


Pest Management Performance Standards and BMPs



Eisenberg, Olivet, and Associates 


Discussion Topics

- I. Background
- II. Program Implementation
- III. Performance Standards
- IV. Pest Management Performance Standard
- V. Integrated Pest Management

Eisenberg, Olivet, and Associates 

Discussion Topics


- VIII. IPM Policy/Procedures
- IX. Pesticide Usage
- X. Pesticide Storage
- XI. Pesticide Disposal


Eisenberg, Olivet, and Associates 

Background

What is Non-point Source Pollution?

- Storm water runoff from streets, parking lots, parks, building roofs and other impermeable surfaces
- Storm water (or anything else) in drain systems
- Agricultural runoff
- Sediment deposited in creeks, streams and other water bodies




Eisenberg, Olivet, and Associates 

Background

Pollutants in Urban Runoff


▪ Pesticides and herbicides	▪ Oxygen-demanding substances
▪ Sediment	▪ Petroleum-based products
▪ Nutrients	▪ Heavy metals
▪ Bacteria and viruses	▪ Other toxic materials


Eisenberg, Olivet, and Associates 

Background

Stormwater Regulations and Agencies

- Federal – Environmental Protection Agency
- California – State and Regional Water Quality Control Boards
- Santa Clara Valley *Urban Runoff* Pollution Prevention Program (SCVURPPP)
- Local Program



Eisenberg, Olivet, and Associates 

Background

Why Care About Runoff?

- Storm water discharges are untreated
- Storm drains discharge to local creeks and the Bay
- Pollutants are harmful to vegetation and aquatic life



Eisenberg, Olivet, and Associates



Background

Why Care About Pesticides?

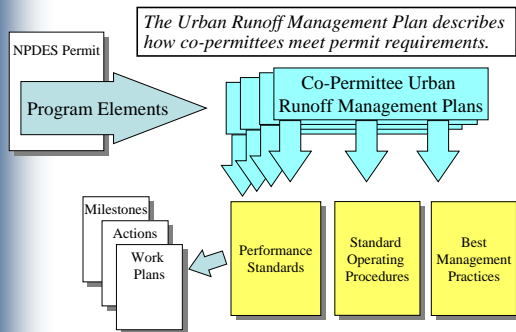
- May reach runoff when applied excessively or improperly
- Adheres to sediment
 - Transported by wind and water
- Harmful to human health and aquatic life
- Diazinon and chloropyrifos are causing toxicity in local creeks and WWTP effluents



Eisenberg, Olivet, and Associates



Program Implementation



Performance Standards

Performance Standards define the level of implementation necessary to demonstrate the “control of pollutants to the maximum extent practicable” (and meets permit requirements).

Eisenberg, Olivet, and Associates



Pest Management Performance Standard

Goals

- Minimize pesticide use (Particularly organophosphates and copper-based pesticides)
- Reduce the amount of pesticides in stormwater and landscape runoff
 - “Maximum Extent Practicable”



Eisenberg, Olivet, and Associates



Pest Management Performance Standard

Control Measures

- Applies to pest management on municipally-owned property to include:
 - Municipal employees
 - Contracted commercial applicators
- Outreach to other users within the municipal jurisdiction to encourage:
 - Less toxic pest control methods
 - Proper pesticide disposal




Eisenberg, Olivet, and Associates



Pest Management Performance Standard

Pesticide Management Plan


- Developed and implemented in accordance with NPDES permit
 - Program and individual Co-Permittee plans
- Co-permittee plans include:
 - Activities to implement this Performance Standard
 - Participation in Program-wide activities (as appropriate)

Eisenberg, Olivet, and Associates 

Pest Management Performance Standard

Co-Permittee Plans address:

- Municipal agency use of pesticides
- Use of pesticides by other sources
- Pesticides causing water quality impairment (diazinon, chlordane, dieldrin, and DDT)
- Integrated Pest Management practices
- Additional permit requirements

Eisenberg, Olivet, and Associates 


Integrated Pest Management



Eisenberg, Olivet, and Associates 

Integrated Pest Management


Integrated Pest Management (IPM) is an ecosystem-based strategy that focuses on long-term prevention of pests or their damage through a combination of techniques.


