

COUNTY OF VENTURA IPM STRATEGY



February 5, 2008

TABLE OF CONTENTS

PREAMBLE	2
I. MISSION STATEMENT	3
II. PURPOSE	3
III. DEFINITIONS	4
IV. DESCRIPTIONS OF ROLES AND RESPONSIBILITIES	7
V. NOTIFICATION:	8
VI. TIERED MATERIALS LIST AND EXEMPTION PROCESS	8
VII. RECORD KEEPING	12
VIII. TRAINING	13
IX. REVIEWING PLANS FOR NEW CONSTRUCTION AND LANDSCAPE PROJECTS	14
X. CONTRACTORS	14
XI. PRECAUTIONARY PRINCIPLE	15
REFERENCE DOCUMENTS	17

Preamble

The County of Ventura has the responsibility for oversight on properties which include hospitals, Parks, golf courses, airports, detention facilities industrial, roads and business sites. At the direction of the Board of Supervisors, the General Services Agency (GSA) was tasked to report and make recommendations on an Integrated Pest Management Plan (IPM). In order to provide an opportunity to address issues which may affect other agencies, department representatives were invited to a meeting on December 17, 2007 to discuss the impact of the IPM on agencies outside of GSA.

The effort of this program is not to eliminate the use of pesticides but to reduce usage and define the manner in which they are used. The approach of “least harmful first” is applied, providing a plan to reduce the use of more toxic pesticides, while allowing the agencies to deal with serious or urgent pest control issues as a situation warrants. Using an IPM, the General Services Agency Landscape/Custodial division has realized an approximate 80% reduction of harmful chemicals.

Using IPM strategies of the City of Santa Barbara, among others, GSA plans to strive towards further chemical reductions in the future.

I. Mission Statement

It is the mission of the County of Ventura IPM Strategy to promote environmentally sensitive pest management while preserving assets and protecting the health and safety of the public and our employees. All costs and impacts associated with pesticide use, including community and environmental health, will be considered. The following IPM Strategy describes the County’s goals and demonstrates how the County will achieve these goals.

II. Purpose

The purpose of this IPM strategy is to establish methodology that the County can apply to:

- Reduce and eliminate to the greatest extent possible, the use of pesticide products that pose known, likely, or probable human health or environmental risks;
- Promote the use of non-hazardous and/or reduced risk alternatives that are protective of human health and the environment;
- Apply pesticides in a manner that protects and enhances our region’s natural resources and public health;
- Pesticide use as a model of environmental stewardship in the eyes of the public;

- Maintain a leadership role in developing both ecologically sensitive and aesthetically pleasing landscapes and structures;
- Practice a consistent standard of environmental stewardship by departments managing structures, landscapes, and other grounds;
- Establish a program where pesticides categorized as toxic or persistent (Tier 1) are only used when there is a threat to public health, safety or the environment, or when use is warranted to prevent economic damage and only after other alternatives have been implemented and shown to be ineffective or considered and found infeasible;
- Establish a clear criteria for pesticide use, to reduce the amount and toxicity of pesticides and eliminate pesticide use on County property and where feasible.

This IPM Strategy also provides for periodic re-evaluation of pesticides used by the County. The Strategy which outlines pesticides that are being used in all departments, and will allow employees involved in pesticide use to make conscious decisions about the control mechanism selected, to employ the use of pesticides wisely, and to make full use of pesticides purchased. All departments responsible for overseeing construction projects; managing County-owned structures, grounds, landscapes; and purchasing and/or using pesticides are affected. In addition, all contractors that are applying pesticides on the County's behalf will be required to subscribe to the IPM Strategy. Disinfectants used to protect human health are excluded from this strategy and the IPM.

III. Definitions

Contract: A binding written agreement requiring the services of an outside provider for grounds maintenance or any pest control related services or services that may include pest control activities.

Contractor: A person, firm, corporation, or other entity, including a governmental entity, that enters into a contract with a department.

Emergency: A pest outbreak that poses an immediate threat to public health or significant economic or environmental damage.

Hazardous Material: A chemical or mixture that may pose a physical hazard, health hazard, or environmental hazard and that is regulated under the law to control its harmful effects. This definition is not intended to be rigid or legalistic because all materials regulated in this manner merit special attention and consideration under this program.

