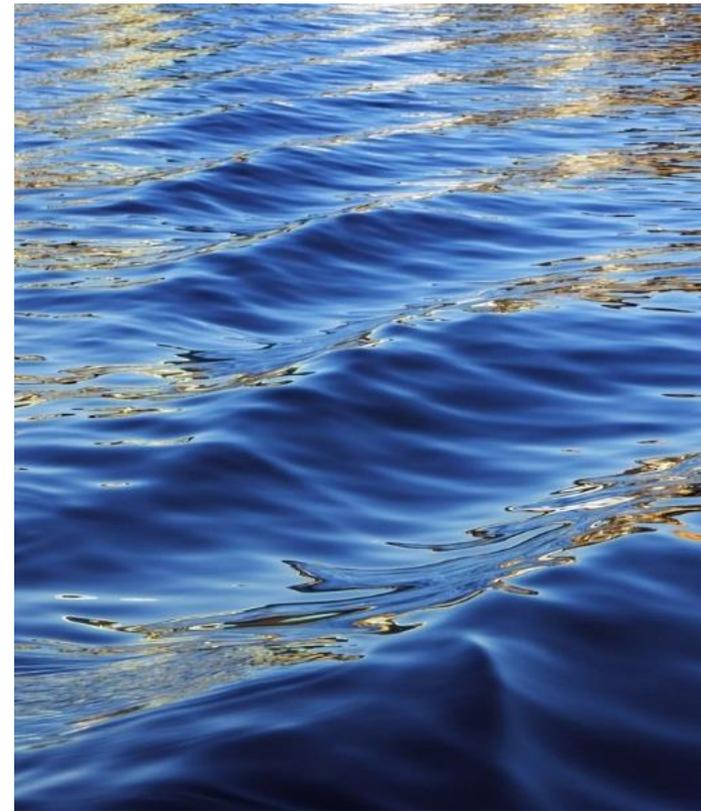


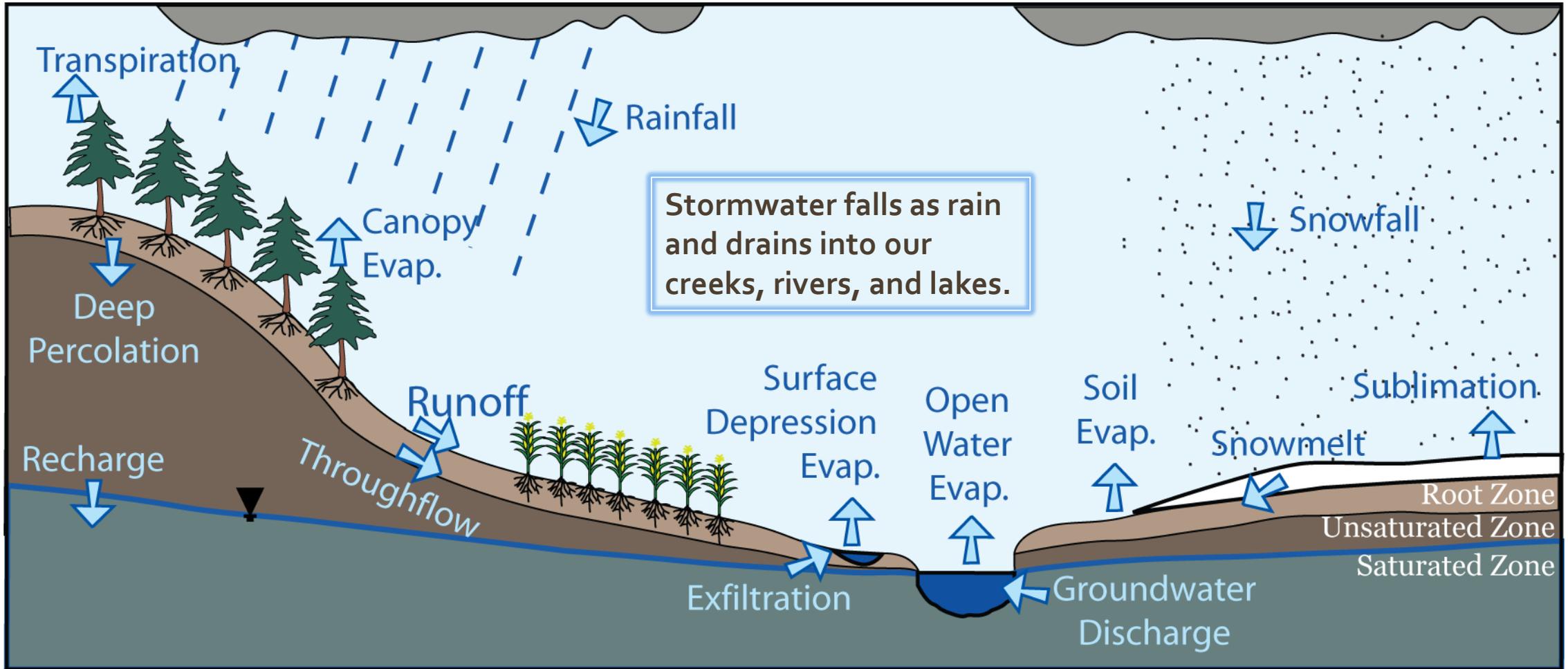


Stormwater Management in our Subdivisions

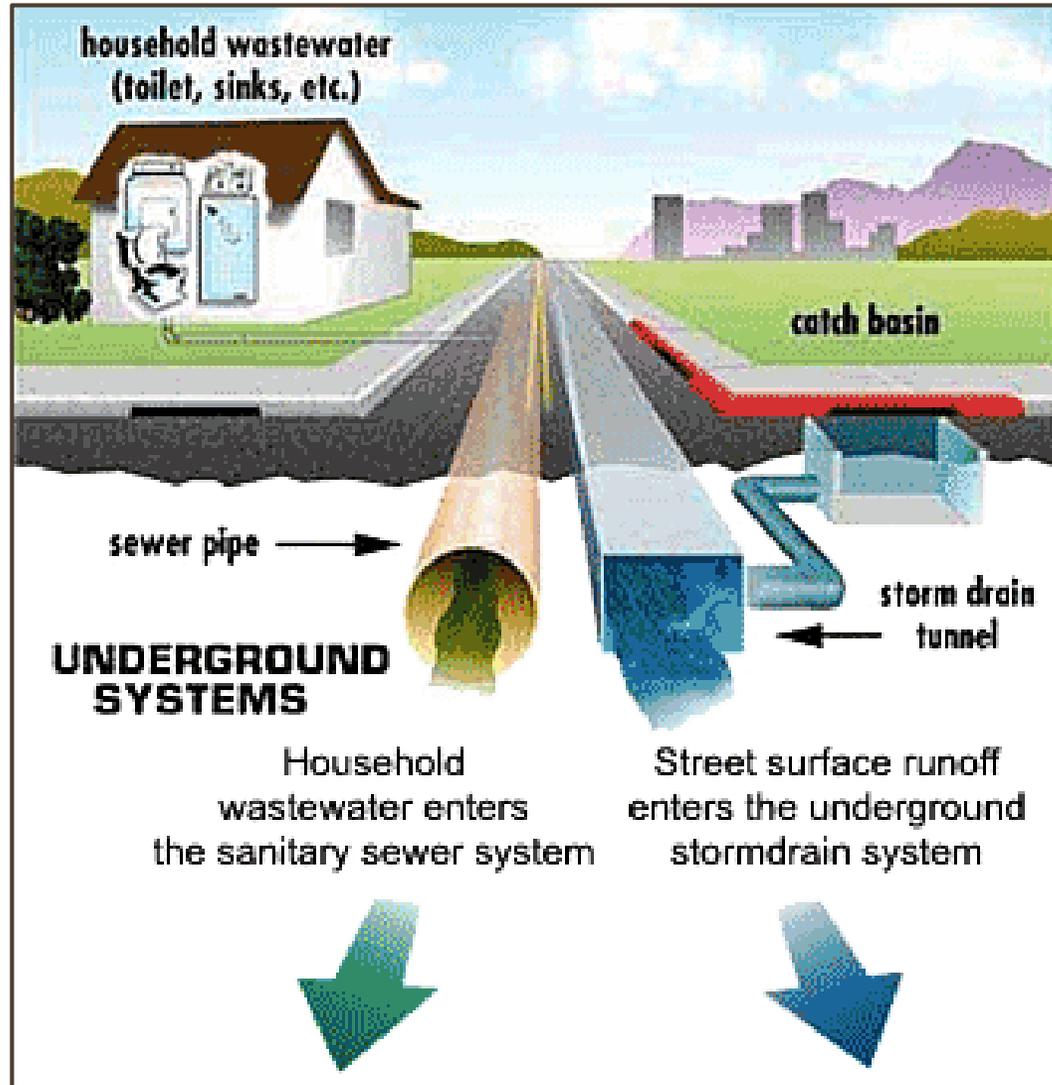
Frisco HOA Manager's Luncheon 2016



The Water Cycle



<http://hydrogeology.glg.msu.edu/research/active/modeling-and-monitoring-hydrologic-processes-in-large-watersheds>



MS₄ vs Sanitary Sewer

Stormwater does not enter the same sewer system as household wastewater.

