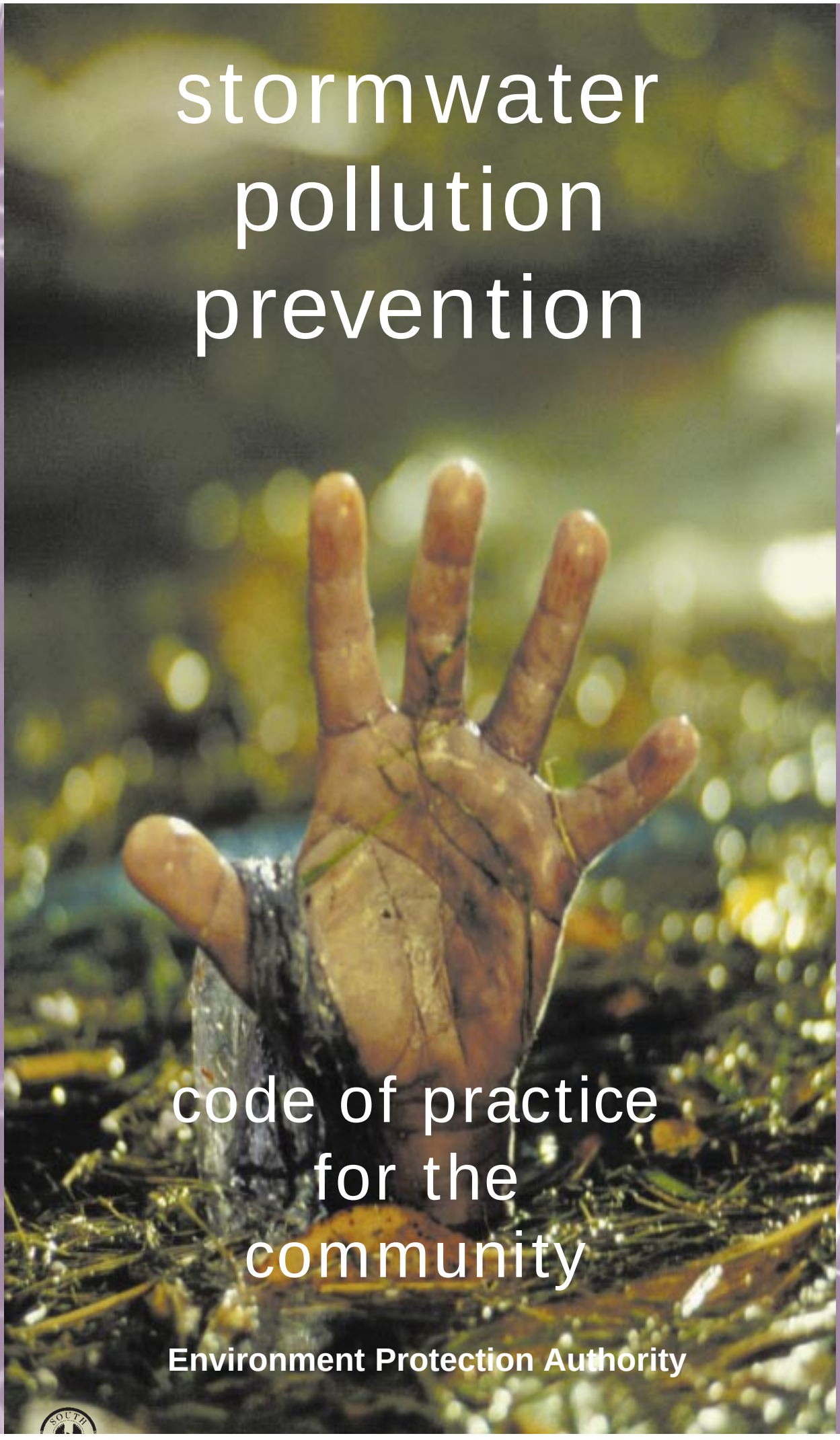
stormwater pollution prevention



code of practice for the community

Environment Protection Authority

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Authors:

Kathryn Bellette
Alan Ockenden

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DENR
DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

GPO Box 2607
Adelaide SA 5001

Telephone (08) 8204 2004
Facsimile (08) 8204 2054
Free Call 1800 623 445

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This Stormwater Pollution Prevention General Code of Practice for the Community was prepared by the Environment Protection Authority.

Existing guidelines and codes were used and particular acknowledgement is given to the Sydney Coastal Councils' *Stormwater Pollution Control Code for Local Government.*

This community code is one in a series designed to cover activities in urban catchments as well as the planning and structural measures that need to be considered in an overall catchment management plan.

This code covers potential pollution sources from a variety of community activities and practices. It does not cover design details or practices for structural measures such as wetlands or on-site infiltration.

This code has a voluntary status but will be linked to the proposed environment protection water policy under the *Environment Protection Act 1993*. During consultation on this policy appropriate enforcement arrangements and penalties will be determined. The primary role of this code is to advise the community and industry of their "general environmental duty" under the *Environment Protection Act.*

Thank you to members of the community, conservation groups, industry and government who contributed to this community code.

