

# Water Watch



## Flood Prevention

The mission of the City of Orem's Storm Sewer Utility is to properly manage the quantity and quality of storm water runoff in the City. This article shares ways in which the City tries to handle the quantity of storm water runoff that can be generated during storm events.

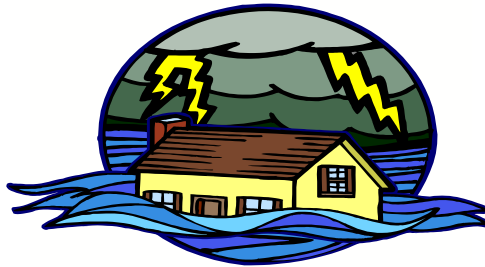
Though we live in a dry climate, the City of Orem occasionally sees flooding. These events can lead to injury, illness and property damage.

There are two types of flooding, nuisance flooding and serious flooding. Nuisance flooding is when water makes puddles in streets. These puddles can be annoying, but as long as drivers are careful, there is no real threat of property damage or injury from the backing water. Ponding, even to the extent that the water backs up onto yards, falls into this category. All other flooding could be termed as serious flooding.

The City's goals towards flooding are to prevent damage from serious flooding and lessen the inconvenience of nuisance flooding. To this end, storm sewer systems that are installed in City streets are designed to handle 10-year storms. A 10-year storm is a storm event that has a

10% chance of being equaled or exceeded in any given year. (About one inch of rain in one hour).

The City also gives a great deal of attention to keeping the storm sewer system in proper working order. Four major activities undertaken to prevent flooding are: 1) constructing new storm water structures; 2) replacing failing storm water structures; 3) cleaning storm water structures; and 4) sweeping streets.



### Constructing Storm Water Structures

In 1998, the City adopted a Storm Drainage Master Plan. This document guides the construction of new storm drainage projects. It also delineates which existing systems are not large enough to adequately handle storm water runoff. Through coordination with other City departments, the Storm Sewer Utility ensures that these undersized systems

are replaced as streets and other City infrastructure are repaired.

### Replacing Storm Water Structures

During storm events we learn a lot about the condition of sumps and storm water pipes throughout the City. As we find inlets that back up and cause flooding, we schedule those sites to be cleaned or rebuilt. Each year the city installs or replaces about 20 sumps out of the approximately 1,800 we maintain.

### Cleaning Storm Water Structures

As the weather warms up, the Storm Sewer Utility sends out two crews in specially equipped vehicles called vacuum trucks. These crews are sent to clean sumps, inlets and pipes. They do this by shooting high pressure water into storm water structures. They then suck out all the mud, debris and water, leaving the inlets clean and ready to accept water from the next storm. Each year the City cleans about 25% of these structures, which greatly increases their effectiveness and extends their useful life.

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If you wouldn't drink it, don't dump it!

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## Sweeping Streets

One of the biggest problems for the City's storm drainage system is the amount of dirt and debris that washes into them. To help keep dirt out of storm drains, the City owns and operates three street sweepers. They are able to clean every City-owned street about nine times each year.

## What Can You Do To Help

Some helpful things Orem residents can do to help prevent flooding are:

- Don't litter
- Sweep out gutters
- Collect fallen leaves
- Keep grass clippings out of gutters
- Don't place topsoil or other landscaping materials on streets
- Never cover a storm drain
- Clean out existing driveway culverts

Next issue of WaterWatch we will discuss how the City addresses concerns with the quality of storm water runoff.

## Pesticide Use—Part 3

In our last issue, we discussed mechanical and chemical control of weeds as well as tips for proper pesticide application.

### Handling Pesticides Properly

1. Don't buy more pesticide than you need. Disposal can be a problem.
2. Store pesticides where children and pets can't get at them.
3. Never dispose of excess pesticides by dumping them on the ground. While pesticides are broken down to non-toxic compounds by microorganisms, excessive amounts applied to soil can "overload" this natural system and contaminate drinking water.
4. Consider sharing leftover pesticides with neighbors. (The pesticides must be in their original containers and registered for use in our area.) If you cannot give them away, apply them later according to label instructions.
5. Never dispose of unwanted pesticides in a ditch, gutter or storm drain. Such practices allow the hazardous chemicals to move directly into streams and lakes where they can harm fish and wildlife. In addition, pesticides dumped down the household drain can kill beneficial organisms that help purify the waste water in treatment plants or a septic system.
6. When a pesticide container is empty, fill it with water three times, each time pouring the rinse water into the spray tank when preparing the final application. Triple-rinsing is important because some chemical

residues may remain in a container even though it appears empty.

7. Dispose of empty triple-rinsed containers as instructed on the label. Small containers can be wrapped in layers of newspaper or in a plastic bag and placed in the garbage on the day of pickup. Never burn or bury empty pesticide containers. The fumes from burning pesticide residues can be toxic. Buried containers could leak pesticides into drinking water.



### Consider This Principle of Ecology

Everything is linked to everything else. Because of this, pesticides can often have unintended consequences. For example, don't be surprised if songbirds leave your yard after pesticides have been sprayed. Many birds are directly harmed by pesticides; others leave because the insects they feed on have been killed.

### Pesticide Application

When pests invade lawns and gardens consider the full range of pest control options. In many cases pesticides will not be necessary. When pesticides must be used, follow label directions carefully to minimize harm to people and beneficial plants and animals. For more information on alternative pest control methods, and proper application and disposal of pesticides, contact the Utah State University Extension at 851-8460.

Source: *Yard Care And The Environment* by the West Valley City Storm Water Utility

