

AUSTRALIAN CAR WASH ASSOCIATION



CAR WASH CHEMICALS

The effect on the fish, animal and plant life of creeks, rivers, lakes and coastal waters if waste wash water is allowed to run into the urban stormwater systems

The range of chemicals used at commercial car washes is in the same range as chemicals used for general home cleaning purposes including home car washing.

Generally speaking these chemicals are considered to be “environmentally friendly” and biodegradable. But if they end up in our waterways, they are anything but friendly

Biodegradable means that organic compounds left in the waste water discharge are broken down and consumed by millions of micro-organisms (bacteria) in the water. Municipal waste treatment systems depend upon these biological methods to break down and consume the organic compounds (surfactants, oils, greases, solvents, dyes and fragrances) coming in for treatment. Once the bacteria have done their work, the cleaned and treated water can be safely discharged back into the waterway systems.

The problems arise when chemicals are released in waste water going directly into the stormwater system and untreated into the waterways. This occurs for instance if vehicles are washed on driveways or in the street, using soaps and chemicals to clean the vehicle.

The bacteria need oxygen, like all living things, and when the polluted water reaches the creek or river, the bacterial numbers increase very rapidly as the organic chemical food supply increases. The more bacteria are fed, the more oxygen they use. Soon the bacteria are taking more oxygen out of the water than can be replaced by the normal re-oxygenation through turbulence and general water activity.

Fish are deprived of the oxygen they need to breathe in the water and suffocate. The waters can become dark and sluggish, often with slime forming on the surface, and this further reduces the supply of oxygen to the aquatic environment. The entire ecosystem is adversely affected, making it difficult for the plants and animals to survive, and devaluing the amenity for the use of the local population.

Source document:

Environmentally friendly pollutants – what your detergent does to waterways

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After the big wet, spare a thought for the health of your waterways and the substances that wash into them.

Bacteria are important to the health of the waterways running through our backyards. As decomposers – organisms that break down substances – they are an essential part of a natural healthy ecosystem. These bacteria live on the substances that wash into the waterway.

While bacteria are small, what they lack in size they make up for in their numbers and how fast they grow. I often find millions in one millilitre of creek and river water, with bacterial populations doubling every 20 minutes.

Just like you and I, they need food and oxygen to breathe if they are to survive. The oxygen they take from the water. The natural flow of a healthy creek and river replaces the oxygen that the bacteria remove. We know that the more bacteria are fed the more oxygen they use. During storms, the pollutants washed from houses, farms and urban allotments into our waterways are a great source of food for these bacteria. Fortunately, the fast flowing water and turbulence keep plenty of oxygen in the water.

After the storm, flood waters recede and the waterways return to their slow meandering path. Then much less oxygen is returned to the water. But the bacteria continue to use the new pollutants as food.

The problem is that the bacteria can take so much oxygen that little is left for bigger organisms like fish. Fish kills a few weeks after heavy rains are often because the fish suffocated, not because of poisons, as many think. This is what makes for a very unhealthy ecosystem.

The big question is, "What are bacteria eating and where is it coming from?"

"Biodegradable" soaps and detergents are designed as food for bacteria. They are often referred to as "environmentally friendly". Yet if they end up in our waterways they are anything but friendly.

These soaps and detergents are meant to feed the bacteria in sewerage treatment plants under controlled conditions. Once these bacteria remove the detergents from the waste water, the cleaned water is released back into the environment.

Environmentally friendly detergents are not meant to feed the bacteria in our waterways. They are pollutants when they encourage bacterial growth and loss of oxygen in our rivers and streams. They can be the cause of a very unhealthy ecosystem.

Think about the substances that wash off your property and into the nearest storm water drain. Remember, when you wash your car, wash the dog, wash the house, wash the driveway, or recycle the washing machine waste water, if the detergents make it to the street they will end up in the nearest waterway.

Avoid using detergents. If you must use them, make sure that the waste water goes into the sewer or use it to irrigate your garden. Whatever methods you use make sure the soaps and detergents do not leave your property.

If everyone did their bit to reduce these sources of pollution, we could significantly improve the health of our local creeks and rivers.