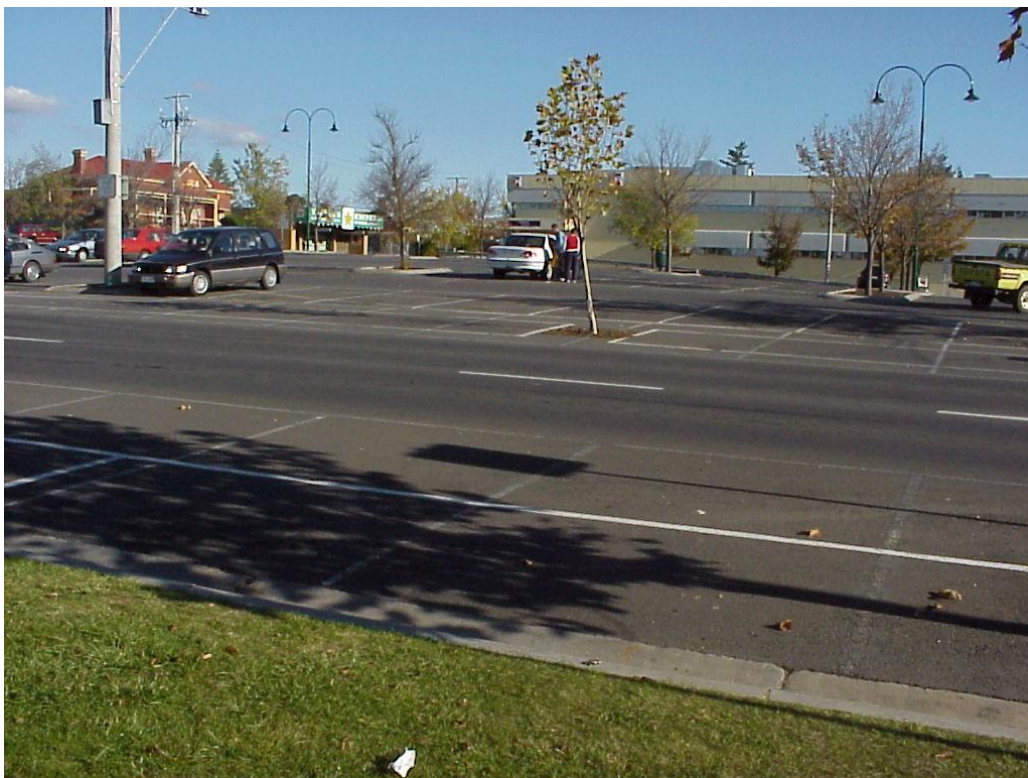


Stormwater Sources



Brick lined drain in suburban area



Carparks



Lots of hard surfaces in town; road, gutter, footpath



Roadside stormwater pit



Runoff occurs from roads and roadworks



Runoff occurs from rooves and can enter stormwater systems if not plumbed to a water tank



Large stormwater drain



Where stormwater ends up



Urban waterways (Bendigo Creek)





Stormwater outlet from roadside drainage



Open drains in suburban areas



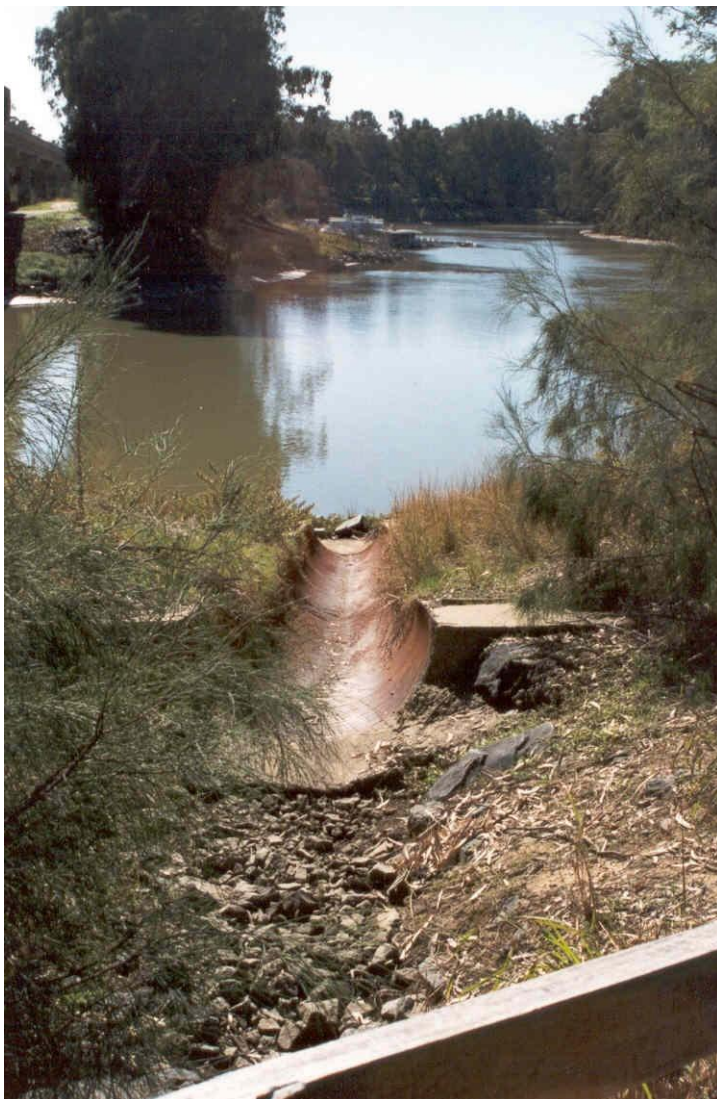
Open drain between road and forested area



