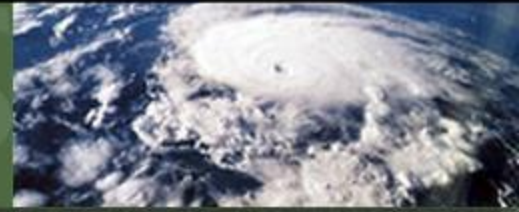


REFLECTIONS



# MANAGING FLOOD WATER

*Before and After the Storm*

## Before and After the Storm



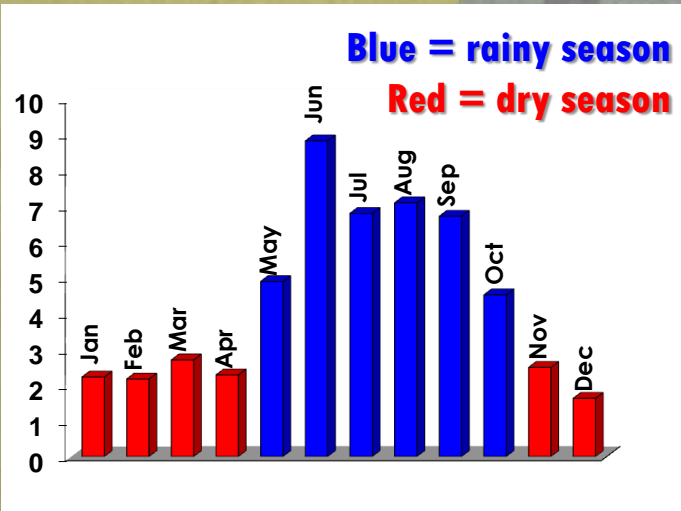
**Marshes and swamps once covered our tropical-like region**