Eisenberg, Olivet, and Associates 


Integrated Pest Management

Techniques

- Biological control
 - Natural enemies or predators
- Habitat manipulation
 - Hand labor or mowing
- Modification of cultural practices
 - Mulching, disking or alternative vegetation
- Use of resistant varieties







Eisenberg, Olivet, and Associates 

Integrated Pest Management

Pesticides Are Only Used:

- After monitoring indicates they are needed to meet established guidelines
- Treatments are made with the goal of removing only the target organism



Eisenberg, Olivet, and Associates 

Integrated Pest Management


Pest control materials are selected and applied in a manner that minimizes risks to:


- Human health
- Beneficial and non-target organisms
- Environment




Eisenberg, Olivet, and Associates 

IPM Policy/Procedures




Eisenberg, Olivet, and Associates 

IPM Policy/Procedures

Major Requirements


- Use of IPM techniques
- Minimized pesticide usage by agency staff and contractors
 - Particularly organophosphates and copper-based pesticides

Eisenberg, Olivet, and Associates 

IPM Policy/Procedures


Major Requirements (cont'd)

- Use of organophosphates and copper-based pesticides only when justified and adverse water quality impacts are minimized
- Reduction, phase-out and ultimate elimination of pesticides that impair surface waters

Eisenberg, Olivet, and Associates 


IPM Policy/Procedures

Standard Operating Procedures (SOPs)
 and **Best Management Practices** (BMPs)
 for implementing our IPM Policy

Eisenberg, Olivet, and Associates 

IPM Policy/Procedures

Co-permittee IPM Policy/Procedures added
 here

Eisenberg, Olivet, and Associates 

Pesticide Usage



Eisenberg, Olivet, and Associates



Pesticide Usage

- Follow all federal, state, and local laws and regulations governing:
 - Usage, storage, and disposal of pesticides
 - Training of pest control advisors and applicators



Eisenberg, Olivet, and Associates



Pesticide Usage

- If there is a choice, use the least toxic pesticide that will do the job
- Apply pesticides at the appropriate time:
 - Maximizes their effectiveness
 - Minimizes the likelihood of discharging no-degraded pesticides in runoff

Eisenberg, Olivet, and Associates



Pesticide Usage

- Avoid application of pesticides if rain is expected
 - Does not apply to pre-emergent herbicide applications when required by labeled instructions
- Apply pesticides only when wind speeds are low
- To prevent runoff, irrigate slowly. Use only what is needed
- Clean application equipment at the Corp yard, not in the field

Eisenberg, Olivet, and Associates



Pesticide Usage

- Only mix and apply the amount necessary for treatment
 - To ensure desired application, calibrate application equipment prior and during use
- Do not mix or load application equipment adjacent to a storm drain inlet, culvert or watercourse



Eisenberg, Olivet, and Associates



Pesticide Usage



- Employ techniques to minimize off-target application (e.g., spray drift)
- Alternative application techniques do exist

Eisenberg, Olivet, and Associates



Pesticide Usage

Alternative techniques

- Spray only when necessary
- Increase drop-size
- Lower application pressure
- Use of surfactants and adjuvants
- Use of wick applications

Eisenberg, Olivet, and Associates



Pesticide Storage



Eisenberg, Olivet, and Associates



Pesticide Storage

- To minimize storage quantities, purchase only what is needed for near-future use
- Implement pesticide storage requirements with guidance from:
 - Local Fire Department
 - Santa Clara County Agricultural Commissioner
- If required, provide secondary containment

Eisenberg, Olivet, and Associates



Pesticide Storage

- Provide and store spill kits near pesticides
- Train employees on spill-kit usage
- Follow spill response plan
- Store pesticide only in labeled containers



Eisenberg, Olivet, and Associates



Pesticide Storage

- Store pesticide in locked and posted individual storage units
- Do not store pesticides where they could be exposed to rain or irrigation water



Eisenberg, Olivet, and Associates



Pesticide Disposal



Eisenberg, Olivet, and Associates



Pesticide Disposal

- Dispose of empty pesticide containers with container label instructions
- Dispose of unused pesticides as hazardous waste in accordance with all applicable regulations

