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Department of
Agriculture

Marketing and
Regulatory
Programs

Animal and
Plant Health
Inspection
Service



Mediterranean Fruit Fly Cooperative Eradication Program

**Imperial Beach, San Diego
County, California**

**Environmental Assessment,
August 2009**

Mediterranean Fruit Fly Cooperative Eradication Program

Imperial Beach, San Diego, California

**Environmental Assessment,
August 2009**

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I. Need for the Proposal

The Mediterranean fruit fly or Medfly, *Ceratitis capitata* (Wiedemann), is a major pest of agriculture throughout many parts of the world. Because of its wide host range (over 250 species of fruits and vegetables) and its potential for damage, the Medfly represents a serious threat to U.S. agriculture. Although it has been introduced intermittently to the U.S. mainland since its first introduction in 1929, successful eradication programs have prevented it from becoming a permanent pest in the conterminous United States.

A permanent infestation of Medfly would be disastrous to agricultural production in California and the United States. Although established on the Hawaiian Islands, the unchecked presence of Medfly on the U.S. mainland would result in widespread destruction of crops, such as apricot, avocado, grapefruit, nectarine, orange, peach, and cherry. Commercial crops, as well as home production of host fruits, would suffer if Medfly were allowed to become established. Fruit that has been attacked by Medfly is unfit to eat because the Medfly larvae tunnel through the fleshy part of the fruit, damaging the fruit and subjecting it to decay from bacteria and fungi.

On July 30, 2009, a mated female Medfly was detected in a trap located at 579 11th Street, Imperial Beach, San Diego County, California. Confirmation of this finding has triggered Federal involvement in response to this outbreak. The area surrounding the infestation is a mixture of developed urban and residential districts and undeveloped regions, including some ecologically sensitive wetlands. The U.S. Navy operates an airfield within the current eradication zone (Imperial Beach Naval Outlying Field (NOLF)); nearly half of the airfield acreage is managed by the U.S. Fish and Wildlife Service (FWS) as part of the Tijuana River National Estuarine Research Reserve (Pike, 2005).

Although Medfly is not known to be established in California, many host plant species are grown in San Diego County, which increases the potential environmental impact of the Imperial Beach detection. This Medfly infestation represents a major threat to the agriculture and environment of California and other U.S. mainland States. The U.S. Department of Agriculture's (USDA) Animal and Plant Health Inspection Service (APHIS) and the California Department of Food and Agriculture (CDFA) are proposing a cooperative program to eradicate the Medfly infestation and prevent the spread of Medfly to noninfested areas of the United States.

APHIS' authority for cooperation in the program is based upon the Plant Protection Act (Title 4 of the Agricultural Risk Protection Act of 2000), which authorizes the Secretary of Agriculture to carry out operations to eradicate insect pests, and to use emergency measures to prevent the

dissemination of plant pests new to, or not widely distributed throughout, the United States.

APHIS has cooperated with State departments of agriculture on a number of successful Medfly eradication programs in the past. Examples of such programs include the Mediterranean Fruit Fly Cooperative Eradication Program, Los Angeles County, California (USDA, 2007a), the Mediterranean Fruit Fly Cooperative Eradication Program, Santa Clara County, California (USDA, 2007b), and the Mediterranean Fruit Fly Cooperative Eradication Program, Solano County, California (USDA, 2007c).

This site-specific environmental assessment (EA) analyzes the environmental consequences of alternatives which have been considered for Medfly control, and considers, from a site-specific perspective, environmental issues relevant to this particular program. Alternatives for Medfly control have been discussed and analyzed comprehensively within the Fruit Fly Cooperative Control Program, Final Environmental Impact Statement—2001 (FF Cooperative Control Program EIS) which is incorporated by reference and summarized within this EA. The control measures being considered for this program have been discussed and analyzed comprehensively within the fruit fly chemical risk assessments (USDA–APHIS, 1998a, and 1998b) and risk assessments for spinosad (USDA–APHIS, 1999a, 1999b, and 2003). Those documents are also incorporated by reference and summarized within this EA.

II. Alternatives

Alternatives considered for this proposed program include (1) no action, (2) quarantine and commodity certification, and (3) eradication using an integrated pest management (IPM) approach. Component techniques of eradication include the use of chemical pesticides to facilitate the timely elimination of the current Medfly infestation.

