ENVIRONMENTAL CONSULTANTS

January 16, 2017

Nicole Morse, Esq.
Placeworks
3 MacArthur Place, Suite 1100
Santa Ana, California 92707

Re: Response to Bird-Safe Design Related Comments for the Draft Southeast Area Specific Plan, Long Beach, California

Dear Ms. Morse:

As requested by Placeworks, this letter provides responses to bird-safe design related comments for the draft Southeast Area Specific Plan (SEASP) and related Draft EIR (DEIR) within the City of Long Beach, Los Angeles County, California. The SEASP would represent the first zoning alterations within Long Beach's defined "Southeast Area" (SEA) since the Planned Development District 1 was established in 1977, allowing for an increased density of commercial development in two discrete portions of the SEA. Two sets of comment letters were submitted pertaining to bird-safe design issues, from the El Dorado Audubon Society and Los Cerritos Wetlands Land Trust respectively, and are evaluated herein.

Responses - Audubon Society Letter

Comment A4-2:
…night lighting and birds striking glass resulting in their deaths in a dense group of buildings placed to within 100 feet or less of the wetlands is of particular concern. In addition, lighted buildings at night pose extreme risks to migratory birds as well as other wetlands creatures. Bird safe building treatments only lessen building glass bird strike kills. Bird safe treatment is a good tactic for existing buildings, but when we have the choice not to create the hazard in the first place then we shouldn't do it. In addition, the ground and lower floors of any buildings, regardless the height, need bird safe treatments as birds strike lower stories just as often as upper stories. A lights out program can solve the issue of night lighting. El Dorado Audubon would be happy to assist the planners in these areas.

Response:
The comment is noted. The SEASP acknowledges that lighting and building facades can pose a hazard to birds (SEASP p. 165). However, these hazards largely depend on the type, location, and orientation of lighting and facades. The SEASP requires bird-safe measures for both lighting and facades, which have been shown to reduce bird strikes (SEASP p. 166, Sheppard 2011 and references therein [hereafter Sheppard 2011]). Generally speaking, the most hazardous areas of buildings for birds are the lower stories, specifically ground level up to 60 feet in height or approximately the lower 4.5 (average-height) building stories (San Francisco Planning Department [SFPD] 2011 and references therein [hereafter SFPD 2011]). Most bird migration (both diurnal and nocturnal) occurs at altitudes of 500 feet or greater (approximately 38 average-height building stories), and thus the risk of strikes is usually greatest when the birds descend to rest/forage or during inclement weather (Sheppard 2011, SFPD 2011). As

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such, the birds most susceptible to potential building strikes in the SEA are 1) locally resident species present throughout the year, and 2) migratory species that are using the SEA as stopover and/or wintering habitat, and may transit to/from and between habitat patches such as the Los Cerritos Wetlands Complex (LCWC). The bird-safe requirements in the SEASP recognize and are tailored to this context, requiring that building facades incorporate bird-safe treatments above the ground floor such that less than no more than 10% of the total area is untreated glazing (SEASP page 166). Most bird-safe guidance documents (e.g., SFPD 2011) recommend that such treatments occur up to a minimum of 60 feet in height, so the SEASP requirements actually go further (higher), i.e., to the maximum height of the proposed buildings. Regarding lighting, among other requirements, the SEAP stipulates that exterior lighting be shielded and downcast, and that interior lighting be minimized through the use of automated on/off systems. The SEASP also encourages building owners to follow bird-safe best practices and a lights out for birds regimen (SEASP page 167).

Comment A4-9:
A critical item that is not addressed in SEASP is that it is in the direct path of the Pacific Flyway. Cornell Lab of Ornithology, the National Audubon Society, the American Bird Conservancy, U.S. Fish and Wildlife Service, and FLAP Canada have determined that collisions with windows are a major factor in bird fatalities and accounts for nearly 1 billion deaths per year. Whether the building is a single story or a skyscraper birds will fly into windows, but logic follows that the more stories and glass the more bird strikes will occur. The Draft SEASP Developmental Plan 5.7 page 72 will allow for building heights of 7 stories or 75', which is 40' higher than current zoning. The additional windows and light emitting from windows will have a substantial negative impact on resident birds and those that utilize the Pacific Flyway. A better understanding of the detrimental repercussions from artificial night lighting can be gained by reading Ecological Consequence of Artificial Night Lighting; edited by Travis Longcore and Catherine Rich.

Response:
The comment is noted. The context of the Pacific flyway is discussed in DEIR. It should be made clear that this flyway includes much of western North America, including the entirety of the state of California. As such, the SEA is a relatively tiny piece of the flyway, which occurs on substantially broader spatial-scales and includes a variety of biomes and habitats. The portions of the SEA within which increased commercial development is proposed are already almost entirely developed. As such, the overall area(s) within the SEA that may be utilized by birds migrating and wintering along the flyway will remain essentially unchanged. Given the extent of urban development in the greater Long Beach area, it is recognized that the LCWC provides locally important habitat for birds using the flyway, and thus measures to minimize potential impacts to birds from future re-development are included in the SEASP. Please see the response to comment A4-2 for the remainder of the response.

