Perceived risks and concerns among Private Water Supply users.

Exploratory survey. Brief June 2025.

Keith Marshall, Diana Valero, Katy Joyce, and Graciela Martinez Sanchez

Introduction

Here we present a summary of key results from a 2024 online survey which explored private water supply (PWS) users' experience and perceptions of the impacts of drought, contamination, treatment, costs, and the availability support.

There were a total of 185 respondents, with recruitment focussed on NE Scotland (n=88) and SW Scotland (n=66), with the remaining 31in other regions. This allowed comparison between the NE and SW: these regions have a high number of PWS users and differ in terms of their primary land-use (broadly arable/mixed vs pasture/forestry) and prevalent climate (broadly cooler drier vs warmer wetter).

In the following sections we provide a summary of the data collected and insights on PWS users' concerns and risks perceived regarding their supply.

Respondents and their PWS setup

- 45.9% knew that they were on unregulated supplies and 46.4% did not know if they were regulated: we assume that these would also be unregulated otherwise they would be aware of Local Authority oversight. Only 4.4% were on a regulated PWS.
- Eighty percent of respondents were owner occupiers and 12.4% were tenants, the remainder being businesses or landlords.
- Groundwater was the main source in the NE, and surface water in the SW. Sources were often surrounded by more than one land use, with the dominant ones being crops and livestock in the NE, and livestock and woodland in the SW.

Treatment, monitoring and testing practices

- Particulate filters and UV lamps were each used by more than 60% of respondents. Those in the NW were more likely (40% vs 10%) to use pH buffers to mitigate the effects of acidic water.
- Over 70% of failures (n=62) were due to bacteria, and pH 17% of failures. Metals caused 27% of failures, with the majority of these in the SW. Overall, there was no difference between the failure rates of water quality tests between the NE and SW.
- Only 3.5% of respondents reported having a water quality monitoring system, and over 40% of respondents felt that financial and practical would be required if they were to consider self- monitoring, as well as evidence of its efficacy.

Main concerns related to PWS

- The issue of most concern overall (48% of responses) was the **increasing cost** of maintaining a clean, safe water supply (see *Figure 1*). Respondents on lower incomes tend more to be concerned about the cost maintaining a safe supply will become increasingly unaffordable.
- Overall, approximately 60% were not concerned about their **water quality**, although this increased slightly when asked about **the future**.
- There were regional differences, with PWS users in **SW Scotland** being **more concerned about water quality** than in the NW, and this was reflected in a greater interest in water quality monitoring.
- The majority of water **quality testing failures** were due to bacterial contamination.
- Of least concern to users was **water availability**, although issues around supply were more relevant to those in the SW. Again, water availability concerns increased in response to questions about the future. Respondents with less than 2 years' experience of PWS are more likely to be concerned about risk of running dry due to drought.
- **Power cuts** were the most reported events that impacted household water supply.