A. No Action

The no action alternative would result in no Federal effort being made to eradicate the Medfly or restrict its expansion from the infested area. In the absence of a Federal effort, quarantine and control would be left to State government, grower groups, and individuals. Expansion of the infestation would be influenced by any controls exerted over it, by the proximity of host plants, and by climatic conditions. No action could be the only choice with respect to some sensitive sites; in such cases, lack of action could result in a continuing and expanding infestation. This alternative would continue the agency exclusionary practices to preclude outbreaks of Medfly in high risk areas, including the ongoing use of sterile insect technique as part of the preventive release program. An expansion of the infestation

would likely result in substantial economic losses to growers in the United States and losses of U.S. export markets.

B. Quarantine and Commodity Certification

This alternative combines a Federal quarantine with commodity treatment and certification. Regulated commodities harvested within the quarantine area would be restricted to movement within that area unless treated with prescribed applications and certified for movement to outside the area. For a large infestation, intensive quarantine enforcement activities could be necessary including safeguarding of local fruit stands, mandatory baggage inspection at airports, and judicious use of road patrols and roadblocks. The quarantine actions of this alternative would result in a reduction of human-mediated movement of Medfly in host plant materials to areas outside the quarantined area; however, the infestation could remain established within the quarantine boundaries. Any Medfly eradication efforts would be managed by, and wholly under the control of, CDFA.

Interstate movement of regulated commodities would require issuance of a certificate, or limited permit, contingent upon commodity treatment or the grower or shipper complying with specific conditions designed to minimize pest risk and prevent the spread of the Medfly. Control methods that may be used in this alternative include (1) regulatory chemicals, (2) cold treatment, (3) vapor heat treatment, and (4) irradiation treatment. Regulatory chemical treatments may include fumigation with methyl bromide, soil treatment with diazinon, and topical bait spray with a mixture of protein hydrolysate bait and either spinosad or malathion. (Refer to the FF Cooperative Control Program EIS (USDA, APHIS, 2001) for more detailed information about the chemicals and their uses.) Cold treatment, vapor heat treatment, or irradiation treatment of certain produce, as a requirement for certification and shipping, must be made in facilities that are inspected and approved by APHIS.

C. Eradication (Preferred Alternative)

APHIS' preferred alternative for the Medfly program is eradication using an integrated pest management (IPM) approach. This alternative combines quarantine and commodity certification with eradication treatments. Eradication efforts for Medfly considered in the FF Cooperative Control Program EIS (USDA, 2001) include any or all of the following: chemical control, sterile insect technique, physical control, cultural control, and regulatory control.

The current eradication zone involves parts of the cities of Imperial Beach, Chula Vista, Coronado, and San Diego (see appendix A). This zone covers approximately 14.7-square miles, as defined by a radius of approximately 1.5 miles around each property on which an adult fly has been trapped, or

on which another life stage of Medfly is present. Three types of traps—Jackson, yellow panel, and multilure—will be placed over an 81-square mile area around each detection site in order to delimit the infestation and to determine the efficacy of treatments. All monitoring traps will be serviced for a period equal to three Medfly life cycles beyond the date of the last fly detection (CDFA, 2009).

It has been determined that no non-pesticidal options available will effectively eradicate or control Medfly (CDFA, 2009). The treatment plan for Medfly within this zone will, therefore, include ground applications of an organic formulation of spinosad bait to the foliage of all host trees and plants within a 200-meter radius of the detection site. The sterile insect technique will be used on the Medfly population—the eradication area will be flooded with a continued release of sterile male Medflies in order to disrupt the reproduction cycle and so control the wild population. Larval surveys will be conducted up to 200 meters around any property where a Medfly is trapped. If Medfly larvae are discovered, fruit from the infested property and up to 100 meters around the find site will be removed and taken for disposal under regulatory compliance (CDFA, 2009).

The public will be notified 24 hours prior to insecticidal treatment or physical removal of potentially infested fruit from their property, and provided with guidelines for posttreatment precautions and harvest protocols. Treatments will be repeated every 7 to 14 days for one Medfly life cycle. The eradication project will continue for three life cycles past the date of the last Medfly trapped (CDFA, 2009).

III. Potential Environmental Consequences

This EA analyzes the potential environmental consequences of alternatives that have been considered for Medfly control, and considers, from a site-specific perspective, environmental issues relevant to this particular program. The preferred alternative, eradication, would involve an IPM approach that may use any or a combination of the following: (1) no action, (2) quarantine, (3) regulatory chemical application (fumigation, soil treatment, and bait spray application), (4) eradication chemical applications (protein bait spray and/or soil treatment), (5) cold treatment, (6) vapor heat treatment, and (7) irradiation treatment. The capability of an adult Medfly to fly distances in excess of 40 miles makes it possible for commercial host-plant growing areas outside the eradication zone to become infested. Therefore, the regulatory treatment methods used for movement of commercial produce are covered in the event that the eradication zone should expand to include groves or orchards. However, the quarantine and commodity certification treatments do not apply to the present eradication zone.

