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The NE Scotland RLUP Pilo

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Focus for Year 1 of RLUP Pilot

- Identify the relevant stakeholders in the region and engage with them.
- Identify and evaluate partnership and collaborative working arrangements already in place and determine how the Pilot will work alongside these.
- Develop a suitable stakeholder engagement plan to enable collective and integrated working.
- Establish a suitable governance structure for the RLUP pilot that ensures accountability and transparency.
- Decide how members of the governance structure will be chosen, and appoint these members.
- Draft Terms of Reference for the Board / governance structure that outlines how the RLUP will function.

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Expectation for Year 2 (from April 2022)

- Once RLUP governance structure is established, the core objective is to produce a suitable Regional Land Use Framework (RLUF) for the region by end of 2023.
- These Frameworks have to based on a broad Natural Capital approach and consider how land assets deliver a wide range of ecosystem services including food production, carbon sequestration, climate adaptation, and improved biodiversity into the future.

Each Framework will cover how it:

- Aligns with SG objectives on climate change and the environment, and wider objectives as appropriate e.g. water quality and air quality.
- Links with wider initiatives, such as ‘Just Transition’ and ‘Green Recovery’.
- Relates to other regional initiatives, such as Regional Spatial Strategy, Regional Economic Partnership and City Deal.

Regarding Natural Capital the Framework will:

- Identify the potential for nature-based solutions to address climate change, such as woodland expansion, peatland restoration, and natural flood management.

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Synergies with a Regional Spatial Strategy

- Environmental Policy framework – while no reference to ecosystems services their provisioning, regulating, and cultural services, these 'assets' are afforded protection within planning system.
- Development frameworks – sets out development priorities, including infrastructure required.
- An important synergy we have identified relates to water availability, land use and an increased need for integrated water management within all landscapes both urban and rural. The use of Sustainable Urban Drainage Schemes are important both within and outwith urban areas.
- Flooding - Planning requires that 'Development' avoids areas likely to flood or where it might increase the likelihood of flooding elsewhere.
- The Town and Country Planning system also has a policy requirement that ensures that development is served by sufficient infrastructure, including water supply.
- Climate Change does however require us to manage our water resources differently, with an increase in chance of extreme weather events, potential drought and flooding.
- The Biodiversity crisis also requires us to rethink how we manage our land. Producing a RLUF can help deliver multiple benefits from alternative ways to manage our land. 90% of UK wetland habitat has been lost over last 100 years. Wetlands are also critical to carbon sequestration.

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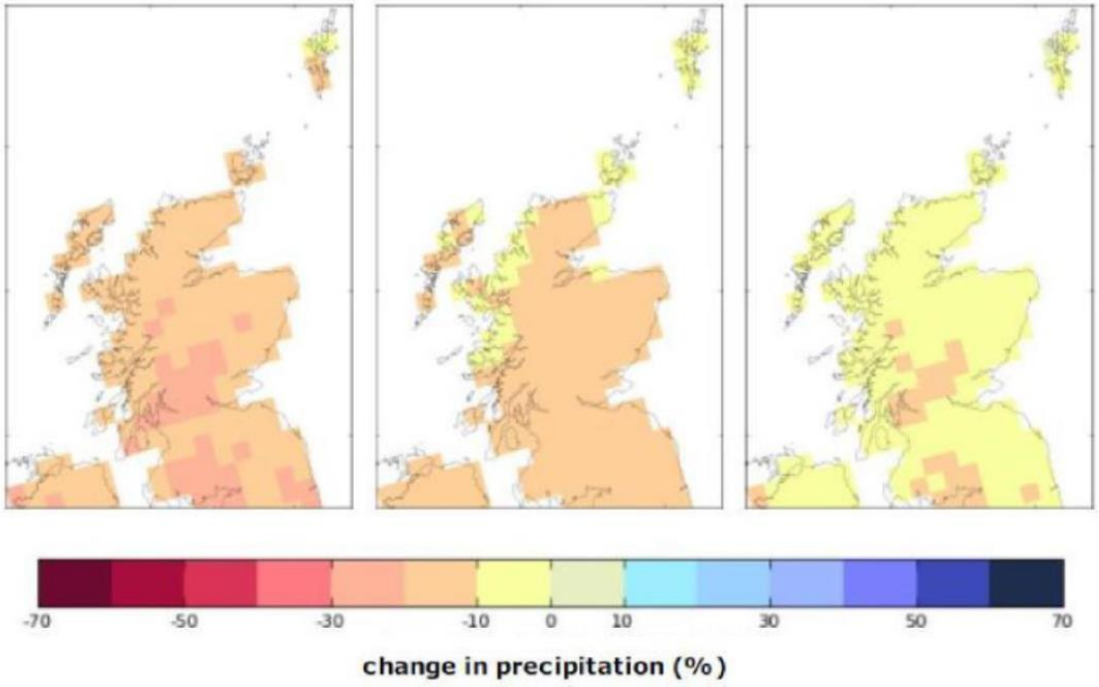
Expected decrease in summer rainfall of 10-20% (SEPA)

Future?

