the second state of the	or Change	Same Sing		2	ved Without Hue	5Y or Redder
Histic Epiped			Alaska Alpine Swales (TA5) Alaska Redox With 2.5Y Hue		Underlying Layer				
Hydrogen Su			Alaska Red	dox With 2.	by Hue		Other (Expl	ain in Remarks)	
—	Surface (A12)		3						
Alaska Gleye							primary indicator of	wetland hydrolog	IY.
Alaska Redo			the second second second second	C. David School Concerns of the			st be present.		
	ed Pores (A15)		⁴ Give details of	color chan	ge in Ren	harks.			
Restrictive Laye									
								v	
Depth (inches	s):		-				Hydric Soil Pres	ent? Yes X	No
Remarks: Histic cryaquep	t inclusion with	in Decention	Estalla Vishot	no comular			S (2001)		
ristic cryaquep	t metusion with	III Deception	I-Estelle-Kichau	lia complex	c mappee	I UY INKC	.5 (2001).		
IYDROLOGY									

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)	Water-stained Leaves (B9)
X Surface Water (A1)	 Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3)
Field Observations:	
Surface Water Present? Yes X No Depth (inches): 2 Water Table Present? Yes X No Depth (inches): 6 Saturation Present? Yes X No Depth (inches): 0 (includes capillary fringe) O Depth (inches): 0 0	Wetland Hydrology Present? Yes X No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspect	ions), if available:
Remarks: Adjacent to small seep.	

Project/Site: Legacy Pointe Tracts A & B	Borough/City:	Anchorage, Alaska	_ Sampling Date:	24-Jun-06
Applicant/Owner: Forest Heights, LLC				DP-34 (#535)
Investigator(s): _Pat Athey	Landform (hills	ide, terrace, hummocks, etc.): <u> </u>		
Local relief (concave, convex, none): Gentle slope to west	Slope (%): _1%			
Subregion: Southcentral Lat: N61.062	247	Long: W149.78131	Datum:	NAD 27 Alaska
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes X	_ No (If no, explain in F	Remarks.)	
Are Vegetation, Soil, or Hydrology significantly	y disturbed?	Are "Normal Circumstances"	present? Yes X	No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic?	(If needed, explain any answe	ers in Remarks.)	
SUMMARY OF FINDINGS – Attach site map showing	g sampling p	point locations, transects	s, important fe	eatures, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X Yes X Yes X	No No No	Is the Sampled Area within a Wetland?	Yes X	No
Remarks: Wetland associated with nearby seep.					

Species (Use scientific names. List all species in plot.) 1. Alnus sinuata - FAC	Absolute <u>% Cover</u> 50	Indicator <u>Status</u> FAC	Prevalence Index: Total % Cover		N.A 141	ply by:	
2 Oplopanax horridus - FACU	30	FACU	OBL species		24 July 19		-
3 Calamagrostis canadensis - FAC	30	FAC	FACW species			-	-0
4 Equisetum palustre - FACW	30	FACW	FAC species				Ś.
5 Angelica genuflexa - FACW	20	FACW	FAC species				•
			UPL species				<u>.</u>
6			Column Totals:				- (B)
7				100	(A)	100	(D)
8			Prevalence In	dex = B/A	A = <u>2.9</u>		_
9							
10			01				
11			Other Indicators o (Record supporting				rate
12			sheet.)			706	
13			Wetland Crypto	gams (re	cord speci	es and cov	ver
14			at left)				
15			Morphological	Adaptation	ns		
16			Problematic Hy			n (Explain))
17							
18		<u> </u>					
19							
20	. <u> </u>						
Total Cover	: 160		Hydrophytic				
Plot size _30 ft radius % Bare G	Fround		Vegetation Present?	Yes	<u>X</u> N	0	
% Cover of Wetland Bryophytes Total Cover of Bryo	phytes					0.22	
Remarks:							
Small marsh associated with seep.							

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Depth	Matrix	Red	ox Features			
(inches) Color (r		Color (moist)	%	_Loc ²	Texture	Remarks
0-24 black					muck	 Alleration and the
				_		
					10 5 - 1 -1	
		3 6		-102		
		S 		-00		
- in						
Turney C=Concentration	D-Daplatian DM	-Deduced Matrix	² l continui DI -D		Do-Doot Channel Ma	Mateix
Type: C=Concentration lydric Soil Indicators:			Problematic Hydr		RC=Root Channel, M=	-Marix.
X Histosol or Histel (A			or Change (TA4) ⁴	00113 .	Alaska Gleve	ed Without Hue 5Y or Redder
Histic Epipedon (A2		Contraction of the second seco	ine Swales (TA5)		Underlying	
Hydrogen Sulfide (A			dox With 2.5Y Hue			in in Remarks)
Thick Dark Surface	S. Sugar					in in Romanoy
Alaska Gleyed (A13		³ One indicator	of hydrophytic year	tation one	primary indicator of w	etland hydrology
Alaska Redox (A14)			opriate landscape p			counter right coogy;
Alaska Gleyed Pore		and the second second second second second	color change in Re			
Restrictive Layer (if pro	esent):					
Туре:						
Depth (inches):					Hydric Soil Prese	nt? Yes X No
Remarks:	· · · · · · · · · · · · · · · · · · ·	·	1		(2001)	
Histic cryaquept inclus	sion within Decep	lon-Estene-Kichat	na complex mapp	ed by NKC	.5 (2001).	
YDROLOGY						

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)	Water-stained Leaves (B9)
X Surface Water (A1)	 Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) Presence of Reduced Iron (C4) Salt Deposits (C5) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4)
	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes X No Depth (inches): 1	
Water Table Present? Yes X No Depth (inches): 4	
Saturation Present? Yes X No Depth (inches): 0 (includes capillary fringe)	Wetland Hydrology Present? Yes X No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspection	ons), if available:
Remarks:	
Adjacent to small seep.	

Project/Site: Legacy Pointe Tracts A & B	Borough/City:	Anchorage, Alaska	Sampling Date: 24-Jun-06		
Applicant/Owner: Forest Heights, LLC			Sampling Point: DP-35 (#536)		
Investigator(s): Pat Athey	Landform (hills	ide, terrace, hummocks, etc.): _	Hillside Slope		
Local relief (concave, convex, none): <u>Flat</u>	Slope (%):				
Subregion: Southcentral Lat: N61.062	244	Long: <u>W149.78061</u>	Datum: NAD 27 Alaska		
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes X	_ No (If no, explain in	Remarks.)		
Are Vegetation, Soil, or Hydrology significantly	v disturbed?	Are "Normal Circumstances	" present? Yes X No		
Are Vegetation, Soil, or Hydrology naturally pr	oblematic?	(If needed, explain any answ	vers in Remarks.)		
SUMMARY OF FINDINGS – Attach site map showing	g sampling _l	point locations, transec	ts, important features, etc.		
Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No Wetland Hydrology Present? Yes X No	is the c	ampled Area a Wetland? Ye	es X No		

Remarks: Wetland associated with seeps and creek.

Species (Use scientific names. List all species in plot.) 1 Alnus sinuata - FAC 2 Oplopanax horridus - FACU 3 Calamagrostis canadensis - FAC 4 Equisetum palustre - FACW 5			Prevalence Index: <u>Total % Cover</u> OBL species FACW species FAC species FACU species UPL species	of: 50 180	x 1 = x 2 = x 3 = x 4 =	100 540 0	
7			Column Totals:	230	(A)	640	(B)
89			Prevalence In	dex = B//	A =2.8		-
10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20.			Other Indicators of (Record supporting sheet.) Wetland Crypto t left) Morphological. Problematic Hy	data in R ogams (re Adaptation	emarks or cord specie ns	on a sepa es and co	ver
Total Cover Plot size _30 ft radius% Bare @			Hydrophytic Vegetation				
% Cover of Wetland Bryophytes Total Cover of Bryo	1096-1097-01-02-698	204	Present?	Yes	<u>x</u> N	0	-
Remarks: Small marsh associated with seep.							

s	O	L
0		-

Depth	iption: (Describe) Matrix	to the depth i		ment the in ox Features					
(inches)	Color (moist)	%	Color (moist)	%	_Type ¹	Loc ²	Texture	Remarks	
0-20	black						muck		
				·					
				_					
<u> </u>						-	la r a s		
							10 <u></u>		
				<u> </u>					
	ncentration, D=Depl	etion, RM=Re					RC=Root Channel, M=	Matrix.	
Hydric Soil In			Indicators for I		-	Soils ³ :			
X Histosol o	or Histel (A1)		Alaska Col		Same Sing		Alaska Gleye	d Without Hue 5Y or	Redder
—	pedon (A2)		Alaska Alpi		Sec. Son Sec.		Underlying		
	Sulfide (A4)		Alaska Rec	lox With 2.5	5Y Hue		Other (Explain	n in Remarks)	
	k Surface (A12)		30						
Alaska Gl					•	Contraction of the second	primary indicator of we	etland hydrology,	
	edox (A14) eyed Pores (A15)		and an appro ⁴ Give details of				a be present.		
	ayer (if present):		Give details of		ge in Rei	Idins.	1		
	200):		-0				Hydric Soil Prese	nta Vac X	
Depth (inch	les).		-				Hydric Soli Prese		No
Remarks: Histic cryagu	ept inclusion with	in Deception	-Estelle-Kichatı	na compley	manned	by NRC	S (2001).		
							- ().		
YDROLOG	Y								

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)	Water-stained Leaves (B9)
Surface Water (A1)	 Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) Presence of Reduced Iron (C4) Salt Deposits (C5) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes No X Depth (inches):	Vetland Hydrology Present? Yes X No ns), if available:

Project/Site: Legacy Pointe Tracts A & B	Borough/City:	Anchorage, Alaska	Sampling Date:	24-Jun-06
Applicant/Owner: Forest Heights, LLC			Sampling Point:	DP-36 (#537)
Investigator(s): Pat Athey	_ Landform (hills	ide, terrace, hummocks, etc.):	Hillside Slope	
Local relief (concave, convex, none): <u>Flat</u>	_ Slope (%):			
Subregion: Southcentral Lat: N61.06	5139	Long: <u></u> W149.78044	Datum: _	NAD 27 Alaska
Are climatic / hydrologic conditions on the site typical for this time of y	year? Yes X	_ No (If no, explain in	Remarks.)	
Are Vegetation, Soil, or Hydrolcgy significant	ly disturbed?	Are "Normal Circumstances	" present? Yes X	No
Are Vegetation, Soil, or Hydrology naturally p	problematic?	(If needed, explain any ansy	wers in Remarks.)	
SUMMARY OF FINDINGS – Attach site map showin	ng sampling	point locations, transec	ts, important fe	eatures, etc.
Hydrophytic Vegetation Present? Yes X No	- Is the S	ampled Area		

Hydrophylic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X Yes X	No No	Is the Sampled Area within a Wetland?	Yes X	No
Remarks: Wetland associated with nearby seep.					

Species (Use scientific names. List all species in plot.)	Absolute <u>% Cover</u> 75	Indicator Status	Prevalence Index:					
1 Calamagrostis canadensis - FAC		FAC	Total % Cover of:					
2 Angelica genuflexa - FACW		FACW	OBL species				-0	
3 Equisetum palustre - FACW	30	FACW	FACW species	70	x 2 =	140	-	
4. Carex laeviculmis - FACW	20	FACW	FAC species	75	x 3 =	225	-	
5			FACU species		x 4 =	0		
6			UPL species		x 5 =	0	2	
7			Column Totals:	145	(A)	365	(B)	
8		<u> </u>	Developmente	D(25			
9		<u> </u>	Prevalence In	dex = B/I	A = <u>2.3</u>			
10								
11			Other Indicators o					
12			(Record supporting sheet.)	data in R	emarks or	on a sepa	rate	
13		<u> </u>	Wetland Crypto	gams (re	cord speci	es and co	ver	
14			at left)	•	Č.			
15			Morphological	Adaptatio	ns			
16			Problematic Hy			n (Explain)	
17							,	
18		<u> </u>						
19								
20	0 <u> </u>	<u> </u>						
Total Cover	Hydrophytic							
Plot size 30 ft radius % Bare Ground			Vegetation Present? Yes X No					
% Cover of Wetland Bryophytes Total Cover of Bryo	Tresent	105		•	-			
Remarks:								
Small marsh associated with seep.								

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	ription: (Describe	to the depth							
Depth (inches)	Matrix Color (moist)		Color (moist)	ox Features %	Type ¹	Loc ²	Texture	Remarks	
)-20	black						muck		
	· · · · · · · · · · · · · · · · · · ·								
							. <u> </u>		
	oncentration, D=Depl	etion, RM=R	educed Matrix. Indicators for				RC=Root Channel, M=	Matrix.	
lydric Soil I						5011S :	Alaska Olaus	d Mith and Line CV as Deddar	
- Margaretter	or Histel (A1)		Alaska Col Alaska Alpi	•				d Without Hue 5Y or Redder	
-	bipedon (A2)		ALC: NOT THE PARTY OF		Sec. Sec.		Underlying Layer Other (Explain in Remarks)		
	n Sulfide (A4) ark Surface (A12)		Alaska Red	JOX WILL 2.3				n in Remarks)	
_	Gleved (A13)		³ One indicator	of hudronbu	tic vocat	tion and	primary indicator of w	atland budralagu	
	Redox (A14)						st be present.	eliand hydrology,	
	Gleyed Pores (A15)		⁴ Give details of				a be present.		
	Layer (if present):				gennition	iunito.			
	Luyer (in present).								
Depth (inc			_				Hydric Soil Prese	nt? Yes X No	
Remarks: Histic cryaq	uept inclusion with	in Deception	1-Estelle-Kichati	na complex	k mapped	by NRC	S (2001).		
YDROLO	GY								
Votland Hv	drology Indicators						Secondary Indicat	tors (2 or more required)	

Wetland Hydrology Indicat	ors:		Secondary Indicators (2 or more required)
Primary Indicators (any one	indicator is suffic	ient)	Water-stained Leaves (B9)
X Surface Water (A1) X High Water Table (A2) X Saturation (A3)	-	 Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7 Sparsely Vegetated Concave Surface (B 	88) Presence of Reduced Iron (C4)
Water Marks (B1)	-	_ Hydrogen Sulfide Odor (C1)	Salt Deposits (C5)
Sediment Deposits (B2)		_ Dry-Season Water Table (C2)	Stunted or Stressed Plants (D1)
Drift Deposits (B3)		Other (Explain in Remarks)	Geomorphic Position (D2)
Mat or Crust of Algae or	Marl (B4)		Shallow Aquitard (D3)
Iron Deposits (B5)			Microtopographic Relief (D4)
			FAC-Neutral Test (D5)
Field Observations:		4	
Surface Water Present?	Yes X N	lo Depth (inches):6	
Water Table Present?	Yes X N	lo Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes X N	lo Depth (inches):0	Wetland Hydrology Present? Yes X No
Describe Recorded Data (str	eam gauge, mor	nitoring well, aerial photos, previous inspect	tions), if available:
Remarks:			
Adjacent to small seep.			

