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Environmentally friendly pollutants – what your detergent does to waterways

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DISCLOSURE STATEMENT

Peter Pollard does not work for, consult to, own shares in or receive funding from any company or organisation that would benefit from this article, and has no relevant affiliations.

Professor, Innovative Learning Design and Development

Reference: 497691 Element: Centre for Learning Futures Work type: Continuing Overview: The newly formed Centre for Learning...

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Reference: 497677 Element: Urban Research Program Work type: Fixed term (12 months) Overview: The Urban Research Program...

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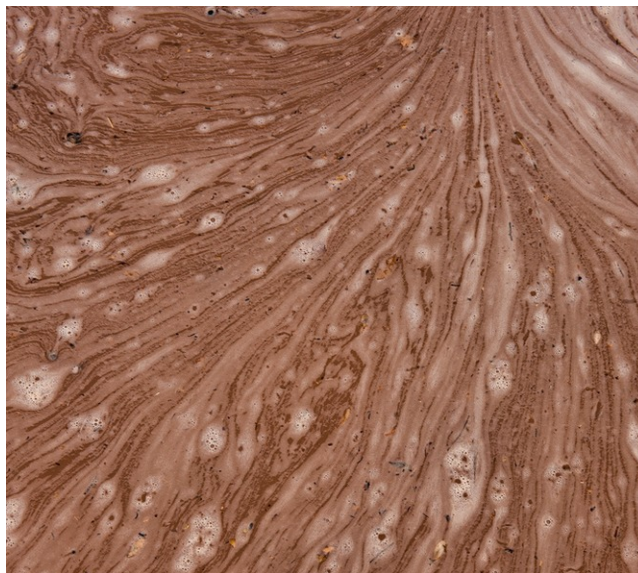
After the big wet, spare a thought for the health of your waterways and the substances that wash into them.

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.



No matter how friendly your detergent is, it does damage. NPS
Photo/Neal Herbert



Bacteria use up the oxygen, and fish can suffocate.
severinus/Flickr

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.



Think about where all this detergent goes. [bark/Flickr](#)

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.

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