



# WATERWAY ISSUES IN FIRE AFFECTED AREAS

## Goulburn Broken Catchment Management Authority Region

This information sheet has been prepared to assist landholders in the fire affected areas in the Goulburn Broken Catchment Management Authority<sup>1</sup> region with issues relating to waterways.

### SAFETY:

The VIC SES, CFA and DSE have produced a factsheet<sup>2</sup> highlighting that in fire affected areas there is potential for increased rainfall runoff. **This can create life threatening conditions in some situations** and may continue to apply for up to several months after the fire. Heavy rain or thunderstorms can cause **major safety hazards and flash flooding** in and around fire affected areas including:

- around drainage line and waterways,
- across roads / bridges / culverts,
- damage to or washing away of water pumps and irrigation equipment, and
- erosion damage to gullies.

If a storm is intense or lasts a long time, the risk of fast-moving water with large debris (big rocks, boulders, fallen trees etc) can be significant.

**In a life threatening emergency call 000**

**In a flood or storm emergency call SES for emergency assistance: 132 500**

**The Bushfire and Storm Information Line:  
1800 240 667**

<sup>1</sup> The Authority wishes to acknowledge the work of the North East Catchment Management Authority in the preparation of this information.

<sup>2</sup> See Beechworth Fire Area Community Update Fact Sheet 1# March 2009 VIC SES



**Above:** A flash flooding event which eroded the road surface (source NECMA)



**Above:** A flash flood event covered the Omeo Highway in silt (source NECMA)

### FENCING:

When restoring fencing it is important to recognise that debris and flash flooding may cause problems, particularly on fences across drainage lines, in gullies and on waterways. Unfortunately these rainfall events which can cause flood damage are almost unpredictable. It is recommended that landholders consider placing 'sacrificial' fencing across drainage lines. This is a short section of fence designed to give-way if and when debris collects on the fence. This sacrificial section can then be repaired or replaced after flash flooding events without the rest of the fence line being damaged or needing repair.

Care should also be taken in reconstructing fences on the correct line and location.





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## MANAGING REDUCED WATER QUALITY:

Water quality is often an issue in fire affected areas and can be due to windborne material (ash and dust) contaminating storages, rainfall runoff transporting ash and debris after rainfall events, or even from landslips due to instabilities due to loss of vegetation.



**Above:** Silt, ash and debris in the Dandongadale River in 2007 affect water quality

It must be recognised that sometimes there is nothing that can be done to prevent a water quality event. However, it is possible to mitigate the risks to your property and ensure that you have alternative water supplies available.

It is recommended that landholders consider following three steps in planning farm water supplies for their properties after a fire event:

1. Evaluate current water reserves and water needs;
2. Estimate how the status of these reserves may change over time;
3. Prioritise the management options available.

If essential water (stock, domestic or extensive horticulture) was taken for fire purposes you can contact your local council to organise replacement water.

### 1. Evaluate current water reserves, sources and needs;

First estimate what quantities of water you have already in storage on your property:

- ☐ Off stream dam(s),  
Volume in storage \_\_\_\_\_;
- ☐ On stream dam(s),  
Volume in storage \_\_\_\_\_;
- ☐ Water tank(s),  
Volume in storage \_\_\_\_\_;

Second, consider where you source this water from as these sources have different risks:

- ☐ Rainwater;
- ☐ Waterway;
- ☐ Groundwater;

Third, calculate the amount of water you need for your property.

The Department of Primary Industries has produced a document<sup>3</sup> to assist landholders with recovery after fire. This document contains information on how to calculate the demands that may be placed on water supply, including stock and domestic use.



**Above:** Silt and debris in the Livingstone Creek after the 2003 fires

<sup>3</sup> *Recovery after fire: Practical steps for landholders*, DPI February 2009. The document can be found at [www.dpi.vic.gov.au](http://www.dpi.vic.gov.au), follow the link to **Bushfire Response and Recovery Information**







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## 2. Estimate how the status of these reserves may change over time;

Assess your sources of water available to you and what risks may be posed to them in the future. Some questions that you should consider include:

- Is there a first flush diverter on the pipes into your rainwater tanks?
- Are any of your dams at risk of filling up with ash, sediment and debris?
- Do you rely on a waterway and if so, do you have enough water in storage if you can't pump from the waterway because the water is dirty?
- Are there infrastructure issues that need to be resolved? For example do you need to replace damaged or destroyed pumps, pipes, generators, fuel storages and water meters?