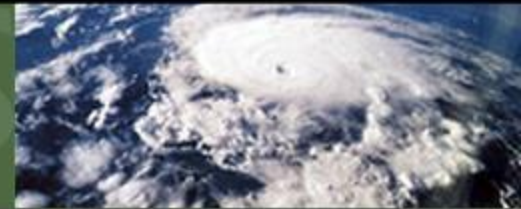
# Before and After the Storm



**Our terrain is low and flat, and seasonal rainfall can be intense**



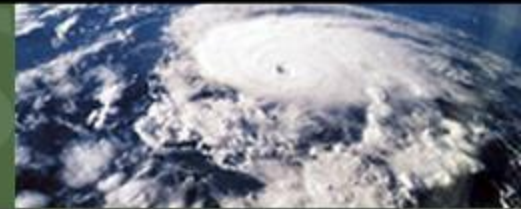
# Before and After the Storm



**This land is now home to more than 8.1 million people**

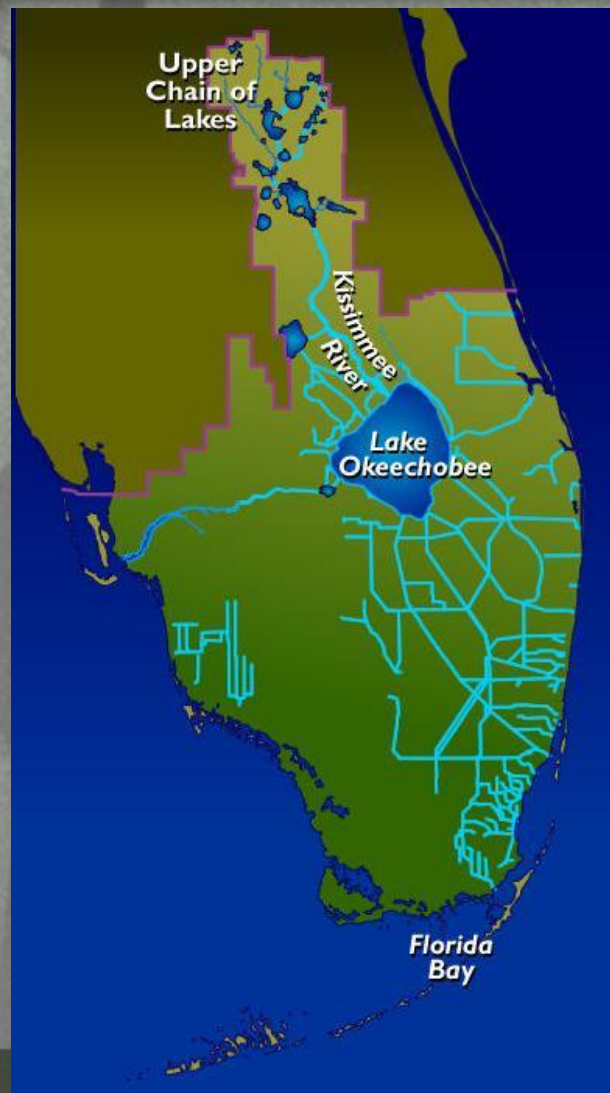


# Before and After the Storm

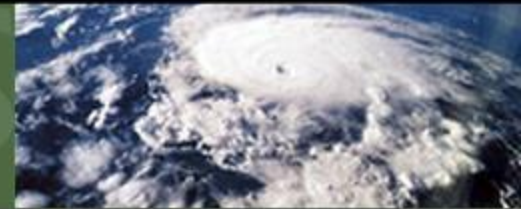


**The South Florida Water Management District operates the regional flood control system**

- **2,100 miles of canals**
- **2,000 miles of levees**
- **600 structures**
