West Cumbria
Catchment Partnership

Summary of West Cumbria Catchment Partnership Meeting

29th November 2023

Attendees:

17 people attended the meeting:

Angela Wakefield – Environment Agency
Becky Powell – National Trust
Caitlin Pearson – West Cumbria Rivers Trust
Cat Parkinson – Environment Agency
Dave Bechelli – Cumberland Council
David Harpley – Cumbria Wildlife Trust
Emmanuel Flecken – Cumberland Council
Hui Zhang – Environment Agency
Jan Darrell – Friends of the Lake District
Naomi Lumsden – Natural England
Nathan Curry – Cumbria Community Forest
Neil Ash – Environment Agency
Nick Chappell – Lancaster University
Olivia Devan – Network Rail
Pete Leeson – Woodland Trust
Rebecca Thomas – Catchment Sensitive Farming/CiFR
Vikki Salas - West Cumbria Rivers Trust

Introduction

Vikki Salas welcomed everyone and outlined the purpose of the meeting as being to focus on flood risk management, NFM and water resources, including project updates, priorities, new evidence, and opportunities.

See attached slides for details. The main points and discussions are summarised below.

Project updates

Environment Agency Flood & Coastal Risk Management – Neil Ash, Environment Agency

The Environment Agency Partnership and Strategic Overview (PSO) department takes a holistic, catchment-based approach to flood risk management. It includes three teams:

- Planning and permitting – Flood risk activity permitting, planning and regulation;
- Integrated PSO – Flood risk modelling, mapping and data;
- Cumbria Advisory team – Looks after the development and delivery of flood risk schemes. Neil sits within this team, covering the Derwent catchment. The team doesn't currently have anyone covering the South-West Lakes or Waver-Wampool so Neil is currently picking some of this up. The team is supported by senior advisors Ewan Lorton and Chris Evans.

The Environment Agency had a long list of possible FCRM projects for West Cumbria but most of these weren't viable to take forward. Recently they started with a blank slate that only includes projects on the pipeline that are likely to progress. There are five projects currently on the list for West Cumbria:

- Cleator - River Ehen – This is at a very early stage and the Environment Agency are keen to look at partnership opportunities for delivery.
- Allonby – Longshore drift is causing the outlet of Allonby Beck to block up and causing water to back up in the village. Clearing the outlet will be a priority but there may be other opportunities to reduce flood risk.
- Harrington – River Wyre – Currently, walls owned by third parties are protecting houses. The Environment Agency are looking at whether these can be adopted by them and/or improved.

- Cockermouth – The Old Court House/Honest Lawyer restaurant has fallen into the river. There is work planned to replace/repair the current Standard of Protection but not to enhance it at this stage.
- Cumbria River Restoration Strategy – This program is focused on environmental improvements, funded through the FCRM program. Originally work focused on Derwent SAC but some work is being delivered in other areas, such as barrier removal on the River Ellen.

After Storm Desmond, appraisals were undertaken for lots of communities at risk, but most options were not deliverable. Improving the standard of protection for Keswick, Cockermouth, Braithwaite, Workington/Barepot and Wigton was not cost viable, but these communities are still at risk and the Environment Agency need to think about how to approach them. These projects are not currently progressing, but there is still potential to progress them in the future, particularly if there are opportunities for partnership working and funding.

Keswick flood walls were designed for a 1 in 75-year event but now only protects from a 1 in 20-year event. There is a limit to what can be done in the town so reducing flood risk will require work in the wider catchment and storage/NFM opportunities upstream. This is being progressed through the Resilient Glenderamackin project. The Environment Agency are also looking at the role of Thirlmere Reservoir in reducing flood risk, working with United Utilities.

In Braithwaite there is some potential for upstream catchment management to reduce flood risk. Tree planting has already taken place and the National Trust plan to extend/improve this and identify opportunities for water storage. The National Trust's Riverlands work in the upper Derwent catchment presents an opportunity to reduce flood risk to communities in Borrowdale.

