

Wildfires in the upper catchment of the Goulburn River, Victoria - monitoring and protection of river health and water quality

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The upper catchment of the Goulburn River in Victoria, south eastern Australia, is highly valued for its natural values. Largely un-cleared for agriculture, this region is home to an array of threatened flora and fauna. The catchment is highly valued for tourism and recreation and is a major source of the region's highly valued water resource.

In February 2009, catastrophic wild fires impacted on a significant area of the upper/mid Goulburn River catchment between Kilmore/ Wandong and Alexandra. The largest of the fires, known as the Kinglake Complex, burnt over 220,000ha of land, destroyed more than 550 homes and has resulted in significant loss of life - including those at St Andrews, Strathewen and nearby Kinglake. The fire followed a path across Victoria's central highlands, from Wandong, south as far as St Andrews and east and north through Marysville, Taggerty and Flowerdale towards the upper Goulburn Valley.

This fire event has been titled by some as "Australia's worst natural disaster" with the loss of life, damage to communities, destruction of manmade and natural infrastructure and assets.

Over 49% of the fire area was affected by moderate to high soil burn severity. Along with 52% of the area having steep slopes, this put many areas both within and downstream of the fire at increased risk of erosion and runoff (DSE 2009).

Within the region strong partnerships have formed between public groups as the result of many years working together. Following the fire the Goulburn catchment Water and River Contingency Planning Group, which was formed to collectively respond to waterway incidents undertook a review of the potential risks to aquatic ecosystem health and water quality resulting from rain or storm events on the severely burnt catchments. The Group identified where action could be taken and areas in which detailed and ongoing surveillance was required.

Key assets identified as being at risk included the Goulburn River, Lake Eildon and downstream irrigation systems, urban water supplies and river health.

The immediate and on-going response to the event centered around coordination between relevant agencies, development of a Turbidity Decision Support System, establishment of "Real Time" monitoring and community based water quality monitoring (Ashwatch), support for partner agencies in the protection of aquatic dependent threatened species, development of processes to reduce the impact on urban water treatment and the continued review of data and information from storm and rainfall events.

This paper presents an overview of the monitoring programs initiated in response to the catastrophic fire event, details and introduces some of the supporting and complimentary initiatives and key findings.

References

DSE (2009). Kilmore East-Murrindindi Complex North Fire Emergency Stabilization and Rehabilitation Plan 10 March, 2009, Department of Sustainability and Environment, Victoria.