

# Pollution in Bristol's rivers & streams

- Seen / smelled something you're unhappy about in a local river or stream but don't know next steps? This guide is for you.
- Included:
  - Key types of pollution in our local watercourses;
  - What we can do to help;
  - Why it matters.
- In Bristol probably the most frequent pollution is sewage. If you suspect this call **Wessex Water: 0345 600 4600** – recent experience is that their Stream Clean team are pretty helpful.

# Key Types of pollution: **Sewage pollution**

Milky grey, may smell soapy, acrid or simply unpleasant. Possibly foam / or solid floating items (eg wipes, towels, etc) either visible in the river or later, stuck in bankside bushes after a spate. There may (or may not) be an obvious outfall where it's entering the stream / river.



This is probably the most frequently observed pollution in our city as there are no industrial farms and little heavy industry.

# Key Types of pollution: **Sewage fungus**

Sewage fungus builds-up on surfaces where there is a consistent flow of water and supply of the necessary nutrients (eg in faeces). It may be associated with a culvert or outfall where sewage regularly enters the stream / river.



Grey, thick, slimy and cottonwool-like. It's a mass of filamentous bacteria (often primarily *Sphaerotilus* species).

Typical sewage sources: Combined Sewer Overflows (CSOs), misconnected drains, overflowing manholes (blocked sewer).

# Key Types of pollution: **Sewage debris**

Wipes, pads, paper, etc may accumulate in tree branches low down at river level or surround a man-hole where pressure has forced it out. Nasty!



# Key Types of pollution: **Paint, plaster, cement**

Some people (including some tradespeople) pour paint, cement or plaster-washings, etc down the drain - not realising (or maybe caring about) the harm it causes.



It's a problem as it goes straight into the nearest stream / river.

The picture on the left was investigated by Wessex Water. It turned out not to be sewage fungus. It was paint washing-in from a nearby building site.

# Key Types of pollution: **Oil / diesel pollution**

Creates a rainbow sheen on the surface. May have an oily / petro-chemical smell. May be coloured – duty free red diesel used by farmers. Can come from an oil spill (eg used engine oil illegally poured down a roadside drain) or simply from drops from vehicles building up during a dry period, washed off a road during a heavy shower.



In the Floating Harbour - to report oil pollution call: **0117 903 1484**

# Key Types of pollution: **Silt pollution**

Streams normally carry some silt when in flood but excess silt from an obvious source (eg a building site or via run off from ploughed fields) may be a type of pollution.

Recently the housing development near Catbrain Hill led to tonnes of silt being flushed into roadside drains - which then entered the Hazel Brook (reported to South Glos Council). The developer has now installed silt traps.

Excess silt disrupts ecosystems - many invertebrates and fish are specialists at certain life stages and need clean gravel to lay their eggs, hide, feed, etc.



# Key Types of pollution: **Mine water / old industry**

Abandoned mines are a pollution threat all over Britain, a legacy of mining (coal, metal ores, other minerals) dating back to the Bronze Age.

Thousands of old mines discharge water containing heavy metals, very acidic water and other pollutants into watercourses.

Bristol had a major coal mining industry. A few small streams in Bristol are affected, eg one in Eastville Park.



**Industrial contamination** - Legacy heavy industries (smelting, chemicals, etc) has contaminated soil in some places. Where development happens on these sites control actions must be taken by developers so chemicals don't wash into nearby drains / streams.



# Key Types of pollution: **Diffuse pollution**

- **Roads** – after a dry period then heavy rain initial run-off into streams / rivers from roadside drains may be black - from tyre dust, brake dust, oil.
- **Invisible pollution**
  - Nutrients – **Nitrates and Phosphates** – from agriculture or garden fertilisers, from sewage (treated or untreated). In 2023 all Bristol's rivers / streams were affected; *(Source: annual Riverblitz surveys coordinated by Bristol Avon Rivers Trust)*
  - **Micro-plastics** – from plastic litter / rubbish entering watercourses. Also from micro-fibres from washing clothes from domestic “grey water”;
  - **Pesticides (eg flea treatments) / herbicides / drug residues** – scientific study is at an early stage but concerns exist of potentially serious but largely unknown impacts.

