ISLAND RIVERS PARTNERSHIP

NEWSLETTER

JULY 2024

The State of Isle of Wight Rivers…

This month we have two new Members of Parliament. We welcome them and will be asking if we can brief them on the condition and challenges of our local water courses. We thought we would share our message more widely.

The Island is classed as having 35 river water bodies, 8 estuaries & coastal waters and 4 groundwater bodies. It also includes 14 bathing waters, 1 surface drinking water source and 6 shellfish waters. The Isle of Wight has a diverse geology and aquifers are found in both the chalk and the greensand. The soils reflect the geology with heavy clays to the north, with occasional plateau gravels; free draining silty loams on the chalk to the centre and free draining friable sandy loams to the south.

With the exception of small streams running south into the Channel, the majority of the Island's rivers run north into the Solent. Classic chalk streams are rare but include Lukely Brook in Newport and the Caul Bourne at Winkle Street.

Over 90% of rivers in the catchment have been changed for water abstraction, agriculture, navigation and flood protection reasons. They have been straightened and man-made river banks and structures such as weirs have been put in the rivers.
Our rivers react dramatically to high rainfall incidents leading to spatey conditions and localised flooding. 25% of the Island's drinking water comes from the Hampshire Test river via a sub-Solent pipeline.

Sources of pollution include agriculture, poorly managed septic tanks, storm water discharges, road run-off and minor wastewater treatment works. The Solent is a highly designated area and is the final destination of much of the catchment's water.

Water Quality

On the Isle of Wight the Environment Agency classifies 10 water bodies: Atherfield Stream, Blackbridge Brook, Brighstone Steams, Caul Bourne, Upper Eastern Yar, Lower Eastern Yar, Lukely Brook, Medina, Monktonmead Brook and Wroxall Stream. **None are 'High' or 'Good' status**. Wroxall Stream is classified as 'Poor' and the rest are 'Moderate'. The coastal waters and estuaries are also 'Moderate'.

Pressures include **urban pollution and road run-off**—over 300 different pollutants can enter this way. **Rural pollution** comes from run off from farms and horse paddocks and also septic tanks, a lot of the Island does not have mains drainage. We drink water from our rivers and Southern Water have to deal with increasing numbers of **herbicides and pesticides** to make it safe. **Waste water and Combined Sewer Overflows** have been covered extensively in previous newsletters, this system is over-stretched.

There are **opportunities** to tackle some of these issues. Transitions in farming support is an opportunity for engaging landowners with advice and support for Catchment Sensitive Farming. Southern Water are working with partners to reduce CSO spills and the new Island Plan, if adopted, will create buffers and legislate for good practice.

Water Quantity

Too much water - The primary risk of **flooding** on the Island is from rivers and the sea. Flooding events are projected to become more frequent and more severe as the climate changes. The Eastern Yar and Medina are flashy rivers and vulnerable to flooding, this is exacerbated by poor management of river-side gardens. All development (no matter where located) can increase flood risk by increasing runoff and contributing to drainage problems. In natural river systems the floodplain temporarily stores, slows and absorbs floodwater. Many of our rivers have been dredged and disconnected from their floodplains.

And too little water too! - We are seeing increasingly hot, dry conditions in the UK. The Island has **insufficient drinking water** and is augmented from the mainland. When there is **low flow in rivers**, there is less dilution and higher concentrations of pollution. This increases nutrient levels and there is a higher risk of algal blooms. These changes in habitat can negatively impact both fish and invertebrate communities in our rivers. **Abstraction** is the removal of water, permanently or temporarily, from water bodies or from groundwater. On the Island this is mainly for agriculture and drinking water.

Opportunities include holding back water in times of abundance for when later needed, for example **farm reservoirs**. There are lots of places where we could **restore floodplain functionality** to slow the flow of water and reduce flooding. New developments can have sustainable drainage systems, and there is no need for **driveways and gardens** to have impermeable paving.

Habitats and species

The Island's water courses, estuaries and the Solent have a wide diversity of habitats, which support an array of flora and fauna. **Pressures** include **Invasive Non-Native Species** such as Himalayan balsam, Japanese knotweed and crassula helmsii. Himalayan balsam in particular out-competes our native flora on the Eastern Yar. **Habitat Fragmentation**—key to the protection of species is the protection of habitats. Development threatens riverine, estuarine and coastal habitats alike. Rising sea-levels and erosion leads to **coastal squeeze**, where habitats like saltmarsh disappear. On the Island's freshwater water courses **lack of appropriate management** has led to an excess of scrub and brambles which has led to the decline of water voles. **Increased nutrient levels** caused by fertilisers, wastewater and sewage discharges, result in the excessive growth of green algae on the rivers and intertidal mudflats, saltmarshes and seagrass meadows covering thousands of hectares. Kelp and seagrass beds, which could be great sequestrators of carbon, have been devastated in the Solent.