The decommissioning of Crummock Water in the Cocker catchment is likely to impact flood risk to Cockermouth. Modelling shows a 35 % reduction in flow in a 1 in 1-100 year event by removing the weir. However, currently the River Cocker peaks earlier than the main River Derwent so there is a risk of synchronizing of flood peaks. The Environment Agency have asked United Utilities to model the impacts of the weir removal right down to Cockermouth and the confluence with the River Derwent but have not received the results yet. The synchronization effect is very dependent on the pattern of rainfall. The Environment Agency also asked the consultants to assess whether any benefits will be sustained into the future as the channel changes and naturalises over time.

United Utilities have also decommissioned Ennerdale Water and are likely to remove the weir. A similar analysis to the one being conducted for Cockermouth will need to be done to assess the impact of the Ennerdale weir removal to flood risk in Ennerdale Bridge and Egremont. There are also opportunities for natural flood management upstream of Ennerdale Bridge, particularly on Croasdale Beck.

Parton is another area of interest for the Environment Agency. Cumberland Council are also looking at this area and have completed an appraisal. A bid for Council Flood Defence grant in aid has been deferred until next financial year. Parton is also vulnerable to sea level rise causing the watercourses to back up, which is likely to worsen with climate change. This community wasn't put forward to the NFM funding due to this complex interaction between sea levels and fluvial flood risk. ***Action: Neil Ash and Dave Bechelli to meet and discuss Parton.***

There are lots of communities at risk, so decisions need to be taken on where to prioritise funding and resources. The Environment Agency are looking to priorities communities where there are partnership opportunities for funding projects and for realising multiple benefits.

Peak river flows are expected to increase with climate change. The presentation slides show predicted increases in peak flow by catchment over different time periods, using the 50^{th} percentile of the high emissions scenario of the U.K. climate predictions from 2018, which has been adopted as the most likely scenario. Cumbria, is one of the places with the highest predicted increases, along with other areas of the north-west and south-west. Combined with issues of small communities, mountainous environments and the UNESCO World Heritage Site, addressing increased flood risk from climate change will be very challenging.

The message about these figures, and the urgency, needs to be heard by Environment Agency national leads, DEFRA and the Government. Neil and colleagues have been raising this with area leaders and have linked with colleagues in

Devon and Cornwall who have similar predictions and issues. The intention is to raise the issue nationally and push for action, but it is difficult for local voices to change national policy. All Catchment Partners/Local Authorities have a role in highlighting this message. Climate change is a key issue across all the drivers from health & social care, environment, communities, heritage etc. There will also be knock on consequences of increased peak flows such as more frequent combined sewer overflows.

Action: All partners should take all opportunities to raise issues of climate change and predicted impacts on flood risk (and other environmental hazards) nationally through their own channels and connections.

Action: Climate change risks should be acknowledged in Catchment Plans and underpin all actions.

Nationally, the National Trust feed into national policy and have recently met Toby Perkins, the Shadow Minister for Environment, Food and Rural Affairs, who is supportive of raising this up the political agenda. Climate change is not an electoral issue, it needs cross part consensus and long-term approaches. The impacts of climate change on low flows also need to be considered. There is less data available on this and the Environment Agency don't have catchment specific figures on predicated changes.

Nationally, resources for addressing climate change related issues will become very stretched and are likely to be directed to areas of highest population density. Across the Northwest, where there is a high climate change impact expected, resources will be unable to meet the demand.

Environment Agency NFM programme - Angela Wakefield, Environment Agency *See slides*

In September 2023 the Environment Agency and Defra announced £25 million of funding for improving flood resilience through a new NFM programme. It was intended that partners would have the opportunity to discuss and prioritise applications at this meeting, but the funding was announced with an application window of only eight weeks so there was not time to hold a Catchment Partnership meeting to inform applications.

The programme is looking to fund a variety of measures including soil & land management, water storage (floodplain and wetlands), woodland creation, runoff management and coastal restoration. The funding will not cover any maintenance payments and actions that can be funded elsewhere, such as through the England Woodland Creation Offer, are not eligible. Partners noted that this funding feels like phase 2 of the NFM pilot programme and not mainstreaming of NFM. There is still a focus on providing evidence about NFM performance.

The average project value will be around £200k but with some partnership projects up to £1.5mil. Projects were encouraged to secure private finance but applicants noted that the application form made it difficult to include private finance to deliver multiple benefits. The flood risk cost:benefit calculator being used to assess projects used the full project cost against only the NFM benefits delivered by this funding pot.

