

Integrated Pest Management (IPM)

Presented by:
Anessa Espinosa
Director of Facilities
November 13, 2018

The California Healthy Schools Act (HSA)

- HSA was enacted in 2000
- It is a right to know law that provides parents and staff with information about pesticide use at public schools and child care centers
- The law encourages the adoption of effective, lower risk pest management practices also known as Integrated Pest Management

California Healthy Schools Act

HSA Compliance Requirements in California School Districts



What is Integrated Pest Management?

- Integrated Pest Management (IPM) is an effective and environmentally sensitive approach to pest management that relies on a combination of common-sense practices
- Manages pests primarily by focusing on eliminating the reasons pests are present
- Takes advantage of all pest management strategies and the use of pesticides as the last option
 - Weeds are also considered pests as part of the IPM because pesticides are often used for control



What is an Integrated Pest Management Plan?

- Provides information about how pests are managed
- Provides annual written notification
- Creates a registry (contact information for parents who request to be notified)
- Requires the posting of warning signs 24 hours before and 72 hours after application of pesticides
- Requires additional record keeping and reporting on pesticide use annually to Department of Pesticide Regulations
- Annual training



IPM Policy and Plan

Benefits of Integrated Pest Management

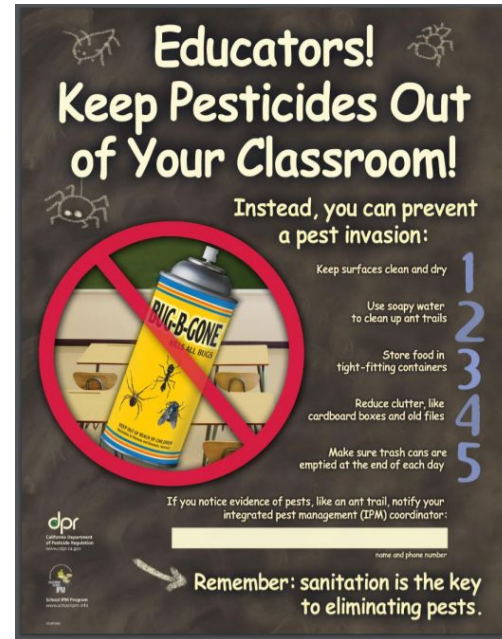
“Standard” Pest Control	Integrated Pest Management
<ul style="list-style-type: none">• Chemical intensive• Largely reactive to pest outbreaks• Less emphasis on prevention• Emphasizes killing pests directly• Major purpose of most site visits is to apply pesticides• General and widespread use of pesticides	<ul style="list-style-type: none">• Knowledge intensive• Systematic program of long-term pest control• Major emphasis on prevention of pest problems• Emphasizes modifications of conditions that favor pests• Major purpose of most site visits is to inspect and monitor• Pesticide use is limited in terms of types, amounts, and locations

Integrated Pest Management Pyramid



Prevention through Education

- IPM is a cooperative effort
- Everyone must understand the basic concepts and receive ongoing training
 - This includes custodians, kitchen personnel, maintenance and ground staff, teachers and principals



Cultural and Sanitation Practices

- Eliminate areas where pests can find the basics:
 - Food
 - Shelter
 - Water
- Pay attention to pest vulnerable areas such as:
 - Kitchens/cafeterias
 - Dumpsters
 - Grounds



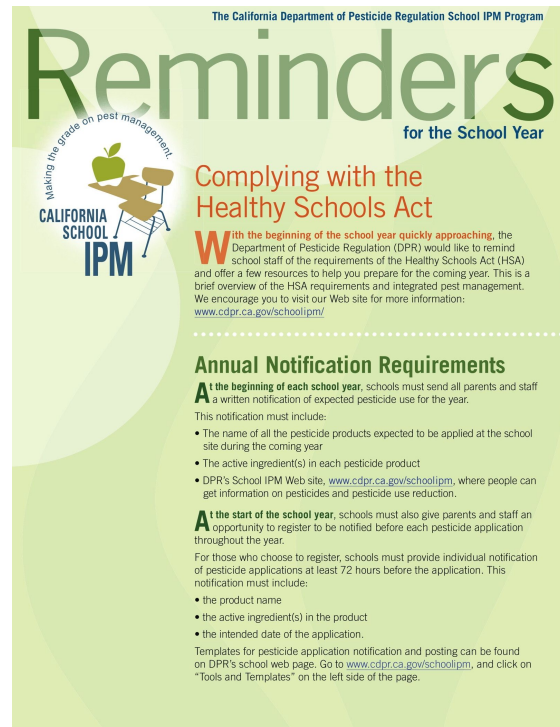
Physical/Mechanical Practices

- Includes erecting barriers, using traps, hand-picking and other activities that disrupt insect breeding and feeding. For instance, spraying plants with a water hose to knock off aphids and mites is a mechanical practice



Chemical Practices

- The general term “pesticide” applies to a large group of chemicals that are intended to control, destroy, repel or attract a pest
- Common types include:
 - Insecticides (control of insects)
 - Rodenticides (control of rodents)
 - Herbicides (control of weeds & plants)
 - Disinfectants and sanitizers (control bacteria & viruses)



Examples of strategies and methods in place within MHUSD

- Traps
 - Currently used in the interior for mice, roaches & ants
- Gel or paste
 - Used in cracks and crevice treatment indoors
- Antimicrobial cleaners
 - Currently using Sparks 64
- Manual labor - aerating, mowing, hoeing, pruning, weed eating, and hand pulling



New(er) practices in the Grounds Department

- Organic weed killers as an alternative to Ranger Pro
 - Avenger, Weed Zap and Weed Pharm
 - The active ingredient in most in an emulsified d-Limonene (citrus oil), which acts as a natural degreaser
 - The District will continue to test numerous organic products to see which one works best for our sites
- The District has also purchased a Weedtechnics SW900 trailer mount steamer



Demonstration at Sobrato



Before



2 days after



Cost considerations for implementation of new IPM practices

- Additional Labor
 - \$70,500 per groundskeeper plus equipment
- Weed killer
 - Ranger Pro - 30 gallons \$427.99: 2 oz per 1 gallon of water
 - Avenger Organic Weed Killer - 2.5 gallons \$208: 1 oz per 4.5 ozs water
- Steamer Trailer
 - Mounted with 2 hoses: \$27,530
- Antimicrobial (Sparks 64) - 1 gallon \$10.25: 3 oz per 1 gallon of water



Conclusions

- The Grounds and Maintenance Department has formalized its current practices into an IPM Plan
- The IPM Plan prioritizes the incorporation of prevention strategies as well as physical and cultural practices only using pesticides when all other strategies are not successful
- The IPM Plan is flexible to allow for the continued incorporation of new materials and evolving technology
- The District's IPM Plan attempts to achieve an effective balanced approach with minimal fiscal impact