CONTENTS

THE STORMWATER QUALITY PROBLEM

Stormwater (rainwater runoff) runs directly into our waterways and oceans. In urban areas pollution from many small and diffuse sources combines in stormwater to carry a large and concentrated problem into those waters.

Litter and rubbish are usually the most visible pollution but contaminants such as soil sediments, oil and grease, garden waste, residual chemicals, and excess nutrients from animal faeces and fertilisers have a large pollution impact. They cause fish kills, unsafe swimming conditions, rubbish entanglement and toxin accumulation in aquatic animals, and unsightly waterways in our parks and recreation areas.

The way we do things at work and at home contributes to pollution. Individual sources may seem insignificant but the large number and cumulative effect of them combine to create a major impact on the environment.

AIM OF THE CODE

This code shows how you can improve stormwater quality by changing the way you do things, so that our waterways, lakes and oceans will be healthier.

Clean urban runoff may become important as a water supply. Existing water resources like the Murray–Darling basin and Mount Lofty Ranges catchments are under pressure.

The Environment Protection Authority (EPA) together with the catchment management authorities will actively promote good practice and monitor improvements. In addition, regulatory provisions will also ensure poor practices are discouraged and polluters are penalised.

GUIDING PRINCIPLES OF THIS CODE

Eliminate Non-Stormwater Discharges

The stormwater system drains to our waterways, lakes and oceans. It should only carry stormwater NOT wastewater or washdown water, rubbish, litter or any other contaminant that can be prevented from entering the system.

Most urban areas are well served with adequate waste disposal in a sewerage system or a septic tank effluent drainage system (STEDS) and waste collection services.

Source Pollution Control

Reducing and, where possible, eliminating sources of pollution is more effective than treating effects downstream. Source controls place the responsibility directly on the polluter – and simple changes in practice can lead to permanent solutions.

Urban Runoff is a Resource

Stormwater or urban runoff should be managed as a valuable water resource for situations such as irrigation – the better the quality, the more valuable the resource.

Maximum Practical Extent

Pollution reduction to the maximum practical extent requires continuing active community support and awareness. The reduction of pollutants in stormwater is very difficult and costly to quantify or prescribe.

Summary

Reduce, reuse, recycle.

Keep solid wastes contained.

Keep liquid wastes contained and away from the stormwater drains. Dispose of liquid wastes:

- through a licensed liquid waste contractor who will collect and store them in a licensed waste depot
- OR direct to sewer, with approval from the SA Water Trade Wastes Unit, telephone (08) 8216 1723
- OR by redirecting them to irrigation of gardens.

ACTIVITIES TARGETED BY THIS CODE

The General Code of Practice for the Community covers:

Households	activities in and around the home
Service Businesses	a wide range of services at business, commercial and industrial premises for example building maintenance and cleaning, construction and landscaping, and vehicle and equipment servicing

Building & Industrial Sites	general 'housekeeping' activities at small to medium industrial premises – many large industries are covered by licences under the *Environment Protection Act 1993*
Commercial Premises	general retail, sales and service premises including restaurants and take-aways.

Other codes in this series give more details for government (local, State and Federal), the construction and building industry, and general industry.

WHO IS RESPONSIBLE?

Everyone in the community can influence the quality of stormwater. This code gives examples of 'good practice' we can all follow.

This code will be linked to the proposed 'environment protection (water) policy' under the Act, once the policy is proclaimed (anticipated to be mid-1998). The policy will be influenced by a public consultation process, as outlined in the Act. The policy-making process will also establish appropriate penalties and timetables for specific activities. The Act will enable prosecution or other appropriate action to be taken for ignoring mandatory practices of the code.

In this code:

Statements giving instructions, for example "Apply herbicides during the early growth phase of the target plants", refer to practices proposed to be **recommended but not mandatory** when linked to the proposed water policy.

Instructional statements which include **must**, refer to practices proposed to be **mandatory or a requirement** when linked to the proposed water policy.

WHAT ABOUT OTHER LEGISLATION?

This code of practice is complemented by other environmental programmes and legislation aimed at protecting the environment. More detailed instructions on specific requirements may be needed in some circumstances, for example, a car cleaning business may need to find out exactly what discharges are allowed to sewer from the SA Water Trade Wastes Unit.

If you live or operate a business in an unsewered area check with your local council about requirements for septic tank effluent drainage system discharges. For more information on the following activities, contact the organisation shown.

ACTIVITY	ACT	CONTACT
General environmental duty not to pollute	*Environment Protection Act 1993*	EPA (08) 8204 2000
Trade waste to sewer	*Sewerage Act 1929*	SA Water Trade Wastes Unit (08) 8216 1723
Handling and storage of dangerous substances	*Dangerous Substances Act 1979*	Department for Industrial Affairs (08) 8207 1805
Discharge of wastes, littering, dog control, waste management	*Public and Environmental Health Act 1987* *Local Government Act 1934* *Dog and Cat Management Act 1994* *Food Act 1985*	Your local council
Disposal of hazardous	*Environment Protection Act 1993*	EPA

HOUSEHOLDS

This section covers activities in and around the home, and sometimes in the workplace.

