



WALLAGA LAKE

SEDIMENT and EROSION CONTROL

WHY ARE SEDIMENTS A PROBLEM?

- ❑ Sediments are solid particles such as sand, soil, silt and clay, sometimes with pollutants such as phosphates and nitrates attached.
- ❑ If they reach Wallaga Lake, these sediments can settle on the bed of the lake and smother animals and plants such as seagrasses. Nutrients in sediments can be released to the lake waters during warmer weather. This has led to algal blooms and fish and invertebrates kills.
- ❑ Sediments can also cause the lake to become muddy or turbid, which reduces the penetration of sunlight and can have some unfavourable results for seagrass growth.
- ❑ Deltas such as the one formed where the entrance to Narira Creek meets the lake have formed over centuries, produced by eroded sediments from the catchment. These deltas can produce cut-off embayments such as Black Lagoon and Meads Bay, which now receive less flushing and experience reduced water quality compared to the main lake basin.
- ❑ Sediment infill rates for Wallaga Lake are now estimated to be eight times greater than those prevailing prior to European settlement. At these infill rates, the next 50 years should see the deltas advancing a further 200 metres into the lake.

WHY IS SEDIMENT IN WALLAGA LAKE?

- ❑ Estuaries such as Wallaga Lake are natural traps for sediment. Because the lake is often closed to the ocean, sediments will tend to accumulate on the bed of the lake.
- ❑ One of the effects of landclearing is to reduce the amount of rain that can seep into the soil. This increases the speed and volume of runoff during a storm. Over time this leads to erosion of topsoil and bed and bank erosion in creeks.
- ❑ This erosion adds much more sediment to Wallaga Lake in comparison to natural conditions.
- ❑ Impervious surfaces in urban areas such as roads, gutters, roofs, concrete and pavers also increase volumes of runoff, which enter the lake via stormwater drains.

WHAT CAN WE DO?

- ✓ Sweep and collect dirt or soil from stormwater gutters and drains or on the road and discard in the garden or garbage bin.
- ✓ If building or landscaping, cover stockpiles of sand or soil and place barriers on the downslope side to prevent loss during rain or high winds.
- ✓ Reduce the amount of concreted areas in your yard. When landscaping, consider using more porous surfaces such as brick or clay pavers. These techniques can retain up to 80% of sediment.
- ✓ Cover bare soil surfaces with mulch to prevent erosion. Planting of groundcovers provides living mulch for longer-term protection.
- ✓ The regeneration of trees and shrubs will help to reduce erosion. Vegetation also helps to intercept overland flow and reduce the intensity of runoff.

