# ADDENDUM TO DELAWARE-OTSEGO AUDUBON SOCIETY REPORT ON SPRING 2018 RAPTOR SURVEYS IN THE PROPOSED BLUESTONE WIND PROJECT


## SUMMARY

**The Delaware-Otsego Audubon Soc. conducted field surveys of raptors in the study area of the proposed Bluestone Wind Project area in Broome Co., NY in March, 2018. Fifteen days were covered at a site near the hamlet of Sanford, Broome Co. The surveys were timed to coincide with the peak of Golden Eagle migration.**

**101 migrating raptors were recorded during the period, including 42 Bald Eagles and 22 Golden Eagles. In addition, a significant number of non-migratory eagles were sighted. These included 218 Bald Eagles, 20 Golden Eagles, and 2 unidentified eagles.**


The following maps were created in a Geographic Information System (GIS) using scanned field maps submitted by Delaware-Otsego Audubon Society (DOAS) observers in March 2018. Turbine location information was provided to DOAS by Calpine in October 2018. Note: Turbine symbols have no relationship to turbine size.

Scans of original DOAS field maps can be found at:
https://drive.google.com/drive/folders/1MuMa5KabJJHlbLTPCz-q06ZKfxMjnAg8

Maps 1 and 6 include data from every eagle flight path recorded by DOAS observers. Maps 2-5 are separated by species and migration status. Maps 2-5 include only flight paths of birds observed within 200 meters of ground level.

Map 1: All documented eagle flight paths.

Map 2: Flight paths of migrating Bald Eagles observed within 200 meters of ground level.

Map 3: Flight paths of non-migrating Bald Eagles observed within 200 meters of ground level.

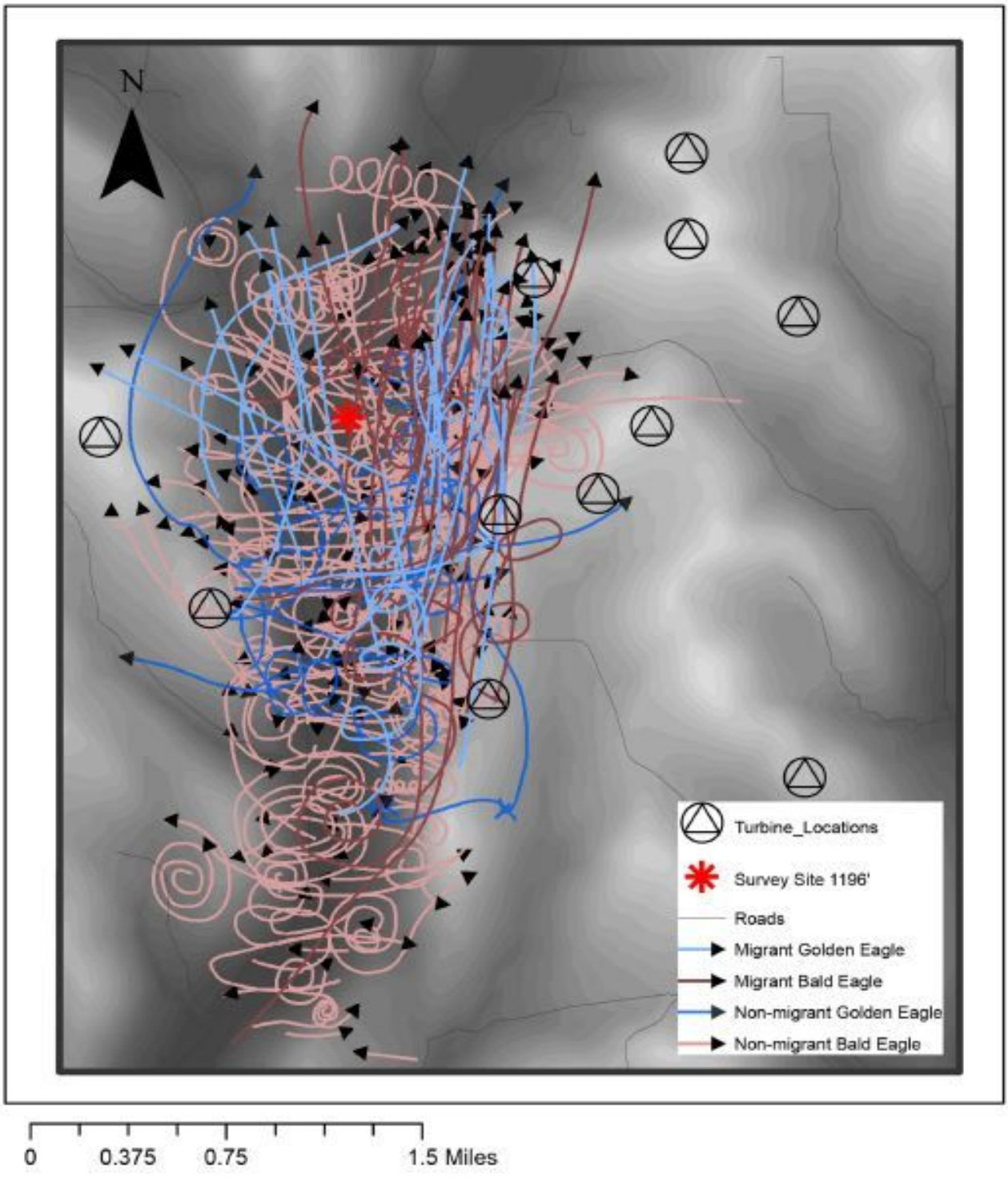
Map 4: Flight paths of migrating Golden Eagles observed within 200 meters of ground level.

