

Integrated Pest Management for
California Public Schools
Contract 97-0283

Final Report

"Prepared for California Department of Pesticide Regulation";

Disclaimer

The statement and conclusions in this report are those of the contractor and not necessarily those of the California Department of Pesticide Regulation. The mention of commercial products, their source, or their use in connection with material reported herein is not to be construed as actual or implied endorsement of such products.

Acknowledgments

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Abstract

This project was supported by a grant from the California Department of Pesticide Regulation (DPR) as well as the participating school district team members. Recognizing that California public schools face many challenges in implementing Integrated Pest Management (IPM) programs, DPR has committed resources to help California public school districts overcome those challenges. It is the opinion of this team that California schools can achieve effective pest management through reduced risk programs.

The purpose of this project was to provide school district administrators tools to help educate staff regarding IPM.

A committed team of individuals representing public school districts across the state first met in an effort to complete the Pest Management Evaluation for California Public Schools. That project then evolved into the current project, which was to develop tangible resources to assist districts in implementing IPM programs.

Executive Summary

Within recent years concern regarding pesticide use by California public schools has escalated to critical proportions. School district administrators have come under attack and criticism for their pest management practices. Even districts that have received Integrated Pest Management (IPM) Innovator awards from the State Department of Pesticide Regulation (DPR) have found themselves being criticized by community and special interest groups. Few issues stir the emotions more than pesticide use in schools.

In a report issued by the California Public Interest Research Group (CalPIRG) Charitable Trust, the Executive Summary states "When it comes to protecting our children's health from the use of pesticides in California schools, Governor Wilson and the California legislature get a failing grade." This statement, along with the title of the report "Failing Health", serve to intentionally fan the flames of a controversial subject. The implication is that California public schools are blatantly disregarding the health and safety of students, which is simply not the case.

California school districts face a host of challenges and barriers in dealing with their pest management problems. The recently completed *Pest Management Evaluation for California Public Schools* identifies these issues. The purpose of this project was to develop solutions and resources for district administrators to help them overcome their challenges. There are a number of resources currently available, which include policies, programs, technical information, and resource materials. This project included the development of new materials as well as the consolidation and/or refinement of existing materials.

The specific components of this project included the following:

1. The development of a working definition of "reduced risk".
2. The development of a training/education curriculum, which includes segments for administration, staff, and workers.
3. The development of sample policies and forms.
4. The development of a general awareness education video for parent/community groups.
5. The purchase and distribution of a recommended resource library.
6. The development and refinement of recordkeeping/database systems.

The anticipated benefit of completing the above components is an increase in the implementation of IPM programs in California public schools. Consistent, standardized resource materials lessen the learning curve, thereby, making implementation easier.

Body

The resources developed, and project materials, were distributed to every county office of education/superintendent of schools office in the state. A copy of the letter distributed with the materials appears in Appendix A. The specific elements of the project are as follows:

- I. One of the initial tasks of the project was to develop a working definition of "reduced risk". The lack of a formal, universally accepted definition of reduced risk leave interpretation to the individual. Therefore, the team developed the following definition.

Reduced Risk -

The goal of school district administrators should be the reduction of risk (which is readily achievable) versus the elimination of risk (which is unachievable). Decisions regarding risk and acceptable levels of risk must be made at the local level.

The lack of universally accepted definition of "reduced risk" leaves interpretation to the individual. Some have defined reduced risk programs as those that do not use any controls at all, while others define risk based solely on the control method used. Clearly, the definition of reduced risk cannot rest solely with the use/non-use of chemicals. In order to appropriately assess risk reduction, one must weigh the risk posed from the pest, as well as the risk posed from the control method. Conditions and unique issues relative to geography, occupancy, staffing, and target pest will all play a role in the pest management control strategy selected.

With this in mind, a reduced risk program may include, but is not limited to, the following:

- Pest monitoring protocols to note when pest thresholds are exceeded.
- Increased pest threshold (where applicable and appropriate) to reduce the need for control.
- Use of enclosed baits.
- Use of non-chemical controls
- *Prudent use of chemicals.*
- Application methods that limit exposure (e.g., reduced access to applied product such as crack-crevice applications).
- Aggressive pest control where the pest poses a threat to human health or the environment (such as wasps, bees, cockroaches, bacteria, and microorganisms).
- Employee/occupant training, education programs, and notification protocols.