Be Stormwater Smart

The stormwater drainage system is separate from the sewerage system. It is important that everyone in your household understands the difference.

Inside your house the kitchen, laundry, toilet and bathroom drains are connected to the sewer, or a septic tank in unsewered areas. Outside your house you may have a sewer connection under a tap over a gully trap. All other outside drains including roof drains should be connected to the stormwater system.

Rain and other water runs from outdoor household drains down the gutters of the roadways into drains under the road, which connect to our natural waterways (ponds, wetlands, creeks and rivers), or to large open drains and to the ocean without treatment. Only clean rainfall runoff should enter this system.

The sewer takes wastewater to treatment works, before being piped to the sea or irrigated over land such as golf courses. Strong wastes, like solvents and oils, need treatment at specialised facilities.

If you are outside a sewered area or connected to a septic tank effluent drainage system, take care before discharging non-household wastes – always check with your local council.

Incorrectly disposed wastes cause pollution problems. For example strong chemicals may destroy the micro-organisms that help treat wastewater at sewage treatment plants and wastewater that is not fully treated may be piped to our coastal waters. Help protect our environment by notifying the authorities of pollution problems or hazards that could pollute our waterways. Contact your local council for all pollution incidents and contact the EPA pollution line (08) 8204 2011 for serious incidents or emergencies (eg acid spillage to stormwater drainage system).

Gardening Activities

Keep garden and green litter out of the stormwater system. Sweep grass cuttings and leaves from street gutters, footpaths and driveways and dispose of to your compost, garden, to a green waste recycling depot or, as a last resort, the rubbish bin. Garden and green litter must not be dumped to the stormwater and urban waterway system.

Sweep leaf litter and place in the compost, use in the garden as mulch, collect and provide to a green organics recycling depot or, as a last resort, place in the waste bin.

Be careful to contain mulch by bunding or placing wire or rocks over mulch on verges or garden edges, so it won't enter the street gutters.

When biodegradable substances such as lawn cuttings and leaves break down in waterways, they can reduce oxygen levels, threatening the lives of fish and other aquatic organisms. When these substances settle they may form methane or, in salt water, hydrogen sulphide (rotten egg gas) – both toxic to aquatic organisms.

Use fertilisers and chemicals sparingly and never near drains and natural waterways. Where possible consider the use of less hazardous materials and alternatives. Conservation organisations (eg Australian Conservation Foundation, 120 Wakefield Street, Adelaide, telephone (08) 8232 2566) have publications and information that can help.

Consider opportunities to direct domestic rainwater runoff to garden and lawn areas when landscaping. Take care to ensure building footings are adequately protected and excess water is disposed of properly without impacting upon neighbouring properties. Check local soil and foundation issues, and building requirements through your local council.

Reducing paved areas in your garden will decrease runoff by allowing water to soak into the soil.

Pesticides

Pesticides can be introduced into the aquatic environment through spillage, accidental discharge or waste disposal during production, packaging, storage and use. They can also enter surface and underground waters by direct use near aquatic environments, or by runoff or leaching from land-based applications. The spread of the active toxic component of pesticides is often assisted by surfactants in the mixture which can also be detrimental to water-living native organisms.

Little is known about the fate of specific pesticides in various South Australian environments, so minimising the unnecessary release of pesticides into the environment is a high priority. To this end, only use pesticides – herbicides, insecticides and rodenticides in accordance with a strategic integrated pest management plan. An integrated management plan may involve for example, the physical removal of plants and physical trapping of animals at optimum times of the year.

Adopt the following guidelines for the management of pesticides:

- Apply herbicides during the early growth phase of the target plants before flowering (prevents cross pollination with other stands of pest vegetation in the area and eliminates seed set).
- Do not use herbicides during periods of rain. Plants generally require 24 hours to absorb the herbicide through the leaves and rain in the meantime may prevent target vegetation being killed and may wash the herbicide into the stormwater system. This may be a particular problem for pre-emergent sprays, such as atrazine, applied to soils.
- Use wanding and painting on to leaves or, for woody weeds, cutting and painting or injection methods of application where possible to avoid spray drift. Inject the herbicide into deciduous trees immediately after leaf drop to prevent the possibility of herbicide transfer into waterways through the leaf litter.
- Avoid application of herbicides in areas surrounding and within watercourses. If you consider this necessary, consult the EPA.
- Note that very few pesticides are registered for spraying in watercourses.
- Do not spray under windy conditions. The wind may transport spray to non-target species and stormwater systems.
- Place rodenticide baits so they are not available to indigenous mammals or able to enter waterways.
- Store pesticides and prepare accidental spill contingency plans as for all hazardous chemicals.
- Colour all herbicides with a suitable non-toxic dye to indicate where they have been used.

