



ARE YOU WATER WISE?

By using a professional car wash
you conserve water and protect our
environment.

For information visit
www.wcwa.org



The Challenges of Change

In today's world, we face many changes especially environmentally. As never before, all of us are required—both our in our personal surroundings and in our communities—to pay attention to how we care for the environment, as well as the legacy we leave behind for generations to follow. We are challenged to change the way we live for the sake of creating a sustainable world.

As our collective environmental concerns developed we focused on the way we disposed of trash. Anti-litter ordinances lead the way to production of environmentally sensitive papers and plastics, which led the way to trash recycling bins and green waste bins.

The way we dispose of oil, flush our toilets, and take showers has changed over the years with mandated oil changing procedures, low flow toilets and shower heads.

It's now time to think about how we wash our cars and the impact home car washing has, as it depletes our water resources and pollutes our environment.

The Dirty Little Secret of Home Car Washing

Most car washing is being done at home with a hose and a bucket of soap in the driveway. A small percentage of residential car washers will use a hose with a trigger nozzle and wash their cars on more appropriate surfaces such as their lawn that will allow the water to seep into the soil, limiting the amount of water used and eliminating wastewater runoff into community wetlands, rivers, lakes and oceans.

However, the majority will wash their cars in their driveway with their garden hose using an average of 100 gallons or more of water. (*Studies indicate an average of 100 gallons of water flow thru a typical 5/8" garden hose every 10 minutes*). The runoff water then becomes wastewater mixed with soaps, road acids, brake dust, and other harmful contaminants.

Car washes average the following amount of water usage as indicated by the 2005 International Carwash Association's in-depth study "Water Use in the Car Wash Industry"

	Gallons per Vehicle			Evaporation & Carryout (%)		
	O	B	P	O	B	P
Self-Serve	16.0	15.2	12.3	22.9	33.2	19.8
In-Bay	24.6	40.0	72.5	29.8	28.6	32.8
Conveyor	34.3	26.7	43.8	15.1	16.1	16.7

O=Orlando; B=Boston; P=Phoenix

When wastewater is allowed to run freely down the driveway into the gutters, the water empties straight into the storm drain and straight into our community wetlands, rivers, lakes, and oceans.

Consumers, on average, are completely unaware of where wastewater from their residential car wash ends up. Why? Because most probably think that the outside water goes where the inside water goes—to a treatment plant of some sort. When asked about that black hole at the end of the street, consumers will most often refer to it as the sewer. If they only knew and understood that the water that enters the black hole at the end of the street flows into our waterways, most consumers would willingly adapt to change by washing their cars on their lawns using a trigger nozzle, or choose to use a professional car wash in the same way they choose to use a professional oil change center.

Professional Car Washing Offers an Ideal Alternative

All professional car washes use substantially less water than a typical home car wash and, most importantly, are mandated by all municipalities to dispose of the wastewater *only* thru the sanitary sewer system.

There are three different types of professional carwashes available: conveyor full service, self-serve coin-op, and roll over in-bay automatic (commonly found in gas stations). Professional car wash operators clean approximately 55% to 60% of registered vehicles on our Nation's roads. However, due to today's economic challenges, that number

has diminished with a approximately 50% of car owners choosing to wash their vehicles at home. Approximately 5% of car washing is being done by independent mobile car wash operators, who rarely use appropriate wastewater capture and disposal methods.

Why is this a concern to city, county and state officials as well as water purveyors? Because of the limited supplies of water in many communities *and* the impact on the environment due to the polluting of our waterways.

There is a myth believed by the public that professional car washers are water wasters and not the most environmentally friendly. This myth holds no water. Numerous studies have been done that indicate that professional car washers typically use far less water than the common residential car washer. Professional car washes are equipped with high-pressure, low flow nozzles that precisely control the amount of water used on a car. Many professional carwashes recycle their water and reuse it multiple times in the carwash process. Wastewater at the car wash is also treated prior to being released into the sewer system and in most cases, is cleaner than the average wastewater that is disposed to our Sanitary Sewer Systems.

Unveiling the Truth Regarding Residential Car Washing and Pollution—A Study You Can Use

The truth is out! Residential car washing pollutes this country's waterway and now one city—Federal Way, Washington—has the study to help other city officials across the nation do something about stormwater polluting.

For years, environmentalists have told the public that washing cars in the driveway is detrimental to local waterways. Federal Way city staff now has the numbers to prove it. *The Residential Car Washwater Monitoring Study*, published in July 2009, illustrates the connection between residential car washing, stormwater, local surface waters and the Puget Sound. Federal Way is a city located between Seattle and Tacoma, Washington—a state that takes protecting the local waterways very seriously and Federal Way City is no different. The city will use their findings from this study in consumer education to target preventing stormwater pollution.

The findings of this study clearly show the car wash industry using *LESS* water and *NOT* contributing to stormwater pollution. This study is one of the most powerful and important studies to affect the car wash industry in many years. This study can be used as a resource for any city, municipality, or carwash owner/operator who is facing drought restrictions or pollution issues. Federal Way may be a city in Washington State, but it could be

“Water is going to be the biggest environmental issue that we face in the 21st century, in terms of both quantity and quality”

—Christine Whitman 2001

Valencia, California or Denver, Colorado—water is water and pollution is pollution and this study provides valuable talking points regarding the proper way to wash a vehicle at home and the real “low-down” on what is the most environmentally sound way to wash a vehicle.