IPM Committee: Is the working group consisting of representatives from each County agency/department designated as the IPM Coordinator, and other department representatives as deemed appropriate by individual departments involved in the IPM strategy implementation. This committee shall be responsible

for guiding the individual agency-wide implementation of the approved IPM strategy. The IPM committee shall meet a minimum of four times per year for the purpose of information sharing and collaboration.

IPM Coordinator: Individual designated for those departments that apply pesticides or contract with pesticide applicators. The GSA Facilities & Maintenance (F&M) (Special Services Manager) is the individual to coordinate these activities on a countywide basis and to serve as the primary point of contact. The IPM coordinator(s) shall be trained in the principles of low risk IPM, safe application of pesticides, and alternatives to pesticide use.

The IPM Coordinator shall be responsible for:

1. Coordinating efforts to adopt IPM techniques.
2. Communication with all staff on the goals and guidelines of the program.
3. Coordinating training programs for staff.
4. Facilitating meetings with the IPM Committee.
6. Coordinating with other public agencies that are practicing IPM programs.

Integrated Pest Management (IPM): A decision-making process for managing pests that uses monitoring to determine pest levels and tolerance thresholds and combines biological, cultural, physical, and chemical tools to minimize health, environmental, and financial risks. The method uses extensive knowledge about pests, such as infestation thresholds, life histories, environmental requirements, and natural enemies to compliment and facilitate biological and other natural control of pests. The method uses the most toxic pesticides only as a last resort and includes the following guiding principles.

1. Monitor each pest ecosystem to determine pest population, size, occurrence, and natural enemy population, if present. Identify decisions and practices that could affect pest populations. Records of all such monitoring shall be kept.
2. Set threshold and action levels. The threshold level refers to the point where a pest problem causes an unacceptable impact. The action level is the level of vegetation or pest population at a specific site at which action must be taken to prevent the population from reaching the threshold level.
3. Consider a range of potential treatments for the pest problem. Employ non-chemical management tactics first. Consider the use of chemicals only as a last resort, select and use the least toxic formulation effective against the

target pest, and use pesticides only in accordance with other provisions of this strategy.

4. Monitor treatment to evaluate effectiveness. Such monitoring records shall be kept.
5. Ongoing education of the public.
6. Special circumstances, i.e. protection of botanical specimen, or other mitigating factors may allow exemptions to the process outlined above.

Landscapes: Grounds that are actively managed such as parks, plantings, lawns around public buildings, right-of-ways, watersheds, orchards, and open space, etc., excluding large tracts of forestland.

Tiered Materials List: List of pesticides classified into four tiers on the basis of their hazard potential, updated annually by the IPM Committee. All pesticides considered for use by County departments are screened through the hazard criteria and will fall into one of the following tiers:

Tier 1: Highest concern

Tier 2: Moderate concern

Tier 3: Lowest concern

Tier 4: Insufficient information available to assign to above tiers

Pesticide Free Zones: A site or area within a site so designated as a “Pesticide Free Zone” by specific departments in order to further reduce and eliminate pesticide use in areas of higher public exposure or areas with high environmental sensitivity.

Pesticide: Any substance, or mixture of substances, used for defoliating plants, regulating plant growth, or for preventing, destroying, repelling, or mitigating any pest, which may be detrimental to vegetation, humans, or animals.

Sustainable Design, Construction, and Maintenance: Principles, materials, and techniques that conserve natural resources and improve environmental quality throughout the life cycle of the landscape and its surrounding environment. Sustainable designs for buildings and landscapes incorporate methods that reduce the potential for pest problems from the start and with long-term maintenance needs in mind.

Toxicity Category I Pesticide Product: Any pesticide product that meets United States Environmental Protection Agency criteria for Toxicity Category I under Section 156.10 of Part 156 of Title 40 of the Code of Federal Regulations.

Toxicity Category II Pesticide Product: Any pesticide product that meets United States Environmental Protection Agency criteria for Toxicity Category II under Section 156.10 of Part 156 of Title 40 of the Code of Federal Regulations.

IV. Descriptions of Roles and Responsibilities

- Department Head
- Departmental IPM Coordinator
- IPM Committee

Department Head: Department Heads shall be responsible for:

1. Ensuring that departmental procedures, budget, and staffing decisions support implementation of the IPM Strategy.
2. Providing training to grounds management staff in the requirements of this IPM Strategy.
3. Designating an Integrated Pest Management Coordinator to ensure products used by the Department meet the standards outlined in this IPM Strategy and represents the Department on the IPM Committee.