- Follow manufacturers' handling and safety instructions for all applications.
- Unwanted chemicals must be disposed of at an approved waste depot and not tipped into the stormwater system. Rinse all pesticide containers three times and use the rinsate to make up pesticides to working strength. Dispose of the empty pesticide containers at an approved waste depot.

Vehicle Use and Care

Vehicles produce a variety of contaminants in road runoff including copper from brake wear, zinc from tyre wear, lead from exhaust, and oils and greases from leaks. Reduce car usage and help improve stormwater and air quality – use public transport and car pools, and cycle or walk whenever possible. Keep your car properly tuned.

Lead in road runoff comes from motor vehicle exhaust emissions. To reduce this pollutant source use unleaded petrol if possible with your vehicle. Encourage others to do the same.

To stop roadside and car park oil pollution do not allow your vehicle to leak oil or any other fluids including coolants.

Keep your vehicle regularly serviced to avoid leakage of oil.

Wash cars, boats and trailers on grassed or other areas to allow washwater to soak into the ground (and water the lawn or garden) and not be washed down the stormwater system. Alternatively use a commercial carwash which directs wastewater to the sewer, via pretreatment facilities. Service stations with treatment facilities available for fundraising carwashes are:

SHELL HAWTHORN
150 Belair Road
HAWTHORN SA 5062
Telephone (08) 8271 9186

MOBIL
1483 South Road
DARLINGTON SA 5047
Telephone (08) 8296 9562

Wash cars on grassed areas, allowing the wastewater to soak into the ground, or use a commercial carwash, preferably one which recycles water to avoid pollutants such as brake dust, sediment and detergents entering the stormwater system.

Have your vehicle and/or equipment regularly serviced by a recognised operator with proper facilities to manage wastes. Insist your service providers explain how their waste disposal meets environmental requirements. You can make this a condition of your future patronage.

When servicing vehicles, dispose of waste oil and any other vehicle wastes properly (check the waste disposal guide). Used oil, coolant and associated vehicle wastes must never be directed to the stormwater system, put on the ground or discarded so they could get washed on to the roadway and into waterways. Refer to the problem household waste disposal guide on page 29 for advice on appropriate disposal.

Carry a litter bag in your car. Most litter is found along busy roads.

Outdoor Cleaning

Dry sweep rather than hose down driveways and paths, and dispose of solids in the garden, compost or waste bin rather than the stormwater system. You'll be helping conserve water resources.

To stop litter getting into the stormwater system, secure household wastes and recyclable material by tying or wrapping before collection.

Help reduce litter and sediment in the stormwater system by regularly sweeping the street kerb and footpath outside your house and dispose of solids in the waste bin. Do this routinely each collection day.

Home Handy Persons

Make sure material stockpiled for building works, for example sand, is protected from entering the stormwater system. Place the stockpiles away from the street and the top of driveways which slope down to the street. If necessary put a cover over the material to reduce the risk of erosion or wind loss, and a bund or trench around the stockpile to catch the sediment lost by water erosion.

Contain stockpiled materials for building – this pile is contained by filter fabric which has been fitted into a trench and surrounded by an earth bund (mound).

Paint stripping, sawdust and other building wastes must be collected and disposed of as solid waste. When stripping or sand blasting paint, lay tarpaulins on the ground and erect hessian screens to prevent wind disposal of the waste – check waste disposal guide on page 29.

Wastewater from washing paint brushes and other problem wastes must not be disposed of to stormwater – see the waste disposal guide.

Animal Faeces

While walking dogs owners must collect all faeces and then bury them in the garden or dispose of them in a sealed bag to the waste collection. Pooper scoopers made from recycled materials are readily available, or use plastic shopping bags inside-out like a glove to pick up, cover by inverting and carry faeces home. Do not wash dog faeces from footpaths and driveways into the gutter.

Collect faeces from all animal enclosures regularly and either provide to fertiliser/garden companies (chicken, horse, cow manure) or dispose of in a sealed bag to the waste collection or bury in the garden (rabbit, bird faeces).

Collect horse manure on paved areas from your horses and dispose of it in an appropriate manner.

Undertake general best practice catchment management techniques on your hobby farm. For information phone the Mount Lofty Ranges Catchment Centre on (08) 8391 7500.

If your dog defecates in a public place, collect the faeces with a pooper scooper or in a plastic shopping bag used like a glove.
Take it home and bury it in the garden or put it out in your waste bin in a sealed bag.

Septic Tanks

Overflowing septic tanks and underground soakage trenches transfer nutrients and bacteria into creeks and could be a health hazard. Domestic septics must be cleaned of sludge at least every four years, even if connected to a septic tank effluent disposal scheme (STEDS). Many councils which operate a STEDS undertake a sludge removal service.

Wastewater Disposal

In sewered and septic tank effluent disposal scheme (STEDS) areas, direct backwash water from all swimming pools to the sewer or STEDS.