Project/Site: Legacy Pointe Tracts A & B	Borough/City:	Anchorage, Alaska	Sampling Date: 24-Jun-06
Applicant/Owner: Forest Heights, LLC			Sampling Point: DP-37 (#538)
Investigator(s): Pat Athey	Landform (hills	ide, terrace, hummocks, etc.):	Hillside Slope
Local relief (concave, convex, none): Flat	Slope (%):		
Subregion: Southcentral	Lat: <u>N61.06115</u>	Long: <u>W149.78040</u>	Datum: NAD 27 Alaska
Are climatic / hydrologic conditions on the site typica	I for this time of year? Yes X	_ No (If no, explain in	Remarks.)
Are Vegetation, Soil, or Hydrolcgy _	significantly disturbed?	Are "Normal Circumstances	" present? Yes X No
Are Vegetation, Soil, or Hydrolcgy _	naturally problematic?	(If needed, explain any answ	vers in Remarks.)
SUMMARY OF FINDINGS – Attach site	map showing sampling	point locations, transec	ts, important features, etc.
Hydric Soil Present? Yes	No	Sampled Area	esXNo

Wetland Hydrology Present?	Yes _ A	_ No	
Remarks:			
Wetland associated wth small seep	s in area.		

Species (Use scientific names. List all species in plot.) 1. Alnus sinuata - FAC	Absolute <u>% Cover</u> 100	Indicator <u>Status</u> FAC	Prevalence Index:				
			Total % Cover of:				
2 Angelica genuflexa - FACW	50	FACW	OBL species				-0
3		<u> </u>	FACW species				-
4			FAC species	100	x 3 = _	300	-
5			FACU species		x 4 =		-2
6			UPL species		x 5 =	0	_
7			Column Totals:	150	(A) _	400	(B)
8			2 2 3 3	2.11	2.5	7	
9			Prevalence Index	(= B/A	= _ 2.1	/	
10							
11			Other Indicators of H	ydroph	ytic Vec	etation:	
12			(Record supporting dat	ta in Re	emarks o	r on a sepa	rate
13			sheet.)				
14			Wetland Cryptoga	ms (rec	ord spec	cies and co	ver
15			at left)				
16			Morphological Ada				
17			Problematic Hydro	phytic \	Vegetatio	on (Explain)
18							
19							
20							
	ver: 150		Hydrophytic				
Plot size 30 ft radius % Bar	e Ground		Vegetation Present? Ye	e X	x 1	No	
% Cover of Wetland Bryophytes Total Cover of Br	ryophytes						_
Remarks:							
Alder thicket with herb-grass meadows.							

s	OI	L
_		

	cription: (Describe t	o the depth						
Depth (inches)	Matrix Color (moist)		Color (moist)	x Features %	Type ¹	Loc ²	Texture	Remarks
0-10	black				_туре_			Remarks
							muck	
10-20	black						silt	
· · · · · · · · · · · · · · · · · · ·				- 00				
							· · · · · · · · · · · · · · · · · · ·	
	0.4 							
	· · · · · · · · · · · · · · · · · · ·							
							· · · · · · · · · · · · · · · · · · ·	
Type: C=C	oncentration, D=Depl	etion. RM=R	educed Matrix.		PL=Pore	Linina, F	RC=Root Channel, M=M	atrix.
Hydric Soil			Indicators for I					
Histoso	l or Histel (A1)		Alaska Colo	or Change	(TA4) ⁴		Alaska Gleyed	Without Hue 5Y or Redder
X Histic E	pipedon (A2)		Alaska Alpine Swales (TA5)				Underlying La	iyer
Hydroge	en Sulfide (A4)		Alaska Red	lox With 2.	5Y Hue		Other (Explain i	n Remarks)
Thick D	ark Surface (A12)							
1 Construction of the second	Gleyed (A13)						primary indicator of wetl	and hydrology,
	Redox (A14)		and an appro	ten renocuentantes vas	Contraction and the second		st be present.	
-	Gleyed Pores (A15)		⁴ Give details of	color chan	ge in Rem	arks.		
Restrictive	Layer (if present):							
Type:			C					
Depth (in	iches):		-				Hydric Soil Present	? Yes X No
Remarks:		- Decentie	- E-t-lle Kishete	1			(2001)	
Histic crya	quept inclusion with	n Deceptio	n-Estelle-Kichatr	a complex	к таррео	by NRC	.5 (2001).	

Wetland Hydrology Indica	ors:		Secondary Indicators (2 or more required)
Primary Indicators (any one	indicator is suffici	ient)	Water-stained Leaves (B9)
Surface Water (A1) High Water Table (A2) _X_ Saturation (A3)	2000 1.	 Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B8) 	
Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Mat or Crust of Algae of	_	 Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Other (Explain in Remarks) 	 Salt Deposits (C5) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aguitard (D3)
Iron Deposits (B5)			 Microtopographic Relief (D4) FAC-Neutral Test (D5)
Field Observations:		V	
Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe)	Yes N	X Depth (inches):	Wetland Hydrology Present? Yes X No
Describe Recorded Data (st	ream gauge, mon	nitoring well, aerial photos, previous inspectio	ons), if available:
Remarks: Seeps located in area.			

Project/Site: Legacy Pointe Tracts A & B	Borough/City: _	Anchorage, Alaska	_ Sampling Date:	24-Jun-06
Applicant/Owner: Forest Heights, LLC			Sampling Point:	DP-38 (#540)
Investigator(s): Pat Athey	Landform (hills	ide, terrace, hummocks, etc.): _	Hillside Slope	
Local relief (concave, convex, none): Sloping to west	Slope (%): _5%			
Subregion: Southcentral Lat: N6	1.06281	Long:W149.78088	Datum: _l	NAD 27 Alaska
Are climatic / hydrologic conditions on the site typical for this time	of year? Yes X	_ No (If no, explain in	Remarks.)	
Are Vegetation, Soil, or Hydrology signific	cantly disturbed?	Are "Normal Circumstances	" present? Yes X	No
Are Vegetation, Soil, or Hydrology natura	Ily problematic?	(If needed, explain any answ	vers in Remarks.)	
SUMMARY OF FINDINGS – Attach site map show	wing sampling p	point locations, transec	ts, important fe	atures, etc.
Hydrophytic Vegetation Present? Yes X No	Is the S	ampled Area		

Hydric Soil Present? Wetland Hydrology Present?	Yes X Yes X	No No	Is the Sampled Area within a Wetland?	Yes X	No
Remarks: Wetland associated with a small cree	k.				

Species (Use scientific names. List all species in plot.)	Absolute <u>% Cover</u>	Indicator Status	Prevalence Index:				
1 Calamagrostis canadensis - FAC	75	FAC	Total % Cover	of:	Multi	bly by:	_
2 Angelica genuflexa - FACW	20	FACW	OBL species		x 1 =	0	
3 Equisetum palustre - FACW	30	FACW	FACW species	70	x 2 =	140	
4 Carex laeviculmis - FACW	20	FACW	FAC species	75	x 3 =	225	-
5			FACU species		x 4 =	0	
6			UPL species	-	x 5 =	0	_
7			Column Totals:	145	(A)	365	(B)
8			Dravelanes In	day = D/	A = 25		
9		<u> </u>	Prevalence In	dex = B/I	A = 2.3		-
10		<u> </u>					
11			Other Indicators o				
12			(Record supporting sheet.)	data in R	emarks or	on a sepa	irate
13			Wetland Crypto	ogams (re	cord specie	es and co	ver
14			at left)		ŝo.		
15			Morphological	Adaptatio	ns		
16			Problematic Hy			n (Explain)
17					2		
18		<u> </u>					
19							
20							
	ver: 145		Hydrophytic				
Plot size 30 ft radius % Bar	e Ground		Vegetation Present?	Yes	X N		
% Cover of Wetland Bryophytes Total Cover of Br	ryophytes			A (76.75).			_
Remarks:							
Herb-grass meadow adjacent to small creek.							

-	-		
-	C)	L	
-	-		

Depth	Matrix		Red	ox Features	5			
(inches)	Color (moist)	%	Color (moist)	%	_Type ¹	Loc ²	Texture	Remarks
0-24 b	lack						muck	
							· · · · · · · · · · · · · · · · · · ·	
							·	
							······	
							0. 	
					<u> </u>		·	
				- 2				
Type: C=Conc Hydric Soil Ind	entration, D=Depl	etion, RM=R	Indicators for				RC=Root Channel, M	=Matrix.
						30115 .	Alaska Clav	ad Mithaut Llua EV as Daddas
X Histosol or	and the second		Ch. 25 and the second s	lor Change	S		and the second s	ed Without Hue 5Y or Redder
Histic Epipe Hydrogen S			Alaska Alpine Swales (TA5) Alaska Redox With 2.5Y Hue				Underlying Other /Evels	ain in Remarks)
	Surface (A12)		Aldska Ke		51 Hue			an in Rendiks)
Alaska Gley			³ One indicator	of hudronhu	ticupat	tion and	primary indicator of v	untand hudrology
Alaska Gle	a service and the service serv						st be present.	veliana hydrology,
	yed Pores (A15)		⁴ Give details of	enter a entrevenancia es ve	10.770 A. B. CO. 100.000		a be present.	
	ver (if present):							
Depth (inche	es):		_				Hydric Soil Pres	ent? Yes X No
Remarks:							(2001)	
Histic cryaque	pt inclusion with	in Deceptio	n-Estelle-Kichat	na comple	x mapped	by NRC	.8 (2001).	

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)	Water-stained Leaves (B9)
X Surface Water (A1) Surface Soil Cracks (B6)	Drainage Patterns (B10)
X High Water Table (A2) Inundation Visible on Aerial Imagery (E	B7) Oxidized Rhizospheres on Living Roots (C3)
X Saturation (A3) Sparsely Vegetated Concave Surface	(B8) Presence of Reduced Iron (C4)
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Salt Deposits (C5)
Sediment Deposits (B2) Dry-Season Water Table (C2)	Stunted or Stressed Plants (D1)
Drift Deposits (B3) Other (Explain in Remarks)	Geomorphic Position (D2)
Mat or Crust of Algae or Marl (B4)	Shallow Aquitard (D3)
Iron Deposits (B5)	Microtopographic Relief (D4)
	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes X No Depth (inches): 2	_
Water Table Present? Yes X No Depth (inches): 3	
Saturation Present? Yes X No Depth (inches): 0	Wetland Hydrology Present? Yes X No
(includes capillary fringe)	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspe	ections), if available:
Remarks:	
Herb-grass meadow adjacent to small creek.	

Project/Site: Legacy Pointe Tracts A & B	Borough/City:	Anchorage, Alaska	Sampling Date:	24-Jun-06
Applicant/Owner: Forest Heights, LLC			Sampling Point: _	DP-39 (#541)
Investigator(s): Pat Athey	_ Landform (hills	ide, terrace, hummocks, etc.): _		
Local relief (concave, convex, none): <u>Flat</u>	_ Slope (%):			
Subregion: Southcentral Lat: N61.06	306	Long: <u>W149.78029</u>	Datum: N	AD 27 Alaska
Are climatic / hydrologic conditions on the site typical for this time of y	ACCESSION OF THE SECOND SECOND			
Are Vegetation, Soil, or Hydrology significantl Are Vegetation, Soil, or Hydrology naturally p		Are "Normal Circumstances (If needed, explain any ansv		No
SUMMARY OF FINDINGS – Attach site map showin	g sampling	point locations, transec	ts, important fea	atures, etc.
Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No Wetland Hydrology Present? Yes X No	within	Sampled Area a Wetland? Ye	əs X No	

Remarks:

Wetland associated wth small seeps in area.

Species (Use scientific names. List all species in plot.)	Absolute % Cover	Indicator Status	Prevalence Index:				
1 Alnus sinuata - FAC	50	FAC	Total % Cover of	F:	Multi	ply by:	
2 Oplopanax horridus - FACU	30	FACU	OBL species			22139	110
3 Equisetum palustre - FACW	50	FACW	FACW species				
4 Calamagrostis canadensis - FAC	50	FAC	FAC species				
5 Angelica genuflexa - FACW	30	FACW	FACU species		100 C 200		
6			UPL species				
7			Column Totals:				(B)
8							
9			Prevalence Inde	ex = B/A	= _2.8		-
10							
11			Other Indicators of	Hydroph	nytic Veg	etation:	
12		<u> </u>	(Record supporting d	ata in Re	emarks or	on a sepa	rate
13			sheet.)				
14			Wetland Cryptog	ams (rec	cora speci	es and co	ver
15			at left)				
16			Morphological A	50.2 * 0.2.1245-2255			
17			Problematic Hyd	ropnytic	vegetatio	n (Explain)
18							
19							
20							
Total Cover	r: 210		Hydrophytic				
Plot size 30 ft radius % Bare 0	Ground		Vegetation	(es)	X N	o	
% Cover of Wetland Bryophytes Total Cover of Bryo	phytes					•	-
Remarks:							
Small marsh associated with seep.							

