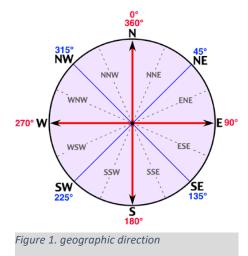
## **Ecological Reflection Sampling Points**

**BY CASEY JONES** 

The ecological reflections study requires a series of randomly-distributed points across the site in order to monitor the changes that are predicted to take place.

Points were randomly generated (ArcGIS Pro 2.2.4) within the centrally-located Swenson tract (the 'site') of Wing Haven the at a minimum of 200 feet apart from one another. Non-contiguous tracts were not included.



Slope aspect was determined by using 1/3 arc-second resolution LIDAR data downloaded from U.S. Geological Society.

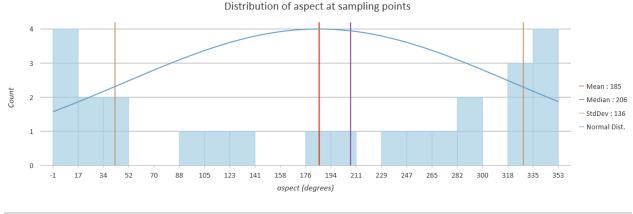
The resulting 25 points were found to be a representative sample (Figure 2) of the site-wide slope aspect (Figure 3). Aspect degrees indicates the geographic direction that the slope is oriented towards (Figure 1).

Due to the random placement of the sampling points, some locations landed in open water or improvements and cannot be considered as a viable sample site. These points may be good candidates for photo points.

Point coordinates were recorded and are reported here and physical locations will be marked in the field using a combination

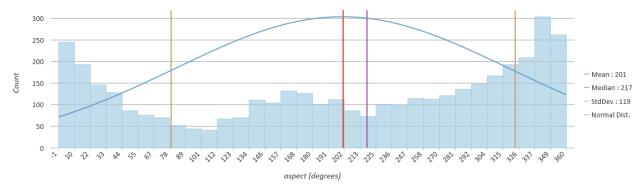
of permanent and semi-permanent techniques.

These points should serve as the basis for all sampling that occurs as part of this 200-year ecological reflection.



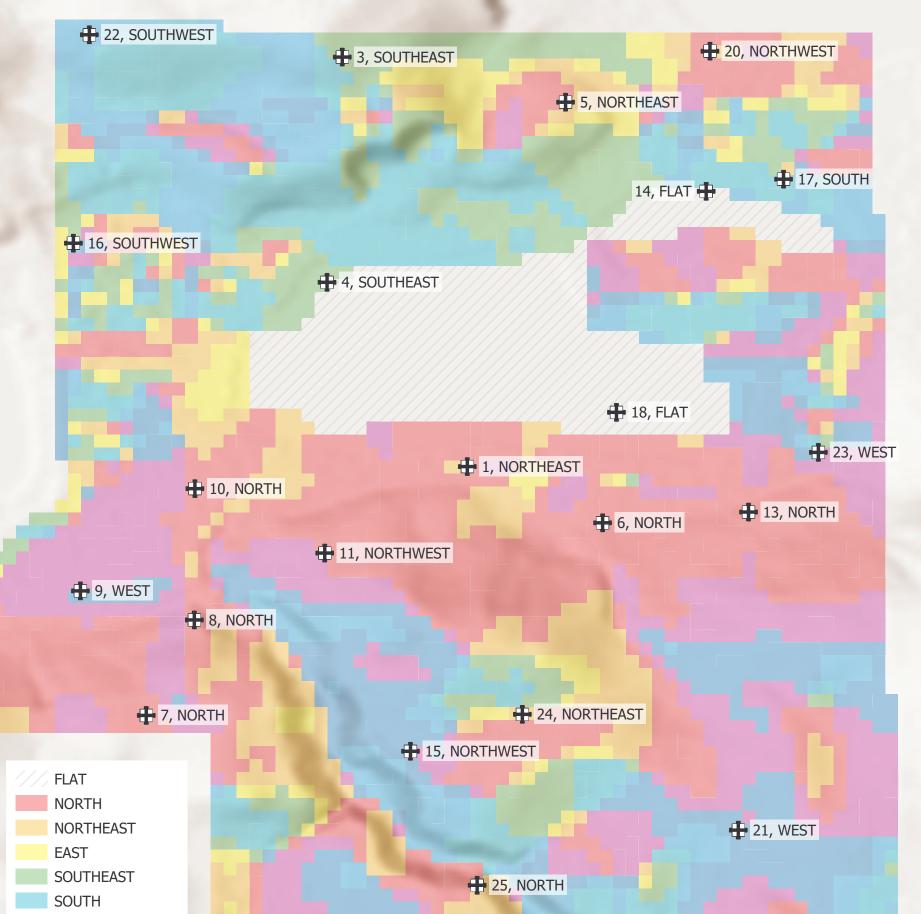


Distribution of aspect values at wing haven



OBJECTID	aspectDegrees	aspectDirection	POINT_X	POINT_Y	potentialObstacles	photoDirection	photoNotes
1	33	northeast	-84.9931125	41.70502725			
2	35	northeast	-84.99077444	41.70158087			trail
3	119	southeast	-84.99400506	41.70795051			
4	135	southeast	-84.99411371	41.70634279	underwater		
5	32	northeast	-84.99241112	41.70762845			
6	1	north	-84.99214663	41.70462584			
7	353	north	-84.99540436	41.70325101		south	boundary
8	351	north	-84.9950612	41.7039326			
9	287	west	-84.9958743	41.70413992			
10	342	north	-84.99505707	41.7048697			
11	335	northwest	-84.99413014	41.70440995			
12	99	east	-84.99310835	41.70117996			
13	343	north	-84.99110512	41.70470267			
14	-1	flat	-84.99140733	41.70699206	underwater		trail
15	298	northwest	-84.99351804	41.70299502			
16	234	southwest	-84.99592448	41.7066219		west	boundary
17	179	south	-84.99085511	41.70707885	underwater		
18	-1	flat	-84.99204786	41.70541458	underwater		
19	321	northwest	-84.99391679	41.70158743			
20	327	northwest	-84.99138035	41.70799236	underwater		
21	264	west	-84.99117815	41.70243207			
22	206	southwest	-84.99581047	41.7081097		north	boundary
23	281	west	-84.9906066	41.70512868			
24	37	northeast	-84.99271955	41.70325875	building		
25	15	north	-84.99304231	41.7020386			

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## SAMPLING POINTS FOR 200-YEAR ECOLOGICAL REFLECTION STUDY



COLOR-CODED SLOPE ASPECT AND SAMPLING POINTS AT WING HAVEN

Sources: Esri, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community at 12:38 PM on 12/3/2018