- **625 culverts**
- **70 pumping stations**



# Before and After the Storm



## SFWMD role:

- Monitor weather conditions and water levels around-the-clock
- As needed, open gates to lower water levels in primary canals in anticipation of expected inflows
- During and after heavy rains, route excess water through waterways to storage or coastal discharge points



# Before and After the Storm



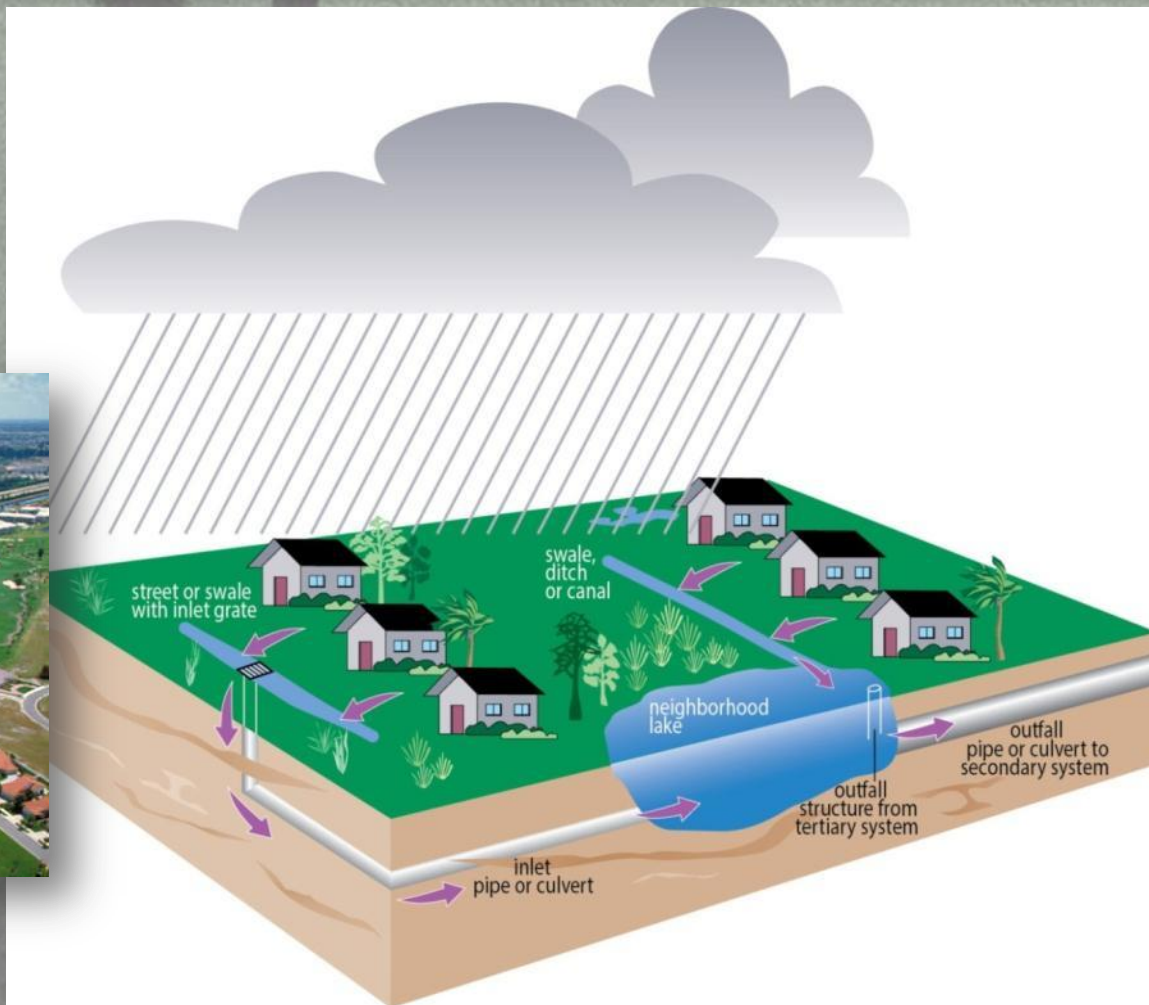
**Optimum flood control  
is a three-tiered system  
– functioning much like  
a roadway system**