SC	DI	L
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Depth	Matrix		Redox Features						
(inches)	Color (moist)	%	Color (moist)	%T	ype ¹	Loc ²	Texture	Remarks	s
0-20 bl	lack						muck		
	<u></u>					<u></u>			
						<u>.</u>			
	entration, D=Depl	etion PM-P	educed Matrix	² location: P		Lining	RC=Root Channel, I	A-Matrix	
lydric Soil Indi			Indicators for						
X Histosol or I				lor Change (T/	-		Alaska Gle	yed Without Hue 5	Y or Redder
Histic Epipe	and the second		Alaska Alpine Swales (TA5)				Underlying Layer		
Hydrogen S			Alaska Redox With 2.5Y Hue			Other (Explain in Remarks)			
	Surface (A12)								
Alaska Gley	/ed (A13)		³ One indicator	of hydrophytic	vegeta	tion, one	primary indicator of	wetland hydrology	5
_ Alaska Red	ox (A14)			opriate landsca					
_ Alaska Gley	ed Pores (A15)		⁴ Give details of	f color change	in Rem	arks.			
lestrictive Lay	er (if present):								
Туре:									
Depth (inche	s):						Hydric Soil Pre	sent? Yes X	No
Remarks:	12. 12								
	nt inclusion with	in Decention	n-Estelle-Kichat	na complex n	nanned	by NRC	'S (2001)		

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)	Water-stained Leaves (B9)
Surface Water (A1) Surface Soil Cracks (B6) High Water Table (A2) Inundation Visible on Aerial Imagery (B X Saturation (A3) Sparsely Vegetated Concave Surface Water Marks (B1) Hydrogen Sulfide Odor (C1) Sediment Deposits (B2) Dry-Season Water Table (C2) Drift Deposits (B3) Other (Explain in Remarks) Mat or Crust of Algae or Marl (B4) Iron Deposits (B5)	and and the second s
Field Observations:	
Surface Water Present? Yes No _X Depth (inches): Water Table Present? Yes No _X Depth (inches): Saturation Present? Yes _X No Depth (inches): (includes capillary fringe) O	
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspe	ections), if available:
Remarks: Seeps and small creek in area.	

Project/Site: Legacy Pointe Tracts A	& B		Borough/City:	Anchorage, Alaska	Sampling Date: 24-Jun-06
Applicant/Owner:Forest Heights, LL	.C				Sampling Point: DP-40 (#542)
Investigator(s): Pat Athey			_ Landform (hills	side, terrace, hummocks, et	
Local relief (concave, convex, none):]	Flat		_ Slope (%):		
Subregion: Southcentral		Lat: <u>N61.06</u>	5346	Long: <u>W149.78058</u>	Datum: NAD 27 Alaska
Are climatic / hydrologic conditions on	the site typica	I for this time of y	/ear? Yes X	No (If no, expla	ain in Remarks.)
Are Vegetation, Soil, or	Hydrology _	significant	ly disturbed?	Are "Normal Circumsta	nces" present? Yes X No
Are Vegetation, Soil, or	Hydrology _	naturally p	roblematic?	(If needed, explain any	answers in Remarks.)
SUMMARY OF FINDINGS – Attach site r Hydrophytic Vegetation Present? Yes X Hydric Soil Present? Yes		0.	- Is the S	point locations, tran Sampled Area a Wetland?	sects, important features, etc. Yes X No
VEGETATION					

Species (Use scientific names. List all species in plot.)	Absolute % Cover	Indicator Status	Prevalence Index:			
1 Betula papyrifera - FACU	30	FACU	Total % Cover of:	N	Aultiply by:	
2 Alnus tenuifolia - FAC	30	FAC	OBL species	x 1 =	0	
3. Oplopanax horridus - FACU	30	FACU	FACW species			
4 Equisetum palustre - FACW	50	FACW	FAC species			
5 Calamagrostis canadensis - FAC	40	FAC	FACU species			
6 Angelica genuflexa - FACW	20	FACW	UPL species		1	
7			Column Totals:2			(B)
8					2.0	
9			Prevalence Index =	B/A =	5.0	
10						
11			Other Indicators of Hyd	rophytic \	/egetation:	
12		22	(Record supporting data i	n Remarks	s or on a se	arate
13			sheet.)	(
14			Wetland Cryptogams	(record s	becies and c	over
15			at left)			
16			Morphological Adapt			~
17			Problematic Hydroph	ytic veget	ation (Expla	n)
18						
19						
20						
Total Cove	er: 200		Hydrophytic			
Plot size _30 ft radius % Bare 0	Ground		Vegetation Present? Yes	x	No	
% Cover of Wetland Bryophytes Total Cover of Bryo	ophytes					_
Remarks:						
Herb-grass meadow adjacent to small seeps.						

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Depth	Matrix		Red	ox Features					
(inches)	Color (moist)	%	Color (moist)	%	_Type ¹	Loc ²	Texture	Remarks	
0-20	black						muck	Carlor Gall, Colorin	
	0.1 3 (2								
							·		
	· · · · · · · · · · · · · · · · · · ·								
Type: C=C	oncentration, D=Dep	letion, RM=F	Reduced Matrix.	² Location:	PL=Por	e Lining, I	RC=Root Channel, M	M=Matrix.	
	Indicators:		Indicators for						
X Histosol	l or Histel (A1)		Alaska Co	lor Change	(TA4) ⁴		Alaska Gle	yed Without Hue 5Y or	Redder
Histic Er	pipedon (A2)		Alaska Alpine Swales (TA5)			Underlyin	ig Layer		
Hydroge	en Sulfide (A4)		Alaska Redox With 2.5Y Hue			Other (Explain in Remarks)			
_ Thick Da	ark Surface (A12)								
_ Alaska (Gleyed (A13)		³ One indicator	of hydrophy	tic vegeta	ation, one	primary indicator of	wetland hydrology,	
Alaska I	Redox (A14)		and an appro	opriate land	scape po	sition mus	st be present.		
Alaska (Gleyed Pores (A15)		⁴ Give details of	f color chan	ge in Rem	narks.			
Restrictive	Layer (if present):								
Depth (in	ches):						Hydric Soil Pres	sent? Yes X	No
Remarks: Histic cryac	quept inclusion with	in Deceptio	n-Estelle-Kichat	na complex	k mapped	l by NRC	CS (2001).		

Wetland Hydrology Indicate	ors:	Secondary Indicators (2 or more required)
Primary Indicators (any one in	indicator is sufficient)	Water-stained Leaves (B9)
 Surface Water (A1) X High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Mat or Crust of Algae or Iron Deposits (B5) 	Other (Explain in Remarks)	 Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) Presence of Reduced Iron (C4) Salt Deposits (C5) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5)
Field Observations:	2	
Surface Water Present?	Yes NoX Depth (inches):	
Water Table Present?	Yes X No Depth (inches): 12	
Saturation Present? (includes capillary fringe)	Yes X No Depth (inches): 5	Wetland Hydrology Present? Yes X No
Describe Recorded Data (stre	eam gauge, monitoring well, aerial photos, previous inspectio	ons), if available:
Remarks:		
Seeps located in area.		

Project/Site: Legacy Pointe Tracts A & B	Borough/City:	Anchorage, Alaska	Sampling Date:	24-Jun-06
Applicant/Owner: Forest Heights, LLC			Sampling Point:	
Investigator(s): Pat Athey	Landform (hills	ide, terrace, hummocks, etc.): <u>H</u>	illside Slope	
Local relief (concave, convex, none): <u>Sloping to west</u>	Slope (%): _5%	<u>)</u>		
Subregion: Southcentral Lat: No	51.06249	Long:W149.78117	Datum: _N	AD 27 Alaska
Are climatic / hydrologic conditions on the site typical for this tim	e of year? Yes <u>X</u>	_ No (If no, explain in Re	emarks.)	
Are Vegetation, Soil, or Hydrology signif	icantly disturbed?	Are "Normal Circumstances" p	resent? Yes X	No
Are Vegetation, Soil, or Hydrology nature	ally problematic?	(If needed, explain any answer	s in Remarks.)	
SUMMARY OF FINDINGS – Attach site map sho	wing sampling p	point locations, transects,	, important fe	atures, etc.
Hydrophytic Vegetation Present? Yes X No	Is the S	ampled Area		

Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No	is the Sampled Area within a Wetland?	Yes X No	
Remarks:				
Wetland associated wth small seeps	in area.			
				1

Species (Use scientific names. List all species in plot.)	Absolute % Cover	Indicator Status	Prevalence Index:				
1. Alnus sinuata - FAC	50	FAC	Total % Cover	of:	Multi	ply by:	
2 Oplopanax horridus - FACU	30	FACU	OBL species		x 1 =	0	
3 Calamagrostis canadensis - FAC	50	FAC	FACW species				22
4 Equisetum palustre - FACW	40	FACW	FAC species				
5 Angelica genuflexa - FACW	30	FACW	FACU species		1 10 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		
6			UPL species		x 5 =	0	
7			Column Totals:				(B)
8			2 2 3		2.0		
9			Prevalence In	dex = B/A	A = _2.8		-
10							
11			Other Indicators of				
12			(Record supporting sheet.)	data in R	emarks or	on a sepa	rate
13	·	<u> </u>	Wetland Crypto	ogams (re	cord speci	es and cov	ver
14	·		at left)	rganne (re			
15			Morphological	Adaptatio	ns		
16			Problematic Hy			n (Explain)	N ^C
17	·			cropitytic	vogetation		,
18							
19							
20							
Total Cover	r: 200		Hydrophytic				
Plot size 30 ft radius % Bare 0	Ground		Vegetation Present?	Yes	X N	0	
% Cover of Wetland Bryophytes Total Cover of Bryo	phytes						_
Remarks:							
Small marsh associated with seep.							

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noist) 	%		Loc ² _1	Texture Remarks ick
			mu	ıck
, D=Depletion, RM				Root Channel, M=Matrix.
			DIIS :	
	Control and the second state of the second state of the	S. Charles 1996		Alaska Gleyed Without Hue 5Y or Redder
		and the second		Underlying Layer
State and the second	Alaska Redox With	2.5Y Hue	80 -	Other (Explain in Remarks)
	³ One indicator of hydror	hytic vecetatio	n one prim	any indicator of wetland bydrology
			And Context # A Charlos	
		Contraction and the second second second second		
	energi den urbenden. Butteta mente urbata urbeitet. 1947-1975 bi	ana 🖶 mangang pang kanal		
			H	ydric Soil Present? Yes X No
ion within Decept	tion-Estelle-Kichatna comp	lex mapped by	y NRCS (20	001).
	1)) (4) (A12)) s (A15) esent):	Indicators for Problem 1) Alaska Color Chang 1) Alaska Color Chang 1) Alaska Alpine Swale (4) Alaska Redox With (A12) 1) (A12) 3One indicator of hydrop and an appropriate la	Indicators for Problematic Hydric So 1) Alaska Color Change (TA4) ⁴) Alaska Alpine Swales (TA5) (4) Alaska Redox With 2.5Y Hue (A12)) 3One indicator of hydrophytic vegetation and an appropriate landscape posities (A15) 4 ^d Give details of color change in Remartement	Indicators for Problematic Hydric Soils ³ : 1) Alaska Color Change (TA4) ⁴ 1) Alaska Alpine Swales (TA5) (A) Alaska Redox With 2.5Y Hue (A12) Alaska Redox With 2.5Y Hue (A12) 3One indicator of hydrophytic vegetation, one prim and an appropriate landscape position must be s (A15) 4Give details of color change in Remarks.

wetland Hydrology Indica	tors:	Secondary Indicators (2 or more required)
Primary Indicators (any one	indicator is sufficient)	Water-stained Leaves (B9)
X Surface Water (A1) X High Water Table (A2) X Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Mat or Crust of Algae o Iron Deposits (B5) Iron Deposits (B5)	 Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (Sparsely Vegetated Concave Surface Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Other (Explain in Remarks) 	(B7) Oxidized Rhizospheres on Living Roots (C3)
Field Observations: Surface Water Present? Water Table Present? Saturation Present? (includes capillary fringe) Describe Recorded Data (st Remarks: Adjacent to small seep.	Yes X No Depth (inches): 2 Yes X No Depth (inches): 10 Yes X No Depth (inches): 0 tream gauge, monitoring well, aerial photos, previous insp	Wetland Hydrology Present? Yes X No

Applicant/Owner: Forest Heights, LLC Sampling Point: DP-42 (#563 Investigator(s): Pat Athey Landform (hillside, terrace, hummocks, etc.): Hillside Slope Local relief (concave, convex, none): Sloping to west Slope (%): 5% Subregion: Southcentral Lat: N61.06258 Long: W149.78165 Datum: NAD 27 Alask Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No	Borough/City:	Anchorage, Alaska	Sampling Date: 25-Jun-06
Investigator(s): Pat Athey Landform (hillside, terrace, hummocks, etc.): Hillside Slope Local relief (concave, convex, none): Sloping to west Slope (%): 5% Subregion: Southcentral Lat: N61.06258 Long: W149.78165 Datum: NAD 27 Alask Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No			Sampling Point: DP-42 (#563)
Local relief (concave, convex, none): Sloping to west Slope (%): 5% Subregion: Southcentral Lat: N61.06258 Long: W149.78165 Datum: NAD 27 Alask Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No	_ Landform (hills	ide, terrace, hummocks, etc.)	
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (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 map showing sampling point locations, transects, important features, etc Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No Is the Sampled Area within a Wetland? Yes X No			
Are Vegetation, Soil, or Hydrologysignificantly 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 map showing sampling point locations, transects, important features, etc Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No Is the Sampled Area within a Wetland?	258	Long: <u>W149.78165</u>	Datum: NAD 27 Alaska
Are Vegetation, Soil, or Hydrology naturally problematic? (If needed, explain any answers in Remarks.) SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No Is the Sampled Area within a Wetland? Yes X No	/ear? Yes X	_ No (If no, explain	in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc Hydrophytic Vegetation Present? Yes X No Hydric Soil Present? Yes X No Within a Wetland? Yes X No	ly disturbed?	Are "Normal Circumstance	es" present? Yes X No
Hydrophytic Vegetation Present? Yes X No Is the Sampled Area Hydric Soil Present? Yes X No within a Wetland? Yes X No	roblematic?	(If needed, explain any an	swers in Remarks.)
Hydric Soil Present? Yes X No within a Wetland? Yes X No	g sampling p	ooint locations, transe	cts, important features, etc.
Hydric Soil Present? Yes X No within a Wetland? Yes X No	- In the S	ampled Area	
Wetland Hydrology Present? Yes X No	is the S		Yes X No
	-	· ·····	
Remarks: Wetland associated with a small creek to north.		Landform (hills Slope (%): <u>5%</u> 258 rear? Yes <u>X</u> y disturbed? roblematic? g sampling p Is the S	Slope (%): <u>5%</u> <u>258</u> Long: <u>W149.78165</u> rear? Yes <u>X</u> No <u>(If no, explain</u> y disturbed? Are "Normal Circumstance roblematic? (If needed, explain any an g sampling point locations, transe Is the Sampled Area within a Wetland?

