



June 11, 2019

The Honorable Mayor Ezzy Ashcraft and Honorable Members of Alameda City Council
Alameda City Hall
2263 Santa Clara Ave.
Alameda, CA 94501
TRANSMITTED VIA EMAIL

RE: Nautilus Data Center Poses Too Many Risks to Alameda's Wildlife & Marine Ecosystem

Dear Mayor Ashcraft & Alameda City Council Members:

On June 18, the City Council is scheduled to consider a lease of buildings in Alameda Point for a water-cooled data center to be managed by Nautilus Data Technologies. We urge the Council not to approve the lease. The data center may reduce emissions by using bay water rather than electric power to cool their servers, but the potential negative environmental impacts of this data center to the bay and its wildlife are serious.

Nautilus's presentation to the Council stated that the increase in water temperature at the discharge site will be four degrees or fewer. In the Council materials on the City's web site, there is no analysis by Nautilus of whether that temperature increase or turbulence caused by discharge at the planned rates will negatively impact the fish and birds that use that area. The location of the proposed discharge point is environmentally sensitive. The endangered California Least Terns forage in that area. Furthermore, a crucially important night roost for Brown Pelicans is quite close by, as is the Harbor Seal resting platform. The central SF Bay fishery is critical for many birds and other animals. Many species are sensitive to temperatures just a few degrees higher than those they usually experience in nature. A rise in temperature of even 1 degree Celsius could have important and rapid effects on mortality of some organisms and on their geographic distributions. *Executive Summary, Coastal and Marine Ecosystems & Global Climate Change: Potential Effects on U.S. Resources. Pew Center on Global Climate Change, 2002* <https://www.c2es.org/document/coastal-and-marine-ecosystems-global-climate-change-potential-effects-on-u-s-resources/>. Further, warmer waters may cause species that remain to swim in the water column at levels that are not accessible for birds.

In addition, as the water temperature increases, the amount of oxygen that can dissolve in the water decreases. Dissolved oxygen is critical for the survival of animals and plants that live in the water. The amount of dissolved oxygen in an estuary's water is the major factor that determines the type and abundance of organisms that can live there. *National Oceanic and Atmospheric Administration, Ocean Service Education*, https://oceanservice.noaa.gov/education/kits/estuaries/media/supp_estuar10a_temp.html and https://oceanservice.noaa.gov/education/kits/estuaries/media/supp_estuar10d_dissolvedox.html. Warmer waters can also promote toxic algal blooms, a hazard to both humans and animals.

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This project proposes changing water temperatures and creating turbulence in ways that have been shown to negatively impact fisheries and other wildlife. Alamedans have worked hard to protect and monitor our terns, pelicans, seals and other wildlife and we should not take the risk of the unknown consequences arising from this project.

In addition, we have not found any information in the materials on the City's web site that demonstrates how the temperature increase will be limited to four degrees. The estimated power draw from AMP is significant, and the servers can be expected to generate much heat. It is not apparent from the web site information how the temperature of the discharge water will be limited or monitored. The Council should carefully examine and thoroughly understand Nautilus's plan for limiting and monitoring the temperature increase prior to approving the lease.

The San Francisco Bay and its delicate marine ecosystem are under severe and harmful pressure. Our Alameda Point nature reserve and its wildlife are a unique resource in our intensely urbanized region. This data storage project poses risks for each of these resources and we urge the City Council not to approve the lease.

Sincerely yours,

A handwritten signature in cursive script, reading "Cindy Margulis".

Cindy Margulis
Executive Director, Golden Gate Audubon

&

Leora Feeney & Linda Carloni
Co-Chairs of the Friends of the Alameda Wildlife Reserve (FAWR)