Establishing an Integrated Pest Management Coordinator: Each department will be responsible for designating an Integrated Pest Management Coordinator. Departments will be responsible for providing Integrated Pest Management training in addition to opportunities for the Coordinator and other employees responsible for pest management.

The Coordinator will be responsible for:

1. Managing the IPM program for the Department.
2. Attending meetings of the IPM Committee.

IPM Committee: This advisory committee is responsible for:

1. Meeting on a regular basis to review and discuss pest management practices.
2. Identifying the types of pest problems that have been encountered.
3. Identifying the alternatives currently used for phased out pesticides.
4. Identifying planned changes to pest management practices.
5. Evaluating the effectiveness of any changes in practice implemented.

6. Discussing any IPM Committee dissensions on any issues
7. Developing, adopting, and periodically reviewing the Tiered Materials List.
8. Reviewing emergency pest control decisions.
9. Investigating low-risk/least hazardous alternatives to conventional treatments.
10. Assisting departments in implementing the IPM Strategy by developing educational information for staff and vendors about IPM plans and programs.
11. Annually reviewing the written IPM Strategy and recommending appropriate revisions to ensure the program meets the intended purpose and goals of IPM.

The Committee is made up of IPM Coordinators, vendor representatives and staff involved in the day-to-day operations and oversight of pest management operations. The Committee's role is supportive of the IPM Coordinator.

IPM Committee: The committee shall consist of GSA Parks, Ventura Sheriff's Department, Todd Road Jail, Public Works Administration Roads, GSA F&M, Department of Airports and the Department of Harbors.

V. Notification:

Any department that uses pesticides shall comply with all Federal, State and Local rules and regulations for notification and record keeping.

VI. Tiered Materials List and Exemption Process

The IPM Committee shall develop a tiered risk assessment of pesticides. A prioritized list of materials will be developed to identify materials that may be targeted for IPM Committee review of the product's contents, precautions, need for the product, and adverse health and environmental effects. The IPM Committee will make product recommendations and establish and prioritize the Tiered Materials List for future materials phase out. The lists shall be distributed to committee members for their use and to the Resource Management Agency for their information.

Criteria for developing materials lists shall be based on acute and chronic toxicity of products and chemicals known to cause cancer and known to cause reproductive toxicity. Environmental impacts of the products shall also be

considered. The approved materials list shall screen pesticides for the following risk parameters:

A. Acute Toxicity: The potential for a pesticide to cause immediate harm.

1. Hazard Category: Each pesticide product registered by EPA is assigned hazard category I, II, III, or IV by the Agency based on characteristics of the full product formulation, including acute toxicity, and skin and eye irritation. In evaluating the acute data, EPA assigns the hazard category based on the greatest hazard, i.e. ingestion, inhalation, skin absorption, eye irritation, etc. The table below shows the toxicity ranges that apply for each category. (Note: LD50 indicates lethal dose 50%; LC50 indicates lethal concentration 50%.) A relatively non-toxic product (via ingestion, inhalation, or skin absorption) could be placed in the highest hazard category merely on the basis of extreme eye irritation. Products in category I are most hazardous and bear the signal word DANGER on their labels. Those in category II are labeled WARNING. Both category III and IV products are labeled with CAUTION. Product category was determined from label signal words, and category III and IV products were not distinguished from each other.

EPA Category	I	II	III	IV
Signal Word	DANGER	WARNING	CAUTION	CAUTION
Oral LD50 (mg/kg body wt)	Less than 50	Between 50 and 500	Between 500 and 5000	More than 500
Inhalation LC50 (mg/liter air)	Less than 0.2	Between 0.2 and 2	Between 2 and 20	More than 20
Dermal LD50 (mg/kg body wt)	Less than 200	Between 200 and 2,000	Between 2,000 and 20,000	More than 20,000
Eye Effects:	Corrosive Non-reversible opacity	Severe irritation Reversible opacity Persisting 7 days	Moderate irritation No opacity Reversible 7 days	No irritation
Skin Effects:	Corrosive	Severe irritation	Moderate irritation	Mild irritation

2. Restricted Use Pesticides: Some pesticides are restricted for use by the state to only certified pesticide applicators and are not available to the general public because of high toxicity, particularly hazardous ingredients, or environmental hazards.

