

**Quality and Productivity Commission
32nd Annual Productivity and Quality Awards Program
"Innovating for Impact"**

2018 APPLICATION

Title of Project (limited to 50 characters, including spaces, using Arial 12 point font)
NAME OF PROJECT:
MOSQUITO-BORNE DISEASE PUBLIC HEALTH RESPONSE

DATE OF IMPLEMENTATION/ADOPTION: 2016 - ONGOING
(Must have been fully implemented for a minimum of at least one year - on or before July 1, 2017)

PROJECT STATUS: Ongoing One-time only

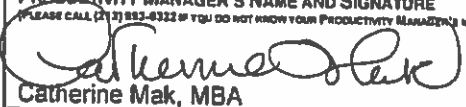

HAS YOUR DEPARTMENT PREVIOUSLY SUBMITTED THIS PROJECT?
 Yes No

EXECUTIVE SUMMARY: Describe the project in 15 lines or less using Arial 12 point font. State clearly and concisely what difference the project has made.

1 Los Angeles County (LAC) is one of the highest risk jurisdictions for mosquito-borne
 2 disease outbreaks. By the time Zika emerged globally in 2015, LAC was already
 3 experiencing serial annual outbreaks of West Nile virus (WNV), a local mosquito-borne
 4 disease. DPH developed early partnerships, strengthened systems and built capabilities
 5 to respond to the increased surveillance, prevention and coordination needs created by
 6 the risk of Zika spread in LAC. In 2017, the Board of Supervisors expressed serious
 7 concern over a record number of WNV deaths and the looming threat of Zika. In
 8 response, DPH organized and coordinated an unprecedented county-wide outreach
 9 event entitled "It's Not Just a Bite!" within 2 weeks. This is the largest door-to-door
 10 outreach launched by DPH in its history to fight a communicable disease. Rapid
 11 activation and mobilization was made possible by the advanced planning activities and
 12 the public health surveillance and response infrastructure already established to fight
 13 mosquito-borne disease in LAC. A post-event evaluation showed that the outreach had
 14 successfully reached nearly 60% of respondents. This successful effort is a testament
 15 to the exemplary team-work and collaboration by staff from programs across DPH.

BENEFITS TO THE COUNTY				
(1) ACTUAL/ESTIMATED ANNUAL COST AVOIDANCE	(2) ACTUAL/ESTIMATED ANNUAL COST SAVINGS	(3) ACTUAL/ESTIMATED ANNUAL REVENUE	(1) + (2) + (3) = TOTAL ANNUAL ACTUAL/ESTIMATED BENEFIT	SERVICE ENHANCEMENT PROJECT
\$	\$	\$	\$	X

ANNUAL = 12 MONTHS ONLY

SUBMITTING DEPARTMENT NAME AND COMPLETE ADDRESS Department of Public Health 313 N. Figueroa Street, 8 th Floor Los Angeles 90012		TELEPHONE NUMBER 213-288-8117
PROGRAM MANAGER'S NAME Umme-Aiman Halai, MD		TELEPHONE NUMBER 213-288-7941 EMAIL UHalai@ph.lacounty.gov
PRODUCTIVITY MANAGER'S NAME AND SIGNATURE <small>(PLEASE CALL (213) 833-4332 IF YOU DO NOT KNOW YOUR PRODUCTIVITY MANAGER'S NAME)</small>	DATE	TELEPHONE NUMBER
 Catherine Mak, MBA	7.6.2018	213-288-7240 EMAIL cmak@ph.lacounty.gov
DEPARTMENT HEAD'S NAME AND SIGNATURE	DATE	TELEPHONE NUMBER
 Barbara Ferrer, PhD, MPH, MEd	07/06/18	213-288-8117

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1st FACT SHEET – LIMITED UP TO 3 PAGES ONLY: Describe the challenge(s), solution(s), and benefit(s) of the project to the County. What quality and/or productivity-related outcome(s) has the project achieved? Provide measures of success and specify assessment time frame. Use Arial 12 point font.

Challenges:

1. LAC is at serious threat from mosquito-borne diseases:

From 2013 to 2017, Los Angeles County (LAC) has experienced yearly outbreaks of West Nile Virus (WNV) with an average of 221 cases per year, approximately 10% of the national burden. WNV circulates in local mosquitoes and can result in serious illness including meningitis, encephalitis, paralysis and even death [1]. Additionally, the infestation of the aggressive Aedes mosquito species capable of transmitting exotic diseases such as dengue or Zika, has spread to new areas of the county since its importation into LAC in 2011. The spread of Aedes mosquitoes coupled with the high volume of international travel and our dense population provide the ideal elements for a potential local outbreak of these diseases if introduced into the environment by an infected traveler. Zika has been of immense concern as infection in pregnancy can lead to serious birth defects in the baby including a small head size or microcephaly, abnormal brain development, blindness and hearing loss [2].

