

Dŵr Cymru  
Welsh Water

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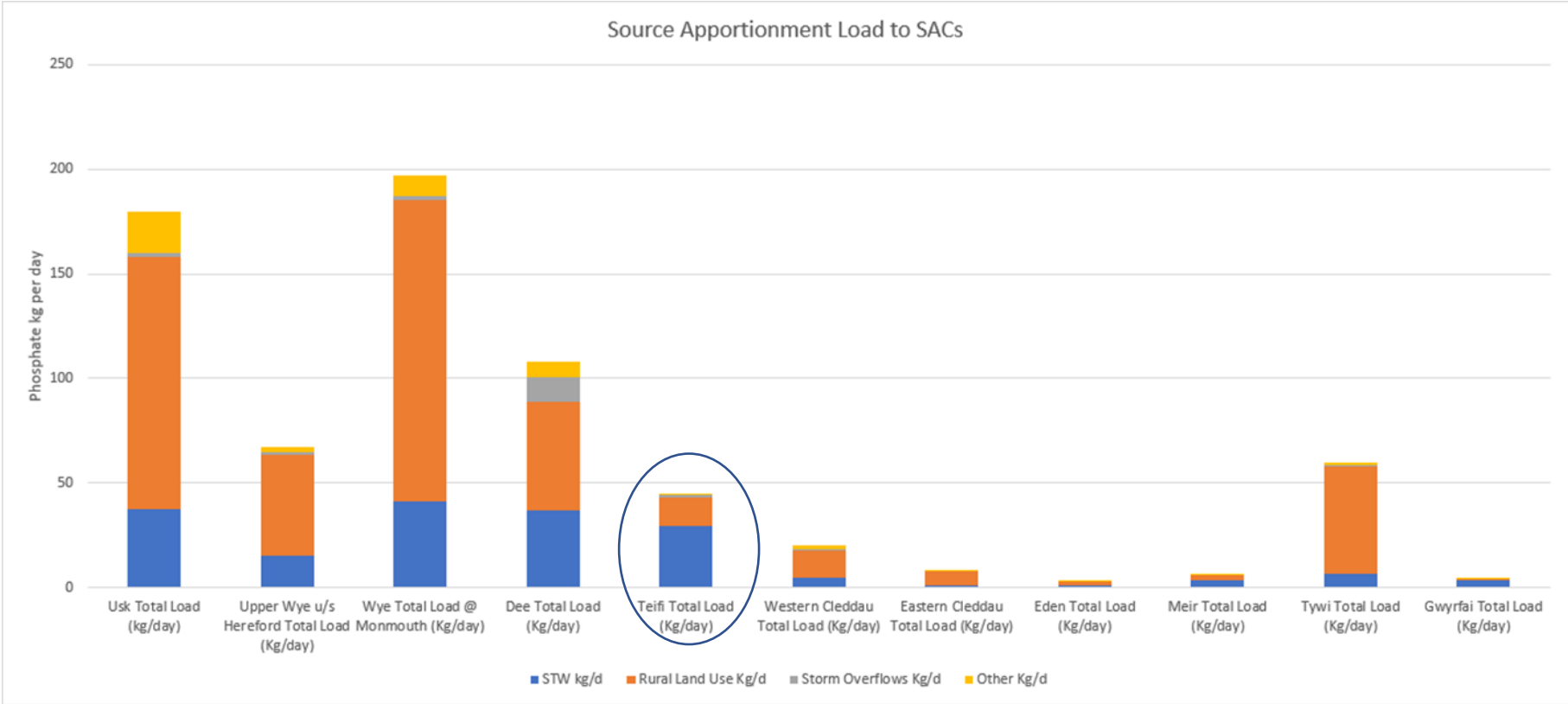
*Welsh Water investment plans for the Afon Teifi*