Connect new swimming pools permanently to the sewer or STEDS at the time of installation or construction. Approval for connecting swimming pool backwash facilities to a sewer or STEDS is required from either the Trade Wastes Section of SA Water or the local council operating the STEDS.

Note:

In those areas served by a STEDS, discharge backwash water to the drain between the septic tank and the communal effluent drain. Under no circumstances should backwash water be discharged into a septic tank system.

In unsewered areas, discharge backwash water to a grassed, vegetated or garden area, or a stone filled trench either open to the surface, or underground, similar to a septic tank absorption field, in a manner that does not result in runoff outside the property boundaries.

Direct all swimming pool backflush water to the sewer via the gully trap. (See text if not connected to sewer)

If a pool is salt chlorinated, then any garden areas used for disposal would need to be planted with salt tolerant species. Irrigate the disposal area with good quality water from time to time. Wastewater or washdown waters from cleaning operations, including roof and other building cleaning wastewater, must not be discharged to the stormwater system. Minimise washdown water volumes and, where possible, soak into the garden or lawn. If this is not appropriate direct wastewater to the sewer via the gully trap.

Release of Balloons

Avoid the mass release of balloons by using alternative methods of celebration.

Salt and Chlorine Tolerant Plants

Botanical Name	Common Name	Comments
SHRUBS		
Melaleuca halmaturorum	SA Coastal Paperbark	3–4 m high White bottlebrush-like flowers
Melaleuca brevifolia	Salt River Melaleuca	2–3 m high White bottlebrush-like flowers
Melaleuca decussata	Totem Poles	1–1.5 m high Pink/purple bottlebrush-like flowers
Melaleuca lanceolata	Moona	4–8 m high White bottlebrush-like flowers
Melaleuca uncinata	Broombush	3–6 m high Cream bottlebrush-like flowers
*Melaleuca ericifolia**	Swamp Teatree	3–6 m high White bottlebrush-like flowers
Callistemon rugulosus	Scarlet Bottlebrush	3–4 m high Scarlet flowers
Atriplex nummularia	Old Man Saltbush	2–3 m high Silver foliage with very small flowers
Atriplex cinerea	SA Coastal Saltbush	2–2 m high Silver foliage with very small flowers
*Acacia cyclops**	Coastal Wattle	4 m high by 4 m wide Yellow flowers and fast growing
Myoporum insulare	Boobialla	3–5 m high Small white flowers
TREES		
Banksia marginata	Silver Banksia	4–8 m high Clustered yellow flowers
Acacia salincina	Pt Broughton Wattle	5–10 m high Cream flowers, does sucker
Acacia stenophylla	River Cooba	5–8 m high Weeping foliage
*Casuarina obesa**	WA Swamp Oak	10–15 m high Needle-like foliage

* Not a South Australian species
List compiled by Wayne A Brown, Mt Lofty Catchment Programme (08) 8391 7500

Nurseries

Allenders Native Plant Nursery
Shady Grove Road Macclesfield
Telephone (08) 8388 3004

Tetratheca Nurseries
Kanmantoo
Telephone (08) 8538 5071

Trees for Life
State Tree Centre Brookway Park
Telephone (08) 8207 8787

State Flora
Belair National Park
Telephone (08) 8278 7777

Northside Native Plants
Cnr Diagonal & Goldsborough Roads Cavan
Telephone (08) 8262 6509

Bolivar Road
Burton
Telephone (08) 8280 8088

Heyne's Nurseries
283 The Parade Beulah Park
Telephone (08) 8332 2933

Most species are readily available from these nurseries. Local garden centres may not have them in stock.

SERVICE BUSINESSES

This section covers activities involved with the motor trade, machinery and equipment servicing, vehicle refuelling, repair and cleaning, and the range of business services delivered at homes and at other premises such as building maintenance and cleaning, carpet and window cleaning, and mobile vehicle servicing/cleaning.

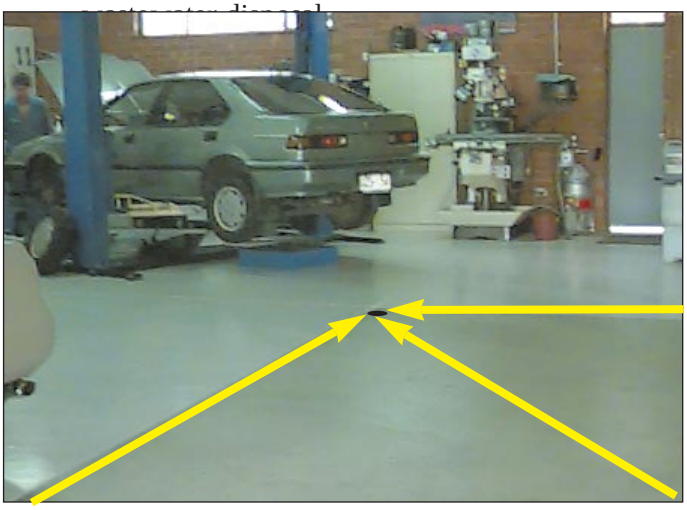
Refuelling Facilities

Cover fuel dispensing areas at service stations and depots. Isolate covered dispensing areas from runoff generated elsewhere on site by surface grade changes, bunds and/or catch drains. Maintain separate drainage systems with pretreatment facilities for discharge to sewer or a blind pit in undercover areas. Cleaning water or washwater generated from the fuel dispensing areas must not be discharged directly or indirectly to stormwater.

