

# Piper's Creek Watershed Annual Status Report 2008

WALTER  
The Water Drop  
IN  
STATE OF  
THE  
~~WATERS~~  
Walters

Okay,  
Lil' Drippers ...

... let's take  
what we've learned on  
a field trip through the  
watershed. Commence  
precipitation!

Aw Snaps, Drips!  
Here's a neighbor using  
nasty chemicals to treat her  
thirsty non-native  
plants!

And here's a neighbor  
who tends his native  
trees and shrubs without  
chemicals ...

... the bad bugs  
die, sure, but so do the  
good ones ...

... and  
catches his rain in a  
rain barrel ...

... and those  
chemicals get washed  
by rain down storm drains  
and into Piper's Creek  
untreated.

But look, she  
does clean up after her  
dog - so that doesn't  
go to our creek.

But yikes!  
His car is leaking  
oil!

Solid work on the  
push mower, friend!  
But fix that car leak so oil  
doesn't go from the street  
to the creek.

I guess everyone  
can do more  
to help, Walter ...

Right on!

PIPER'S  
CREEK

# What Is The Piper's Creek Watershed and Why Does It Have a Status Report?

The Piper's Creek Watershed is a drainage basin in the northwest corner of the City of Seattle including parts of the Greenwood, Crown Hill, Broadview, and Blue Ridge neighborhoods. Although some water comes from underground springs, most of the water in Piper's Creek (in Carkeek Park) comes from stormwater (rain & snow) running off the roofs and pavement in these neighborhoods. In 1990, after three years of work, a dedicated committee, including representatives from community groups, State agencies, and County and City departments, completed the Piper's Creek Watershed Action Plan. Since then, the work directed by this plan has resulted in many improvements in the Piper's Creek Watershed. This Status Report outlines the condition of the watershed each year, and introduces ways in which you can be involved.

## The Piper's Creek Watershed Status Report, 2008

The latest news is out — Seattle's urban waters need your help — not the water that we drink, but the water that surrounds us, from Lake Washington to Puget Sound. Two new documents, *State of the Waters 2007* and *A Science Framework for Ecological Health in Seattle's Streams* (prepared by SPU and Stillwater Sciences and available at the SPU website) show us what's gone wrong, what's gone right, and how we can continue to improve. Each document includes a large investigation of our creek, Piper's Creek: home to Chum and Coho salmon, cutthroat trout, river otters, numerous bird species, and a wide variety of native vegetation. According to the reports, it seems that the very things that make Piper's Creek and Carkeek Park a quiet, restive, and meaningful space are in need of our assistance and care. Let's take a moment to discuss the results of these recent studies. We'll find out what they mean for our watershed, our homes, and our lives — and how simple it is to modify our everyday behaviors in ways that will preserve and protect a wild, natural place like Carkeek Park: an increasingly valuable asset as untouched space in our city dwindles.

## A Report Card For Seattle's Five Major Creeks

Scientists and specialists throughout SPU have made significant conclusions concerning our creeks. Included in their *State of the Waters 2007* study is the report card seen at right. It shows us how each of our major creeks score in selected categories. These categories are decisive indicators of habitat health and water quality. Take a look at how Piper's Creek compares with the rest of Seattle's creeks.

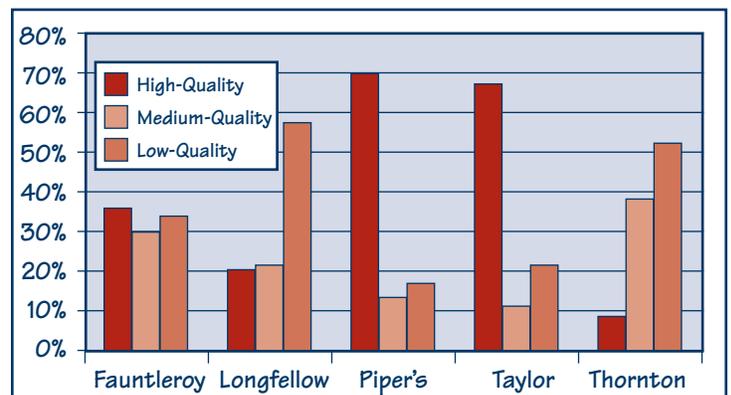
	Stream Flow	Oxygen/Temp	Bacteria	Toxics	Riparian Habitat	Instream Habitat	Fish Access
Fauntleroy	Poor	Moderate	Moderate	Moderate	Moderate	Moderate	Moderate
Longfellow	Poor	Poor	Poor	Moderate	Poor	Moderate	Moderate
Piper's	Poor	Moderate	Poor	Poor	Good	Good	Moderate
Taylor	Poor	N/A	N/A	N/A	Good	Good	Poor
Thornton	Moderate	Poor	Poor	Moderate	Poor	Poor	Moderate