Currently applicants have submitted an Expressions of Interest. The announcement of which projects are being taken forward will be in January. The Environment Agency, Cumberland Council, West Cumbria Rivers Trust and National Trust discussed projects to put forward. Several catchments were considered and three have been put forward. Others were ruled out for various reasons, as shown on the slides. The projects that have been put forward are:

- Resilient Glenderamackin – led by West Cumbria Rivers Trust (see below for more details).
- Coledale Common – led by the National Trust – improving/enhancing existing tree planting enclosures.
- Ennerdale Bridge – led by West Cumbria Rivers Trust and the Environment Agency. Cumberland Council have also bid for FCRM money for Ennerdale Bridge, focusing on surface water issues.

Partners raised concerns about the monitoring element of the programme. Some of the actions that have been asked of delivery organisations are unlikely to provide any meaningful data and some actions will be very difficult to do without expert support. There may be potential for projects across Cumbria to support each other with monitoring activities. ***Action: After the announcement on which projects are being taken forward, Caitlin to coordinate a monitoring meeting for delivery partners in Cumbria, Environment Agency staff and University researchers.***

Cumberland Council Flood and Coastal Risk Management projects – Dave Bechelli, Cumberland Council.

Councils are lead local flood authorities for ordinary watercourses and surface water, whereas main rivers are under the Environment Agencies remit. The Cumbrian councils are still in a period of transition following the reorganisation in April 2023. Dave Bechelli covers coastal risk management projects for the whole of Cumberland but only covers the former Copeland area for inland flood risk projects. Andrew Harrison is leading on flood risk management projects for Cumberland but was unable to attend this meeting due to illness.

Going forward, the Making Space for Water (MSfW) groups will cover the whole of Cumberland at one meeting, rather than having three separate meetings for Copeland, Allerdale and Carlisle, as previously. Any issues or projects can be raised with Dave or Caitlin, who can take them to the MSfW group meetings. There is also a quick-win pot of funding available.

Dave ran through the current list of projects in development:

- Ennerdale Bridge – An appraisal of surface water issues will be undertaken in the new year. This is a high priority and ties in with work planned by the Environment Agency.
- Silloth groyne replacement – Optioneering is complete, Cumberland council looking at current options, may include a one-off beach renourishment.
- Ravenglass – Work underway to deal with surface water issues.
- Norbeck Park, Cleator Moor – addressing undercapacity culverts through GIA funding. Some minor works are ongoing ahead of the main project.
- Whitehaven/Parton – Surface water modelling and appraisal complete. Next step is to decide what actions to take forward. Whitehaven is a complex flood issue as sits at the bottom of the Pow Beck Valley. ***Action: Appraisal report to be shared with the Environment Agency.***
- Oldside Landfill site Workington – Coastal erosion with contaminated land at risk but no FCRM funding available. Hopefully will be addressed as part of site redevelopment.
- Workington former steel works site – Surface water outfall issues and sea wall in poor condition. Tetra Tech are working on behalf of the developer to look at the outfall issues. No Flood Defence Grant in Aid funding is available to take this project further.
- Spittal Farm, Wigton – Business case soon to be completed and a small-scale scheme should be carried out in 2024.
- Stubb Place Eskmeals – Appraisal going ahead. Short term protection of highway to provide emergency access to MoD site. Tetra Tech currently working on Options Appraisal.
- Harrington North Shore – erosion study, contaminated land risk. Only one property as risk but also risk to rail network so need to partner with Network Rail.

Generally, project development is under-resourced, but Dave now has some time for working-up projects. The MSfW groups will be taking a forward look at future priorities but flooding hotspots are complex issues and often need costly investigations.

Creating a pipeline of future priorities/projects, considering all data and opportunities from partners including peat and river restoration opportunities, would be a useful exercise for both the Environment Agency and Cumberland Council.

Working with landowners through the Cumbria Innovative Flood Resilience (CiFR) project – Rebecca Thomas, CiFR Catchment Sensitive Farming and Community Officer. See slides.