Stormwater outlet near industry



Stormwater outlet from roads into adjacent billabong



Stormwater straight into the river



Best practice example of stormwater swathe catching runoff from a suburban roadway

Rainfall events create large amounts of stormwater/runoff



Nothing stopping sediment washing into waterway from building development site



Full suburban gutters in a storm



Large amounts of urban stormwater rush into nearby waterway in a rainfall event



Potential pollution



Sediment from construction sites



Sediment and litter from construction sites



Cigarette butts in gutters



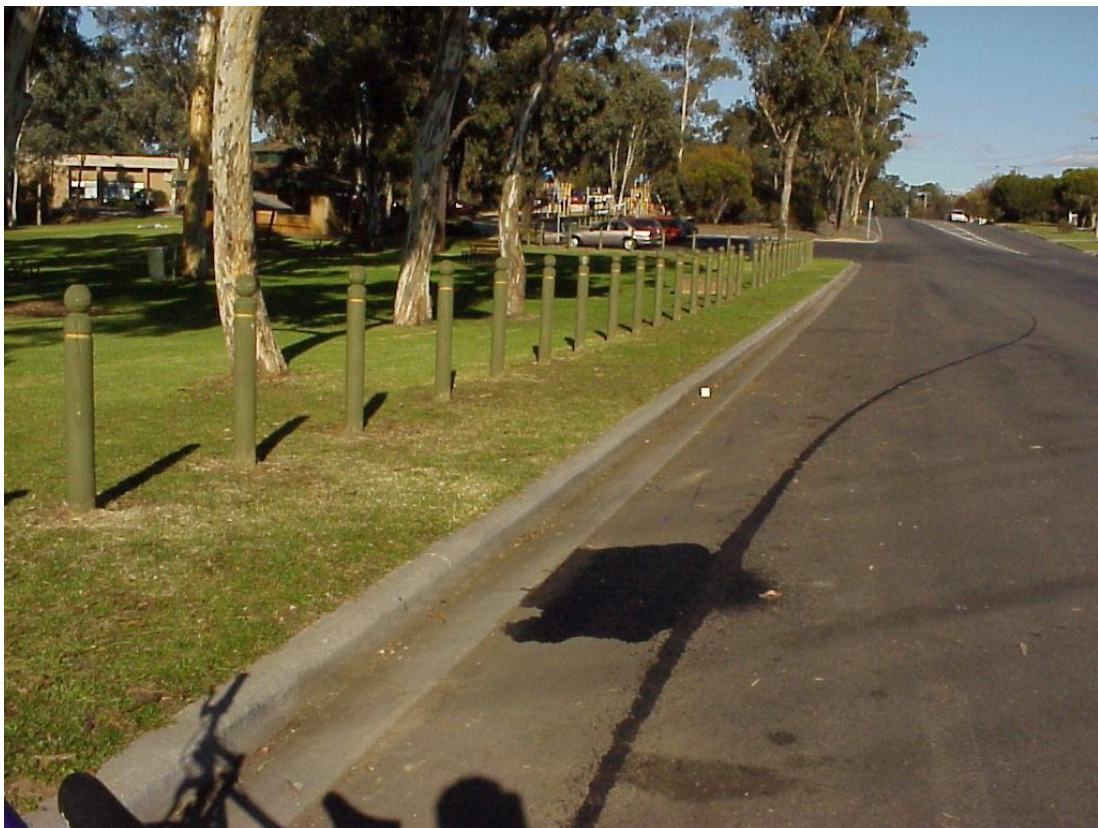
Roadworks



Domestic rubbish left in drain



Grass clippings after mowing

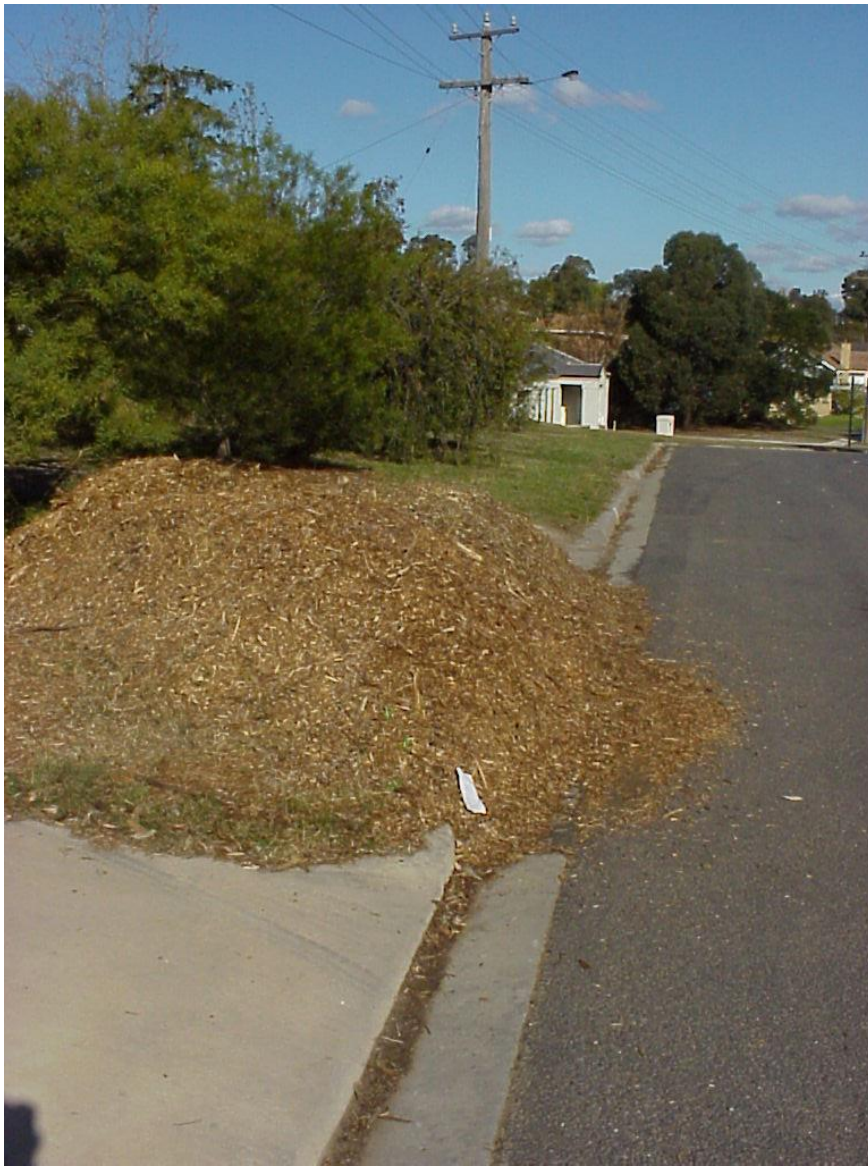


Grease and oil on roads



Autumn leaves





Garden mulch



Oil leaks from cars in carparks



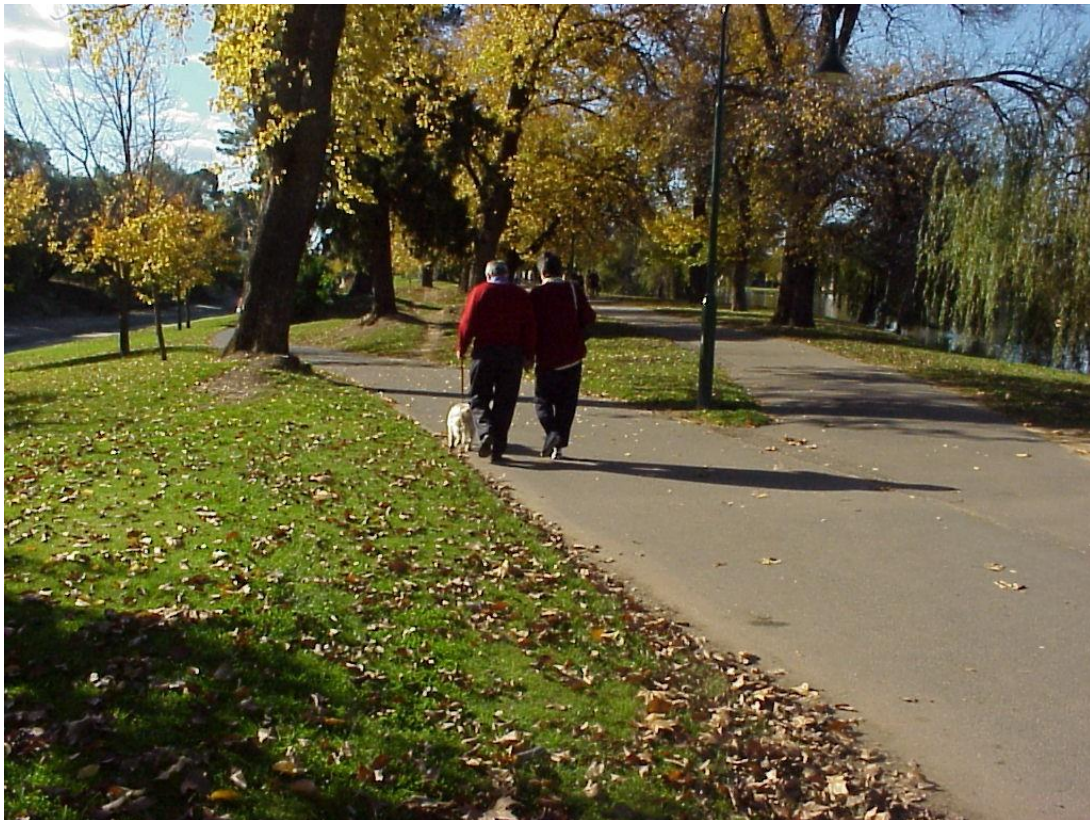
Overflowing skip bins in school yards



Sediment and gravel in gutter beside a housing estate development



Stormwater pit clogged with autumn leaves



