

This presentation premiered at WaterSmart Innovations

watersmartinnovations.com



Water Conservation and Management Lessons from Australia

WaterSmart Innovations 2010

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Boise, Idaho Public Works

October 2010

AUSTRALIA



Demographics

Australia: 21.5 million population

Located in major cities along the coastline

Density per square kilometer: 3

- Melbourne, Victoria: 3.5 million population
- Adelaide, South Australia: 1.5 million population

United States: 308 million population

Density per square kilometer: 33



Victoria

- Drought conditions > 10 years
- Melbourne averages about 25 inches precipitation/yr
- Stage 2 - Current drought response
- Potable water is supplied from surface water reservoirs
- 35.6% water storage level – July 2010.
- 26.9% water storage level – July 2009



FEDERATION WHARF

Melbourne Water

- Owned by Victorian government
- \$8.4 billion (AUS) assets
- Responsible for:
 - Catchments (reservoirs) & potable water
 - Wastewater collection & treatment
 - Provides treated water for non-potable uses
 - Manages rivers and drainage systems

IMPROVING OUR YARRA
Parks Healthy and Healthy People

Parks Victoria is committed to improving our Yarra for us all to enjoy.
This litter trap is one of 17 at the most effective collection points.

Litter enters through stormwater drains.
When you litter our streets you rubbish our rivers and bays.
Ph: 13 1963

WATERWAYS
ENVIRONMENTAL
SOLUTIONS





Target 155 Campaign

- 155 liters of water per person per day
- 18 consecutive weeks
- Storm water harvesting common
- Dual flush toilets
- Potable water use restrictions
- 200 liters peak water use October 2009
- 135 liters average use in July 2010



Ballarat

Sovereign Hill Open Air Museum

- Storm water harvesting
- Native plants
- Water conservation







**Temporary Watering
Exemption Approved**

Enquiries Ph. 5320 5500



Ballarat Botanical Gardens
BY LAKE WENDOUREE

**These Gardens
are being
watered with
Recycled water.**

Further information is
available at The
Conservatory

and Botanical Gardens
Phone: 5320 5196



CITY OF
BALLARAT

Wyndham

- 4th fastest growing city in Australia
- Transitioning from agricultural to suburban
- Protection of native bush habitat
- Growth management
- Drought response









Mornington Peninsula

- Storm water reuse projects
- Rainwater harvesting
- Protection of agricultural base
- Water Sensitive Urban Design
- Promotion of native landscapes & plants