Rebecca's role is an extension of the Catchment Sensitive Farming advisor role, offering a one-stop-shop to help farmers/landowners access both Natural England schemes and funding for NFM interventions available through the CiFR project. Having a dedicated advisor for a small area has allowed regular check-ins with the farmers and has been effective in building relationships and delivering projects smoothly.

CiFR is testing a range of quarterly inundation payments without the hassle of being in a formal Countryside Stewardship agreement and monitoring landowner take-up. The intention is that these features will then be able to transition into allowing inundation payments from future agri-environment schemes, but this isn't certain. Capital costs are met using blended finance so there is no net capital cost to the landowner.

There are many barriers to delivery (see slides). Drawing on different funding sources for different aspects of the project can allow more ambitious work to be realised but it is also a tricky jigsaw to make sure they all fit together and no aspects of the work are double funded. Having one dedicated person working across multiple projects/funding streams has been a good approach, meaning farmers only have one point of contact and making coordination easier. Rebecca also engages with the wider community, taking on board local views to co-design and get community support for interventions.

To date, Grasmere has been the focal area but Tom Rudd and Bitter Becks above Cockermouth are likely to be the next focus.

Lots of lessons have been learnt from the work in the Grasmere catchments, as outlined on the slide. Many of these were raised during the NFM pilot project (e.g. liability, adaptive management and maintenance). There are also some good success stories including a kested hedge with multiple benefits that was funded through a Countryside Stewardship agreement, with the Woodland Trust providing the trees and the CiFR project funding the kest to provide flood risk benefit.

Resilient Glenderamackin – Vikki Salas, West Cumbria Rivers Trust

The Resilient Glenderamackin project is a large-scale blended finance project. It is currently in the development stage, identifying the potential for corporate income from various mechanisms to work alongside public money to create a bespoke funding mechanism for farmers. Mechanisms for blending public and private finance are difficult. DEFRA have advised that the only way to do this is through Landscape Recovery.

The project team found out on the day of the meeting that their Landscape Recovery application had been successful. This £550k will fund the further development of the project to the stage at which it is ready to deliver and sign bespoke agreements with landowners. The project team have also applied for £1.4 million from the new NFM programme for delivery but are not overly optimistic about this being successful as the criteria for the projects didn't fit very well with the Resilient Glenderamackin's catchment scale, blended finance approach.

The financial model for the Resilient Glenderamackin project is to have capital works funded by public grants and ongoing hosting/maintenance payments from private buyers with 20-year agreements with the farmers. The project is also being listed on DEFRA's new 'Projects for Nature' platform to raise funds directly from businesses.

There is a concern about a lack of resources/skills for the project due to the scale of delivery, including project officers, finance officers and ecologists for baseline habitat surveys.

In order to demonstrate the potential benefits of the project to buyers and determine the level of delivery needed to provide a meaningful reduction in flood risk to Keswick, JBA were commissioned to model the effect of the proposed NFM/upstream storage features. The modelling looked at the present day 1 in 30-year event, the 1 in 20-year event 2020-2039 and the 1 in 10-year event 2040-2059 to determine if the proposed features could increase the current standard of protection in Keswick and off-set the predicted effects of climate change. Potential actual interventions were modelled. These have not been ground-truthed but took account of other constraints and what might be possible to deliver.

Two sets of results were presented, the first table shows all the features that were modelled, the second shows what the Resilient Glenderamackin project realistically hopes to deliver. The modelling predicted a 9% reduction in peak flow across all three modelled events from the project deliverables. This would bring the current 1 in 30-year event below the existing flood walls in Keswick. This reduction wouldn't be sufficient to fully offset the effects of climate

change but would help to reduce flood peaks. NFM/upstream storage will need to be part of a package of measures including hard engineering, and potentially management of Thirlmere Reservoir. As with all modelling, there are limitations and caveats (see slides), but these results provide a good indication of what large scale NFM/upstream storage could deliver. Designing interventions so they fill at the right point in an event will be key.

JBA also produced a technical note on proportionate modelling approaches to inform NFM delivery which can be shared with anyone who is interested.

There was a discussion around how we address future flood risk under predicted climate change, as significant upstream intervention will be needed to help protect communities. Large storage features are likely to be needed to create a meaningful reduction in flood risk to towns.