## Source Apportionment Geographical Information System

- Industry standard modelling tool used to inform investment needs
- Data sources include measure and estimates;
  - Agriculture census information using PHYSIC model
  - River flow data
  - Phosphorus sample data
  - WwTW flow and quality
  - Estimates of other diffuse and point source contributors
- Calibration followed by NRW commissioned audit process

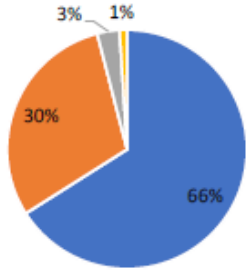
# Different catchments have different needs



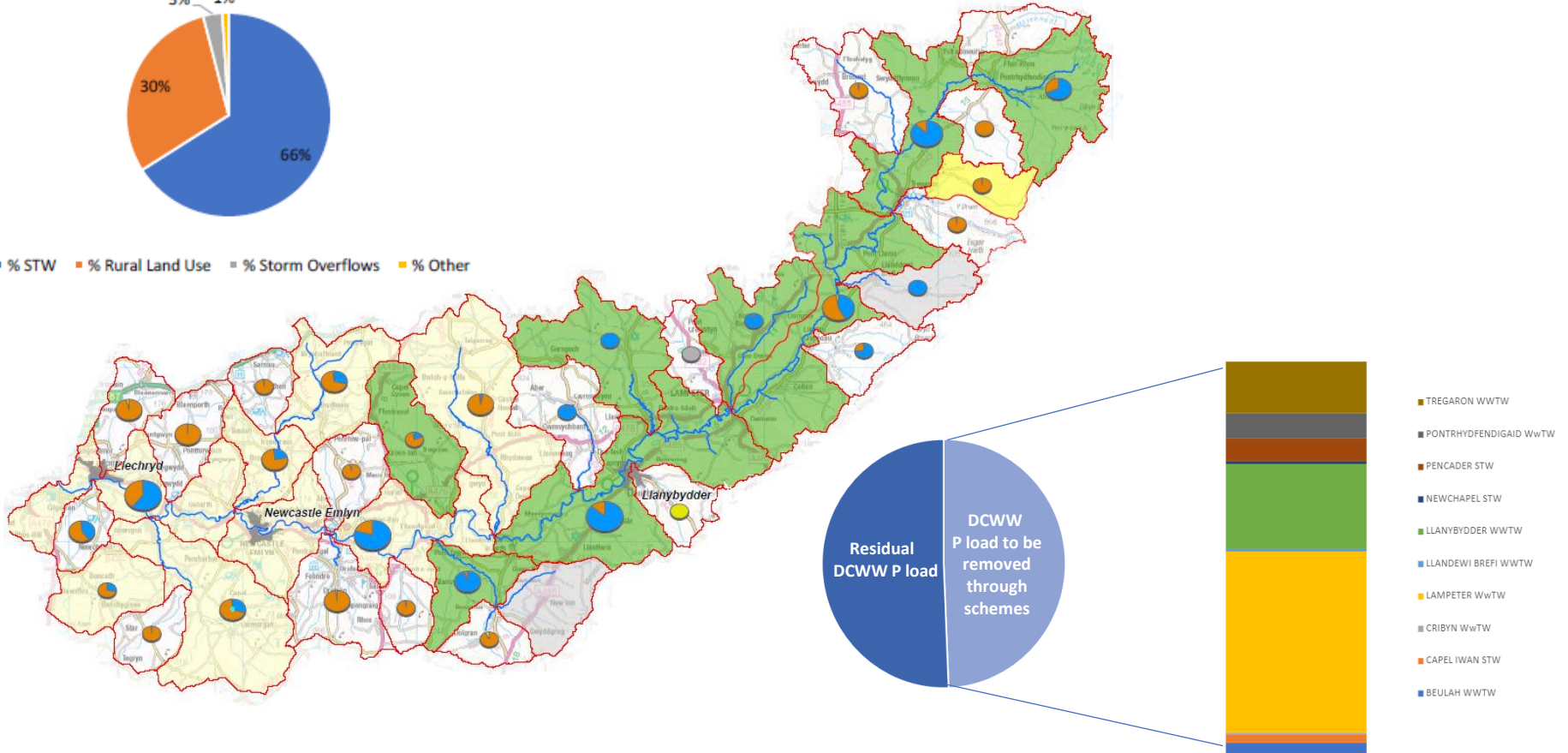
# Different catchments have different needs