Species (Use scientific names. List all species in p	Absolute		Prevalence Index:				
1 Alnus sinuata - FAC	10	FAC	Total % Cover c	of:	Mul	tiply by:	
2 Equisetum palustre - FACW	90	FACW	OBL species			The second se	
3. Calamagrostis canadensis - FAC	50	FAC	FACW species				
4			FAC species	60	x 3 =	180	
5			FACU species		x 4 =	0	-
6			UPL species		x 5 = _	0	_
7			Column Totals:	150	(A) _	360	(B)
8			Describerto las		2	1	
9			Prevalence Inc	dex = B/A	A =	+	-
10							
11			Other Indicators of				
12			(Record supporting of sheet.)	data in Re	emarks o	r on a sepa	rate
13			Wetland Crypto	gams (re	cord spec	cies and co	ver
14			at left)	30			
15			Morphological A	Adaptation	ns		
16			Problematic Hyd			on (Explain)
17	<u>.</u>	<u></u>					/
18							
19							
20							
	Total Cover: 150	-	Hydrophytic				
Plot size 30 ft radius	% Bare Ground		Vegetation Present?	Vee	X I	No	
% Cover of Wetland Bryophytes Te	otal Cover of Bryophytes		Tresenti	103			_
Remarks:							
Herb-grass meadow adjacent to small creek.							

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Depth Matrix			Redox Features							
(inches)	Color (moist)	%	Color (moist)	%	_Type ¹	Loc ²	Texture		Remarks	
0-18	black						muck			
21				_						
							6 <u></u>			
	k 									
	3 						· · · · · · · · · · · · · · · · · · ·			
							<u> </u>			
							·			
	oncentration, D=Dep	letion, RM=I					RC=Root Channel,	M=Matr	ix.	
lydric Soil ∣ V			Indicators for			Soils":				
Nonconstant pro-	or Histel (A1)		1 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	or Change	Same State		den en anna anna anna anna anna anna ann	18	thout Hue 5Y	or Redder
	pipedon (A2)			ine Swales	Sector Sector		Underlyi			
_ Hydroge	en Sulfide (A4)		Alaska Red	dox With 2.5	5Y Hue		Other (Exp	plain in F	Remarks)	
_ Thick Da	ark Surface (A12)									
Alaska C	Gleyed (A13)		³ One indicator	of hydrophy	tic vegeta	ation, one	primary indicator o	of wetlan	d hydrology,	
Alaska F	Redox (A14)		and an appro	opriate land	scape po	sition mus	t be present.			
Alaska C	Gleyed Pores (A15)		⁴ Give details of	color chang	ge in Rem	narks.				
Restrictive I	Layer (if present):									
Type:										
Depth (ind	ches):						Hydric Soil Pre	esent?	Yes X	No
Remarks: Histic cryaq	quept inclusion with	in Deceptio	on-Estelle-Kichat	na complex	k mapped	l by NRC	S (2001).			

Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is su	ifficient)	Water-stained Leaves (B9)
 Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Mat or Crust of Algae or Marl (B4) Iron Deposits (B5) 	 Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7 Sparsely Vegetated Concave Surface (B Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Other (Explain in Remarks) 	
Field Observations:		
Surface Water Present? Yes	No X Depth (inches):	
	No X Depth (inches):	
Saturation Present? Yes X (includes capillary fringe)	_ No Depth (inches):0	Wetland Hydrology Present? Yes X No
	nonitoring well, aerial photos, previous inspec	tions), if available:
Permet/e:		
Remarks: Seeps located up slope.		
Seeps located up slope.		

Project/Site: Legacy Pointe Tracts A & B	Borough/Ci	ty:Ancho	rage, Alaska	Sam	pling Date:	25-Jun-06
Applicant/Owner: Forest Heights, LLC						DP-43 (#567)
Investigator(s): Pat Athey	Landform (hillside, terr	ace, hummocks, etc.): Hillsid	e Slope	51
Local relief (concave, convex, none): <u>Gentle slope to west</u>						
Subregion: Southcentral Lat: N61.062	88	Lor	g: W149.78186		_ Datum: _1	NAD 27 Alaska
Are climatic / hydrologic conditions on the site typical for this time of ye						
Are Vegetation, Soil, or Hydrology significantly	125/V/V - VA130V/846	0.1410.0425				No
Are Vegetation, Soil, or Hydrology naturally pro			eded, explain any a			
SUMMARY OF FINDINGS – Attach site map showing		2020 2020				aturos atc
SUMMART OF FINDINGS - Attach site map showing	j sampini	ig point i	ocations, transe	ects, im	portant le	atures, etc.
Hydrophytic Vegetation Present? Yes X No	Is th	e Sampled	Area			
Hydric Soil Present? Yes X No		in a Wetlar		Yes X	No	
Wetland Hydrology Present? Yes X No						
Remarks: Wetland associated with a small creek to north.						
VEGETATION						1
	Absolute	Indicator	T			1
Species (Use scientific names. List all species in plot.)	% Cover	Status	Prevalence Index			
1 Calamagrostis canadensis - FAC	80	FAC	Total % Cove			Street and the second sec
2 Angelica genuflexa - FACW	20	FACW	OBL species			
3 Equisetum palustre - FACW	30	FACW	FACW species			
4. Alnus sinuata - FAC		FAC	FAC species		a 2008) ar	10
5			FACU species			0
6	<u> </u>		UPL species		3	100
7			Column Totals:	150	(A)	(B)
8		<u> </u>	Prevalence I	ndex = B/	A = 2.7	
9		<u> </u>				
10	·					
11	3 		Other Indicators (Record supporting			
12			sheet.)			10
13 14	3 2	 .	Wetland Cryp	togams (re	cord specie:	s and cover
15			at left)			
16.			Morphological			
17			Problematic H	lydrophytic	Vegetation	(Explain)
18	0					
19						
20						
Total Cover	: 150		Hydrophytic			
Plot size _30 ft radius % Bare G	Fround		Vegetation Present?	Vec	X No	
% Cover of Wetland Bryophytes Total Cover of Bryo	phytes		Fresentr	Tes	X No	
Remarks:			4			
Herb-grass meadow adjacent to small creek.						

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Depth	Matrix		Red	ox Features	S			
(inches)	Color (moist)	%	Color (moist)	%	_Type ¹	Loc ²	Texture	Remarks
0-20	black						muck	
	12							
					3 <u></u> *			
					·			
							·	
	ncentration, D=Dep	letion, RM=R					RC=Root Channel, M	M=Matrix.
Hydric Soil In			Indicators for		-	Soils ³ :		
X Histosol o	r Histel (A1)		Alaska Co	lor Change	$(TA4)^4$		Alaska Gle	yed Without Hue 5Y or Redder
Histic Epip	oedon (A2)		Alaska Alp	ine Swales	(TA5)		Underlyin	ig Layer
Hydrogen	Sulfide (A4)		Alaska Re	dox With 2.	5Y Hue		Other (Exp	lain in Remarks)
Thick Dark	k Surface (A12)							
Alaska Gle	eyed (A13)		³ One indicator	of hydrophy	ytic vegeta	ation, one	primary indicator of	wetland hydrology,
Alaska Re	dox (A14)		and an appr	opriate land	scape po	sition mus	t be present.	
Alaska Gle	eyed Pores (A15)		⁴ Give details of	f color chan	ige in Ren	narks.		
Restrictive La	ayer (if present):							
Туре:			C					
Depth (inch	nes):		_				Hydric Soil Pres	sent? Yes X No
Remarks: Histic cryaqu	ept inclusion with	in Deception	n-Estelle-Kichat	na comple	x mapped	l by NRC	S (2001).	

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)	Water-stained Leaves (B9)
	 Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) Presence of Reduced Iron (C4) Salt Deposits (C5) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes No X Depth (inches):	
Water Table Present? Yes <u>No X</u> Depth (inches):	
(includes capillary fringe)	Vetland Hydrology Present? Yes X No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspectio	ns), if available:
Demovice	
Remarks: Adjacent to small creek.	

Project/Site: Legacy Pointe Tracts A & B	Borough/City: Anchorage, Alaska	Sampling Date: 25-Jun-06
Applicant/Owner: Forest Heights, LLC		Sampling Point: DP-44 (#569)
Investigator(s): Pat Athey	Landform (hillside, terrace, hummocks, etc.): <u>Hi</u>	llside Slope
Local relief (concave, convex, none): Gentle slope to west	Slope (%): <u>1%</u>	
Subregion: Southcentral Lat: N61.062	260 Long: <u>W149.78267</u>	Datum: NAD 27 Alaska
Are climatic / hydrologic conditions on the site typical for this time of y	ear? Yes X No (If no, explain in Re	marks.)
Are Vegetation, Soil, or Hydrology significantly	y disturbed? Are "Normal Circumstances" pr	resent? Yes X No
Are Vegetation, Soil, or Hydrology naturally pr	roblematic? (If needed, explain any answers	s in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	g sampling point locations, transects,	important features, etc.
Hydrophytic Vegetation Present? Yes X No	Is the Sampled Area	
Hydric Soil Present? Yes X No		X No
Wetland Hydrology Present? Yes X No	within a wetland?	NO
Remarks:	·	
Wetland associated with a small creek to north.		

Province (llos estentific normae , list all anonice in plat)	Absolute	Indicator	Prevalence Index				
Species (Use scientific names. List all species in plot.) 1 Alnus sinuata - FAC	<u>% Cover</u> 20	<u>Status</u> FAC	Total % Cove		N.4. 141	- h - h	
2 Oplopanax horridus - FACU	20	FACU	OBL species			oly by: 0	-
3 Equisetum palustre - FACW	30	FACW	FACW species				-0
Calamagrostis canadensis - FAC	80	FAC		100			
			FAC species _ FACU species _				•C
5			sta oznanosta in Ashikutensen a				-
6			UPL species _				-
7			Column Totals: _	150	(A)	-++0	(B)
8			Prevalence	Index = B/	A =2.9		_
9					and the standard		
10			011				
11			Other Indicators (Record supportin				rate
12			sheet.)	0		106	
13			Wetland Cryp	otogams (re	cord specie	es and co	ver
14			at left)				
15			Morphologica	I Adaptatio	ns		
16			Problematic H	Hydrophytic	Vegetation	n (Explain)
17							
18		<u> </u>					
19							
20Total Cove	- 150						
			Hydrophytic Vegetation				
Plot size % Bare 0	Ground		Present?	Yes	X No	o	
% Cover of Wetland Bryophytes Total Cover of Bryo	phytes		1999 - 1920 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -	7.1 W N D S			
Remarks:							
Herb-grass meadow adjacent to small creek.							

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Profile Description	STATES STATES AND A PROPERTY	o the depth								
Depth	Matrix color (moist)			x Features %		Loc ²	Texture		Remarks	
	novem to service the cost	<u>%</u>	Color (moist)		_Type ¹	LOC		-	Remarks	
0-12 blac	ск						muck			
				·						
·	~									
di										
·				·				-		
							1			
s e t is							- <u>-</u>	-		
Type: C=Concen	tration D-Dank	tion DM-D	duced Metrix	21		Lining I	DO-Dest Chara	al MaMata	lu.	12
Hydric Soil Indica		etion, Rivi=Re	Indicators for F				RC=Root Chann	ei, m=inatr	IX.	
Histosol or His			Alaska Colo				Alaska	Gleved Wit	thout Hue 5Y o	or Redder
X Histic Epipedo			Alaska Alpin		Same Sills		2	rlying Laye		
Hydrogen Sult	and the second		Alaska Red		Sec. Son Pre-			Explain in F		
Thick Dark Su	irface (A12)						10 <u></u>			
Alaska Gleyed	d (A13)		³ One indicator of	f hydrophy	tic vegeta	tion, one	primary indicato	or of wetlan	d hydrology,	
Alaska Redox	(A14)		and an appro	priate land	scape pos	sition mus	t be present.			
Alaska Gleyed	d Pores (A15)		⁴ Give details of	color chang	ge in Rem	arks.				
Restrictive Layer	(if present):									
Туре:			_:							
Depth (inches):			_				Hydric Soil	Present?	Yes X	No
Remarks:										
Histic cryaquept	inclusion within	n Deception	-Estelle-Kichatn	a complex	mapped	by NRC	CS (2001).			

Wetland Hydrology Indicat	ors:		<u>S</u>	econdary Indicators (2 or more required)
Primary Indicators (any one	indicator is suff	ficient)		_ Water-stained Leaves (B9)
 Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Mat or Crust of Algae or Iron Deposits (B5) 		 Surface Soil Cracks (B6) Inundation Visible on Aerial Imager Sparsely Vegetated Concave Surfa Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Other (Explain in Remarks) 	· · / —	 Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) Presence of Reduced Iron (C4) Salt Deposits (C5) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5)
Field Observations:				
Surface Water Present?	Yes	No X Depth (inches):	_	
Water Table Present?	Yes	No X Depth (inches):	_	
Saturation Present? (includes capillary fringe)	Yes X	No Depth (inches):4	Wetland H	lydrology Present? Yes X No
	eam gauge, m	onitoring well, aerial photos, previous in	spections), if ava	ilable:
Remarks:				
Adjacent to small creek.				

