

How to save money as well as the Environment

A joint production by Greg Hunt MP and the Clean Ocean Foundation

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A PRACTICAL GUIDE TO HELP CONSERVE WATER

Water is one of our Nation's most precious resources, so if our community is to grow and prosper we must carefully manage our water supplies.

This excellent booklet offers simple and straightforward advice on how we can do our bit to reduce water consumption, whether by replacing a washer on a dripping tap, or fixing a leaking toilet.

If each household can reduce the consumption of water by just a little, then the combined effect will greatly benefit the local environment by reducing the amount of waste water which flows into the natural environment and easing the demands placed on natural water sources.

WORKING HARD TO CLEAN UP GUNNAMATTA BEACH

Whilst Victorian families have dramatically reduced their water consumption, unfortunately the State Government has not matched that commitment and nowhere is that more evident than at Gunnamatta Beach.

The Victorian Government has reneged on its public commitment of January 9, 2002 promising a \$170 million dollar upgrade to the Eastern Treatment plant. This has severely curtailed opportunities for water re-use in industry and agriculture. It also means that up to 450 million litres per day of only partially treated sewage will continue to be dumped at Gunnamatta Beach, to the detriment of both public health and the local environment.

I have been working closely with local State Parliamentarians, such as Martin Dixon, with community groups such as the Clean Ocean Foundation and with my Coalition colleagues to find a solution to the outfall at Gunnamatta Beach.

Together we helped establish a \$2 billion Australian Water Fund to encourage and to help State Governments get on with the job of cleaning-up our beaches. We have also helped to develop a proposal to pump treated waste water from the Eastern Treatment Plant to the Latrobe Valley in Gippsland for re-use in agriculture and industry. This would help take the pressure off our rivers and help replenish one of our great national treasures, the Gippsland Lakes.

The \$2 billion Australian Water Fund demonstrates that the Federal Government is doing its bit and now it's time for Melbourne Water and the State Government to come to the table. I hope the State Government will fulfil their promise of January 9, 2002 and immediately upgrade the Eastern Treatment Plant so that we can get on with the job of cleaning up Gunnamatta Beach.

Yours sincerely

Prestigation

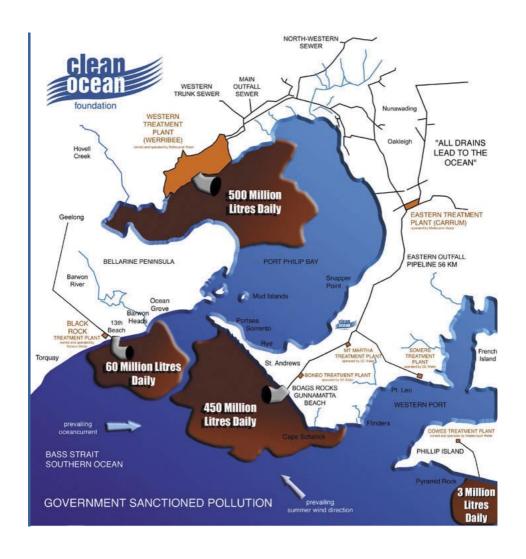
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HON. GREG HUNT MP

Federal Member for Flinders

Parliamentary Secretary to the Minister for the Environment and Heritage

Current Dumping Grounds of Effluent



INTRODUCTION

The Clean Ocean Foundation is a non-profit organisation that is committed to see the closure of ocean outfalls in Australia.

Each and every day approximately 450 million Litres of semi-treated sewerage and industrial waste is dumped at Gunnamatta Beach. This is equivalent to filling the MCG to the brim and releasing it every one and a half days.

As an alternative to this unacceptable and out-of-date disposal process, Clean Ocean Foundation is putting pressure on governments and water authorities to improve the quality of the effluent so that it can be reused for agricultural and industrial purposes. Due to an ever increasing demand for water, this will see a waste problem turned into a resource solution.

In conjunction with this campaign for full recycling of effluent, the Foundation is providing resources for households and businesses to reduce the quantity, and improve the quality of their wastewater. This will help facilitate the eventual closure of the outfall whilst at the same time provide immediate financial savings by reducing water purchasing, treatment and disposal costs.

This book has been designed specifically to help you the householder reduce your contribution to the Gunnamatta outfall and other waterways through simple changes you can implement within your home.

Many of the changes suggested can also be implemented in the workplace to reap improvements to your bottom line.

