



Reducing soil erosion with compost

FACT SHEET

More than 35% of NSW is affected by some form of soil erosion, which has an impact on the quality of stormwater catchments, river systems and the productivity of agricultural land.¹ Eroded topsoil carried into our waterways can contain toxic chemicals and fertilisers, which can reduce water quality in catchment areas and impact on aquatic flora and fauna. Reducing soil erosion in urban areas can improve stormwater quality and reduce the impacts on our receiving waterways such as beaches and lakes.

One way to reduce runoff, sediment loss and improve water quality is to revegetate degraded soils.

The use of composted mulch and/or soil conditioners can also reduce the direct impact of rain and wind on the soil surface, reduce runoff, improve soil structure, water infiltration, water holding capacity, and increase plant growth.²



Benefits of composted mulch

- Physically protects soils from the erosive forces of wind and rain.^{3,4}
- Reduces soil erosion by more than 90% on slopes of up to 15%.⁵
- Reduces runoff by more than 70%.⁶

Benefits of composted soil conditioners

- Assists in plant growth and vegetation establishment, which is critical for long-term erosion control and site stabilisation.^{3,4}

- Soil erosion can be reduced by up to 85%.⁷
- In heavy clay soils, soil conditioners can reduce soil compaction; improve infiltration and drainage; and reduce runoff and erosion.
- In light sandy soils, soil conditioners can reduce surface sealing; improve infiltration and water retention; and reduce runoff and erosion.
- In heavy traffic areas of urban landscapes (e.g. parks, zoos, golf courses, and sports fields), soil conditioners can improve root penetration and turf establishment; increase water penetration, absorption, and drainage; and reduce runoff and erosion.^{3,4}

Reducing soil erosion in urban areas improves stormwater quality, and minimises impacts on receiving waterways



Using compost materials helps you to obey the law

Under section 120 of the Protection of the Environment Operations Act (1997) heavy fines, including on-the-spot fines may be imposed if a person allows soil, earth, mud, clay, concrete washings or similar material to be washed, or placed in a position from where it is likely to be washed, into stormwater drains.

On construction sites, the owner and the builder are responsible for controlling soil erosion and preventing sediment from the building site from being washed into stormwater drains.

Large scale urban developments, which require a soil and water management plan, can use a range of compost products to control erosion and prevent sediment from building sites from being washed into stormwater drains. Use of recycled compost can help builders to meet legal requirements and avoid fines.

References

1. DLWC (2000). *Soil and landscape issues in environmental impact assessment. Technical Report No. 34.* NSW Department of Land and Water Conservation, Sydney, Australia.
2. Department of Environment and Conservation (2003). *Life cycle inventory and life cycle assessment of windrow composting systems.* Report prepared by Recycled Organics Unit, The University of New South Wales, Sydney.
3. US EPA (1997). *Innovative uses of compost. Erosion Control, Turf Remediation, and Landscaping.*
4. US Composting Council (1996). *Benefits of Compost. The Field Guide to Compost Use.*

Application guide

- Products should comply with Australian Standard AS4454 (2003) Composts, Soil Conditioners and Mulches.
- Composted mulches can be successfully applied on soil surfaces around plants on slopes of up to 30%.
- Mulch should not touch the stems and trunks of plants to prevent stem rot.
- Avoid application of fine mulches and/or thick layers of mulch on heavy soil types that can be prone to waterlogging.
- Composted soil conditioners are commonly incorporated into the topsoil, before planting to improve soil structure and water holding capacity.
- Some composted soil conditioners can also be applied as organic top dressing to improve levels of soil organic matter in turf.
- Compost can be applied any time of the year. For erosion control, apply prior to rainfall season to reduce erosion.
- Sediment filter socks and filter bales containing composted material are effective in capturing sediment in stormwater.⁷

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Acknowledgement

The Recycled Organics Unit, University of NSW, is thanked for providing content for this fact sheet.

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