

National EPA  
**SUSTAINABLE  
COMMUNITIES  
CONFERENCE**  
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**State of California**  
**Department of General Services**  
**Division of the State Architect**



# **California Best Practices Manual**

**Better Building Management  
for a Better Tomorrow**

Department of Health Services Buildings (051-054)  
East End Complex  
Sacramento, CA 95814

May 30, 2007



PHOTO: © ERNARD PFEIFFER

# California Department of Education Building 2006 LEED-EB Platinum Certification



**California Department  
Public Health/Health Care Services Buildings  
2007 LEED-EB Gold Certification**

# Leadership in Energy and Environmental Design - Existing Buildings: Operations and Maintenance (LEED-EB)

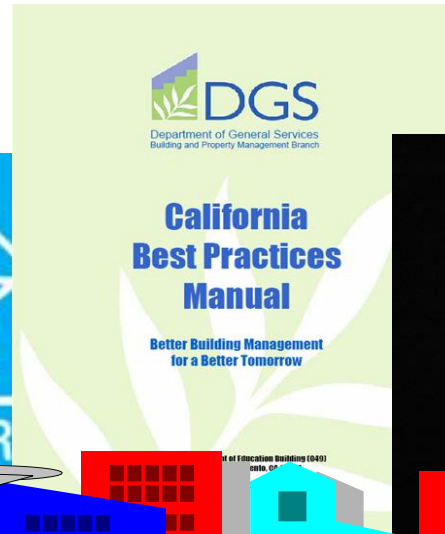
## Module 1: Tasks 1-10



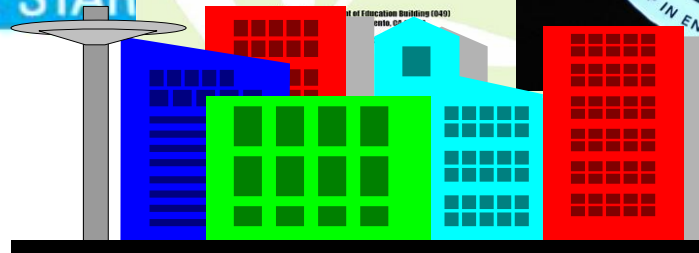
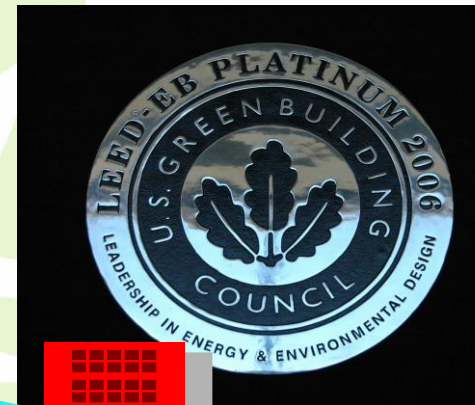
# Attaining Green Buildings: *Facilities, Operations and Programs*

## Green Management Policies

Optimize Energy Efficiency



LEED-EB Silver or higher



Sustainable Activities by the Building Occupants

## Task 1

# California Best Practices Manual

## *Better Building Management for a Better Tomorrow*



### • **Tenant Handbook**

- Building Security
- Emergency Procedures
- Building Amenities
- Building Services
- Policies Procedures
- General Rules and Policies

**TENANT  
HANDBOOK**

**Building Tenant  
Information**

## Task 2

# California Best Practices Manual

## *Better Building Management for a Better Tomorrow*



- **Custodial Plan**
  - **General Staffing**
  - **Special Cleaning Requirements**
  - **Custodial Plan**
  - **Cleaning Systems Method**
  - **Environmental Maintenance Program**
  - **Inventory Management and Purchasing Program**
  - **Employee Orientation and Training**

