

DRAFT PROGRAMMATIC ENVIRONMENTAL ASSESSMENT

**MOSQUITO CONTROL ACTIVITIES FUNDED BY CDC TO COMBAT
ZIKA VIRUS TRANSMISSION IN THE UNITED STATES**

January 9, 2017

**U.S. Centers for Disease Control and Prevention
1600 Clifton Road
Atlanta, GA 30329-4027**



Executive Summary

This draft Programmatic Environmental Assessment (PEA) addresses the proposal by the U.S. Centers for Disease Control and Prevention (CDC) to support mosquito control activities to combat Zika virus in the United States.

Two alternatives were reviewed through this Assessment.

- **Alternative 1 is the No Action Alternative**, representing mosquito control activities being conducted by territorial, tribal, state and local governments.
- **Alternative 2 is the Enhanced Support for Integrated Mosquito Management Programs Alternative**, which includes CDC supporting either directly or through technical and/or financial assistance mosquito control activities of territorial, tribal, state and local governments.

After consideration of these alternatives and a comprehensive review of potential environmental impacts, CDC selects Alternative 2: Enhanced Support for Integrated Mosquito Management.

This draft PEA was conducted pursuant to the requirements of the *National Environmental Policy Act of 1969* (NEPA) and the HHS General Administration Manual (GAM) Part 30 Environmental Protection.

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1.0 Introduction

Zika virus disease is caused by Zika virus, which is spread to people primarily through the bite of an infected mosquito (*Aedes aegypti* and *Aedes albopictus*).¹ Zika virus infection during pregnancy can cause a serious birth defect called microcephaly and other severe brain defects.² Other problems have been detected among fetuses and infants infected with Zika virus before birth, such as defects of the eye, hearing deficits, and impaired growth.³ There have also been increased reports of Guillain-Barré syndrome, an uncommon sickness of the nervous system, in adults living in areas affected by Zika.⁴

In February 2016, the World Health Organization (WHO) declared Zika virus a public health emergency and advised that pregnant women need to be protected from its effects.⁵ To prevent and track Zika virus infection, CDC is currently conducting surveillance of the spread of the virus, developing and distributing better diagnostic tests, providing guidance and advice to states and localities on strengthening mosquito control and source reduction efforts, assisting Puerto Rico and other territories with mitigating the impact of Zika virus, and providing clinical guidance on addressing Zika virus infection. CDC experts are also working to protect pregnant women and better understand the link between Zika virus infection and adverse health outcomes.

Mosquito control programs, expertise and financial resources are highly varied throughout the United States, ranging from absent or with limited capacity in some jurisdictions to advanced integrated mosquito management programs in others. A recent CDC-funded survey conducted by the National Association of County and City Health Officials (NACCHO) of vector control capacity in ten high risk jurisdictions (Alabama, Arizona, California, Florida, Georgia, Hawaii, Louisiana, Mississippi, Texas and Los Angeles County) found that nearly 70% of the vector control organizations in these jurisdictions were ranked as “needs improvement” in one or more core competencies.⁶ Qualitative input provided by these jurisdictions underscores that vector control organizations often face financial as well as human resource constraints.

CDC develops technical guidance, and provides technical assistance related to, mosquito control activities, including the best methods to control immature and adult mosquitoes, monitor resistance to insecticides, conduct mosquito surveillance, and monitor efficacy of control efforts.

¹ Peterson, L. et al. Zika Virus. *N Eng J Med* 2016; 374: 1552-1563. April 21, 2016.

² Rasmussen, S. et al. Zika Virus and Birth Defects – Reviewing the Evidence for Causality. *N Eng J Med* 2016; 374: 1981-1987. May 19, 2016.

³ Leal, M. et. al. Hearing Loss in Infants with Microcephaly and Evidence of Congenital Zika Virus Infection – Brazil, November 2015–May 2016. *MMWR Morb Mortal Wkly Rep* 2016; 65:917–919.

⁴ Dirlikov, E. et. al. Guillain-Barre Syndrome During Ongoing Zika Virus Transmission – Puerto Rico, January 1- July 31, 2016. *MMWR Morb Mortal Wkly Rep* 2016; 65:910–914.