Comment A4-16:
The Los Cerritos Wetlands is physically separated from Alamitos Bay, Ocean and beach by Pacific Coast Highway, 2nd Street, Studebaker, etc.

The birds do not know our boundaries -- they fly between the wetlands, the bay, the river and the ocean. They fly between the buildings and just barely over the tops of 3.5 story buildings.

Response:
The comment is noted. It is recognized that birds presumably transit to/from and between existing habitat patches within the SEA. Regarding the height at which birds fly over buildings, those flying "*between…and just barely over the tops of 3.5 story buildings*" likely do so simply because they recognize the boundaries of the structures and are deliberately avoiding them (while minimizing the energy expenditure required to do so). The importance of birds being able to perceive the outline of solid structures (buildings) is recognized, and indeed the primary rationale for including bird-safe design requirements in the SEASP.

Responses – Los Cerritos Wetland Land Trust Letter

Comment A7-10:
As LCWLT has noted in past comments submitted to the City, development within the area of southeast Long Beach contemplated by SEASP has the potential to disrupt circadian rhythms of wildlife in the Los Cerritos Wetlands and other adjacent areas, and to attract migratory birds to artificial light sources. Millions of migratory birds are killed each year after being attracted to artificial light sources. LCWLT appreciates SEASP's repeated emphasis on design, massing, setback, and bird safe treatments for buildings to be located near the Los Cerritos Wetlands and provides these comments to improve the Plan.

First, references within SEASP itself must be revised to use the mandatory "shall" instead of the more permissive "should." (E.g., SEASP 7.2.3 (G), p. 154.)

Response:
The comment is noted. Regarding artificial light sources and circadian rhythms, the zoning changes proposed apply almost entirely to areas that are currently developed, with existing commercial buildings and related artificial lighting sources for parking lots and streets. Birds present locally are presumably at least somewhat adapted to the artificial light emanating from the current developments and surrounding areas, which are highly urban/suburban and have been developed for decades. As is known, existing developments within the relevant portions of the SEA have not implemented bird-safe design elements and are not currently required to. It is recognized that additional development within these areas has the potential to increase the extent of lighting in the area on a localized scale, and the relevant requirements in the SEASP (related to lighting types, direction of illumination, etc.) are included for that reason.

Regarding verb usages in the SEASP, prominent bird-safe design measures indeed use "shall" and are binding. Examples include mandating that building exteriors have a large proportion of "treated" glass/glazing, and that building light be shield and directed downward (SEASP p. 166). Some bird-safe elements do occur as recommendations ("should"/"could"), primarily to encourage additional bird-safe practices while maintaining a balance between human use of the area and minimizing potential impacts to biological resources.

Comment A7-11: *Second, Guideline (E) of the "bird-safe lighting design" guidelines emphasizes the use of blue or green lights. (SEASP pp. 159-160.) The Guidelines should be modified to prohibit the use of blue lighting, which research shows may adversely impact wildlife. (See, http://www.takepart.com/article/2016/06/16/light-pollution-safe-people-wildlife, herein incorporated by reference.) Warm-white lights or filtered LEDs designed to minimize blue emissions should be required. Adverse impacts include more severe disruptions to circadian rhythms and increases in predation of some species beyond that seen with other wavelengths.*

Response:
The comment is noted. The article cited in the comment is an advocacy piece that primarily discusses the disruption of circadian rhythms in humans as a result of LED lighting. Effects to wildlife are mentioned only briefly and within the context of general impacts due to artificial lighting; LED and blue lighting are not specifically addressed in this context. The current consensus among biologists regarding which light wavelengths may be more impactful on birds than others is somewhat mixed. However, a body of evidence suggests that green and blue lighting affects orientation in birds much less than red and white lighting, and as such the use of the former is encouraged (Sheppard 2011, Poot et al. 2008, SFPD 2011). The goal of the bird-safe design elements of the SEASP is to minimize the use of artificial night lighting overall in a manner that still allows for public safety and nocturnal use of the area by people.

Comment A7-12:
Third, SEASP must clarify how architectural lighting guidelines are to be interpreted with regard to the bird-safe lighting design guidelines. While the bird-safe lighting design guidelines specify that "Nighttime lighting shall be minimized to levels necessary to provide pedestrian security" (SEASP pp. 159-160), other provisions encourage use of special illumination "to highlight main building entrances and add interest to the building façade. Subtle lighting to accent the architecture and special architectural elements (such as distinctive rooftops) is encouraged." (SEASP p. 154.) What an architect considers subtle may be extremely harmful to wildlife. Additionally, SEASP provides that "lighting should augment pedestrian experience and encourage window shopping even when stores are closed" (SEASP p. 161), in direct conflict with the bird-safe lighting design guidelines. SEASP must be revised to ensure that the bird safe lighting design guidelines prevail over aesthetic guidelines.