Floodplain bunds were the main mechanism of providing temporary storage in the catchment models. How can these be designed so that they don't interrupt normal hydrological functioning and protect habitat and natural processes? Actions need to address twin outcomes of climate resilience and restoring nature, as well as considering the economics of farming and heritage. Flood risk reduction projects need to blend all of these outcomes and not just be focused on the amount of storage provided. Everyone was broadly in agreement with this but there will be differences in opinion between partner organisations about where this balance sits. It also needs recognising that some features need to be specifically designed for a particular function. For example, water storage areas to reduce flood risk need designing to fill and drain in the target event. Re-naturalisation projects such as river or peat restoration will require less outcome-specific designing.

This will be an ongoing discussion and there is likely to be a role in the Catchment Partnership and project working groups on discussing what interventions are appropriate.

Riverland Update – Becky Powell, National Trust See slides.

Riverlands is a National Trust and Environment Agency partnership project. Phase 1 of the project has been completed and delivered a lot across Cumbria, as summarised in the slides.

The Goldrill Beck project has been a huge success, it is in the Eden catchment but is a good case study and has been well monitored to show the benefits of this sort of work, facilitating delivery elsewhere. The river was straight and canalised alongside the road and the road was undercut by almost a meter. The project re-naturalised the stream creating a braided channel over a 1.6 km section.

Water level loggers have been installed upstream and downstream of the restored section, which show the timing of the peak during high flow events. The time between the upstream and downstream peak has increased since the work was completed. There is a clear break in the graph in 2021 when the work was completed, showing the slow the flow effect. This delay is from just a 1.6 km section of restoration so the effect could be very significant if longer reaches of streams were re-naturalised. The site has also been repeatedly flown with a drone to quantify sediment storage and this has been calculated as 2170 m^3.

Riverlands is now at the start of its phase 2 and is planning the next 10-year programme of delivery. An audit has been undertaken of all the rivers on National Trust land in the Lake District, assessing river condition and naturalness. 86 % of the rivers assessed were not in a good condition. The audit also considered how easy it would be to restore each reach and what level of naturalness could be achieved given the constraints. Over 6,000 opportunities have been identified. These are now being prioritised and developed into a 10-year plan of works. This work will be completed by February and data will be made available on a web-based platform.

A new phase of work on Armboth Fell is being completed currently, to extend the new footpath by 680 m and restore a further ~6Ha of peat. Next summer the Riverlands team will deliver the Barrow Beck project at Derwent Water to

remove the embankment and restore the fan at the mouth of the lake. A raised boardwalk will be installed to improve access and allow the river to move naturally.

Several further projects are in development:

- River Liza in Ennerdale – work to break the river out of its channel and allow it to rejeuvenate its natural movement and recreate the lake delta, which should be beneficial for Arctic Charr.
- Lakeshore restoration opportunities - Soften transition from agricultural land to the edges of tarns and lakes. Currently doing a feasibility study, which includes Watendlath Tarn.
- Lingmell Beck in Wasdale.

The Riverlands team applied to the Species Survival Fund to support delivery including the Derwent Invasives Programme and engagement activities. They have not yet heard back about whether this bid has been successful.

NFM evidence base – Nick Chappell, Lancaster University

Nick has been working on two projects that are informing the Environment Agency's NFM programmes; the Q-NFM project was a Natural Environment Research Council (NERC) funded project, which concluded in March this year, and the C-NFM project ran alongside this, monitoring the pilot NFM projects across Cumbria.

Both of these research projects aimed to quantify the performance of NFM features. Interventions are looked at in terms of the NFM process/es they deliver, not what the feature is. Understanding these processes requires monitoring of interventions to get real data, which is used to inform large scale modelling. Monitoring was undertaken on a diverse set of NFM features installed across Cumbria by partner organisations. Many of these features continue to be monitored, particularly as there haven't been any big floods since they were installed.

The Q-NFM project produced large scale models for the Kent, Derwent and Eden catchments to assess what benefits NFM features could deliver if they were installed at scale. As with all models, care is needed to ensure they are credible and are capturing reality. This is particularly difficult in extreme events. This modelling used data from real rainfall events and included uncertainty estimates.