The Water Conservation Booklet has been constructed as a part of a Work for the Dole Program sponsored by Your Employment Solutions (YES). Work for the Dole is a Federal Government initiative funded through the Department of Employment and Workplace Relations.





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INTERNAL WATER USE

REDUCE WATER USE

TOILET

DUAL FLUSH

Dual flush toilets usually have a half flush of 3-5L/flush and a full flush of 6-8L/flush. The flush volumes can be reduced as desired simply by following these instructions:

Firstly, remove the toilet tank/cistern lid.

For those toilets with an adjustable screw at the base of the float, use

a screwdriver and turn the screw clockwise to lower the float arm. This reduces the level of water in the cistern and therefore the flush volume.

For those toilets without an adjustable screw there are usually variations that enable the float to be lowered in the cistern to reduce flush volume. A simple examination may reveal this, otherwise call a plumber.

Use ozone or hydrogen peroxide based cleaners/disinfectants rather than toxic agents.



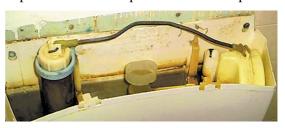
SINGLE FLUSH

Single flush toilets usually have a volume from 10-20L. Whilst it is recommended that single flush toilets are replaced with a newer dual flush toilet, there are two ways of reducing the flush volume of single flush systems.

Firstly, remove the toilet tank/cistern lid. For those toilets with a copper arm attached to a float, an adjustment in flush volume can be achieved by bending the float arm down until a suitable reduction in the water level is achieved. To do this, firstly turn the toilet tap off, next take the pin out which hinges the arm so the arm can be removed (be gentle), bend the arm so the float will sit lower in the cistern, then replace the arm and pin and turn the tap back

on. NB Ensure that the float arm and float do not foul the inner workings of the flush mechanism.

For those toilets with an overflow tube in the centre of the tank, a large reduction in flush volume can be achieved by inserting a BB Selecta Flush into the top of this tube (See below). The extra weight that Selecta Flush provides to the overflow tube simply closes the flush valve before the full volume of the cistern is emptied. The BB Selecta Flush can be appropriately weighted to suit the volume reduction required. They cost approx. \$10 and are available from hardware stores.







LEAKS

Toilet leaks are often very deceptive in their water wastage but can prove very expensive when the water bill comes around. Signs that your toilet is leaking are that water can be seen running down into the bowl continuously, or running water can be heard as the cistern is continually filled.

If one or both of these signs is apparent....

Get your toilet fixed!!

It not only wastes lots of water, it wastes lots of money.



To work out how much water or money is actually being wasted; press an empty cream container (200ml) against the back of the bowl where the leak is coming down. After one minute see how full the container is and estimate the volume gathered. The chart below provides an estimate of annual water wastage and its cost.

Volume/Minute	Litres/Year	Cost \$/Year
50ml	26,280	44.68
100ml	52,560	89.35
200ml	105,120	178.70
400ml	210,240	357.40
800ml	420,480	714.80

To repair a leaking toilet it is firstly necessary to identify the source of the leak within the cistern.

Remove the toilet tank/cistern lid and look into the cistern. In the middle you will see the overflow tube.

E A K S

If water is overflowing into the overflow tube, the leak is associated with the inlet valve. It may be due to the water level of the tank being too high.

To lower the water level, check for an adjustment screw on the top of the inlet or fill valve. If there is a screw, adjust it clockwise to decrease the water level on the tank. Flush the toilet, wait for it to refill and see if the leak remains. If the leak remains, the rubber washer in the inlet valve may need replacing.



Firstly, turn off the supply tap which delivers water to the cistern and flush the toilet so the cistern is empty. Unscrew the inlet valve so the faulty washer is revealed. Take the washer to the hardware store to ensure that the correct size replacement washer is chosen. Replace the inlet valve with the new washer and re-assemble. Turn the supply tap back on, wait for it to refill and ensure the leak stopped.



If water is not overflowing into the overflow tube, the leak is associated with the outlet valve. You will either need to replace a faulty washer or install a new cistern outlet kit. Firstly, turn off the supply tap that delivers water to the cistern and flush the toilet so the cistern is empty. Unscrew the complete outlet valve from

the bottom of the cistern. Whilst it is likely that the rubber washer in the outlet valve is faulty and requires replacement, it is suggested that the entire assembly is taken to the hardware store. They will tell you whether you will need to buy a new kit or just replace the washers on the old one. Replace the old inlet valve with the new washer or the new inlet valve into the cistern. Turn the supply tap back on, wait for it to refill and see if the leak remains.

