

### Biological Controls - *Nature's Way*

Encourage the use of swallows, bats and other insect eating animals on your residence. For more information, call: 1 (800) 974-9794

### Chemical Controls - *Your Last Resort*

Use these least-toxic products:

- Pyrethrin-based insecticides
- Dehydrating dusts (e.g. silica gel)
- Insecticidal soaps
- Horticultural oils

### Pesticide Disposal

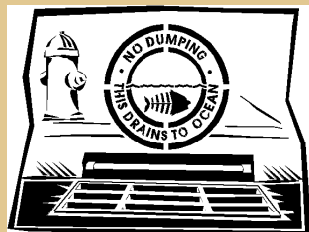


Rinse empty pesticide containers and treat the rinse water as you would the product. Dispose of empty containers in the trash.

City of Los Angeles residents should dispose of unused household toxics at a HazMobile instead of into the sink. Call 1 (800) 98-TOXIC (8-6942) for the location nearest you.

***Dumping toxics into the street, gutter or storm drain is illegal!***

Residents outside the City of Los Angeles can call the reference numbers listed in this pamphlet to learn more about the proper disposal of household toxics.



### Spill Response Agencies

#### City of Los Angeles

Department of Public Works, Bureau of Engineering  
Stormwater Management Division  
1 (800) 974-9794

#### City of Los Angeles

Police Department, Hazardous Materials Unit  
(213) 237-2793 or (213) 485-4011

#### Los Angeles Fire Department

Health/Hazardous Materials Program  
City: (213) 485-6185 County: (213) 890-4045

### Recycling & Hazardous Waste Disposal

#### City of Los Angeles

Small Business Hazardous Waste Hotline  
(800) 98-TOXIC / 988-6942

#### Solid Resources Citywide Recycling Division

(213) 847-1444

#### Los Angeles County

Department of Public Works  
Recycling & Household Hazardous Waste Hotline  
1 (800) 552-5218

### To Report Illegal Dumping

#### City of Los Angeles

Department of Public Works, Bureau of Engineering  
Stormwater Management Division  
1 (800) 974-9794

#### Los Angeles County

Department of Public Works  
1 (800) 303-0003

### To Report a Clogged Catch Basin

#### City of Los Angeles

Department of Public Works, Bureau of Engineering  
Stormwater Management Division  
1 (800) 974-9794

#### Los Angeles County

Department of Public Works  
(818) 458-HELP

*This is one in a series of pamphlets describing storm drain protection measures.*

*Other pamphlets include:*

**Automotive Maintenance & Car Care**

**Food Service Industry**

**Fresh Concrete & Mortar Application**

**General Construction & Site Supervision**

**Heavy Equipment & Earthmoving Activities**

**Home Repair & Remodeling**

**Landscaping, Gardening & Pest Control**

**Painting**

**Swimming Pool, Jacuzzi & Fountain Maintenance**

**Roadwork & Paving**

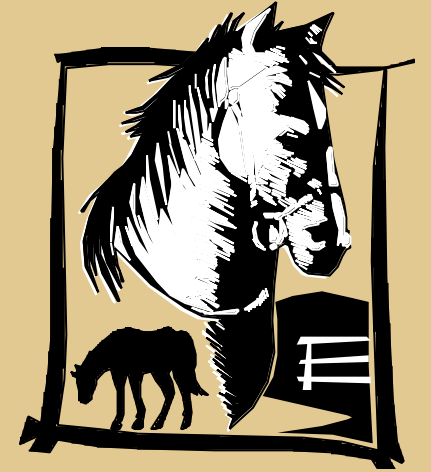
*For more information about storm drain protection or additional pamphlets, call:*



1 (800) 974-9794  
[www.LAstormwater.org](http://www.LAstormwater.org)

The authors acknowledge the contributions of the King Conservation District in Renton, WA for the information in this pamphlet.

# Stormwater Best Management Practices (BMPs)



## Horse Owners & Equine Industry

Safe Environmental Habits and Procedures for:

- Boarding Stables
- Equestrian Centers
- Small Farms
- Urban Horse Owners



# Ocean Pollution Prevention It's Up to Us



Los Angeles has two drainage systems—the sewers and the **storm drains**. The storm drain system was designed to prevent flooding by carrying excess rainwater away from city streets out to the ocean.