⁵ See <http://www.who.int/mediacentre/news/statements/2016/emergency-committee-zika-microcephaly/en/>

⁶ National Association of County & City Health Officials: Mosquito Surveillance and Control Assessment in Zika Virus Priority States. September 2016.

In response to requests from territories, tribes, states, and localities for additional support to combat Zika virus through enhanced mosquito control activities, CDC has prepared this draft Programmatic Environmental Assessment (PEA) to review and address the potential impacts of activities that might be supported directly via CDC contract mechanisms or through cooperative agreements to other organizations. This draft PEA will be used to facilitate CDC's compliance with the National Environmental Policy Act (NEPA) by providing a framework to address the potential environmental impact of such activities.

1.1 Purpose and Need for Action

Currently, the majority of reported cases of Zika virus disease in the continental United States have occurred in travelers that have visited areas outside the continental United States with widespread local transmission of Zika virus. However, local transmission of Zika virus has been reported in several areas in Florida, and CDC is providing financial resources and technical assistance to Florida to support the local response.⁷

As of December 28th, 2016, over 4,800 cases of Zika virus infection were reported in 48 U.S. states and the District of Columbia, and nearly 35,000 cases have been reported in the U.S. territories. CDC is working with the states and territories to identify, monitor and support nearly 4,000 pregnant women (as of December 13th, 2016) across the U.S. and its territories with suspected Zika virus infection.⁸

Given the risks associated with maternal Zika infection, CDC's key priority is to reduce women's risk of becoming infected with Zika virus during pregnancy. Over the last six months, CDC has worked closely with the Commonwealth of Puerto Rico and other areas to provide support and reduce the threat of Zika virus to women who are or may become pregnant.⁹ CDC has also taken the unprecedented step of issuing formal domestic guidance advising pregnant women to avoid travel to areas in Florida that have confirmed local transmission of Zika virus. For pregnant women living or working in these areas, CDC has provided a list of concrete actions that should be taken to reduce their risk of Zika virus infection.

CDC's primary strategies to prevent and respond to the spread of Zika virus and prevent infection in pregnant women include working to strengthen mosquito control efforts, improving diagnostic testing to rapidly detect and control transmission, and supporting community and individual risk reduction and prevention efforts within the United States and U.S. territories.

Because Zika virus is primarily transmitted through mosquitoes, CDC has been providing technical assistance and guidance to territories, tribes, states and local jurisdictions on improving and enhancing their mosquito control efforts. Local mosquito control programs often use an integrated mosquito management (IMM) approach (also called integrated

⁷ See <https://www.cdc.gov/zika/about/index.html>

⁸ See <https://www.cdc.gov/zika/>

⁹ Adams, L. et al. Update: Ongoing Zika Virus Transmission — Puerto Rico, November 1, 2015–July 7, 2016. *MMWR Morb Mortal Wkly Rep* 2016; 65:774–779.

vector management, IVM, when referring specifically to mosquito vectors of human pathogens) to control mosquitoes.¹⁰ IMM uses a combination of methods to control mosquitoes that spread human pathogens, including the vectors of Zika, Dengue, and Chikungunya viruses. IMM is based on an understanding of mosquito biology, the mosquito life cycle, and the way mosquitoes spread pathogens. IMM uses methods that, when followed correctly, are safe and have been scientifically proven to reduce mosquito populations. The key components of an IMM program include: (1) Conducting mosquito surveillance; (2) Removing habitats where mosquitoes lay eggs; (3) Controlling the aquatic immature life stages; (4) Controlling adult mosquitoes; (5) Monitoring control programs; and (6) Supporting public outreach and risk communication efforts.¹¹ Strong IMM programs incorporate these components in a strategic and tailored way that maximize effectiveness and minimize potential environmental and human health impact.

In order to support the continued efforts of territories, tribes, states and localities to control the mosquitoes that spread Zika virus, CDC may support IMM programs through the provision of financial or in-kind assistance through cooperative agreements or direct contract support.