Response:
The comment is noted. The SEASP requires that all building lighting shall be designed to minimize spillage, e.g. shall be shielded and directed downward (SEASP p. 166). Such requirements conform to general bird-safe design guidelines (e.g., SFPD 2011, Sheppard 2011). As stated in the response to Comment A7-10, the zoning changes proposed apply almost entirely to areas that are currently developed, with existing commercial buildings and related artificial lighting sources for parking lots and streets. It is recognized that additional development within the relevant areas has the potential to increase the extent of localized lighting, and the relevant bird-safe design requirements in the SEASP are included for that reason.

Comment A7-13:
Fourth, the DEIR dismisses the Project's cumulative impacts related to nighttime lighting because nighttime lighting already exists in the developed portions of the SEASP area. (DEIR p. 5.4-39.) The area's existing nighttime lighting is already problematic for biological resources. Increasing the area's nighttime lighting will increase the adverse impacts of nighttime lighting. CEQA requires consideration of SEASP's cumulative impacts on nighttime lighting for precisely this reason. "One of the most important environmental lessons evident from past experience is that environmental damage often occurs incrementally from a variety of small sources." (Kings County Farm Bureau v. City of Hanford (1990) 221 Cal.App.3d 692.)

Response:
The comment is noted. As stated in the response to Comment A7-10, the zoning changes proposed apply almost entirely to areas that are currently developed, with existing commercial buildings and related artificial lighting sources for parking lots and streets. It is recognized that additional development within the relevant areas has the potential to increase the extent of

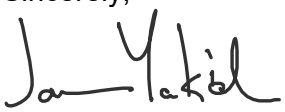
localized lighting, and the relevant bird-safe design requirements in the SEASP are included for that reason.

Comment A7-50:
We agree with the requirements for bird safe treatments to all buildings that are developed through the buildout of SEASP. These measures are critical to avoid collisions for birds that are not only migrating along the Pacific Flyway, but also for birds that make daily aerial transits from Alamitos Bay, Colorado Lagoon, or Sims' Pond to Los Cerritos Wetlands. However, there are some concerns with building height close to Los Cerritos Wetlands, specifically within the Marketplace development along Shopkeeper Road. Multiple studies have been conducted on bird strikes with both short (<40m) and tall (>40m) buildings, buildings nearby densely vegetated areas, and buildings along bird migratory paths. A study on bird strikes from 1996 expressed concern with migrating birds facing risks wherever human-built structures occur along their migratory flight path, stating they are likely more vulnerable than resident birds to collisions and potentially fatal disorientation (Ogden, 1996). Several bird safe building guidelines for cities across the U.S. describe that the lower levels of a building are most hazardous, especially during the day due to the attractiveness of reflective surfaces of buildings with glass, but moderate height buildings between 50 and 500 ft can pose a threat to nocturnal migratory species that descend into vegetated areas to feed in the early hours of the morning (NY Audubon Society, 2007). A recent study by Gelb and Delacretaz found that a poorly planned 6-story building located nearby a densely vegetated area in New York City had the highest volume of bird mortality when compared to other buildings within the study (Gelb et al., 2009). Due to the high risk of building directly next to densely vegetated areas along a major migratory path, we recommend that each development is required to perform an animal movement study as part of the design of the building layout.

Response:
The comment is noted. While the cited studies are recognized, the context of the studies does not apply to areas of proposed change in the SEASP. Please see the response to comment A7-10 regarding overall lighting in the rezoning area. Additionally, the undeveloped areas adjacent to the areas of proposed change are not densely vegetated in the same manner as the focal areas in the study by Gelb and Delacretaz (2009). The undeveloped portions of the SEA consist primarily of open areas with scattered palm trees and shrubbery amid short herbaceous and wetland vegetation, versus the urban parks with tall, mature trees in the aforementioned study. Please see response to comment A4-2 regarding the proposed plan's location along a major migratory path. It is recognized that birds may transit to/from and between patches of nearby habitat such as the LCWC, and the relevant bird-safe design requirements in the SEASP are included for this reason. It is assumed the birds using the LCWC may come and go from essentially any direction, and the bird-safe requirements and guidelines apply to all areas of proposed commercial zoning changes within the SEA (which are relatively discrete and largely contiguous). Therefore, specific animal movement studies for each building or individual development are not warranted.

Please feel free to contact me if you have any questions or require additional information.

Sincerely,



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Ec: Wendy Nowak, Placeworks

References

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