

The Weather Web

Cool Gardens Using Less Water



**LIVING
WATER
SMART**

Darwin Region



livingwatersmart.com.au

An initiative of

PowerWater

Darwin - Growing



Darwin River Dam – not growing

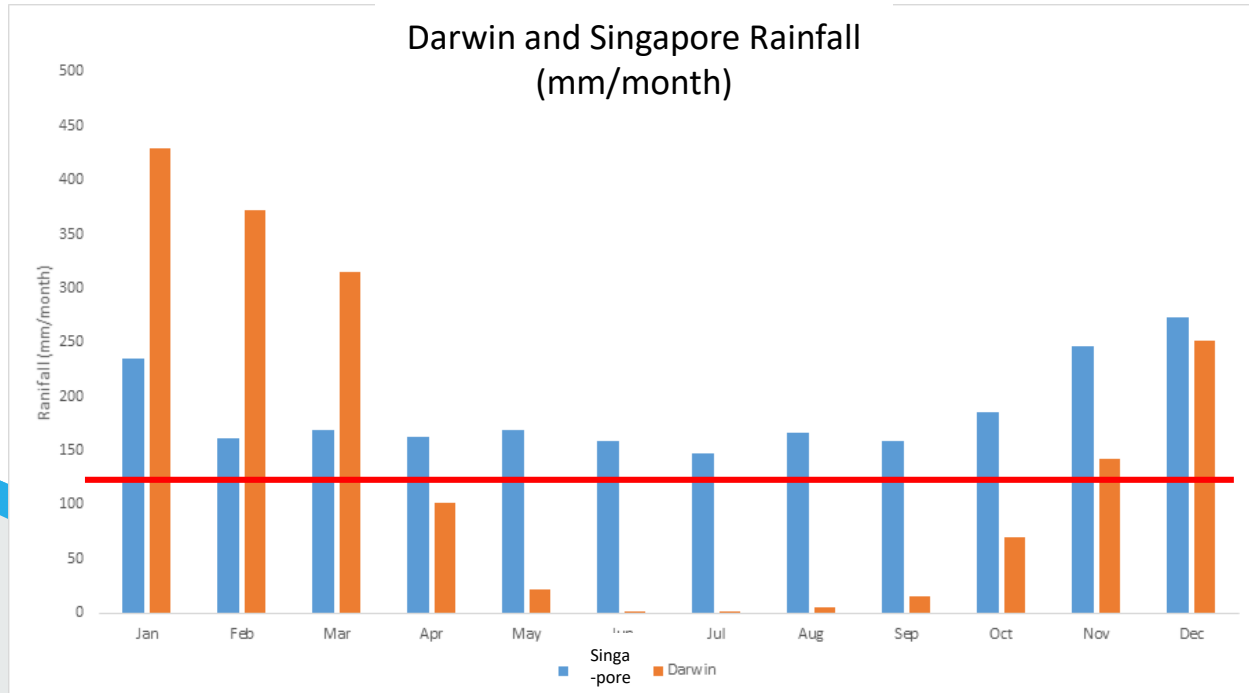
Key Facts:

- Darwin has \approx 43GL/yr of water
- Use is generally around 43GL \approx 1,000L/p/d



Singapore?

- Darwin is Wet/Dry tropics 1.7m of rain then 7 months of drought



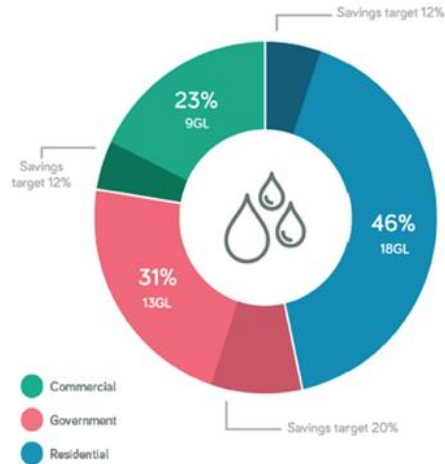
**LIVING
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A Power and Water initiative