**Custodial  
Plan**

## Task 3

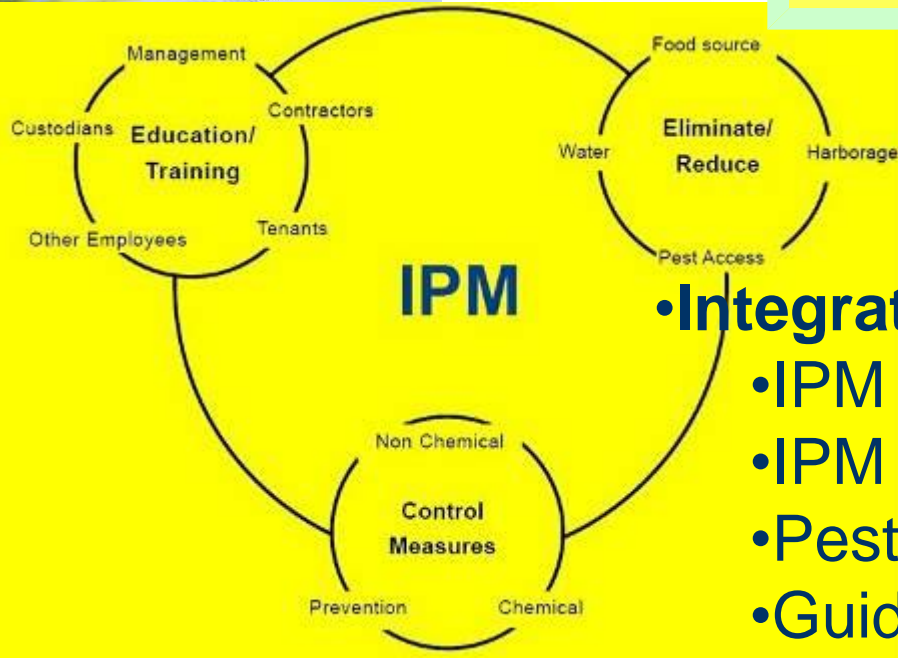
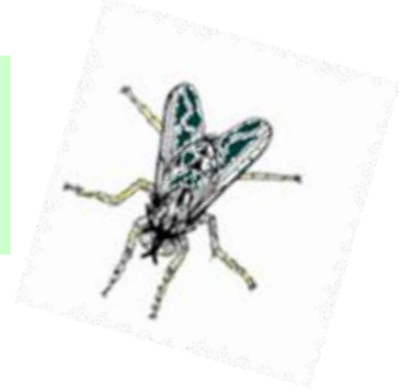


# California Best Practices Manual

## *Better Building Management for a Better Tomorrow*



**Review IPM  
Contracts**



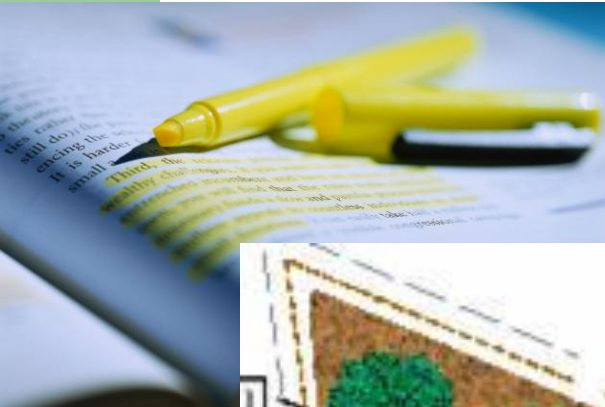
- **Integrated Pest Management (IPM)**
  - IPM Objectives and Strategies
  - IPM Program
  - Pesticide Planning and Use
  - Guidance



