

## Animal Waste, Fly and Vector Control Plan

Desert Diamond

County of SD, Parcel Map 21017

December 28, 2006 (Rev. 3/5/09)

Site Location: Borrego Springs Road, Borrego

Owner: Charles White

Consultant: Jim Engelke, CEP

Background: Have owned and operated Diamond Mountain Stables in northern California for last 25 years. Diamond Mountain Stables is a show stable that specializes in jumping horses. We board, train, and sell these show horses and care for 70-100 horses at any given time.

Description of facilities: This facility will have large paddocks for turnout, stalls, arenas, hay storage, etc.

### **Manure Management and Fly Control Plan:**

Education - staff and volunteers at the Desert Diamond facility will be given instruction on the importance and methods of managing fly, mosquitoes and rodents. The fly breeding cycle will be explained and management will stress the importance of breaking the fly breeding cycle by removing and drying manure within 7 days and within 5 days during the hot and humid summer days.

Areas of wet manure in the corrals should be cleaned out, sun dried and removed to the manure storage area daily. Dried manure should be moved to the composting, soil amendment area within 1 to 2 weeks.

While no use of pesticides or larvicides is planned in this program, if manure management programs are found to be inadequate in heavy fly breeding times the plan may be revised to contain some low toxicity chemical controls. Consultation will be made with the appropriate agencies prior to use. Technical information from the University of California Agricultural Bulletin 2335 states that "Correctly chosen and applied chemicals may be a necessary supplement to good sanitation, manure and water management. Insecticides and chemical formulations which best suit the stable needs may include:

1. Persistent insecticides, when applied as surface spray are usually the most effective and economical compounds for controlling fly.
2. A quick knockdown insecticide, applied as a surface spray, is advantageous if immediate reduction of adult flies is necessary.
3. Baits are generally most effective when applied at the same time as surface sprays,

4. Space sprays or fogs are most valuable when quick kills of large numbers of flies and insects are desired in enclosed areas,

5 Larvicides are best used as spot treatments to control fly larvae in wet areas and manure storage areas."

If manure is unable to be spread and dried due to equipment failure or excessive rains, it may be necessary to cover the raw manure pile with black plastic tarps. The edges of the tarp should be buried or sand bagged to prevent fly emergence. If the equipment or soil mixing operation is delayed for any extended length of time, **the fly control plan will revert to a weekly removal of organic wastes as stated in the County Code.**

The importance of storm-water Best Management Practices (BMP's) and integrated pest management will be reviewed to understand what staff could do to protect the watershed and water supply.

Prior to the known rainy seasons (September and December to March) cleaning efforts will be made to remove any excess accumulations of manure from the pastures and premises to prevent fly breeding and reduce storm-water runoff. The wet weather operation will include covering the manure pile and compost pile(s) with plastic sheeting to prevent storm-water runoff. Good drainage is to be maintained at all times on the property to prevent standing pools of water and mosquito breeding.

#### **Water Management Methods:**

Feed troughs and bins shall not be located near water sources, because spilled feed attracts flies and makes a good breeding site.

The accumulation of damp manure, bedding or feed should be avoided. The following are some guidelines for effective reduction of these fly sources:

- 1 - Use non-leak valves on all water troughs, bowls, cups and other water devices.
- 2 - Use automatic valves or sanitary drains for large troughs or cups if water flow is continuous.
- 3 - Properly grade earth surfaces in paddocks and corrals for drainage. Adapt surfaces to a drainage pattern so that rainwater or water trough overflow does not form ponds.
- 4 - Staff will be requested to report and repair all water leaks to prevent unnecessary wet manure areas or mosquito breeding areas.

At least weekly staff will assure all watering devices are working, have proper air-gap back-flow prevention and are not breeding mosquitoes. If mosquito breeding is found the water container should be emptied cleaned and filled with fresh water. At this time there are no watering ponds or large water storage containers.

#### **General Sanitation Management Methods**

A general clean up program shall supplement the manure and water management efforts.

Good sanitary methods around corrals or barns shall pay attention to the following items:

- 1 - Use as little bedding material as possible.
- 2 - Remove damp or spilled feed from around bins, tanks and feed troughs bottoms.
- 3 - Remove stillborns and afterbirths at once to tight lid containers or off-grounds disposal.
- 4 - Store all garbage, fruit and vegetable wastes and pet dropping in tight metal/tin containers until off-grounds disposal is possible.
- 5 - Control weeds in order to improve sun penetration and air movement so that the grounds remain dry and to avoid breeding of flies, rodents, mosquitoes and other potential pests.
- 6 - Feed should be stored in vector and rodent-proof metal/tin containers.
- 7 - Yellow jacket and fly traps will be used if those insects become a problem and are attracted to the high protein feeds.

Feed storage: Hay and straw will be stored off the ground on wooden pallets to protect the feed but also to reduce the harborage of rodents. The hay feed will be rotated first in first out. Grains and pellets if used will be store in metal/tin rodent-proof storage containers.

Rodent Control: At this time no rodent poisons are used, as they are dangerous to the animals. Snap traps or live traps will be used as necessary. If rodent baits are used in the future, they shall be contained in approved tamper resistant bait stations and used according to the label. If severe rodent problems occur a licenses Private Pest Control Operator (PCO) may be employed.

Pesticides and Larvicide's - No use of pesticides are planned in the horse stable operation. Hydrated lime may be used in some areas to reduce odors. It also will reduce fly breeding. A licensed Pest Control may use chemicals to control fly breeding.

Adult fly bait stations may be used at times to reduce the adult fly population.

If any sedimentation basins are constructed VSCP requests that they be designed to be self-draining within 72 hours to prevent mosquito breeding.

If "Animal Waste, Fly and Vector Control Plan" is found to be inadequate this plan may be revised in consultation with property owner and consultant.

Any changes to the fly/vector plan should be made with consultation and approval of San Diego Depart of Environmental Health Services, Vector Control by contacting Gregory Slawson at 858-495-5358.

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Owner \_\_\_\_\_ Date \_\_\_\_\_

Consultant \_\_\_\_\_ Date \_\_\_\_\_

Reviewed and approved by \_\_\_\_\_ Date \_\_\_\_\_