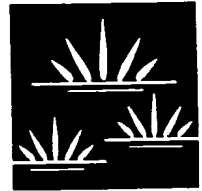


GLENN LUKOS ASSOCIATES

Regulatory Services



January 7, 2004

Ron Metzler
Shea Homes
603 S. Valencia Ave.
Brea, California 92823

SUBJECT: Raptor Usage and Nesting Study of the Parkside Estates Property, City of Huntington Beach, Orange County, California

Dear Mr. Metzler:

A biologist from Glenn Lukos Associates (GLA) conducted general raptor surveys that assessed presence/absence, nesting and foraging use of raptors at the above-mentioned site on May 19, 20, 21, 22 and on June 2, 3, 4, and 5, 2003.

SITE DESCRIPTION

The Parkside Estates Property encompasses approximately 50 acres located within the City of Huntington Beach, Orange County, California. The 50-acre area was formerly divided into two parcels, where the northern parcel, consisting of 45 acres, was located within the City of Huntington Beach and the remaining 5-acre parcel to the south was located in an unincorporated section of Orange County. The 5-acre "County" parcel has since been incorporated into the City of Huntington Beach as well.

The property is roughly bounded by residential development and Kenilworth Drive to the North, Graham Street to the east, the Wintersburg Channel to the south, and development with small areas of disturbed open space to the west (Exhibits 1 and 2). The majority of the site is composed primarily of lowland areas supporting commercial agricultural activities. A gum tree windrow (*Eucalyptus* sp.) is located along a side slope in the northwestern corner of the site. The lower 5-acre portion of the site consists of a disturbed lowland area supporting weedy alkaline plants including, saltgrass (*Distichlis spicata*), pickleweed (*Salicornia virginica*), iceplant (*Mesembryanthemum nodiflorum*), five-hook bassia (*Bassia hyssopifolia*), London rocket (*Sisymbrium irio*), and canary grass (*Phalaris minor*). A eucalyptus windrow extends in a southwesterly direction along the western border of the site in this area.

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During the course of the eight raptor surveys, field workers harvested lettuce (*Lactuca* sp.) on the northern 45-acre portion of the site. Within the 45-acre area, the lowlands appear to be disturbed year round through disking and maintenance activities including irrigation. Historically, the 45-acre north parcel has had a lengthy history of agricultural practices including farming and associated disking. A maintenance road is located approximately ten feet east of the Eucalyptus windrow in this area. A farmed hillslope is located west of the Eucalyptus windrow and had been recently disked during the survey period. Evidence of human disturbance, including abandoned maintenance equipment and debris, is common within the eucalyptus windrow.

RAPTORS LOCAL TO SOUTHERN CALIFORNIA

- **Red-tailed hawk (*Buteo jamaicensis*)** - The red-tailed hawk (REHA) is common throughout California and can be found in a wide variety of habitats. Red-tailed hawks eat small mammals up to hares in size, small birds, reptiles, amphibians, and some carrion. In winter, these hawks are largely dependent on mice, but will also take medium to fairly large birds on the ground. This hawk searches for prey by soaring, but will also perch and pounce, and occasionally hover. The nesting season for REHAs nest begins as early as February and most chicks are fledged by the second week in June.
- **Cooper's Hawk (*Accipiter cooperii*)** - The Cooper's hawk (COHA) is listed by the California Department of Fish and Game (CDFG) as a species of special concern. This species is common throughout California and is often associated with deciduous and mixed forests and open woodland habitats such as woodlots, riparian woodlands, and semiarid woodlands where the woodlands tend to occur in patches and groves or as spaced trees, rather than in dense, continuous stands (Beebe 1974, and Evans 1982). Approximately 50% of the prey taken in the west is avian with the remaining 50% consisting of mammals and lizards. Experienced birds usually make only a single try at a prey item, and then abandon the effort should that try fail (Johnsgard 1990). Cooper's hawks typically will nest in woodlots, conifer plantations, riparian forests, or forest patches in a matrix of farmlands. COHAs are also known to nest in residential areas where the trees are mature and provide sufficient cover.
- **Turkey Vulture (*Cathartes aura*)** - The turkey vulture (TUVU) is common throughout most of North America and inhabits dry, open country, ranch lands and along roadsides where carrion is common. The TUVU is one of North America's largest birds of prey with a wing span reaching up to six-feet. Its overall color is brown-black with a featherless, red head, white bill and yellow feet among mature adults. In flight, the turkey vulture rocks from side to side, rarely flapping its wings, which are held at a V-angle called a dihedral. In North

America, TUVUs breed from March to June, with peak activity occurring in April and May. This species prefers forested areas in which to nest and commonly selects camouflaged areas to lay their eggs such as under vegetation, on cliff ledges, in barns, or in caves. They do not build a nest but lay the eggs on the ground, rocks, or other substrate.