Total elimination of risk within any pest management program is not possible. There will be wither some level of risk from the presence of the pest, or some level of risk associated with the control method. Risk is not simply defined as illness or injury resulting from the use of chemicals. Definitions of risk include: "Possibility of suffering harm or loss," and "To expose to a chance of loss or damage." One must consider the risk to the buildings, grounds, environment, and occupants from both the pest and the control method.

In any reduced risk program, it is important to address the issue of perceived risk. There are few issues that stir the emotions more than pesticide use in schools. However, there are those who have zero tolerance for pests and demand immediate control. Clearly, the gap must be bridged.

School district administrators strive to provide a safe and healthy environment for their students and employees. Integrated Pest Management (IPM) programs help district administrators fulfill this goal. Decision-makers must be careful not to base pest management decisions on perceived risk. Perceived risk varies significantly from individual to individual, and decisions based solely on the perceptions of parents or building occupants will lead to a reactive rather than proactive pest management program. Also, perceived risk leads to decisions based on emotion rather than on science and technology.

II. The second component of the project included the development of a training/education curriculum. Standardized curriculum is needed for districts to provide adequate training. The curriculum addresses the following:

1. **Administration** (superintendents, principals, vice principals, purchasing agents, etc.)

- ✓ What is IPM
- ✓ District policy
- ✓ Benefits of IPM
- ✓ Components of an IPM program critical for success
- ✓ Recordkeeping, notification, posting
- ✓ Communication (media, community, parents)
- ✓ Community outreach/interaction
- ✓ Liability
- ✓ Bids and contracts

2. **Reporting Staff** (teachers, clerical, custodians, food service—employees who do not implement control measures and/or use pesticides)

- ✓ What is IPM
- ✓ District policy
- ✓ Pest identification/monitoring
- ✓ Pest reporting
- ✓ Individual responsibilities/limitations/prohibitions

3. **Worker/Responding Staff** (those who implement control measures and/or use pesticides)

- ✓ What is IPM
- ✓ District policy
- ✓ Pesticide Safety Information Series
- ✓ Control measure (cultural, biological, mechanical, chemical)
- ✓ Monitoring, inspection
- ✓ Identification
- ✓ Reporting/recordkeeping
- ✓ Notification/posting

4. **IPM Coordinator** (person who is designated and given authority to implement program)

- ✓ All of the above
- ✓ Program evaluation/quality control
- ✓ Communicating/Interacting with other levels listed above
- ✓ Policy implementation

III. The third component of the project involved the purchase of training videos that target various audiences and address specific topics. The videos were produced by Texas Agricultural Extension Service and include the following modules:

Module 1: An Introduction (good for parent/community groups)

Module 2: Structural Pest Control

Module 3: Food Handling Areas

Module 4: Bids and Contracts

Module 5: The Administrative Challenge

Module 6: Landscape IPM

The program modules should be incorporated into this training document as follows:

- Administrative Staff (superintendents, principals, vice principals, purchasing agents, etc.): Modules 1, 5, and 4
- Reporting Staff (teachers, clerical, custodians, food service employees who do not implement control measures and/or use pesticides): Module 1
- Workers/Responding Staff (those who implement control measures and/or use pesticides): Modules 1, 2, 3, and 6
- IPM Coordinator (person who is designated and given authority to implement program): all modules
- Parent/Community Groups: Module 1

IV. The fourth component of the project included the development of several sample policies and forms. The materials are included in the appendix section of the training curriculum manual and are intended to serve as tools to help facilitate IPM. The policies may be modified to reflect local district decisions, and the forms may also be modified or used "as is".

V. The fifth component included the review and ultimate purchase of a recommended resource library. The purpose of the library is to identify those materials that are a "must have" for school IPM administrators. A complete set of library materials was distributed to every county office of education/superintendent of schools office in the state. A complete list of the library appears in the following section "Materials Produced".

VI. The last component of the project included the development and refinement of a recordkeeping/database system. A constant criticism of school districts is their method of recordkeeping (or lack thereof). The Los Angeles Unified School District has committed

extensive resources toward the development of a pesticide use database. Under this project, their program was refined and developed to become available to districts statewide. Hard-copy procedures were also identified for those districts where smaller scale recordkeeping is more appropriate/applicable. Recordkeeping is an issue for many districts; the lack of direction in this area only exacerbates the problem. Completing this component helps address this problem.

