

West Side Mosquito and Vector Control District: PAP Addendum

Element 2: Discussion of factors influencing the decision to select pesticide applications for mosquito control.

Attachment G of the Notice of Intent identifies the Kern River, Buena Vista Lake, and the Kern Flood Channel as bodies of water within the District that may require the use of pesticide applications for effective mosquito control. Under ideal circumstances, Best Management Practices for the aforementioned areas would include vegetation management, timed flooding, shoreline maintenance, flooding from permanent water sources, and stabilization of water levels (Best Management Practices for Mosquito Control in California, p. 10-13). In addition, the District employs the use of biological control in the form of *Gambusia affinis* whenever possible to reduce the need for pesticide application.

With any source, the District's first action is to review the potential for source elimination, reduction, or management. The Kern River and the Kern Flood Channel are semi-permanent bodies of water that are flooded on a seasonal basis. In addition, both sources are close to the town of Tupman and produce large numbers of adult mosquitoes that directly impact the population. During the flood season portions of the Kern River and Kern Flood Channel are accessible only by foot or small boat. In addition, critical portions of the Kern River and Kern Flood Channel lie within protected areas where disturbance of vegetation or manipulation of habitat is discouraged or prohibited. The District has also contacted local agencies in an attempt to time flooding. However, information provided from local water agencies has not always been timely or reliable. Local water agencies have also been asked to perform vegetation maintenance on problem areas. Some maintenance has been performed; however, most areas have been left unattended. Due to the factors described above, the District has found that a combination of biological control (via *Gambusia affinis*) and pesticide application is necessary to provide effective mosquito control and protect the population of Tupman. Similarly, the Buena Vista Lake recreation area also represents a population of people at risk due to the presence of mosquitoes. Portions of the lake and recreation area are well maintained and fall within BMP guidelines for wetland areas. The lake also supports a population of *Gambusia affinis* to assist in biological control. However, the size and expanse of the park area make effective mosquito control difficult without the assistance of pesticide. In addition, the Lake lies in close proximity to the Kern Flood Channel and Kern River and could receive adult mosquito populations from those areas. The District has found the use of pesticide necessary to maintain control and protect the people who use the lake and surrounding recreation areas.

Element 3: Names of Larvicide and Adulticide products to be used by the West Side Mosquito and Vector Control District, as found on Attachments E and F.

Adulticide:

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| Biomist 4+12 ULV | Registration Number: 8329-34 |
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Larvicide:

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| BVA 2 Mosquito Larvicide Oil | Registration Number: 70589-1 |
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| Teknar HP-D | Registration Number: 73049-404 |
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| Vectobac-G Biological Mosquito Larvicide Granules | Registration Number: 73049-10 |
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| Vectolex CG Biological Larvicide | Registration Number: 73049-20 |
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| Vectolex WDG Biological Larvicide | Registration Number: 73049-57 |
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| Zoecon Altosid XR Extended Residual Briquettes | Registration Number: 2724-421 |
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Element 8: Evaluation of available BMP's to determine if feasible alternatives are available.

As mentioned in Element 2, the designated water bodies within the District (as applicable to the permit) are the Kern Flood Channel, the Kern River, and Buena Vista Lake. District policy mandates that all measures of biological and physical control be explored and evaluated prior to the application of pesticide. The location, terrain, and habitat associated with the sources mentioned above limit the options the District has at its disposal with regard to Best Management Practices. In addition, the District has experienced minimal cooperation with local water agencies regarding forms of physical control and vegetation maintenance. Biological control through *Gambusia affinis* has proven to be very successful. However, the initial onset of flooding requires the use of pesticide to curtail mosquitoes until populations of *Gambusia affinis* reach control levels. Once control levels are established, pesticide application is minimal or non-existent. The District also tries to enhance biological control through promotion of natural predators. Specifically, the District prefers to use Teknar HP-D as a narrow spectrum Larvicide to ensure that non-targeted populations of predatory insects remain established. Though limited, the available BMP's specified above are actively pursued by the District and have been evaluated according to the approach outlined in Best Management Practices for Mosquito Control in California (p. 20). The District's surveillance program includes regular larval inspection and adult mosquito collection to monitor BMP effectiveness, as specified in Best Management Practices for Mosquito Control in California (p. 20).