Unlikely to be drier than this	Central projection	Likely to be drier than this



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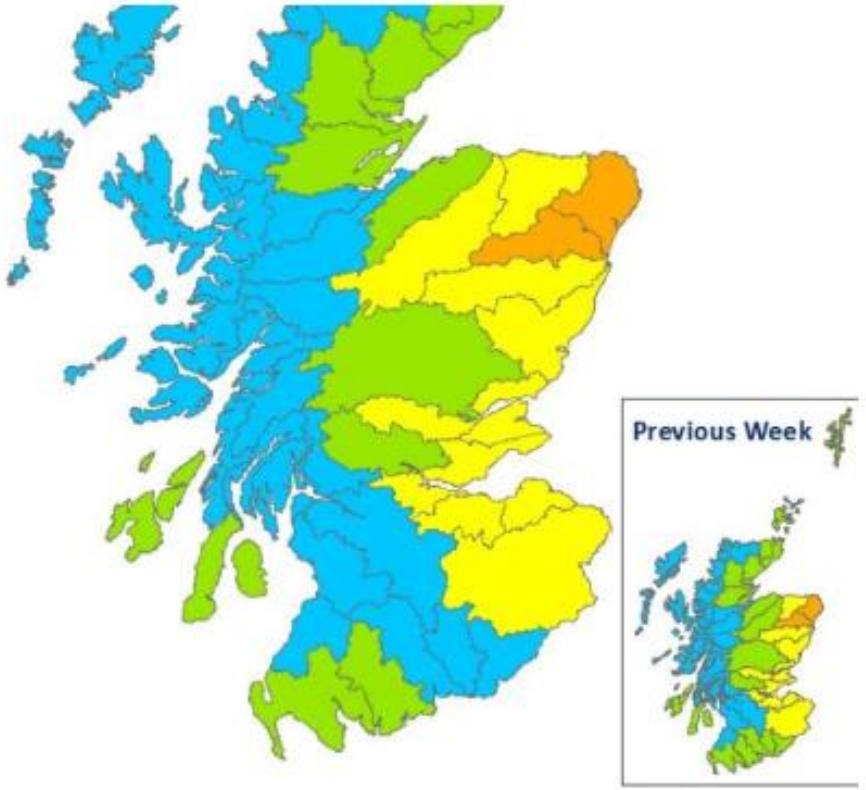
SEPA Water Situation Report, July 2020 (extract)

Groundwater levels are still very low for the time of year in the north-east where above average rainfall would be required to reduce the drought risk over the summer.

Water sources used for irrigating farm land are at risk ...



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Some consequences of drier conditions

- Over a longer time frame, lower rainfall will cause a drop in groundwater levels and spring flows which could cause lowering of water tables in wetlands. (CREW)
- Drier weather will also cause an increased deficit of moisture in soils meaning less runoff into rivers and a greater need to irrigate crops (CREW).
- Drier soils however can also increase the risk of flash floods if heavy rain follows dry weather. (CREW)
- As river levels drop, the depth and width of the river channel will contract and water flow velocities reduce. This may fragment the river and reduce the suitable habitat space. Shallow rivers increase water temperature and reduce oxygen availability. (CREW)
- A key challenge relates to drinking water supply both public and private.

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Public Water Supply

- The City of Aberdeen and Aberdeenshire receive their public water supply via 9 Water Resource Zones (WRZs).
- Each zone is served by one or more sources.
- Each of the WRZs is supplied by water sourced from a wide geographic area, including several locations outside of Aberdeenshire.
- Most of the sources are from rivers within the Aberdeenshire area.
- The largest population is supplied from the Invercannie and Mannofield Water Resource Zone abstracting water under licence from the River Dee.
- An additional challenge is that the River Dee is a Special Area for Conservation (SAC) and abstraction volumes are regulated and licenced by SEPA .