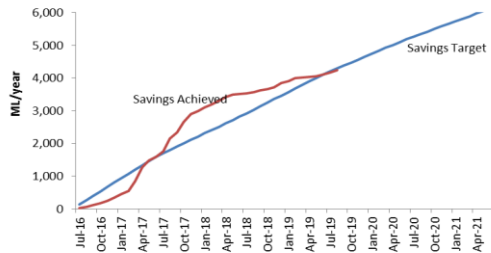
Living Water Smart – last 5 years

Annual Darwin Water Use:



- Commercial
- Government
- Residential

Living Water Smart Darwin Water Savings (2016 - 2021)



Government Strategies



Power and Water Corporation



Local Government



Northern Territory Government



Federal Government

Commercial Strategies



Commercial Garden Tune Ups



Business Water Use Health Checks



Smart Metering



Water Management Plans

Residential Strategies



Community Leak Program



Rebates Garden Tune Up Leak Find and Fix



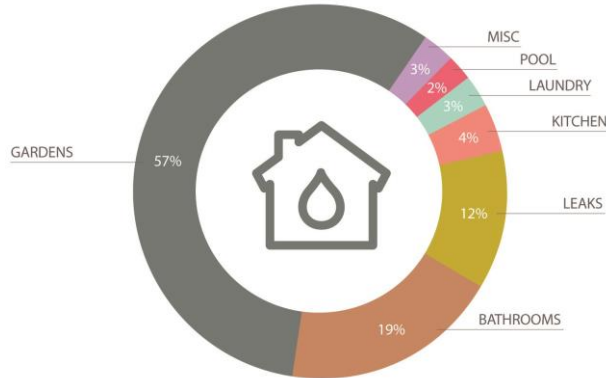
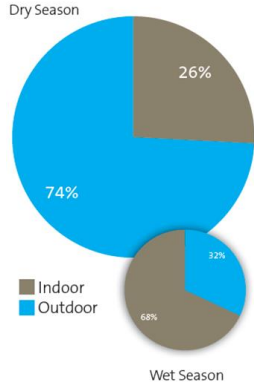
That's My Water! Curriculum Unit