TAPS

THREADED

The flow rate of threaded taps can be reduced with the addition of an aerator and water saving disc. Most taps that are relatively new, come with an aerator already screwed on to the taps end, some however are without one. In these cases, the addition of an aerator to a tap can reduce the water flow rate by 50%. To add an aerator, simply screw it on to the tap head.



For those taps with an aerator, the addition of a water saving disc can further reduce the water flow rate by 10-20%. To add a water saving disc; unscrew the aerator, remove the washer, add the water saving disc (as instructed) into the back of the aerator with adequate washer/s (ensure that the thickness of the original



washer is equal to the thickness of the water saving disc plus the new washer).



Finally, screw the aerator back on to the tap head.

UNTHREADED

Unthreaded taps can be given a thread and therefore an aerator to reduce flow by fitting a thread-a-tap with an aerator.

Firstly, screw the male fitting into the thread-a-tap and screw the aerator on to the fitting. Lubricate the rubber sleeve of the thread-atap and slide it over the tap. Ensure that the sleeve goes on completely.



Secure the rubber sleeve using the unlockable plastic tightener.

LEAKS

A tap dripping one drip per second wastes about 5000L/year.

Leaking taps are mostly due to the wearing of the internal jumper washer that creates the watertight seal.

To replace the washer firstly turn off the water supply. NB For a roof mounted hot water system or a hot water system which is located above the tap, ensure that the supply at the heater is also turned off. Secondly, remove the hot or cold indicator button and the screw underneath. Take the tap handle off and then lift off or unscrew the cover. Next unscrew the large hexagonal-shaped collar in an anti-clockwise direction. Remove the assembly. At the bottom of the assembly will be the offending jumper valve/washer (see below).

Replace the worn jumper valve/washer with a new one, fit it back into the hole on the end of the assembly and screw the whole assembly back. Finally, replace the tap handle, screw and

indicator button, and turn the heater supply (if applicable) and water supply back on.





SHOWER

SHOWERHEAD

Whilst it is recommended that water saving showerheads with a flow rate of 9L/minute or less (below left) are used, a reduction in flow can be achieved by adding a water saving disc to an existing showerhead (below right).

To add a water saving disc, firstly, unscrew the hexagonal-shaped collar of the shower rose at the wall in an anti-clockwise direction until it is removed. Add a water saving disc into the collar, then screw the shower rose back on.



LEAKS

Showers may leak as a result of wear on the internal washer, as is the case with taps. In this case they should be treated in the same way. Sometimes showers may leak from the elbows on the shower arm. To fix these, unscrew the wing nut of the leaking elbow, pull out spindle, remove worn fibre washer, replace with new washer, return spindle and wing nut.



OTHER SIMPLE WATER CONSERVATION IDEAS

TAPS

Water indoor plants with the cold water that comes out of the tap while waiting for the hot water to arrive.

Insulate hot water piping. This avoids water wastage while waiting for the hot water to heat up.

KITCHEN

Don't use running water to defrost frozen food. Ideally place food in the refrigerator to defrost overnight.

Rather than rinsing fruit and vegetables under a tap, wash them in a half filled kitchen sink.

When boiling vegetables, use just enough water to cover them and keep the lid on the saucepan.

Keep a bucket in the kitchen to collect leftover water from cooking. Once cool it can be used on the garden.

If you are washing dishes by hand, don't let the water run while rinsing. Fill one sink with wash water and the other with rinse water. Avoid running the tap continuously.

WASHING MACHINE

Only use the washing machine when there is a full load of laundry. If there is the requirement to wash a small load adjust the water level.

Consider replacing your old washing machine with a more efficient AAA model. These newer models use approximately 40% less water.

TOILET

Make sure you use the correct button. Only use the full flush when necessary.

BATHROOM

When shaving, fill the basin with water instead of letting the water run continuously.

Don't leave the tap running whilst brushing your teeth.

Spend less time in the shower. Every minute you cut from your shower saves 9-15Litres.

Take a shower rather than a bath. Showers with low flow shower heads often use less water than taking a bath.

Only fill the bath with as much water as is required.

Collect the bath water for reuse on the garden or to wash your car.

Consider an instantaneous water heater if your water has a long way to travel from the water heater to the bathroom.

DISHWASHER

Wait until the dishwasher is full before turning it on.

Instead of rinsing dishes under the tap before placing them into the dishwasher, use the 'rinse and hold' setting on the dishwasher.

Follow the manufacturer's instructions to make sure that your dishwasher uses water efficiently. Choose 'economy cycle'.

