

PROTOCOL FOR MONITORING OF THE 1984  
GYPSY MOTH ERADICATION GROUND  
SPRAY PROGRAM

I. Objective

To monitor the environmental levels of pesticides applied during the 1984 Gypsy Moth Eradication Program.

II. Personnel

The monitoring of the gypsy moth eradication ground spray program will be conducted by personnel in the Environmental Hazards Assessment Program (EHAP) under the overall supervision of Ronald J. Oshima. All inquiries regarding the progress and/or results of any facet of the monitoring program should be directed to Ronald Oshima in Sacramento (phone 916-322-2395 or ATSS 492-2395).

Joe Franz - Responsible for selection of sampling methodology, field storage and transport of collected samples, and liaison to CDFA Chemistry Laboratory Services. Questions concerning all aspects of the chemical analysis of collected samples should be directed to him (phone 916-322-2395 or ATSS 492-2395).

Monitoring in affected counties will be assigned to specific EHAP personnel. The following individuals will be responsible for liaison with state, county and local officials involved with the local eradication program.

Alameda County	-	Joe Franz
San Diego County	-	Scott Simpson

III. Study Timetable

Field monitoring will coincide with the implementation of the gypsy moth eradication efforts on an area basis. A single treatment, will be monitored in each selected area to insure that pesticides levels remain in the ranges previously documented in Santa Barbara, 1982.

IV. General Monitoring Plan

By monitoring treatment areas within Alameda and San Diego counties, EHAP will attempt to determine the presence of detectable pesticide concentrations in air and natural bodies of water. One private residence that is scheduled to be sprayed in Oakland and San Diego will be selected as a monitoring site.

a) Air will be sampled by high volume air samplers (HV). HV's utilizing an adsorbant resin bed and electronic flow controllers, will operate at a flow rate of 30 cubic feet per minute (CFM). Samples will be collected

from outside the residence during each of the following periods: 6 hr background, spray plus 1/2 hr., and for 6 hrs. post spray.  $2 \times 3 = 6$  samples

b) Duplicate water samples will be drawn from any stream or creek flowing through a treatment area. These will include a background sample taken downstream of the treatment area and post spray samples from downstream and upstream of the treatment areas.  $2 \times 2 \times 3 = 12$  samples

c) Duplicate rain runoff samples will be drawn from sites above and below the treatment area following the first significant rainfall. Those samples will be collected from streams, creeks and/or drainage systems that drain the treatment area.  $2 \times 2 \times 2 = 8$  samples

d) Tree foliage- In order to determine pesticide levels present on tree foliage over time, a host tree will be chosen at one treatment property. Duplicate samples consisting of a minimum of 20-30 leaves will be taken during each of the following periods: background, spray, and every other day up to the spray. Additional samples will be taken on later dates if necessary.  $2 \times 2 \times 10 = 40$  samples

e) Tank samples will be collected during or immediately following all monitored applications.

V. Handling and Storage of Samples

All sampling media and containers will be prepared and pre-numbered at the California Department of Food and Agriculture Laboratories in Sacramento. Each device or container will be shipped to the sampling sites with an accompanying Chain of Custody Record. The Chain of Custody Record will be filled out by all parties handling or storing the sampling media or sample containers from the time they leave the Sacramento DFA lab until they are returned to the lab for analysis. The Chain of Custody Record also contains an internal chain of custody record for use by the laboratory.

All samples will be collected by EHAP personnel, sealed in glass containers and stored in the following manner until and during transport to the CDFA laboratory in Sacramento.

On Dry Ice ( $-70^{\circ}\text{C}$ )  
air samples  
~~foliar samples~~

On Ice ( $1^{\circ}\text{C}$ )  
tank samples  
water samples  
**FOLIAR SAMPLES**

VI. Analysis of Samples

All samples will be analyzed by CDFA Chemistry Laboratory Services in Sacramento. Quality control duplicate samples will also be analyzed by CDFA. Approximately ten percent of the total number of samples or each type

collected will have duplicate analyses performed as part of the quality control program. Brief details of the analytical methods for each type of sample are available if requested.