



Oxitec Works to Bring Innovative Mosquito Control Technology to California

Mosquito-transmitted diseases are a public health threat and innovative interventions are urgently needed.

- According to the Centers for Disease Control and Prevention (CDC), [mosquitoes kill more people than any other creature in the world](#). *Aedes aegypti* is an invasive mosquito that can transmit viruses that cause Zika, dengue, chikungunya, yellow fever, and animal heartworm. There is no cure or vaccine for many of the diseases transmitted by *Aedes aegypti* mosquitoes.
- Climate change has magnified the risks of invasive mosquitoes and *Aedes aegypti* can now withstand temperate California winters, remaining a threat year after year. *Aedes aegypti* was first detected in California in 2013 and has now spread rapidly to more than 23 counties.
- Innovative mosquito control techniques are needed as these mosquitoes have shown resistance to pyrethroids, the most commonly used class of mosquito adulticide. This limits the efficacy of traditional mosquito control approaches.

Oxitec received U.S. EPA approval to implement a mosquito control pilot project in California and is now seeking approval from the California Department of Pesticide Regulation.

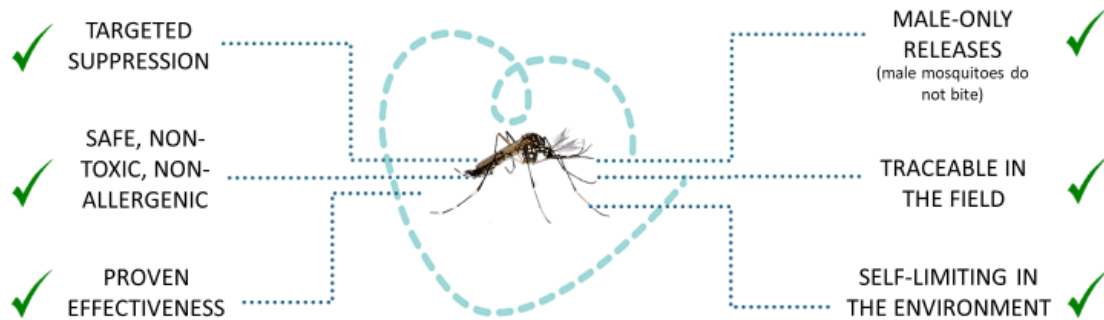
- On March 7, Oxitec received approval from the [U.S. Environmental Protection Agency](#) to initiate a pilot project in California and continue its project in Florida. The EPA's review included a [risk assessment](#) and [response to comments](#). Now, the California Department of Pesticide Regulation is conducting a scientific evaluation of Oxitec's *Aedes aegypti* technology which will include opportunities for the public to engage and review the results of the state's evaluations.
- Invasive *Aedes aegypti* mosquitoes are prevalent in the Central Valley and the Board of Trustees for the [Delta Mosquito and Vector Control District](#) (Delta MVCD) gave unanimous approval to partner with Oxitec to carry out focused projects in northern Tulare County.

Oxitec's technology has been proven to control disease vectors.

- Oxitec's Friendly™ male *Aedes aegypti* mosquitoes carry a self-limiting gene that prevents their female offspring from surviving, allowing for male-only production.
- The non-biting male mosquitoes emerge from just-add-water boxes to mate with biting females. The female offspring of these encounters cannot survive. As the number of biting females in the population is reduced, the overall population of the invasive *Aedes aegypti* also declines.
- Oxitec's self-limiting mosquitoes only mate with invasive *Aedes aegypti* females and this specificity leaves non-target species, such as bees, butterflies, and other wildlife, unharmed.



- Oxitec's mosquitoes are safe for humans and the environment, as confirmed by the U.S. Food and Drug Administration in 2016 and by the EPA in 2020.



Peer-reviewed scientific research and extensive evaluation shows Oxitec's technology is safe and effective.

- Oxitec recently secured regulatory approvals from the EPA and the Florida Department of Agriculture and Consumer Services for a pilot project in Florida. The decisions included input from the CDC and seven other State of Florida agencies, including the Departments of Health and Environmental Protection. The EPA's scientific and environmental assessments for this project included a review of over 4,500 pages of data and protocols, including 2,500+ pages of scientific peer-reviewed literature.
- Similar projects in the Brazilian city of Indaiatuba found that Oxitec's mosquito suppressed disease-carrying *Aedes aegypti* by up to 96% in urban, dengue-prone environments, as compared to untreated control sites in the same city.¹
- In May 2020, Oxitec received full biosafety approval for this technology from Brazil's national biosafety regulatory authority CTNBio after demonstrating the technology's full safety to human health and the environment.

¹ <https://www.frontiersin.org/articles/10.3389/fbioe.2022.975786/full>