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Lincs and Northants Fisheries Update October 2019

Introduction

Once again it has been a busy summer for the fisheries team. In addition to our routine work of providing advice, guidance and communications to the fisheries and angling businesses the team have been supporting Area staff in the on-going prolonged dry weather incident. We have been engaged in monitoring and surveillance work checking rivers, streams and drains for deterioration in water quality and environmental stress. As well as physical site checks remote instrumentation (Sondes) were used allowing us to monitor difficult sites from any office in the Area. A number of high risk still waters were also checked routinely throughout the summer. In a number of cases our surveillance work resulted in early intervention preventing large scale fish mortalities. This year we have also been in the position to support fisheries with the short term loan of aeration equipment, this enables us to support fisheries in a flexible way during critical incidents and makes best use of our available staff resources. Throughout the summer it became clear that the north of the area was suffering the effects of prolonged dry weather more than the south of the area.

The analysis of biological samples from Lincolnshire rivers provided clear evidence of environmental stress; these results directly correlated with the number of incident reports the team were receiving, with a clear split between North and South. Fenland drains were again a focus of our attention. Long reaches of shallow standing water with excessive algal growth prove very hazardous conditions for fish populations.

The summer prolonged dry weather period has not been as severe as last year but it has been a very close call with many rivers across the area showing the symptoms of ecological stress. The rainfall events during the early summer helped a great deal in keeping rivers and still waters healthy, while stable weather conditions and consistent temperatures throughout the summer prevented large scale overnight oxygen depletion.



Images showing a typical fish mortalities within the fenland drain system (c2019).

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Fisheries Incidents

Sulphur Bacteria Incidents

This summer we have also identified two fish mortality incidents where a sulphur bacteria have been present. These bacteria thrive on water courses where oxygen is significantly depleted or absent, and are red or purple in colour which causes the water to become dark red. In these conditions it is impossible for fish to survive



Fisheries Incident Response Summary

We have received approximately 70 fisheries incident calls across the area this summer. These are assessed first by the duty fisheries officer and responded to accordingly. Throughout the season we have deployed approximately 6 tonnes of hydrogen peroxide (H2O2) and deployed 6 number of Sondes. (A Sonde is a multi-parameter probe used for collecting water quality data). Splash aeration systems were provided to 3 large fisheries and one Internal Drainage Board who would have struggled to manage on their own.

We received several reports of fish in distress, particularly in July due to hot, dry weather.

Water quality testing was undertaken, and deployment of both hydrogen peroxide dosing and venturi units to rapidly raise oxygen levels.

Officers also provided future management advice.



Incident response training

Fisheries officers and Enforcement officers have completed boat training this summer, in addition to 4x4 and trailer towing instruction with the aim of building-up the team of staff available for incident response.

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Enforcement

Illegal instruments

We have continued to focus on our response to reports of illegal instruments (nets, lines and traps). During this recent period we have recovered 10 pots and nets. The majority of these are associated with unauthorised crayfish trapping.



Image showing enforcement staff removing an illegal crayfish pot.

These illegal instruments are deadly to river wildlife and fish, if not correctly set, guarded and checked on a regular basis. On occasion members of the public report these incidents after they have removed the instrument, essentially reporting to us after the event. We are always grateful to members of the public who report environmental crime this can be via the EA's Hotline 0800 80 70 60 or Crime Stoppers.

Since April this year we have received 3 High Priority (Cat1/2) incident reports which have been investigated, substantiated and dealt with accordingly.

Partner Working

We are continuing our work with the Volunteer Bailiff team and have undertaken a number of joint patrols which have included 'targeted' evenings and weekends. Where possible we have undertaken joint patrols with the local Police forces.

An evening patrol with our police partners and Peterborough and District Angling



Association bailiffs was interrupted by poor weather conditions. The rain may have deterred some anglers from fishing that evening but it certainly hasn't deterred planning and liaison works for future targeted joint patrols!