2.0 Alternatives

Alternatives were developed to meet the need to control Zika transmission, using guidance from several pertinent information sources. These sources included CDC vector control subject matter experts, relevant scientific literature, and formal and informal guidance from other federal and state public health and environmental agencies including the Environmental Protection Agency (EPA) and the American Mosquito Control Association (AMCA).

2.1 Alternative 1: No Action Alternative

Under the No Action Alternative CDC will not provide any additional support to territories, tribes, states, and localities for IMM programs. For this Alternative, CDC will maintain its current strategy of supporting territories, tribes, states and localities to combat Zika virus transmission through the following activities, including those relating specifically to Zika virus mosquito vector control:

- Developing guidance/guidelines and providing virtual as well as on-the-ground technical assistance and advice to jurisdictions to support them in preventing, preparing for and responding to Zika virus transmission.
- Supporting national surveillance activities to identify new infections as well as to identify and support pregnant women at risk of experiencing adverse outcomes from Zika virus infection.

¹⁰ Rose, R. Pesticides and Public Health: Integrated Methods of Mosquito Management. Journal of Emerging Infectious Disease. Vol. 7, No.1, Jan-Feb 2001.

¹¹ Best Management Practices for Integrated Mosquito Management, American Mosquito Control Association, December 2, 2009.

- Providing funding to support epidemiology, laboratory and health systems capacity in territorial, tribal, state and local health departments through several CDC cooperative agreements.

For this Alternative, the impacted territory, tribe, state or locality will take primary responsibility for funding and implementing enhanced mosquito control activities.

2.2 Alternative 2: Enhanced Support for IMM Programs

Under this proposed alternative, CDC will provide enhanced support for IMM programs. The enhanced level of support will include those activities currently being supported by CDC (*see Alternative 1 above*), but additionally include assistance (financial or in-kind) through cooperative agreements or direct support by CDC staff or via contractors to jurisdictions to conduct mosquito control activities.

Two potential means of enhanced support were reviewed for Alternative 2: **Alternative 2A – Assistance Action Alternative** and **Alternative 2B – Direct Action Alternative**.

2.2.1 Common Elements of Alternative 2

Under both Alternative 2A and 2B, CDC will support jurisdictions to achieve successful IMM programs, including the following best practices:

- i. **Surveillance:** a) Identifying mosquito vector species and their population trends for preparedness purposes, and b) Evaluating the effectiveness of implemented control methods on mosquito vector populations.
- ii. **Mapping:** a) Mapping major sources of immatures (larval habitats), and b) Mapping areas where control measures for larvae or adults have been instituted.
- iii. **Physical Control or Source Reduction:** Eliminating, removing or modifying larval habitats.
- iv. **Biological Control:** Introducing biological agents to reduce mosquito populations, including EPA-approved microbial larvicides applied in strict adherence to label instructions for safe application.
- v. **Public Health Pesticides:** Using EPA-registered chemical mosquito larvicides or adulticides to control mosquito populations, strictly adhering to label instructions for safe application.
- vi. **Monitoring for Efficacy/Resistance:** a) Conducting pesticide resistance testing to ensure use of effective insecticides, and b) Managing insecticide use to minimize risk of target mosquitoes becoming resistant to the available insecticides.
- vii. **Education and Community Outreach:** Educating and informing those at risk to adopt personal protective measures and perform source reduction.
- viii. **Record Keeping:** Ensuring adequate and timely record-keeping of all mosquito management activities.

As noted above, jurisdictions have varying levels of capacity related to the above practices. In providing this support CDC seeks to ensure that the following conditions are met:

2.2.1.1 Support of registered and approved public health pesticides

CDC will only directly implement and/or provide funding to territories, tribes, states and localities to use EPA-registered mosquito control pesticides. The pesticides will be used only according to approved label instructions.

