

Hawk Survey Summary 2007

Park Inventory Sites

Hawk Surveys were performed in Cascade Valley and Goodyear Heights Metro Parks in conjunction with the comprehensive park inventories. These surveys were conducted in each park once a month in April, May and June to determine the presence of breeding individuals.

Approximately one site per 100 acres of park land was surveyed. Topography was also considered when choosing the number of sites per park. Five sites were surveyed in Cascade Valley and four in Goodyear Heights Metro Park. The raptor survey protocol is described in Appendix I.

Table I illustrates the species documented for each park surveyed. Red-tailed hawks and turkey vultures continue to be the two most common raptors observed in our parks. Both species were recorded at Cascade Valley and Goodyear Heights.

Cooper's hawks were also found in both parks. Adults carrying food were observed in the Chuckery Area of Cascade Valley and in the Pioneer Area of Goodyear Heights. Juveniles were observed in the Chuckery Area in June, and were observed on numerous occasions.

Sharp-shinned hawks were recorded in Goodyear Heights at Alder Pond and in the Pioneer Area in April. At least two individuals were observed. These birds were not recorded in May or June, and are assumed to be migrants. They were observed on April 13 and April 28.

A northern harrier was recorded passing over Alder Pond in June. This species is a ground nester and prefers marsh habitats. While it could nest in Alder Pond, it is unlikely, as the bird was not observed more than once during 2007.

Table I. Hawk Species documented in Metro Parks, Serving Summit County, 2007.

| Hawk Species | Cascade Valley | Goodyear Heights |
|---------------------|----------------|------------------|
| Broad-winged hawk | | |
| Cooper's hawk | X | X |
| Northern harrier | | X |
| Red-shouldered hawk | | |
| Red-tailed hawk | X | X |
| Sharp-shinned hawk | | X |
| Turkey Vulture | X | |

Hawk surveys will not be conducted as part of comprehensive park inventories in 2008. This survey strategy will be discontinued until further notice.

Long-term Monitoring Sites

Long-term monitoring sites at Liberty Park, Firestone and Silver Creek are surveyed every three years. One site per park is surveyed once a month in April, May and June. The protocol for these surveys is the same as conducted above (see Appendix I). The long-term monitoring sites were surveyed for hawks this year. They were first surveyed in 2005 for baseline data and can now be compared with these values.

Figure I shows the long-term data for Firestone Metro Park. The data is clearly different from 2005 to 2007. Cooper's hawks and red shouldered hawks were only recorded in 2007. One

osprey was observed in 2005. Red-tailed hawks and turkey vultures were documented in both years. However, twice as many red-tails were observed in 2005 as 2007. Six turkey vultures were found in 2005 and only one in 2007.

Figure 1. Long-term Monitoring data for Firestone Metro Park 2005 and 2007 (BWHA – Broad-winged hawk, COHA- Cooper’s hawk, NOHA- northern harrier, OSPR- osprey, RTHA- red-tailed hawk, RSHA- red-shouldered hawk, SSHA- sharp-shinned hawk, TUVU- turkey vulture).

