Southern Rural Water

Factsheet

A strategic review of domestic and stock system options in Gippsland

Introduction

In 2019, drought was formally declared in the Wellington and East Gippsland Shires of Gippsland. At this time, Domestic & Stock (D&S) access was identified as being under threat from the dry conditions. While there are Emergency Water Supply Points (EWSP) throughout Gippsland, SRW commissioned a study to identify critical focus areas and determine the feasibility of establishing a D&S water supply scheme to support drought affected water users in Gippsland with a focus on the Wellington and East Gippsland Shires.

Marsden Jacobs and Associates (MJA) were commissioned to undertake the work which investigated region-wide, shire based and local area D&S supply schemes while considering the efficacy of the EWSP network. This factsheet will provide an overview of the study area, approach and findings.

Study area

The work identified a number of local 'pressure point areas' which formed the geographic scope of the work. At the time, the 'pressure point areas' identified were

- Toongabbie/Glengarry
- Flynn
- Bushy Park/Llowalong
- Munro/Perry Bridge
- Fernbank/Lindenow South
- Giffard
- Stradbroke
- Woodside

Approach

In making the assessments MJA drew on range of data, mapping resources and expert opinion to identify potential D&S supply pressures and undertook high level mapping of land use, rainfall projections and water resource availability and estimated likely D&S demand based on land use and stock rate information. The work also considered the bore locations and management oversight of the EWSP network.

Five supply options were explored:

1. Whole of region system – a single D&S system connecting each pressure point area
2. Two shire systems – a D&S system in each Shire connecting each pressure point areas
3. Area supply systems - a stand-alone D&S system for each pressure point area
4. Opportunistic systems – D&S systems where new irrigation developments occur
5. Bespoke on-farm responses – individually tailored on-farm management and infrastructure responses including practice change

Solutions were assessed against criterion that broadly align with Victorian Treasury Guidelines (see below).

Criteria	Key criteria questions
Urgency and long-term need	Are there pressing short and longer-term needs to justify a response (e.g. farm system needs and current on-farm infrastructure considerations)?
Implementable	Is the solution practical, technically and legally feasible given topography, natural features and land use overlay
Fit for purpose	Is the response at a scale that is commensurate to the problem?
Supply	Is there sufficient available water resource to meet the scale of implementation?
Risk and uncertainty	Is the solution low risk and provide for certain outcomes but also sufficient flexibility?
Potential for other solutions	Is the solution the only feasible solution that can be applied at scale efficiently?
Likely cost and benefits	Are the benefits likely to exceed the costs?

Findings

This work found that there was no feasible supply system that could be established to improve D&S access, however it did identify both short-term and long-term responses to improve access to water for D&S users. The findings are summarised below.

SUPPLY OPTION	NOTES FROM FINDINGS	RECOMMENDATION
1. Whole of region system	A whole of region system would not be appropriate given that potential pressure point areas are generally isolated from one another. Would require large, long-distance pressurised system.	Not recommended. The scheme would be costly relative to the expected benefits and there are likely to be more practical smaller scale responses.
2. Two shire systems	Separate Wellington and East Gippsland Shire systems would have similar issues to option 1.	Not recommended. Not expected to be efficient or effective.
3. Area supply systems	The costs of an area system are expected to be large relative to the modest on farm gains that could be expected to occur annually. The approach is also likely to elevate farm system risk. In particular, farms may act to intensify land use and there are risks on other water users of accessing water to meet system needs.	Not recommended. There are likely to be more suitable smaller scale and on farm responses.
4. Opportunistic systems	There may be practical and lower cost ways of opportunistically incorporating domestic and stock systems where there is an expansion of the irrigation footprint or utilising the existing infrastructure network to opportunistically supply localised farms via nearby water courses as temporary extensions of the network.	Possible. Dependent on other developments such as irrigation system extension. No developments were under consideration at the time of writing.
5. Bespoke on-farm responses	There are opportunities to improve support to sustainable on-farm responses. This includes continuing to improve the emergency bore responses, improving on-farm drought management planning and capabilities and helping farmers to invest in drought management plan aligned on-farm infrastructure.	Recommended. This was the only option that met all the assessment criteria. Avoids high infrastructure costs and empowers farmers to develop risk based preparedness responses.

The study identified short-term responses that could have a positive impact on D&S access, while avoiding costly development. These include:

- Continuing to upgrade emergency water supply points (increasing pump capacity, create buffer storages etc)
- Develop farm management plans that recognise and respond more effectively to drought
- Provide farm practice change information
- Clarifying accountabilities within statutory and government agencies (local and state) and develop greater alignment of emergency water supply and drought response initiatives.

These short-term responses should be framed and developed within a longer term maturing response and implementation strategy which would require a clear long term vision for the area in relation to drought response. It was concluded that this long term response should address farm system change as well as governance and/or asset management oversight changes.