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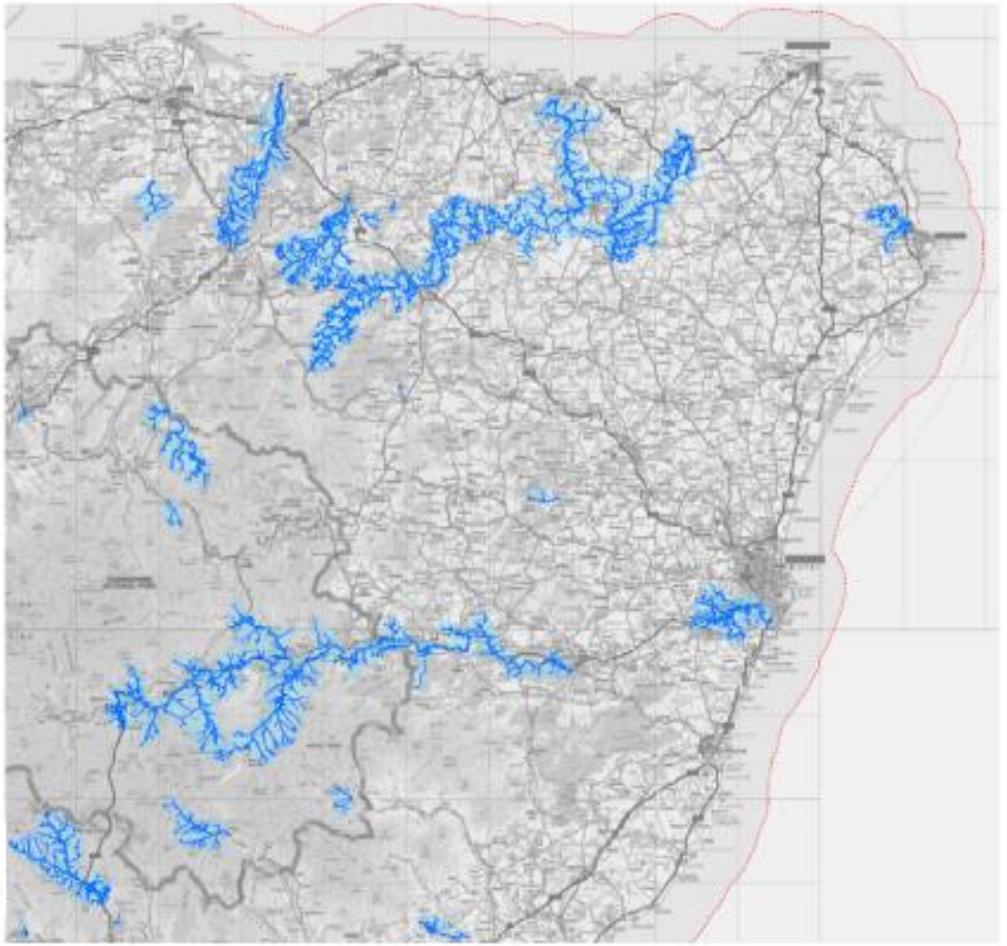
Regulated Areas:

Drinking Water Protected Areas (surface water) across the NE

Long established drinking water protection areas based on surface water assets across the north east region



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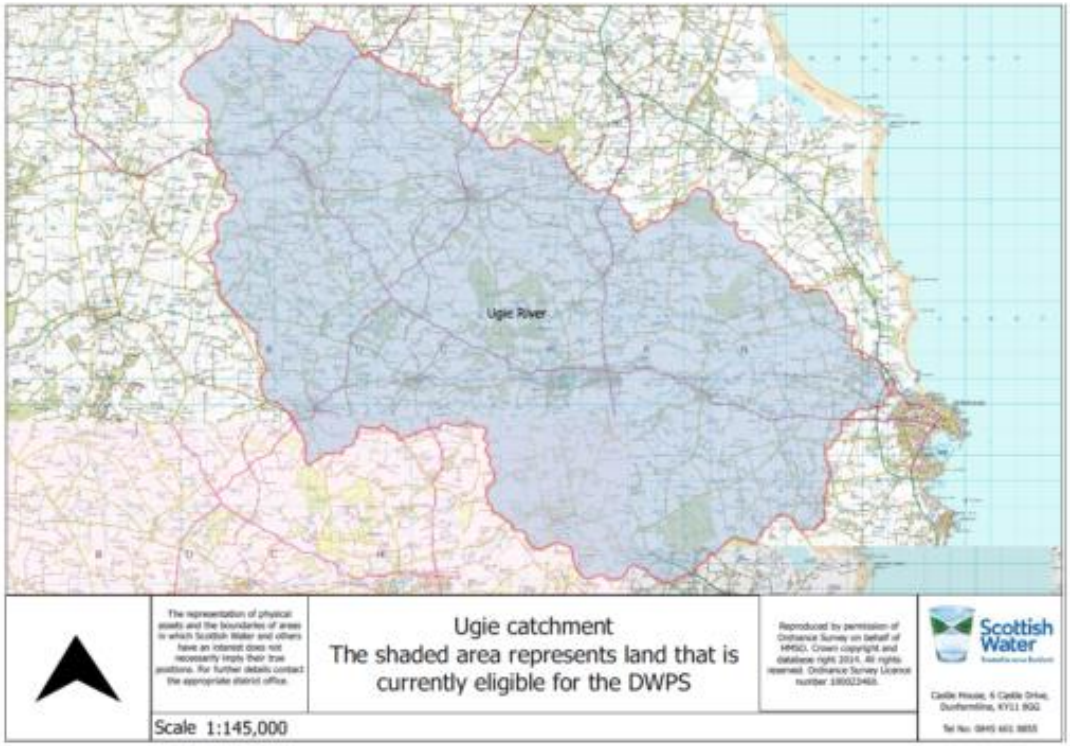
Drinking Water Regulated Area