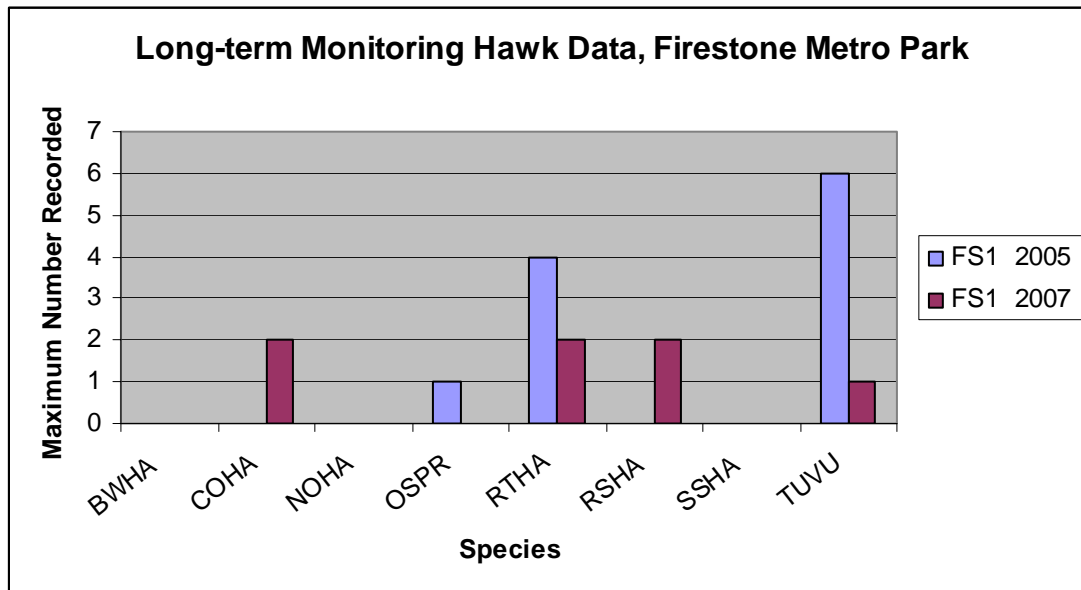


Figure 2 shows the long-term hawk data for Liberty Park, and shows more consistency than Firestone’s data. Cooper’s hawks, red-tailed hawks and turkey vulture numbers remained relatively consistent over the two survey periods. One northern harrier and two red-shouldered hawks were documented in 2007.

Figure 2. Long-term Monitoring data for Liberty Park 2005 and 2007 (BWHA – Broad-winged hawk, COHA- Cooper’s hawk, NOHA- northern harrier, OSPR- osprey, RTHA- red-tailed hawk, RSHA- red-shouldered hawk, SSHA- sharp-shinned hawk, TUVU- turkey vulture).

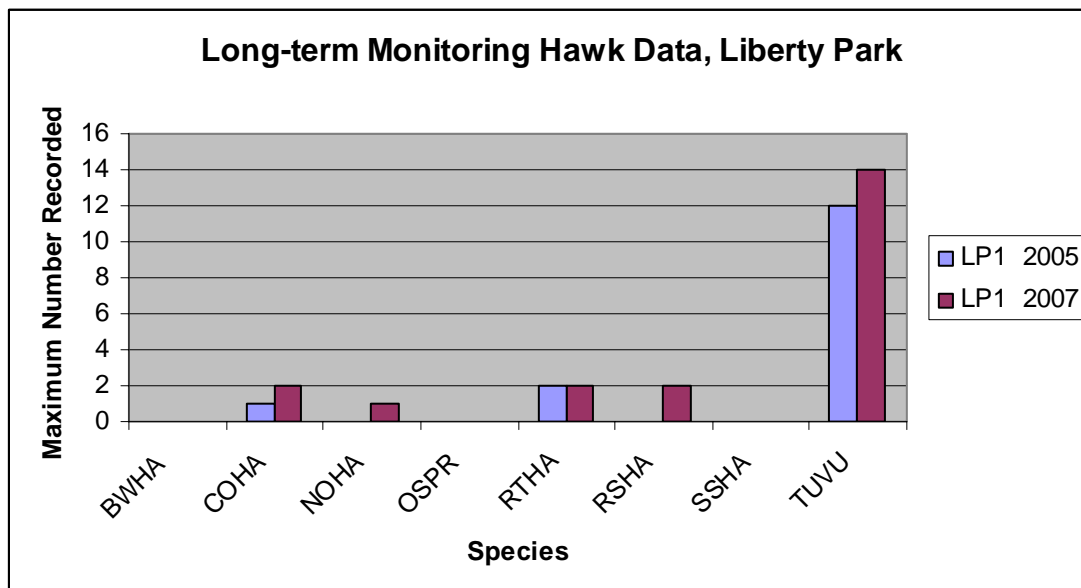
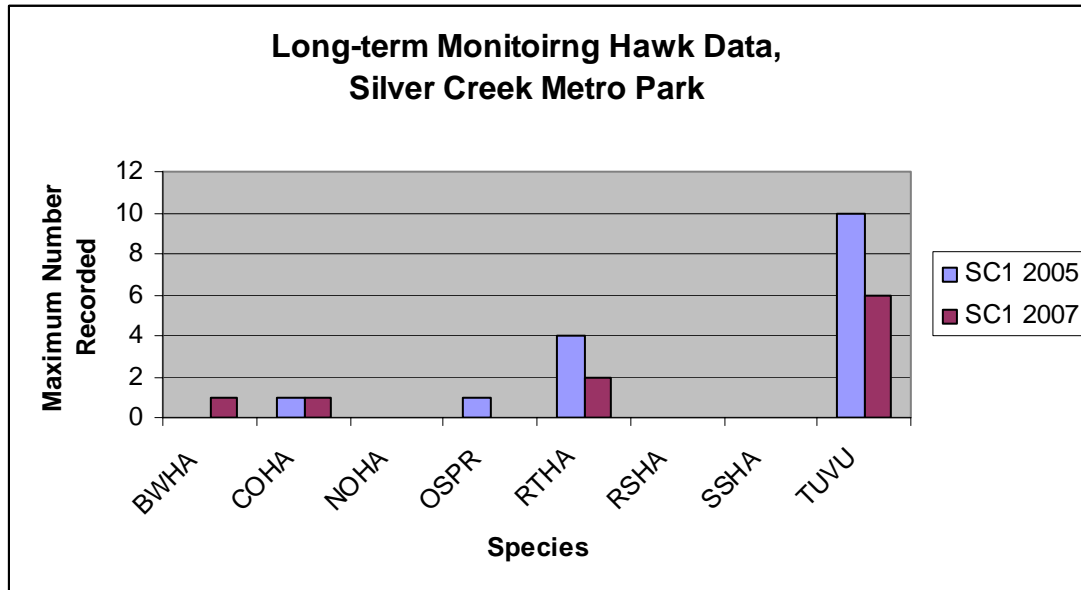