As noted previously, public health pesticides (mosquito larvicides and adulticides) are routinely used by state and local mosquito control organizations throughout the United States. In a recent survey of vector control capabilities in ten high-priority jurisdictions, nearly 70% of respondents reported use of mosquito larvicides and adulticides.¹²

2.2.1.2 Express request from Territory, Tribe, State, or Locality to support mosquito control efforts

CDC will only implement or support mosquito control activities when expressly requested to do so by a jurisdiction. Examples of express requests include, but are not limited to:

- The acceptance of CDC funding through cooperative agreement mechanisms by territorial, tribal, state or local organizations to support mosquito control; or
- Written request from territorial, tribal, state or local government officials specifically asking CDC to provide direct support to implement mosquito control activities, including awarding contracts to private companies to conduct activities on behalf of CDC.

2.2.1.3 Federal Permits

CDC will work with the relevant jurisdictions to obtain any necessary federal permits (e.g. National Pollutant Discharge Elimination Permit) prior to supporting any activities that may impact the environment. CDC will also assist territories, tribes, states and localities to obtain any necessary territorial, tribal, state or local permits prior to initiation of any relevant mosquito control activities.

2.2.1.4 Expedited coordination/consultation

CDC will consult and coordinate with any federal, territorial, tribal, state, or local agency stakeholders as expeditiously as possible. Any conditions developed to address potential impacts to the human environment will be captured in a record of environmental considerations (see Appendix B: Environmental Information and Documentation Form) and the conditions will be conveyed to the organizations engaging in the CDC-supported activity to ensure that the conditions are met.

¹² National Association of County & City Health Officials: Mosquito Surveillance and Control Assessment in Zika Virus Priority States. September 2016.

2.2.1.5 Education and Outreach

Where appropriate, CDC will collaborate with territorial, tribal, state and/or local organizations to conduct education and outreach activities aimed at educating and informing the public about the risks associated with Zika virus transmission from mosquitoes as well as the activities that CDC is supporting to control mosquitoes that transmit Zika virus.

2.2.1.6 Monitoring and Surveillance

CDC will collaborate with territorial, tribal, state and/or local organizations to implement (if not already in place) mosquito management surveillance programs and monitor supported activities.

2.2.2 Alternative 2A: Assistance Action Alternative (technical and financial assistance only)

This Assistance Action Alternative proposed by CDC will consist of supporting (through technical assistance as well as financial resources via CDC cooperative agreements) territories, tribes, states and/or localities to undertake the IMM activities. CDC will not directly implement IMM activities under this alternative.

When executing this alternative, primary responsibility will lie with the relevant territorial, tribal, state and/or local jurisdictions to conduct any necessary subsequent site- and program-specific environmental reviews that would be tailored to specific needs, such as ensuring compliance with regulations and ordinances, identifying geographic areas for supported mosquito control efforts, and effectively communicating and providing notice to potentially affected communities. This work will be captured in a record of environmental considerations (see Appendix A: Environmental Information and Documentation Form) that will be provided to CDC and made available to the public upon request.

2.2.3 Alternative 2B: Direct Action Alternative (direct implementation support)

Under this alternative CDC would support territories, tribes, state and localities by directly implementing components of an IMM program including awarding contracts to private companies to provide IMM services on behalf of CDC.

When executing this alternative, primary responsibility will lie with CDC to conduct any necessary subsequent site- and program-specific environmental reviews that would be tailored to specific needs, such as ensuring compliance with applicable laws, regulations and ordinances, identifying geographic areas where CDC will conduct mosquito control efforts, and effectively communicating and providing notice to potentially affected communities. These will be captured in a record of environmental considerations (see Appendix A: Environmental Information and Documentation Form) that will be available to the public upon request.

CDC anticipates it would execute Alternative 2B: Direct Action Alternative only in those cases where territorial, tribal, state and/or local governments are unable to conduct the

appropriate mosquito control activities and where they have explicitly requested CDC to directly provide IMM services.

3.0 Affected Environment and Environmental Impact

3.1 Affected Environment

The proposed actions could potentially take place in multiple locations across the United States. CDC will prioritize support to those jurisdictions with significant and ongoing Zika virus transmission and environmental conditions favorable for continued mosquito propagation. When CDC receives a request for assistance, CDC will work with the impacted jurisdiction to eliminate/mitigate any potential adverse impact on the environment.

