Pollution from towns, cities and roads

What is the issue?

- **Sewage Treatment Works** – Mains sewerage goes to wastewater treatment works to be cleaned before being discharged into watercourses. Sewage treatment works are under pressure particularly in areas with high numbers of tourists in certain months where the capacity has been designed for the number of residents. See Pollution from waste water for more information.
- **Misconnections** – There are different types of drains. Surface water drains take runoff from gardens, gutters, roads and car parks and deliver it straight to watercourses without treatment. Foul sewer drains collect water from toilets, washing machines, dishwashers, showers and sinks and deliver it to the sewage treatment works to be cleaned before it is discharged back into rivers. Sometimes household appliances are connected to the wrong drain and deliver dirty water, or water with detergents in, straight to the water courses.
- **Storm Overflow drains** – Combined drains take surface water and foul water through sewage treatment works. When we have very high rainfall the water is discharged straight into water courses so the sewage system is not overwhelmed. This delivers dirty water to watercourses, potentially containing phosphate, nitrate, chemicals or bacteria.
- **Road runoff -** Roads, car parks and other paved areas usually have surface water drains meaning the water they collect runs straight to the river without being treated. This water can carry road salt, oil, petrol, sediment and chemical wastes from construction sites with negative consequences for water quality, aquatic life and human users of the water.

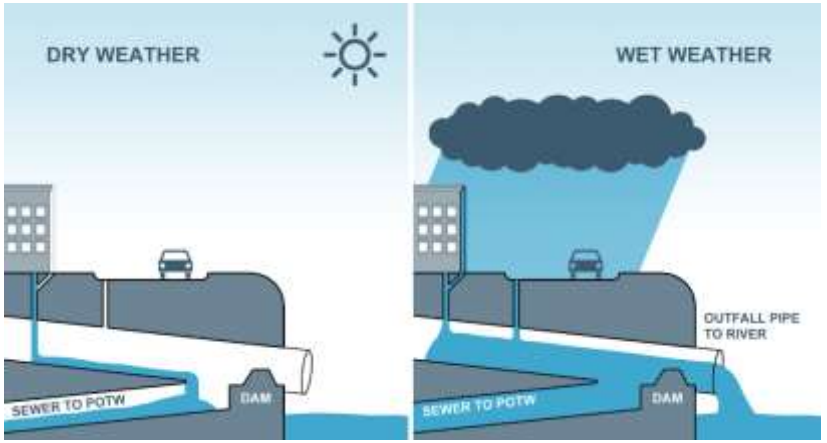

Image courtesy of D. Ovenby.

What locations are affected?

Urban areas are limited within the West Cumbria catchments so urban pollution is only identified as a problem in 3 % of our watercourses, in the Ehen (6 %) and Cocker catchments (13 %). However, runoff from roads is likely to be contributing to diffuse pollution across many areas of the catchment.

Why should this concern me?

► **Harms ecosystems, sensitive plants and animals.**

- Poor water quality can lead to the loss of aquatic plants and animals, including fish.
- Increased salinity and chemical inputs are very damaging to aquatic insects and fish.

► **The quality of our water environments for human uses**

- Poor water quality in our rivers, lakes and estuaries affects people's opportunity to use them for leisure activities.
- Inputs of coliform bacteria from sewage inputs can result in eye and ear infections and gastrointestinal problems in people in and around the watercourse.
- These losses can mean that the value of tourism and properties decreases.

What are the future challenges and concerns?

► **Increasing pressure on sewage treatment works.**

- Bigger populations or increased tourist numbers could cause the capacity of waste water treatment works to be exceeded.

► **Climate change could increase runoff from agricultural land.**

- Changing rainfall patterns with more storm events could increase the amount of runoff from roads and storm overflow drains.

What can be done about this issue?

► **Ensuring household appliances are connected correctly.**

Washing machines, tumble driers and dishwashers should be connected to the foul water drain so the dirty water is treated. Find out how to check your home at ConnectRight.

► Yellow Fish

The Yellow Fish campaign is an Environment Agency project to raises awareness about water quality issues. A symbol of a yellow fish is stencilled onto surface water drains to remind people that anything put down the drain will go straight to a watercourse where it could harm aquatic life.

► Improving waste water treatment works

Like all water providers United Utilities has a programme of upgrading and improving its wastewater treatment works. Find out more here.

► Sustainable Drainage Systems (SuDS)

SuDS are any practices or structures that are designed to effectively drain surface water whilst minimising pollution to local water bodies. They act to slow the flow of water running off hard surfaces and filter the water of pollutants before it reaches streams and rivers. Small scale examples include changing block paving drive ways to gravel where water can soak in, having rainwater butts on your house or building a rainwater gardens (planting wetland plants in a small hole where water from a driveway or gutter can soak into). Larger scale SuDS include reed beds and retention ponds and are beginning to be more common in new housing developments. Find out more here.