Project/Site: Legacy Pointe Tracts A & B	Borough/Ci	ty: Ancho	rage, Alaska	Sam	pling Date:	25-Jun-()6
Applicant/Owner: Forest Heights, LLC					pling Point		
Investigator(s): Pat Athey	Landform (hillside terr					
Local relief (concave, convex, none): Gentle slope to west							
Subregion: Southcentral Lat: N61.062					Datum:	NAD 27	Alaska
Are climatic / hydrologic conditions on the site typical for this time of ye						11110 27	- Hushu
	Nativity - Shits Children	0791006295				V N-	
Are Vegetation, Soil, or Hydrology significantly							
Are Vegetation, Soil, or Hydrology naturally pro							
SUMMARY OF FINDINGS – Attach site map showing	samplin	ig point l	ocations, trans	ects, im	portant f	eatures	, etc.
Hydrophytic Vegetation Present? Yes X No							
Hydric Soil Present? Yes X No		ne Sampled		v			ſ
Wetland Hydrology Present? Yes X No	with	nin a Wetlar	nd?	Yes	No_		
Remarks:							\neg
Wetland associated with a small creek to north.							
							1
VEGETATION	Abaalata	In all a stars	1				
Species (Use scientific names. List all species in plot.)	Absolute % Cover	Indicator Status	Prevalence Index	x:			
1 Calamagrostis canadensis - FAC	80	FAC	Total % Cove	er of:	Multip	bly by:	
2 Oplopanax horridus - FACU	40	FACU	OBL species		x 1 =	0	
3 Equisetum palustre - FACW	20	FACW	FACW species	20	x 2 =	40	5
4 Alnus sinuata - FAC	20	FAC	FAC species	100	x 3 =	300	
5			FACU species	40	x 4 =	160	
6			UPL species _		x 5 =		2
7			Column Totals: _	160	(A)	500	(B)
8	. <u> </u>		Prevalence	Index = B/	A = 31		
9			Frevalence	muex - Dh	<u></u>		3
10	·						
11			Other Indicators (Record supportin				ate
12			sheet.)	iy dala in i	CITIAL KS UT	Jil a Sepai	ale
13		<u> </u>	Wetland Cryp	otogams (re	cord specie	es and cov	er
14			at left)				
15			Morphologica	al Adaptatio	ns		
16			Problematic H	Hydrophytic	Vegetation	ı (Explain)	ŝ
17 18							
19							
20							
Total Cover			Hydrophytic				
	Fround		Vegetation				
in the treat			Present?	Yes	X No	>	-
% Cover of Wetland Bryophytes Total Cover of Bryop Remarks:	phytes						
Herb-grass meadow adjacent to small creek.							
THE grass meadow adjacent to small eleck.							

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Profile Des	cription: (Describe t	o the depth	needed to docur	ment the i	ndicator.)				
Depth	Matrix			x Features		. 2			
(inches)	Color (moist)		Color (moist)		_Type ¹	Loc ²	Texture	Remarks	
0-10	black						muck		
10-16	dark brown						silt loam		
				· <u> </u>					
				·					
	oncentration, D=Depl	etion RM=R	educed Matrix		PI =Por		RC=Root Channel, M=	Matrix	
Hydric Soil			Indicators for I					Maria.	
	or Histel (A1)		Alaska Colo				Alaska Gleve	d Without Hue 5Y	or Redder
X Histic E	pipedon (A2)		Alaska Alpi		S		Underlying I		
Hydroge	en Sulfide (A4)		Alaska Red	lox With 2.	5Y Hue		Other (Explain	n in Remarks)	
Thick D	ark Surface (A12)								
Alaska (Gleyed (A13)		³ One indicator of	of hydrophy	tic vegeta	ation, one	primary indicator of we	etland hydrology,	
Alaska I	Redox (A14)		and an appro	ter de la conservention de la vese			st be present.		
Alaska	Gleyed Pores (A15)		⁴ Give details of	color chan	ge in Rem	narks.			
Restrictive	Layer (if present):								
Type:									
Depth (in	ches):		_				Hydric Soil Preser	nt? Yes X	No
Remarks:									
Histic crya	quept inclusion with	in Deceptio	n-Estelle-Kichatr	a complex	x mapped	by NRC	CS (2001).		

Wetland Hydrology Indica	ors:		Secondary Indicators (2 or more required)
Primary Indicators (any one	indicator is s	sufficient)	Water-stained Leaves (B9)
Surface Water (A1)		Surface Soil Cracks (B6)	Drainage Patterns (B10)
High Water Table (A2)		Inundation Visible on Aerial Imagery (B7)	Oxidized Rhizospheres on Living Roots (C3)
X Saturation (A3)		 Presence of Reduced Iron (C4) 	
Water Marks (B1)		Salt Deposits (C5)	
Sediment Deposits (B2)		Stunted or Stressed Plants (D1)	
Drift Deposits (B3)		Other (Explain in Remarks)	Geomorphic Position (D2)
Mat or Crust of Algae of	Marl (B4)		Shallow Aquitard (D3)
Iron Deposits (B5)			Microtopographic Relief (D4)
			FAC-Neutral Test (D5)
Field Observations:			
Surface Water Present?	Yes	No X Depth (inches):	
Water Table Present?	Yes	No X Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes X	No Depth (inches):	Wetland Hydrology Present? Yes X No
	ream gauge,	monitoring well, aerial photos, previous inspecti	ons), if available:
Remarks:			
Adjacent to small creek.			

Project/Site: Legacy Pointe Tracts A & B	Borough/City:	Anchorage, Alaska	Sampling Date	25-Jun-06
Applicant/Owner: Forest Heights, LLC				DP-46 (#589)
Investigator(s): Pat Athey	Landform (hills	ide, terrace, hummocks, etc.):	Hillside Slope	
Local relief (concave, convex, none): Gentle slope to west	Slope (%): _1%	<u>.</u>		
Subregion: Southcentral Lat: 1	N61.06290	Long: W149.78413	Datum:	NAD 27 Alaska
Are climatic / hydrologic conditions on the site typical for this ti	me of year? Yes <u>X</u>	_ No (If no, explain i	n Remarks.)	
Are Vegetation, Soil, or Hydrology sign	nificantly disturbed?	Are "Normal Circumstance	s" present? Yes	<u>X</u> No
Are Vegetation, Soil, or Hydrology nat	urally problematic?	(If needed, explain any ans	wers in Remarks.)	
SUMMARY OF FINDINGS – Attach site map sh	lowing sampling p	point locations, transed	ts, important f	eatures, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No _ No _ No _	X X X	Is the Sampled Area within a Wetland?	Yes	No	X
Remarks: Outside boundary of wetland to south.							

Species (Use scientific names. List all species in plot.)	Absolute % Cover	Indicator Status	Prevalence Index	:			
1 Calamagrostis canadensis - FAC	50	FAC	Total % Cover	of:	Multi	ply by:	_
2 Equisetum arvense - FACU	50	FACU	OBL species		x 1 =	0	
3. Rosa acicularis - FACU	30	FACU	FACW species				
4 Rubus idaeus - FAC	40	FAC	FAC species				
5			FACU species	80	x 4 =	320	
6			UPL species				
7			Column Totals:				(B)
8					2.5		
9			Prevalence I	ndex = B//	A = 3.5		-
10							
11			Other Indicators	of Hydrop	hytic Veg	station:	
12			(Record supporting sheet.)	y data in R	emarks or	on a sepa	rate
13		<u> </u>	Wetland Crypt	logams (re	cord speci	es and co	vor
14			at left)	oganis (re	cord speci	es and co	VCI
15			Morphological	Adaptatio	ne		
16			Problematic H	1.1.1.991.42. *		n (Evolain	N State
17	<u></u>			ydropnyiic	vegetatio		,
18		<u> </u>					
19							
20							
Total Cov	er: 170		Hydrophytic				
Plot size _30 ft radius % Bare	Ground	75,	Vegetation Present?	Yes	N	o X	
% Cover of Wetland Bryophytes Total Cover of Bry	ophytes						_
Remarks:							
Herb-grass meadow.							

SOIL

inches)	Matrix Color (moist)	%	Color (moist)	ox Features % Tvp	e ¹ Loc ²	Texture	Remarks
-2						organics	rionano
-8	black					muck	
8-12	yellow-red					sandy loam w/ cob	bles
	-						
	. <u> </u>						
	Concentration, D=Depl	etion, RM=F				RC=Root Channel, M=	Matrix.
lydric Soil	Indicators:		Indicators for	Problematic Hy	dric Soils':		
History	ol or Histel (A1)		Alaska Col	les Change (TA A)	4	Alacka Clava	JACH and Line EV as Dedalas
_ HISLOSU	of Hister (AT)			lor Change (TA4))	Alaska Gleye	d Without Hue 5Y or Redder
-22	Epipedon (A2)		General contract contracts	ine Swales (TA5		Underlying	
_ Histic E	and the second		Alaska Alp)	Underlying	
_ Histic E _ Hydrog	Epipedon (A2)		Alaska Alp	ine Swales (TA5)	Underlying	Layer
_ Histic E _ Hydrog _ Thick D	Epipedon (A2) en Sulfide (A4)		Alaska Alp Alaska Ree	ine Swales (TA5 dox With 2.5Y Hu))	Underlying	Layer n in Remarks)
_ Histic E _ Hydrog _ Thick E _ Alaska	Epipedon (A2) Ien Sulfide (A4) Dark Surface (A12)		Alaska Alp Alaska Rec ³ One indicator	ine Swales (TA5 dox With 2.5Y Hu) ue egetation, one	Underlying Other (Explai	Layer n in Remarks)
_ Histic E _ Hydrog _ Thick D _ Alaska _ Alaska	Epipedon (A2) Ien Sulfide (A4) Dark Surface (A12) Gleyed (A13)		Alaska Alp Alaska Red ³ One indicator and an appro	ine Swales (TA5 dox With 2.5Y Hu of hydrophytic ve) ue getation, one e position mus	Underlying Other (Explai	Layer n in Remarks)
Histic E Hydrog Thick E Alaska Alaska Alaska	Epipedon (A2) Ien Sulfide (A4) Dark Surface (A12) Gleyed (A13) Redox (A14)		Alaska Alp Alaska Red ³ One indicator and an appro	ine Swales (TA5 dox With 2.5Y Hu of hydrophytic ve opriate landscape) ue getation, one e position mus	Underlying Other (Explai	Layer n in Remarks)
Histic E Hydrog Thick E Alaska Alaska Alaska	Epipedon (A2) en Sulfide (A4) Dark Surface (A12) Gleyed (A13) Redox (A14) Gleyed Pores (A15) Layer (if present):		Alaska Alp Alaska Red ³ One indicator and an appro	ine Swales (TA5 dox With 2.5Y Hu of hydrophytic ve opriate landscape) ue getation, one e position mus	Underlying Other (Explai	Layer n in Remarks)
Histic E Hydrog Thick D Alaska Alaska Alaska Restrictive	Epipedon (A2) en Sulfide (A4) Dark Surface (A12) Gleyed (A13) Redox (A14) Gleyed Pores (A15) Layer (if present):		Alaska Alp Alaska Red ³ One indicator and an appro ⁴ Give details of	ine Swales (TA5 dox With 2.5Y Hu of hydrophytic ve opriate landscape) ue getation, one e position mus	Underlying Other (Explai	Layer n in Remarks) etland hydrology,
Histic E Hydrog Thick D Alaska Alaska Alaska Restrictive Type: Depth (ir Remarks:	Epipedon (A2) Ien Sulfide (A4) Dark Surface (A12) Gleyed (A13) Redox (A14) Gleyed Pores (A15) Layer (if present):		Alaska Alp Alaska Red ³ One indicator and an approd ⁴ Give details of	ine Swales (TA5 dox With 2.5Y Hu of hydrophytic ve opriate landscape f color change in) ue getation, one e position mus	Underlying Other (Explainer) primary indicator of wars st be present.	Layer n in Remarks) etland hydrology,
Histic E Hydrog Thick D Alaska Alaska Alaska Restrictive Type: Depth (ir Remarks:	Epipedon (A2) Ien Sulfide (A4) Dark Surface (A12) Gleyed (A13) Redox (A14) Gleyed Pores (A15) Layer (if present):		Alaska Alp Alaska Red ³ One indicator and an approd ⁴ Give details of	ine Swales (TA5 dox With 2.5Y Hu of hydrophytic ve opriate landscape f color change in) ue getation, one e position mus	Underlying Other (Explainer) primary indicator of wars st be present.	Layer n in Remarks) etland hydrology,
Histic E Hydrog Thick D Alaska Alaska Alaska Restrictive Type: Depth (ir Remarks:	Epipedon (A2) Ien Sulfide (A4) Dark Surface (A12) Gleyed (A13) Redox (A14) Gleyed Pores (A15) Layer (if present):		Alaska Alp Alaska Red ³ One indicator and an approd ⁴ Give details of	ine Swales (TA5 dox With 2.5Y Hu of hydrophytic ve opriate landscape f color change in) ue getation, one e position mus	Underlying Other (Explainer) primary indicator of wars st be present.	Layer n in Remarks) etland hydrology,

Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is s	ufficient)	Water-stained Leaves (B9)
 Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Mat or Crust of Algae or Marl (B4) Iron Deposits (B5) 	 Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B3) Sparsely Vegetated Concave Surface (I) Hydrogen Sulfide Ocor (C1) Dry-Season Water Table (C2) Other (Explain in Remarks) 	
Field Observations:		
Surface Water Present? Yes	No X Depth (inches):	
Water Table Present? Yes	_ No X Depth (inches):	
Saturation Present? Yes (includes capillary fringe)	No X Depth (inches):	Wetland Hydrology Present? Yes No <u>X</u>
Describe Recorded Data (stream gauge,	monitoring well, aerial photos, previous inspec	tions), if available:
Remarks:		
No surface water features present.		