## Now It's Time For The Breakdown ... Let's Start With The Good Stuff

According to the reports, habitat in and around Piper's Creek is doing fairly well. Take a closer look below.

In the graph at right, the bars represent different grades of riparian habitat health (high, medium, and low-quality, respectively.) Because a large part of Piper's Creek is surrounded by Carkeek Park, and is thus bordered by a large area of native forest, 70% of the land next to the creek is considered "high-quality." (Where the creek stretches outside the park is where we see medium and low-quality areas.) High-quality riparian health is important to salmon survival because mature forests naturally restore and retain essential creek properties such as water filtration (by rich soils), temperature regulation (from tree shade), and erosion control (from root systems).

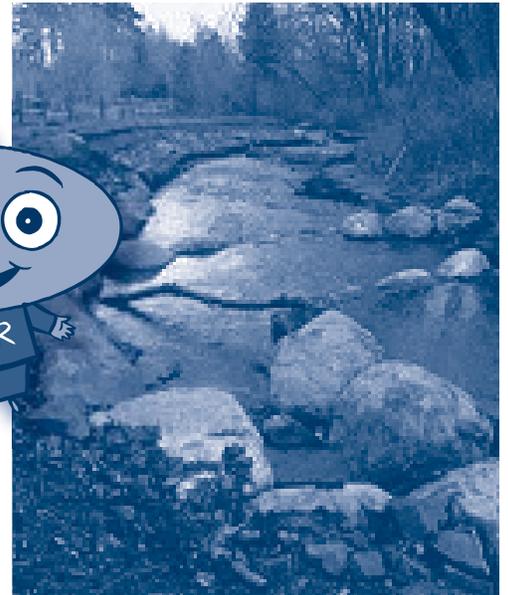
**Riparian Habitat**  
(Habitat within 200 feet of a Creek, Stream, or River)



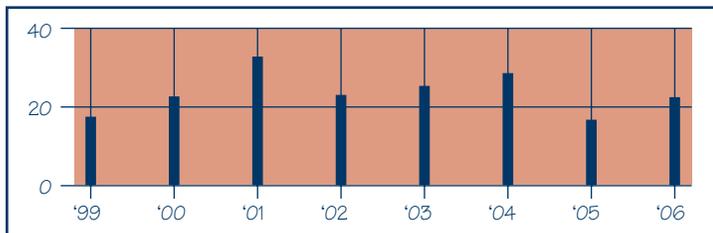
## More Good Stuff...

### Dissolved Oxygen and Temperature in Piper's Creek

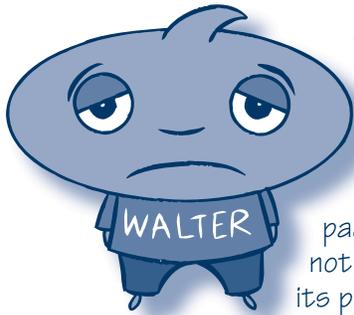
Just as humans need certain levels of oxygen and temperature to survive, so too do salmon. For salmon, high levels of oxygen and temperatures below 55-60 degrees Fahrenheit are important. According to the *State of the Waters 2007* report, Piper's Creek has met Washington State Standards for dissolved oxygen since 1997, and temperature standards since 1988. A lot of this has to do with the hard work done by community organizations and individuals. By volunteering for riparian, park, and in-stream restoration projects, members of our community help assure that salmon and people alike have a better place to visit. To find out how you can get involved, call Carkeek Park 206-684-0877 or Bob Spencer with Seattle Creek Stewards at 206-684-4163.