Map 5: Flight paths of non-migrating Golden Eagles observed within 200 meters of ground level. “Kiting” is a raptor hunting behavior in which a bird holds still in the air like a kite using wind speed for lift. Kiting times varied from brief instances to 14 minutes.

Map 6: The flight path density map is included to illustrate the visibility limitations of observers stationed at the valley floor looking up at ridge lines. Density is measured as the total length of all eagle flight paths per area. This is an indication of the number of eagle flight paths occurring in an area on the map.

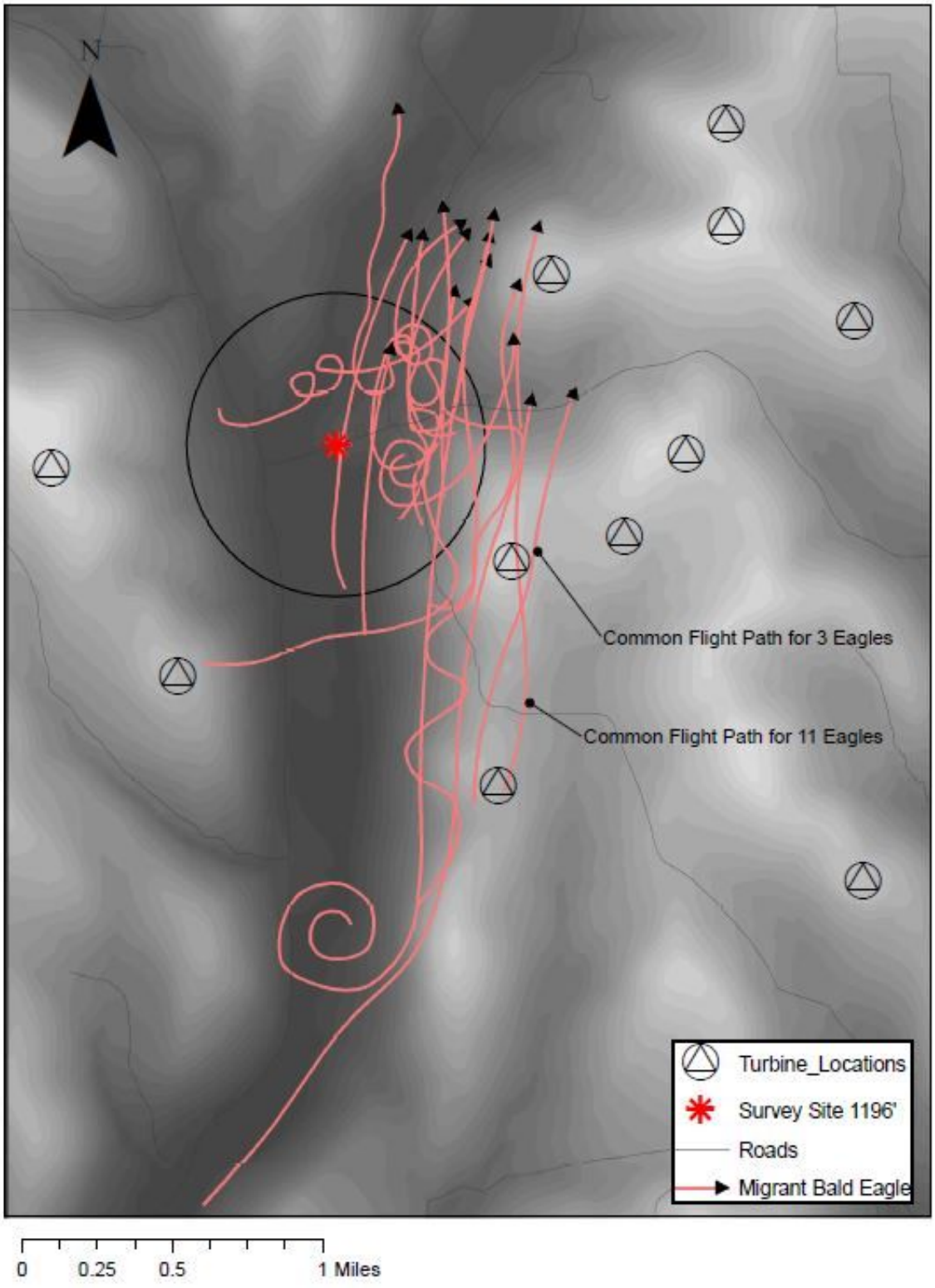
Map 7: Blank field map used by DOAS observers.