River Ugie catchment Drinking Water Protection Scheme (DWPS)

Scottish Water abstractions are designated as Drinking Water Protected Areas (DWPA) under Article 7 of the Water Framework Directive.

The DWPS targets specific areas within drinking water catchments.

A range of activities may benefit from compensation that helps improve or maintain drinking water quality.



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Regulated Area

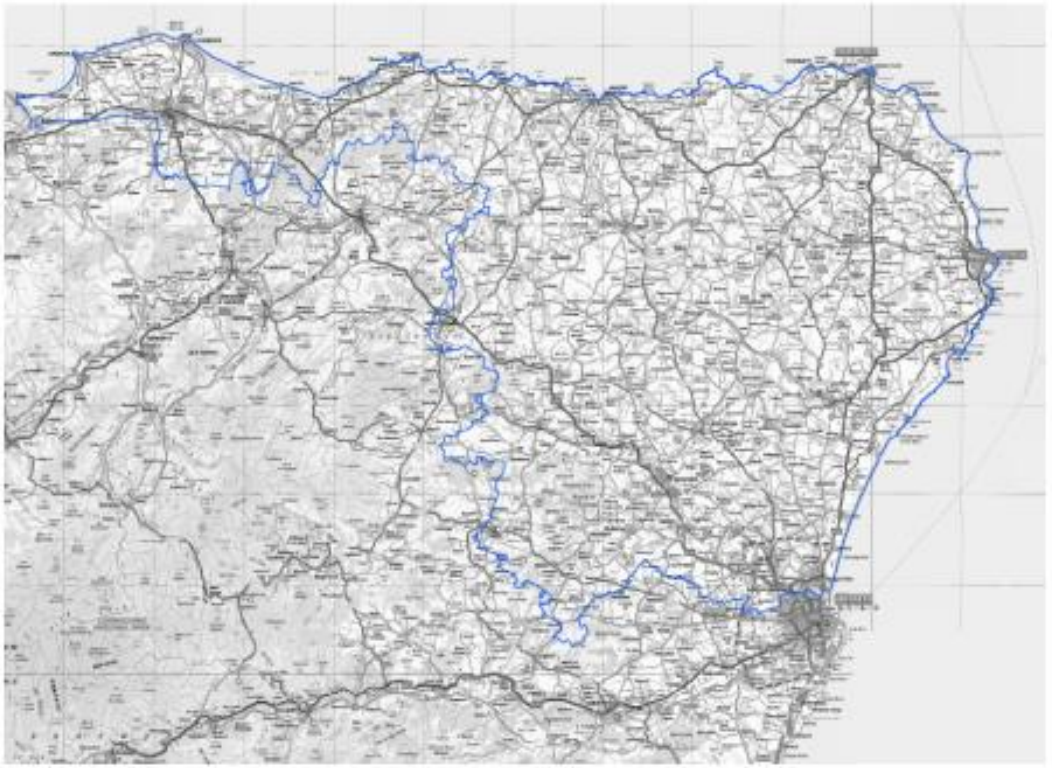
Nitrate Vulnerable Zone

All plants require nitrogen for healthy growth, and farmers apply nitrogen fertilisers to their crops to ensure a successful harvest.

However, excess nitrates that aren't absorbed by plants can harm the environment and humans by leaching from soils into groundwater, and running off the land into waterways.

Areas where the concentrations of nitrate in water exceed, or are likely to exceed, the levels are designated as Nitrate Vulnerable Zones (NVZs).