B. Chronic Toxicity: The ability of the pesticide to cause long lasting harm.

1. Carcinogens (active ingredients only): For the purposes of the County of Ventura IPM Strategy, this will include all pesticides on the State of California Environmental Protection Agency Office of Environmental Health Hazard Assessment Safe Drinking Water and Toxic Enforcement Act of 1986 list of Chemicals Known to the State to Cause Cancer or Reproductive Toxicity.

2. Reproductive/Developmental Toxicants (active ingredients only):
“Chemicals known to the State of California to cause cancer or reproductive toxicity.” The source used for the development of the Materials Phase-Out List is the State of California Environmental Protection Agency Office of Environmental Health Hazard Assessment Safe Drinking Water and Toxic Enforcement Act of 1986 list of Chemicals Known to the State to Cause Cancer or Reproductive Toxicity.

3. Endocrine Disruptors (active ingredients only): These are pesticides with the ability to mimic or block the effects of hormones in humans and other wildlife. Because of the similarity of the endocrine system across many species, its critical role in development and reproduction, and its extreme sensitivity to very low levels of hormone-like compounds, there is the potential for endocrine disrupting substances in the environment to adversely affect wildlife and humans. Although the science is relatively new and in many cases highly controversial, considerable evidence of effects in wildlife and some evidence in humans have caused many scientists to warn of potential dangers from exposure to endocrine disrupting chemicals. Under the Food Quality Protection Act, the EPA is required to screen pesticide ingredients for endocrine system effects. Until that screening is done, a comprehensive list of endocrine disruptors will not be available. For the purpose of this strategy development, the source used for the development of the Tiered Materials List is the State of Illinois Environmental Protection Agency list of known, probable, or suspected of causing endocrine system effects (Illinois EPA Endocrine Disruptors Strategy, February 1997.).

4. Ecotoxicity (active ingredients only): Based upon the required precautionary statements on product labels, pesticides that warn of potential toxicity to non-target wildlife species will be considered in the development of the Tiered Materials List. Of primary concern is toxicity to:

- Birds
- Aquatic Organisms
- Bees
- Other wildlife or domestic animals

5. Persistence: Pesticides are considered to be persistent if their half-lives exceed 100 days. For the purposes of the approved materials list, the Oregon State University Extension Pesticide Properties Database, the Agricultural

Research Service/US Department of Agriculture Pesticide Properties Database or Hazardous Substances Databank will be used in that priority.

6. Water Pollution Hazard (active ingredients only):

- Leaching potential
- Runoff potential

The Ground Water Ubiquity Score (GUS) index is used to identify those pesticides that have a high potential to contaminate the ground water.

Ranking by Tiers: Materials will be classified into tiers on the basis of their hazards.

Tier Definitions:

Tier 1: Highest concern

Tier 2: Moderate concern

Tier 3: Lowest concern

Tier 4: Insufficient information available to assign to the above tiers

The criteria for assigning materials to tiers are as follows:

Tier 1: (Any of the following are true)

- Products in EPA Hazard Category 1, Signal Word DANGER
- Restricted use pesticides
- Products with known, likely, or probable carcinogens as active ingredients (EPA list of Chemicals Evaluated for Carcinogenic Potential classified as Carcinogenic To Humans, and Likely To Be Carcinogenic To Humans)
- Products with reproductive toxicants as active ingredients (CA Prop 65 list)
- Products with known or probable endocrine disrupters as active ingredients
- Products labeled as highly toxic or extremely toxic to birds, aquatic species, bees, or wildlife
- Products with active ingredients with soil half lives greater than 100 days (not applicable to products used only indoors on to products used in bait stations)
- Products with active ingredients with mobility ratings high or very high or with specific label warnings about groundwater hazard (Not applicable to products used only indoors on to products used in bait stations)
- Products containing the rodenticides brodifacoum, bromethalin, or bromadionone

Tier 2:

- All products not assigned to Tier 1 or Tier 3

Tier 3: (All of the following are true)

- Product contains no known, likely, or probable carcinogens
- Product contains no reproductive toxicants (CA Prop 65 list)
- Product contains no ingredients listed by Illinois EPA as known, probable, or suspect endocrine disrupters
- Active ingredients has soil half-life of thirty days or less
- Product is labeled as not toxic to fish, birds, bees, wildlife, or domestic animals

Tier 4: Not enough information

The Tier 1 list of pesticides will be used by the IPM Committee to determine future product elimination.