Employees must be trained and customers encouraged to reduce pollution risks by eliminating refuelling over-fills and spillage.

Workshops

The floor drainage of covered work areas must be isolated from the stormwater system by surface grade changes, bunds and/or catch drains. Use dry absorbents and dry sweeping to clean floor areas and minimise



Use surface grades or bunds, to isolate and contain spills from the stormwater system.

Wastewater or washwater must be pretreated and directed to sewer with approval from the SA Water Trade Wastes Unit or stored in tanks and collected by a licensed liquid waste contractor. The collection and pretreatment system must be regularly maintained.

Store wastewater and washwater or waste cleaning solvents in tanks or drums to be collected by a licensed liquid waste transporter. This figure shows a solvent wash sink connected directly to the storage drum.

There must not be any direct or indirect discharge to the stormwater system from cleaning operations or processes including steam cleaning facilities and material mixing or storage areas.

Excess or waste oils, lubricants or coolants must not be discharged directly or indirectly (eg left on the ground) to the stormwater system. Make arrangements for recycling used oils, coolants and other materials and train all staff accordingly. Refer to problem household waste disposal guide on page 29.

Spills, Clean-Up Procedures

There must be an emergency spill response plan to deal with hazardous material on all premises. Have spill response procedures, train employees and provide appropriate clean-up materials or keep a spill kit in a handy location on premises that deal with potentially polluting material. The basic spill response procedure must make employees aware of the need to contain spills and not wash them down the drain.

In the event of a spill quickly and safely stop the source and isolate or contain the spilt material from the stormwater system. The spill must be cleaned up according to the relevant Material Safety Data Sheet. Help and advice must be sought if the spill is large or hazardous.

Emergency services (in order of urgency – Police, Metropolitan/Country Fire Service, EPA, local council) must be notified of large or hazardous spill incidents as soon as possible.

Uncovered Work Areas

Relocate work activities that could involve fuel, oil, grease, coolant, chemicals, solvents and/or cleaning agent drainage, leakage or spills to undercover areas fitted with grease and silt traps. If this is not possible, regularly cleaned and maintained drip pads or containers must be provided. Spilt material that could pollute stormwater must not be left unattended.

Vehicle maintenance must take place in designated areas covered to prevent stormwater pollution.

Bund all tanks and valves.

Undertake vehicle maintenance in undercover areas fitted with grease traps, and/or regularly maintained drip trays or pads to prevent pollutants such as fuel, oil, coolant and solvents entering the stormwater system.

Washing and Steam Cleaning Areas

Businesses that wash or steam clean equipment or components must provide and use covered wash areas that discharge to sewer with the approval of the SA Water Trade Wastes Unit. In unsewered areas check disposal to septic tank effluent with the local council.

Use covered bays which discharge wastewaters to sewer (with the approval of SA Water Trade Wastes Unit) when undertaking steam cleaning or washing equipment or vehicles.

Washwater and waste from steam cleaning must not be discharged to the stormwater system.

Contract Cleaning Wastewater

Cleaners must not dispose of washwater or wastewater to the stormwater system. Alternatives must be used such as recycling wastewater, discharging to sewer with approval from the SA Water Trade Wastes Unit, soakage to ground or garden with owners approval (if it doesn't contain hazardous substances) or collecting and disposal at a licensed waste depot.

Building, Landscaping and Maintenance Works

Advise clients that disposal of wastewater to stormwater is not allowed if you hire out equipment such as masonry cutters or high pressure cleaners. Minimise wastewater including washdown water. Wastewater or washwater on commercial building sites must be contained and disposed of to a soakage area or an approved wastewater facility via a licensed waste transporter.

Building material stockpiles (eg sand) or wastes must be covered or bunded or surrounded by a silt 'moat' or located to prevent loss to the stormwater system.

Mobile Vehicle Servicing and Washing

Cleaners must not discharge washwater to the stormwater system. Collect and recycle washwater or discharge it to sewer with approval from the SA Water Trade Wastes Unit. On domestic properties washwater can go to the lawn, garden or an appropriate soakage area.

Mobile service operators must collect wastes and wastewaters and dispose of them at an approved waste facility.

Mobile service contractors must not operate over or near open stormwater drains. All wastes, used oil, coolants and the like must be collected and taken away by the contractor and disposed of at an approved wastewater facility.

Servicing contractors must use adequate drip trays and/or absorbent materials during servicing to eliminate spills and contamination.

Contractors must not steam or high-pressure clean engines, equipment or components without a total recovery and collection system in place.