Weather Web and Smart Controllers

Darwin region per capita water use

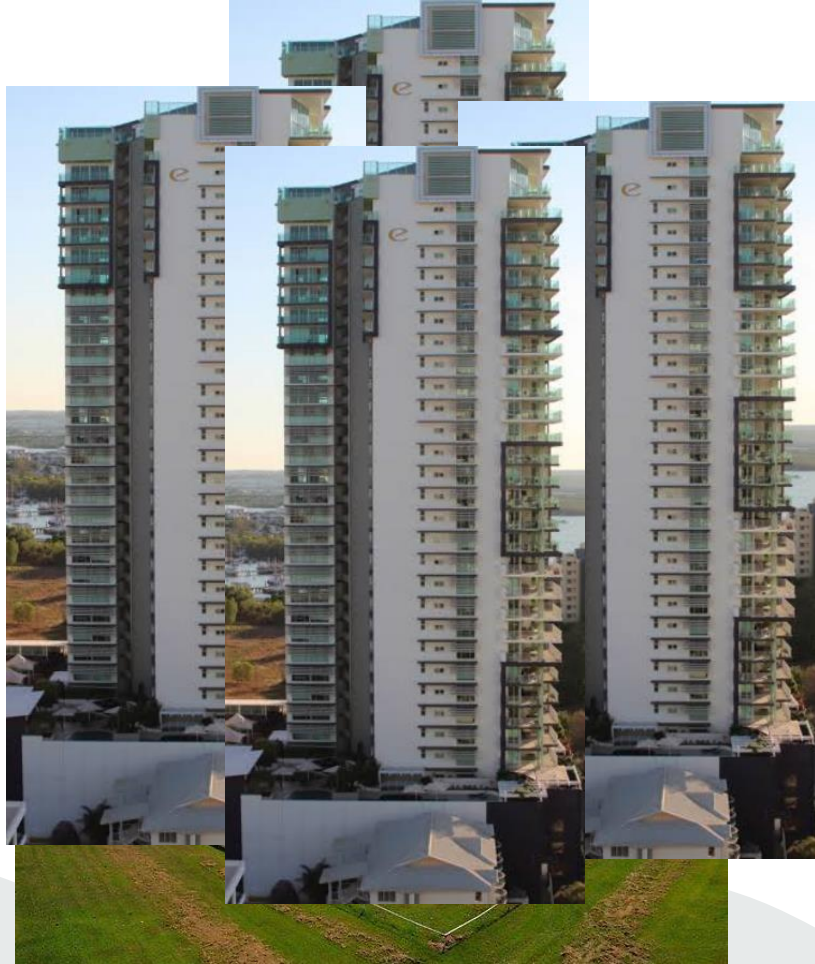
Darwin Seasonal Water End Use



**Dry season irrigation in Darwin
≈ 100 million litres every day...**

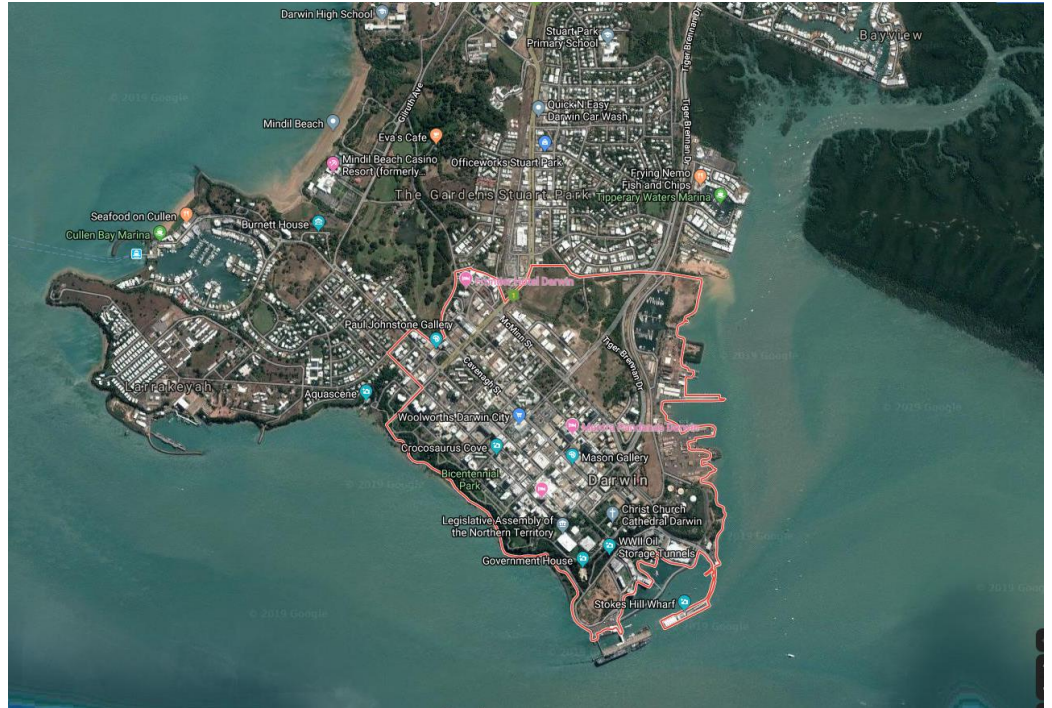
...Which is a rugby pitch covered in 14m of water...

...Or four 33 floor Evolution buildings each week.



What about across a year?

- Over 20 billion litres
- Enough water to irrigate:
 - 1,300 hectares
 - Or 100m² per person
 - CBD is 265 hectares



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A Power and Water initiative

How does water fit in to a cooler city?

Gardens are cooling

But they need water

What can we do?.....