Alternatives for Medfly control have been discussed and analyzed comprehensively within the FF Cooperative Control Program EIS (USDA, 2001). The control measures being considered for this site-specific program—surveillance trapping, spinosad bait application, removal of fruit from potentially infested properties, and sterile insect release—have been analyzed comprehensively within the fruit fly chemical risk assessments (USDA–APHIS, 1998a, and 1998b) and risk assessments for spinosad (USDA–APHIS, 1999a, 1999b, and 2003). These documents are incorporated by reference and summarized within this EA.

This area's site-specific characteristics were considered with respect to the program's potential to affect (a) human health, (b) nontarget species (including threatened and endangered species), and (c) environmental quality. In addition, potentially sensitive areas have been identified, considered, and accommodated through special selection of control methods and use of specific mitigation measures. Further analysis will be required regarding any expansion of the current program area.

The City of Imperial Beach is located in Southern California and occupies 4.5-square miles with a population of approximately 28,000. The current eradication zone also involves the neighboring cities of Chula Vista, Coronado, and San Diego. Downtown San Diego is situated 12 miles to the north. The City of Imperial Beach is bordered on the north by San Diego Bay, on the south by the country of Mexico, and on the west by the Pacific Ocean. The regulatory quarantine aspects are complicated by the fact that the southern edge of the eradication zones includes several miles of the border with Tijuana, Mexico. The City of Imperial Beach is surrounded by 4,000 acres of protected habitats supporting wildlife and native vegetation unique to Southern California. A U.S. Navy airfield (Imperial Beach NOLF) occupies 1,190 acres of land used by the U.S. military since 1917 (Pike, 2005). Imperial Beach is a vacation spot popular with both surfers and naturalists. The climate is Mediterranean with an annual mean temperature between 61 and 68 °F.

The Imperial Beach region obtains irrigation and drinking water from the California State Water Project, the Colorado River, and local streams and reservoirs. Runoff from properties in the City of Imperial Beach drains into one of five water bodies—the Tijuana River or the Tijuana Estuary to the south, the Otay River or San Diego Bay to the north, and the Pacific Ocean to west. Each of these water bodies supports important habitat and recreational uses, and may be affected by the quality of urban runoff flowing into it because the runoff is not treated like municipal waste water. Urban runoff flows directly into local waters, picking up trash, dirt, chemicals, and other pollution along the way (WEF, 2006; City of Imperial Beach, 2007a). Standard mitigation measures are applied to protect marine and freshwater resources, as discussed in section C, Environmental Quality.

The Imperial Beach area is noted for providing residence year-round to 370 species of birds, including the endangered light-footed clapper rail. During spring and fall, its beaches and wetlands are also an important stop along the Pacific Flyway for migratory flocks. The San Diego Bay National Wildlife Refuge to the north and the Tijuana River National Estuarine Research Reserve to the south are both designated as Globally Important Bird Areas (City of Imperial Beach, 2007b).

Coastal dune, riparian, estuarine, and upland areas also provide habitat for the many species of indigenous vegetation around Imperial Beach. Some of the larger local natural and restored habitats include the San Diego Bay National Wildlife Refuge, the Otay Valley Regional Park, the Dairy Mart Pond Ecological Reserve, the Tijuana Slough National Wildlife Refuge, the Tijuana River National Estuarine Research Reserve, the Tijuana River Valley Regional Park, and Border Field State Park. Parkland and portions of the many protected areas in Imperial Beach are accessible by hiking paths and bike trails. The Tijuana River National Estuarine Research Reserve has been designated as a Wetland of International Importance (City of Imperial Beach, 2007b).

A. Human Health

The principal concerns for human health identified in the FF Cooperative Control Program EIS are related to the potential program uses of the chemical pesticides malathion bait, spinosad bait, diazinon (a soil drench), and methyl bromide (a fumigant) (USDA, 2001). Three major factors influence the human health risk associated with pesticide use—fate of the pesticides in the environment, their toxicity to humans, and their exposure to humans. Each of the program pesticides is known to be toxic to humans. Exposure to program pesticides can vary, depending upon the pesticide and the use pattern.