# Before and After the Storm

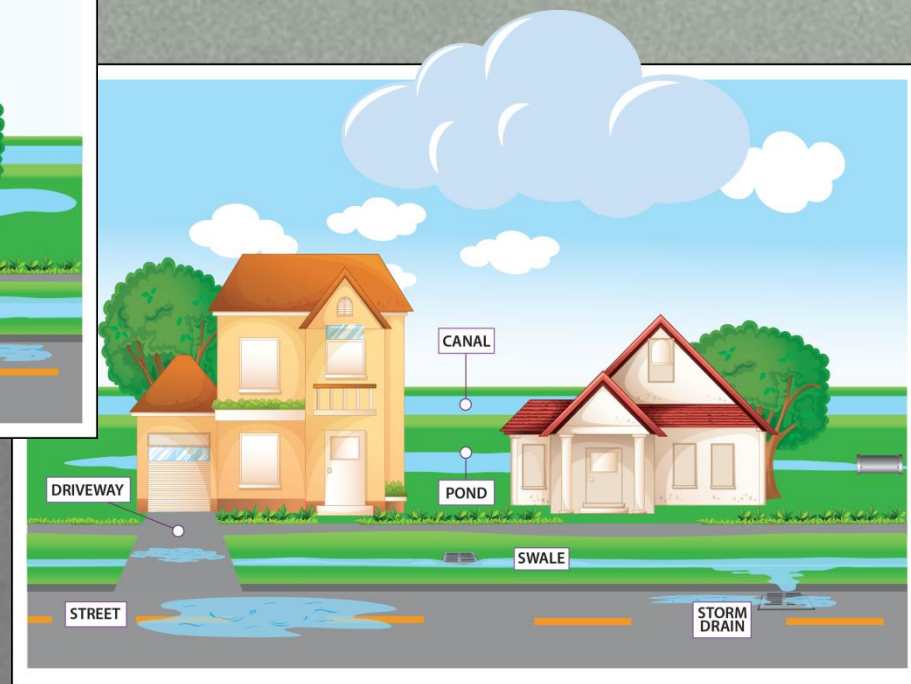
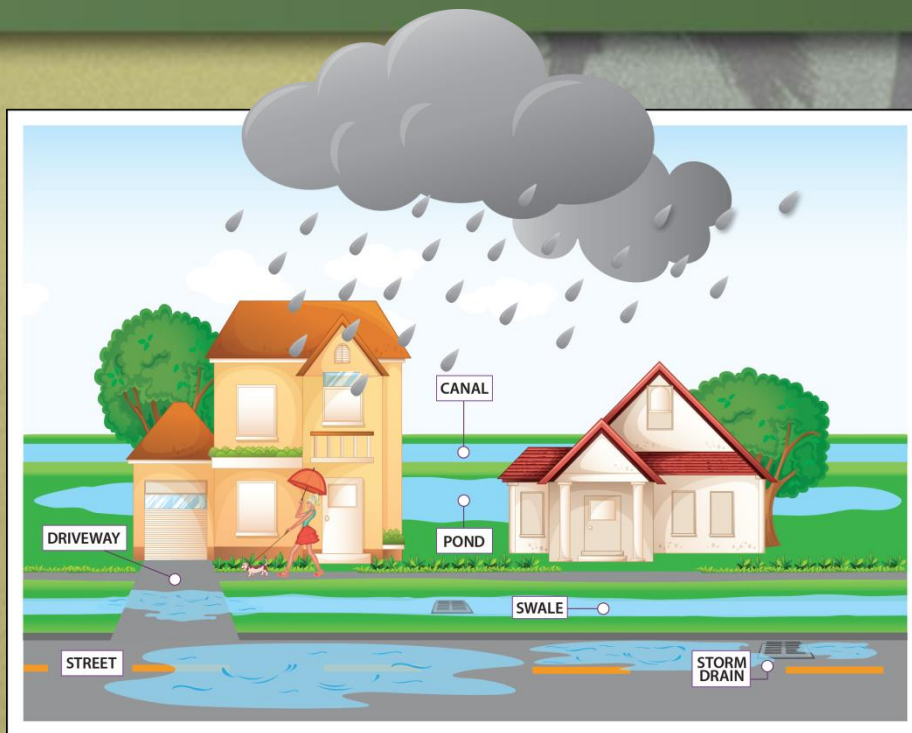