### Water Quality Complaints



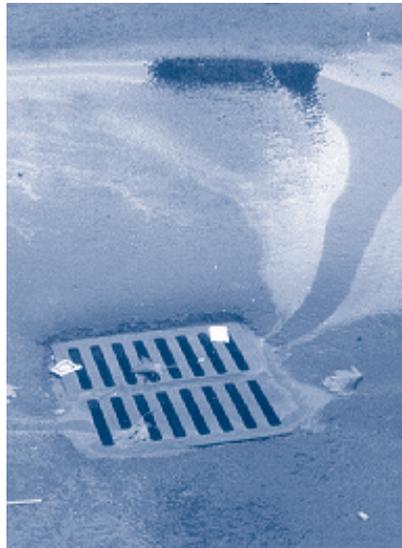
Last year, local residents called in 21 water quality concerns. These calls help prevent harmful substances and activities from affecting Piper's Creek. If notified, Water Quality investigators can locate the source of a problem, and consequently provide education, technical assistance, or initiate legal action. That number is 206-684-7587.



## And Now For The Not-So-Good News...

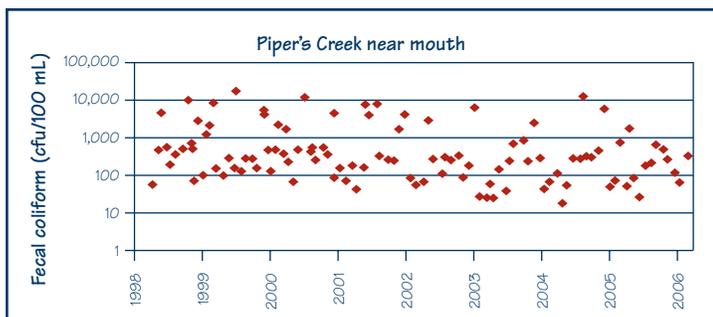
Fecal coliform is bacteria present in the feces of warm-blooded animals (see page 4). Although it is not harmful on its own, its presence in water can indicate contamination from

other unhealthy microorganisms. The graph below shows how many bacterial colonies (cfu) were found per 100 milliliters (mL) of water in Piper's Creek between 1998 and 2006. (100 mL is roughly equivalent to 1/3 of a can of soda.) The Washington Dept of Ecology has classified Piper's Creek as a class AA, as such, these levels should stay mostly below 50 colonies/100mL.



Each fall, hundreds of Coho and Chum salmon return to Carkeek Park. Of late, a troubling trend has begun here as well as in other Seattle creeks. Referred to by scientists as Pre-Spawn Mortality (PSM) — a condition where adult salmon die after they enter the creek, but before they are able to spawn — this affliction has been measured since 1999 and occurs to an average of 58% of the Coho that enter Piper's Creek. (Strangely, PSM affects only 2-4% of Chum.)

### Fecal Coliform Levels



### Coho Pre-Spawn Mortality

Year	Spawmed females	Unspawmed females	Female carcasses	Females of known spawning condition	PSM (%)
1999	0	4	4	4	100%
2000	14	3	18	17	18%
2001	13	32	70	45	71%
2002	4	6	18	10	60%
2003	1	0	1	1	N/A
2004	2	1	4	3	N/A
2005	1	3	15	4	75%
Totals	35	49	130	84	58%

## How Can You Help?

Let's break it down problem by problem...

### Fecal Coliform

This bacteria poses a number of problems because its presence indicates a human health hazard; as well, it is potentially harmful to fish, insects, and other animals living in or near Piper's Creek.

Preliminary tracking studies done in 1993 — designed to match the bacteria with the exact animal from which it came — suggest that the major sources of contamination in Piper's Creek are pets, birds, raccoons and squirrels.