Figure 3 represents long-term data for Silver Creek Metro Park. Cooper's hawk numbers remained the same over the two year period. Red-tailed hawk numbers fell by 50%. Osprey and turkey vulture numbers also fell. Osprey have not been recorded breeding in the park but visit from nearby nesting grounds to fish in Silver Creek Lake. One broad-winged hawk was recorded. This individual was recorded in April and may have been a migrant.

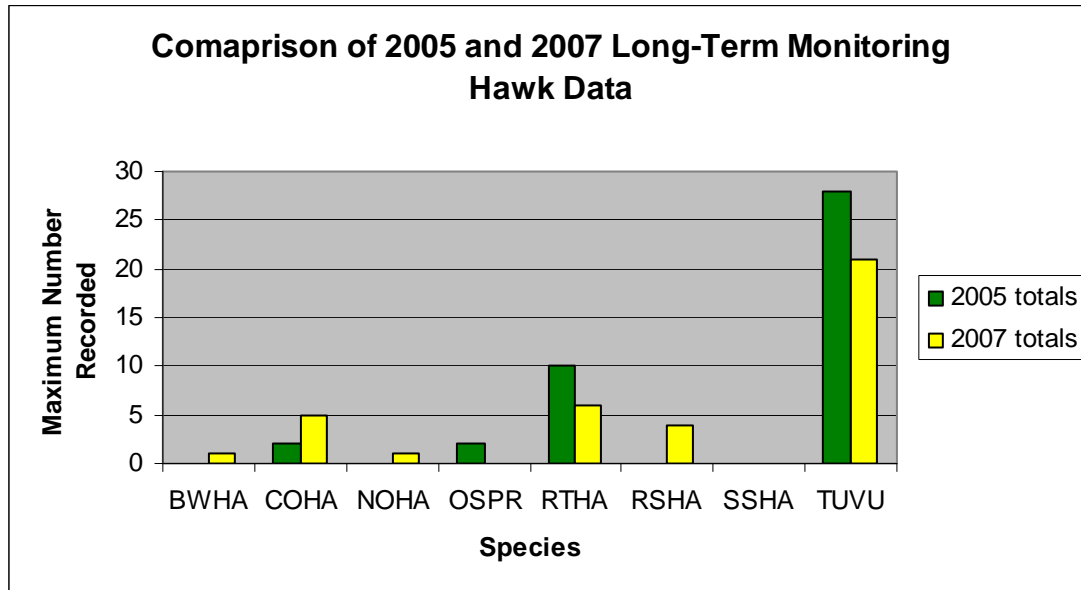
Figure 3. Long-term Monitoring data for Silver Creek Metro Park for 2005 and 2007 (BWHA – Broad-winged hawk, COHA- Cooper's hawk, NOHA- northern harrier, OSPR- osprey, RTHA- red-tailed hawk, RSHA- red-shouldered hawk, SSHA- sharp-shinned hawk, TUVU- turkey vulture).