**It starts in  
your  
community...**



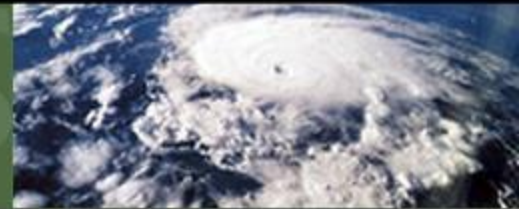


# Before and After the Storm

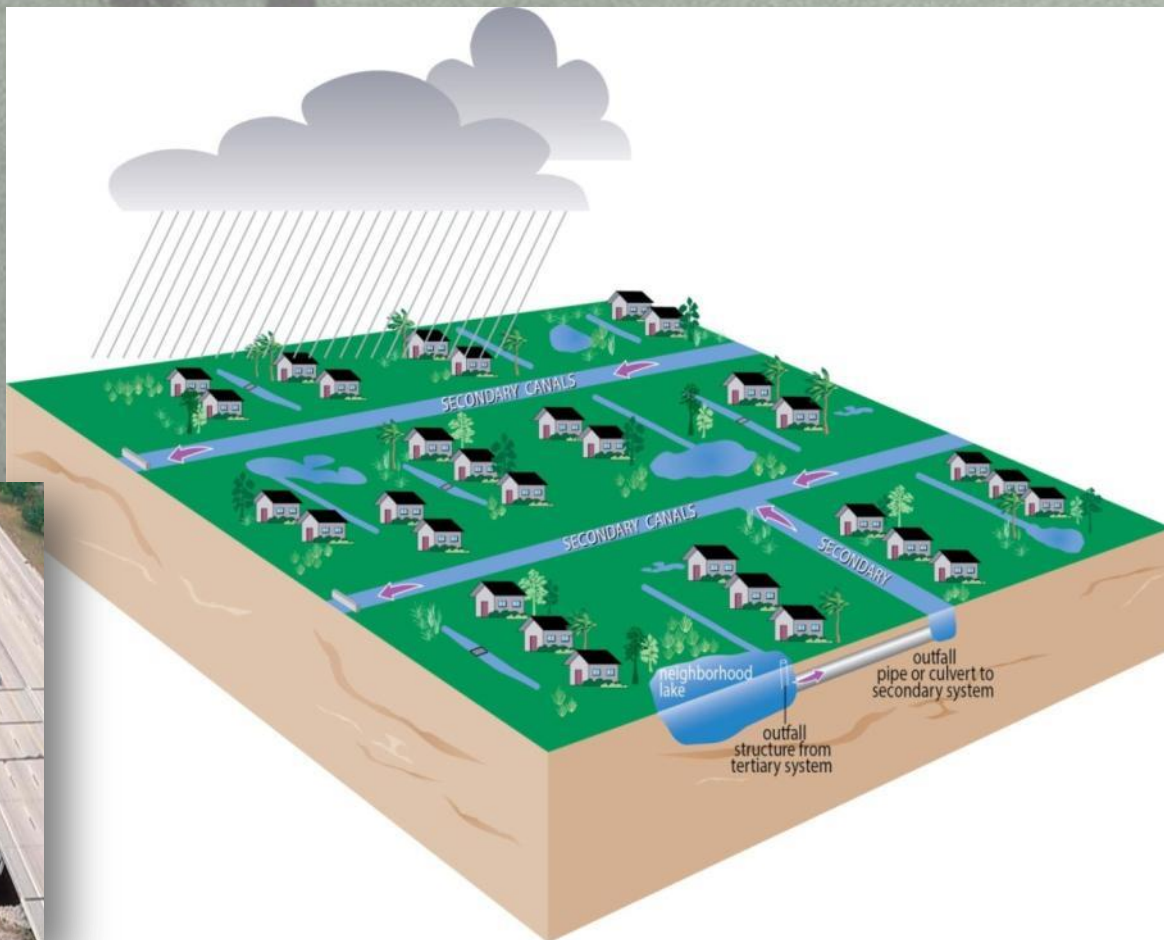