Illustrative research findings for each of five NFM processes were presented:

1) Enhanced evaporation – the scientific community thought evapotranspiration from trees didn't occur during storm events because the atmosphere was saturated. The Q-NFM project studied real observations from events across temperate regions of the world and showed that even in large events, humidity was generally only 85-95% so there was still plenty of capacity for wet canopy evapotranspiration to remove water from the system. In a storm event, 40-50 mm water could be thrown back into the atmosphere over extensive woodland, which is a significant amount.

2) Enhanced hillslope storage – the Q-NFM project modelled a network of storage features across the upper Eden. The graph on the slides shows how long water should be held for. If the feature drains too readily (i.e. holds onto water only for 1 hour, red line) it doesn't hold on to the water long enough for the flood peak to pass and doesn't store a significant amount. If the feature holds on for water for too long (100 hours, yellow line), it is unlikely to have drained down between successive periods of rainfall to provide additional capacity. Features that hold onto water for ~ 10 hours gave optimum performance. Design of NFM features to ensure they drain down at the right rate for the target storm magnitude will be key to NFM feature performance in reducing downstream flood risk.

   The modelling used the project in Birds Park above Kendal, delivered by Cumbria Wildlife Trust, as an example. This project delivered 4000 m^3 of storage. This density of storage was scaled this up across the whole of the Kent catchment. In the 15 km^2 Gowan catchment (part of the Kent) this level of intervention was effective at

reducing discharge in both 1 in 5-year and 1 in 500-year events. This challenges the idea that NFM is only effective in low magnitude events. However, the effect was lower across the whole 200 km^2 Kent catchment area.

3) Enhanced soil permeability – A review of studies from temperate areas across the world showed that woodland soils have a higher permeability than grassland soils by a factor of five. Woodlands soils are also drier at the start of a storm event so have more water storage capacity.
   Field trials in the Eden catchment showed that a sward lifter had a similar effect to trees (5x increase in permeability), but blade aeration had less impact. However, a single tractor pass eliminated the effects of the sward lifter. There were some scenarios where blade aeration increased flood risk because water travels through the soil rapidly. This effect will be dependent on the soil type.

4) Enhanced in-channel storage – It is difficult to get meaningful amounts of storage within a channel. Most leaky dam features don't hold water after the flood peak has passed, rising and falling with the water level of the whole stream. Leaky dams need to push water onto the floodplain and be slow to drain back into the channel for them to have a meaningful impact. The slides show that in a series of leaky dams, the dam that pushed water onto the banks is performing much better than the other dams, with a slower drain time.

5) Enhanced floodplain storage – Prior monitoring of discharge before a bund was constructed at Grange over Sands shows that houses flooded when water levels in the stream reached 30 cm. After the storage bund has been installed, plus some drainage improvements by Cumbria County Council, water levels have reached 40 cm without any houses flooding.

Research is continuing, primarily through the CiFR project, which is looking at performance of NFM features in catchments of 24 km^2. This is scaling up from the monitoring work in Q-NFM and C-NFM, which focused on catchments of 1 km^2. The NERC funding for the Q-NFM project didn't allow for consideration of economics but the Environment Agency need to know damages avoided data to feed into their flood risk calculator. Nick and the research team now have additional money to look at damages avoided as a result of NFM features.

All of this work is feeding into an update of the Environment Agency's Working with Natural Processes evidence directory, led by JBA, and the NFM benefits tool which will be used to judge the projects put forward for the new round of NFM funding. The benefits tool uses data from monitored interventions to determine how much benefit different interventions can deliver. It is the volume that is taken off the peak that is key to the performance of the NFM feature in reducing downstream flood risk. Effective volume is the volume at the flood peak +/- 2 hours. This is very different for different interventions. Data from Cumbria features very heavily in these reviews due to the amount and quality of monitoring that has been done here.

In order to realise significant flood risk benefits, projects will need to stack different interventions/processes e.g. bunds and storage features within new woodlands. To achieve flood benefits, some features will need to have bespoke designs but this doesn't mean we can't realise multiple benefits. Features need to be designed for a specific purpose (e.g. flood storage, water quality improvement) but we can try and stack these benefits.