The Imperial Beach eradication program will employ surveillance trapping, ground-based applications of organic spinosad bait, and sterile insect release. Potential exposure is low for all applications to be used in this eradication program except for spinosad bait. The limited program use of spinosad bait is by ground applications targeted to host plants. Most commercial applications are applied to groves where exposure to the general public is unlikely, and the current applications are limited to residential areas. The analyses and data of the EIS and human health risk assessments indicate that exposures to pesticides from normal program operations are not expected to result in substantial adverse human health effects. (Refer to the FF Cooperative Control Program EIS (USDA–APHIS, 2001) and the human health risk assessments (USDA–APHIS, 1999a, and 1998a) for more detailed information relative to human health risk.) No adverse impacts to human health are expected to occur from these actions, if executed properly and in accordance with label instructions.

In general, a well-coordinated eradication program using IPM technologies results in the least usage of chemical pesticides overall, and the least potential to adversely affect human health. The no action alternative or the quarantine and commodity certification alternative would not eliminate the Medfly as readily or as effectively as the eradication alternative. Over a protracted time period, there would likely be broader, more widespread use of pesticides by homeowners and commercial growers, with correspondingly greater potential for adverse impacts to human health.

Some executive orders, such as Executive Order 13045, Protection of Children From Environmental Health Risks and Safety Risks, and Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations, as well as departmental and/or agency directives call for special environmental reviews in certain circumstances. No circumstance that would trigger the need for special environmental reviews is involved in implementing the preferred alternative considered in this document. The proposed program does not pose any disproportionate adverse effects to children, minority populations, or low-income populations over those effects to the general population.

B. Nontarget Species

The principal concerns for nontarget species, including threatened and endangered species, also relate to the program use of pesticides. Paralleling human health risk, the risk to nontarget species is related to the pesticides' fate in the environment, toxicity to the nontarget species, and exposure to nontarget species. All of the program pesticides are highly toxic to invertebrates; however, the likelihood of exposure (and thus, impact) varies a great deal with the use pattern. Current pesticide applications are limited to ground-based, foliar applications of an organic formulation of spinosad to host plants. These treatments target host plants in a manner that minimizes potential exposure and associated risks to nontarget species. The bait applications attract only a small number of invertebrate species other than Medfly. (Refer to the FF Cooperative Control Program EIS (USDA-APHIS, 2001) and its nontarget risk assessments (USDA-APHIS, 2003, 1999b, and 1998b) for more information on risks to all classes of nontarget species.) In general, a well-coordinated eradication program using IPM technologies would result in the least use of chemical pesticides overall, with minimal adverse impacts to nontarget species. The no action alternative and the quarantine and commodity certification alternative are less effective at eliminating Medfly, and are likely to result in broader and more widespread use of pesticides by homeowners and commercial growers, with correspondingly greater potential for adverse impact.

The program area was considered with respect to special characteristics that could influence the implementation of program operations. A portion of the

treatment area is within the San Diego Bay National Wildlife Refuge and there is considerable overlap of the eradication zone with the refuge lands. There are wetlands located approximately 100 meters from the treatment area. Section 7 of the Endangered Species Act and its implementing regulations govern consultation with FWS and/or the National Marine Fisheries Service to ensure that proposed actions are not likely to jeopardize the continued existence of threatened or endangered species, or result in the destruction or adverse modification of critical habitat. APHIS has reviewed the eradication zone and proposed treatment area and identified habitat for several listed species. APHIS, in cooperation with CDFG, has consulted with FWS regarding the potential for listed resources to be exposed to any of the program treatments. After review of the proposed action, FWS has recommended that the program employ a 100-foot buffer to minimize runoff of program pesticides to refuge lands and receiving waters, and avoid impacts to listed resources. Those buffers have been incorporated in all program operations and will be adhered to throughout all treatments associated with this action. Provided these buffers are adhered to and the Medfly population is contained within the existing eradication zone, no further consultation with FWS is necessary.

There will be no chemical treatments in riparian habitat, wetlands lacking host plants, or areas not adjacent to paved roads. In addition, per standard protocol, precautions will be taken to avoid runoff (no applications when rain is anticipated or when winds exceed 10 mph). The San Diego Bay National Wildlife Refuge has been contacted about the proposed eradication project. A 100-foot buffer will be applied to help minimize the potential for runoff onto refuge lands.