Aardvark Plaster

- PROMPT & PROFESSIONAL
- SPECIALISING IN INDIVIDUAL DESIGNS & PRESTIGE HOMES



Rob Mottershead

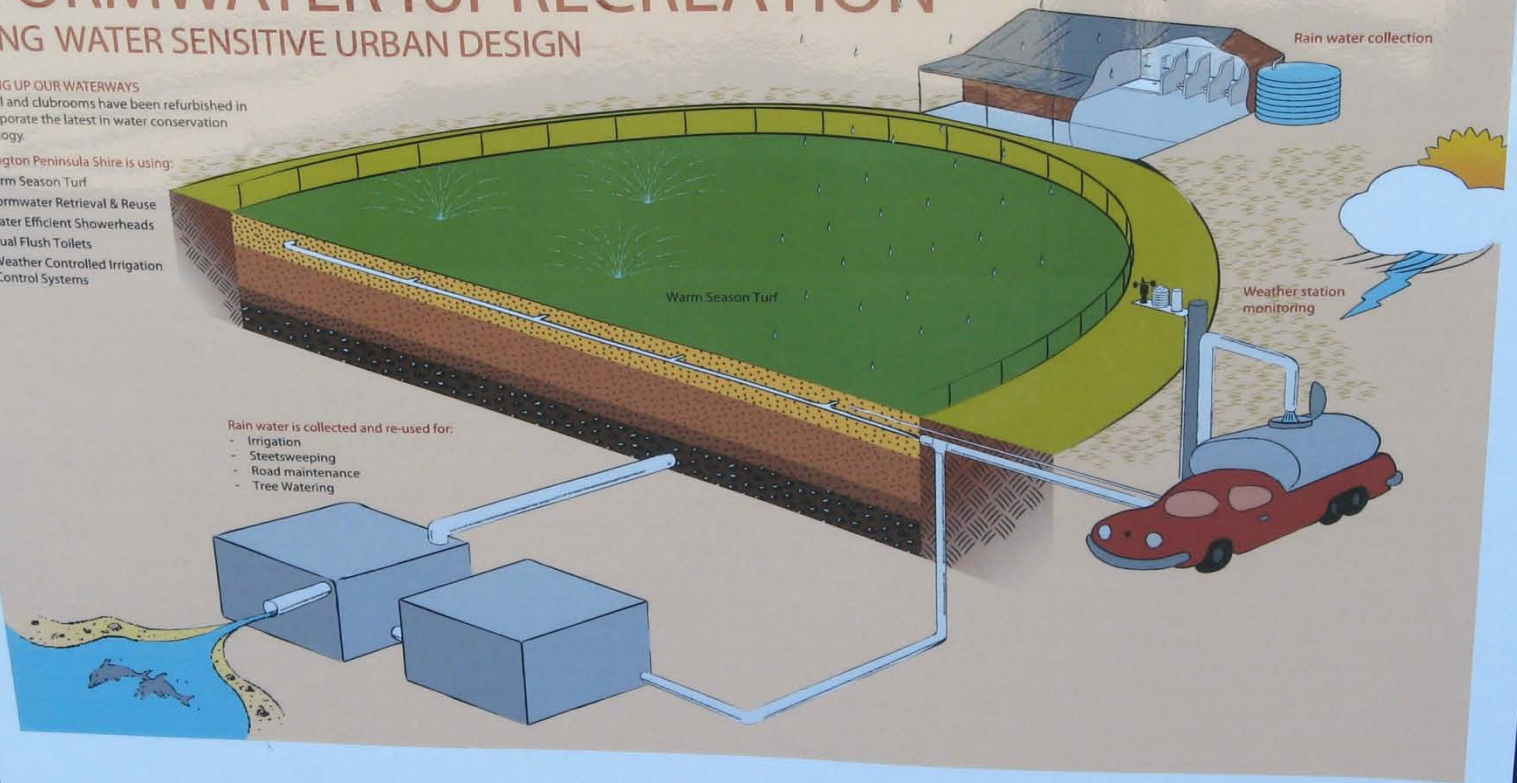
0438 536 681

STORMWATER for RECREATION

USING WATER SENSITIVE URBAN DESIGN

CLEANING UP OUR WATERWAYS
This oval and clubrooms have been refurbished in to incorporate the latest in water conservation technology.

- Mornington Peninsula Shire is using:
- Warm Season Turf
 - Stormwater Retrieval & Reuse
 - Water Efficient Showerheads
 - Dual Flush Toilets
 - Weather Controlled Irrigation Control Systems



WORKING TOGETHER TO MANAGE THE
COMMUNITY'S SPORTSFIELDS THROUGH

STAGE 2 WATER RESTRICTIONS
Circa 2002

Managing Sports

Oval Rehabilitation Program (Capital Project)

- 5 year program 2002- 2007
- \$1 million
- Involving;
 - Recreation Team
 - Infrastructure Project Team
 - Infrastructure Maintenance Team, Parks and Roadsides Team
 - Renewable Resources Team
 - Council Support







MORNINGTON
PENINSULA

Shire

COMMITTED TO A
SUSTAINABLE
PENINSULA



BORE WATER USED ON THIS RESERVE

*Usage from the Aquifer is a monitored
sustainable resource*

For more information call 1300 850 600











Jindivick

- Rural community
- Northeast of Melbourne
- Fires – February 7, 2009
- 300 families







