

Papillion Creek water quality must be improved



The Big Papillion Creek and West Papillion Creek and several lakes have been listed by the Nebraska Department of Environmental Quality as impaired waters. They have unacceptable levels of the following:

- Fecal coliform bacteria, commonly found in human and animal feces, which means the possible presence of disease-causing bacteria, viruses and protozoans.
- PCBs, manmade chemicals called polychlorinated biphenyls, which accumulate in the food chain and have been shown to cause cancer, according to the EPA.
- Agricultural runoff called Dieldrin used in insecticides, which also accumulates in the food chain and is linked to cancer, birth defects and immune system impairments, according to the EPA.
- Sediment.

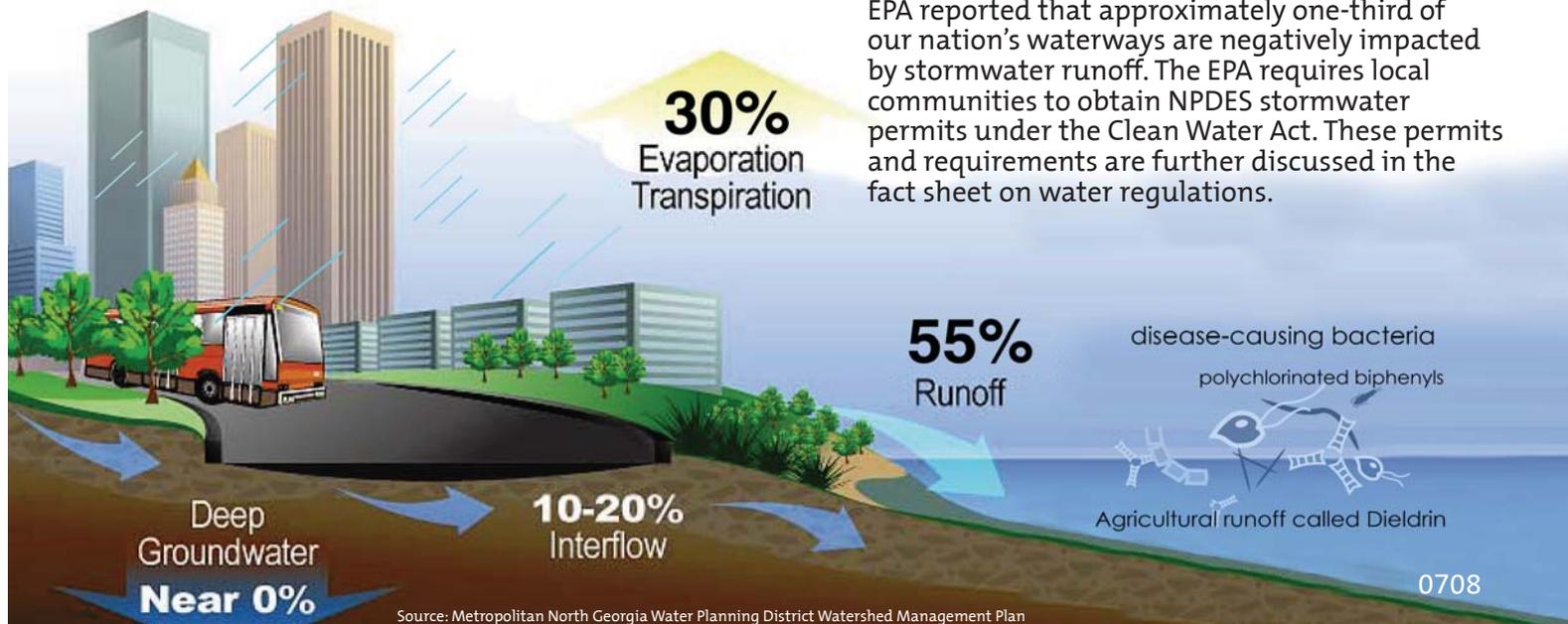
When it rains or when snow melts, water quality in the Papillion Creek Watershed is significantly and negatively affected, according to sources such as the Papillion Creek Watershed Project.

- Levels of fecal coliform bacteria, PCBs and Dieldrin significantly increase in Papillion Creek with stormwater runoff, based on

monitoring at 32 sites by the Papillion Creek Watershed Project.

