Managing Stormwater

Changes and Challenges in Carrollton

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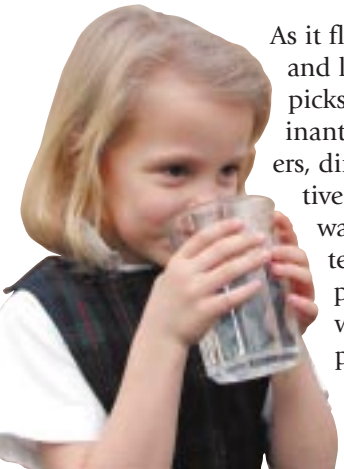
Carrollton is a city with an abundance of creeks and ponds. Our waterways support a wealth of wildlife and aquatic habitat, and provide us with a glimpse of nature in the midst of an urban setting. Clean water is a vital resource and the common denominator of any healthy environment. As a growing community, we are faced with new ecological challenges and responsibilities. Protecting the quality of our water resources is at the top of the list.

The Stormwater Story

Today, we know that stormwater pollution is one of the biggest threats to the health of our creeks. In urban areas like Carrollton the problem is magnified by widespread development, which puts a lot of stress on the environment. By converting land from an undisturbed condition to a developed state we have covered the natural landscape with roads, rooftops and parking lots. Rainwater that used to soak into the ground now becomes urban runoff—a mixture of rain and assorted pollutants.

The Pollution Picture



As it flows over our streets and lawns, urban runoff picks up all sorts of contaminants like pesticides, fertilizers, dirt, detergents, automotive fluids and paint. Pet waste, grass clippings, litter and debris are also a problem. Basically, whatever we dump, pour, spill, leak, drain or discard onto the ground eventually winds up in urban runoff. This polluted rainwater flows into the city's storm sewer system. What's wrong with that?

Follow the Flow

Many people believe that once the runoff enters the storm drain, it flows to the wastewater treatment plant. **Not true!** Instead, storm sewers discharge the polluted water into the nearest river, creek or pond. Did you know that in Carrollton, creeks flow into the Trinity River . . . our main source of drinking water? The result can be a **real mess**.

6 minimum measures

Enter the EPA

To decrease the amount of pollution reaching our surface waters, the U.S. Environmental Protection Agency has issued new stormwater regulations. They are designed to guide urban areas, such as Carrollton, in efforts to keep our waterways clean. The ultimate goal is to reduce stormwater pollution to the "**maximum extent practicable**." How will we do this?

Laying the Foundation

The EPA has established the foundation for our Stormwater Management Program. As a regulated city, we must build our program around six minimum measures.

1 Public Education and Outreach

Develop a program to **educate** our community about stormwater impacts on our creeks and ponds, plus inform residents how they can help **prevent** stormwater pollution.

2 Public Participation and Involvement

Give the public—that's **you**—opportunities to participate in the development and implementation of the stormwater program. This is your **opportunity** to be heard. Express your opinions. Share ideas. We encourage you to get involved and "spread the word."

3 Illicit Discharge Detection and Elimination

We must develop a plan to locate and **stop illegal discharges** into storm sewers. In addition, we are required to map the storm sewer system, identifying all major inlets and outfalls. This will show where stormwater enters and exits the system and help isolate sources of pollution. Adding a geographical dimension to water quality data provides us with a sophisticated management tool to visualize, analyze and track changes.

4 Construction Site Runoff Controls

Construction sites are the biggest contributors of a major stormwater contaminant—**dirt**. To reduce the impacts of silted runoff on local waterways, developers must implement and maintain erosion and sediment controls. Routine inspections will ensure that pollution controls are established and preserved throughout development.

Why is dirt so bad?

- Silted runoff is highly turbid or "cloudy." It's like an underwater dust storm, which clogs fish gills and interferes with photosynthesis.
- As it settles, it can smother fish eggs and other bottom dwelling organisms.
- Soil acts like velcro, picking up other pollutants as it's washed into our waterways.
- Silt settles out in slow moving sections of streams, which can lead to flood concerns, or it winds up in lakes and ponds, which may necessitate expensive dredging.

5 Post-Construction Runoff Controls

Create a program requiring new and redevelopment projects to utilize **environmentally friendly** designs, minimizing ecological impacts over the long-term. Some examples of this policy include:

- Grass swales instead of concrete ditches—grass, unlike concrete, gives rain a chance to soak in
- Vegetated buffer strips—stabilize creek banks and help filter pollutants
- Detention ponds—allow pollutants to settle out before reaching the creek

6 Pollution Prevention and Good Housekeeping

Finally, we must set the example by making sure our "house" is in order. We're examining city operations and **changing** the way we do things to minimize our contribution to stormwater pollution.

Pollution Solution

Clean water is an inviting, soothing, life-giving natural resource. As stewards of the environment, we all share in the responsibility of keeping our waterways clean. The creation of a Stormwater Management Program requires a community effort. It's a huge challenge, but in Carrollton we're serious about being a part of the pollution solution. Contaminated stormwater runoff threatens our health and the environment. Please join us as we strive to keep our creeks and ponds pollution-free for generations to come.

CARROLLTON

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