All Documented Flight Paths by DOAS Observers, n = 300
Sanford, NY
March 2018



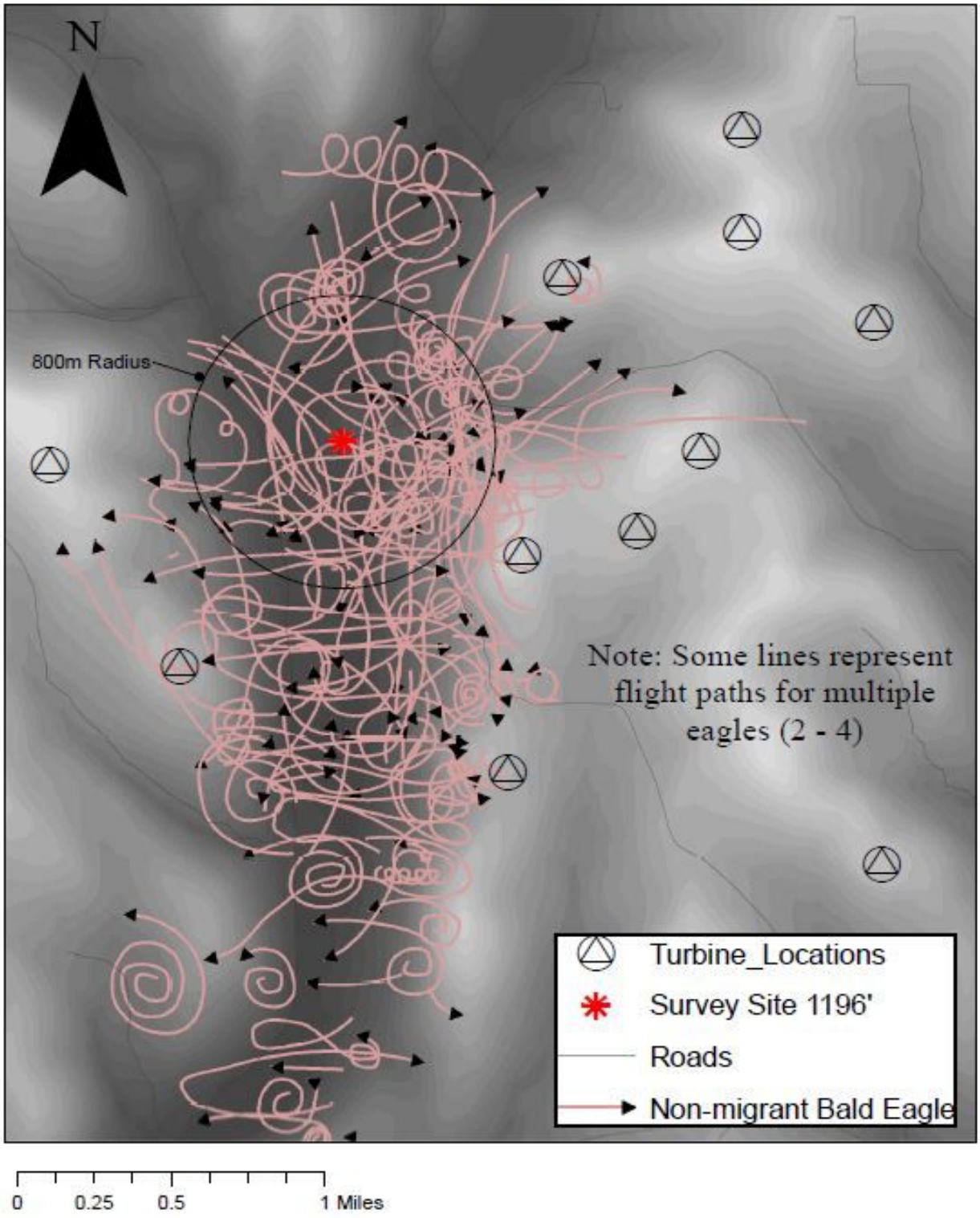

MAP 1

FLIGHT PATHS OF MIGRATING BALD EAGLES OBSERVED WITHIN 200m OF GROUND LEVEL BY DOAS OBSERVERS AT THE SANFORD SURVEY SITE MARCH 2018, n = 29