### How can we solve this problem responsibly?

**1) We can clean up after our pets every time, even when we're not in the park.** The water that goes into the storm drains in our neighborhoods does not get treated before it goes into Piper's Creek and Carkeek Park. That means, if pet waste is not cleaned up in our neighborhoods, we may come into contact with it when visiting the park.

**2) Keep your dog on leash when in the park.** This ensures you know where and when your pet is going.

**3) Don't feed the crows, gulls, ducks, raccoons, or squirrels!** By feeding wild animals we are overloading a natural system. Carkeek Park's habitat is naturally equipped to handle the waste from the food it provides in the form of vegetation, berries, seeds, etc. If we add unnatural food sources to this system we are also overloading the system with waste. This extra waste then contaminates the waterway. Remember, failing to properly dispose of your trash is the same as feeding an animal. (Stay tuned for more information on this problem. Another fecal coliform tracking study starts this year!)

### Coho Pre-Spawn Mortality

The causes of Pre-Spawn Mortality are less clear. After years of study, NOAA Fisheries scientists are still struggling to answer the question of why fish are dying in Seattle.

At present, their best guess is that Coho are being fatally affected by a "cocktail" of contaminants. (Heavy metals, chemicals, toxins, and bacteria all found in our urban waters.) No matter what the cause however, fish die-off is an indication that we are doing something wrong. Let's make a list of what to do:

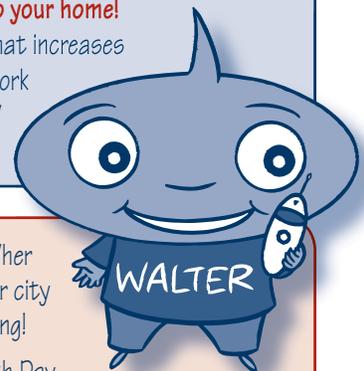
**1) There are heavy metals in Piper's Creek! Drive less! Fix car leaks!** Lead, mercury, and other metals fall on our streets every time we press our brakes. They come from exhaust and engine leaks too. The less you drive and the more you bus and bike, the more you do to save money for yourself, and the health of our waters. (Also, dispose of batteries, electronics, paint, and household cleaners properly.)

**2) Use natural yard care practices!** Non-chemical fertilizers and lawn products keep excessive nitrogen and harmful chemicals out of our streams.

**3) Wash your car at a car wash!** A 2006 study shows that common car washing products are more lethal to fish than originally thought. Taking your vehicle to a car wash ensures that soapy, grimy water gets treated and reused rather than funneled to a creek or Puget Sound.

**4) Catch your rain in a rain barrel!** Call SPU at 206-684-0190.

**5) Consider low impact improvements to your home!** Low impact development is a new trend that increases property value and helps our watershed work like it used to. Check out [www.seattle.gov/dpd/greenbuilding](http://www.seattle.gov/dpd/greenbuilding) for more.



## Get Involved!

By volunteering in the park and being involved in your community, you assist in making Piper's Creek healthier for both the people and animals who use it. If you've been looking for ways to get involved in park projects, consider joining these on-going programs that always welcome helping hands:

**1) Creek Steward Program.** Seattle Public Utilities offers scheduled habitat restoration events and grants for your projects in your watershed. Call 206-684-4163.

**2) Storm Drain Stenciling.** Help your community learn about watersheds and which storm drains funnel untreated water to creeks. Call Carkeek Park or 206-684-7624 for a kit and more info.

**3) Salmon in the Schools and Land and Water Field Trips.** 1,900 Seattle students participated in these unique programs last year

alone. Your child may be raising fish in his/her classroom for release in Piper's or another city creek. Ask them about what they're learning!

**4) Earth Day 2008.** Make every day Earth Day by doing your part to help the watershed. Carkeek Park/Piper's Creek Earth Day event is April 19. Call 206-684-0877.

**5) Carkeek Park "STARS" (Stream, Trails, and Reforestation Stewards).** These work parties take place from 9am to 12:30pm on selected weekends throughout the year. Call 206-684-0877.

**6) Local Watershed Experts.** Housed year-round in the Carkeek Park Environmental Learning Center are watershed experts Beth and Bill. Call us anytime at 206-386-9154.