- **Sharp-Shinned Hawk (*Accipiter striatus*)** – The sharp-shinned hawk (SSHA) is listed by CDFG as a species of special concern. It looks almost identical to the larger COHA, but has a narrower tail and slightly shorter wings. It is also much quicker than the COHA, its flight pattern often consisting of a rapid series of wing beats punctuated by a glide. It is found in many habitats including deserts, coast, and mountains; however, it prefers wooded and scrub areas and breeds in montane forests. The SSHA hunts song birds and occasionally larger prey such as pigeons, and rabbits. The nest is built of twigs in the lower branches of conifers or deciduous woodland trees.
- **Red-shouldered hawk (*Buteo lineatus*)** – The red-shouldered hawk (RESH) is found year found in California in moist, mixed or deciduous woodlands, often near streams, and wooded river bottoms. The RESH prefers mature forests and will hunt quietly by perching on tree limbs. As with the COHA, the RESH will also nest in urban areas. Courtship begins in February to March, during which pairs are very noisy and will often return to same nesting area year after year. Nests are large, sturdily constructed of sticks, bark, leaves and mosses, lined with softer material. Nests are built in large trees against the trunk in the crotch of a large branch.
- **American Kestrel (*Falco sparverius*)** - The American Kestrel (AMKE) is common throughout California and occurs in most open habitats, in a variety of shrub habitats, and various ecotones. American kestrels feed on small mammals, birds, insects, earthworms, reptiles, and amphibians. American kestrels prefer to hunt in open habitats and hunting tactics include perches and pounces, pounces from a hover, or captures of aerial insects in mid-air. Perching platforms are often fence posts, utility pole or wire, and trees. American kestrels nest in the spring from April to early June in woodpecker holes, natural cavities, niches in cliffs or buildings and in nest boxes that are specifically set up for them.
- **Loggerhead Shrike (*Lanius ludovicianus*)** - The loggerhead shrike (LOSH) is listed by CDFG as a species of special concern. It is a resident and winter visitor in lowlands throughout California. Loggerhead shrikes prefer open habitats with scattered shrubs, trees, posts, fences, utility lines, and other perches and will eat mostly large insects, but will also take small birds, mammals, amphibians, reptiles, fish, carrion, and various other invertebrates. Loggerhead shrikes usually fly directly to prey on ground or in a shrub; sometimes hovering. Occasionally it will hawk aerial insects in mid-air. A LOSH nest typically placed in a dense part of the foliage of a tree or shrub, often in a crotch, below the

crown. Height of nests varies with the height of available trees and shrubs; average nest height ranges from 2.6 to 8.5 feet above ground level.

- **White-Tailed Kite (*Elanus leucurus*)** - The white-tailed kite (WHKI) is CDFG-designated as fully protected in California. White-tailed kites forage in open areas, feeding mainly on small diurnal mammals. White-tailed kites typically hover while hunting, dropping to the ground to take prey. A WHKI nest is made from twigs and sticks, lined with grass. In the spring pairs build a small twig nest, 50-60 feet high near water, often in an isolated tree, and may use it for several seasons.
- **Northern Harrier (*Circus cyaneus*)** - The northern harrier (NOHA) is listed by CDFG as a Species of Special Concern. It is a bird of open country that is easily recognized by its low, coursing flight, white rump, and wings held in a V-like pattern. Northern harriers in the west are year round residents that hunt low over open fields or marshlands for mice, voles, other diurnal rodents, juvenile rabbits, frogs, pheasant chick, and other birds in dense vegetation. When a prey item is located, the NOHA either stalls in flight and pounces, or hovers like a helicopter for a better look, or a better listen. The NOHA will build its nest in tall grass or in the cover of a bush or shrub.
- **Ferruginous Hawk (*Buteo regalis*)** - The ferruginous hawk (FEHA) is listed by CDFG as a Species of Special Concern. It is a winter migrant to Southern California and is most often observed in uncultivated pastures and arid grasslands. Botta's pocket gophers (*Thomomys bottae*) make up nearly 90 percent of their diet.
- **Burrowing Owl (*Athene cunicularia*)** - The western burrowing owl (BUOW) is a CDFG-designated State species of special concern, although CDFG recently determined that the species does not currently warrant listing as a State threatened or endangered species. Burrowing owl habitat can be found in annual and perennial grasslands, deserts, and scrublands characterized by low-growing vegetation (Zarn 1974). Burrowing owls feed on insects, small rodents, birds, amphibians and reptiles. Although they primarily hunt at night they are readily seen during the day standing at the burrow entrances. Burrows are the essential component of BUOW habitat and this fossorial owl will commonly occupy abandoned rodent burrows and man-made structures such as culverts, pipes, and debris piles. The BUOW nesting season begins as early as February 1 and continues through August 31, with the peak of the breeding season occurring between April 15 and July 15 (Thomsen 1971, Zarn 1974).
- **Barn Owl (*Tyto Alba*)** - The barn owl (BAOW) is easily recognized by its nearly pure white underparts and distinctive heart-shaped facial disk surrounding dark eyes. Barn owls are typically associated with open fields and will take small mammals including voles (*Mircrotus*

