

## Owl Survey Summary 2006

Owl surveys were conducted in Sand Run and Deep Lock Quarry Metro Parks as part of the comprehensive park inventories. The long-term monitoring sites at Liberty Park, Firestone and Silver Creek Metro Park were also surveyed for owls in 2006. These surveys will be discussed separately below.

### Comprehensive Inventories

Owls were surveyed once a month in Sand Run and Deep Lock Quarry Metro Parks. Although Gorge Metro Park was also inventoried in 2006, owl surveys were not performed there. The decision to add Gorge to the 2006 schedule was made after owl surveys started.

Recordings of five owl species including northern saw whet owl, eastern screech owl, long eared owl, barred owl and great horned owl were played during the surveys. One call of each species was played with two minute listening periods in between each call. The protocol is included as Appendix 1.

Table 1 illustrates the species found in each park during these surveys. Eastern screech owls were documented for both parks. Two individuals were heard on the same night at different sites in Deep Lock Quarry. One individual was recorded in Sand Run.

Although the owl survey was not conducted at Gorge Metro Park, some owls were identified there throughout the year. During the bio blitz an owl survey was conducted by volunteers and eastern screech owls were detected. A great horned owl was also observed north of the monkshood area in the spring.

Two great horned owls were documented in Sand Run at Shady Hollow Pavilion and the Big Bend Area. A barred owl was documented at the Nature Realm. This bird is frequently sighted in the pines of the arboretum.

A northern saw whet owl was recorded in Sand Run at site 2. The vocalization was in the northwest corner of the park near the intersection of Sand Run Road and Sand Run Parkway. The bird was heard by park staff and volunteers.

Table 1. Owl species observed in Metro Parks, Serving Summit County 2006.

<b>Park</b>	Saw whet	Screech	Long-eared	Barred	Great horned
Sand Run	X	X		X	X
Deep Lock		X			

### Long-term Monitoring Sites

Long-term monitoring sites are surveyed for owls, hawks and coyotes every three years based on the schedule listed in Table 2. One site at Liberty Park, Firestone and Silver Creek Metro Parks is surveyed. Long-term monitoring sites were surveyed for owls in 2006.

Table 2. Schedule for Owl, Hawk and Coyote Surveys 2006-2008.

<b>Survey</b>	<b>2006 LTM</b>	<b>2006 COMP</b>	<b>2007 LTM</b>	<b>2007 COMP</b>	<b>2008 LTM</b>	<b>2008 COMP</b>
Owl	X	X		X		X
Hawk		X	X	X		X
Coyote		X		X	X	X

Long-term monitoring is designed to track trends in relative abundance. The protocol for owl surveys at the long-term sites is different than for the comprehensive inventories. Only calls of eastern screech owl, barred owl and great horned owl are played. Calls of each species are played twice with two minute listening periods in between each call. Results of this survey are shown in Table 3.

Table 3. Maximum number of owls heard at long-term monitoring sites, 2005-2006 (2005 was the introductory year for long-term monitoring, owl surveys will be conducted at these sites again in 2009).

	<b>2005</b>			<b>2006</b>		
	<b>EASO</b>	<b>BADO</b>	<b>GHOW</b>	<b>EASO</b>	<b>BADO</b>	<b>GHOW</b>
Liberty Park	1	0	2	0	0	0
Firestone	0	0	1	1	0	0
Silver Creek	2	2	0	0	1	0

The results from the two years of long-term monitoring look very different. Screech owls were detected in Liberty Park and Silver Creek in 2005. In 2006, they were only detected at Firestone. Similarly, great horned owls were detected in Liberty Park and Firestone in 2005, but nowhere in 2006.

The only consistent results were barred owls at Silver Creek. Two were heard in 2005 and one in 2006. Staff at Silver Creek frequently hear barred owls near the field office. The barred owl documented during these surveys has flown from the direction of the field office to the survey area both years to respond to our recordings. It was likely the same individual both years.

Only two of the 2006 long-term surveys were conducted. Many of the surveys during 2006 were cancelled due to rain. This missed survey may influence the comparison of the two years. For example, the two great horned owls recorded at Firestone in 2005 were both in February. The February survey was not conducted this year. These two birds were known to have a nest near the survey site. They moved their nest to a new location in 2006.

### Conclusions

Based on experience, the protocol for the long-term sites is more effective. Having two calls played of each species with listening periods in between works well. The first call peaks the bird's interest and second call encourages them to respond. The comprehensive survey protocol will change in 2007 to reflect this experience.

Comprehensive inventories will be conducted at Cascade Valley and Goodyear Heights Metro Parks in 2007. Long-term monitoring locations will be surveyed for owls in 2009.

## **Appendix 1**

### **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	Map of Calling Stations	Radio
Data Sheets	Compass	Raptor ID Books
Pencil/Pens	Wildlife Caller	Binoculars
Flashlight	Cassette Tape of Raptor Vocalizations (2)	