

Meet the POLLUTANTS



	Character	Nickname	Pollutant	Source	Causes	Where is this a problem?	Is it toxic?	Toxicity rating	Occurance?	Overall harm?	Treatment?	Some things you can do?
NATURAL		Nitron	Nitrogen	Waste water & fertilizer	Algal blooms leading to oxygen depletion and fish kills	Waterways, lakes, coastal areas	Non-toxic, harmful to the environment	0	High	5	Water Sensitive Urban Design	Wash the car on the lawn
		Pho	Phosphorus	Waste water & fertilizer	Algal blooms leading to oxygen depletion and fish kills	Waterways, lakes, coastal areas	Non-toxic, harmful to the environment	0	High	5	Water Sensitive Urban Design	Reduce fertilizer use on lawns and gardens
		Muddy	Sediment	Erosion and scour	Smother plants and stream bed habitats, reduces light, reducing photosynthesis	Waterways, rivers, creeks, lakes, sea grass beds	Non-toxic, harmful to the environment	0	High	5	Water Sensitive Urban Design	Sweep driveways instead of hosing
PHYSICAL		Salty	Salinity	Shallow rising groundwater	Saline water can be toxic to plants and fish	Waterways, lakes	Toxic to animals and organisms	3	Low	3	Water management plans, remediation	Manage groundwater consumption
		pH	pH	Acid mine drainage, acid sulphate soils	Environmental degradation, fish kills. Low pH can dissolve tissues and eggs, killing aquatic animals and preventing reproduction	Waterways, lakes, Coastal areas	Toxic conditions for animals and organisms	3	Low	3	Management of acid sulphate soils, Remediation of acid mine waste	Be aware of acid sulphate soils and manage appropriately
		Heatwave	Temperature	Industry, power plant effluent	Warm water carries less oxygen, suffocating fish (and other organisms)	Everywhere	Non-toxic, harmful to the environment	0	High	5	Regrow plants	Plant canopy trees adjacent to waterways
BIOLOGICAL		Micron	Microorganisms	Waste water & naturally occurring	Include viruses, bacteria, protozoa, nematodes (worms). Can spread water borne diseases such as cholera, dysentery, typhoid and hep A	Waterways, lakes	Can cause health problems	1	High	5	Waste water treatment plants, potable water treatment plants,	Dispose of animal waste appropriately
		Goo	Cyanobacterial (algal) blooms	Excess nutrients exacerbate problem	Toxic to humans	Everywhere	Toxic to fish and humans	5	Variable	5	Localised removal and treatment of algae, prevention, WSUD	Construct a raingardens to filter stormwater runoff
PLASTIC		Grossey	Gross pollutants	Litter	Leach toxins, break into micro plastics	Everywhere	Bioaccumulation risk, increases concentration of toxins	1	Very high	3	Gross pollutant traps, Education campaigns	Pickup 2 pieces of litter every day
		Nurdles	Nurdles (microplastics)	Plastics industry	Enter the food web, adhesion of toxins worsening bioaccumulation	Coastal areas, waterways adjacent to spills, Oceans	Toxic bioaccumulation risk	2	Medium	4	Prevention, Improved handling practices	Manage waste streams appropriately: avoid, reduce, reuse, recycle
		Fleece	Fleece (microplastics)	Clothes	Enter the food web, adhesion of toxins worsening bioaccumulation	Everywhere	Bioaccumulation risk, increases concentration of toxins	2	High	4	Improved washing machine filtration, Improved waste water treatment plants,	Buy clothing with organic natural fibres

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HOME USE		Flush	Personal care	Suncream, makeup, lotions, sanitary pads,	Some can be toxic to animals, ecosystems and humans	Waterways, lakes, coastal areas	Low toxicity	1	Very high	2	Improved waste water treatment plants	Buy eco friendly products at the supermarket
		Soapy	Surfactants	Soap, detergent	Some can be toxic to animals, ecosystems and humans	Waterways, lakes, coastal areas	low toxicity	1	High	2	Improved waste water treatment plants	Buy eco friendly products at the supermarket
		Pillz	Phamacueticals	Waste water discharge	Endocrine disrupters	Waterways, lakes, coastal areas	Some of the affects on human and animal health are unknown	3	High	4	Improved waste water treatment plants	Dispose of unused medication appropriately
AGRI CULTURAL		Sprayz	Pesticides	Agriculture	Skin irritation, nervous system issues, reproduction issues and cancer, pesticide use reduces biodiversity, contributes to pollinator decline, makes habitat toxic	Waterways, lakes, coastal areas	Can be highly toxic	4	High	3	Suitable disposal, elimination or reduce toxic varieties	Invest in organic pest control methods
		Herby	Herbicides	Agriculture	Atrazine is a problem in ground water, can cause decline in bird populations, causes mutations (sex changes) in frogs and disrupts hormones preventing animals from breeding	Waterways, lakes, coastal areas	Can be highly toxic	4	High	3	Suitable disposal, elimination or reduce toxic varieties	invest in organic weed control methods
		Poppy	Persistent Organic Pollutants (POP)	Agriculture	Includes fertilizers and pesticides, can cause cancer, affects immune system, toxic, birth defects, toxic to wildlife. POPs have been banned in many countries	Waterways, lakes, coastal areas	Highly toxic causes cancer humans and animals	5	High	5	Reduce or eliminate toxic varieties, improved waste water treatment	Use organic weed and pest control method instead
CHEMICAL		Solvey	Paints and solvents	Industrial and residential applications	Can contain heavy metals, toxic to fish, can contain Volatile Organic Compounds (VOCs)	Predominately creeks and streams	Can be highly toxic, can cause cancer	4	Medium	4	Suitable disposal	Buy with care, dispose with care
		Oily	Oils	Oil drilling and transport, oil leaks and spills	Can cut light to plants, damaging to birds and fish, can stick to feathers preventing birds from flying. Toxic in very low concentrations	Everywhere	Toxic	5	High	5	Prevention, Management plans	Clean up spills as soon as they occur
INDUSTRIAL		Indie	Industrial Waste / Dioxins	Industrial processes, incomplete combustion and pesticide production	Can cause reproductive and developmental problems, damage the immune system, interfere with hormones and also cause cancer. Bioaccumulation	Waterways, lakes, coastal areas	Highly toxic causes cancer humans and animals	5	High industrial areas	5	Suitable disposal, elimination or reduce toxic varieties, monitoring programs	always follow legislation for use and disposal
		P-Fos	Perfluorooctane Sulfonate (PFOS)	Firefighting foam and other industrial uses	Causes chronic kidney disease, compromise immune system. PFOS can cause cancer, delays in physical development, stunted growth, endocrine disruption, and neonatal mortality	Waterways, lakes, coastal areas	highly toxic, causes cancer	5	Low	5	Suitable disposal, elimination of toxic varieties	Avoid buying non-stick coated frypans, use cast iron or ceramic instead
		Metalhead	Heavy Metals	Industry, vehicle emissions, lead acid batteries, fertilizers, paints and treated timber	Carcinogens, disrupt central nervous system, endocrine disruptors, congenital disorders	Waterways, lakes, coastal areas	Highly toxic, causes cancer	5	Medium	5	E waste recycling scheme, Improved landfill, Remediation of mine waste	Ensure dirty work areas do not drain to creek, cover and disconnect work areas