Project/Site: Legacy Pointe Tracts A & B	Borough/City:	Anchorage, Alaska	_ Sampling Date: _1	-Jul-06
Applicant/Owner: Forest Heights, LLC			_ Sampling Point: _	
Investigator(s): Pat Athey	Landform (hills	ide, terrace, hummocks, etc.): _	Hillside Slope	
Local relief (concave, convex, none): Sloping to west	Slope (%): _5%)		
Subregion: Southcentral La	at: <u>N61.06318</u>	Long: W149.78199	Datum: _N	AD 27 Alaska
Are climatic / hydrologic conditions on the site typical for the	his time of year? Yes $_ X$	_ No (If no, explain in	Remarks.)	
Are Vegetation, Soil, or Hydrology	significantly disturbed?	Are "Normal Circumstances"	present? Yes \underline{X}	No
Are Vegetation, Soil, or Hydrology	naturally problematic?	(If needed, explain any answ	ers in Remarks.)	
SUMMARY OF FINDINGS – Attach site map	showing sampling p	point locations, transect	s, important fea	itures, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes Yes Yes	No X No X No X	Is the Sampled Area within a Wetland?	Yes	No <u>X</u>
Remarks: Outside boundary of wetland to south	1.				

Species (Use scientific names. List all species in plot.)	Absolute % Cover	Indicator Status	Prevalence Index:				
1 Betula papyrifera - FACU	50	FACU	Total % Cover of:		Multi	ply by:	
2 Alnus tenuifolia - FAC	25	FAC	OBL species				
3 Rosa acicularis - FACU	25	FACU	FACW species			0	
4 Menziesia ferruginea - UPL	15	UPL	FAC species				
5 Oplopanax horridus - FACU	15	FACU	FACU species				-
6 Equisetum arvense - FACU	50	FACU	UPL species				
7 Calamagrostis canadensis - FAC	50	FAC	Column Totals:			1000	- (B)
8	73 <u></u>		(3) 3) 3) 3) 3) 3) 33 (3)				
9			Prevalence Inde	x = B/A	= 4.7		-
10							
11			Other Indicators of H	lydroph	ytic Veg	etation:	
12			(Record supporting da sheet.)	ita in Re	marks or	on a sepa	rate
13			Wetland Cryptoga	me /rec	ord speci	es and co	
14			at left)	inis (iec	oru speci	es and co	VEI
15				entetion			
16			Morphological Ada			n (Evalaia	
17			Problematic Hydro	opnytic	vegetatio	n (Explain)
18							
19							
20							
Total Cover	: 230		Hydrophytic				
Plot size _30 ft radius % Bare G	Fround		Vegetation Present? Ye	66	Ν	o_X	
% Cover of Wətland Bryophytes Total Cover of Bryo	phytes		Present?		N	0 <u></u>	_
Remarks:							
Herb-grass meadow.							

SOIL

Depth (inches) Color	Matrix (moist)	%	Color (moist)	ox Features %	Type ¹	Loc ²	Texture Remarks
)-2				76	_түре		organics
						-	
-20 yellow-	red					-	sandy loam w/ cobbles
0.8				- e)/			
ype: C=Concentrati		tion, RM=Re					RC=Root Channel, M=Matrix.
ydric Soil Indicators	s:		Indicators for	Problemat	ic Hydric	Soils ³ :	
_ Histosol or Histel	(A1)		Alaska Co				Alaska Gleyed Without Hue 5Y or Redde
_ Histic Epipedon (A	A2)		Alaska Alp	ine Swales	(TA5)	Underlying Layer	
_ Hydrogen Sulfide	(A4)		Alaska Re	dox With 2.	5Y Hue		Other (Explain in Remarks)
_ Thick Dark Surfac	e (A12)						
_ Alaska Gleyed (A	13)		³ One indicator	of hydrophy	tic vegeta	tion, one	primary indicator of wetland hydrology,
_ Alaska Redox (A1	4)		and an appr	opriate land	scape po	sition mus	st be present.
_ Alaska Gleyed Po	res (A15)		⁴ Give details of	f color chan	ge in Ren	narks.	
estrictive Layer (if p	present):						
Type:			-11				
							Hydric Soil Present? Yes No X

Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is s	ufficient)	Water-stained Leaves (B9)
 Surface Water (A1) High Water Table (A2) Saturation (A3) Water Marks (B1) Sediment Deposits (B2) Drift Deposits (B3) Mat or Crust of Algae or Marl (B4) Iron Deposits (B5) 	 Surface Soil Cracks (B6) Inundation Visible on Aerial Imagery (B7) Sparsely Vegetated Concave Surface (B Hydrogen Sulfide Odor (C1) Dry-Season Water Table (C2) Other (Explain in Remarks) 	 Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3)
		FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present? Yes	No X Depth (inches):	
Water Table Present? Yes	_ No X Depth (inches):	
Saturation Present? Yes (includes capillary fringe)	_ No _ X _ Depth (inches):	Wetland Hydrology Present? Yes No X
Describe Recorded Data (stream gauge,	monitoring well, aerial photos, previous inspect	ions), if available:
Remarks:		
No surface water features present.		

Project/Site: Legacy Pointe Tracts A & B	Borough/C	ity: Ancho	orage, Alaska	Sampling Date:	1-Jul-06
Applicant/Owner: Forest Heights, LLC					
Investigator(s): Pat Athey	Landform				
Local relief (concave, convex, none): Flat					
Subregion: Southcentral Lat: N61.				Datum:	NAD 27 Alaska
Are climatic / hydrologic conditions on the site typical for this time of					
					7
Are Vegetation, Soil, or Hydrolcgy signification					
Are Vegetation, Soil, or Hydrolcgy naturally	y problematic?	(lf n	eeded, explain any answe	rs in Remarks.)	
SUMMARY OF FINDINGS – Attach site map show	ving samplir	ng point l	locations, transects	, important fe	eatures, etc.
Hydrophytic Vegetation Present? Yes X No		ne Sampleo	4 4 700		
Hydric Soil Present? Yes X No	with	nin a Wetla		<u>X</u> No_	
Wetland Hydrology Present? Yes X No	with	iii a vvelia	107 108	NO	
Remarks: Wetland associated wth small seeps in area.					
VEGETATION Species (Use scientific names. List all species in plot.) 1. Betula papyrifera - FACU 2. Alnus tenuifolia - FAC 3. Rosa acicularis - FACU	Absolute % Cover 50 15 25	Indicator Status FACU FAC FACU	Prevalence Index: Total % Cover of: OBL species	x 1 =	
A Calamagrostis canadensis - FAC	$\frac{23}{50}$	FAC	FACW species		
5 Equisetum palustre - FACW		FACW	FAC species		
			UPL species		
6			Column Totals:		505
8				<u> </u>	
9			Prevalence Index	C = B/A = 3.1	
10. 11. 12. 13. 14. 15. 16. 17. 18. 19.			Other Indicators of H (Record supporting dat sheet.) Wetland Cryptoga at left) Morphological Ada X_ Problematic Hydro	ta in Remarks or o ms (record specie aptations	on a separate es and cover
20.	over: 190		Hydrophytic Vegetation Present? Ye	esX No)

% Cover of Wetland Bryophytes _

Remarks:

Vegetation considered to be hydrophytic due to presence of saturated histic soils. Herb-grass meadow.

Total Cover of Bryophytes

-	-		
-	C)	L	
-	-		

Profile Desc	cription: (Describe t	o the depth	needed to docur	nent the ir	ndicator.)			
Depth	Matrix			x Features				
(inches)	Color (moist)		Color (moist)		_Tγpe ¹	Loc ²	Texture Remarks	_
0-10	black						muck	
10-16	dark brown						silt loam	
								_
								_
Type: C=C	oncentration, D=Depl	etion, RM=R	educed Matrix.	² Location:	PL=Por	E Lining, I	RC=Root Channel, M=Matrix.	-
Hydric Soil			Indicators for F					
Histosol	l or Histel (A1)		Alaska Cold	or Change	(TA4) ⁴		Alaska Gleyed Without Hue 5Y or Redder	
X Histic E	pipedon (A2)		Alaska Alpi	ne Swales	(TA5)		Underlying Layer	
Hydroge	en Sulfide (A4)		Alaska Red	ox With 2.5	5Y Hue		Other (Explain in Remarks)	
Thick D	ark Surface (A12)							
Alaska (Gleyed (A13)		³ One indicator o	f hydrophy	tic vegeta	ation, one	primary indicator of wetland hydrology,	
Alaska I	Redox (A14)		and an appro	priate land	scape pos	sition mus	st be present.	
Alaska (Gleyed Pores (A15)		⁴ Give details of	color chang	ge in Rem	narks.		
Restrictive	Layer (if present):							
Type:			_					
Depth (in	ches):		_				Hydric Soil Present? Yes X No	
Remarks: Histic cryat	quept inclusion with	in Deception	n-Estelle-Kichatr	a complex	k mapped	by NRC	CS (2001).	

Primary Indicators (any one indic		
	ator is sufficient)	Water-stained Leaves (B9)
Surface Water (A1)	Surface Soil Cracks (B6)	Drainage Patterns (B10)
High Water Table (A2)	Inundation Visible on Aerial Imagery (B7	7) Oxidized Rhizospheres on Living Roots (C3)
X Saturation (A3)	Sparsely Vegetated Concave Surface (E	38) Presence of Reduced Iron (C4)
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Salt Deposits (C5)
Sediment Deposits (B2)	Dry-Season Water Table (C2)	Stunted or Stressed Plants (D1)
Drift Deposits (B3)	Other (Explain in Remarks)	Geomorphic Position (D2)
Mat or Crust of Algae or Mar	l (B4)	Shallow Aquitard (D3)
Iron Deposits (B5)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)
Field Observations:	31	
Surface Water Present? Y	es No X Depth (inches):	
Water Table Present? Y	es NoX_ Depth (inches):	
Saturation Present? Y (includes capillary fringe)	es <u>X</u> No <u>Depth (inches)</u> : <u>6</u>	Wetland Hydrology Present? Yes X No
Describe Recorded Data (stream	gauge, monitoring well, aerial photos, previous inspec	tions), if available:
Remarks:		
Seeps located up slope.		

Project/Site: Legacy Pointe Tracts A & B	Borough/Cit	Anchor	age, Alaska	Sam	pling Date:	1-Jul-06	5
Applicant/Owner: Forest Heights, LLC							
Investigator(s): Pat Athey						.6	
Local relief (concave, convex, none): <u>Flat</u>							
Subregion: Southcentral Lat:	N61.06361	Long	W149.78103		_ Datum:	NAD 27	Alaska
Are climatic / hydrologic conditions on the site typical for this t							
Are Vegetation, Soil, or Hydrology sig	TWO IS NOT OVER ANY OF ANY	0.0010.002.5				X No	
Are Vegetation, Soil, or Hydrology nat			eded, explain any ans				
			102 51 51 515 - 51				
SUMMARY OF FINDINGS – Attach site map sl	nowing sampling	g point lo	ocations, transe	cts, im	portant f	eatures	, etc.
Hydrophytic Vegetation Present? Yes X No							
	Is the	e Sampled		•			
Wetland Hydrology Present? Yes X No	withi	n a Wetlan	d? \	res <u>X</u>	No_		
VEGETATION Species (Use scientific names. List all species in plot.)		Indicator Status	Prevalence Index:				
1 Betula papyrifera - FACU	20	FACU	Total % Cover	of:	Multi	ply by:	
2 Alnus tenuifolia - FAC	30	FAC	OBL species		x 1 =	0	-
3 Calamagrostis canadensis - FAC	50	FAC	FACW species	50	x 2 =	100	-
4 Equisetum palustre - FACW	50	FACW	FAC species	80	x 3 =	240	-
5			FACU species	20	x 4 =	80	-
6			UPL species		x 5 =		-
7			Column Totals:	150	(A)	420	(B)
8			Prevalence In	dov = P/	A = 28		
9			Frevalence III	dex = D/	A =		-
10							
11			Other Indicators of	f Hydrop	hytic Vege	totions	

- Wetland Cryptogams (record species and cover at left)
- ____ Morphological Adaptations
- Problematic Hydrophytic Vegetation (Explain)

Hydrophytic				
Vegetation				
Present?	Yes	X	No	

Plot size _30 ft radius

% Cover of Wetland Bryophytes ____

14._____ ____ ____ ____ ____ ____

15. _____ ____ ____

Total Cover: 150

_____ % Bare Ground _

Total Cover of Bryophytes

16._____

20._____

Remarks:

Herb-grass meadow.

s	O	L
0		-

Profile Dese Depth	cription: (Describe 1 Matrix	to the depth		ment the i)		
(inches)	Color (moist)	%	Color (moist)	%	_Type ¹	Loc ²	Texture	Remarks
0-8	black						muck	
8-14	yellow-red						silt loam w/ cobbles	
							· · ·	
¹ Type: C=C	oncentration, D=Depl	letion, RM=F	Reduced Matrix.	² Location	: PL=Por	e Lining, I	RC=Root Channel, M=Matrix.	
Hydric Soil	Indicators:		Indicators for	Problemat	tic Hydric	Soils ³ :		
Histoso	l or Histel (A1)		Alaska Col	lor Change	(TA4) ⁴		Alaska Gleyed Witho	out Hue 5Y or Redder
X Histic E	pipedon (A2)		Alaska Alp	ine Swales	(TA5)		Underlying Layer	
Hydroge	en Sulfide (A4)		Alaska Red	dox With 2.	5Y Hue		Other (Explain in Re	marks)
Thick D	ark Surface (A12)							
	Gleyed (A13)		³ One indicator	of hydrophy	vtic vegeta	ation, one	primary indicator of wetland I	hydrology.
	Redox (A14)						t be present.	
	Gleyed Pores (A15)		⁴ Give details of	C. 641 3 -4000 001 0420 70				
	Layer (if present):				•			
Type:								
Depth (in			_				Hydric Soil Present?	Yes X No
Remarks: Histic crya	quept inclusion with	in Deceptio	n-Estelle-Kichat	na comple	x mapped	l by NRC	S (2001).	

