



# Think The WATER In Your Creek Is CLEAN?

## What is in Your Stormwater?

*Stormwater is the runoff that occurs when it rains or snow melts. As water flows over impervious surfaces like driveways, sidewalks, and streets, it can pick up debris, chemicals, dirt, and other pollutants. This runoff flows into storm sewers or directly into the creeks, rivers, and lakes we use for fishing, swimming, and providing drinking water. In developed areas, storm sewers simply convey stormwater runoff away from locations where it started flowing and direct it, without treatment, into nearby creeks, rivers, and lakes.*

## How Much Stormwater Do We Make?

Roads, pavement and rooftops keep us dry and make life easier but, they are also common sources of stormwater runoff. Imagine how much runoff all the rooftops and roads in Sedgwick County generate. The table below provides an illustration of how much runoff is generated by an average rooftop and 1-acre of pavement.

Potential Runoff	1,200 ft <sup>2</sup> Roof	1-acre of Pavement
1 inch of rain or snow melt	748 gallons	27,150 gallons
Wichita (30.38 inches/year*)	22,724 gallons	824,817 gallons

\*Average Annual Precipitation

*Did you know that an Olympic-size swimming pool holds 660,000 gallons of water? Compared to this, 1-acre of pavement generates enough stormwater runoff to fill 1.2 Olympic-size swimming pools.*

## What is Stormwater Costing You?

Communities within Sedgwick County currently spend approximately \$10.0 million annually to manage stormwater. This includes paying debt service for stormwater improvements, cleaning storm lines, repairing storm sewers, and maintaining creek channels. This means that the County is spending \$20 per person just to manage

stormwater. Given the back log of projects, and the need for maintenance and repair, it also means that stormwater capital and operational needs exceed available funding. By implementing stormwater projects at the local and regional level, the County could reduce future spending while reducing flood risk and improving water quality for everyone.



Sedgwick County...  
working for you

## How Does Stormwater Affect Your Community's Water Quality?

The primary cause of water quality problems in the U.S. today is from nonpoint source pollution according to the U.S. Environmental Protection Agency (EPA). This is the stormwater runoff that picks up debris and pollutants as it runs over land, eventually depositing it into creeks, rivers, and lakes, or even into groundwater.



*Did you know that just one quart of oil can contaminate 1-million gallons of clean water?*

## How Does Stormwater Impact Your Creeks and Rivers?

Stormwater runoff impacts creeks and rivers by creating higher water flows during storm events and much lower flows during the dry seasons of the year. High flows have more energy that results in erosion of stream channels and scouring of stream beds. Low flows result in problems for fish and other important aquatic plants and animals that depend upon water for their survival.

The Arkansas River provides an excellent illustration of the impacts of stormwater. The greatest flows and depths in the river occur during the spring through early summer followed by extremely low flows in mid-summer that change the river into a creek in areas like Hutchison, north of Wichita. The amount of water in the river directly impacts people's ability to enjoy the river for recreation or events like Riverfest.

Polluted stormwater runoff can have many adverse impacts on plants, animals, and people.

- Debris – plastic bags, bottles, and cigarette butts washed into creeks, rivers, and lakes can choke, suffocate, or disable aquatic life like ducks, fish, turtles, and birds.
- Household hazardous waste – insecticides, pesticides, fertilizers, paint, solvents, used motor oil, and other auto fluids can poison aquatic life. Land animals and people can become sick or die from eating diseased fish or ingesting polluted water.
- Bacteria and pathogens – can wash into swimming areas and create health hazards, often making beach or boat ramp closures necessary.
- Excess nutrients – can cause algal blooms. When the algae die, the decomposition process removes oxygen from the water causing problems for fish and other aquatic animals.
- Sediment – can cloud the water and make it difficult or impossible for aquatic plants to grow. Sediment can also destroy aquatic habitats.
- Drinking water – stormwater can affect drinking water sources which can in turn affect human health and greatly increase costs associated with treating the water.

*The primary cause of water quality problems is stormwater runoff that picks up debris and pollutants, depositing them into our water!*