- VII. In conclusion, it is anticipated that with the proper tools, district administrators can make appropriate decisions regarding their pest management control methods. This was the first effort of its kind to specifically address the needs of public schools, as identified by public schools, and to help provide solutions.

Although there have been other studies and evaluations conducted specifically targeting schools, this was the first project actually conducted by schools. The significance of this is the specific knowledge of the school system, function, organization, and challenge that can be transitioned into the development of solutions.

Other studies have been extremely critical of school districts yet have offered no realistic solutions or tools for implementation. The CalPIRG Charitable Trust study, for example, offered several recommendations, yet failed to include any measures for assistance in implementing the recommendations. These same studies have also made negative declarations regarding some district practices, yet offer no tangible assistance in improving their practices.

This project was the first effort of its kind to partner school districts together to formulate hands-on solutions rather than condemning judgements.

In a statement issued by the Department of Pesticide Regulation (DPR), James W. Wells states, "CalPIRG proposed a statewide bureaucracy to dictate pest management decisions in local schools. But DPR believes cooperation is better than control, especially since we see no evidence that California schools put children at risk from exposure to pesticides. Schools present a challenge for pest management. Unlike the farm—where a few pests may be tolerated—no responsible teacher or principal would allow vermin in a classroom, cafeteria, or playground. At the same time, schools recognize that pesticides are toxic by nature, and must be used with the *greatest care.*"

Such statements indicate a real understanding of the issues school district administrators face. Schools need solutions and assistance, not criticism.

Materials Produced

The following materials were either developed or purchased under the project scope of work and distributed to every county office of education/superintendent of schools office in the state.

1. Integrated Pest Management for Schools Training Curriculum Outline for School Administration and Staff.
2. The following video training program is recommended for all school districts implementing IPM programs. The videos, which were developed by Texas Agricultural Extension Service, focus specifically on IPM for schools. The modules include:

Module 1: An Introduction (good for parent/community groups)
Module 2: Structural Pest Control
Module 3: Food Handling Areas
Module 4: Bids and Contracts
Module 5: The Administrative Challenge
Module 6: Landscape IPM

The videos may be purchased through the Texas Agricultural Extension Service by calling (409) 845-3849 or (972) 952-9204.

3. Recommended Library

1. **Ants of California**
This color leaflet provides information on how to identify the most common and/or economically important ants of California. \$2.00 *21433
2. **EPA "Recognition and Management of Pesticide Poisonings"**
This book deals almost entirely with short-term (acute) harmful effects of pesticides. A copy of this book should be given to the medical provider designated to provide emergency treatment. **No Cost
3. **Insect Identification Handbook**
22 insect identification color photo sheets. \$5.00 *4099
4. **IPM for Schools: A How-to Manual**
IPM focuses on pest prevention using effective, least-toxic methods. This manual discusses the role of IPM in schools, pest monitoring, evaluation, and treatment strategies for pests like ants, rats, spiders and hornets. IPM for lawns, trees and shrubs is also included. **No Cost
5. **Know Your Turfgrass**
This pamphlet provides information on how to identify turfgrass. This is important because irrigation methods, mowing methods and fertilization methods differ for each species. \$1.75 *2585

6. **Lawn Aeration and Thatch Control**
This leaflet shows information on soil compaction , aeration and thatch. \$1.50 *2586
7. **Natural Enemies Handbook**
This book will help you find, identify and use natural enemies to control pests in almost any crop, garden or landscape. \$35.00 *3386
8. **Practical Lawn Fertilization**
Proper maintenance is the prerequisite to having an attractive lawn. This pamphlet provides information on practical fertilization. \$1.50 *21250
9. **Safe & Effective Use of Pesticides**
Detailed information for selection, using, handling, storing, and disposing of pesticides. It emphasizes worker protection, prevention of ground water contamination, protection of endangered species and wildlife, and reduction of environmental problems. \$30.00 *3324
10. **Spiders in San Joaquin Valley**
This leaflet provides basic identification of common spider species found in California's San Joaquin Valley along with information on their ecology and behavior. \$1.50 *21530
11. **The Illustrated Guide to Pesticide Safety**
Training packages for pesticide handlers, as mandated by state law. The instructor's edition has space for notes, ready-to-use training records and other required forms. \$4.00 *21489