To summarize, the program will not apply pesticides to riparian areas, undeveloped areas of native vegetation, or areas where endangered species or natural habitats exist. All pesticide treatments will be applied to residential properties and within existing urban developments (CDFG, 2009). In the event that the eradication zone has to be expanded, APHIS, in cooperation with CDFG, will reinstate consultation with FWS and the refuge, as necessary.

C. Environmental Quality

The principal environmental quality concerns are for the protection of air quality, water quality, and the minimization of the potential for environmental contamination. In relation to preserving environmental quality, program pesticides remain the major concern for the public and the program. Although program pesticide use is limited, especially in comparison to other agricultural pesticide use, the proposed action would result in a controlled release of chemicals into the environment. The fate of those chemicals varies with respect to the environmental component (air, water, or other substrate) and its characteristics (temperature, pH, dilution,

etc.). The half-life of spinosad ranges from 8 to 10 days in soil, up to 2 days in water, and residues on plants persist for only a few hours. (Refer to the FF Cooperative Control Program EIS (USDA-APHIS, 2001) and the spinosad risk assessment (USDA-APHIS, 2003) for a more detailed description of the pesticide's environmental fate.)

The alternatives were compared with respect to their potential to affect environmental quality. A well-coordinated eradication program using IPM technologies would result in the least use of chemical pesticides overall, with minimal adverse impact on environmental quality. The other alternatives involve broader and more widespread use of pesticides by homeowners and commercial growers, likely due to more extensive host fruit damage, with correspondingly greater potential for contamination of the environment.

The proposed program area was examined to identify potentially sensitive sites that would require changes in operations to mitigate effects to environmental quality. Measures that have been adopted by the program to avoid contamination to bodies of water are described in the FF Cooperative Control Program EIS (USDA-APHIS, 2001).

Finally, the program was considered with respect to its potential to cause cumulative impacts. No significant cumulative impacts are anticipated as a consequence of the program or its use of component treatment measures. This is the first Federal program action in this area; there is a lack of residual impacts from previous non-Federal actions in the Imperial Beach area, and there are no reasonably foreseeable future actions that could result in incremental increases in environmental effects. The half-life of spinosad in water, air, and soil is short with effects from residues of individual treatments no longer detectable in environmental substrates within a few weeks of application.

IV. Listing of Agencies Consulted

California Department of Food and Agriculture
Department of Plant Industry
Sacramento, California

U.S. Department of Agriculture
Animal and Plant Health Inspection Service
Plant Protection and Quarantine
Invasive Species and Pest Management
4700 River Road, Unit 134
Riverdale, MD 20737-1236

U.S. Department of Agriculture
Animal and Plant Health Inspection Service
Policy and Program Development
Environmental Services
4700 River Road, Unit 149
Riverdale, Maryland 20737-1238

U.S. Department of the Interior
Fish and Wildlife Service
Carlsbad Field Office
6010 Hidden Valley Road, Suite 101
Carlsbad, CA 92011

V. References Cited

California Department of Food and Agriculture, Pest Detection/Emergency Projects, 2009. Proclamation of an eradication project. Mediterranean fruit fly. City of Imperial Beach, San Diego County. August 3, 2009.

CDFR—See California Department of Food and Agriculture, Pest Detection/Emergency Projects

City of Imperial Beach, 2007a. City Departments, Public Works, Environmental Division: Urban Runoff / Storm Water. [Online.] Available at http://coib.govoffice2.com/index.asp?Type=B_BASIC&SEC=%7B72BC70D1-E883-43CF-82F3-E8BF8B7F9513%7D [2009, Aug. 11]

City of Imperial Beach, 2007b. Birds, beaches and beyond. Ecotourism bulletin of the City of Imperial Beach, CA. [Online.] Available at <http://www.coib.govoffice2.com/vertical/Sites/%7B6283CA4C-E2BD-4DFA-A7F7-8D4ECD543E0F%7D/uploads/%7B772E010A-59D1-4A68-8844-E7664CAC4778%7D.PDF> [2009, Aug. 3]

Pike, J., 2005. Imperial Beach Naval Outlying Field (NOLF). [Online.] Available at <http://www.globalsecurity.org/military/facility/imperial-beach.htm> [2009, Aug. 4]

USDA–APHIS—See U.S. Department of Agriculture, Animal and Plant Health Inspection Service

U.S. Department of Agriculture, Animal and Plant Health Inspection Service, 2001. Fruit fly cooperative control program, final environmental impact statement—2001. USDA–APHIS, Riverdale, MD.