*This school
is committed to becoming*

Waste Wise



WASTE WISE IS A PROGRAM OF
ECORECYCLE VICTORIA

This school has completed the

Schools Water Efficiency Program

buildings and facilities that save water



Our Water Our Future

A Victorian Government initiative







Adelaide

- Limited, usable ground water
- Innovative storm water collection systems
- Aquifer Storage and Recovery projects
- Treated wastewater reuse





medallion homes

ALLAN SCOTT PARK
THE RACE
INNER CHUTE

DEAD

TOOHEYS NEW

ALLAN SCOTT PARK MORPHETT VILLE
LAN SCOTT
MORPHETT VILLE

Schweppes Schweppes

The Dunes The Dunes
PORT HUGHES PORT HUGHES

THE COFFEE CLUB.

HOLDFAST
insurance brokers

Panasonic

Panasonic

Panasonic

Panasonic

KISS
KISS THE ASPHALT

Quick E Mart



nothing beats streets



ADELAIDE



BIKE LANE













Desalination

- New Projects in Adelaide and Melbourne
- Melbourne
 - 150 billion liters per year
 - 84 kilometer underground pipeline
 - 90 MW electricity
 - \$3.5 billion (AUS)
 - September 2009
 - Water delivery by end 2011

Desalination

- Adelaide
 - Project owned by SA Water and South Australia
 - \$1.83 billion (AUS)
 - Up to 100 billion liters of water per yr
 - First water delivery by December 2010
 - Full water supply by December 2012
 - 100% Green Power







Education

- The Watershed Function Center, wetlands & trails
- Adelaide Botanic Garden
- Penguin Parade Nature Preserve
- Healesville Sanctuary
 - Sustainability
 - Water conservation
 - Climate change
 - Water reuse & ASR
 - Wildlife & Habitat





THE WATERSHED
trails

waterwatch
AT THE WATERSHED







every raindrop tells a story

Take a look at the rain gauge. Can you guess how old the raindrops are?

Perhaps the rain fell yesterday, or last week? But, whenever it fell, it's been travelling around the world changing from solids, liquids or gases since the dawn of time, when the first amphibians crawled from the sea and dinosaurs roamed the earth.

Water is a precious resource. Don't waste a drop.

water ways for life

There are many ways you can save water and help keep our precious waterways clean.

Don't flush anything down the drain. Your sink leads directly to our creeks. What are you tipping down your sink?

Plastic bags kill wildlife in our waterways. Are you using 'Green Bags' instead of plastic bags? Do you reuse and recycle?

Your dog's poo can end up in the creek. Do you clean-up after your dog?

So much litter ends up in our waterways. Do you litter? Try picking-up rubbish even if it isn't yours.

Check-out these websites for handy water saving tips: www.watersave.com.au
www.ourwater.vic.gov.au

happy flushing!

All of our toilet facilities are flushed using rainwater we catch from our roof. This saves 5.5 million litres (1.45 million US gallons) of water every year.