**Above:** damaged water pump and pipeline

## 3. Prioritise management options available.

It is important that landholders consider what management options are available in order to determine the best scenarios for their properties. Some management options are outlined below:

- Install temporary silt fencing above catchment (hill slope) dams to reduce contaminants (ash, organic litter, sediment) in rainfall runoff events.

- Ensure there are alternative water sources in place if a property relies upon on-stream dams.
- Ensure there is sufficient water in off stream storage (e.g. water tanks) if a property relies upon direct pumping from a waterway.
- Ensure there are sufficient filters on pumps, and avoid pumping when sediment loads are high. Wait until the material settles.
- Consider reducing stock numbers, or moving stock to alternative locations where supply is not affected.
- Combine or separate stores of water, so that water is stored in locations that are at the least risk of damage or contamination.
- Carting water. Water may need to be brought in from an alternative supply source. It is recommended that landholders contact Goulburn Murray Water (G-MW) (contact details provided on the last page) in relation to any approvals that may be required.
- Sinking a new ground water bore(s) maybe the only feasible option for the site. It is recommended that landholders contact G-MW in relation to any licence approvals that may be required.



**Above:** Increased sediment load from a drainage line





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## DE-SILTING:

### Best Practice for De-silting.

After heavy rainfall events de-silting of dams and pump holes is likely to be necessary. The main concern with de-silting is the risk of the works impacting on downstream water quality. Landholders need to consider which of the following may apply to their situation prior to de-silting:

- If an off waterway dam is de-silted only, and not enlarged in any way, then landholders will not require a licence from G-MW.
- If the dam is on a waterway and is to be enlarged then a license is required from G-MW.
- If the dam is on a waterway but is only being de-silted then a license would not be required, however it is recommended that landholders contact their local G-MW Diversions Inspector to confirm proposed works prior to commencing de-silting.

When undertaking de-silting activities in or adjacent to waterways landholders should ensure that:

- Silt is placed and secured from re-entry to the dam or waterway.
- Silt is not used to form a levee type structure or impede flow on the floodplain.
- Excavation does not go below the natural bed level of the waterway.
- Suitable conservation measures are implemented to prevent silt from de-silting activities either entering a waterway or moving downstream.
- Waterways are not deviated in any manner.

- De-silted material is not pushed into the waterway or left in a manner where it can slip or be moved by floodwaters into the waterway.
- De-silting works in a waterway do not impede fish passage or low flows.
- De-silting does not obstruct the outlet or bypass of the dam, which may impede the continuation of the flow down the waterway.



**Above and below:** Ash and debris in the upper Goulburn River catchment after the 2009 fires







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## FURTHER INFORMATION:

### Department of Human Services (DHS)

DHS have fact sheets, information and advice about water quality, how to protect your rainwater supplies after bushfires etc. Contact your closest recovery centre or DHS on **1300 650 172** or [www.dhs.vic.gov.au](http://www.dhs.vic.gov.au)

### Department of Primary Industry (DPI)

DPI staff can provide advice about specific recovery services and programs offered by the Victorian Government and other agencies following bushfire incidents. Additional information, including the extensive DPI Information Notes Series, is available on the DPI website [www.dpi.vic.gov.au](http://www.dpi.vic.gov.au) or by calling the Victorian Bushfire Information Line on **1800 240 667**.



### Department of Sustainability and Environment (DSE)

Landholders should visit the Bushfire Recovery page on the DSE website for links to general information about grants, recovery assistance as well as advice in relation to native vegetation and fence line clearing. Further information can be obtained at local DSE offices, the DSE website [www.dse.vic.gov.au](http://www.dse.vic.gov.au) or through the Victorian Bushfire Information Line on **1800 240 667**

### Goulburn Murray Water (G-MW)

GMW customers in fire affected areas can contact G-MW to discuss possible supply options by phoning **1800 013 357**. Further details can be found on the G-MW website [www.gmwater.com.au](http://www.gmwater.com.au)

### Goulburn Broken Catchment Management Authority (GB CMA)

The GB CMA will be undertaking rehabilitation works on waterways in fire affected areas. If you require assistance with a waterway issue or are interested in finding out more about other bushfire recovery works, contact the GB CMA on **(03) 58 201100, 57 360100** or [www.gbcma.vic.gov.au](http://www.gbcma.vic.gov.au)