sp.) and shrews (*Sorex* sp.). Barn owls typically begin nesting in January in the south to late February or March in the north. The BAOW will nest in cavities in trees, buildings, rock crevices, outcrops, cliffs, quarries and nest-boxes.

- **Great Horned Owl (*Bubo virginianus*)** – The great horned owl (GHOW) begins nesting in late November or January in the south and will nest in a natural cavity in a tree, rock ledge, cave, and will often use the nest of a large bird such as crows and hawks, and large tree hollows. Others use cliff ledges, or caves as nesting sites. During daylight hours, the GHOW needs a roost that is not easily visible. They prefer roost trees located some distance away from other trees in the area.
- **Merlin (*Falco columbarius*)** – The Merlin is listed by CDFG as a species of special concern. It does not breed in California, but is a winter migrant to the area. Its numbers have declined drastically in the last 20 years due to reproductive failure from pesticide exposure. This species generally prefers to hunt in open habitats such as coastal areas, marshes, dunes, and deserts.
- **Peregrine Falcon (*Falco peregrinus anatum*)** -The Peregrine Falcon is listed a state listed endangered species. The species was delisted from the federal endangered species list in 1999 due to recovery. The species had declined drastically due to egg-thinning from pesticide exposure, but recovered following the ban on the pesticide DDT. This species is commonly found in open habitats near water sources, such as shorelines.

METHODOLOGY

A qualified GLA biologist familiar with the identification of raptors, their associated prey and nests, conducted raptor surveys at the Parkside Estates Property on May 19, 20, 21, 22 and on June 2, 3, 4, and 5, 2003, to evaluate the site for nesting raptors and to document the extent of raptor foraging use on site. Survey hours ranged from early morning to dusk to increase the likelihood of detecting raptors on site. During each survey, the biologist was alert to evidence of nesting including the location of a nest, observation of a raptor with nesting material, raptor with prey item, observation of offspring, or observation of nesting behavior.

In addition, all indicators of raptor use were recorded on site including; direct observation of the raptor, detection of whitewash, feathers, and regurgitated pellets. If a raptor was observed on site, the biologist recorded its location and foraging behavior (Exhibit 2). Commonly observed foraging behaviors exhibited by raptors include; circling, hovering, perching, attempt, and kill. Each behavior is defined below.

- **Attempt** - Pursuing a prey item without success.

- Circling - Circling over an area while scanning the surface below for prey. This behavior is most often performed by the TUVU and buteos including the REHA.
- Hovering/Kiting - Hovering or kiting in mid-air while scanning the surface below for prey. This behavior is most often performed by American kestrels and by white-tailed kites.
- Kill - The action or process of chasing, capturing, and killing a selected prey item.
- Perching - This behavior is performed by all raptor species. Most raptors will utilize telephone poles and wires, tall structures and fence posts as elevated lookout platforms. The vast majority of recorded attempts and kills are often first initiated from an elevated perch.

During all survey visits, conditions were conducive for raptor surveys. Table 1 summarizes the conditions recorded during the raptor surveys.

Table 1. Survey Conditions

Date	Survey Time	Cloud Cover	Temperature	Wind
5/19/03	14:20 – 18:45	40% - Overcast	69 – 63 ° F	0 – 1 MPH
5/20/03	13:05 – 17:00	20%	71 – 75 ° F	1 – 2 MPH
5/21/03	07:30 – 12:00	Clear	59 – 66 ° F	1 - 3 MPH
5/22/03	10:55 – 14:45	Clear	73 ° F	0 – 3 MPH
6/02/03	08:30 - 13:30	25%	68 – 76 ° F	0 - 2 MPH
6/03/03	07:15 – 11:55	60%	60 – 73 ° F	0 – 2 MPH
6/04/03	12:20 – 16:25	15%	72 – 78 ° F	2 – 5 MPH
6/05/03	13:05 – 18:15	20%	69 – 76 ° F	0 – 3 MPH

RESULTS AND CONCLUSIONS

Raptor Use of Parkside Estates Property

No raptor species or nests were observed on the property. Two species, the REHA and TUVU were observed circling over the southern 5-acre portion of the site during a number of the site visits, but no species were observed perching or nesting on site. When observed, the REHAs and TUVUs spent the majority of their time circling over the larger, adjacent off-site areas located north and west of the site. In addition, Audubon's cottontails (*Sylvilagus audubonii*) and California ground squirrels (*Spermophilus beecheyi*) were observed frequently on the off-site areas, but were not observed on site. A summary of raptor foraging activities on the property is provided in Table 2.