Because the system contains no filters, it now serves the *unintended* function of carrying urban pollution straight to the ocean.

This pamphlet tells you how to prevent ocean pollution from “stormwater” or “urban runoff.”

Rain, industrial and household water mixed with urban pollutants creates stormwater pollution. The pollutants include: oil and other automotive fluids, paint and construction debris, yard and pet wastes, pesticides and litter.

Urban runoff pollution flows to the ocean through the storm drain system—1,500 miles of pipes that take water and debris straight from Los Angeles streets to the ocean. Each day, 100 million gallons of polluted urban runoff enter the ocean untreated, leaving toxic chemicals in our surf and over 4,300 *tons* of trash on our beaches annually.

Urban runoff pollution contaminates the ocean, closes beaches, harms aquatic life and increases the risk of inland flooding by clogging gutters and catch basins.

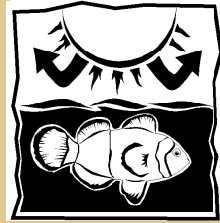
These Best Management Practices (BMPs) will ensure a cleaner ocean and city.

## Animal Waste Problems

Animal waste contributes to ocean pollution when it is improperly stored or left uncovered near small streams and storm drains. During rainfall, it is washed into storm drains and flows untreated, directly into the ocean.

Animal waste contains some nutrients—phosphorus and nitrogen—as well as bacteria. The nutrients fertilize the aquatic plants causing their proliferation which depletes oxygen in the water, killing sea life. The high bacteria levels in the water can cause gastrointestinal disorders and other medical problems for swimmers.

Sediment is also a common pollutant washed from pastures and livestock facilities. It creates multiple problems once it enters the ocean. It harms sea life by clogging the gills of fish, blocking light transmission and increasing ocean water temperature.



## Solutions

### Facilities Design

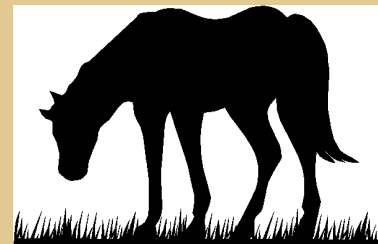
- Site barns, corrals and other high-use areas on the portion of property that drains away from the nearest creek or stream.
- Install gutters that will divert runoff away from livestock area.
- Design diversion terraces which drain into areas with sufficient vegetation to filter the flow.
- Protect manure storage facilities from rainfall and surface runoff.

### Pasture Management

- Confine animals in properly fenced areas except for exercise and grazing time.
- Corrals, stables and barns should be located on higher ground when possible and surrounded by pasture to act as a natural filtration system.
- Utilize fencing to keep horses away from environmentally sensitive areas and protect stream banks from contamination.
- Use manure and soiled bedding sparingly to fertilize pastures and croplands.

### Grazing Management

- Establish healthy and vigorous pastures with at least 3 inches of leafy material present.
- Subdivide grazing areas into three or more units of equal size.
- Clip tall weeds and old grass to control weeds and stimulate grass regrowth.
- Rotate animals to clean pasture when grass is grazed down to 3-4 inches.
- Let pasture regrow to 8-10 inches before allowing regrazing.
- Keep animals away from wet fields when possible.
- During heavy rainfall, consider indoor feeding, a practice which keeps more manure under roof and away from runoff.



### Collection and Storage

Collect soiled bedding and manure on a daily basis from stalls and paddocks and place in temporary or long-term storage units. Store in sturdy, insect resistant and seepage free units such as:

- Plastic garbage cans with lids.
- Fly-tight wooden or concrete storage sheds.
- Composters.
- Pits or trenches lined with an impermeable layer.



### Use and Disposal

- Compost soiled bedding and manure for your own use.
- Give away composted material to local greenhouses, nurseries and botanical parks.
- Transport manure to topsoil companies or composting centers.
- Fertilize pastures, cropland and lawns with manure and soiled bedding. **Do not** apply fertilizer just before or during rainstorms.

### Pesticide Alternatives

The “chemicals only” approach to pest control is only a temporary fix. *Integrated Pest Management* is a more common sense approach for a long-term solution. Plan your “IPM” strategy in this order:

#### Physical Controls

- Pheromone Traps
- Tarps
- Bug Zappers
- Fly-Tight Storage Sheds