## Task 4

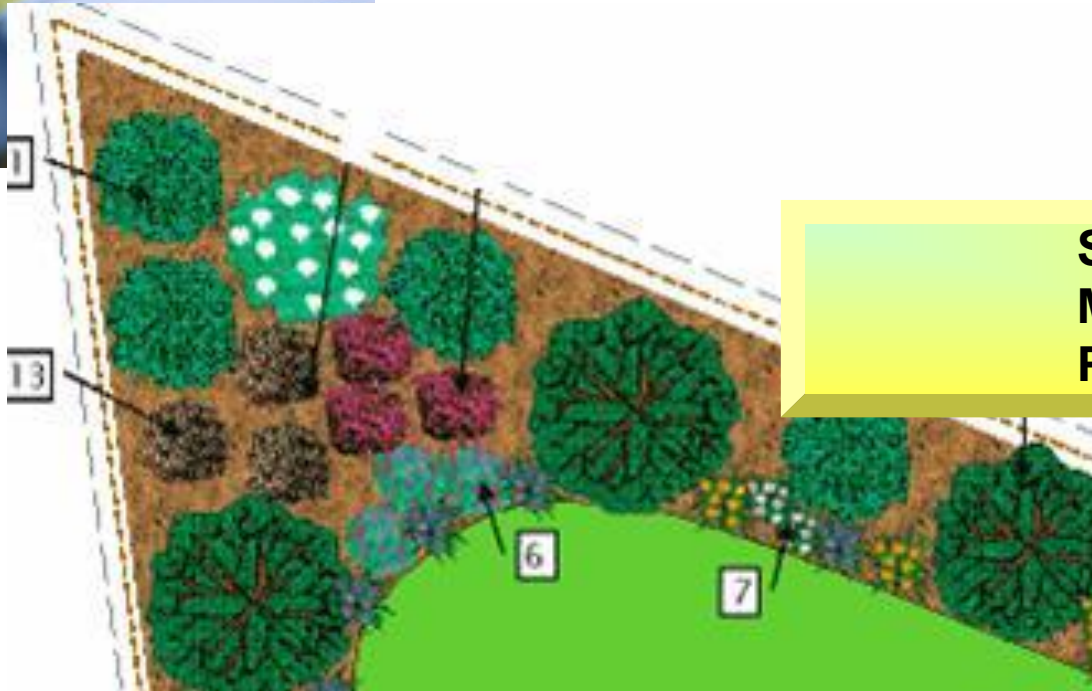
# California Best Practices Manual

## *Better Building Management for a Better Tomorrow*



### •Site and Grounds

- Erosion and Sedimentation Control
- Exterior Management Plan



**Site & Grounds  
Maintenance  
Plan**

## Task 5

# California Best Practices Manual

## *Better Building Management for a Better Tomorrow*



- **Waste and Recycling Management**
  - Organization Integrated Waste Management Plan
  - Universal Hazardous Waste
  - Recycling Area Guidelines

**WASTE AUDIT**

## Task 6

# California Best Practices Manual

## *Better Building Management for a Better Tomorrow*



- **Engineering and Trades Plan**
  - Engineering Staff
  - Maintenance
  - Operations
  - Building Systems Monitoring
  - Indoor Air Quality Management Plan
  - Refrigerant Management



**BUILDING  
OPERATIONS  
PLAN**

## Task 7.1: Building Information

# California Best Practices Manual

## *Better Building Management for a Better Tomorrow*



### •Introduction

- Building information
- LEED-EB credit locator

### 10.3 Energy and Atmosphere

The Energy and Atmosphere prerequisites and credits that are addressed in this manual are listed below.

Prereq	LEED-EB Description	Page
1	Existing Building Commissioning	1-6
2	Minimum Energy Performance	1-7

Credit	LEED-EB Description	Page
3.3	Building Operation & Maintenance: Building Systems Monitoring (System for Delivering Prompt Repairs)	4-9
4	Additional Ozone Protection (Refrigerant Management for CFCs & HFCs)	4-18

## Task 7.2 : Verify info in appendices

# California Best Practices Manual

## *Better Building Management for a Better Tomorrow*



- **Appendices**
- \*Samples of Specifications
  - Erosion and Sedimentation Control
  - Construction and Demolition Waste
  - Construction Indoor Air Management

\*Incorporate into the contact documents or work orders in the event of a renovation, retrofit or special repair project

## Task 7.3: Compile Management Policies and complete manual



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# LEED-EB: Management Plans

As required by many of the prerequisites and can earn up to 12 LEED-EB credits



## Task 8

# California Best Practices Manual

## *Better Building Management for a Better Tomorrow*



- **Construction and Renovation Policies**
  - Asbestos Management Plan
  - PCB Management Plan
  - Construction and Demolition IAQ Plan
  - Building Space Churn Renovation Plan
  - Construction Waste Management Plan