There is a national program, Phase II Municipal Stormwater Permit, which requires municipalities across our nation to put programs in place to manage pollution that is mixed in with stormwater discharge. The permit also requires the jurisdictions to reduce or eliminate stormwater pollution by educating the public. Your own local community is likely engaged with their own programs at this very time. This information and report might be very timely for your city and beneficial to you as you use it efficiently.

Because it was nearly impossible to get samples from individual driveway car wash occurrences, the City of Federal Way collected samples from five different weekend fundraising car wash events. These samples indicate some startling findings and make it easy to understand why a professional car wash is mandated to trap and only dispose of all wastewater runoff thru the municipal sewer system.

The Federal Way study indicated oil, phosphorous, ammonia, surfactants and solid wastes as the typical contaminants from residential car washing. Staff estimates

that the residents with an estimated 62,000 registered vehicles in the City of Federal Way annually deposit the following pollution loads into the city's stormwater drainage system:

- 190 gallons of gasoline, diesel and motor oil,
- 400 pounds of phosphorous and nitrogen,
- 60 pounds of ammonia,
- 2,200 pounds of surfactants and
- 30,000 pounds of solid wastes

Breaking the Federal Way study results down into pollution-generated-per-registered cars in their community provides a formula which you could use to determine the amount of pollution generated in your own community by residential car washing. You'll frequently be able to find the number of registered cars by calling your local city traffic department or your State Department of Motor Vehicles.

If you still cannot arrive at the number of registered vehicles, then you're relatively safe in using the following formula based on the population of your community: Multiply your population base by .688 to arrive at a national average of registered vehicles based on population. For Ex: 10,000 population = 6,880 registered vehicles.



Formula of pollution for every 10, 000 registered cars:

- 30.6 gallons of gasoline, diesel and motor oil per 10,000 registered cars.
- 64.51 pounds of phosphorous and nitrogen per 10,000 registered cars.
- 9.7 pounds of ammonia per 10,000 registered cars
- 355 pounds of surfactants per 10,000 registered cars
- 4,838 pounds of solid wastes per 10,000 registered cars

When you have multiplied these numbers out for your own community and determine the amount of pollution created by residential car washing, prepare a personal letter to accompany your findings and present your report with printed copies of the Federal Way Study to your city officials, stormwater regulators, and private environmental groups. Most public officials will become equally concerned when you provide a sum total of pollution coming from residential car washing and emphasize the fact according to the Federal EPA “*Water is going to be the biggest environmental issue that we face in terms of both quantity and quality*”, Christine Whitman 2001. The sooner we act to educate consumers the better off we all will be.

Follow the formula for your own community and determine the amount of pollution created by residential car washing. Prepare a letter to accompany your findings and present your report with printed copies of the Federal Way Study to your city officials, stormwater regulators, and private environmental groups. Most public officials will become equally concerned, as the City of Federal Way leaders did, when you provide a sum total of pollution coming from residential car washing.

Ask your local officials to support educating consumers about the pollution they create each and every time they wash their car in their driveway or at a charity event not located at a professional car wash facility. The majority of consumers don't know that with each driveway or parking lot car wash the dirty waste water flows to our natural wetlands environment carrying with it amounts of gasoline, diesel, motor oil, phosphorous, nitrogen, ammonia, surfactants (soaps) and solid waste. With the urgent need being created by local and federal environmental groups to protect the United States natural resources, if each city or water municipality added something as simple as an educational flyer to their monthly invoices—using the statistics you provided—imagine the change that could occur—a change you helped orchestrate.

How Western Carwash Association Members Are Protecting the Environment

The Western Carwash Association Water Conservation Certification Program (WCA/WCCP) is a tool for car wash owners/operators to maximize water conservation efforts at their car wash facilities. The purpose of the program is to educate water utility companies as to the benefits of professional car washing as it pertains to water conservation and protecting the environment. When implemented correctly the WCA/WCCP will recognize conservation efforts by professional car washes and provide an incentive to achieve and maintain these efforts.

In order to qualify for the WCA/WCCP, the WCA member car wash facility must be an existing business in full compliance with all current, local, state and federal laws and regulations. A licensed plumber or local water agency representative must inspect and complete a compliance check list outlining specific criteria (having a recycling water system in place, no visible water leaks, and that drought tolerant landscaping or drip system is used) a car wash facility must meet.

If the vehicle wash facility does not meet the WCCP criteria due to a lack of a reclaim system, due to age or physical limitations, the facility may qualify for the WCA Commercial Car Wash Best Management Recognition Program. If all criteria are met, WCA members will display the WCA/WCCP or Best Management Recognition program poster and/or window sticker at their facility.

Accepting the Challenge

We all want to protect our environment and the natural resources that sustain our way of life. When we start to understand the impact we have on our community's waterways, we will start taking the steps in making a profound difference in improving our waterways and perhaps start seeing far more car owners making the conscientious change to wash their vehicles at a professional car wash in their neighborhood.

To find out more about the City of Federal Way's *The Residential Car Washwater Monitoring Study*, the WCA/WCCP and the Commercial Car Wash Best Management Recognition program please visit the WCA Web site at www.wcwa.org.

Now is the time for each and every one of us to make a conscientious effort to accept the “Challenge of Change”. How we care for the environment will be the legacy we leave behind for generations to follow. It's up to us, now—not tomorrow!



950 Glenn Drive, Suite 150, Folsom, CA 95630
800.344.9274 | 916.235.4135 | 916.932.2209 fax
info@wcwa.org | www.wcwa.org