C. Establishing “Pesticide Free Zones”: Pesticide Free Zones are sites or areas within a site established to be free of pesticide applications. The following have been established as Pesticide Free Zones.

- Playgrounds – No pesticides will be applied within 100 feet of playgrounds unless an emergency situation arises.
- Picnic Areas – No pesticides will be applied within twenty-five feet of picnic facilities unless an emergency arises.

The IPM Committee will base decisions to add to the list of Pesticide Free Zones upon monitoring the effectiveness of alternatives and other factors. It is the intention over time to expand these zones as time and resources allow.

VII. Record Keeping

(a) Each department that uses pesticides shall keep records of all pest management activities whether applied by a vendor or a county employee. Each record shall include the following information:

- (1) The target pest;
- (2) The type and quantity of pesticide used;
- (3) The specific location of the pesticide application;
- (4) The date the pesticide was used;
- (5) The name of the pesticide applicator;
- (6) The application equipment used
- (7) Prevention and other non-chemical methods of control used;

VIII. Training

Increasing knowledge of staff and contractors who design and maintain buildings and landscapes is critical to the success of the IPM Program. Consequently, providing ongoing training and educational opportunities to County staff and contractors regarding building and landscape IPM concepts, practices, and products will be a priority.

The IPM Coordinator shall invite speakers and arrange for other educational opportunities to assist departments in implementing the IPM Program each year. Department Directors shall ensure that IPM Coordinators inform employees on departmental policies and procedures relevant to this IPM Program and keep staff current with best landscape-management practices and technologies that utilize Integrated Pest Management. Department Directors shall also support employee involvement in identifying and implementing strategies to minimize the use of pesticides and in evaluating replacements to chemicals targeted for phase-out.

- All staff associated with planning, design, construction, and maintenance of buildings and landscapes shall receive an orientation to the IPM Strategy and their roles and responsibilities in implementing it in a written or verbal format.
- All personnel involved in pest management activities shall receive training on:
 - IPM Strategy.
 - Identification and lifecycles of typical southern California pests, weeds and beneficial insects; determining threshold levels for different types of landscapes; monitoring techniques; and strategies for successful management of these pests
 - Noxious weed identification, control, and regulations
 - Pesticide laws and safety
 - Specific best management practices as appropriate

Training will be provided by County staff, IPM consultants, IPM technical advisors, and invited guest speakers. The IPM Coordinator, with assistance from the IPM Committee, will schedule training. Training and educational opportunities, both formal and informal, will also occur at landscape staff meetings. Managers and supervisors are not only expected to participate in the training, but to fully support involvement of their staff and contractors in the training.

In making landscaping staffing and budget decisions, departments shall consider the potential environmental tradeoffs; for example, will reduced staffing require increased use of pesticides to maintain the landscape at the same standard? Will short-term IPM expenditures result in long-term savings?

IX. New Construction and Landscape Projects

Poorly planned landscape designs may require intensive maintenance and greater reliance on pesticides for pest control than landscapes created with integrated pest management design specifications.

Departments participating in a County project that includes the design of new landscape or renovation of an existing one shall design and construct the project consistent with IPM design specifications. The IPM Coordinator for each department will review all project plans to ensure that, where possible, the design considers IPM measures and the following strategies.

In planning, designing, and installing landscape owned and managed by the county, site objectives shall include future management and maintenance practices that protect and enhance natural ecosystems. A landscape, facility, or road right-of-way should be planned and designed taking into account parameters that will enhance the intended use of the land and minimize pest problems. Design will take into account such factors as types of uses, soils, grading and slope, water table, drainage, proximity to sensitive areas, selection of vegetation, and vector control issues. County grounds designers, planners, managers, crews, and their contractors shall give priority to IPM strategies when designing new and renovating existing landscaped areas. These include:

- Using proper soil preparation and amendment
- Specifying weed-free soil amendments
- Using mulches to control weeds, conserve water, and build healthy, biologically diverse soils
- Use weed control fabrics under organic mulches
- Use site adapted and pest resistant plants: “the right plant for the right place”
- Group together plants with similar horticultural needs
- Retain and use regionally native trees, shrubs, and perennials where appropriate, preferably from genetic stock
- Pre-plant control of noxious weeds and invasive, non-native plant species
- Plant for erosion and weed control
- Assess whether landscapes can still meet the intended site use objectives while modifying the aesthetic standard and/or applying less maintenance
- Match maintenance standards to site objectives in the design stage
- Construct walkways so as to prevent weed intrusion; and
- Plant vegetation that will encourage the presence of beneficial insects and birds

X. Contractors

When a Department enters into a new contract or extends the term of an existing contract that authorizes a contractor to apply pesticides to property, the contract

shall obligate the contractor to comply with all provisions of this IPM Strategy. In addition, the contractor shall submit to the County an IPM implementation plan that lists:

- The types and estimated quantities, to the extent possible, of pesticides that the contractor may need to apply to property during its contract;
- Outline actions the contractor will take to meet the IPM Strategy to the extent feasible; and
- Identify the primary IPM contact for the contractor.

XI. Precautionary Principle

It is the policy of the County to adopt, properly implement and practice low risk/least hazardous Integrated Pest Management with the goal of immediately minimizing the risk of pesticide exposure to staff, the environment, and the public. This strategy is based on what is referred to as the 'Precautionary Principle' (see description below) of pest management. The guiding principles in this strategy are based on the following:

- (1) No pesticide is free from risk or threat to human health
- (2) All reasonable alternative measures of pest management have been attempted and have been shown, and documented in writing, to be unsuccessful,
- (3) Pesticides suspected of being in conflict with the mission and goals of this strategy shall not be used without an exemption, or until it is determined that a specific product is safe for use around sensitive individuals (i.e. children, elderly, asthmatics, etc.).

The Precautionary Principle should guide decision-making processes when it comes to the health and safety of staff and public. All aspects of the program will be in accordance with federal and state laws and regulations and county policies. All departments within the County must conform to the IPM Strategy.

"The Precautionary Principle requires a thorough exploration and a careful analysis of a wide range of alternatives. Based on the best available science, the Precautionary Principle requires the selection of the alternative that presents the least potential threat to human health and the County's natural systems. Public participation and an open and transparent decision making process are critical to finding and selecting alternatives.

Where threats of serious or irreversible damage to people or nature exist, lack of full scientific certainty about cause and effect shall not be viewed as sufficient reason for the County to postpone cost effective measures to prevent the degradation of the environment or protect the health of its citizens. Any gaps in scientific data uncovered by the examination of alternatives will provide a guidepost for future research, but will not prevent the County from taking protective action. As new scientific data become available, the County will review its decisions and make adjustments when warranted.

Where there are reasonable grounds for concern, the precautionary approach to decision-making is meant to help reduce harm by triggering a process to select the least potential threat. The key elements of the Precautionary Principle approach to decision-making include:

1. Anticipatory Action: There is a duty to take anticipatory action to prevent harm. Government, business, and community groups, as well as the general public, share this responsibility.
2. Right to Know: The community has a right to know complete and accurate information on potential human health and environmental impacts associated with the selection of products, services, operations or plans. The burden to supply this information lies with the proponent, not with the general public.
3. Alternatives Assessment: An obligation exists to examine a full range of alternatives and select the alternative with the least potential impact on human health and the environment including the alternative of doing nothing.
4. Full Cost Accounting: When evaluating potential alternatives, there is a duty to consider all the reasonably foreseeable costs, including raw materials, manufacturing, transportation, use, cleanup, eventual disposal, and health costs even if such costs are not reflected in the initial price. Short- and long-term benefits and time thresholds should be considered when making decisions.
5. Participatory Decision Process: Decisions applying the Precautionary Principle must be transparent, participatory, and informed by the best available science and other relevant information."

Reference Documents:

1. Santa Barbara Integrated Pest Management Plan
2. Code of Regulations, Title 40, Section 156.10 of Part 156
3. Board of Supervisor letter dated October 23. 2007
4. Illinois Environmental Protection Agency (EPA) Endocrine Disrupters Strategy of February 1, 1997
5. EPA Safe Drinking Water and Toxic Enforcement Act of 1986
6. Oregon State University Extension Pesticide Properties Database
7. Agricultural Research Service/US Department of Agriculture Pesticide Properties Database
8. California Prop. 65 list
9. Federal Insecticide, Fungicide, and Rodenticide Act, 1996