

San Jose Airport Commission
Mr. Matthew Kazmierczak,
mkazmierczak@sjc.org

March 31, 2021

Re: Hazardous Project in San Jose

Dear Chair Connoly and San Jose Airport Commissioners,

The Santa Clara Valley Audubon Society and Sierra Club Loma Prieta Chapter are greatly concerned that the selected illuminated structure proposed by the Urban Confluence Silicon Valley¹, to be located at Arena Green park in San Jose, will create an unmitigable hazard to airport operations. This 200-ft tall, lit structure may prove hazardous to pilots who need to be able to see the lighted runways and control tower. It can also significantly increase the risk of aircraft interaction with large flocks of migratory birds.

San Jose is located on the Pacific Flyway for migratory birds. The vast majority of these birds fly at night, and often concentrate along oceans, wetlands and waterways. Nocturnal migratory birds are attracted to light, a phenomenon known as phototaxis². This attraction can be fatal due to collision with both light-emitting and nearby structures. It can also lead to disorientation and exhaustion as birds are “captured” by the light and circle ceaselessly around and above the light source.



Birds attraction to light should not come as a surprise to the City of San Jose, given historical reports³ of birds and insects that swarmed the original light tower, including “Birds and insects came in violent contact with the tower and the electric wires and fell to the ground below dead. A couple of bushels of them could be gathered up on the street.” The wikipedia entry for the tower describes⁴, “...the police on the local beat made money selling birds that collided with the tower to local restaurants.”

The Tribute in Light iconic memorial to the Twin Towers in New York City is lit only once a year, on September 11th. A 7-year long study⁵ of bird behavior showed that when the installation was

¹ <https://www.urbanconfluencesiliconvalley.org>

² <https://pubmed.ncbi.nlm.nih.gov/25483789/>
<https://esajournals.onlinelibrary.wiley.com/doi/abs/10.1002/fee.2029>

³ <https://cdnc.ucr.edu/?a=d&d=SFC19000506.2.50&e=-----en--20--1--txt-txIN-----1>

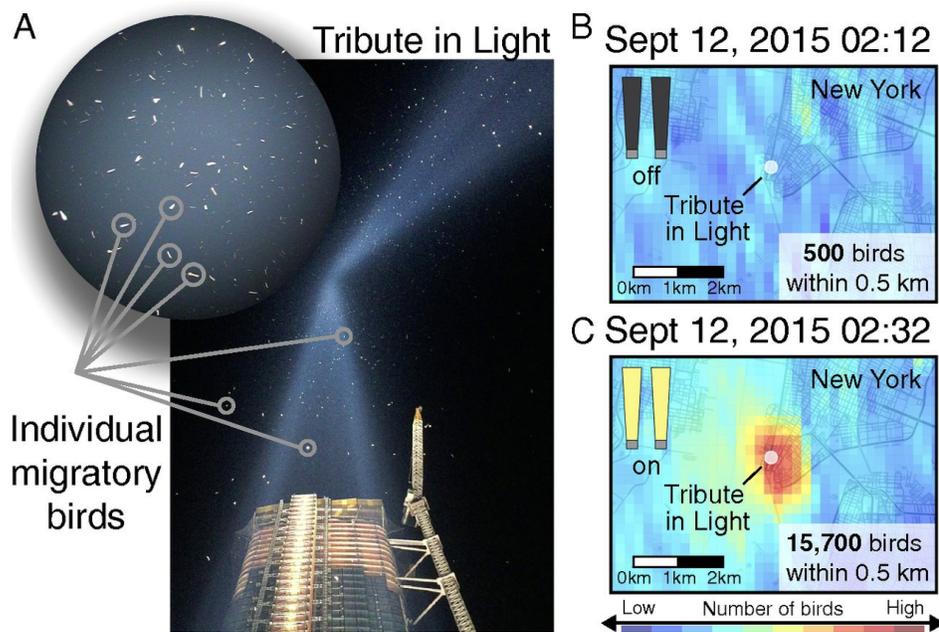
⁴ https://en.wikipedia.org/wiki/San_Jose_electric_light_tower

⁵ <https://www.pnas.org/content/early/2017/09/26/1708574114>

illuminated, birds congregated in high densities, decreased flight speeds, followed circular flight paths, and vocalized frequently. **Bird densities near the installation exceeded magnitudes 20 times greater** than surrounding baseline densities during each year's observations. These significant behavioral alterations occurred even though this is a heavily light polluted environment. The researchers estimated that the installation influenced about a million birds during their study period just 1 night a year for 7 years

The Tributes in Light study used visual, auditory and radar methodology to estimate the number of birds that were attracted to the light. Figure 1 shows one night in which the **number of birds within 0.5-km of the iconic light plume increased from 500 to 15,700 within 20 minutes**. The birds circled the light until it was extinguished.

Figure 1. Tribute in Light site in NYC. Observations from the September 2015 Tribute in Light event show altered behaviors of nocturnally migrating birds. (A) Direct visual observation. (B) Radar observation without TiL illumination and (C) with TiL illumination. Source: <https://www.pnas.org/content/early/2017/09/26/1708574114#sec-1>



The proposed Urban Confluence project is likely to attract a large number of birds to Arena Green in San Jose from surrounding areas. The project site is immediately adjacent to the Outer Safety Zone - South. It is reasonable to expect that birds will be attracted to the installation and will circle the sky, disoriented, within the safety zone, at various heights. **This risk of attracting flocks of nocturnally migrating birds into the airspace near the airport poses a significant and unacceptable hazard to aircraft.**

The Airport Land-Use Commission can influence appropriate development of areas surrounding public airports in Santa Clara County. It is intended to minimize the public's exposure to excessive noise and safety hazards, and to ensure that the approaches to airports are kept clear of structures that could pose an aviation safety hazard.

We expect the San Jose City Council to consider confirming the Arena Green location and the selected design in May 2021. For the good of avian species and public safety, we hope the Airport Commission recommends that the City of San Jose stop processing the proposal for this hazardous structure at this (or any) location.

Respectfully,

Shani Kleinhaus, Ph.D.
Environmental Advocate,
Santa Clara Valley Audubon Society

Dave Poeschel,
Guadalupe Regional Group Conservation Committee Chair,
Sierra Club Loma Prieta Chapter