Outdoor Car Parks

Dry sweep paved areas of your outdoor car park.

Grade new car parks with the fall to the outside edge so that the water is directed to developed grass swales which filter water before it enters the stormwater system, or install grease and sediment traps on the border of the car park before the water enters the street.

BUILDING AND INDUSTRIAL SITES

This section covers general activities at small to medium industrial sites covering basic stormwater source pollution control requirements.

Many industries will have to upgrade discharge practices according to a negotiated timetable for improvements and compliance.

Site Drainage

There must be no discharges to the stormwater system from industrial premises, other than uncontaminated roof rain runoff.

Undertake a thorough site audit to ensure there are no illicit connections, for example that floor drains are not connected to stormwater and stormwater drains are not connected to sewer.

Minimise stormwater contamination from pollution fallout on roofs, paved areas and on-site materials.

Activities involving washing or cleaning or other industrial processes generating liquid wastes must be provided with facilities that discharge to sewer with the approval of SA Water Trade Wastes Unit. In unsewered areas disposal to the septic tank effluent drainage system must be checked with the local council.

Vehicle and Equipment Refuelling or Servicing

Cover fuel dispensing areas. Isolate dispensing areas from runoff sourced elsewhere on site by surface grades, bunds and/or catch drains. Undercover areas must have well-maintained separate drainage systems with pretreatment facilities for discharge to sewer with the SA Water Trade Wastes Unit approval or be directed to storage tanks and collected by a licensed waste transporter. Cleaning water or washwater from fuel dispensing areas must not be discharged directly or indirectly to stormwater.

Employees must be trained to reduce pollution risks by eliminating refuelling over-fills and spillage.

Roof and bund refuelling areas and provide surface grades which drain to pretreatment facilities which, in turn, lead to the sewer.

Uncovered Work Areas

Relocate work activities that involve potentially polluting materials such as fuel, oil, solvents and/or cleaning agents through drainage, leakage or spills to bunded undercover areas fitted with grease and silt traps. If the installation of grease and silt traps is not possible, regularly cleaned and maintained drip pads or containers must be provided. Spilt material that could pollute stormwater must not be left unattended. Bund all tanks and overflow pipes.

Chemical Storage, Loading and Unloading Areas

All liquid materials must be stored and handled carefully to avoid spillage.

Store liquid materials or hazardous chemicals in a roofed, impervious and bunded area.

For large quantities, locate materials within a bunded compound that is:

- impervious
- able to contain 120% of the volume of the largest container within the bund
- roofed to minimise the collection of rainwater.

Cover and bund liquid loading and unloading facilities to prevent possible stormwater contamination as well as to assist in the control of any spills.

Goods stored for transport must be stored in accordance with the Australian Code for the Transport of Dangerous Goods by Road and Rail.

Material and Waste Storage Stockpiles

Store all potentially polluting materials[i] including wastes in a manner that prevents contamination of stormwater, for instance:

- place stockpiles away from the street and the tops of downward sloping driveways
- stormwater drainage must be directed around or away from stockpiles
- cover the materials
- treat contaminated runoff before it is discharged (refer to the EPA for advice).

Spills, Clean-Up Procedures

Prepare an emergency spill response plan to deal with hazardous and/or potentially polluting material handled or stored on site, for each industrial site. Make a copy of all Material Safety Data Sheets available for all materials on site.

Prepare spill response procedures, train employees and provide appropriate clean-up materials or a spill kit for all sites that deal with potentially polluting material. The basic spill response procedure must make employees aware of the need to contain spills and not to wash spills down the drain.

[i]Potentially polluting materials cover a range of substances that can get blown by wind, washed away by stormwater or act to contaminate stormwater. If uncertain about the potential for pollution and/or appropriate measures, contact the EPA on (08) 8204 2000.

In the event of a spill, stop the spill quickly and safely at the source and isolate or contain the spilt material from the stormwater system. The spill must be cleaned up with reference to the Material Safety Data Sheets; help and advice must be sought if the spill is large or hazardous. Emergency services (in order of urgency – Police, Metropolitan/Country Fire Service, EPA, local council) must be notified of large or hazardous spill incidents as soon as possible.

RETAIL AND/OR COMMERCIAL PREMISES

This section covers activities that could affect stormwater quality from commercial and retail (finished goods) premises including markets, shops and restaurants.

Waste Storage and Collection Areas, General Loading Bays

All new waste storage and collection areas must be roofed as a minimum requirement to prevent stormwater access. If it is not possible to roof existing facilities, use covered waste skips at all times to prevent entry of stormwater or the dispersal of wastes by wind. Store all waste placed outdoors in sealed waste containers with adequate covers.

All waste storage and collection areas must be roofed to prevent stormwater access. If it is not possible to roof existing areas, use rubbish skips which must be closed at all times to prevent entry of stormwater or the dispersal of wastes by wind.

In the case of food premises all putrescible waste must be enclosed in a sealed container before disposal to an industrial bin.