... water, our most precious resource



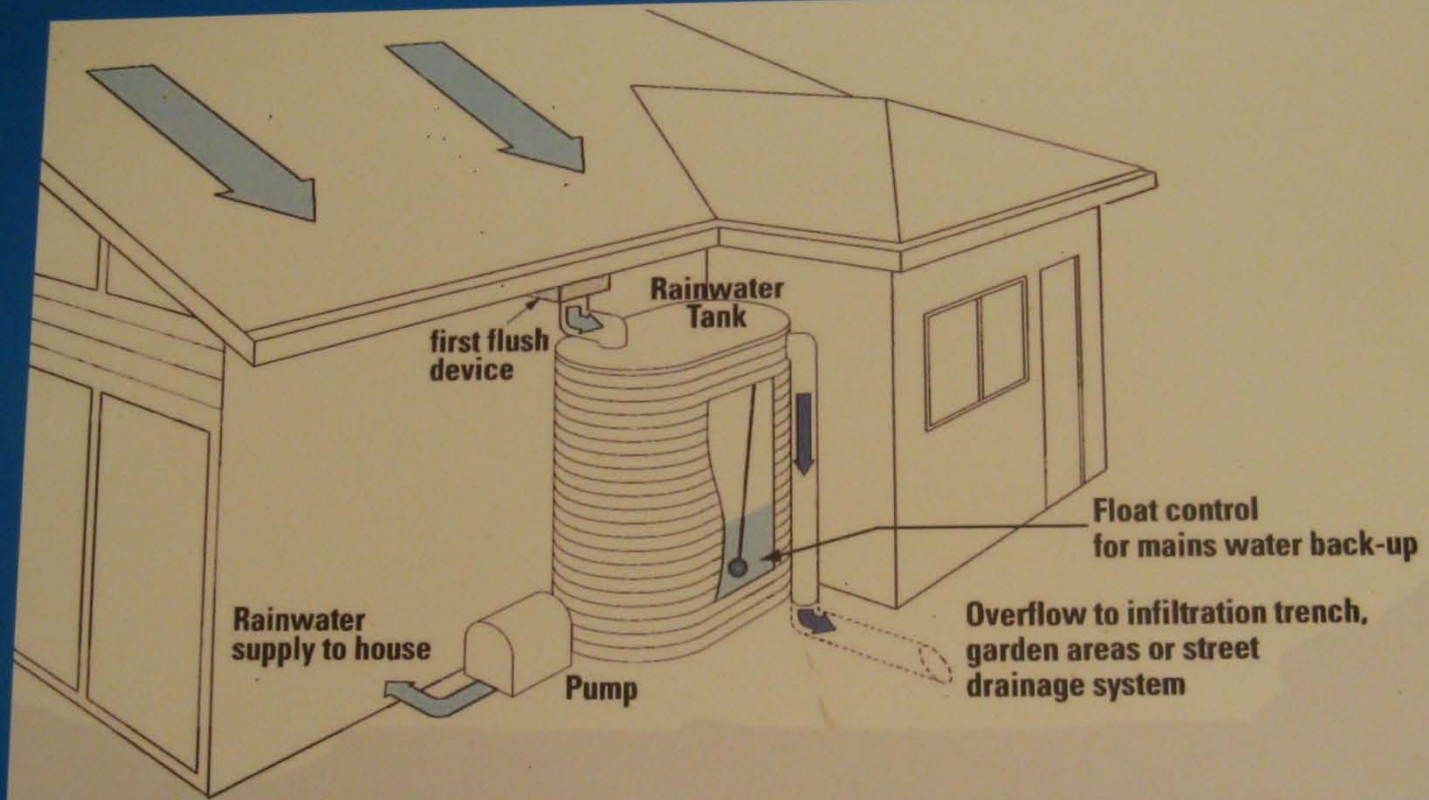
Smart Water Fund



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your to



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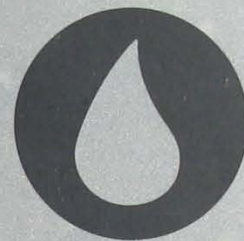
Did you know that you can harvest rainwater from your roof at home? This diagram shows how a home rainwater harvesting system works. Hook your rainwater tank up to your toilet, washing machine and garden watering system and become a water saver!





Water is the driver of Nature.

LEONARDO DA VINCI



Water: Here Today, Gone Tomorrow

Water is ephemeral in mediterranean places: plentiful in winter, but scarce during the long summer.

Mediterranean plants have many ways of surviving dry times. Look closely at their features to discover how they do it and see what you can learn from them.

Find these features

- small leaves with fewer pores that reduce water loss
- waxy leaves that seal in water
- fine hairs that insulate the leaf
- light-coloured leaves that reflect the sun
- leaves hanging vertical towards the ground that reduce sun exposure
- underground bulbs that store water.



Government of South Australia

Botanic Gardens
of ADELAIDE



 SA Water

MAIN CAR PARK



Please
**CHECK UNDER
YOUR CAR**
Before driving away

Lessons Learned

- Water management strategies, policies & plans
- Water conservation practices
- Commitment to sustainability
- Creative solutions