**7) Restore Our Waters (ROW).** Coming soon to a watershed near you! Look for ways to get involved in this new citywide initiative sponsored by SPU and Mayor Greg Nickels. Call Susan Harper at 206-386-9139.

## Piper's Creek Watershed Project

c/o Carkeek Park  
950 NW Carkeek Park Rd.  
Seattle, WA 98177

Email us...  
Beth.Miller@Seattle.Gov  
Bill.Malatinsky@Seattle.Gov

Seattle  
Public  
Utilities



## Need More Information On . . .

### . . . Natural Car Washing?

- Check out car washing alternatives at <http://greenoptions.com>
- Call 206-684-0877 to borrow our Fish-Friendly Car Wash Kit for your next car washing fundraiser

### . . . Planting and Chemical-Free Care for Native Plants?

- Getting started with Native Plants in Seattle and Bellevue: <http://depts.washington.edu/propplnt/Chapters/SeattleBellevue.htm>
- Non-pesticide care for native plants: [www.watoxics.org](http://www.watoxics.org) or call the Natural Lawn & Garden Hotline 206-633-0224

### . . . Disposing of Batteries, Light Bulbs, Paint, etc.?

- Check out this great King County Database: <http://www.metrokc.gov/dnrp/swd/wdidw>
- Call the King County Solid Waste Info Hotline 206-296-4466

### . . . Car or Vanpooling?

- Check out this site to get started: [www.rideshareonline.com](http://www.rideshareonline.com) or call Rideshare at 1-888-814-1300

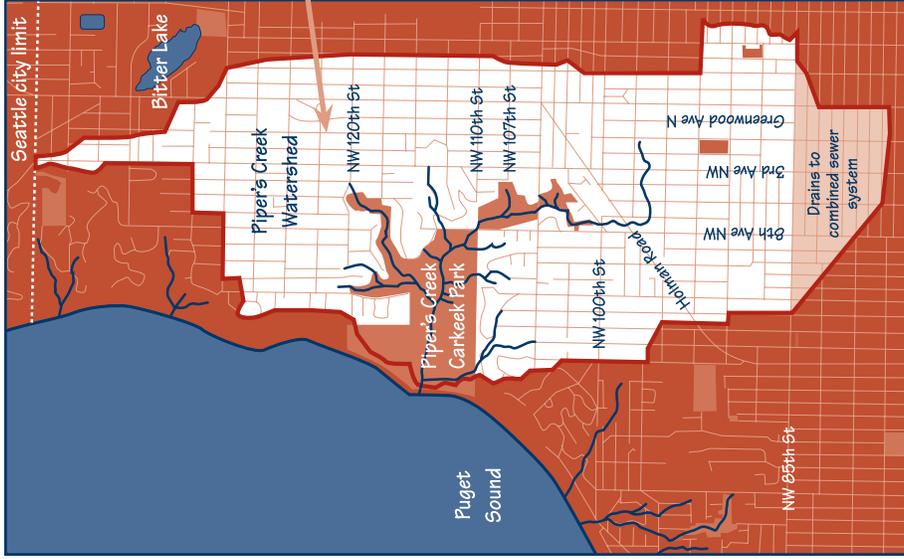
### . . . Getting "Paid" to Sell One of Your Cars?

- Before you sell your car, visit [www.seattle.gov/waytogo/onelesscar.htm](http://www.seattle.gov/waytogo/onelesscar.htm)

### . . . Living Green?

- Check out the Carkeek Park website!! We're continually adding classes and events that help you take your next green step: [www.seattle.gov/parks/environment/Carkeek.htm](http://www.seattle.gov/parks/environment/Carkeek.htm)
- Seattle Public Utilities has some great ideas and incentives too: [www.seattle.gov/util/services](http://www.seattle.gov/util/services)





## Seattle's Major Watersheds

A close-up of the Piper's Creek Watershed.

If you live within the white area, the water from your street goes down a storm drain...and into Piper's Creek...without ever being treated...

Seattle's major watersheds.

Each is outlined as shown around Piper's Creek (except for Fauntleroy.) In unmarked areas, storm-water passes through the sewerage system.

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