Get Smarter





LEE PT

EAST PT

JINGILI

MALAK

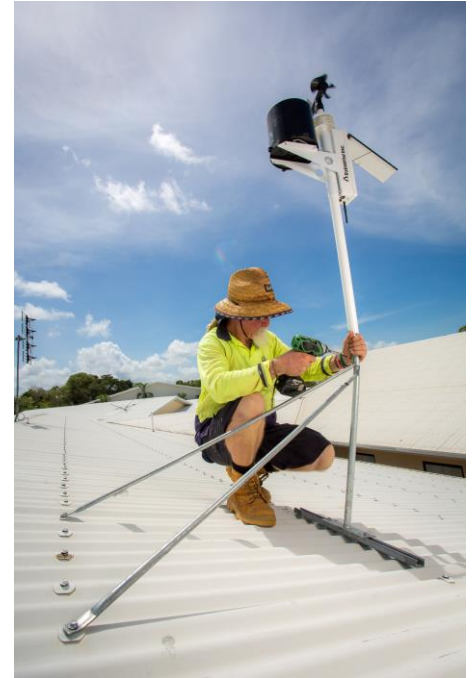
DARWIN

PALMERSTON

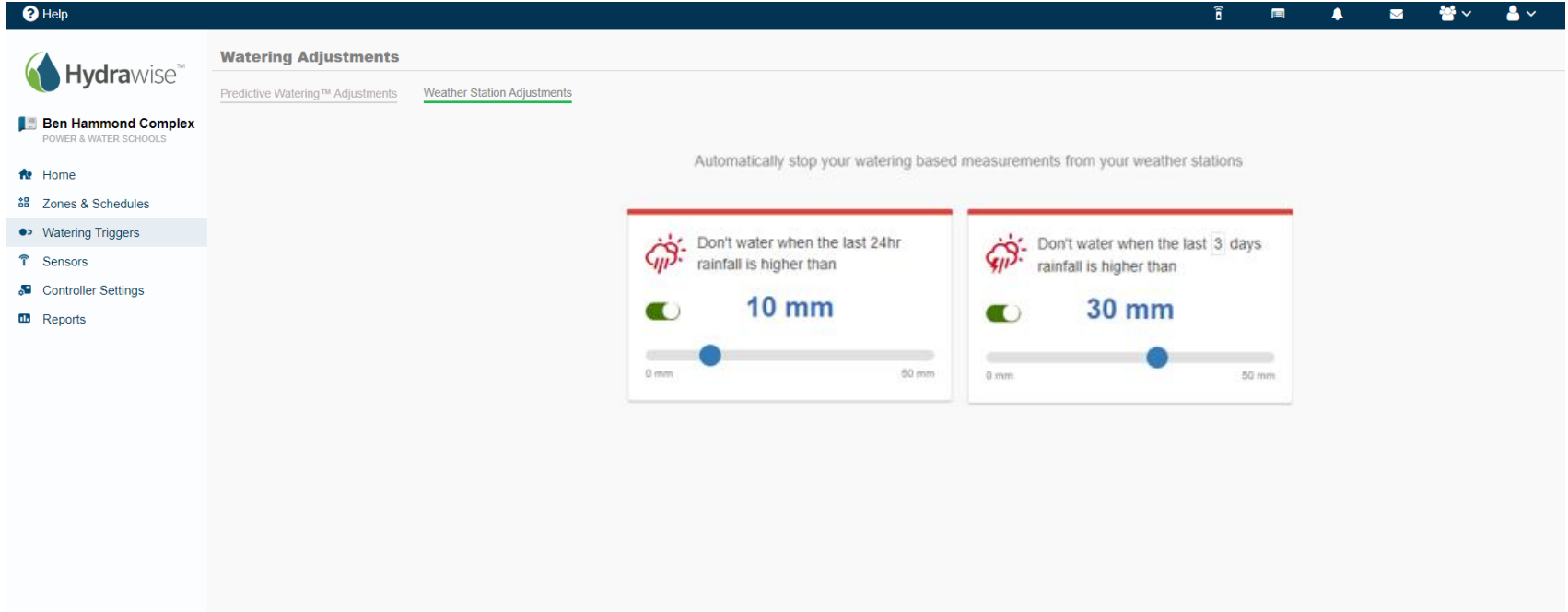
BEES CREEK

How was the Weather Web created?