Service alleys and waste collection areas must be kept clear of loose rubbish. Fit stormwater inlet pits serving these areas with a device (gross pollution trap) capable of removing litter and ensure it is regularly maintained.

It may be necessary in some loading bays, to install a stormwater diversion system connected to the sewer, with the SA Water Trade Wastes Unit approval, which directs the first flush of rainfall and associated waste to the sewer and, at a specified cut-off point, directs the remainder of the rain runoff to the stormwater system. This would only be acceptable if the loading bay was dry swept and stored putrescible waste was appropriately contained.

Parking Areas

Regularly sweep parking areas and paved open areas discharging to the stormwater system. Fit a device(s) capable of removing litter, oil and sediment which must be regularly maintained.

Direct stormwater to landscaped areas or specially dedicated grassed swales which filter water before it enters the stormwater system. For instance in new car parks, grade paved surfaces toward the swales. This is also good water conservation planning. Alternatively, install grease and sediment traps on the border of the car park before the water enters the street as above.

Place clearly labelled litter bins in prominent positions near shop and car parking areas for customers.

Washdown Wastewater

Do not hose down or in any other way discharge wastewater or washdown water from the cleaning of open air stalls, shop frontages, outdoor restaurant areas and the like to the stormwater system. Dry sweep, and collect and dispose of solid wastes as far as possible. Wet clean by mopping with wastewater discharged to sewer. Contractors are available who steam clean paved surfaces and vacuum the wastewater to a holding tank prior to disposal to the sewer.

Cooling System/Airconditioning Wastewater

Cooling system and evaporative airconditioning wastewater must be discharged to sewer with the SA Water Trade Wastes Unit approval.

WASTE DISPOSAL GUIDE FOR HOUSEHOLDERS

You must not discharge or dispose of wastewater and wastewater to the stormwater system.

Here are alternatives for dealing with problem wastes.
HHWCF = Household Hazardous Waste Collection Facility
Addresses and details for facilities over the page.

Type of Waste	Disposal Options (in order of priority)
Batteries	
Alkaline	Put out with rubbish.
Car or Truck	Do not tip out acid. Take to scrap metal business.
Non-alkaline (eg mobile phone, button, nickel cadmium and rechargeable)	Put in a plastic container and keep in shed or take to HHWCF.
Building washwater	Wash to soakage area and allow to settle.
Cooking oil	Use domestic oil absorbent or bury in garden. Don't put into compost.
Driveway cleaning (eg vehicle leaks)	Use absorbents for excess fluids, then scrub driveway and discharge washwater to sewer.
Fat	Let solidify and bury or wrap in paper and place in the rubbish.
Fire extinguishers	It is illegal to own or discharge a yellow BCF Fire Extinguisher. Take them to nearest fire station.
General washdown water	First minimise quantities and re-use if possible, then discharge to garden/lawn or soakage area.
LPG cylinders	Out of date cylinders: remove valve or damage the thread. Take to scrap metal business.
Motor coolant	Check with Trade Waste Unit, SA Water or local radiator repairer or take to HHWCF.
Motor oil	Check with council or take to Scotcher Petroleum, Mulherns, Inglewood Brick or HHWCF.
Paint	
Oil-based paint, stain and varnish	Place in rubbish in a sealed container or take to HHWCF.
Oil-based paint brush clean-up fluid	Let paint settle, re-use thinner, let remaining paint dry. Dried paint to rubbish or to HHWCF.
Paint scrapings (eg lead/caustic)	Take to HHWCF.
Water-based paint or brush clean-up water	Allow to dry, then put in rubbish.

Pesticides	Take to HHWCF.
Pharmaceuticals	Contact local pharmacy or pharmacy guild, Tel: (08) 8223 2844 or Overseas Pharmaceutical Aid For Life (OPAL). Tel: (08) 8346 0444
Photographic chemicals	Take to HHWFC.
Pool chemicals	Take to HHWFC.
Recyclables Glass, tins, plastic bottles, milk & juice cartons	Contact local council for details of collection in your area.
Solvents	Take to HHWFC.
X-rays	Take to the Mary Potter Foundation, Tel: (08) 8239 0119.
Other hazardous materials	Contact information office EPA, Tel: (08) 8204 2004.

Hazardous Household Waste Collection Facility (HHWCF)
Corner of Magazine Road and Henschke Street
Dry Creek.

Conducted by the Environment Protection Authority on the first Tuesday of each month between 9 am and 12 noon with waste items as listed received free of charge.

Used Motor Oil Removal

SCOTCHER PETROLEUM
17 Athol Road
ATHOL PARK
Tel: (08) 8447 6611

MULHERNS WASTE OIL REMOVAL
North East Road
INGLEWOOD
Tel: (08) 8380 5567

INGLEWOOD BRICK COMPANY
Chapmans Road
INGLEWOOD
Tel: (08) 8380 5677

FAT & COOKING OIL
Commercial quantities
Gardner Smith Tel: (08) 8449 2250
Cromptons Tel: (08) 8208 0100