There is an Action Programme for all the areas across Scotland and rules regarding fertilizer application and storage.



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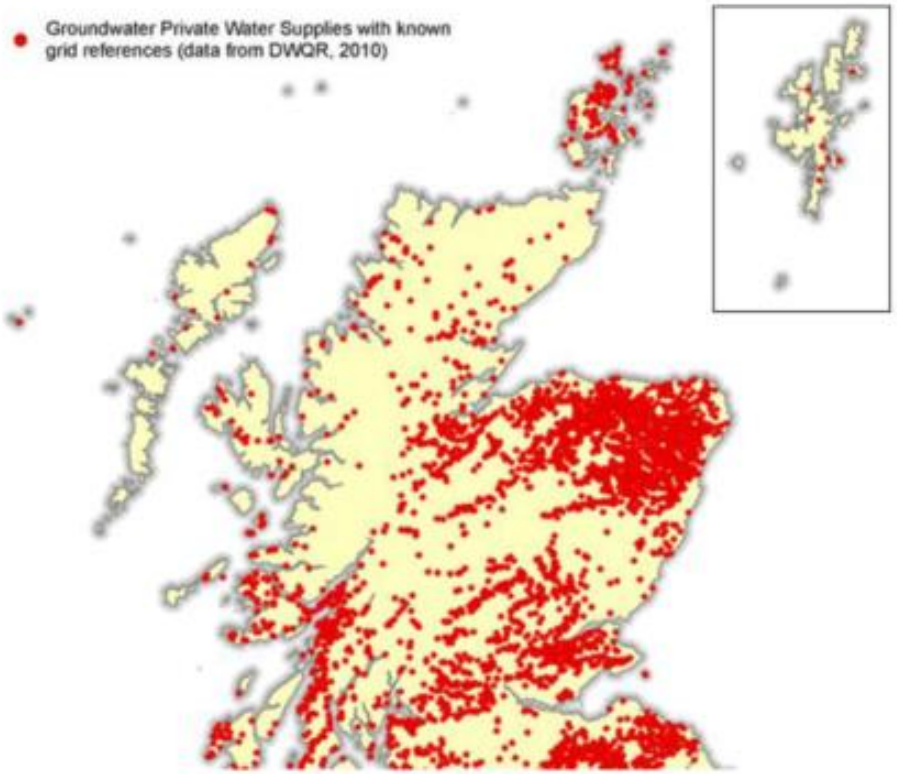
Groundwater dependent

Private Drinking Water Supplies (PWS)

Aberdeenshire has approximately 7800 private supplies (35% of the Scottish total), serving over 11000 properties, domestic and non-domestic (13% of Aberdeenshire's resident population).

Approximately 6500 supplies serve single houses, the remainder being shared supplies, in some case serving up to 50 properties. Many rural businesses – including those in the agricultural and tourism sectors - rely on private water supplies

Each year there are a few supplies that run dry, but 2018 proved to be unprecedented in terms of the extent of problems. Between June 2018 and March 2019 Aberdeenshire Council assisted with 163 supplies (350 properties).



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Recent research from CREW on PWS Risk

- Climate change will result in alterations to the precipitation input to Scotland's hydrological system, with different spatial distributions and seasonality shifts giving reduced rainfall in the east and an increasing probability of experiencing drier years in the future.
- An increased risk of meteorological drought which may lead to hydrological drought and impact on PWS with an increase in the number of drier years (low total annual precipitation) occurring more frequently with water shortages due to large water precipitation deficits
- The north-east of Scotland may have the greatest exposure to risk of precipitation deficit due to projected changes in precipitation and high concentration of PWS.

(M.Rivington, I. Akoumianaki and M. Coull (2020). Private Water Supplies and Climate Change The likely impacts of climate change (amount, frequency and distribution of precipitation), and the resilience of private water supplies. CRW2018_05. Scotland's Centre of Expertise for Waters (CREW).)

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Natural Capital – relies on Stocks of Capital to allow the Flow of Benefits from them

- While water depends on climate, natural flood management can improve resilience of our landscapes to benefit, including the natural environment.
- We need to better understand key ecosystem services for our area, including the potential to improve the resilience for private water supplies.
- We need to map and assess ecosystem quality, identify key factors and their vulnerability, in order to prioritise our ecosystem restoration efforts.
- More integrated water management across our landscapes can deliver multiple benefits for nature, communities and carbon sequestration.

At the end of the day:

Ecosystems don’t depend on our economies, however our economy does depend on our ecosystems. So it is in our own interest to care for them.

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Thank you

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