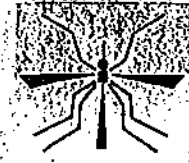


SAN JOAQUIN COUNTY



MOSQUITO & VECTOR CONTROL DISTRICT

MEMORANDUM

EXHIBIT
VV 3-1-12-12
Anderson

Date: April, 2001
From: JOHN R. STROH, MANAGER
To: BOARD OF TRUSTEES AGRICULTURAL AND INDUSTRIAL WASTE POND OWNERS/OPERATORS
Subject: WASTE POND VEGETATION MANAGEMENT

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As an owner and/or operator of a liquid waste pond system, you have several responsibilities in managing and operating your pond and related drains, of which one is ~~vegetation control to prevent mosquito development~~. Weeds controlled around the perimeter and surface of the pond, and along the ditch banks of drains, is the most effective mosquito control measure available to the waste pond system owner.

Because state law classifies mosquito development as a "public nuisance", the owner or operator of the mosquito breeding site is responsible for the prevention of mosquitoes. This district provides routine inspection service for all ponds in San Joaquin County to ascertain their condition and the status of any mosquito development. The district also performs mosquito control on the ponds to prevent adult mosquito emergence. However, these control operations cannot be performed economically or effectively when there is emergent vegetation around the perimeter and surface of the ponds and related drains.

The district is requesting that all owners and operators of liquid waste ponds implement a vegetation control program for their sites. The plan should contain the following objectives:

1. Eliminate and prevent emergent vegetation on all roadways and inside slopes of liquid waste ponds and drains from March through November.
2. Eliminate and prevent the accumulation of manure and organic solids on the surface of liquid waste ponds. Any vegetation growing on floating manure or organic waste must be immediately controlled and prevented from re-occurring during the months of March through November.

Pond owners can either perform the weed control themselves or contract with a licensed weed control company. The planning for weed control should start immediately. Certain types of chemicals used in controlling weeds must be applied during normal growing conditions, while others can be applied when the weeds are dormant.

District inspectors will monitor the condition of all liquid waste ponds through the fall and winter months. When vegetation growth appears excessive, or if there does not appear to be a

POND MANAGEMENT FOR INSECT, RODENT, AND ODOR CONTROL

The way dairy wastewater facilities are managed affects many people including fly and air pollution control inspectors, mosquito abatement operators, and neighbors. If a wastewater pond is used only for storm runoff is emptied and dried promptly, and if weeds are controlled, there will probably be no complaints. If it is used daily as a sump for washwater, or as an irrigation reservoir, or just allowed to remain wet for long periods, close management will be necessary to prevent nuisances. Although house fly eggs will not hatch in standing water, the moist areas protected from the direct rays of the sun (e.g., under weeds or tall grass, in deep cracks in the soil, or in organic waste) are ideal places for fly development.

Mosquitoes favor sheltered or stagnant water such as occurs near pond floatage or near banks with vegetation growing or hanging into the water. Elimination of vegetation at the water line, raising and lowering the water level a foot or two every 3 days, and separation of waste material that will float will simplify fly and mosquito control.

Ground squirrel burrows are often a problem around levees. There should be a service road on top, and frequent vehicle use will tend to discourage squirrels. Vehicles (including tractors) will keep the soil compacted for hydraulic strength and safety. The road also will serve for weed and insect control purposes. Elimination of vegetation will discourage burrowing rodents.

Wastewater ponds, properly managed, usually generate fewer odors than would the same total manure wastes remaining in the corrals. A US Department of Agriculture (USDA) study (Luebs, Laag, and Davis, 1973) in the Chino Basin found that the

atmosphere near a wastewater pond contained no more odorous gases than the atmosphere measured at corral fence lines. Careless operation, however, can produce excessive putrefactive odors from long-term anaerobic sludge from pond bottoms. Odor control, then, is accomplished by frequently removing settled sludge and diluting it with irrigation water. This is best done by pumping the lower pond water into an irrigation standpipe in a blend of no more than one part wastewater to three parts flowing irrigation water. Good sludge elimination and reasonable odor control also can be obtained by admitting irrigation water into the pond near the point of waste inflow and drawing off the manure-irrigation blend from near the bottom at the opposite end. This must be done frequently to prevent excessive concentration. The blend usually needs further dilution.

Ponds that are used daily for washwater storage should be promptly refilled with 2 feet of water after emptying to "cap" the odor-generating floor. Pond structures that are only used for infrequent storm runoff should be promptly dried to restore an odorless aerated condition (Light harrowing will speed up drying and will control fly larvae growth.)

(retyped from UC leaflet 2910)

weed control program in place, district inspectors will contact the pond owner/operator in person to request compliance.

If, during the months of March through November, any liquid waste pond system has vegetation that creates a mosquito-breeding problem, the site will be declared a public nuisance and the landowner will be requested to abate the nuisance. If compliance is not forthcoming in a reasonable amount of time, the district will initiate legal abatement action to eliminate the public nuisance. The landowner and/or operator will be responsible for all abatement costs. Because of the past cooperation received from most pond owners in San Joaquin County, it is not expected that the district will have to resort to this action.

Enclosed are recommendations for proper waste pond maintenance.

Do not hesitate to contact the district if you have any questions or comments. You may contact us toll-free at 1 800-300-4675.