3.2. Environmental Effects

This section provides a general discussion of the environmental effects of the proposed actions. CDC will work with the affected jurisdictions to review and assess any site-specific environmental concerns that are not adequately addressed in this draft PEA. Where appropriate, activities may include use of registered pesticides, provision of adequate and timely notice of proposed activities, and clear and continuous dialogue with territorial, tribal, state and local officials to ensure proper procedures, laws and regulations are followed and objectives are jointly developed.

3.2.1 Alternative 1: No Action Alternative

Under the No Action Alternative, CDC will continue to provide the technical assistance it has historically provided, including developing and providing guidance, supporting national surveillance activities, and providing resources for laboratory and health systems capacity. It will not provide any enhanced support for IMM. CDC has determined that these activities (provision of general guidance and technical support for mosquito surveillance) do not have a significant impact on the environment as currently implemented, and thus they were not reviewed in this draft PEA.

Territories, states, tribes, and localities will continue to bear primary responsibility for funding and implementing mosquito control activities. Because the level of funding, capacity and quality throughout the nation for mosquito control varies, CDC expects that some jurisdictions will be unable to adequately provide effective mosquito control to counter local outbreaks of Zika virus transmission if the No Action Alternative is adopted.

3.2.2 Alternative 2: Enhanced Support for IMM Programs

Activities that are part of an IMM program but do not have a significant impact on the natural environment, such as public education or removal of artificial containers serving as mosquito development sites, are not assessed in this draft PEA. CDC has also not assessed interventions that we expect will continue to be supported primarily by the territories, tribes, states and local jurisdictions.

Through this draft PEA, CDC has reviewed and assessed proposed interventions and activities that: (1) potentially could have an impact on the quality of the environment; and (2) are interventions that CDC may conduct directly or provide financial and technical support for during the ongoing Zika virus response.

3.2.2.1 Public Health Pesticides (Larvicides and Adulticides)

Public health pesticides are pesticide products registered for use, and used predominantly in, public health programs for vector control or for other recognized health protection uses, including the prevention or mitigation of viruses, bacteria, or other microorganisms [other than viruses, bacteria, or other microorganisms on or in living man or other living animal] that pose a threat to public health. Public health pesticides include larvicides and adulticides.

Larvicides

Larvicides target mosquito larvae in their aquatic development habitats before they mature into adults. Liquid or granular larvicide products are applied by hand or using backpack sprayers, or truck or aerial/aircraft disbursement units. Larvicides include biological insecticides, as well as chemicals used for controlling mosquito larvae, such as insect growth inhibitors.

The EPA evaluates and registers larvicides to ensure they can be used safely. When evaluating larvicides, EPA assesses whether the larvicide has the potential to cause adverse effects on humans, wildlife, fish and plants, including endangered species and non-target organisms.

More commonly used larvicides approved by EPA can be found on EPA's website: <https://www.epa.gov/mosquitocontrol/controlling-mosquitoes-larval-stage>.

These larvicides have been assessed by EPA and are approved for use for public health purposes when used according to label specifications.

Territorial, state and local agencies commonly use these products for larval mosquito control.¹³ Under Alternatives 2A and 2B, CDC will work with territorial, tribal, state and local agencies to determine which of the various EPA-approved larvicides are appropriate for mosquito control in the selected sites.

Adulticides

Adulticides target adult mosquitoes. EPA-registered and -approved adulticides are applied on the ground using backpack sprayers or truck-mounted sprayers, or by aircraft. Adulticides often are dispensed using ultra-low volume (ULV) sprays. ULV sprayers dispense very fine aerosol droplets that stay aloft and kill flying mosquitoes on contact. EPA-approved

¹³ <https://www.epa.gov/mosquitocontrol>

ULV applications involve small quantities of pesticide active ingredient in relation to the size of the area treated, typically less than 3 ounces per acre, which minimizes exposure and risks to people and the environment.

EPA evaluates and registers adulticides to ensure they can be used safely. When evaluating adulticides, EPA assesses whether the adulticide has the potential to cause adverse effects on humans, wildlife, fish and plants, including endangered species and non-target organisms.