Joint Patrol with PDAA and Cambs Police

Recent boat training has also been put to use when members of the fisheries team

undertook an enforcement patrol, along with a habitat assessment, on the River Witham in September. Using a boat allows us to cover a larger area of river and to check those places that would be difficult to access on foot. During the patrol we were able to check a number of rod licences and respond to an incident relating to an illegal net. The officers also found time to review fishery habitats and we found a number of locations for potential improvement works.



September's boat enforcement work

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Rod Licence

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These are the current rod licence checking figures for the period April – September 2019:

	Total Checks	Multiple Checks	New Checks	Evasion Rate
Q1	677	35	642	5.17%
*Q2	111	0	111	0.89%

Table 1. Rod licence checks (*Q2 interim figures - to be revised when recent data is made available).

The final figures may still not be as high as previous quarterly check periods. This is due to the addition focus on other priority work and increased the time spent on joint patrols with our partners; the Angling Trust Volunteer Bailiff team. Fisheries Enforcement staff have also been focusing their efforts on incident response. Locating illegal lines, nets and traps and removing them is a high priority, this draws our resources away from the high density fisheries and routine rod licence checking the items proceeding this section of the newsletter show some of the recent rewards from this approach.

Operation Clampdown (a partnership rod licence checking blitz with our East Midlands Team) has been postponed. We are waiting to hear from Leicestershire Police Force and hope to have new dates arranged soon with patrols planned for the along the River Welland, Grand Union Canal and Stillwater Sites within our patch.

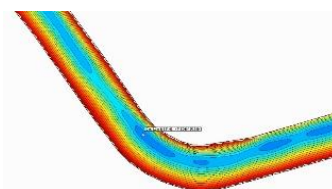
Monitoring

As part of the EA's three yearly monitoring cycle, surveys have been taking place on the Lincolnshire and Cambridgeshire Fens this year. The drains provide some of the most visited angling areas within the catchment, including over 100 matches a season.

In 2019 side scan and multibeam sonar is being used alongside traditional seine netting to help understand how fish use the drains, at what times of the year and where. The major drains are being surveyed twice using sonar, once early in spring to try and collect geographical data on spawning aggregations and once during winter when water temperatures drop and fish begin their cold water aggregations. Seine netting will continue to produce data on species composition and population structure, but will be put into perspective by the sonar derived fish distribution data.



Spring survey results have been promising, helping to identify spawning locations over large distances for bream. In addition the depth data for every drain surveyed is being collected and mapped to form bathymetry sets for each. These can then be plotted to form three dimensional images of the waterbody helping to understand fish distribution against depth and providing useful information.



Water Resources Situation (as of 24/09/2019)

- Lincolnshire & Northamptonshire area received 110% Long Term Average (LTA) rainfall in August; currently in September (as of 22.09.2019) we are at 45% LTA rainfall for the area. Rainfall since the 22nd September will have brought the monthly total closer to the LTA. Soil Moisture Deficit (SMD) is currently classed as normal.
- Despite having similar average rainfall as previous years we are seeing a decline in effective rainfall, this is the rainfall that recharges groundwater and helps support river flows. This year rainfall events have happened during times of high SMD, as such we are not seeing as much recharge to water resources as we would expect.
- Overall river flows are not too bad but there is a noticeable difference between the North and South of the area. In general water resources in the North seem to be recovering (exception being the Northern chalk) but the South of the area seems to be under pressure still.
- Our Witham to Ancholme transfer scheme is currently operating as necessary and our Gwash to Glen transfer scheme is currently on. Our Sleas augmentation scheme is currently switched off but it's predicted it may need to be turned on in the next few weeks.
- Groundwater levels across the Limestone areas mostly look healthy, though the chalk areas particularly in the North are Below Normal for this time of year.

For a full water situation report please visit:

<https://www.gov.uk/government/collections/water-situation-reports-for-england>

If you see signs of fish in distress – such as gasping at the water's surface – contact our 24-hour incident line on 0800 80 70 60.