## Raining vs Draining

# Before and After the Storm



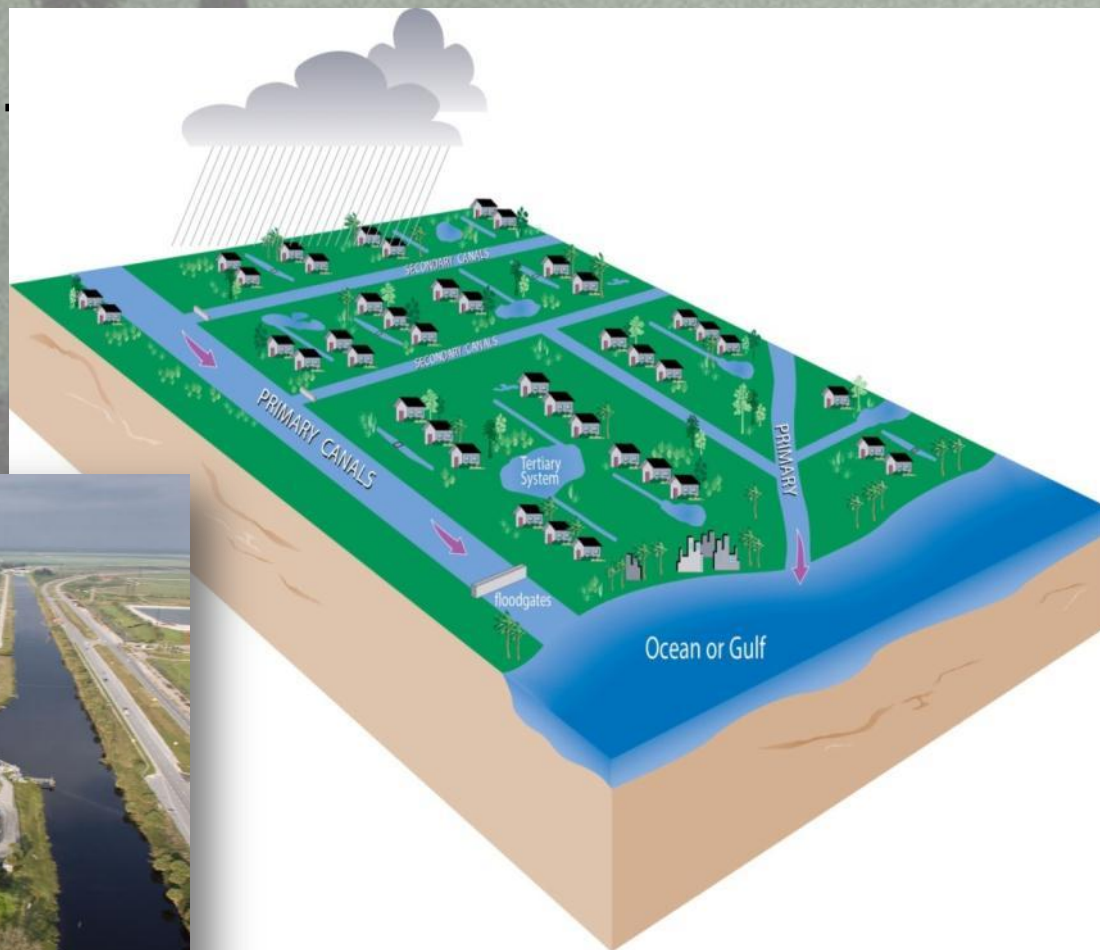
**Secondary canals connect to farm and neighborhood systems**