Teifi Total Load (kg/day)



■ % STW ■ % Rural Land Use ■ % Storm Overflows ■ % Other





## AMP7

2x accelerated schemes will address two thirds of our required reduction by end of 2025

### TEIFI

Lampeter Wastewater Treatment Works – AMP8 scheme brought forward

**Objective:** Reduce phosphorus discharged from works

**Expected completion date:** March 2025

**Investment:** £1.3m

Llanybydder Wastewater Treatment Works – AMP8 scheme brought forward

**Objective:** Reduce phosphorus discharged from works

**Expected completion date:** March 2025

**Investment:** £TBC

## AMP7 and 8+

Now → 2032

- New & tightening permits including ‘backstop’ permits to prevent deterioration, from 2023 until 2032
- Total of **28** new phosphorus conditions – subject to NRW’s review of permit process and OFWAT determination



## AMP8 Investment for the river Teifi

Within PR24 business plan there is over £40m investment planned for the wider Teifi catchment

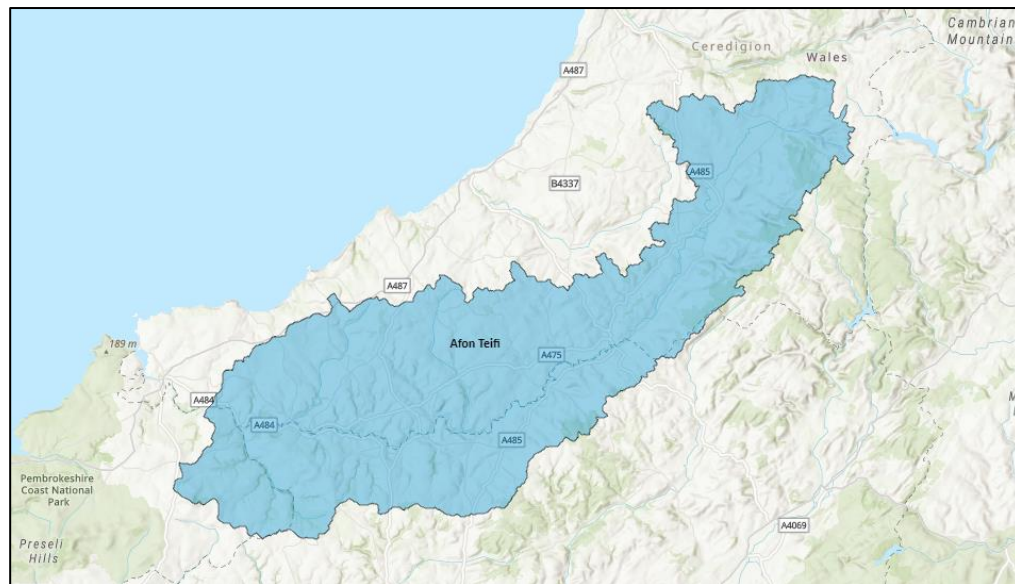
Including;

- £10m on addressing some key overflows
- £20m on Cardigan WwTW flow scheme
- £2.5m on increased flow to treatment
- £10m on improving final effluent quality including phosphorus removal schemes

# Afon Teifi: Drinking Water Source



- 💧 **Catchment area:** 906.27 km<sup>2</sup>
- 💧 **WTW:** Llechryd & Strata Florida
- 💧 **Population Served:** Over 64,000 properties
- 💧 **Safeguard Zone designated in 2020:** *Bacteria, nutrients, pesticides*
- 💧 Catchment Management projects in delivery since 2014
- 💧 Included in AMP8 NEP for ongoing catchment initiatives