But **all is not lost**. Much of the mid—lower eastern Yar is now owned by conservation charities, and organisations are working with landowners to restore habitats, control invasive species and stop species decline across the Island and Solent.

All was well until we started fiddling with our rivers!

Nearly every watercourse on the Island has been **modified**, often these changes are centuries old—waterpower for milling, improvement of agricultural land and creation of railways and roads. More recently flood alleviation, bridge building and utility protection. Many of the manmade obstacles perform important functions - for example dams, sluices, weirs and road culverts - but they can also cause problems such as restricting the movement of eels and fish, damaging riverbanks and beds, and posing a hazard to people using boats, canoes and kayaks.

Modifications are not restricted to obstacles. Many of the Island's water courses have been artificially straightened, deepened or their course has been altered. Floodplain no longer function.

Opportunities exist in some parts of the Island to restore the functionality of both headwaters and floodplains. Legislation is driving the need for better fish passage. New land management schemes encourage adjacent landowners to collaborate to restore functionality on a larger scale. Switched on Local Planners can condition some new developments to remove culverts and natural water courses, such as the development of the Dairycrest site in Newport.

Climate Resilience

Climate change affects the Isle of Wight's water courses in a number of ways. Extreme rainfall events, including unseasonal heavy rainfall in summer, already cause **flash flooding** and also increase soil **erosion**.

Increasing number and length of spells of prolonged dry weather, and stresses on supply and demand, could lead to a greater risk of **water shortages**. The Island will be **vulnerable** to the arrival of new pests, diseases, invasive non-native species and to fires in forests, heaths and grasslands.

Some freshwater wetlands may be at risk of **saline ingress** and rising sea levels can cause **coastal squeeze** where there is no room for habitats to retreat in land.

Land-use also has a role in **climate mitigation** and in carbon capture. Some land uses have greater resilience and also greater opportunities. A Local Nature Recovery Scheme which will pay for actions that support local nature recovery and the Landscape Recovery Scheme supports landscape and ecosystem recovery through long-term projects such as increasing water storage on land, protecting peat bogs, saltmarsh protection and enhancement, restoring wilder landscapes and stage zero river restoration.

The need to engage

Encouraging the community to engage with our rivers for health and leisure by promoting learning and volunteering, protecting and celebrating the culture and heritage of our rivers, wetlands and coasts. Also by supporting the sustainable development of coastal and river-related tourism and recreation.

The benefits of being out in nature to health and well-being are well documented. Our rivers and coasts are rural and urban and free to access. There are a large number of people involved in volunteering citizen science projects regarding our rivers, particularly water quality. However there is little co-ordination and support for these groups and they deserve more.

GET INVOLVED!

ISLAND RIVERS CATCHMENT PLAN This guides the work of Island Rivers and is reviewed annually.

http://www.islandrivers.org.uk/island-rivers/island-rivers-catchment-plan/

There is even an interactive map of our projects:

https://islandrivers.org.uk/map-of-island-river-partnership-projects/

This word cloud reflects the contents of our Catchment Plan.

VOLUNTEER FOR PRACTICAL WORK

Details of opportunities can be found here:

http://www.islandrivers.org.uk/love-your-river/get-involved/

ISLE OF WIGHT INVASIVE NON-NATIVE SPECIES PLAN Details threats to the Island:

http://www.islandrivers.org.uk/isle-of-wight-ias-action-plan-feb2020/

VISIT OUR WEBSITE It's a massive source of information on the Island's rivers, activities, issues etc
http://www.islandrivers.org.uk

FOLLOW US ON FACEBOOK We post here regularly, and love to receive photographs to repost!
https://www.facebook.com/islandrivers

ISLAND RIVERS PARTNERSHIP

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The organisations helping to steer this project are the Environment Agency, Natural Enterprise, Hampshire and Isle of Wight Wildlife Trust, Isle of Wight National Landscape, Southern Water, Isle of Wight Council, Natural England, CLA, NFU, Isle of Wight Estuaries Project, Solent Forum, National Trust, Marine Management Organisation, Bembridge Harbour, Solent Protection Society. Surfers Against Sewage and Arc Consulting.

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