



Anastasia Samoylova: FloodZone

Water quality related key terms and concepts to review prior to visiting the exhibit.

What is a watershed? The area of land that drains to a particular waterbody.

What is stormwater runoff? Rainwater or snowmelt that does not soak into the ground or evaporate, but washes off the land into the nearest waterbody or storm drain.

Impervious surfaces- Hard surfaces like roof tops, buildings, roads and parking lots that do not allow water to soak into.

Stormwater runoff- When it rains and water moves downhill over the land to the nearest waterway it picks up pollutants as it moves. The greater the amount of stormwater runoff, the greater amount of pollutants that get into the water.

Wetlands- Wetlands are areas where water covers the soil, or is present either at or near the surface of the soil all year or for varying periods of time during the year, including during the growing season.(from U.S. EPA)

Keystone species- A species on which other species in an ecosystem largely depend, such that if it were removed the ecosystem would change drastically.
Manatees are a keystone species in Florida and are labeled as “threatened” due to habitat loss and collision with boats.

What are the effects of development on local water quality?

Plants, natural vegetation, and soil act as a sponge to absorb rain water. When the natural vegetation is removed during land development, impervious surfaces are created. Water cannot soak into these surfaces and so instead will runoff from the area into the nearest waterway and can contribute to downstream flooding if not properly controlled.

Natural vegetation holds soil in place, when it is removed and soil is disturbed during construction activities the rain water mixes with the soil and makes the water muddy. This water runs downhill to the nearest waterways causing the water to become cloudy and polluted. Pollutants from stormwater runoff include; pet waste that is not cleaned up, fertilizers/pesticides, soil from construction sites and farm land, litter, and chemicals from leaky vehicles. This is called stormwater pollution.

Other concepts:

Wetlands help absorb extra nutrients from stormwater runoff and can help protect developed areas by absorbing flood waters.

As climate change occurs and sea levels rise, flooding in coastal areas will become more frequent and structures in these areas will be threatened.