## 💧 PestSmart:

Stakeholder engagement in catchment since 2014, developed the Wales Pesticide Partnership. Collaboration led to award-winning mitigations:

- Root-cause analysis to understand pesticide (MCPA) sources in the catchment
- Weed Wiper Hire Trial ran 2015-2019. In total 152 hires wiped 1360ha avoiding approx. 4080litres MCPA used. Reduced detections of MCPA at point of abstraction delaying need for multi-million pounds investment at Llechryd WTW (GAC)

Success of early work led to investment by Welsh Government (£1M grant in 2018):

- Pan-Wales Pesticide Disposal Scheme (2017-2021); 30 participants from Teifi and circa. 1490kg collected and disposed
- *Be PestSmart* campaign for gardeners & homeowners. Pan Wales approach promoting best practice – [www.pestsmart.wales/](http://www.pestsmart.wales/) / [www.pestsmart.cymru](http://www.pestsmart.cymru)
- Published research assessing the impact on behaviour change campaigns on water quality <https://spotlight.leeds.ac.uk/tackling-water-pollution/>





## ◆ NRW's 4Rivers for LIFE Project: 2022-2027

- DCWW co-financing, £240k contribution towards £9M project
- DCWW representation on Project Board & Steering Group
- Working with project team to include WaterSource messaging in comms materials and jointly promoting project at local shows & events (i.e. Lampeter). Presented at WaterSource 2023
- Aligning best practice land management to deliver schemes that provide multi benefits e.g. INNS management in SgZ

## ◆ WaterSource Engagement Campaign:

- New community engagement project with Women's Institute groups

## ◆ Drinking Water Catchment Risk Assessments:

- Continue to assess risk to raw water through our accredited Drinking Water Safety Plan process



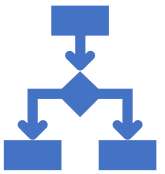
Activities in the Afon Teifi will align to Safeguard Zone Action Plan. Examples of activities:

Risk Evaluation	Smart Catchments	Research Translation & Advanced Techniques	Partnerships & Engagement	Mitigation & New Ways of Working
Understanding of challenges to raw water quality through regulatory monitoring, catchment knowledge and DWSPs	Develop a 'Digital Twin' for prediction of raw water deteriorations, for abstractions management and WTW optimisation	Supporting cutting edge science to achieve better understanding of how we can better manage the causes of changes to water quality which impact Customer Acceptability	Collaboration with partners and communities to raise awareness of the importance of safeguarding drinking water supplies	Co-designing solutions with our key stakeholders which will deliver multiple benefits for water, the environment, and people.
<i>Drinking Water Safety Plans</i>	<i>Real-time water quality monitoring (joined up network for water &amp; waste services)</i>	<i>Earth Observation for risk prediction</i>	<i>Promotion at shows, events &amp; digital platforms</i>	<i>Co-develop mitigations with land managers &amp; stakeholders</i>
<i>Emerging Contaminants Sampling</i>	<i>Smart data analysis for early warning detections</i>	<i>Predictive modelling for T&amp;O events</i>	<i>One Welsh Water – joined messaging &amp; engagement water &amp; waste services</i>	<i>Best practice campaigns (e.g. Be PestSmart)</i>
	<i>Integrated Catchment Modelling (digital twin)</i>		<i>Farmer discussion groups</i>	<i>4Rivers for LIFE project</i>

# How are Welsh Water supporting collaborative working?



Teifi Project Officer to help facilitate opportunities



Defined collaboration categories



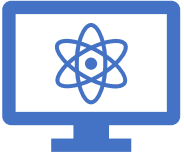
Continue to support NRW's 4Rivers for LIFE



Voting member of NMBs, participate in TAG and stakeholder groups



Pre-screened collaborative opportunity sites for NMBs



Develop scope for live river monitoring programme



Increase our visibility and involvement in the wider community



Continue our WaterSource programme



Establish the Afon Teifi Working Group



Update LAs with phosphorus data on current performance