More commonly used adulticides approved by EPA can be found on EPA's website: <https://www.epa.gov/mosquitocontrol/controlling-adult-mosquitoes>.

These adulticides have been assessed by EPA and are approved for use for public health purposes when used according to label specifications.

Territorial, state and local agencies commonly use these products for adult mosquito control.¹⁴ Under Alternatives 2A and 2B, CDC will work with territorial, tribal, state and local agencies to determine which of the various EPA-approved adulticides are appropriate for mosquito control in the selected sites.

3.3 Prior Environmental Assessments of Proposed Activities

The NEPA requirement to conduct an Environmental Assessment applies only to actions taken by the federal government. Because mosquito control activities are primarily the responsibility of the territorial, tribal, state and/or local jurisdictions and not subject to NEPA requirements, the available Environmental Assessments that include a review of mosquito control are limited to areas that are either owned or managed by the federal government. CDC conducted a search of recent Environmental Assessments by other federal agencies that included mosquito control activities, and did not find any recent Assessments that concluded that use of public health pesticides categorically resulted in findings of a NEPA-defined major federal action that would significantly impact the quality of the human environment. Two examples are summarized below:

San Pablo Bay National Wildlife Refuge: Final Mosquito Management Plan and Environmental Assessment (2011):

Summary: The U.S. Department of the Interior/Fish and Wildlife Service conducted an Environmental Assessment (EA) of proposed mosquito management activities for the San Pablo Bay National Wildlife Refuge. The Refuge lies within the boundaries of Marin, Sonoma, Napa and Solano counties in Northern California. The EA assessed several alternatives, including the implementation of a phased and integrated approach to mosquito management that included the use of larvicides and adulticides when mosquito populations posed a potential public health risk.

¹⁴ <https://www.epa.gov/mosquitocontrol>

Conclusion: The EA concluded that the phased and integrated approach that included use of mosquito larvicides and adulticides **did not** constitute a major Federal action that would significantly impact the quality of the human or natural environment.¹⁵

Mosquito Control at Joint Base Charleston – Weapons Station: Final Environmental Assessment (2011):

Summary: The U.S. Air Force conducted an EA of proposed mosquito management activities for the Naval Weapons Station in Charleston, South Carolina. The Air Force took over responsibility for mosquito management from the U.S. Navy, and proposed to work cooperatively on mosquito control activities with the Charleston County mosquito control program. The U.S. Air Force conducted the EA to comply with NEPA. The EA assessed several alternatives, including the implementation of a phased and integrated approach to mosquito management that included the use of larvicides and adulticides when mosquito populations posed a potential public health risk.

Conclusion: The EA concluded that the phased and integrated approach that included use of mosquito larvicides and adulticides **would not** have a significant impact on the quality of the human or natural environment.¹⁶

4.0 Agencies Consulted

- U.S. Department of Health and Human Services
 - Centers for Disease Control and Prevention
 - Office of the Chief of Staff
 - Office of Public Health Preparedness and Response
 - National Center for Environmental Health
 - National Center for Emerging and Zoonotic Infectious Diseases
 - Office of the General Counsel
 - Federal Occupational Health
 - Food and Drug Administration
 - Health Resources and Services Administration
- Council on Environmental Quality
- U.S. Environmental Protection Agency

5.0 Preparers

- Centers for Disease Control and Prevention
 - Office of the Chief of Staff/Division of Issues Management, Analysis and Coordination

¹⁵ <https://www.fws.gov/uploadedFiles/SanPabloMosquitoPlan.pdf>

¹⁴ <https://www.fws.gov/uploadedFiles/SanPabloMosquitoPlan.pdf&ved=0ahUKEwi3rZDXh6bPAhVJFT4KHdEWC6YQFggcMAA&url=http%3A%2F%2Fwww.dtic.mil%2Fcgi-bin%2FGetTRDoc%3FAD%3DADA619915&usg=AFQjCNGH9E28tgBlyPWvWalva4Ad3CIWpA&bvm=bv.133700528,d.cWw>