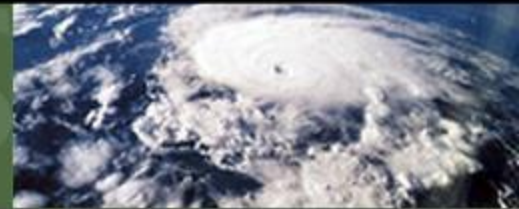
# Before and After the Storm



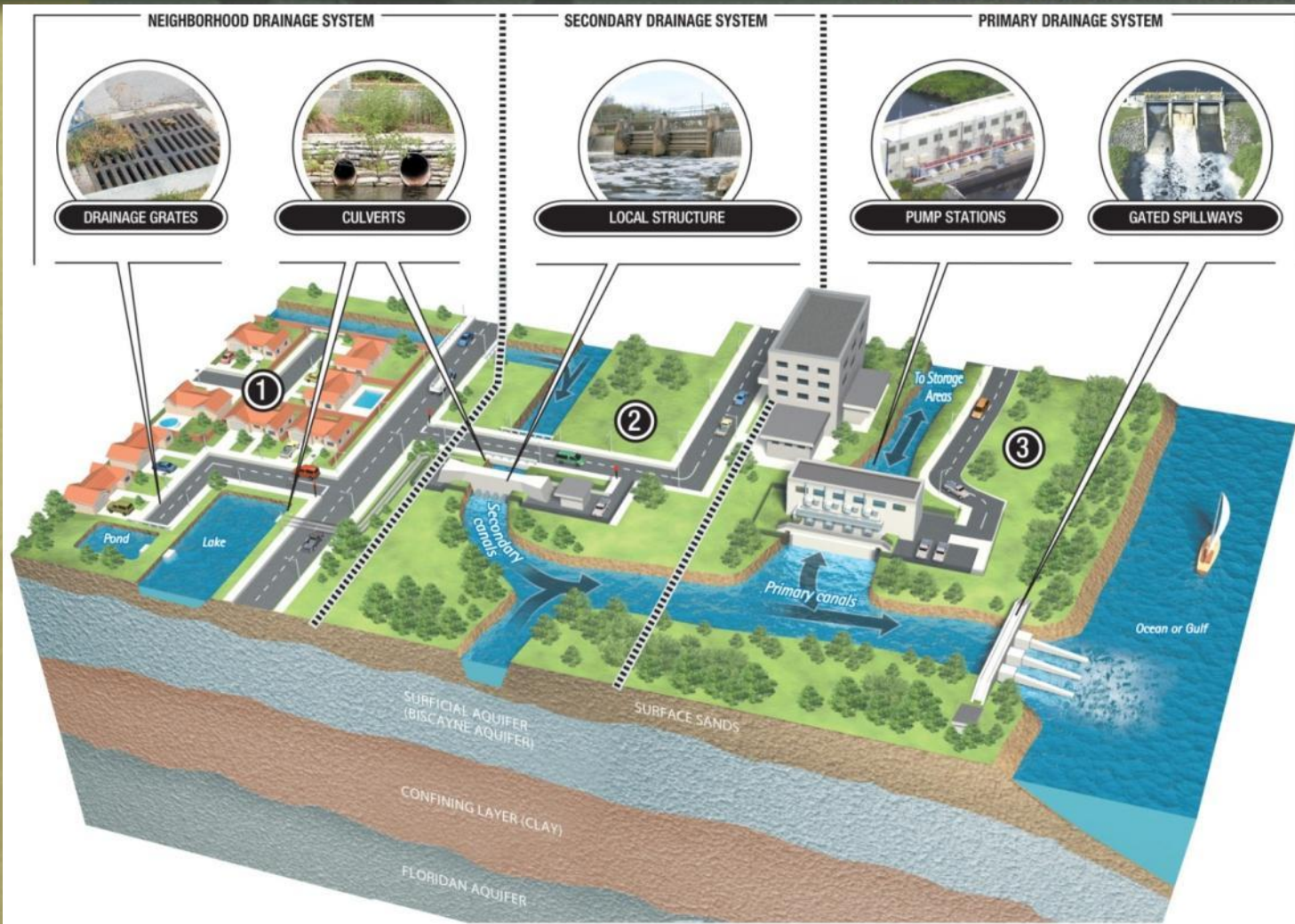
**Major canals receive inflows & move water into storage or to the coast**