Wetland Hydrology Indicat	ors:		Secondary Indicators (2 or more required)
Primary Indicators (any one i	ndicator is su	ufficient)	Water-stained Leaves (B9)
Surface Water (A1)		Surface Soil Cracks (B6)	Drainage Patterns (B10)
High Water Table (A2)		Inundation Visible on Aerial Imagery (B7)	Oxidized Rhizospheres on Living Roots (C3)
X Saturation (A3)		Sparsely Vegetated Concave Surface (B8) Presence of Reduced Iron (C4)
Water Marks (B1)		Hydrogen Sulfide Odor (C1)	Salt Deposits (C5)
Sediment Deposits (B2)		Dry-Season Water Table (C2)	Stunted or Stressed Plants (D1)
Drift Deposits (B3)		Other (Explain in Remarks)	Geomorphic Position (D2)
Mat or Crust of Algae or	Marl (B4)		Shallow Aquitard (D3)
Iron Deposits (B5)			Microtopographic Relief (D4)
			FAC-Neutral Test (D5)
Field Observations:			
Surface Water Present?	Yes	No X Depth (inches):	
Water Table Present?	Yes	No X Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes X	_ No Depth (inches):10 N	Wetland Hydrology Present? Yes X No
Describe Recorded Data (str	eam gauge, r	monitoring well, aerial photos, previous inspection	ons), if available:
Remarks:			
Seeps located up slope.			

Project/Site: Legacy Pointe Tracts A &	B	_ Borough/City:	Anchorage, Alaska	Sampling Date: <u>1-Jul-06</u>
Applicant/Owner: Forest Heights, LLC				Sampling Point: DP-50 (#609)
Investigator(s): Pat Athey		_ Landform (hills	ide, terrace, hummocks, etc.)	: Hillside Slope
Local relief (concave, convex, none): Flat				
Subregion: Southcentral	Lat: <u>N61.0</u>	6360	Long: W149.78124	Datum: NAD 27 Alaska
Are climatic / hydrologic conditions on the	site typical for this time of	year? Yes X	No (If no, explain	in Remarks.)
Are Vegetation, Soil, or Hy	drology significan	tly disturbed?	Are "Normal Circumstance	es" present? Yes X No
Are Vegetation, Soil, or Hy	drology naturally	problematic?	(If needed, explain any an	swers in Remarks.)
SUMMARY OF FINDINGS – Atta Hydrophytic Vegetation Present?	Ach site map showin		ooint locations, transe	cts, important features, etc.
Hydric Soil Present?	Yes X No	- within a		Yes X No
Wetland Hydrology Present?	Yes X No	_		
Remarks: Wetland associated wth small seeps ups	slope.			
VEGETATION				

Species (Use scientific names. List all species in plot.)	Absolute % Cover	Indicator Status	Prevalence Index	с.			
1 Betula papyrifera - FACU	25	FACU	Total % Cove	r of:	Multip	ly by:	
2 Oplopanax horridus - FACU	25	FACU	the second		2.4	0	-
3 Equisetum palustre - FACW	75	FACW	FACW species			150	
4 Calamagrostis canadensis - FAC	50	FAC		50		150	
5			FACU species				
6			UPL species				
7			Column Totals:		1	500	- (B)
8					2.0		
9		<u> </u>	Prevalence	Index = B//	A = <u>2.9</u>		÷
10							
11			Other Indicators	of Hydrop	hytic Vege	tation:	
12			(Record supportin sheet.)	g data in R	emarks or o	on a sepa	rate
13			Wetland Cryp				
14			at left)	ioganis (re	cord specie	s and co	vei
15				I Adamtatia.			
16			Morphologica			(Evaluia)	N.
17			Problematic H	iyorophylic	vegetation	(Explain)
18							
19							
20	. <u> </u>						
Total Cover	: 175		Hydrophytic				
Plot size _30 ft radius % Bare G	Ground		Vegetation Present?	Yes	X No		
% Cover of Wetland Bryophytes Total Cover of Bryo	phytes			Construction -		2.**	
Remarks:							
Herb-grass meadow.							

SC	DI	L
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Depth	Matrix		Red	ox Features						
(inches)	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Texture		Remarks	
0-16	black						muck		C 448-0450-2049-8	
							lea de la companya de			
	9.5	-04-					18 - 17 -			
	ia di seconda di second						i). 			
Type: C=C	oncentration, D=Dep	letion, RM=R	educed Matrix.	² Location:	PL=Por	e Lining, F	RC=Root Channel	, M=Matr	ix.	
Hydric Soil	Indicators:		Indicators for							
X Histosol	l or Histel (A1)		Alaska Co	lor Change	(TA4) ⁴		Alaska G	leyed Wit	thout Hue 5Y	or Redder
Histic E	pipedon (A2)		Alaska Alp	ine Swales	(TA5)		Underly	ing Laye	r	
Hydroge	en Sulfide (A4)		Alaska Re	dox With 2.	5Y Hue		Other (Ex	cplain in F	Remarks)	
Thick D	ark Surface (A12)									
Alaska	Gleyed (A13)		³ One indicator	of hydrophy	tic vegeta	ation, one	primary indicator	of wetlan	d hydrology,	
Alaska I	Redox (A14)		and an appr	opriate land	scape po	sition mus	t be present.			
Alaska	Gleyed Pores (A15)		⁴ Give details of	f color chan	ge in Rem	narks.				
Restrictive	Layer (if present):									
Type:										
Depth (in	ches):		_				Hydric Soil Pr	esent?	Yes X	No
Remarks: Histic cryad	quept inclusion with	in Deceptior	n-Estelle-Kichat	na complex	k mapped	l by NRC	S (2001).			

Wetland Hydrology Indicat	tors:	Secondary Indicators (2 or more required)
Primary Indicators (any one i	indicator is sufficient)	Water-stained Leaves (B9)
Surface Water (A1)	Surface Soil Cracks (B6)	Drainage Patterns (B10)
High Water Table (A2)	Inundation Visible on Aerial Imagery (B7)	Oxidized Rhizospheres on Living Roots (C3)
X Saturation (A3)	Sparsely Vegetated Concave Surface (B8)	Presence of Reduced Iron (C4)
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Salt Deposits (C5)
Sediment Deposits (B2)	Dry-Season Water Table (C2)	Stunted or Stressed Plants (D1)
Drift Deposits (B3)	Other (Explain in Remarks)	Geomorphic Position (D2)
Mat or Crust of Algae or	r Marl (B4)	Shallow Aquitard (D3)
Iron Deposits (B5)		Microtopographic Relief (D4)
		FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present?	Yes NoX Depth (inches):	
Water Table Present?	Yes NoX Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes X No Depth (inches): 2 W	/etland Hydrology Present? Yes X No
Describe Recorded Data (str	ream gauge, monitoring well, aerial photos, previous inspection	ns), if available:
Remarks:		
Seeps located up slope.		

Project/Site: Legacy Pointe Tracts A	Borough/Ci	ty:Ancho	orage, Alaska	Sar	npling Date:	1-Jul-06		
Applicant/Owner:Forest Heights, LL	С			57 F		Sar	mpling Point:	DP-51 (#610)
Investigator(s): Pat Athey			Landform (hillside, ter	race, hummocks, e	tc.): Hillsid	de Slope	
Local relief (concave, convex, none): _F								
					- ng:_W149.78164		Datum:	NAD 27 Alaska
Are climatic / hydrologic conditions on t				*A 10-A 110				
Are Vegetation, Soil, or		n oon to standard over beer	1211/1 VA304345	11 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	"Normal Circumsta			No
Are Vegetation, Soil, or		The second second second			eeded, explain any			
				1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -				
SUMMARY OF FINDINGS – A	ttach site ma	ap showing	y samplin	g point l	locations, tran	sects, im	portant fe	eatures, etc.
Hydrophytic Vegetation Present?	Yes_X_	No						
Hydric Soil Present?		No		e Sample			v	
Wetland Hydrology Present?		No	with	in a Wetla	nd?	Yes	No	
Remarks:								
Wetland associated wth small seeps	upslope.							
VEGETATION								-
			Absolute	Indicator				
Species (Use scientific names. List al	I species in plot.)		% Cover	Status	Prevalence Inde	ex:		
1. Betula papyrifera - FACU			75	FACU	Total % Cov	ver of:	Multip	ly by:
2 Alnus tenuifolia - FAC			25	FAC	OBL species	<u>.</u>	_ x 1 =	0
3 Rubus idaeus - FAC			50	FAC	FACW species		x 2 =	0
4. Calamagrostis canadensis - FAC			95	FAC	FAC species	170	_ x 3 =	510
5					FACU species	75	x 4 =	300
6					UPL species		_ x 5 =	0
7					Column Totals:	245	_ (A)	810 (B)
8								
9					Prevalence	e Index = B	$A = _{3.3}$	
10								
11			o <u> </u>		Other Indicator			
12					(Record support sheet.)	ing data in F	Remarks or o	n a separate
13			. <u> </u>			ntogams (r	ecord specie:	s and cover
14					at left)	proguino (i		s and cover
15		-		<u> </u>	Morphologic	al Adaptatio	ากร	
16					X Problematic			(Explain)
17				<u> </u>		, i j di opii j a	e regetation	(Explain)
18								
19								
20								
		Total Cover	: 245		Hydrophytic			
Plot size 30 ft radius		% Bare G	Fround		Vegetation Present?	Voc	V No	
% Cover of Wetland Bryophytes	Total	Cover of Brvo	phytes		Fresentr	res	X No	·
Remarks:		1						
Vegetation considered to be hydrop	hytic due to pres	sence of satura	ated histic s	oils. Herb-	-grass meadow.			
	<u>^</u>							

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	iption: (Describe f	to the depth							
Depth _ (inches)	Matrix Color (moist)	%	Color (moist)	<u>x Features</u> %	Type ¹	Loc ²	Texture Remarks		
1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.	black				1900		muck		
· <u> </u>									
							6 .	1	
		<u> </u>							
	12						30 - 25 - 25 - 25 - 25 - 25 - 25 - 25 - 2	e.	
Type: C=Cor	ncentration, D=Depl	etion RM=Re	educed Matrix	² Location:	PL=Por	e Linina, F	RC=Root Channel, M=Matrix.	1	
Hydric Soil In			Indicators for I	Problemati	ic Hydric	Soils ³ :			
X Histosol o	r Histel (A1)		Alaska Colo	or Change	(TA4) ⁴		Alaska Gleyed Without Hue 5Y or	Redder	
Histic Epip	pedon (A2)		Alaska Alpi	ne Swales	(TA5)		Underlying Layer		
Hydrogen	Sulfide (A4)		Alaska Redox With 2.5Y Hue				Other (Explain in Remarks)		
Thick Darl	k Surface (A12)								
Alaska Gle	eyed (A13)		³ One indicator of	of hydrophy	tic vegeta	ation, one	primary indicator of wetland hydrology,		
	edox (A14)		and an appropriate landscape position must be present.						
	eyed Pores (A15)		⁴ Give details of	color chang	ge in Rem	narks.			
Restrictive La	ayer (if present):								
Type:									
Depth (inch	nes):		-				Hydric Soil Present? Yes X	lo	
Remarks:		· D (1					
Histic cryaqu	ept inclusion with	in Deception	-Estelle-Kichati	ia complex	старрес	DY NKC	.5 (2001).		
HYDROLOG	v								

Wetland Hydrology Indicat	ators:	Secondary Indicators (2 or more required)
Primary Indicators (any one	indicator is sufficient)	Water-stained Leaves (B9)
		 Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) Presence of Reduced Iron (C4) Salt Deposits (C5) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) FAC-Neutral Test (D5)
Field Observations:		
Surface Water Present?	Yes No X Depth (inches):	
Water Table Present?	Yes NoX_ Depth (inches):	
Saturation Present? (includes capillary fringe)	Yes X No Depth (inches): X	Wetland Hydrology Present? Yes X No
	tream gauge, monitoring well, aerial photos, previous inspectio	ons), if available:
Remarks:		
Seeps located up slope.		

Project/Site: Legacy Pointe Tracts A & B	Borough/City:	Anchorage, Alaska	Sampling Date: 2-Jul-06	
Applicant/Owner: Forest Heights, LLC			Sampling Point: DP-52 (#628)	
Investigator(s): Pat Athey	Landform (hill	side, terrace, hummocks, etc.):	Hillside Slope	
Local relief (concave, convex, none): <u>Flat</u>	Slope (%):			
Subregion: Southcentral	_ Lat: <u>N61.06417</u>	Long: W149.78395	Datum: NAD 27 Alaska	
Are climatic / hydrologic conditions on the site typical	for this time of year? Yes <u>X</u>	No (If no, explain in	Remarks.)	
Are Vegetation, Soil, or Hydrology	significantly disturbed?	Are "Normal Circumstances	" present? Yes X No	
Are Vegetation, Soil, or Hydrolcgy	naturally problematic?	(If needed, explain any answ	wers in Remarks.)	
SUMMARY OF FINDINGS – Attach site r	nap showing sampling	point locations, transec	ts, important features, etc.	
Hydrophytic Vegetation Present? Yes X	No Is the !	Sampled Area		
Hydric Soil Present? Yes X	No		sX No	
Wetland Hydrology Present? Yes X	No within			
Remarks:				
Wetland associated with a small creek to north.				
L				

Species (Use scientific names. List all species in plot.)	Absolute <u>% Cover</u> 25	Indicator Status	Prevalence Index:	:			
1. Alnus sinuata - FAC		FAC	Total % Cover of:				-
2 Oplopanax horridus - FACU	50	FACU	OBL species		x 1 =	0	-
3 Calamagrostis canadensis - FAC	95	FAC	FACW species	50	x 2 =	100	2
4 Angelica genuflexa - FACW	50	FACW	FAC species	145	x 3 =	435	
5 Athyrium filix-femina - FAC	25	FAC	FACU species	50	x 4 =	200	
6			UPL species		x 5 =	0	2
7			Column Totals:	245	(A)	735	(B)
8			Development		3.0		
9		<u> </u>	Prevalence Ir	idex = B//	$A = _{3.0}$		-
10							
11			Other Indicators of				
12			(Record supporting sheet.)	data in R	emarks or	on a sepa	rate
13			Wetland Crypt	ogams (re	cord specie	es and co	ver
14		<u> </u>	at left)	oguino (ro			
15			Morphological	Adaptatio	ne		
16			Problematic H			(Evolain	N
17				reropityiic	vegetation		,
18		<u> </u>					
19							
20							
	l Cover: 245		Hydrophytic				
Plot size 30 ft radius %	Bare Ground		Vegetation Present? Yes X No				
% Cover of Wetland Bryophytes Total Cover	% Cover of Wetland Bryophytes Total Cover of Bryophytes						_
Remarks:							
Herb-grass meadow adjacent to small creek.							