Instead, it moves into a system of concrete pipes that flow directly to creeks, and eventually our lakes.

Our local lakes are the sources for our drinking water. Stormwater enters these reservoirs untreated.

As this water flows over the ground into the storm sewer, it can pick up pollutants.

http://www.gaithersburgmd.gov/~media/city/images/environment/stormwater/storm_drain_system.png

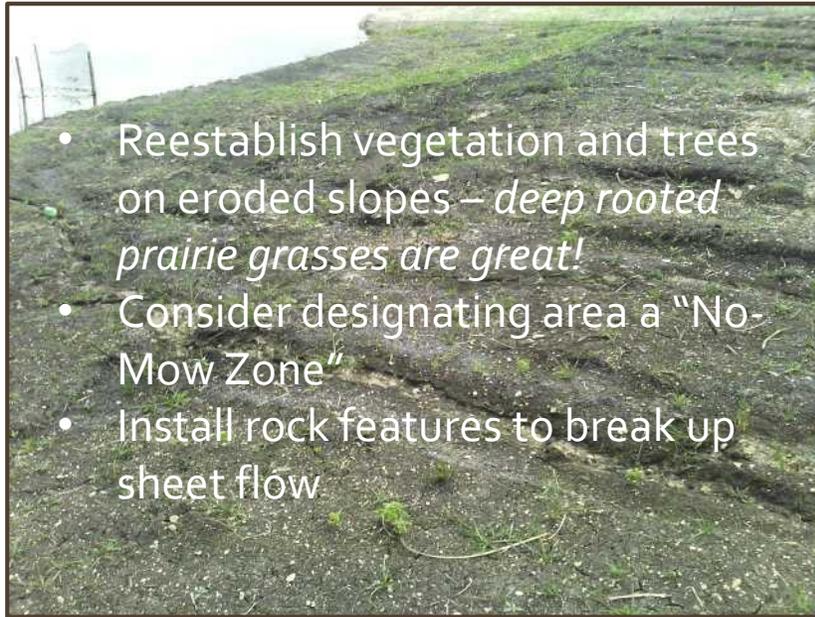
What kinds of pollutants affect stormwater?

Common Stormwater Pollutants in Frisco:

- Sediment
 - Vehicle traffic
 - Erosion
 - Uncovered building materials
- Trash
 - Windblown, unsecured waste
 - Localized littering
- Nutrients
 - Excessive fertilizer
 - Fertilizing before storms
- Bacteria
 - Pet waste

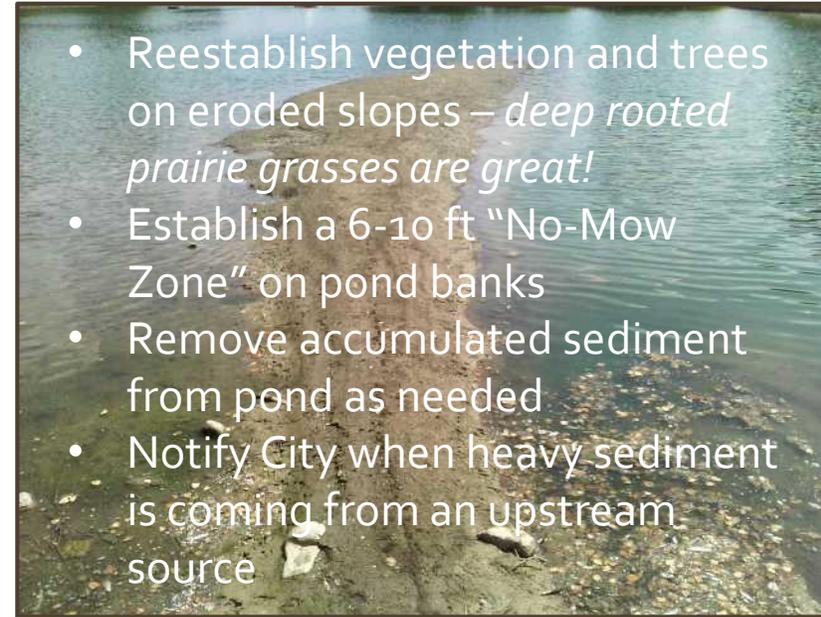


Erosion



- Reestablish vegetation and trees on eroded slopes – *deep rooted prairie grasses are great!*
- Consider designating area a “No-Mow Zone”
- Install rock features to break up sheet flow

