

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.

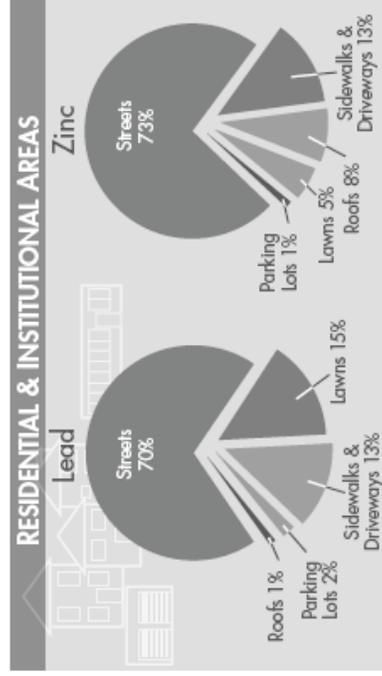
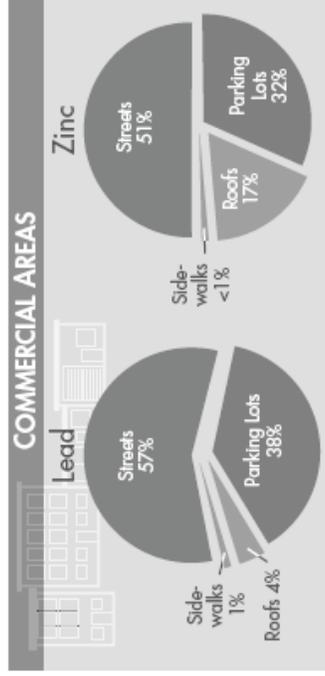
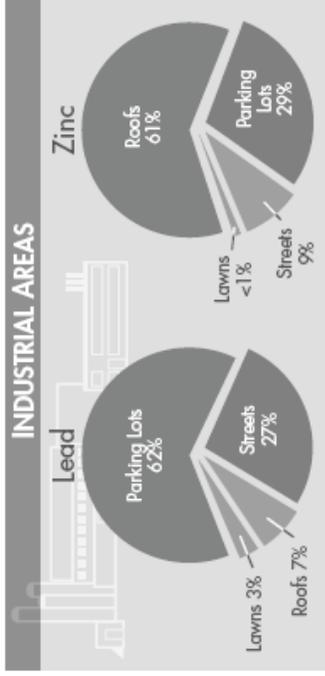
City Ordinance Prohibits Illicit Discharges

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!

Sources of Total Lead and Zinc in Urban Runoff



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Stormwater Management Program News

COMMERCIAL EDITION



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 toxic pollutants such as metals, pesticides and other chemicals.

Toxic Pollutants

One of the special challenges of urban watersheds is toxic pollution. Toxic pollutants are substances that may cause death, disease or birth defects or that may interfere with reproduction, child development or disease resistance. The toxic pollutants of most concern in urban runoff are metals, pesticides, polychlorinated biphenyls (PCBs) and polycyclic aromatic hydrocarbons (PAHs).

Metals

Lead has historically been used as an “indicator” for other toxic pollutants in urban stormwater because it is relatively easy to monitor and its dangers are well documented. Lead is a problem for both humans and aquatic life. Its human health effects include damage to the nervous system and kidneys, high blood pressure

and digestive disorders. Lead can also be toxic to aquatic life. Although lead levels in runoff still occasionally exceed water quality standards, they are much lower today than they were before the shift to unleaded gasoline. **Zinc** is another metal in urban runoff which commonly violates water quality standards.

While zinc does not create human health problems, it can be toxic to aquatic life. The primary source of many metals in urban runoff is vehicle traffic. Concentrations of zinc, cadmium, chromium and lead appear to be directly correlated with the volume of traffic on streets that drain into a storm sewer system. Streets and parking lots are the primary sources of lead in urban areas. Roofs can also be a significant source of metals. Galvanized metal rooftops, gutters and downspouts are the primary source of zinc (61%) in industrial areas where downspouts discharge onto pavement or directly into storm sewers. Roofs are a less significant source of zinc (8%) in residential areas where downspouts discharge onto lawns.

Pesticides

Stormwater monitoring indicates the presence of many pesticides in urban runoff. However, how they got there is currently the subject of some debate. Tests indicate that most properly

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

applied pesticides are bound up in plants and soil; therefore, little runs off. Nevertheless, pesticides are frequently found in urban runoff at levels that violate surface and/or ground water quality standards. Common **lawn and garden insecticides** such as diazinon and malathion may not be persistent in the environment, but they are toxic to bees, fish, aquatic insects, and other wildlife. Diazinon is especially toxic to birds. It has been banned from golf courses because there are documented cases of waterfowl dying while feeding on areas treated with diazinon.

Other Chemicals

Other potentially toxic chemicals found in urban runoff have such long names that we commonly refer to them by their initials. Some of these chemicals are hazardous even in very small doses and require water quality standards set to parts per *billion*. Because sampling for these chemicals can be difficult and costly, information on them is very limited. Monitoring of urban runoff suggests that two groups of chemicals are present in large enough concentrations to be of concern — PAHs and PCBs.

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