Dog droppings must be picked up by responsible pet owners



Cars washed on impervious surfaces can lead to detergents flowing into stormwater drains



Unsecured sediment on building site in an urban area. Imagine what rainfall will do

Pollution in Waterways



SKM

Algae from nutrient-rich runoff



Litter in waterways



Oily film on water surface



Plastic bottles accumulate in debris



Autumn leaves and rubbish caught in tree after high flows



In stream vegetation filters rubbish



Pollution prevention



Ashtrays provided for cigarette butts



Native vegetation on nature strips



Raking and composting autumn leaves



Rubbish contained in bins with good quality lids and recycling in action



Sediment and litter barrier installed at building site



Grassed roadside verges filter sediment and absorb rainfall



Washing your car on the lawn absorbs runoff

Examples of wastewater (not stormwater). This enters sewerage system not stormwater system.









Stormwater management



Learning about water-sensitive urban design



Grass swales instead of hard surfaces absorb rainfall



Litter traps catch rubbish before it enters waterways



Wetland sediment and litter trap near large housing development



Lifting a litter trap lid



Best practice example of stormwater settling ponds in new housing estates



Litter trap in open urban drain



Aquatic plants absorbing nutrients in stormwater settling ponds



Stormwater wetlands help to slow down stormwater runoff, filter sediment and debris and also provide habitat for fauna in urban areas.



Rocks can be used near stormwater outlets as a barrier to filter rubbish and debris but they must be regularly maintained and cleaned.



This wetland in an urban area makes use of urban stormwater helping it to be viewed as an asset, not a threat/nuisance.



Contoured swales direct rainfall from roads and footpaths to help grow attractive nature strip vegetation. Good for managing urban stormwater and great for greening our streetscapes.



An example of median strips that collect water from roads that run along either side.