# Key Types of pollution: **Slurry pollution**

A huge problem in the countryside (not Bristol as no intensive farms).

Brown or greeny brown, often foamy, smells strongly, sometimes of ammonia.

Occurs when:

- Slurry is spread on fields and runs off into the nearest stream / river; Or
- A slurry lagoon fails so it flows out.

In the news: chicken units in the Wye valley are polluting the river with phosphates - turning it green.

Bristolians can help by eating less (or no) meat, chicken, dairy, eggs instead consuming more pulses / other plants.



# Other signs of pollution: **Algae, dead or dying fish**

- **Algae** - green (or bluey-green or brownish-green) colour in the water or as a floating layer may be an algal bloom.

In sunny spells where water has a high level of nutrients algae proliferates.

This can be harmful both directly (blue green algae may be toxic) and indirectly (when the algae dies the oxygen level falls - affecting fish and invertebrates).



- **Dead or dying fish** (eg gasping at the surface, floating on their sides or belly up) see this and it should be reported to the Environment Agency straight away

# What can I do? i) Report issues immediately

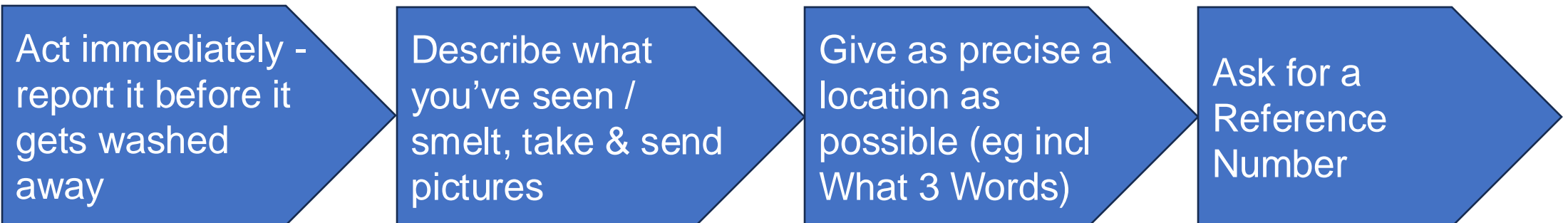
Make it easy, save these contacts on your phone:

Suspected **sewage spill / fungus** – **Wessex Water \* - 0345 600 4600**

*\* If you live elsewhere save your water company's phone number in your contacts, not this one*

Serious **pollution / fish kill** – **Environment Agency - 0800 80 70 60**

**Roadside drain** (eg paint) – **Bristol City Council - 0117 922 2100**



## What can I do? **ii) Make a change, take an action**

- **Water butt / soaker hose** – in pre-1960s homes these cut water volume going into the sewers so Combined Storm Overflows (CSOs) spill sewage less often;
- **The 3 Ps** – ONLY put Poo, Pee or Paper down the toilet - wet wipes, towels, cotton buds can cause blockages hence sewage spills. Get a bin for your bathroom;
- **Roadside drains** – NEVER put oil / paint / chemicals down a roadside drain – it will reach the nearest watercourse;
- **In the garden** – don't use weedkiller, insecticide, chemical fertilizer, etc - many are persistent and will affect aquatic wildlife;
- **Contact** your Councillor / MP / water company – let them know you care about water pollution, ask them to take action.

# Why it matters?

- **Fewer nasty smells and sights** – nicer streamside walks;
- **More wildlife** – there's a surprising variety in some of our urban watercourses (amazing that it's clinging on) but with cleaner water there could be far more fish, water-plants, birds, insects;
- **Lower ecological footprint** – our downstream impact as Bristolians (in the sea) will be cut. Collectively we'll be doing less harm to the oceans;
- **Less worry** - when we see children or dogs playing in Bristol's streams (or adults wild swimming) we'll be less worried about illness.

***Pick an action or two from the list and start making a difference for our watercourses straightaway***