U.S. Department of Agriculture, Animal and Plant Health Inspection Service, 1998a. Human health risk assessment for fruit fly cooperative control programs. USDA–APHIS, Riverdale, MD.

U.S. Department of Agriculture, Animal and Plant Health Inspection Service, 2007a. Mediterranean fruit fly cooperative eradication program, Los Angeles County, California, environmental assessment—November 2007. USDA–APHIS, Riverdale, MD.

U.S. Department of Agriculture, Animal and Plant Health Inspection Service, 2007b. Mediterranean fruit fly cooperative eradication program, Santa Clara County, California, environmental assessment—October 2007. USDA–APHIS, Riverdale, MD.

U.S. Department of Agriculture, Animal and Plant Health Inspection Service, 2007c. Mediterranean fruit fly cooperative eradication program, Solano County, California, environmental assessment—September 2007. USDA–APHIS, Riverdale, MD.

U.S. Department of Agriculture, Animal and Plant Health Inspection Service, 1998b. Nontarget species risk assessment for fruit fly cooperative control programs. USDA–APHIS, Riverdale, MD.

U.S. Department of Agriculture, Animal and Plant Health Inspection Service, 1999a. Spinosad bait spray applications. Human health risk assessment, March 1999. USDA–APHIS, Riverdale, MD.

U.S. Department of Agriculture, Animal and Plant Health Inspection Service, 1999b. Spinosad bait spray applications. Nontarget risk assessment, March 1999. USDA–APHIS, Riverdale, MD.

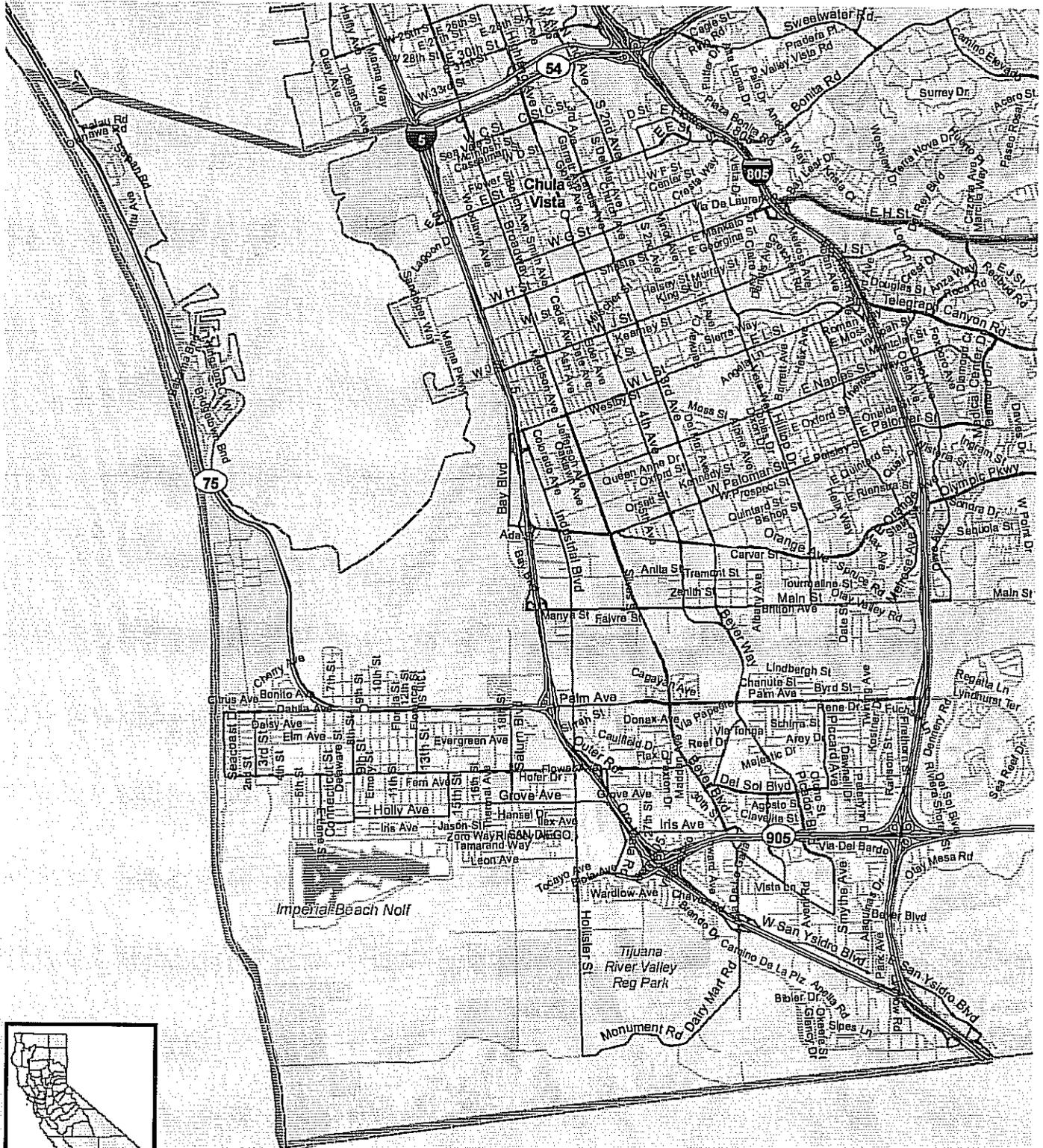
U.S. Department of Agriculture, Animal and Plant Health Inspection Service, 2003. Spinosad bait spray applications. Nontarget risk assessment, October, 2003. USDA–APHIS, Riverdale, MD.