- Office of Public Health Preparedness and Response/Emergency Operations Center
- National Center for Emerging and Zoonotic Infectious Diseases
- National Center for Environmental Health

6.0 Relevant Legislation and Agency Guidance

U.S. Public Health Service Act (42 USC Chapter 6A)

The National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. 4321-4370d)

42 USC §4332: Cooperation of Agencies; reports; availability of information; recommendations; international and national coordination of efforts: "The Congress authorizes and directs that, to the fullest extent possible: (1) the policies, regulations, and public laws of the United States shall be interpreted and administered in accordance with the policies set forth in this chapter, and (2) all agencies of the Federal Government shall—

...(C) include in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on—

- i. the environmental impact of the proposed action,
- ii. any adverse environmental effects which cannot be avoided should the proposal be implemented,
- iii. alternatives to the proposed action,
- iv. the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and
- v. any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

Prior to making any detailed statement, the responsible Federal official shall consult with and obtain the comments of any Federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved.

(D) Any detailed statement required under subparagraph (C) after January 1, 1970, for any major Federal action funded under a program of grants to States shall not be deemed to be legally insufficient solely by reason of having been prepared by a State agency or official, if:

- i. the State agency or official has statewide jurisdiction and has the responsibility for such action,
- ii. the responsible Federal official furnishes guidance and participates in such preparation,
- iii. the responsible Federal official independently evaluates such statement prior to its approval and adoption, and
- iv. after January 1, 1976, the responsible Federal official provides early notification to, and solicits the views of, any other State or any Federal land management entity of any action or any alternative thereto which may have significant

impacts upon such State or affected Federal land management entity and, if there is any disagreement on such impacts, prepares a written assessment of such impacts and views for incorporation into such detailed statement.

The procedures in this subparagraph shall not relieve the Federal official of his responsibilities for the scope, objectivity, and content of the entire statement or of any other responsibility under this chapter; and further, this subparagraph does not affect the legal sufficiency of statements prepared by State agencies with less than statewide jurisdiction.”

Endangered Species Act (ESA) of 1973

The Endangered Species Act (ESA – 16 U.S.C.1531-1544) provides for the identification, protection, and recovery of species approaching extinction. One of the means used to protect such species is found in section 7 of the Act. This section requires Federal agencies to consult with the Fish and Wildlife Service’s Ecological Services (ES) Program or the U.S. Department of Commerce’s National Marine Fisheries Service (NMFS) whenever an action is proposed which may affect a threatened or endangered species or its critical habitat.

Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended.

This law regulates all activities related to pesticides, including development, registration, classification, production, storage and transport and applications. Section 18, as amended, provides for exemption of State or Federal agencies from all requirements in cases where the Governor or head of that agency requests and secures such an exemption. This constitutes declaration of official emergency conditions (such as an imminent human health hazard).

HHS General Administration Manual (GAM) Part 30 Environmental Protection

- *HHS GAM §30-50-15: Responsibilities:* “All HHS policies and programs will be planned, developed, and implemented so as to achieve the policies declared by NEPA and required by the CEQ regulations to ensure responsible stewardship of the environment for present and future generations.”
- *HHS GAM §30-50-40: Environmental Assessments:* “As defined by CEQ in 40 CFR 1508.9, an Environmental Assessment (EA) is the public document in which environmental and other pertinent information on a proposed action are presented, providing a basis for a determination whether to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI).”

Council on Environmental Quality: Memorandum for Heads of Federal Departments and Agencies: Emergencies and the National Environmental Policy Act, May 10, 2010

- *Overview:* “As agencies develop their response to situations involving immediate threats to human health or safety, or immediate threats to valuable natural resources, they must consider whether there is sufficient time to follow the procedures for environmental review established in the CEQ Regulations for Implementing the Procedural Provisions of NEPA,[2] Section 102(2)(c) of NEPA, 42 U.S.C. § 4332,[3] and agency NEPA implementing procedures and regulations.”

