TRAPPING SEDIMENT FOLLOWING BUSHFIRE AT MOUNT BOLD WATER RESERVOIR, SOUTH AUSTRALIA

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Introduction

• Mount Bold is located 35km SE of Adelaide, Australia
• Bushfire occurred 11 Jan 07 burning 1700ha including part of the water reservoir reserve at Mount Bold (Figure 1)
• Total of 53 sediment traps installed using hay bales, coir logs and silt fencing (Figure 1)
• Emergency sediment traps installed due to predicted rainfall of 50mm
• After the fire 748.4 mm of rain fell in the year of 2007 at Mount Bold

Results

• Over 130 cubic meters of sediment caught by the traps
• Over 49% of sediment traps had problems
• Water quality sample analysis from one site indicated no impact by the bushfire. Visual observations differ, showing turbid water and algal growth occurring in areas away from the sampling site (Figure 2)

Key Findings

• Steep narrow slopes require stronger traps such as rock gabions (Figure 3)
• Submerged traps still collected sediment (Figure 4)
• Wildlife destroy hay bales by eating the hay and creating homes in the traps
• Geotextile bags provide extra support and lengthen the life of hay bales
• Coir logs lasted much longer than hay bales
• Generally traps needed to be higher and wider than the existing creek bed (Figure 5)
• Silt fence required more support and additional fences to prevent the collapse (Figure 6)

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