WEF—See Water Education Foundation

Water Education Foundation, 2006. Where does MY water come from? San Diego Communities: Imperial Beach. [Online.] Available at <http://www.water-ed.org/watersources/community.asp?rid=10&cid=523> [2009, Aug. 11]

**Appendix A. State Interior Quarantine for Mediterranean
Fruit Fly—Imperial Beach, San Diego
County, California**

State Interior Quarantine for Mediterranean Fruit Fly Imperial Beach, San Diego County, California



0 0.25 0.5 1 1.5 2 Miles

USDA, APHIS, PPO
Western Region GIS Program
650 Capitol Mall, Suite 6-400
Sacramento, CA 95814

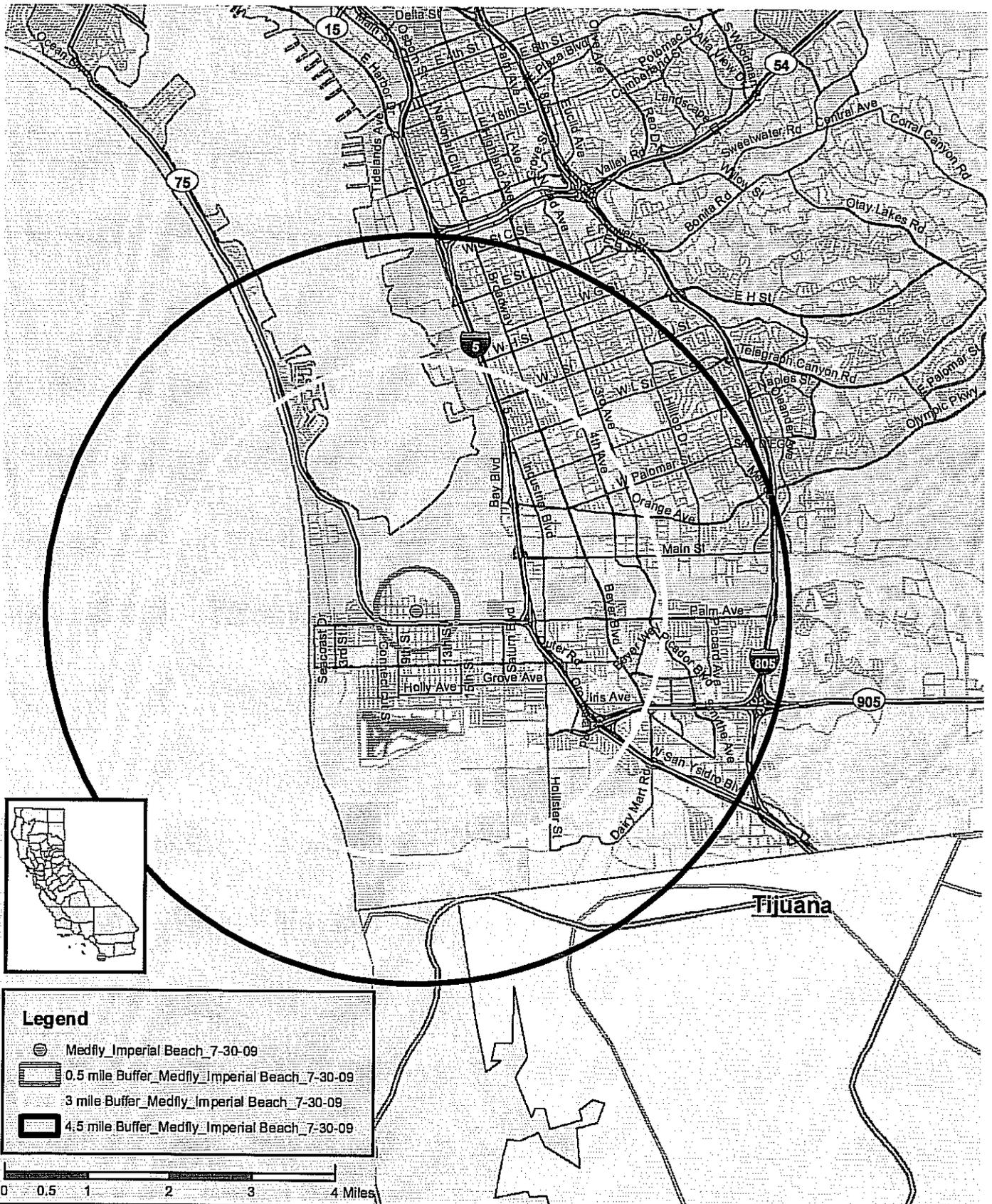
Coordinate System:
CA Teale Albers, NAD 83
Date Created: August 12, 2009