If you look at the long-term monitoring data on a district-wide basis (figure 4), you see that Cooper's hawk numbers increased over the two year period. However, red-tailed hawks and turkey vulture numbers declined. The number of red-tail hawks fell nearly 50% from 10 to 6. Turkey vultures suffered a much smaller decline from 28 to 21 or 25%.

Our survey techniques do not allow us to answer why these declines may be occurring but simply monitor the population trends. This survey is designed to give us an idea of the trends occurring around the county. The long-term monitoring sites will not be surveyed for hawks again until 2010.

Figure 4. Comparison of 2005 and 2007 Long-term Monitoring Hawk Data.



The hawk, owl and coyote long-term monitoring surveys are on a three year rotation (see Table 2). Long-term monitoring sites will continue to be surveyed as scheduled. However, comprehensive inventories for hawks, owls, and coyotes will be discontinued until further notice.

Table 2. Schedule for Owl, Hawk and Coyote Surveys 2007-2010.

| Survey | 2008 LTM | 2009 LTM | 2010 LTM | 2011 LTM |
|--------|-------------|-------------|-------------|-------------|
| Owl | | X | | |
| Hawk | | | X | |
| Coyote | X | | | X |

Appendix I

Raptor Survey Protocol

- 1) Begin owl survey at approximately 8:00 pm, hawk survey after 9:00 am. Drive to site #1. Turn vehicle motor and lights off. Quietly proceed to calling location. Remain quiet and listen for unsolicited raptor calls for 2 minutes.
- 2) Broadcast vocalizations for first raptor species for 30 seconds, rotating speaker 90 degrees. Listen for 2 minute.
- 3) Repeat step 2 for each of the raptor species being surveyed. Be sure to rotate speaker 90 degrees during each vocalization broadcast.
- 4) After broadcasting the last raptor species, listen for 5 minutes.
- 5) If an auditory or visual response occurs, record the site location in the site column and each individual responding raptor by species in the species column of the data sheet. Use the following abbreviations:

GHO—Great Horned Owl
ESO—Eastern Screech Owl
BOW—Barred Owl
UNK—Unknown

CHA—Cooper's Hawk
BWH—Broad-winged Hawk
RSH—Red-shouldered Hawk
RTH—Red-tailed Hawk
SSH – Sharp-shinned Hawk
AK - American Kestrel
TUVU – Turkey Vulture

- 6) For each individual responding raptor, record the compass direction in the direction column using one of the following headings: N, NE, E, SE, S, SW, W, NW.
- 7) For each individual responding raptor, record the distance as one of the following classes using letter A, B, C, or D.
 - (A) less than 0.5 mile, loud and close
 - (B) 0.5 mile to 1.0 mile, clear and moderately loud
 - (C) 1.0 – 1.5 mile, audible but difficult to distinguish.
 - (D) Visual response, raptor visually observed at calling station.
- 8) Record the date, crew members, temperature, wind direction and speed for each survey on the data sheet as indicated.

Equipment List

Clipboard
Data Sheets
Pencil/Pens
Flashlight

Map of Calling Stations
Compass
Wildlife Caller
Cassette Tape of Raptor Vocalizations (2)

Radio
Raptor ID Books
Binoculars