**List of  
ALTERATIONS OR  
ADDITIONS ARE  
PLANNED**

## Task 9

# California Best Practices Manual

## *Better Building Management for a Better Tomorrow*

### •Purchasing

- Reduced Mercury Light Bulbs
- Products with Salvaged or Recyclable Materials
- Indoor Air Quality (IAQ) Products
- Green Cleaning Products



**DOCUMENT COLLECTION**  
**Standard LEED Format**



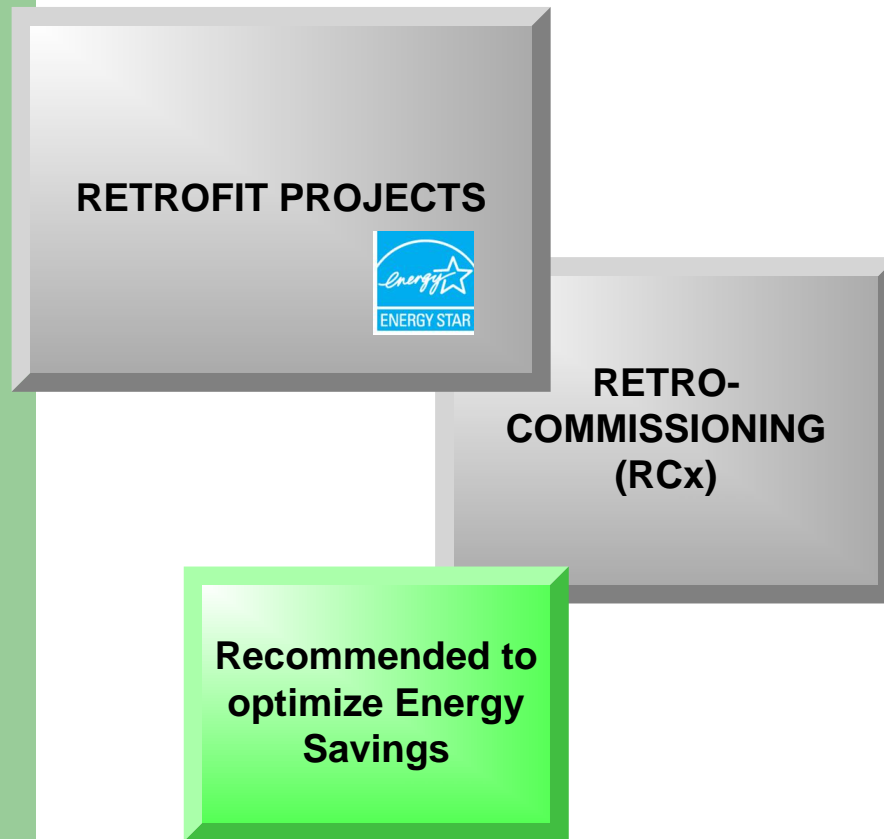
# Task 10



**BUILDING  
SURVEY**  
Light fixtures  
Plumbing fixtures



# Optimizing Energy Efficiency



### **HVAC technologies:**

- Rooftop air conditioning unit tune-ups
- Load shifting
- Refrigerant subcooling
- Duct sealing

### **Lighting upgrades:**

- Wireless management systems
- Integrated office lighting systems
- T-8 upgrades
- Replacement of fluorescent lamps with light-emitting diode (LED) lamps
- Parking lot lighting upgrades.
- LED exit signs
- Occupancy sensors

### **Other technologies:**

- Server virtualization
- High efficiency copiers
- Vending machine controllers.
- Resource monitoring

# Growing California Green



**Treat the earth well.  
It was not given to you by your parents.  
It was loaned to you by your children.**

*Ancient Kenyan Proverb*

[www.green.ca.gov/greenbuildings/bbdtmanual.htm](http://www.green.ca.gov/greenbuildings/bbdtmanual.htm)



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