

# Need for Regulations on Mosquito Control in Irrigation Systems

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Irrigation agriculture often produces hordes of mosquitoes — particularly floodwater *Aedes* and *Culex tarsalis* — throughout the summer months. Such mosquitoes are potentially hazardous from a public health standpoint since culicine mosquitoes in general and *C. tarsalis* in particular are known to carry and are able to transmit certain viruses of the encephalitides, including equine encephalomyelitis and human encephalitis.

It is noteworthy that the most favorable mosquito breeding habitats provided by irrigation systems include water wasted through improperly designed and operated distribution systems, and seepage water through dams, levees, and drainage ditches. At present, there is urgent need for formulation of regulations to forestall the misuse of water diverted for irrigation purposes.

While it is realized that the agency which constructs a reservoir may not retain jurisdiction over water which may be released for irrigation purposes, it is likely that public health hazards resulting from improper use of irrigation water may create prejudice against the entire water system from source to point of use. For this reason, it is essential that even in the planning stages of the reservoir, consideration be given to providing the operating agency with authority to utilize regulations and/or contract provisions designed to prevent the use of irrigation water on private lands in a manner which may result in the creation of a public health hazard.

It may be desirable to provide a clause in the contract between the operating agency and the individual, corporation, or subdivision of government receiving the water requiring the latter to follow practices which would result in a minimum production of mosquitoes. The operating agency simply may wish to stipulate that it will not provide water to any water user unless the user will agree to conform with State regulations governing the impounding and use of water, and unless the State health department approves arrangements made for the proper handling and disposal of water.

If the establishment of regulations for water use is deemed advisable, such regulations should, in addition to requiring disposal of the water without undue wastage, require the contracting individual to prevent the formation of surface pools from wastage or seepage. Also it may be indicated that the water should be finally disposed of in such a manner as to prevent the formation or maintenance of mosquito breeding habitats in the disposal outlets or ditches. It is not anticipated that the operating agency will provide routine inspection or surveillance to obtain compliance with such regulations where water from the reservoir is being used on private lands, but it is envisioned that contract provisions would be a most useful means of obtaining compliance with regulations by the individuals concerned in the event of infraction of regulations.