- Long partnership with Dept. of Education
- Weather stations at over 30 schools - smart irrigation controller too
- Efficient irrigation schedules and watering triggers



Green spaces smart irrigation triggers



The screenshot displays the Hydrawise web interface. At the top, a dark blue navigation bar contains a 'Help' icon and several utility icons. Below this, the left sidebar features the Hydrawise logo and the user profile 'Ben Hammond Complex' with the role 'POWER & WATER SCHOOLS'. The sidebar menu includes 'Home', 'Zones & Schedules', 'Watering Triggers' (which is highlighted), 'Sensors', 'Controller Settings', and 'Reports'. The main content area is titled 'Watering Adjustments' and has two sub-sections: 'Predictive Watering™ Adjustments' and 'Weather Station Adjustments', with the latter being the active tab. A central instruction reads: 'Automatically stop your watering based measurements from your weather stations'. Below this, there are two control panels. The first panel is for '24hr' rainfall, with a toggle switch turned on and a slider set to 10 mm. The second panel is for '3 days' rainfall, with a toggle switch turned on and a slider set to 30 mm. Both sliders range from 0 mm to 50 mm.

Weather Web – 4 key components

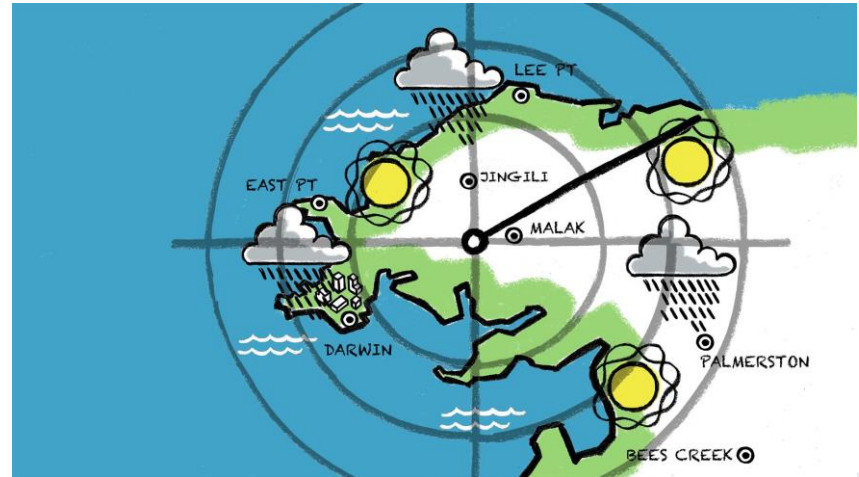
- 1. School irrigation water saving**
- 2. School based education**
- 3. Garden watering education**
- 4. Promote smart irrigation controllers**

For all of the Darwin region



How does the Weather Web work with smart irrigation?

1. Real-time weather data captured
2. Sent to internet sites:
livingwatersmart.com.au/weatherweb,
wunderground, weather channel, etc.
3. Smart controllers react to internet data



How do you access it?

www.livingwatersmart.com.au/weatherweb



Welcome to Darwin's Weather Web

[Home](#) » Welcome to Darwin's Weather Web

Darwin's Weather Web is a network of weather stations located on schools around the Darwin region. Use the Weather Web to help you make smart decisions about watering your garden, based on the rainfall in or nearby your suburb.

How to use the Weather Web

Step 1: Search your suburb using the search bar, or click on the pink circles in the map below which will reveal your closest weather stations.

Step 2: Check the amount of rainfall in your nearest suburb.