There are some key evidence gaps where future monitoring efforts should be focused. The benefits of NFM features for water quality are not currently well understood. Soil processes are also poorly understood including where/when aeration and sward lifting are beneficial and the impacts of mob grazing on soil permeability. Floodplain storage and natural functioning of floodplains is also a key area where more evidence is needed.

'Dispelling the Myth' water resources project – Caitlin Pearson

Dispelling the Myth is a new project with a small amount of funding attached (four days staff time) to allow Catchment Partnerships across the North West to start thinking about water resources in our Catchment Plans and activities. Nationally, the demand for water is increasing and supply is predicted to decrease with climate change so this is a key topic for both society and the environment.

The wider 'Dispelling the Myth' project has produced some public campaign materials to encourage people to use less water. The next phase of the project is helping Catchment Partnerships to use existing data to better understand water resources pressure in their catchments. Currently the West Cumbria catchment plans have priority areas and actions for habitat restoration, endangered species, NFM, health & wellbeing and water quality, but not water resources. The partners agreed that it would be good to add in water resources pressures to create holistic catchment plans.

West Cumbria primarily uses surface water (> 90 % of abstractions). There are abstraction licensing strategies produced by the Environment Agency. These were produced in 2013 and are very out of date due to the changes United Utilities have made to their supplies (decommissioning of Ennerdale Water, Crummock Water etc.). There is data available on water availability for licensing, low flow events, susceptibility to drought and likely impacts of climate change but it is a complex picture. The first step in this piece of work is to understand the data and identify the pressures. The Environment Agency water resources team across the North West are supporting Catchment Partnerships in doing this.

The Catchment Partnership doesn't want to duplicate any work already being done and doesn't have a role in public water supply or regulating abstractions, as this is the remit of United Utilities, the Environment Agency and Water Resources North-West, but there are areas where the partnership could add value.

One potential role is around corporate water stewardship. The Rivers Trust has developed a new scheme for businesses to offset their water use and be 'water neutral'. Any abstracted water is offset by adding water storage into the landscape of the catchment they abstract from through ponds, wetlands, river restoration, peat restoration, soil improvements etc. The Rivers Trust have produced a volumetric water-based accounting calculator called 'Replenish'. Like carbon credits, businesses must show they have minimised their own water usage before buying credits to offset the water that they still need to abstract and use. The Rivers Trust have been working with businesses including Coca Cola, Amazon Services, Meta etc. on 'Replenish' projects.

Water resources has many elements to it. Public water supply is the remit of United Utilities, regulated by the Environment Agency but the Catchment Partnership can help on campaigns to encouraged reduced personal water use. Private abstractions are regulated by the Environment Agency, but the Catchment Partnership could engage with businesses around water offsetting/Replenish and with farms on how to minimise water use and enhance water storage. There is also the environmental risks of low flows and drought conditions. The Catchment Action Plans need to take into account the existing data on modified rivers that are susceptible to drought and identify appropriate actions to increase drought resilience.

Date of Next Meeting

The next meeting will be a Cumbria-wide Catchment Partnership meeting in early February 2024. A calendar invite will be sent out shortly. Please contact Caitlin if you have any items for the agenda.

AoB

United Utilities have submitted their Water Industry Natural Environment Program (WINEP) plan from 2025-2030 to Ofwat. See notes from September 2023 meeting for full details of the WINEP and the timeline for its approval and delivery.

United Utilities had planned to have a session at this meeting to provide more detail on what is included in the plan for West Cumbria, but were not available. Sion Platts-Kilburn has offered to hold an online or in-person session on this for the West Cumbria Catchment Partnership. At this stage the business plan is still being assessed by Ofwat so there will not be an opportunity to progress partnership opportunities until the business plan is approved in summer 2024. Partners felt it would be useful to get an insight into the programme so they could be more prepared to feed into it when the opportunity arises later in 2024. Partners felt it would be best to hold this as an online session at this stage. ***Action : Sion and Caitlin to arrange online session for January 2024.***

River Basin Management Plans – The next river basin management plan will be published in 2027. Consultations for this will start in 2024. A briefing note about the process from the Environment Agency will be circulated with the meeting minutes.