Sediment



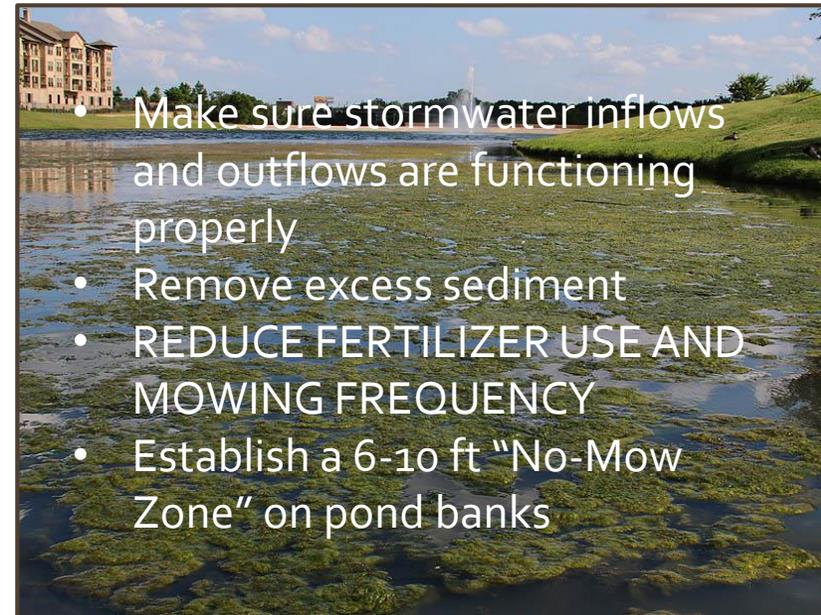
- Reestablish vegetation and trees on eroded slopes – *deep rooted prairie grasses are great!*
- Establish a 6-10 ft “No-Mow Zone” on pond banks
- Remove accumulated sediment from pond as needed
- Notify City when heavy sediment is coming from an upstream source

Trash



- Educate residents in proper trash and pet waste disposal
- Provide adequate waste containers in public use areas
- Make sure waste containers can withstand high winds
- Schedule regular neighborhood trash pickups

Algae



- Make sure stormwater inflows and outflows are functioning properly
- Remove excess sediment
- **REDUCE FERTILIZER USE AND MOWING FREQUENCY**
- Establish a 6-10 ft “No-Mow Zone” on pond banks

Natural creeks and streams run through many of Frisco's subdivisions. These areas are commonly owned by HOAs and dedicated for HOA management.

Preserving our natural creeks and the integrity of our stormwater is a priority and point of pride for the City of Frisco. As stewards of our creeks, HOA's play an important role in managing these water resources.

HOA maintenance responsibilities include:

- Vegetation management
- Litter and debris removal and management
- Silt removal and control
- Responsible application of fertilizers
- Maintaining stable banks and preventing erosion

These types of maintenance is essential to water quality and preservation of our waterways and reservoirs.

Who is responsible for Frisco's creeks?



You're not alone. We're here to help.

Many creeks and drainage areas throughout our subdivisions are under easements to the City for the purpose of **flood control**.

If necessary due to a serious threat of flooding adjacent properties, the City may perform stream widening projects to mitigate these issues.

In addition, **the City is available for consultation on all points of stormwater maintenance**. We are happy to help answer questions or provide education in stormwater management.

The City maintains city-owned stormwater infrastructure. Currently, there are no identified flooding hazards within city limits.





Common Problems

- Erosion
- Clogged outlets
- Excessive siltation
- Sunken or damaged inflows



BMP Inspections

In order to stay informed about the infrastructure on our creek systems, the city hydrologist performs annual inspections on all significant known water bodies within city limits. We inspect to ensure proper maintenance is being performed by the HOAs.

Some of your residents may have seen me conducting these field inspections!

Inspections include:

- Water quality assessment
- Visual inspection and photos of stormwater infrastructure
- Recommendations for maintenance

If you have a big problem, I WILL contact you! However, you DON'T want to hear from me – make sure you have staff maintaining your infrastructure to prevent problems!

To sum it all up...

Water entering the storm sewer flows to our creeks and eventually our lakes untreated. **This is our drinking water.**

HOAs are responsible for managing the water bodies on their property. This includes responsible fertilization, trash removal, and reduction of sedimentation.

The city is available for consultation on stormwater management issues.

The most common issues found during city inspections are **bank erosion, clogged outflows, sunken/damaged inflows, and excessive siltation.**

Questions???