# Before and After the Storm



The three systems must all work together



## Before and After the Storm



**Heavy rain in a short period of time may result in flooding**



## Before and After the Storm



**4 to 6 inches of rain in a 24-hour period**

### What to expect:

- **Standing water in yards, swales and ditches**
- **Crowns of road should remain passable**



# Before and After the Storm



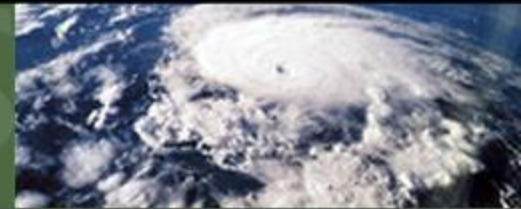
**7 to 10 inches of rain in a 72-hour period**

## What to expect:

- **Roads, as well as swales, ditches and yards flood**
- **Buildings should remain dry**



## Before and After the Storm



**10 to 20 inches  
or more of rain  
in a 72-hour  
period**

### **What to expect:**

- **Many houses and businesses can be expected to flood**





# Before and After the Storm



## Flood Factor:

**Surface waters cannot receive new water if they are full or flow is blocked**



# Before and After the Storm

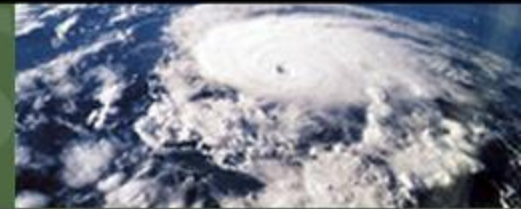


## Flood Factor:

**Water cannot soak into the ground if the water table is high – results in ponding and standing water**



# Before and After the Storm



## Flood Factor:

**High tides and on-shore winds inhibit discharge capability to the coast**



# Before and After the Storm

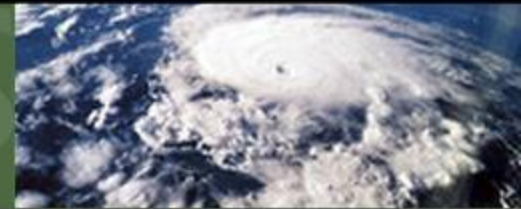


## Flood Factor:

**Older neighborhoods with no, or limited, community drainage systems in place are prone to flooding**



# Before and After the Storm

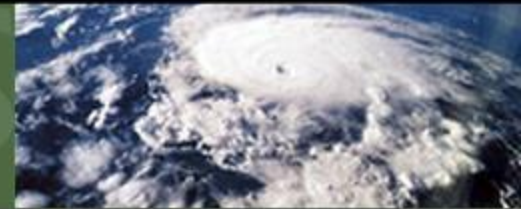


## Shared Responsibility

**Communities play a key role in managing flood situations**



# Before and After the Storm



## Shared Responsibility

**Drainage facilities should be regularly maintained**



# Before and After the Storm



## Shared Responsibility

**System components should not be obstructed**



# Before and After the Storm



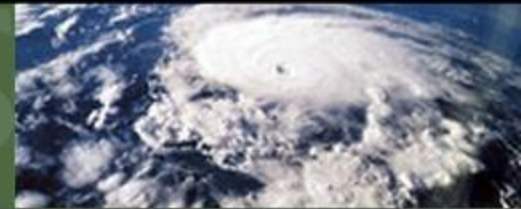
## Shared Responsibility

**Control structures must be functioning to prevent blockages**





# Before and After the Storm

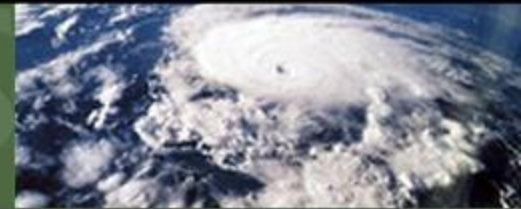


## Shared Responsibility

**Grassed water storage areas need regular mowing**



# Before and After the Storm

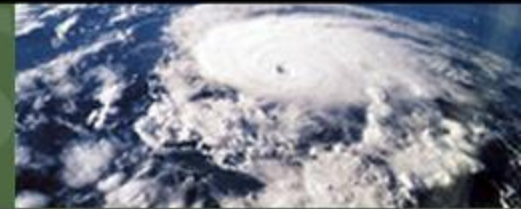


## Shared Responsibility

**Side slopes should be checked for erosion**



# Before and After the Storm

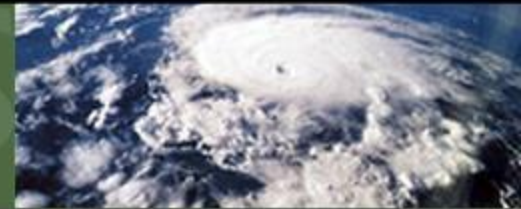


## Shared Responsibility

**Washouts of dikes  
and berms should  
be repaired**



# Before and After the Storm



## Shared Responsibility

**Rights-of-way must  
not be obstructed**



# Before and After the Storm



## Shared Responsibility

**Clear rights of way  
help improve flood  
protection**



**After**



**Before**

# Before and After the Storm



## South Florida flood control basics:

- **Flat terrain and intensive rains**
- **Drainage is through a 3-tiered water control system, which starts at the neighborhood level**
- **To function properly, all components must be kept in working order**
- **Always check with permit requirements before making significant repairs/upgrades**

## Before and After the Storm

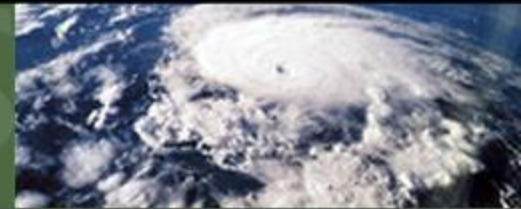


**Tip: Keep a list of pertinent numbers and websites for reporting drainage problems**



- **Homeowners' Association/Property Manager**
- **City, County, Local Drainage Districts**
- **South Florida Water Management District**

# Before and After the Storm



**We work year-round  
to prepare for the  
rainy season**

**Are YOU ready?**





# Before and After the Storm



**SOUTH FLORIDA**  
WATER MANAGEMENT DISTRICT

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## June is Flood Awareness Month

Follow the leader... and learn how we work to help keep your feet dry during the wet season

[LEARN MORE](#)



quick facts on...  
**Keeping the Canal Right-of-Way Clear**  
How you can help



**Flood Awareness Month** ▶



**Everglades Water Quality** ▶



**Permitting Services** ▶



**Restoring the Everglades** ▶