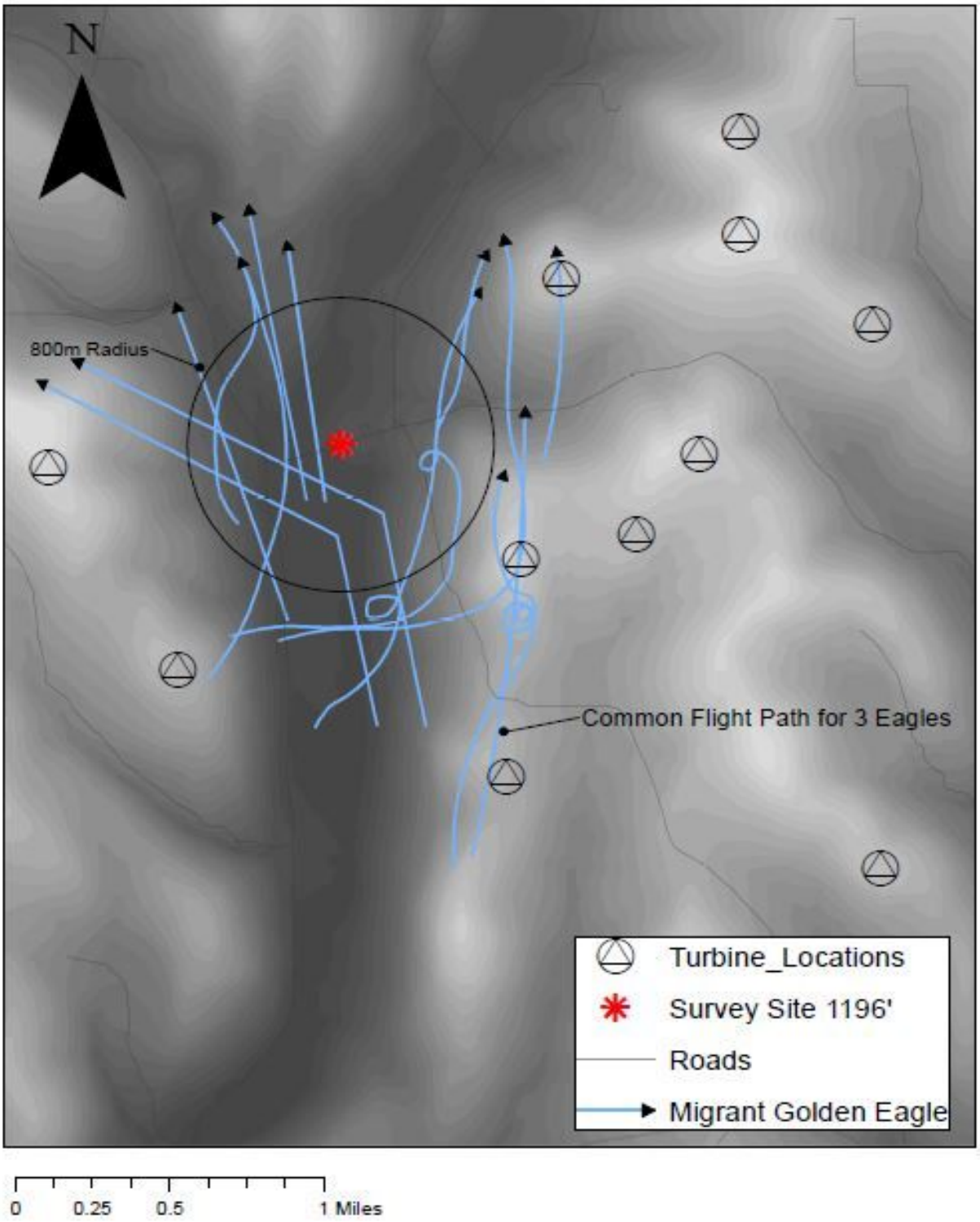

MAP 2

# FLIGHT PATHS OF NON-MIGRATING BALD EAGLES OBSERVED WITHIN 200m OF GROUND LEVEL BY DOAS OBSERVERS AT THE SANFORD SURVEY SITE MARCH 2018, n = 160