Table 2. Recorded Raptor Behaviors Within The Parkside Estates Property.

Behavior	REHA*	TUVU*	Total
Attempts	0	0	0
Circling	2	4	6
Hovers	0	0	0
Perched	0	0	0
Kills	0	0	0
Total**	2	4	6**

*REHA = Red-tailed hawk and TUVU = Turkey vulture.

**These results reflect the number of independent observations of each behavior, but do not represent number of individual birds using the property.

The results from Table 2 are not comprehensive and likely underestimate the level of activity, but clearly indicate that raptor use of the site is limited. Over eight sampling days, REHAs and TUVUs were observed circling on two occasions over the western property boundary, but were observed predominantly circling over larger off-site open space areas. No nests or foraging behavior other than circling were recorded on site.

On June 2, 2003 a male COHA was observed perched approximately 20 meters off site on a stripped utility pole on the adjacent northerly slope. The COHA was observed for approximately 45 minutes perched on the utility pole scanning the on site Eucalyptus windrow. Although no foraging attempt was recorded on site, it is expected that COHAs and on occasionally SSHAs utilize the Eucalyptus windrow and the adjacent contiguous off site Eucalyptus windrow to the west for foraging as this area provides sufficient prey base for these species.

Although the REHA, COHA, TUVU, RESH, NOHA, WHKI, FEHA, BUOW, BAOW, and GHOW are known to occur within the site vicinity, due to the disturbed nature of the site, these species would be expected to use the site limitedly. A biological evaluation conducted in 1997 by Frank Hovore and Associates (FH&A) indicated that several red-tailed hawks resided locally. The FH&A evaluation identified several American crow (*Corvus brachyrhynchos*) nests and possibly one red-tailed hawk nest in the Eucalyptus windrow on site. Because the site has been further degraded since the FH&A report, agricultural areas encroach within several feet west and east of the Eucalyptus windrow, and human disturbance occurs within the windrow, it is expected that the likelihood of raptors nesting on site is low.

The southern 5-acre portion of the site contains areas of disturbed alkaline soils and supports saltgrass, pickleweed, iceplant, five-hook bassia, London rocket, and Canary grass. Although not observed, small mammals including the western harvest mouse (*Reithrodontomys megalotis*), ornate shrew (*Sorex ornatus*), and to a lesser extent the Botta's pocket gopher (*Thomomys bottae*) likely inhabit the area. Therefore, it would be expected on occasion that WHKIs, AMKEs, and NOHAs frequent the area. Although night surveys were not conducted, GHOWs and BAOWs would be expected to utilize the southern perimeter of the Eucalyptus windrow as a platform for pouncing on small mammals in open areas.

Non-raptor avian species observed on or near the Parkside Estates Property include house finch (*Carpodacus mexicanus*), mourning dove (*Zenaida macroura*), European starling (*Sturnus vulgaris*), red-winged blackbird (*Agelaius phoeniceus*), American crow (*Corvus brachyrhynchos*), rock dove (*Columba livia*), northern mockingbird (*Mimus polyglottos*), Anna's hummingbird (*Calypte anna*), black phoebe (*Sayornis nigricans*), Say's phoebe (*Sayornis saya*), white-crowned sparrow (*Zonotrichia leucophrys*), song sparrow (*Melospiza melodia*), California towhee (*Pipilo crissalis*), common raven (*Corvus corax*), western meadowlark (*Sturnella neglecta*), killdeer (*Ceryle alcyon*), and western gull (*Larus occidentalis*).

Mammals present on site based on direct observation or physical evidence include California ground squirrel (*Spermophilus beechyi*), and domestic dog (*Canis familiaris*).

Reptiles observed onsite based on direct observation or physical evidence include western fence lizard (*Sceloporus occidentalis*).

Ron Metzler
Shea Homes
January 7, 2004
Page 9

If you have any questions regarding this letter report, please contact Jeff Ahrens or Tony Bomkamp at (949) 837-0404.

Sincerely,

GLENN LUKOS ASSOCIATES, INC.

Tony Bomkamp for

Jeff Ahrens
Biologist

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