Phosphorus is not the only stormwater pollutant in our regional drainage canals. Think about how many people live here and the household habits that may contribute pollution to the region’s stormwater. What do you think rainwater picks up as it rolls across parking lots, lawns and pastures before draining into stormwater systems like a swale, pond or canals? Just imagine chemicals leaking from vehicles on roadways; inappropriately applied fertilizers and pesticides on urban landscaping; or, mismanaged pet and livestock waste. It all adds up...

LIVING CLOSE TO THE EVERGLADES REQUIRES EVERYONE TO BE A WISE RESOURCE MANAGER

The primary goal of equine “Best Management Practices,” or “BMPs,” is to eliminate or limit excess phosphorus, nitrogen and other pollutants produced by horses and livestock from entering canals and waterways through inappropriate pasture and stable practices. Besides ensuring better water quality for you, your livestock, neighbors and the Everglades – these equestrian BMPs will also help you maintain better pastures, improve livestock health and increase property values. Additionally, adopting BMPs will help protect you from related code enforcement problems.

Horse owners, equestrian facility managers, the South Florida Trail Riders Association, and Florida Farm Bureau have worked together with the South Florida Water Management District, the Florida Department of Agriculture & Consumer Services and the University of Florida Institute of Food and Agricultural Sciences (IFAS) to develop these recommended practices.

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To reduce erosion and avoid water quality degradation, strategic location of your fences needs to be considered before installation.

- Ideally, install fencing to allow for rotation and resting of pastures
- Fence off areas that receive periodic standing water where possible
- Fence to prevent access of horses to canals or bodies of water connected to canals. And, provide alternative sources, like a water trough
- Fence along a canal or other surface water so that a buffer strip of vegetation will be created naturally to filter run off and prevent soil erosion
- Regular inspection and ongoing maintenance of fences should be part of the farm management plan
- The location and construction of all fences and its materials should comply with local, state and federal laws

**Preventing Soil Erosion**

Exposed soil – meaning areas without vegetative cover – is susceptible to soil erosion. Besides being detrimental to property values, soil erosion allows soil sediments to drain into nearby surface water bodies. These sediments can have high levels of phosphorus. Erosion and sediment control practices will prevent surface water quality problems and retain the property’s valuable topsoil.

- Maintain a vegetative buffer strip between paddocks or pastures and canals and roadways
- Construct berms where appropriate
- Use pasture management practices

**Weed Management**

Weeds spread rapidly. Regular inspection of your property is critical and involves immediate action using one or more weed control practices:

- Search for individual weeds and promptly remove, especially near water bodies or wetlands
- Avoid moving livestock from a weedy area to a weed-free area for at least 24 hours
- Mow weeds regularly before they go to seed
- Drag as needed to aerate the pasture manure with soil to encourage pasture growth, and use manure management practices

**Pasteur Management**

Where appropriate, consider subdividing large pastures into smaller ones and develop a rotational grazing system
- Maintain grass on pastures by rotating grazing areas, and make sure there is a [*livestock drinking*] water source for each livestock
- Overgrazing occurs when 50% or more of the plant has been removed all at once. This causes a stoppage of root growth and reduces grass production
- Confine animals for a portion of the day to prevent overgrazing

**GOOD HORSE SENSE**

**To begin the BMP process, examine your property or where your livestock is boarded. Make a sketch showing property boundaries, fences and confinement areas, buildings, wells, septic system and drain field, wetlands and ponds, bare ground, and weeds and Non-native and invasive plants and vegetation. Also consider areas that are landscaped or pastured, neighboring land uses, ground contours, and soil type.**

Studying the property sketch, think about possible pollution sources. Is there a possibility that animal waste from the property might be entering canals and waterways? Could soil erosion on the property be making its way to neighboring properties or nearby surface waters? Is the pasture pond connected to a nearby canal, lake or wetland? Is the correct fertilizer being used for South Florida soils and semi-tropical environment – and what about pesticide usage, and the current system of waste management?

**Manure Management**

Remove manure from stalls daily. Do not allow excess manure to accumulate in paddocks, corrals or pens.

- Spread manure on pastures at allowable rates using a spreader designed for the property
- Drag as needed to aerate the manure with soil to encourage pasture growth
  - Do not over-apply. Contact the local County Extension Agent to determine allowable agronomic rates.
  - Do not use manure spreader within 10 feet of canals or roadways
  - Maintain a good downspout program for livestock to prevent parasites and worn eggs in manure that will be reaped to pastures
  - Compost manure to create topsoil/fertilizer
  - Create two manure piles: one active, one dormant
  - Position manure piles away from canals/roads/neighboring residence’s plot lines
  - Utilize composted manure on lawns, gardens or pastures as fertilizer
  - Create compost piles or containment areas away from canals, roads and neighboring residences
  - Compost piles should be enclosed by a barrier at least 8 inches high and covered with an impervious surface to prevent leaching (such as a sheet of plastic)
  - Arrange a manure pick-up service. Or arrange times for neighbors, gardeners, and nurseries to collect composted manure

**Mud Control**

Mud is a slick, unsafe footing and harbors insects and bacteria, which cause illness and disease in livestock. A muddy farm is unsanitary for the neighborhood and causes an increase in odors and flies. Mud can also be damaging to the environment by contaminating surface water with sediment runoff. The idea behind mud-control BMPs is to prevent mud from making its way into nearby surface water.

- Install gutters and downsputs on all buildings and divert away from confinement areas
- Maintain a grass strip – as wide as possible – around corrals, stalls or other confinement areas to serve as a filter for mud runoff
- Use suitable footing material in high-traffic areas

**Stormwater Management**

A healthy wetland area reduces erosion and provides a good habitat for fish and wildlife as well as indirect protection by filtering out unwanted nutrients and chemicals. Grazing in areas adjacent to canals, ponds and wetlands can destroy natural vegetation. Some suggested alternatives for maintaining healthy buffets are:

- Where feasible, construct berms on your property to retain stormwater and prevent runoff
- Create buffer strips of vegetation along canals and roadways on your property to prevent runoff and prevent soil erosion
- Maintain your property’s existing slopes away from canals and roadways
- When managing your farm or landscaping your property, remember that you should never change the grading of slopes that drain into canals, waterways or lakes. The grading is based on state and local minimum requirements and is determined by the State of Florida Registered Professional Engineer to meet water quantity and quality criteria
- Properly maintain water retention areas on your property:
  - Check your permit and or easement and follow specifications
  - Leave a “ring of responsibility” around pasture ponds (retention areas) by not fertilizing close to the water. This untreated area will serve as a natural buffer zone
  - Remove exotic and invasive vegetation from retention areas
  - These species can produce dense growth and degrading matter that threatens water quality
  - Create drainage ditches to channel water from any catchment areas away from canals and roadways and to a water retention area

**Disconnecting Water Bodies**

Where appropriate, keep pastures separate from surface waters. Remove any existing drainage ditches or pipes that allow water from ponds or lakes on the land to enter canals or roadways. In other words, do not create drainage links between pasture ponds and nearby canals and other waterways, as well as to roadway swales or paved areas. But before disconnecting water bodies, contact your local drainage district or regulatory agency to determine that disconnecting the water body will not conflict with specifications or requirements from local regulations, permits or easements.