When buying a dishwasher, make sure that it is water-efficient (AAA). New AAA dishwashers use up to 44% less water than older models.

REDUCE CONTAMINANTS IN WATER

KITCHEN

Avoid having / using garbage disposal units. They prevent solid waste from entering the wastewater stream.

Avoid using toxic cleaning products.

Use washing detergents that contain no phosphates, to prevent excessive amounts of these nutrients from entering the drainage system.

Measure dishwashing detergents carefully, using the recommended amount, or less.

Reduce the amount of food waste entering the wastewater stream by composting food scraps, oils and cooking liquids or putting them in with your normal household rubbish. Use sink colanders over drains in sinks.



BATHROOM

To reduce the amount of waste going down the bathroom sink care should be taken in what is tipped down the drain.

Never tip expired medicine or perfumes and lotions down the sink. Always place these in the rubbish.

Use chemicals such as bathroom cleaners and disinfectants sparingly.

TOILET

Reduce the amounts of solid waste and chemicals which are flushed down the toilet.

Solid wastes such as feminine hygiene products, condoms, cotton buds and nappies should be disposed of in your household rubbish.

Chemical contaminants such as paint and oils should be disposed of appropriately at your local waste transfer station or tip.

By improving the quality of the wastewater through proper disposal you ultimately improve what returns into the environment after treatment.



LAUNDRY

Avoid using phosphorus based detergents. For light or partial loads, use the lowest water level setting.

Measure the washing detergent used carefully, using the recommended amount, or less.

With heavily soiled clothes wait for mud to dry on clothes then brush off before washing to reduce the amount of dirt entering the wastewater stream.

EXTERNAL WATER USE

As of 1 March 2005 Permanent Water Saving Measures will be introduced into Victoria. These recommendations are based on the "Proposed Water Saving Measures" which are currently available for viewing at www.southeastwater.com.au

REDUCE WATER USE

GARDENING

Water plants less often but more thoroughly. This reduces water loss through evaporation and encourages plants to extend their roots deeper, making them hardier and less thirsty.

Plant native or dry climate plants which need less water.

Don't water if the weather forecast is for rain

Purchase an automatic watering system fitted with either a rain sensor or soil moisture sensor as a part of the control system. This will be a requirement of automatic watering system purchases made under the restrictions from March 1 2005.

Use manual watering systems such as sprinklers and drip systems between the hours of 8:00pm and 8:00am.

Install a rainwater tank to reduce the amount of mains water required for gardening.

Mulch plants (75mm) to reduce water loss through evaporation by up to 70%.



WATERING

Watering Amounts and Frequency

The amount of water required by plants to ensure effective watering is 10L water per m² of soil area or a depth of 10mm. The frequency of watering required by plants is listed in the frequency chart-listed below.

Plants with a high water requirement (A)

Aster, Azalea, Begonia, Birch, Boronia, Camelia, Colombine, Crab Apple, Ferns, Fuchsia, Grapefruit, Hydrangea, Impatiens, Jasmine, Lemon, Lilac, Magnolia, Maple, Orange, Passionfruit, Silver Birch, Tetradenia, Willow.

Plants with a moderate water requirement (B)

Alyssum, Ash, Daisies, Bird of Paradise, Black-eyed Susan, Bottlebrush, Buddleia, Carnation, Cherry, Chinese Elm, Chinese Wisteria, Cockscomb, Cornflower, Cosmos, Cypress, Daphne, Elder, Fig, Palms, Frangipani, Gardenia, Geranium, Gerbera, Glory Vine, Grevillia, Honeysuckle, Jacaranda, Mondo Grass, Native Violet, NZ Flax, Oak, Peach, Petunia, Plane Tree, Plum, Poinsetta, Potato Creepers, Rhododendron, Rose, Bamboo, Snowball Tree, Strelitzia, Tea Tree, Thyme, Verbena, Viburnum, Zinnia.

Plants with a low water requirement (C)

Agave, Banksia, Bougainvillea, Box Tree, Broom, Cape Honeysuckle, Cape Lilac, Cotoneaster, Cycad, Eucalyptus, Flame Tree, Hakea, Hibiscus, Kangaroo Paw, Lambs Ear, Laurestinus, Lavender, Lilly Pilly, Lippia, NZ Christmas Tree, Olive, Pink Wisteria, Pomegranate, Protea, Rosemary, Salt Bush, Sheoke, Wattle, Cedars, Wormwood, Yucca.

