

# MOSQUITO CONTROL ACTIVITIES IN THE COLUMBIA BASIN, WASHINGTON, FOR 1958

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For the past several years, increasingly larger numbers of mosquitoes resulting from expanded irrigation in the Columbia Basin not only created a serious nuisance but also added the threat of an encephalitis outbreak. Because the community of Moses Lake became alarmed as a result of publicity concerning these threats, particularly with the prospect of an early hot season, some public spirited citizens contacted the Washington State Department of Health for technical advice and direction. The junior author was called into consultation at which time he outlined a budget and control procedures.

As a community project, a small group of women organized a door-to-door fund raising solicitation. Within three days, they had raised \$10,685.19. Shortly there-

after, at a community rally, the Moses Lake Mosquito Control Authority was formed.

Initiation of the control program started with the city's division into four sectors, and a carefully selected energetic young man was placed in charge of each of them. After a short training session the men immediately assumed their duties in the field and were placed under the supervision of the manager of the Moses Lake public works department. The combination was a fortunate one, and from the beginning, their efforts produced favorable results.

Control efforts were directed at the breeding source, with applications of a 5 percent DDT oil solution used at the rate of up to three gallons per acre, the concentration depending upon the kind and extent of vegetational patterns. In certain instances "Tossits" were used effectively.

Whenever adult mosquitoes migrated into the treated areas they were controlled

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by DDT fogging applications. This was necessary on several occasions especially after northeast winds had prevailed. As the season progressed, larviciding was extended beyond the original three-mile limits from the center of the city. This extension of boundaries became necessary because of the concentrated breeding sites found in seepages along ten miles of Crab Creek which borders the northeast sector of Larson Airforce Base. Because of the mutual problems and the close proximity of the untreated Crab Creek areas to the base as well as to the city, Larson Airforce officials greatly aided the control program with generous donations of material, equipment and manpower. Considerable amounts of DDT and several experimental larvicides were contributed by the California Spray Chemical Corporation and Dow Chemical Company.

Hoof prints along the margins of the Crab Creek seepages proved to be ideal breeding sites for *Culex tarsalis*. Although these were easily controlled, the magnitude of the area necessitated an arduous effort.

The principal problems of mosquito control which confronted the control authority were breeding sites within the city or adjacent areas, including drainage ditches clogged with dead Russian thistle which provided shelter and protection from the larvicides, high water temperatures which resulted in shorter life cycles of the mosquitoes as well as reduced effectiveness of the larvicides, and occasional influxes from marginal areas of

large populations of adult *Aedes dorsalis*. Goat Island, a large sedge- and cattail-covered island lying near one of the principal housing centers in the city, proved to be especially difficult to control. Aerial dispersion of DDT was found to be quite costly and relatively ineffective due to the heavy vegetation. Burning the vegetation on the island was somewhat helpful.

Because of a history of repeated adulticiding of Larson Airforce Base proper by aerial applications of DDT, the question of resistance was raised. However, tests conducted by the State College of Washington Department of Entomology proved that resistance had not developed.

A great deal of information concerning the day to day progress of the control program was published by the local press. Also, interesting public releases, stories and coverages were broadcast by the radio and television stations of the area.

At the end of the breeding season a concentrated effort was made to acquaint the public with advantages of an organized mosquito abatement district. This was done by presenting a series of talks and showing moving pictures and slides to civic clubs and organizations. Apparently the season's demonstration as the first community-organized mosquito control project in the Columbia Basin section of the State of Washington was accepted, because the formation of the Moses Lake Mosquito Control Abatement District was approved by the vote of the citizens.

## DESPLAINES VALLEY MOSQUITO ABATEMENT DISTRICT

8130 Ogden Avenue, Lyons, Illinois

Member of American Mosquito Control Association

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The District was created under state law adopted in 1927 by the General Assembly of Illinois. The District has functioned for thirty-two years.