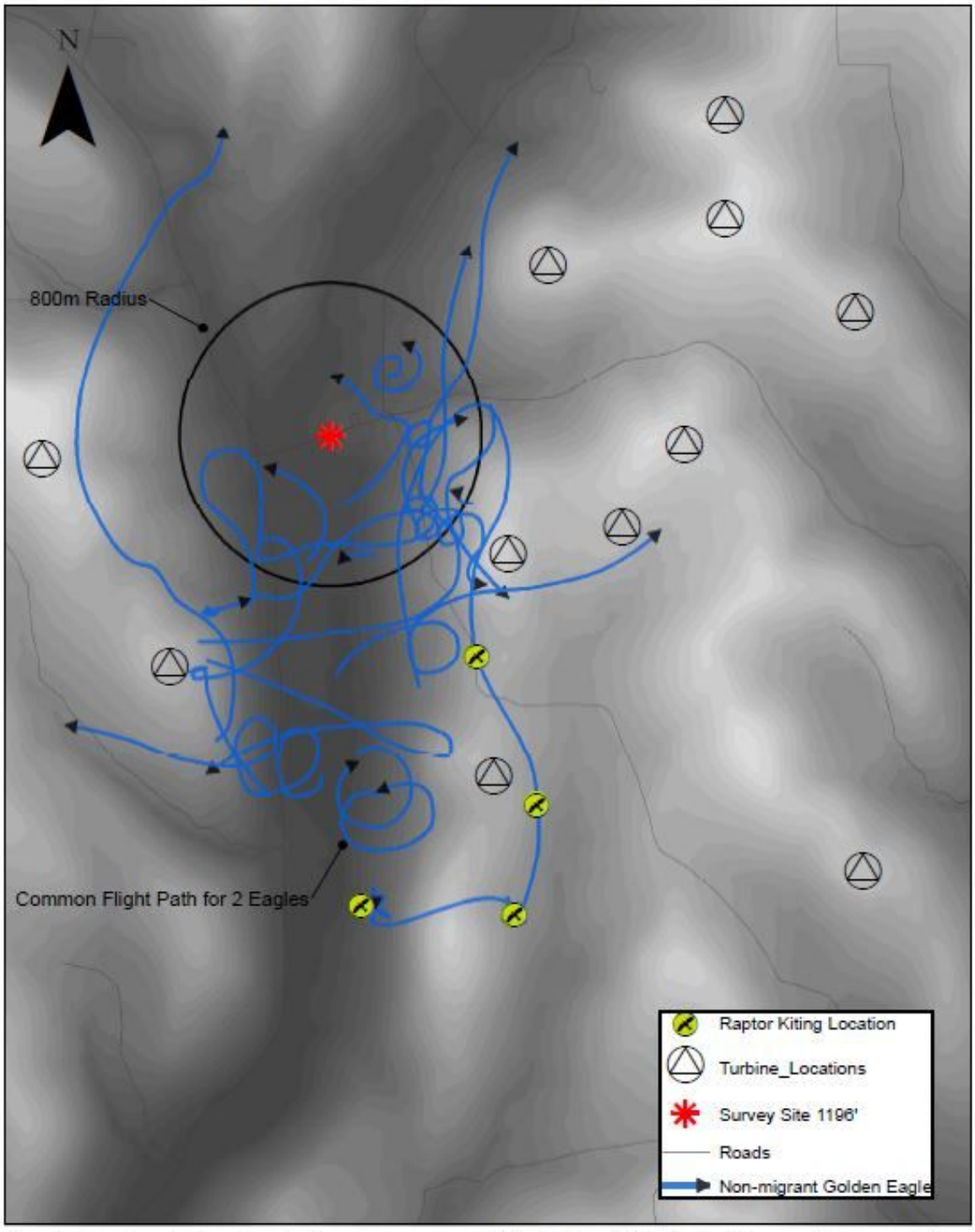

MAP 3

FLIGHT PATHS OF MIGRATING GOLDEN EAGLES
OBSERVED WITHIN 200m OF GROUND LEVEL
BY DOAS OBSERVERS AT THE SANFORD
SURVEY SITE MARCH 2018, n = 15