The worker's edition is an easy-to-read comic-book style in either English or Spanish. \$1.50 each or five for \$6.50 *21488
12. **Turfgrass Pests**
A comprehensive guide to the identification and control of weeds, insects, nematodes, diseases, and vertebrate pests that can harm healthy turfgrass. Two chapters deal exclusively with the safe handling and application of pest-control chemicals. \$20.00 *4053
13. **Turfgrass Renovation**
This leaflet deals with renovation of turfgrass using both chemical and cultural control methods. \$1.75 *21132
14. **Wildlife Pest Control Around Gardens and Homes**
Identification and control of pest birds and mammals common in California. \$8.00 *21385
15. **Managing Insects and Mites with Spray Oils**
With proper use, petroleum oil sprays are among the most effective, least environmentally damaging pest control materials available. \$8.00 *3347

16. **Pests of Landscape Trees and Shrubs**

This is the most comprehensive and authoritative book ever produced on managing landscape pests. There are more than 300 detailed photos which emphasize environmental safe, less-toxic IPM methods of pest control. There are also 50 pages of problem-solving tables to find specific damage symptoms and control methods.

\$32.00 *3359

17. **Pests of the Garden and Small Farm**

Practical, useful techniques to help small garden farmers use fewer toxic pesticides, more biological controls, and other alternative approaches to reduce pests. Good for small school gardens. \$35.00 *3332

18. **Residential, Industrial, and Institutional Pest Control**

Focus on managing structural pests, food pests, fabric pests, rodents, birds, and weeds.

\$25.00 *3334

19. **UC IPM Pest Management Guidelines for Turfgrass**

Includes descriptions of turfgrass species, and chemical and nonchemical treatment recommendations for insects and mites, diseases, nematodes, and weeds. \$5.00

*3365-T

20. **Weeds of the West**

This easy-to-use guide shows more than 350 weed species of Arizona, California, Oregon, and other western states. \$35.00 *3350

*Items marked with an asterisk and catalog number may be ordered from the following:

University of California
DANR Communication Services
6701 San Pablo Avenue
Oakland, CA 94608-1239
1-800-994-8849
<http://danrcs.ucdavis.edu>

**These items may be ordered from the US-EPA Printing Office at 1-800-490-9198 or online at <http://www.epa.gov/ncepihom/orderpub.html>

APPENDIX A



California Association of School Safety Managers

Safety Professionals Dedicated to Making Schools a Safe Place to Work and Learn

November 1999

TO: California County Superintendents of Schools

FROM: Catherine Wilson Jones, CSP
Director, Safety and Loss Control

SUBJECT: Integrated Pest Management (IPM) Program for Schools

Enclosed for your information and use please find the newly developed "Integrated Pest Management (IPM) for Schools" (along with many other reference materials) completed by a team representing California School Districts under a grant from the California Department of Pesticide Regulation (DPR). Recognizing that California public schools face many challenges and barriers in implementing IPM programs, DPR committed resources to assist California public schools in overcoming these difficult challenges. It is the team's opinion that California Schools can achieve effective pest management through reduced risk programs without compromising the safety of students, staff, or the environment.

It has taken several months of dedicated work by several qualified pest management and safety experts to complete this uniquely written program. The information written and assembled in this new Integrated Pest Management Program is for the benefit and use of all School Districts within the State of California.

We are asking each County Superintendent to please make this program available to all school districts in your county as a critical aid in establishing a reliable Integrated Pest Management Program at each of their school sites.

We suggest that you please also plan and conduct an Integrated Pest Management Informational Workshop. Invite all school district Managers and Supervisors responsible for pest management in their respective districts. Select and make copies of program materials as an example of the content of the Program or reproduce the materials in the manual and provide a copy to each one of your county school districts. In addition, encourage districts to purchase their own copies of the video training programs for their training library on Integrated Pest Management.

Instructional information in this program includes:

- Training Curriculum
- Sample District Policies
- Videotape Training Programs (6 Modules)
- Pest Identification Information
- Instructional and Reference Manuals
- Computerized Recordkeeping Software

As you are no doubt aware, complaints regarding the use of poisonous materials for controlling unwanted and harmful pests have become a political issue fueled in part by the Media. We recommend that all school districts address the concerns of parents and media by adopting a workable and effective Integrated Pest Management Program. This will become an essential activity for every school district in the state. We are confident that the materials we have sent to you will help to mitigate these issues.

If you have any questions, you may contact me at (661) 636-4608. Thank you in advance for your help!

CWJ:sh