Frequency Chart

	Jan	Feb	Mar	Apr	Ma	Ju	Jul	Au	Sep	Oct	No	Dec
A	1-2 day	1-2 day	2-3 day	5 day	1	ı	1	10 day	4 day	4 day	3 day	1-2 day
В	2-3 day	2-3 day	3-4 day	7 day	-	-	-	14 day	7 day	7 day	4 day	2-3 day
С	7 day	7 day	7 day	10 day	-	-	-	-	14 day	14 day	7 day	7 day

SWIMMING POOLS

Place a pool cover over your pool to reduce water loss from evaporation. An uncovered pool can lose >200L per day through evaporation.

Check regularly for cracks and leaks.

Backwash only when necessary.

PAVED AREAS

Use a broom for cleaning patios, footpaths and driveways to avoid excess water being used and material being swept down the drain. NB under the permanent water saving measures coming in to effect on March 1 you are not allowed to use a hose on your pavement or driveway.



CAR WASHING

As of March 2005 a hose used to clean a vehicle by hand must be fitted with a trigger nozzle.

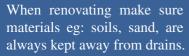
Use a bucket of water and sponge to wash equipment followed by a rinse with a hose with a nozzle to avoid water wastage.

Fix any oil and radiator leaks to stop these pollutants reaching our waterways.

Alternatively, take your car to a car wash which recycles its water and disposes of its oils and soaps properly.

REDUCE CONTAMINANTS IN WASTEWATER

Avoid chemical contaminants such as paints, oils, pesticides and fertilisers being disposed of down drains or gutters. Dispose of these appropriately at your local waste transfer station or tip.





Use low phosphorus detergents when cleaning outside eg washing the car, as phosphorus can cause algal blooms in our waterways.

RE-USE WATER

Purchase and install a grey water diverter, as per the supplied instructions so waste water can be re-used on the garden. Ensure that the grey water diverter is appropriate to accept the volume of wastewater delivered.

Collect the bath water for re-use on the garden or to wash your car.

Keep a bucket in the kitchen to collect leftover water from cooking for use on the garden.



CLEAN OCEAN FOUNDATION WATER CONSERVATION AUDITING SERVICE

If you require greater expertise, the Clean Ocean Foundation is providing a not for profit water conservation auditing service for schools, businesses and homes.

FOR SCHOOLS:

The auditing service will provide your school with a report that identifies the best opportunities to reduce internal and external water use through technological improvements e.g. rainwater harvesting and grey water systems, equipment optimisation and habit changes. The service will also provide guidance and support in the Community Water Fund application process.

FOR BUSINESSES:

The auditing service will be tailored to provide your business with a report that identifies opportunities to reduce internal and external water use through equipment optimisation, technological improvements and habit changes. A water management plan can also be constructed and implemented, with or without an education program, to manage your ongoing water use. This service will reduce your water costs and improve your business image. A Clean Ocean Foundation Certificate will be issued to businesses that avail themselves of our service.

FOR HOMES:

This assessment will provide you with advice on rectifying leaks, reducing water flows, rainwater harvesting, grey water re-use, mulching and available water saving products. This service will help to improve water conservation in your home, with the direct benefit of lowering your water hills

If you have large water bills, you need our services!

For more information, contact the Clean Ocean Foundation on 5973 6788 or email: info@cleanocean.org



www.cleanocean.org

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For Further Information, Contact Clean Ocean Foundation Inc Telephone: (03) 5973 6788

Address: 13 Yuilles Rd, Mornington, 3931 Website: www.cleanocean.org Email: info@cleanocean.org

Become a friend of Clean Ocean!

Make a donation today.

Call now on 5973 6788

All donations over \$2 are tax deductible

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- BlueScope Steel Water Tanks
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GRANTS AVAILABLE TO HELP CONSERVE WATER

COMMUNITY WATER GRANTS:

Grants of up to \$50,000 to communities to promote the wise use of water. For further information about the programme, call 1800 780 730 or go to www.communitywatergrants.gov.au.

WATER SMART AUSTRALIA:

\$1.6 billion in Commonwealth grants available to improve water infrastructure across Australia (such as cleaning-up Gunnamatta Beach). For further information contact National Water Commission on (02) 6102 6088 or email enquiries@nwc.gov.au.

WATER SMART GARDENS AND HOMES REBATE SCHEME:

Offers a range of rebates to encourage the use of water saving products. For more information about Water Smart Garden and Home Rebate Scheme call the Victorian Department of Sustainability and Environment on 136 186 or go to www.ourwater.vic.gov.au.