Stormwater Management Program

Manure BMPs

- Store manure in covered areas protected from weather
- Do not allow excess manure to accumulate in animal confinement areas
- Do not accumulate or store manure in low-lying areas where water collects
- Drag pastures as needed to aerate manure
- Spread manure at allowable rates using a spreader designed for the purpose
- Do not spread manure within 10 feet of canals or roadways
- Compost your manure to improve the fertilizer value
- For excess manure, use a manure pickup service or arrange times for gardeners or nurseries to collect composted manure
- Maintain a good deworming program for animals

Protecting Your Investment and the Environment

For more information please call:
Riverside County "Only Rain Down the Storm Drain
At 1-800-506-2555

www.RcFlood.org

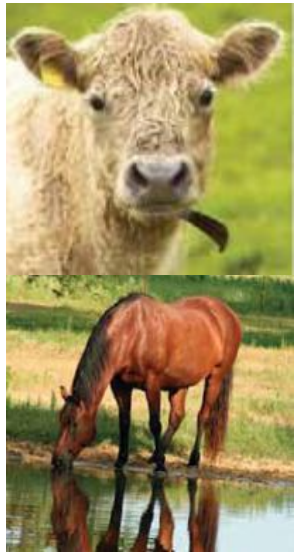
To report a sewage spill (during normal business hours)
Call Environmental Health at
(951) 358-5453

After Hours call:
(951) 955-8982

For Emergencies, dial 911.

Since pollution prevention is much easier and less costly than cleaning up after-the-fact, we must all work together to help keep our precious waterways pollutant free and protect our natural resources. Call 1.800.506.2555 or email to obtain more FREE information.

Pasture BMPs



Best Management Practices

Best Management Practices

BMPs are tested methods, measures or practices designed to prevent or reduce harm to the environment. The BMPs listed in this brochure are practical and cost-effective ways to minimize pollutants entering water bodies, while also improving your land.

- Improve crop/animal health
- Maintain better pastures
- Protect your land from soil erosion
- Manage weeds and control mud
- Increase property values
- Protect you from related code enforcement problems
- Reduce irrigation, fertilizer and herbicide costs

Drainage BMPs

- Keep pasture and constructed ponds separate from natural water bodies
- Do not create drainage links between constructed ponds and nearby water bodies

Pasture BMPs

- Do not overstock your land with more animals than it can handle
- Use high-intensity, short-duration grazing to rejuvenate poor pasture
- Allow grass to reach 6 inches before grazing; remove animals when 3 inches remain
- Mow regularly to encourage grass and discourage weeds
- If available, fertilize pastures according to site-specific soil test recommendations

Fencing BMPs

- Fence off or limit animal access to natural water bodies
- If needed, pipe water from streams or lakes to a trough located away from the water body
- Fence off animal access to areas that receive periodic standing water
- Use fences to divide pastures into temporary plots for rotational grazing

Stormwater BMPs

- Maintain vegetation buffers around animal confinement areas
- Locate animal confinement areas away from water bodies
- Divert uncontaminated surface and roof runoff away from animal facilities
- Construct berms to retain storm water on your land
- Maintain existing slopes away from canals and roadways
- Create drainage ditches to channel water away from water bodies and roadways and into a water retention area
- Direct storm water away from wellhead
- Ensure standing water does not pool around wellhead

Erosion Prevention BMPs

- Allow vegetative buffer strips to grow along water bodies
- Do not leave bare soil exposed to the effects of erosion
- Prevent overgrazing by confining animals for a portion of the day or using rotational grazing

The effects of pollution

Polluted stormwater runoff can have many adverse effects on plants, fish, animals, and people.

- Sediment can cloud the water and make it difficult or impossible for aquatic plants to grow. Sediment also can destroy aquatic habitats.
- Excess nutrients can cause algae blooms. When algae die, they sink to the bottom and decompose in a process that removes oxygen from the water. Fish and other aquatic organisms can't exist in water with low dissolved oxygen levels.
- Bacteria and other pathogens can wash into swimming areas and create health hazards, often making beach closures necessary.

Protecting Your Investment and the Environment

Stormwater Management Program

1. Adopt a Farmwater Management Plan
2. Train irrigation staff on water conservation
3. Repair water system- stop leaks & wasting water
4. Facilitate alternative land use/ drainage patterns
5. Construct & operate spill & tailwater recovery systems
6. Automate water supply control structures
7. Using less water in a more efficient manner helps reduce discharges

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Irrigation Fertilization

Best Management Practices

Best Management Practices

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- Maintain better pastures
- Protect your land from soil erosion
- Manage weeds and control mud
- Increase property values
- Protect you from related code enforcement problems
- Reduce irrigation, fertilizer and herbicide costs

Irrigation BMPs

- Wells used for irrigation should be constructed by a licensed driller
- Schedule irrigations according to soil moisture and crop water needs
- Adjust irrigation amounts to meet varying crop demands at different growth stages
- Apply irrigation uniformly and accurately; do not overspray onto impermeable surfaces

Fertilization BMPs

- Test soil to determine exact fertilizer needs
- Properly calibrate fertilizer application spreaders
- Apply fertilizer directly over root zone; for row crops, place fertilizer on top of beds; for pasture or field crops, fertilize the entire planted area
- Avoid applying fertilizer near roadways or water bodies
- Minimize overlapping fertilizer during application

Best Management Practices

- **Maintain a soil cover.** Leave crop residues on the soil surface during the winter. Do not till too early in the spring. Where feasible, use no-till methods, which may be the only way highly erodible land can be cropped without excessive soil loss.

- **Manage the soil for maximum water infiltration and storage.** Maintain crop residues on the soil surface. If there is little crop residue left in the fall, establish a winter cover crop, but leave the soil surface rough enough to help trap rainfall. Increase the soil's water-holding capacity by adding organic matter and maintaining good soil porosity. These goals can be accomplished by using high-residue crops in the rotation and by tilling carefully to prevent soil compaction.

- **Maintain vegetation on ditch banks and in drainage channels.** Try not to disturb vegetation in drainage channels such as ditches and sod waterways. If necessary, construct ditches larger than needed so the bottoms can be left vegetated to trap sediment and other possible pollutants. Seed ditch banks, and prevent ditch bank erosion by proper sloping and diversion of field runoff water.

- **Slope field roads toward the field; seed roads with a permanent grass cover.** Water erosion and dust from traffic on field roads contribute significantly to soil loss and potential pollution on farms. Do not plow field roads when preparing land. Shape roads for good drainage, and seed them with a perennial grass where possible. Direct field road runoff toward the field or into a sodded waterway and away from any bordering ditch or canal.

- **Shape and seed field edges to filter runoff as much as possible.** Do not plow up to the edge of the field, especially along ditches or canals. Leave a buffer strip along drainage ways, and establish a perennial sod. Shape and seed hoe drain outlets to filter runoff.

- **Use windbreaks and conservation tillage to control wind erosion.** Wind erosion can be minimized by leaving the soil surface rough, maintaining crop residue on the soil surface, bedding to trap wind-blown sediments, keeping the soil wet, or maintaining a cover crop.