- The EPA says additional pollutants that are flushed into waterways from rain or snow melt include:
 - Oil, grease and toxic chemicals from motor vehicles,
 - Pesticides and nutrients from agriculture and lawns,
 - Viruses, bacteria and nutrients from pet and human waste,
 - Road salts,
 - Heavy metals from roof shingles, motor vehicles and other sources, and
 - Sediment.
- This type of common water pollution is called “nonpoint” because it does not come from one specific site.

These pollutants harm our ecosystems and can foul drinking water supplies and make recreational areas unsafe. Controlling stormwater runoff pollution is viewed by the EPA as key to improving the water quality of our nation’s waterways. In a 1990 report to Congress, the EPA reported that approximately one-third of our nation’s waterways are negatively impacted by stormwater runoff. The EPA requires local communities to obtain NPDES stormwater permits under the Clean Water Act. These permits and requirements are further discussed in the fact sheet on water regulations.



Water quality is directly related to water quantity.

- In urban and suburban areas, much land surface is covered by pavement, roofs and other materials that water cannot pass through into the soil.
- Less water is absorbed into the landscape where it can be filtered naturally, according to the EPA.
- The quantity of runoff from rain and snow increases in volume and carries more pollutants with it.
 - A typical city block generates more than five times the runoff than a woodland area of the same size, according to the EPA.
 - In a natural area, only 10 percent of stormwater runs off the natural ground cover, while 55 percent runs off in an urbanized environment.
- Water quality and quantity work hand-in-hand; more runoff results in more pollution.

Partnership policies provide water quality solutions for our watershed.

- The 11 governments of the Partnership have worked for years to create a set of policies for our watershed that are meant to improve our water quality and prevent flooding, which will become a greater risk as our watershed continues urbanizing.
- Three of the six policies seek to improve water quality by reducing pollution from numerous sources across the watershed.
- Because the quantity of runoff directly affects water quality, the remaining policies also address improving water quality in our watershed.

Our watershed's water quality is everyone's responsibility.

- What happens upstream or downstream affects the entire watershed ecosystem.
- Each of us – as individuals, organizations, cities and counties in the watershed – is responsible for pollutants that run into our watershed.
- Information on what you can do to protect our water quality is available from the EPA (www.EPA.gov).

Sources:

- Environmental Protection Agency (EPA) PCB website page, www.epa.gov/pcp/
- EPA Monitoring and Assessing Water Quality, Fecal Bacteria website page, www.epa.gov/volunteer/stream/vms511.html
- EPA Persistent Bioaccumulative and Toxic (PBT) Chemical Program website page, www.epa.gov/pbt/pubs/aldrin.htm
- EPA Stormwater Program website page, http://cfpub.epa.gov/npdes/home.cfm?program_id=6
- Papillion Creek Watershed Project, funded by the EPA, www.papillioncreek.org
- University of Nebraska-Lincoln Extension in Douglas and Sarpy Counties, Watershed News and Views Winter 2006, http://douglas-sarpy.unl.edu/cl/2006_winter_news.shtml

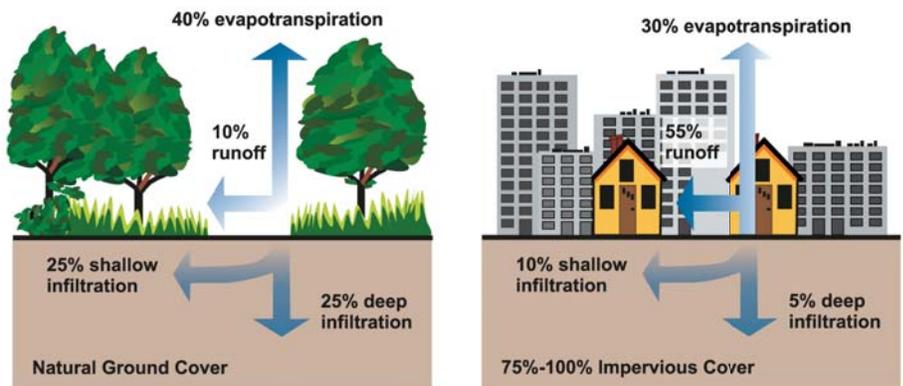


Illustration from the EPA. Urbanization leads to more water runoff. Less water is absorbed by the land and filtered by natural processes.

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**Papillion Creek
Watershed Partnership**
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