MAP 4

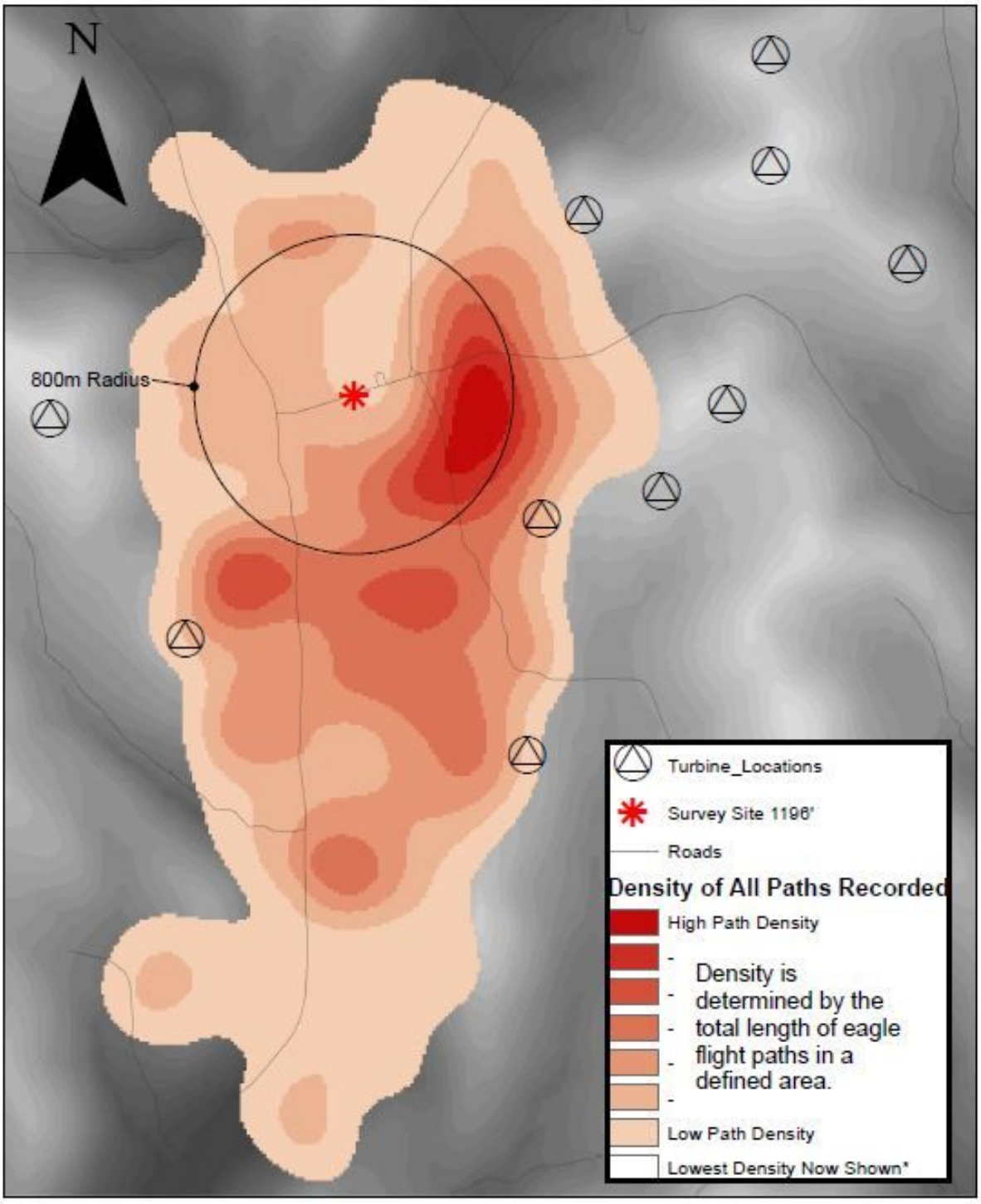
# FLIGHT PATHS OF NON-MIGRATING GOLDEN EAGLES OBSERVED WITHIN 200m OF GROUND LEVEL BY DOAS OBSERVERS AT THE SANFORD SURVEY SITE MARCH 2018, n = 19




Note: Other kiting behavior was documented on the same ridge in behavior notes but not on the field notes.