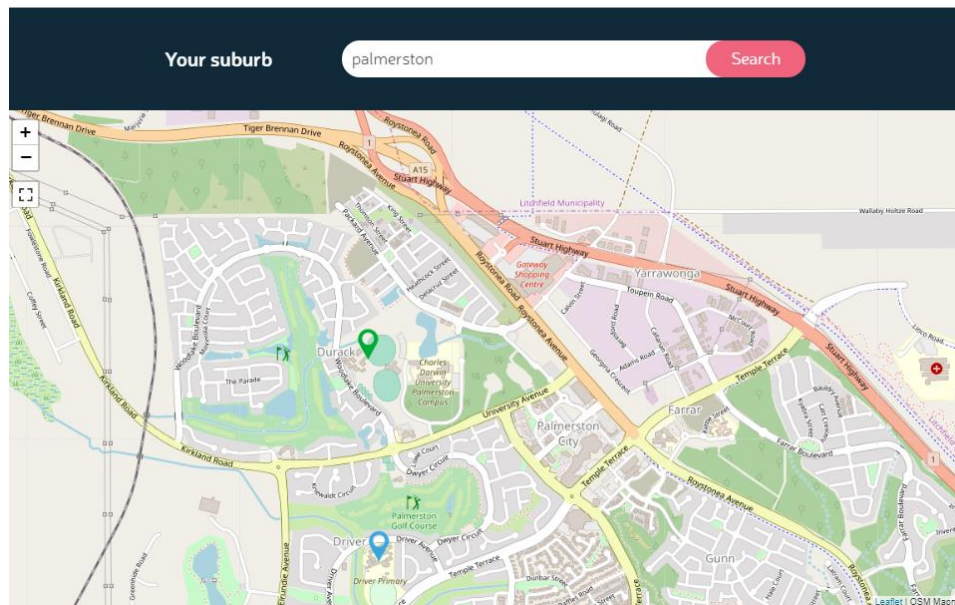
Step 3: Decide if you need to irrigate or not! If you have a smart irrigation controller, connect it to the Weather Web and your irrigation will turn on or off automatically.



Your suburb has had less than 30 mm of rain in the last week and **your plants may still need a drink**



Your suburb has had more than 30 mm of rain in the last week and **you can turn off your irrigation for a couple of days**



Educational resources – Next Gen



Darwin Region

Weather Web Treasure Hunt



In Darwin, the weather and our rainfall affects every aspect of our lives - from the way we dress, to the sports we play, and importantly the amount of water we use on irrigation.

Living Water Smart, an initiative of Power and Water, have worked with Darwin schools to create the Weather Web. The Weather Web is a network of forty weather stations located on school rooftops that allow schools, businesses and residents to make smart decisions about watering their garden, based on local rainfall in their suburb.

Your challenge is to navigate the Weather Web to locate all the information for the treasure hunt below.

Access the Weather Web at livingwatersmart.com.au/weatherweb

You can use the search bar or the map to navigate. Remember, if your suburb has had more than 30mm of rain in the last week, you can turn off your irrigation for a couple of days!

An initiative of
PowerWater

In Darwin we currently use more water than
can be captured and supplied in the long term.



How much water does my garden need?



Year Level: 4, 5, 6

In Short:

Students will conduct an experiment to test how long we should water our gardens before using the findings to influence the broader school community.

Students will:

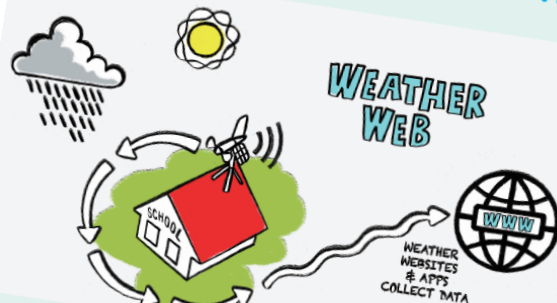
- Learn about the optimal amounts of water required for lawns and gardens.
- Conduct an experiment to test the watering time for various sprinklers.
- Create some key water use and water efficiency messages for the school community.
- Develop some creative posters to share key use messages with the school community.

An initiative of
PowerWater

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Introduction to our school weather station



Year Level: 4, 5, 6

In Short:

Students will explore the importance of predicting and monitoring the weather and investigate all the information they can use from the new school weather station.

Students will:

- Explore the way weather impacts our lives.
- Learn about the role of a meteorologist.
- Learn about the importance of water in Darwin.
- Investigate the features of their school weather station and explore the information.

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Green Space – more of this



Less of this



Sustainable Wet Dry cool city

- Water efficiency is important
- Weather Web can be used by residents, government, business – everyone
- Gardens and green spaces are great but we need to use water smarter – status quo shift in water using habits
- Behaviour helps and technology helps

Questions?

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