

Would You Like Ice In That? Methamphetamine Use, Wastewater Processing Plants And Our Environment



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Wastewater testing in 2016 discovered that the state of Western Australia has a two tonne a year Methamphetamine problem and they're not even our country's ice capital (that's South Australian capital city, Adelaide by the way). By the time the 2017/18 analysis came around, national consumption rates had risen to 9.6 tonnes of methamphetamine annually, making it the most highly used drug across the country.

What does this have to do with water management?

Not only can waste products from methamphetamine creation and consumption cause spikes in influent ammonia, high BOD and wildly out of balance pH within wastewater processing lagoons, they can also find their way into ground water and cause wider environmental impact and flow on effects such as drug addicted animals. This exposes our ecosystems to higher levels of toxicity than ever before. This is, in part, due to waste and bi-products leeching into soil which can eventually lead to measurable traces in household water supply like those uncovered in a 2013 study in the Adelaide region.

When we consider the fact that approximately 75% of biosolids generated by Australia's wastewater management network are used for agricultural applications due to their nutrient rich nature, we can also conclude that it is likely that contaminants could make their way into our food, especially when the ways in which they have already been confirmed as entering our food chain are factored in.

It doesn't help that our sewer and processing facilities were never designed to be suited to the removal of pharmaceuticals (both legal ones that are considered safe for human consumption and other varieties), thereby further increasing the chemical bio load placed on our waterways which provides ideal conditions for drug interactions. Outdated, leaking systems also play a part in contamination as water that never makes it to a wastewater plant quite obviously does not undergo treatment.

So what can we do?

There's not much we can do about the drug use at the root of the problem but ensuring that wastewater plants are functioning at their optimal capacity, can help reduce the consequences of the introduction of this type of contaminant into our water and sewage systems. Because the issues caused by chemical components often found in methamphetamine can **inhibit treatment** within systems and cause a buildup of sludge and nasty, possibly dangerous, odours, at plants, it is important to deal with any issues that arise as quickly as possible.

While toxins and contaminants would ideally be disposed of in separate, specialised processing plants, or at least diluted or neutralised at the source, this very rarely happens so taking steps to protect wastewater treatment and processing facilities from VOCs (volatile organic compounds) is a prudent choice. Correct aeration practices and treatment application can greatly help a processing plant stand its own against whatever nasties flow into catchments and lagoons and regular maintenance and biological augmentation can help ensure that plant ecosystems stay healthy and balanced.

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