2. Prevention of mosquito-borne diseases relies on community engagement:

There are no vaccines or treatments for WNV or Zika. The most effective prevention is to practice behaviors that minimize mosquito breeding or protect from mosquito bites. As it only takes one effective mosquito breeding source to introduce risk of mosquito-borne disease into a neighborhood, elimination of breeding sources must be practiced at the individual level as well as by the whole community. Only one in five WNV case patients in 2017 reported taking action to prevent mosquito-borne diseases such as draining standing water to prevent breeding or using mosquito repellent. To increase preventive practices, public health must effectively reach, connect to and engage all the different communities across the county. This is especially challenging as LAC, with over 10 million people spread out over 4,000 square miles in 88 cities and 140 communities, is one of the most populous counties in the US with extensive racial, cultural, linguistic, and socioeconomic diversity.

3. Public health response to mosquito-borne diseases requires multiple partners:

Neither one program at the Department of Public Health (DPH) nor one agency can prevent mosquito-borne diseases alone. The Acute Communicable Disease Control Program (ACDC) at DPH conducts surveillance of human cases of mosquito-borne diseases. But they must also partner closely with internal and external programs and agencies to provide mosquito abatement services, laboratory diagnostic services, conduct birth defects surveillance, develop and disseminate educational materials to residents and providers, and plan for emergency operations when the need arises.

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Solution:

By the time the first cases of imported Zika in LAC were identified in 2016, DPH had already developed a system to detect, monitor, and respond to mosquito-borne disease cases such as WNV, including a well-established relationship with the 5 independent vector control districts (VCDs) that serve residents across LAC. Zika posed new challenges due to its effects on fetal health in infected pregnant women requiring unconventional cross-disciplinary collaborations and partnerships. Throughout 2016 and early 2017, DPH built and strengthened plans, systems, and relationships with new and existing partners, both internal and external to DPH. ACDC partnered with Maternal, Child, and Adolescent Health, and Children's Medical Services to develop notification and tracking systems to follow Zika infected pregnant women and their infants to document associated birth defects. DPH worked with VCDs to develop a protocol to systematically detect Aedes mosquitoes in the neighborhoods associated with Zika cases. ACDC collaborated with Emergency Preparedness and Response Division (EPRD) to detail and document a plan for a comprehensive response to a local outbreak of Zika in LAC and with the Public Information Office to develop educational materials for outreach. ACDC and EPRD co-led an action plan to increase the distribution of materials through collaborations with the City of Los Angeles Emergency Management Department, LAC Agricultural Commissioner/Weights and Measures, Sanitation Districts of LAC, and VCDs.

Outcome:

In response to the threat of mosquito-borne diseases and increased concern expressed from the Board of Supervisors in September 2017, DPH put in motion a week long, boots-on-the-ground, educational event entitled, "It's Not Just a Bite!" to increase awareness and promote actions to reduce risk of mosquito-borne diseases and outbreaks, particularly WNV and Zika. Under the emergency response structure, various programs across public health came together to operationalize this massive endeavor. Approximately 100 two-person public health teams were deployed each day to distribute posters and flyers to public venues across the county including city council halls, libraries, schools, parks and places of worship. Over 300 county employees signed up from various departments to volunteer with the effort. Educational materials were translated into Spanish, Chinese, Tagalog and Korean. Environmental Health inspectors distributed "It's Not Just a Bite!" materials during routine site visits at permitted facilities. A digital "It's Not Just a Bite" tool kit was disseminated to city contacts and partners to be used, distributed and printed according to local needs and resources. The on-the-ground effort was complemented by a social media initiative through platforms such as Twitter, Instagram and Facebook to engage residents online. The outreach attracted considerable media attention and coverage further amplifying the reach of public health messages. Under this effort, public health teams visited over 14,000 venues and distributed

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Approximately 55,000 educational materials in a single week across all areas of the county. DPH conducted a follow-up community survey in November 2017 which showed that the outreach had reached nearly 60% of respondents and was associated with a significant increase in awareness and knowledge of WNV and Zika.

Impact:

DPH planned, activated and conducted the largest ever public health on-the-ground outreach to respond to the threat of mosquito-borne diseases in LAC within 2 weeks. This was made possible by the effective and sustained partnerships already in place among various public health programs and external agencies and a shared commitment to reduce the threat of mosquito-borne disease in LAC. The utilization of the emergency command system allowed efficient utilization of resources, staff and communication channels to make the endeavor feasible. In an era when emerging and re-emerging pathogens are increasingly being identified and can spread at record speed through global trade and travel, it is essential for health departments to not only be able to detect these threats but to also be able to rapidly organize and mobilize staff to communicate and assess risk at the community level. Public Health's mosquito-borne disease outreach highlighted that extensive and rapid outreach can be successfully accomplished by establishing effective management systems for community-based operations, and was a valuable learning exercise that can be adapted and quickly deployed for other emergency large-scale responses in the future.