MAP 5

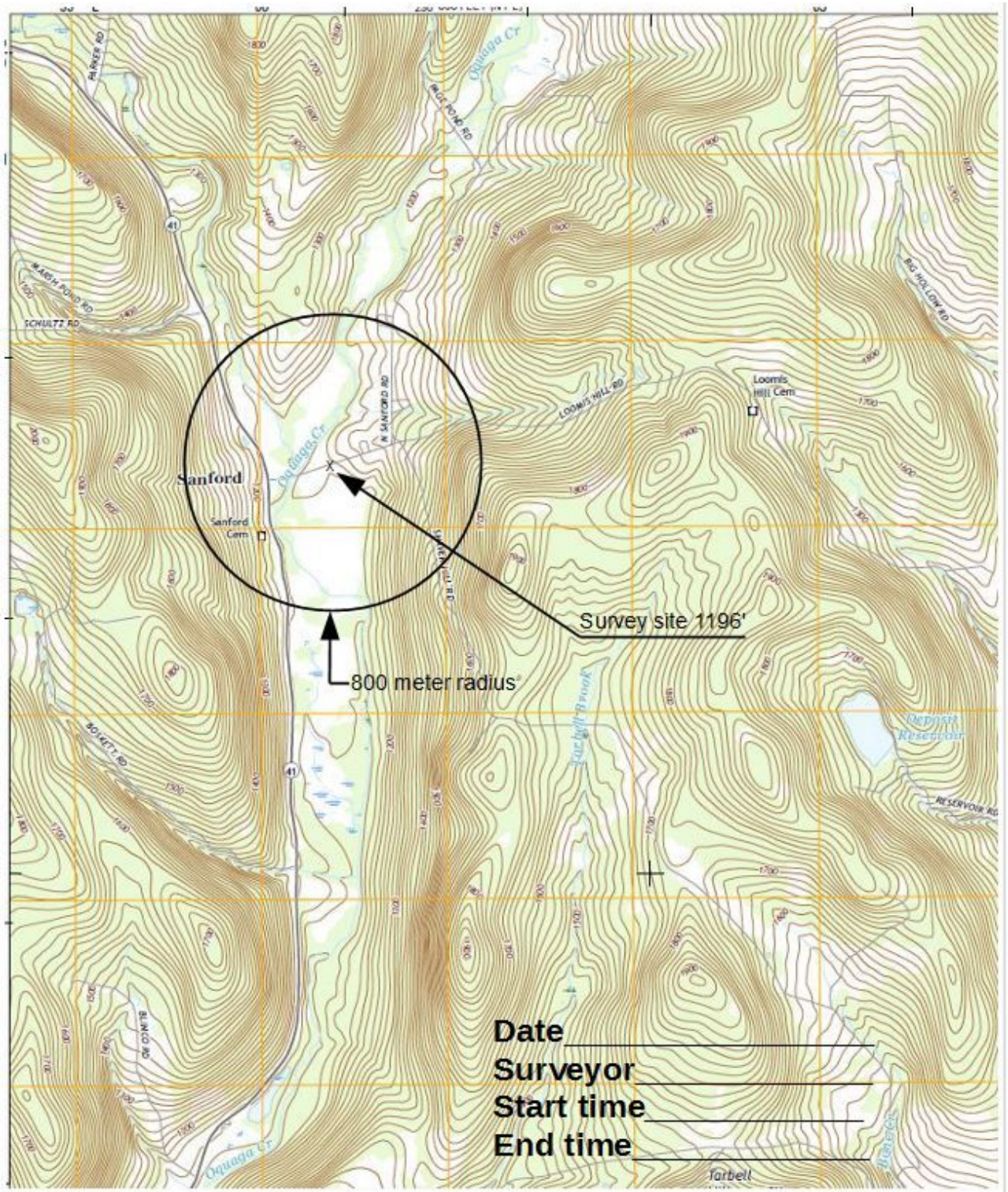
# DENSITY MAP OF DOAS MARCH 2018 FLIGHT PATHS. THIS GIVES A RELATIVELY ACCURATE REPRESENTATION OF WHAT IS VISIBLE AT LOW ALTITUDES FROM THE VALLEY FLOOR SITE




*Lowest density area hidden in order to illustrate the viewshed. Individual path extensions into that area are visible on maps 1-5.

MAP 6

FIELD MAP USED BY DOAS OBSERVERS. BASE MAP IS THE
USGS DEPOSIT, NY QUADRANGLE - 7.5 MINUTE TOPOGRAPHIC MAP




MAP 7