Data Source:
CA Dept of Food & Agriculture
USDA, APHIS, PPO
TeleAtlas Dynamap



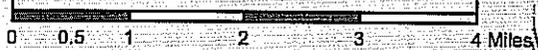
The U.S. Department of Agriculture's Animal and Plant Health Inspection Service collected the data displayed for internal agency purposes only. These data may be used by others, however, they must be used for their original intended purpose.

**Appendix B. Mediterranean Fruit Fly Collected July 30,
2009—Imperial Beach, San Diego County,
California**



Legend

- ⊙ Medfly_Imperial Beach_7-30-09
- ▭ 0.5 mile Buffer_Medfly_Imperial Beach_7-30-09
- ▭ 3 mile Buffer_Medfly_Imperial Beach_7-30-09
- ▭ 4.5 mile Buffer_Medfly_Imperial Beach_7-30-09



**Finding of No Significant Impact
for
Mediterranean Fruit Fly Cooperative Eradication Program
Imperial Beach, San Diego County, California
Environmental Assessment
August 2009**

The U.S. Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS) has prepared an environmental assessment (EA) that analyzes alternatives for control of the Mediterranean fruit fly (Medfly), *Ceratitidis capitata* (Wiedemann), an exotic agricultural pest that has been found in areas of Imperial Beach, San Diego County, California. The EA, incorporated by reference in this document, is available from—

USDA, APHIS, PPQ
State Plant Health Director
650 Capital Mall, Suite 6-400
Sacramento, CA 95814

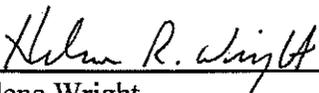
or

USDA, APHIS, PPQ
Fruit Fly Exclusion and Detection Program
4700 River Road, Unit 137
Riverdale, MD 20737-1234

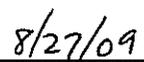
The EA for this program analyzed alternatives of (1) no action, (2) quarantine and commodity certification, and (3) eradication. Each of those alternatives was determined to have potential environmental consequences. APHIS selected eradication using an integrated pest management approach for the proposed program because of its capability to achieve eradication in a way that also reduces the magnitude of those potential environmental consequences.

APHIS has consulted with the U.S. Department of the Interior, Fish and Wildlife Service's Carlsbad Field Office to ensure that all program treatments will not affect any listed species or critical habitat. In addition, APHIS, in cooperation with the California Department of Food and Agriculture, will employ 100-foot buffers to all riparian areas to minimize runoff potential of program pesticides and avoid impacts to other resources.

I find that implementation of the proposed program will not significantly impact the quality of the human environment. I have considered and based my finding of no significant impact on the quantitative and qualitative risk assessments of the proposed pesticides, and on my review of the program's operational characteristics. In addition, I find that the environmental process undertaken for this program is entirely consistent with the principles of environmental justice, as expressed in Executive Order 12898, and the protection of children, as expressed in Executive Order 13045. Lastly, because I have not found evidence of significant environmental impact associated with this proposed program, I further find that an environmental impact statement does not need to be prepared and that the program may proceed.



Helene Wright
State Plant Health Director, California
Animal and Plant Health Inspection Service
Sacramento, CA



Date