Lincs and Northants Area - Fish Stocking

This year the fisheries team have requested 9,000 coarse fish from our farm at Calverton. These fish will be delivered to a range of fisheries throughout the area and will be stocked into still waters and river reaches. As I am sure many folk will be pleased to hear we will be continuing with our barbel stocking programme this year. 2000 barbel will be introduced into River Nene backwaters, including Castor, Alwalton, Elton, Orton, Nassington & Wollaston. These important backwater sites have been identified as suitable because they provide good habitat (with potential for enhancement) while also providing opportunities for future angling development, supporting our local angling clubs and associations.

School pond project

The EA's Lincolnshire Fisheries Officer has introduced 150 crucian carp to the pond at Burton Hathow Preparatory School, as part of our ongoing work to conserve the species and also to create accessible angling for children.

Fisheries improvement funding had previously been provided to improve habitat in the pond and help the school manage it effectively.

The young carp, from Calverton Fish Farm should thrive in their new environment and provide an exciting angling challenge for pupils.

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Drought Resilience Scheme

The Lincs and Northants area, along with several others regions in the UK most affected by drought conditions, were allocated funds from fishing licence income, to offer grants to fisheries and angling clubs. These were focussed on improving resilience by purchasing their own monitoring and pumping equipment.

Six fisheries and clubs successfully bid for grants in our area, including the following:

Jake Reeds assisted **Boston & District Angling Association** in setting up their equipment, and pump. They will now be able to respond if oxygen levels reduce in their lake and were grateful for the opportunity to utilise the grant.

Grantham Angling Association now have two new pumps thanks to the funding they received. When they have experienced problems in hot weather in the past, the EA have instigated incident response. Now they hope to be able save more fish by deploying their own equipment without any delay.

Deeping St James Angling Club purchased testing equipment so they can monitor water quality, and two pumps. They also bought trolleys to allow quick and easy deployment of the equipment.

In 2018 the EA also responded to an oxygen crash at **East Delph Lakes**, and the manager explains: "My application for the grant was successful and I now have enough aeration equipment to deal with future problems.

What's really impressive is how the EA look for long term and sustainable solutions to problems rather than just 'firefighting' and responding to emergency situations. Based on this experience I'd strongly advise all fishery managers who don't own a dissolved oxygen meter to get one ASAP, make a plan of what to do in an emergency situation and not to hesitate to call the EA for help should you need it."



Fisheries Management Work Shop - Aquatic Plant Management for Fisheries - Wicksteed Park February 2020

On Saturday 15th February 2020 The Institute of Fisheries Management (IFM) and Environment Agency will be running a free one day workshop on aquatic plant management. The event is being held at Wicksteed Park in Kettering Northampton and is open to all our local fishery managers and clubs. If you are interested in attending please email Hugh Bunker or Darren Randall on hugh.bunker@environment-agency.gov.uk or Darren.randall@environment-agency.gov.uk. Further details will be made available as soon as possible.



River Nene habitat improvement projects

A number of projects have been completed by River Nene Regional Park over the last two years aiming to improve river habitat and maintain fish populations, which helps to support a number of other species as part of a healthy river ecosystem.

In March 2018 at Stanwick Lakes, vegetation was removed from the mouth of the backchannel, reconnecting it to the main river channel. This now provides a refuge for fish during high flow periods plus weeds and reedbeds at the far end of the backwater is ideal spawning habitat.

Another project at Elton backchannel was to erect over 600m of fencing to prevent cattle poaching, and installed 3 pasture pumps to provide the herd with drinking water.

The second part of the scheme was remedial works to the ford - this saw 40 tonnes of granite laid and 'tracked in' to help combat sediment input in to the channel.



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Further habitat improvement projects were completed on the backchannel at Barnwell, where brushwood revetment reduces energy flow and protects the bank from erosion.

In addition, small willows were hinged and pinned to the bank of the backchannel at Whitemills, to provide marginal woody habitat for fish refuge.



The most recent work, completed in September 2019, was at Ailsworth Backchannel.

As part of this project, trees were hinged and pinned at various levels of the bankside. This creates shelter for fish, invertebrates, mammals and aquatic birds during all flow conditions. The addition of 100t of gravel in two locations should deliver fresh spawning substrate for barbel.

All three of these sites have also benefitted from the installation of fencing to protect the river banks from livestock.

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