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Linkage to the County Strategic Plan – 1 page only. Which County Strategic Plan goal(s) does this project address? Explain how. Use Arial 12 point font.

Public health efforts towards the surveillance, prevention and control of mosquito-borne disease accomplish the goals of the County strategic plan by increasing the focus on prevention initiatives (strategy I.1), supporting the wellness of our communities (strategy II.2) and developing our workforce (strategy III.1). WNV and Zika can cause potentially devastating health outcomes and result in dire socio-economic consequences for patients and their families. Preventing these diseases is an important investment that can save lives and protect the well-being of our current and future generations. By focusing on community outreach to educate residents on how to protect themselves from mosquito bites and reduce mosquito breeding sources in their communities, the mosquito-borne disease outreach efforts have aimed to empower communities to take action, strengthen resilience and influence individual and community decisions that protect health and safeguard the quality of life of all LAC residents. And lastly, by engaging committed personnel, building relationship skills necessary for coordinated activities and training our staff to respond urgently to emerging disease threats, the mosquito-borne disease prevention and control efforts are developing a leadership workforce that will be able to serve the county for years to come.

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COST AVOIDANCE, COST SAVINGS, AND REVENUE GENERATED (ESTIMATED BENEFITS TO THE COUNTY): If you are claiming cost benefits, include a calculation on this page. Please indicate whether these benefits apply in total or on a per unit basis, e.g., per capita, per transaction, per case, etc. You must include an explanation of the County cost savings, cost avoidance or new revenue that matches the numbers in the box. Remember to keep your supporting documentation. Use Arial 12 point font

Cost Avoidance: Costs that are eliminated or not incurred as a result of program outcomes. Please indicate whether these are costs to the County or to other entities.

Cost Savings: A reduction or lessening of expenditures as a result of program outcomes. Please indicate whether these were expenditures by the County or by other entities.

Revenue: Increases in existing revenue streams or new revenue sources to the County as a result of program outcomes.

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FOR COLLABORATING DEPARTMENTS ONLY

(For single department submissions, do not include this page)


DEPARTMENT NO. 2 NAME AND COMPLETE ADDRESS	
AGRICULTURAL COMMISSIONER/WEIGHTS AND MEASURES- 12300 LOWER AZUSA ROAD ARCADIA, CA 91008-5872	
PRODUCTIVITY MANAGER'S NAME AND SIGNATURE	DEPARTMENT HEAD'S NAME AND SIGNATURE
CHRISTINE BELDEN <i>Christine Belden</i> EMAIL: CBELDEN@ACWM.LACOUNTY.GOV	KURT E. FLOREN EMAIL: KFLOREN@ACWM.LACOUNTY.GOV
DEPARTMENT NO. 3 NAME AND COMPLETE ADDRESS	
PRODUCTIVITY MANAGER'S NAME AND SIGNATURE	DEPARTMENT HEAD'S NAME AND SIGNATURE
EMAIL: _____	EMAIL: _____
DEPARTMENT NO. 4 NAME AND COMPLETE ADDRESS	
PRODUCTIVITY MANAGER'S NAME AND SIGNATURE	DEPARTMENT HEAD'S NAME AND SIGNATURE
EMAIL: _____	EMAIL: _____
DEPARTMENT NO. 5 NAME AND COMPLETE ADDRESS	
PRODUCTIVITY MANAGER'S NAME AND SIGNATURE	DEPARTMENT HEAD'S NAME AND SIGNATURE
EMAIL: _____	EMAIL: _____
DEPARTMENT NO. 6 NAME AND COMPLETE ADDRESS	
PRODUCTIVITY MANAGER'S NAME AND SIGNATURE	DEPARTMENT HEAD'S NAME AND SIGNATURE
EMAIL: _____	EMAIL: _____
DEPARTMENT NO. 7 NAME AND COMPLETE ADDRESS	
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PRODUCTIVITY MANAGER'S NAME AND SIGNATURE CHRISTINE BELDEN EMAIL: CBELDEN@ACWM.LACOUNTY.GOV _____	DEPARTMENT HEAD'S NAME AND SIGNATURE KURT E. FLOREN  EMAIL: KFLOREN@ACWM.LACOUNTY.GOV _____
DEPARTMENT NO. 3 NAME AND COMPLETE ADDRESS	
PRODUCTIVITY MANAGER'S NAME AND SIGNATURE EMAIL: _____	DEPARTMENT HEAD'S NAME AND SIGNATURE EMAIL: _____
DEPARTMENT NO. 4 NAME AND COMPLETE ADDRESS	
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