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Profile Desc	cription: (Describe f	o the depth	needed to docu	ment the in	dicator.)				
Depth <u>Matrix</u>				ox Features					
(inches)	Color (moist)		Color (moist)		Type ¹	Loc ²	Texture	Remarks	
0-18	black						muck		
	23							10. 10.	
							19 	07	
							no <u></u>		
	an n						a	i.	
	oncentration, D=Depl	etion, RM=Re					RC=Root Channel, M=N	latrix.	
Hydric Soil			Indicators for I			Soils ³ :			
	or Histel (A1)		General sector control in the sector of the	or Change (Alaska Gleyed	Without Hue 5Y or Redder	
	pipedon (A2)		Alaska Alpine Swales (TA5)				Underlying Layer		
	en Sulfide (A4)		Alaska Redox With 2.5Y Hue				Other (Explain	in Remarks)	
—	ark Surface (A12)		2						
the second second second second	Gleyed (A13)		³ One indicator of hydrophytic vegetation, one primary indicator of wetland hydrology,						
	Redox (A14)		and an appropriate landscape position must be present.						
	Gleyed Pores (A15)		⁴ Give details of	color chang	e in Rem	narks.			
	Layer (if present):								
								N/	
1. I. I. I.	ches):		-				Hydric Soil Present	t? Yes X No	
Remarks:	mont inclusion with	in Decention	Estalla Vishata	a aomulau	monnod	he NDC	S (2001)		
Fisue cryat	quept inclusion with	In Deception	-Estene-Kichau	la complex	mapped	by NKC	5 (2001).		
HYDROLO	GY								

Wetland Hydrology Indicat	ors:				Secondary Indicators (2 or more required)		
Primary Indicators (any one	ndicator is su	ufficient)			Water-stained Leaves (B9)		
				• • •	 Drainage Patterns (B10) Oxidized Rhizospheres on Living Roots (C3) Presence of Reduced Iron (C4) Salt Deposits (C5) Stunted or Stressed Plants (D1) Geomorphic Position (D2) Shallow Aquitard (D3) Microtopographic Relief (D4) 		
Field Observations					FAC-Neutral Test (D5)		
Field Observations:	Mar.	Ne	Death (Inches)				
Surface Water Present?	201200112-0		Depth (inches):				
Water Table Present?			Depth (inches):		Wetland Hydrology Present? Yes X No		
Saturation Present? (includes capillary fringe)	Yes X	_ No	Depth (inches): 6	Wetla			
Describe Recorded Data (str	eam gauge,	monitoring v	vell, aerial photos, previous in	spections), if	f available:		
Remarks:							
Adjacent to small creek.							
1							

Project/Site: Legacy Pointe Tracts A & B	Borough/City:	Anchorage, Alaska	Sampling Date: 2-Jul-06
Applicant/Owner: Forest Heights, LLC			Sampling Point: DP-53 (#658
Investigator(s): Pat Athey	Landform (hills	ide, terrace, hummocks, etc.): <u>H</u>	
Local relief (concave, convex, none): <u>Flat</u>	Slope (%):		
Subregion: Southcentral Lat: N61.061	189	Long: W149.78323	Datum: NAD 27 Alask
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes X	_ No (If no, explain in R	temarks.)
Are Vegetation, Soil, or Hydrology significantly	v disturbed?	Are "Normal Circumstances" p	present? Yes X No
Are Vegetation, Soil, or Hydrology naturally pr	oblematic?	(If needed, explain any answe	ers in Remarks.)
SUMMARY OF FINDINGS – Attach site map showing	g sampling p	point locations, transects	, important features, etc

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X No Yes X No Yes X No	Is the Sampled Area within a Wetland?	Yes X No
Remarks: Wetland associated wth seep.			

Species (Use scientific names. List all species ir	Absolut n plot.) % Cove		Prevalence Index:	
1 Alnus sinuata - FAC	25	FAC	Total % Cover of:	Multiply by:
2 Calamagrostis canadensis - FAC	50	FAC	OBL species	
3 Angelica genuflexa - FACW	25	FACW	FACW species 25	
4			FAC species 75	
5			FACU species	x 4 =0
6			UPL species	x 5 =0
7			Column Totals:100	(A) <u>275</u> (B)
8				28
9			Prevalence Index = E	B/A =
10				
11			Other Indicators of Hydro	
12			(Record supporting data in sheet.)	Remarks or on a separate
13			Wetland Cryptogams (r	record species and cover
14			at left)	
15			Morphological Adaptati	ons
16	7.0		Problematic Hydrophyt	
17		<u> </u>		
18				
19				
20				
	Total Cover: 100	-	Hydrophytic	
Plot size _30 ft radius	% Bare Ground		Vegetation Present? Yes	X No
% Cover of Wetland Bryophytes	Total Cover of Bryophytes _		Flesent? Tes_	NU
Remarks:				
Alder thicket with herb-grass meadows.				

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Depth	Matrix			ox Features				
(inches)	Color (moist)		Color (moist)	%	Type ¹	Loc ²	Texture	Remarks
)-20	black					-	<u>muck</u>	
						<u></u>		
					;			
	Concentration, D=Depl	etion, RM=					RC=Root Channel, M	//=Matrix.
	I Indicators:		Indicators for			Soils':		
Histoso	ol or Histel (A1)		General sector contracts and the	lor Change (Alaska Gley	yed Without Hue 5Y or Redder
_ Histic E	Epipedon (A2)		Alaska Alp	ine Swales (TA5)		Underlyin	g Layer
	gen Sulfide (A4) Dark Surface (A12)		Alaska Re	dox With 2.5	Y Hue		Other (Expl	ain in Remarks)
_ Alaska	Gleyed (A13)		³ One indicator	of hydrophyt	ic vegeta	tion, one	primary indicator of	wetland hydrology,
Alaska	Redox (A14)		and an appr	opriate lands	cape po	sition mus	st be present.	
_ Alaska	Gleyed Pores (A15)		⁴ Give details of	f color chang	e in Rem	narks.		
Restrictive	Layer (if present):							
Type:								
Depth (i	nches):						Hydric Soil Pres	sent? Yes X No
Remarks:	17 - M							
Histic crya	quept inclusion with	n Decepti	on-Estelle-Kichat	na complex	mapped	by NRC	CS (2001).	
YDROLO	OGY							
							Casandan India	atom (2 or more realized)

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
Primary Indicators (any one indicator is sufficient)	Water-stained Leaves (B9)
X Surface Water (A1) Surface Soil Cracks (B6)	Drainage Patterns (B10)
X High Water Table (A2) Inundation Visible on Aerial Imagery (E	7) Oxidized Rhizospheres on Living Roots (C3)
X Saturation (A3) Sparsely Vegetated Concave Surface	(B8) Presence of Reduced Iron (C4)
Water Marks (B1) Hydrogen Sulfide Odor (C1)	Salt Deposits (C5)
Sediment Deposits (B2) Dry-Season Water Table (C2)	Stunted or Stressed Plants (D1)
Drift Deposits (B3) Other (Explain in Remarks)	Geomorphic Position (D2)
Mat or Crust of Algae or Marl (B4)	Shallow Aquitard (D3)
Iron Deposits (B5)	Microtopographic Relief (D4)
	FAC-Neutral Test (D5)
Field Observations:	
Surface Water Present? Yes X No Depth (inches):	
Water Table Present? Yes X No Depth (inches): 2	
Saturation Present? Yes X No Depth (inches): 0	Wetland Hydrology Present? Yes X No
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspe	ctions), if available:
Remarks:	
Adjacent to small seep.	

Project/Site: Legacy Pointe Tracts A & B	Borough/City:	Anchorag	ge, Alaska	_ Sampling Date:	2-Jul-06
Applicant/Owner: Forest Heights, LLC	: (s) (s				DP-54 (#661)
Investigator(s): Pat Athey	Landform (hills	ide, terrace	e, hummocks, etc.): _	Hillside Slope	
Local relief (concave, convex, none): Flat	Slope (%):				
Subregion: Southcentral Lat: N61.061	153	Long:	W149.78339	Datum: _	NAD 27 Alaska
Are climatic / hydrologic conditions on the site typical for this time of ye	ear? Yes X	No	(If no, explain in I	Remarks.)	
Are Vegetation, Soil, or Hydrology significantly	disturbed?	Are "No	ormal Circumstances"	present? Yes 2	K No
Are Vegetation, Soil, or Hydrolcgy naturally pr	oblematic?	(If need	led, explain any answ	ers in Remarks.)	
SUMMARY OF FINDINGS – Attach site map showing	g sampling p	point loc	ations, transect	s, important fe	eatures, etc.

Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present?	Yes X	No No No	Is the Sampled Area within a Wetland?	Yes X	No
Remarks: Wetland associated wth seep.					

Species (Use scientific names. List all species in p	Absolute blot.) % Cover		Prevalence Index:				
1 Alnus sinuata - FAC	50	FAC	Total % Cover of:		Multi	ply by:	
2 Calamagrostis canadensis - FAC	50	FAC	OBL species		24		112
3 Angelica genuflexa - FACW	25	FACW	FACW species		0.000		-0
4			FAC species				2
5			FACU species		2002 - 20		•5
6			UPL species				
7			Column Totals:				(B)
8					(5)(5) (5)		
9			Prevalence Inde	ex = B/A	= _2.8		-
10							
11			Other Indicators of H	Hydroph	ytic Vege	atation:	
12			(Record supporting da	ata in Re	marks or	on a sepa	rate
13			sheet.)				
14			Wetland Cryptoga at left)	ams (reco	ord speci	es and cov	ver
15			Morphological Ad	Instation			
16			Problematic Hydro			n (Evoloin)	v
17				ophylic v	vegetatio	n (Explain))
18							
19							
20							
	Total Cover: 125		Hydrophytic				
Plot size 30 ft radius	% Bare Ground		Vegetation Present? Y	loc X	N	0	
% Cover of Wətland Bryophytes T	otal Cover of Bryophytes		Fresent?	es <u>^</u>		0	-
Remarks:							
Alder thicket with herb-grass meadows.							

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Depth Matrix	Redo	x Features			
(inches) Color (moist) %	Color (moist)	<u>%</u> Type ¹	_Loc ²	Texture Remarks	
0-20 black					
Type: C=Concentration, D=Depletion, RM=				RC=Root Channel, M=Matrix.	
lydric Soil Indicators:		Problematic Hydric	Soils":		
X Histosol or Histel (A1)	General contract of the second	or Change (TA4) ⁴		Alaska Gleyed Without Hue 5Y or Red	der
_ Histic Epipedon (A2)		ne Swales (TA5)		Underlying Layer	
 Hydrogen Sulfide (A4) Thick Dark Surface (A12) 	Alaska Red	ox With 2.5Y Hue		Other (Explain in Remarks)	
Alaska Gleyed (A13)	³ One indicator o	f hydrophytic veget	ation, one	primary indicator of wetland hydrology,	
_ Alaska Redox (A14)	and an appro	priate landscape po	sition mus	st be present.	
Alaska Gleyed Pores (A15)	⁴ Give details of	color change in Rer	narks.		
Restrictive Layer (if present):					
Туре:					
Depth (inches):				Hydric Soil Present? Yes X No	
Remarks: Histic cryaquept inclusion within Decepti	on-Estelle-Kichatn	a complex mapped	l by NRC	CS (2001).	
YDROLOGY					

wetland Hydrology Indicators:		Secondary Indicators (2 or more required)		
Primary Indicators (any one indicator is sufficient)		Water-stained Leaves (B9)		
X Surface Water (A1) Surface Sol	il Cracks (B6)	Drainage Patterns (B10)		
X High Water Table (A2) Inundation	Visible on Aerial Imagery (B7)	Oxidized Rhizospheres on Living Roots (C3)		
X Saturation (A3) Sparsely Ve	egetated Concave Surface (B8)	Presence of Reduced Iron (C4)		
Water Marks (B1) Hydrogen S	Sulfide Odor (C1)	Salt Deposits (C5)		
Sediment Deposits (B2) Dry-Seasor	n Water Table (C2)	Stunted or Stressed Plants (D1)		
Drift Deposits (B3) Other (Expl	Other (Explain in Remarks) Geomo			
Mat or Crust of Algae or Marl (B4)		Shallow Aquitard (D3)		
Iron Deposits (B5)		Microtopographic Relief (D4)		
		FAC-Neutral Test (D5)		
Field Observations:	-			
Surface Water Present? Yes X No Dep	th (inches):			
Water Table Present? Yes X No Dep	th (inches):			
Saturation Present? Yes X No Depr (includes capillary fringe)	th (inches): Wetla	nd Hydrology Present? Yes X No		
Describe Recorded Data (stream gauge, monitoring well, a	erial photos, previous inspections), i	f available:		
Remarks:				
Adjacent to small seep.				

Attachment 3

Pictures of Wetlands and Other Features (Provided in digital format on separate CD)

> Legacy Pointe Tracts A & B Anchorage, Alaska

> > Forest Heights, LLC

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