

City of Cañon City  
Engineering Dept.

# Stormwater Management Program News

**RESIDENTIAL  
EDITION**



## **STORMWATER HOTLINE**

**276-5265**

CALL THIS NUMBER IF YOU WITNESS AN ILLICIT DISCHARGE!

REMEMBER: NOTHING BUT RAIN IN THE STORMDRAIN!

### STORMWATER UTILITY FEE

In 1998, a Citizen's Stormwater Advisory Committee recommended that City Council create a stormwater utility to generate funds for stormwater facility maintenance, construction, and State and Federal Clean Water Quality mandates.

In 2004 the City Council adopted Ordinance No.22 creating a Stormwater Utility Fee providing funding for implementation of the City's federally mandated MS4 permit requirements which regulate stormwater quality to protect streams and rivers.

Because "*impervious surface*" is the primary contributor to polluted urban runoff, the fee is equitably based upon the extent of impervious surface found on a tract of land.

Impervious surface is best defined as any surface which inhibits precipitation from directly percolating through the soil and into groundwater. Examples include pavement, sidewalks, buildings and lined gravel beds.

### **City Ordinance Prohibits Illicit Discharges**

**Illicit Discharge:** is defined as direct or indirect release of pollutants into the City's Storm Sewer System, including gutters!.

City Ordinance provides enforcement and civil penalties of up to

**\$250 per violation per day!**

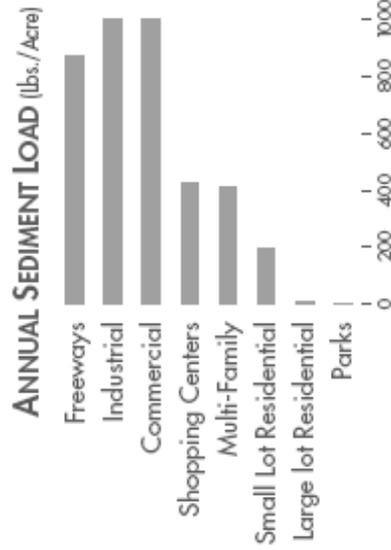
## Managing Urban Stormwater Runoff

### How Urbanized Areas Affect Water Quality

Urban runoff is a significant issue because urban areas have impervious surfaces. That means more water runs off instead of soaking in to the ground. Picked up as water passes over impervious surface, some of the pollutants found in urban runoff are sediment, metals, nutrients, oxygen demanding materials, and bacteria. In this issue we will focus on nutrients, Oxygen Demanding Material, sediment and bacteria.

### Sediment

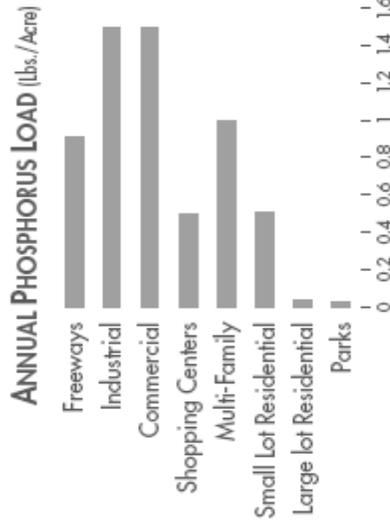
Urban runoff is loaded with sediment. Besides the dirt you see in the streets and gutters, urban areas produce their own distinctive mix of sediment. It includes flakes of metal from rusting vehicles, particles from vehicle exhaust, bits of tires and brake linings. The leading sources of sediment in existing urban areas are industrial sites, commercial development



## THE CITY OF CAÑON CITY STORMWATER MANAGEMENT PROGRAM MISSION IS TO PROTECT THE WATER QUALITY OF THE ARKANSAS RIVER FROM POLLUTANTS FOUND IN URBAN STORMWATER RUNOFF

### Bacteria

The levels of bacteria found in urban runoff almost always exceed public health standards for recreational



swimming and wading. Generally, fecal coliform bacteria counts for urban runoff are 20 to 40 times higher than the health standard for swimming. Research shows these high levels of bacteria are typical of runoff from small as well as large cities. Sources of bacteria in urban runoff include sanitary sewer overflows, pets, and populations of urban wildlife such as pigeons, geese and deer

and highways. But by far the highest loads of sediment come from areas under construction. Two factors account for the large amount of sediment coming from construction sites — high erosion rates and high delivery rates. Construction sites have high *erosion rates* because they are usually stripped of vegetation and topsoil for a year or more. Without erosion and sediment controls in place, typical erosion rates for construction sites are 35 tons to 45 tons per acre per year. Even more importantly, construction sites have very high *delivery rates*. During the first phase of construction, the land is graded and ditches or storm sewers are installed to provide good drainage. This also provides an efficient delivery system for pollutants

### Nutrients

Runoff from both urban and rural areas is loaded with nutrients such as phosphorus and nitrogen. **Phosphorus** is the nutrient of greatest concern because it promotes weed and algae growth in streams. Because phosphorus compounds attach to soil particles, areas with high sediment loads also produce high phosphorus loads. This means that construction sites are significant sources of phosphorus as well as sediment. Other sources of phosphorus include fertilizer spills, leaves and grass left on paved areas, and orthophosphate in vehicle exhaust.