- *Environmental Assessments during Emergencies*: “When agencies are considering proposals with less than significant impacts or are uncertain about the significance of impacts, the agency can prepare a concise, focused Environmental Assessment. Attachment 2 of this memorandum provides guidance for preparing an EA.[8] Some agency NEPA implementing procedures provide for alternative arrangements for preparing Environmental Assessments.[9] Agencies must continue their efforts to notify and inform affected public, state, regional, Federal and tribal representatives of the Federal agency activities and proposed actions. Agencies must comply with the CEQ NEPA regulation requirements for content, interagency coordination and public involvement to the extent practicable.”
- *Attachment 2: Preparing Focused, Concise and Timely Environmental Assessments*: “The following outline with notations addresses the core elements of an EA as found in 40 CFR 1508.9:
 - *the need for the proposal,*
 - *alternatives required by NEPA section 102(E),*
 - *the description of the environmental impact of agency proposed actions and the alternatives, and*
 - *the list of agencies and persons consulted.”*

APPENDIX A: Environmental Information and Documentation Checklist

CENTERS FOR DISEASE CONTROL AND PREVENTION ENVIRONMENTAL INFORMATION AND DOCUMENTATION (EID)
FOR CDC USE ONLY Recipient Name: Funding ID Number: Funding Title:
This Environmental Information and Documentation (EID) checklist consists of information that the CDC is required to obtain to comply with the National Environmental Protection Act of 1969 (NEPA). NEPA establishes the Federal government’s national policy for protection of the environment. CDC has developed this EID for recipients of funding that would potentially affect the environment and to ensure that their decision-making processes are consistent with NEPA. Recipients must provide information requested on the EID checklist so that CDC may ensure compliance with NEPA.
Recipient Phone Email Recipient EID Preparer Phone Email Address
Specific location and description of mosquito control intervention area
Description of mosquito control intervention Identify the organization responsible for the Integrated Vector Management (IVM) program in the mosquito control intervention area, and describe the major program components (surveillance, public education, personal protection recommendations, source reduction, larvicide or adulticide

treatments, evaluation, etc.). Also include what will be added or changed as a result of the funding.

Pesticide Applications

Describe what materials (i.e., specific larvicides and adulticides) and methods of pesticide application are proposed, and why.

Describe how the application methods and materials chosen were evaluated based on local conditions (weather, pesticide resistance, etc.).

What alternative methods and materials were considered and why were they not selected?

Were the EPA bulletins for protection of endangered species reviewed?

<https://www.epa.gov/endangered-species/endangered-species-protection-bulletins>

Yes [] No []

Are there endangered species concerns in the application area?

Yes [] No []

Describe the potential impacts to any endangered species.

Are the proposed pesticide applications outside the label parameters?

Yes [] No [] If yes, describe how the pesticide will be used outside of label parameters, and why it is necessary.

If yes, will an EPA Emergency Exemption for Limited Use be obtained?

Yes [] No [] If no, then explain why.

Will the plans for the proposed pesticide application be made available to the community in the project area for review and comment? Describe the communication plan including engagement of community members. If no, explain why.

Yes [] No []

Will the community be notified of the schedule for pesticide application? If so, how? If there are no plans to notify the affected residents, what is the justification?

Yes [] No []

Review of Potential Impacts of Pesticide Application

Risk to Human Health

Describe what measures will be taken to minimize the risks to human health from the materials and methods of proposed pesticide application. Description should be specific to the location, methods, and materials chosen and should reference EPA human health risk assessment information.

Environmental Justice

Describe location and the effects on any environmental justice populations in the mosquito control intervention area, and what measures will be taken to minimize the risks to this population.

Resources

Describe the effects on the agricultural, environmental, ecological, cultural, and natural resources in the mosquito control intervention area. Describe what measures will be taken to minimize the risks to any resources in the mosquito control intervention area.

Critical Infrastructure (water supply)

Describe the effects on any critical infrastructure in the mosquito control intervention area, and what measures will be taken to minimize the impacts.

Cumulative Impacts

Describe how cumulative impacts of pesticide application can be or have been evaluated in the project area with respect to human health and ecological effects.

Program Evaluation

Describe how non-target organism impacts will be monitored.

Describe how mosquito population impacts will be monitored, including indication of resistance to pesticides.