

Memorandum

Date: October 22, 2015
To: Ms. Nadia Parker, Los Angeles Department of Water
and Power
From: Arthur Popp and John Parent, AECOM
Subject: 2015 Silver Lake Nesting Bird Season Monitoring
Summary

Background

Construction in support of the Silver Lake Reservoir Complex (SLRC) Bypass Project (Project) occurred during the 2015 nesting bird season, generally considered to occur between February and August. Great blue heron (GBHE; *Ardea herodias*) nests (collectively referred to as a rookery) have been known to occur for many years in a grove of mature eucalyptus (*Eucalyptus* sp.) trees along the northwestern perimeter of Silver Lake Reservoir. In order to comply with the federal Migratory Bird Treaty Act of 1918 (MBTA) and California Fish and Game Code's protection of nesting birds, Los Angeles Department of Water and Power (LADWP) implemented Mitigation Measure BR-4 of the Project's Final Environmental Impact Report (FEIR) in order to avoid significant impacts to nesting GBHE and other nesting birds in the Project area. In compliance with the measure, a biologist was present during all Project construction activities occurring within 500 feet of each nest in the GBHE rookery. The 500-foot nest buffers were combined to delineate an environmentally sensitive area (ESA) for the rookery. Biologists were specifically on-site to monitor GBHE behavior during construction activities, remain alert for changes in behavior that may indicate GBHE are disturbed by construction, and ensure that construction activities do not reach adverse levels where the nests or brood are disturbed.

Should the biologist during monitoring determine that construction activities were disturbing nesting birds, construction would be halted, and AECOM biologists and LADWP would work with the construction contractor (Buntich Construction Company) to determine if alternative work method were feasible that would avoid disturbance to nesting birds. If alternative methods of construction to avoid impacts were not possible, construction would not commence until after the conclusion of the 2015 nesting bird season. This memorandum provides a

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summary of the results of monitoring and survey efforts conducted at SLRC during the 2015 bird nesting season..

An AECOM biologist was present to monitor GBHE and any other nesting bird observed in the ESA on a daily basis beginning on March 2, when daily construction activities within the ESA began. Spot checks of the GBHE rookery had been initiated on January 12. From March 2 until the end of July, an AECOM biologist was present every week, Monday through Friday. As construction activities moved north out and away from the ESA and only occasional work occurred in the ESA, AECOM biologist coordinated with LADWP environmental managers and on-site resident engineers regarding the monitoring effort needed. Biologists were present on days when construction within the ESA was scheduled; however, when no significant work in the ESA was scheduled, biologists were not present. A minimum of biweekly spot checks were however conducted to ensure that GBHE nesting remained uninterrupted. Monitoring of GBHE nests ended on September 10, when the last nest was deemed fledged. Although this date occurs outside the nesting bird season, two active nests remained at the calendar end of the breeding season, requiring biologists to continue monitoring activities until juveniles in the last nest fledged and were no longer dependent on the nest.

Summary:

The GBHE rookery is divided into two separate colonies, North and South, to allow for efficient monitoring and documenting of GBHE behaviors during the course of construction activities. The North colony is located along the western edge of Silver Lake reservoir, beginning approximately 100 feet south of the northern edge of the reservoir, and extending south approximately 250 feet. A total of ten nesting attempts occurred in the North colony. One nesting attempt occurred in Nests 1-8, with a second brood occurring in Nest 8 and a new nest (Nest 15) constructed by a GBHE pair immediately above Nest 4.

The South colony was also located along the western edge of Silver Lake reservoir, beginning approximately 350 feet south of the north colony, and extending south for approximately 200 feet. A total of six nesting attempts occurred in the South colony. No second broods occurred in the South colony,

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making it of note that second broods were initiated in the colony closest to Project construction activities.

Biologists were on-site during all construction related activities that occurred within the ESA's. Monitoring efforts focused primarily on the North colony, as construction work generally did not extend into the ESA of the South colony; however, the behavior of GBHE in the South colony was consistently tracked throughout the nesting season to establish a baseline of normal undisturbed behaviors for GBHE within the SLRC. GBHE behaviors observed throughout the season at the North colony closely resembled those observed at the South colony for the same time periods.

Over the course of the nesting season, biologists consulted with LADWP to schedule construction activities to occur at times that would be least disruptive to the GBHE. At no time during the entire monitoring effort was it necessary for the monitoring biologist to request that construction work stop, or to direct work away from the GBHE colonies in order to prevent behavioral changes that could impact nesting heron and result in potential "take" of GBHE.

On June 1, a juvenile GBHE was observed on the ground beneath the South colony. Over the course of the next three days, the juvenile was closely observed, and it appeared to gradually grow weaker. On June 3, the juvenile was beginning to show signs of distress, and a decision was made to capture the individual, and transport it to the Wetlands and Wildlife Care Center in Huntington Beach. Biologists remained in contact with the rescue center, and were informed of the individual's successful rehabilitation and release back into the wild on June 27.

For the 2015 nesting season, SLRC GBHE colonies averaged 1.5 chicks fledged per the 16 nesting attempts. Of note is that both the North and South colonies averaged 1.5 chicks fledged per nesting attempt, indicating the fledging success in the North colony, which is closer to the construction area, was equal to that in the South colony. Four nests experienced chick mortality. Three of the nests suffering chick mortality failed to fledge any chicks. In these instances, it is likely that there are extenuating factors (non-construction related) that caused the failures, such as the adults were first time nesters and inexperienced; however, it

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is more likely that GBHE interbrood competition, which can be very fierce and is well documented within this species, accounted for chick mortality. GBHE chick mortality has been documented as often being high, with only one to two chicks fledging per nesting attempt.

Four of the six GBHE chick mortalities occurring during the 2015 nesting season exhibited injuries consistent with interbrood competition (i.e. peck marks on the body presumably from a sibling). These four GBHE carcasses were discovered on the ground under the nests. Mortality of these individuals likely occurred as a result of interbrood competition in the nest, which would weaken the individual, in combination with a fall to the ground below (nests were generally at least 75 feet above the ground). The two other GBHE carcasses that were observed remained in the nest and did not fall to the ground.

A table summarizing the results of the GBHE 2015 nesting season is provided below.

Silver Lake Reservoir GBHE Nesting Results				
Colony	Nest #	# of chicks	# of fledges	# of mortalities
North Colony	1	2	2	0
	2	2	0	2
	3	2	2	0
	4	3	3	0
	5	2	1	1
	6	1	1	0
	7	1	0	1
	8	2	2	0
	8	2	2	0
	15	3	3	0
South Colony	9	2	0	2
	10	2	2	0
	11	1	1	0
	12	1	1	0
	13	2	2	0
	14	2	2	0
Totals	16 nesting attempts	30	24	6

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In addition to the GBHE colonies, a bushtit (*Psaltriparus minimus*) nest was discovered and an appropriate ESA buffer was established to protect the nest. After the bushtit successfully fledged, the corresponding ESA was removed. Three killdeer (*Charadrius vociferus*) nests were also discovered during monitoring, and appropriate ESA's were established for each nest. Killdeer are ground nesting birds, making their nests in the open in shallow depressions. All three nests were depredated (likely by coyotes) during the course of nesting, and the ESA were removed accordingly.

In summary, Project construction activities occurring in the ESA did not appear to alter the nesting behavior of GBHE within the SLRC and "take" related to construction did not occur. GBHE mortalities observed during the 2015 nesting season were within the normal range for the species.

Should you have any questions, comments, or require additional information, please feel free to contact John Parent or myself.

Sincerely,



Arhtur Popp

Project Mangere/Biologist

