



Australian Government

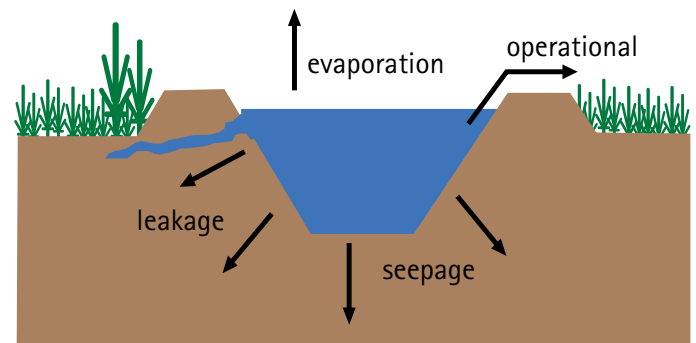
# WATER for the FUTURE

## Irrigation Hotspots Project

The well-being of Australia's population and environment depends on the good management and wise use of our water resources in the face of a prolonged drought and long-term climate change.

Through *Water for the Future*, the Australian Government will focus on four key priorities:

- Taking action on climate change
- Using water wisely
- Securing water supplies
- Supporting healthy rivers.



Potential water losses from an irrigation channel

### What is the Irrigation Hotspots Project?

The Irrigation Infrastructure Hotspots Assessment Project (Irrigation Hotspots Project) is a key component of the \$5.8 billion *Sustainable Rural Water Use and Infrastructure* element of the Australian Government's *Water for the Future* initiative.

The hotspots project will use a consistent and science-based approach to identify the nature, location and amount of water losses (known as "hotspots") in existing channel and piped irrigation delivery systems across Australia.

### How is water lost in an irrigation water delivery system?

Water can be lost in an irrigation water delivery system through:

- Evaporation – water lost to the atmosphere
- Seepage – the movement of water through the beds of irrigation channels
- Leakage – water lost through channel banks and structures
- Operational losses – theft, outfalls, system fill, unmetered diversions and inaccurate metering.

### What is a hotspots assessment?

A hotspots assessment identifies water losses at a whole-of-system and sub-system level, by incorporating local knowledge with data from irrigation district operators and detailed on-site investigations.

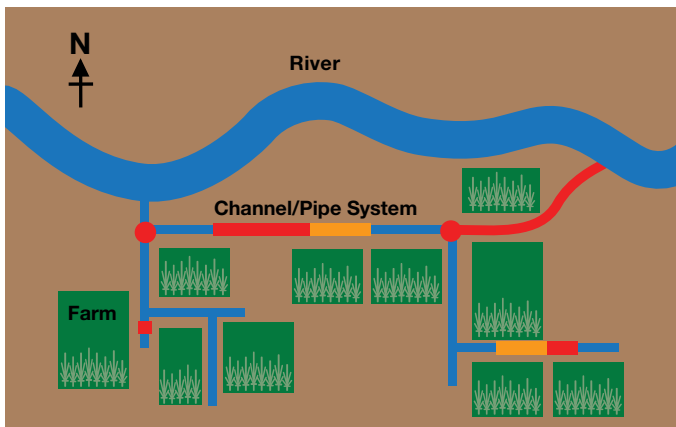
To ensure a consistent and robust approach, the Australian Government commissioned the CSIRO to develop the *Technical Manual for Assessing Hotspots in Channel and Piped Irrigation Systems* (Technical Manual). The manual was developed through a series of workshops that involved national and international experts in irrigation and hydrology, along with Australian and state government representatives.

The Technical Manual outlines a range of hotspots assessment methods including:

- Water balances
- Remote sensing
- Electromagnetic and airborne electromagnetic surveys
- Geo-electrical resistivity surveys
- Groundwater monitoring
- Inflow-outflow methods
- Pondage tests.

*Water for the Future* is a long-term plan to secure the water supply for all Australians. The Government is investing \$12.9 billion over 10 years to address four key priorities:

- Taking action on climate change
- Using water wisely
- Securing water supplies
- Supporting healthy rivers



Hypothetical and simplified representation of a hotspots assessment (water losses) in a water delivery system – red indicates larger losses, orange indicates minor losses

### Why is it important to pinpoint water losses in irrigation supply systems?

Identifying water-loss “hotspots” is a crucial first step to improve irrigation efficiency, restore water to the environment and help irrigators meet the challenge of an expected decline in water availability.

### How will hotspot assessments be undertaken?

The Australian Government established a panel of independent consultants and project teams capable of undertaking hotspots assessments in irrigation areas across Australia using methods outlined in the Technical Manual.

These panel members will work closely with the Australian Government and Irrigation Water Providers (IWPs) to conduct hotspots assessments in participating irrigation areas.

Some IWPs may have already completed, or partially completed, work that could be considered a hotspots assessment. In these circumstances, existing work will be reviewed against the Technical Manual and incorporated into a hotspots assessment if appropriate.

### How will the hotspots information be used?

The hotspots project will inform IWPs of the nature, location and amount of water lost in their irrigation water delivery system and identify potential water savings.

Hotspots assessments will ensure that investment in new irrigation infrastructure under the Australian Government’s *Water for the Future* initiative can be targeted to maximise water savings while meeting the following investment tests:

- Delivering a substantial and lasting return of water to the environment to secure real improvements in river health
- Securing a long-term sustainable future for regional communities
- Value for money.

### Is there funding to fix identified hotspots?

The *Sustainable Rural Water Use and Infrastructure* program has funding available to improve water use efficiency. A hotspots assessment is an important means by which an IWP can support an infrastructure investment proposal. A hotspots assessment will also assist the Australian Government assess the integrity of those proposals.

### MORE INFORMATION

For more information on the Irrigation Hotspots Project visit [www.environment.gov.au/water/programs/off-farm](http://www.environment.gov.au/water/programs/off-farm)

Alternatively you can write to:

Irrigation Hotspots Project Team  
 The Australian Government Department of the Environment,  
 Water, Heritage and the Arts  
 GPO Box 787  
 Canberra ACT 2601  
 Email: [hotspots@environment.gov.au](mailto:hotspots@environment.gov.au)