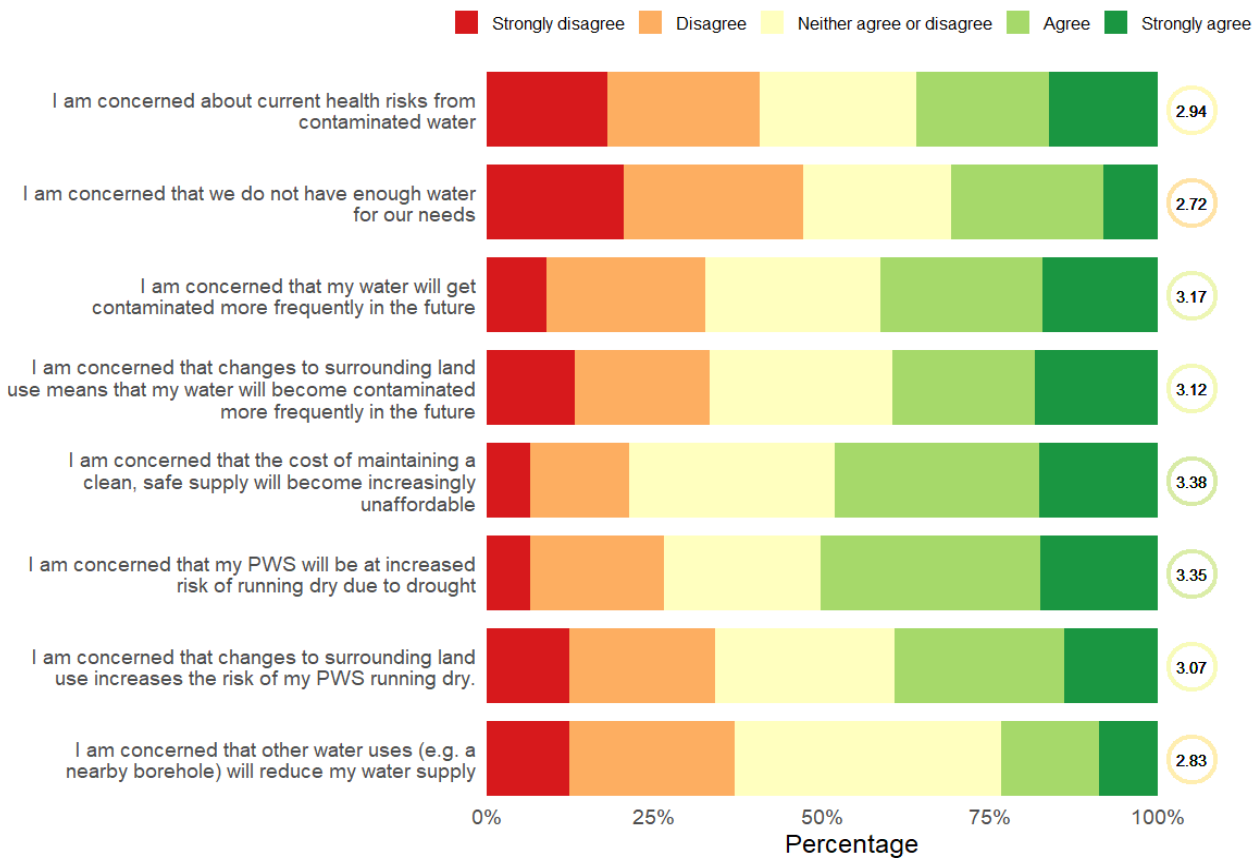

Figure 1. Current and future concerns regarding water supplies
(n=171; Numbers within the circles indicate mean scores on a 1-5 Likert scale).

Existing support to PWS

- **Local Authority guidance** for PWS users was generally viewed positively or neutrally, with financial support and training receiving the least satisfactory support (see figure 2). Responses to satisfaction with experience of support did not differ between regions.
- 68% of respondents reported that their supply had been risk-assessed by their Local Authority and there were no regional differences detected.

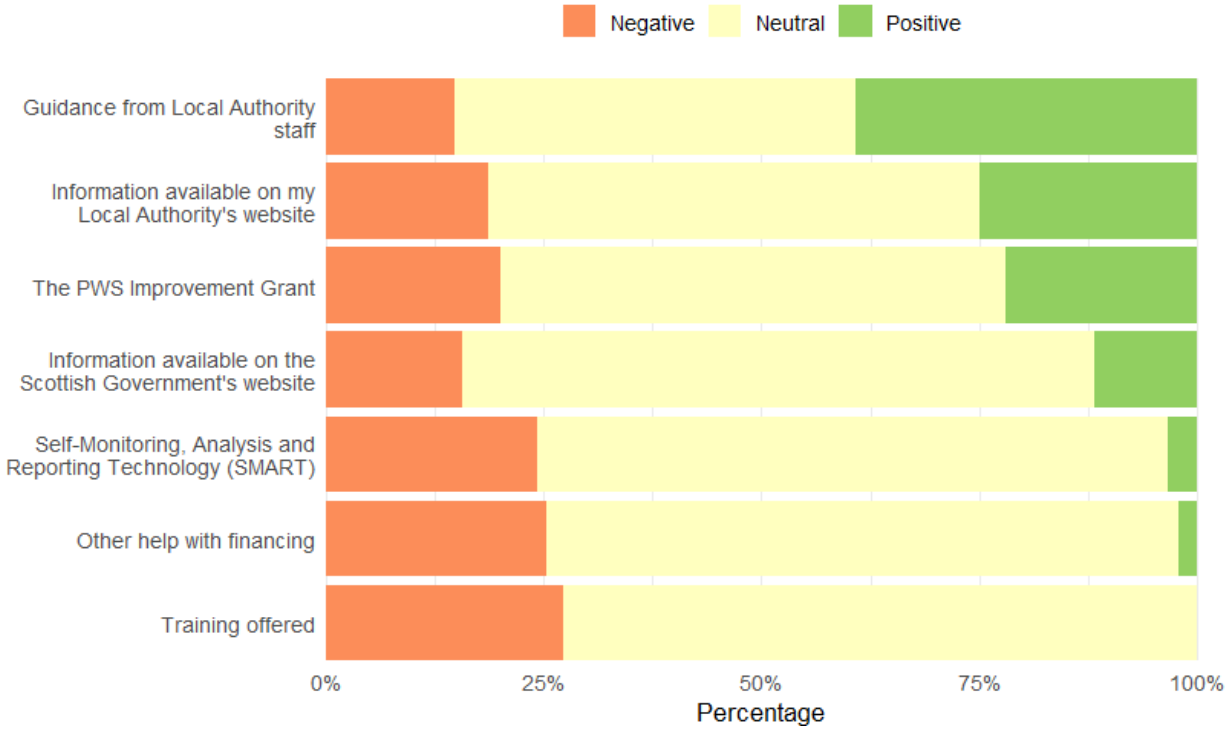

Figure 2. How would you best describe your experience of the following aspects of PWS support?

Further information

This study is part of the research project JHI-D2-1 Emerging Water Futures, funded by Scottish Government's Rural and Environmental Science and Analytical Services Division (RESAS) and led by Dr Miriam Glendell. Detailed results will be published in the project report on the vulnerabilities and resilience of PWS users in 2026, along with the findings of in-depth interviews and the participatory workshops conducted by the research team during 2024-2025.

Contact

Dr Keith Marshall *keith.marshall@hutton.ac.uk*
Dr Diana Valero *diana.valero@hutton.ac.uk*

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