

Cutting red tape on water affecting activities

Sediment control within a watercourse in a bushfire-affected area

Current Recommended Practice

This Current Recommended Practice (CRP) is only applicable to landholders in the Adelaide and Mount Lofty Ranges region in bushfire-affected areas as defined by the South Australian Country Fire Service (CFS)

It is to help you understand what activities WILL NOT require a Water Affecting Activity (WAA) permit, post bushfire.

The *Landscape SA Act 2019 (the LSA Act)* requires a WAA permit for a range of activities. A number of activities are exempt from requiring a WAA permit. The exemptions in this document have been developed to help you cut through red tape whilst meeting your statutory requirements under the LSA Act*.

Run off

Fires can have a significant effect on the way rainfall runoff moves across the landscape. For example, reduced vegetation in the landscape because of fire, allows more rainfall to run off, which then flows faster in waterways. This is exacerbated by the presence of ash and burnt soils, which are more water repellent, resulting in less rain penetrating the soil and therefore increased runoff.

Topsoil

Where possible, the loss of topsoil from the burnt landscape should be minimised through the removal of livestock, re-establishment of vegetation cover, and the placement of sediment control structures such as logs, straw bales and coir logs within the natural depressions of the landscape.

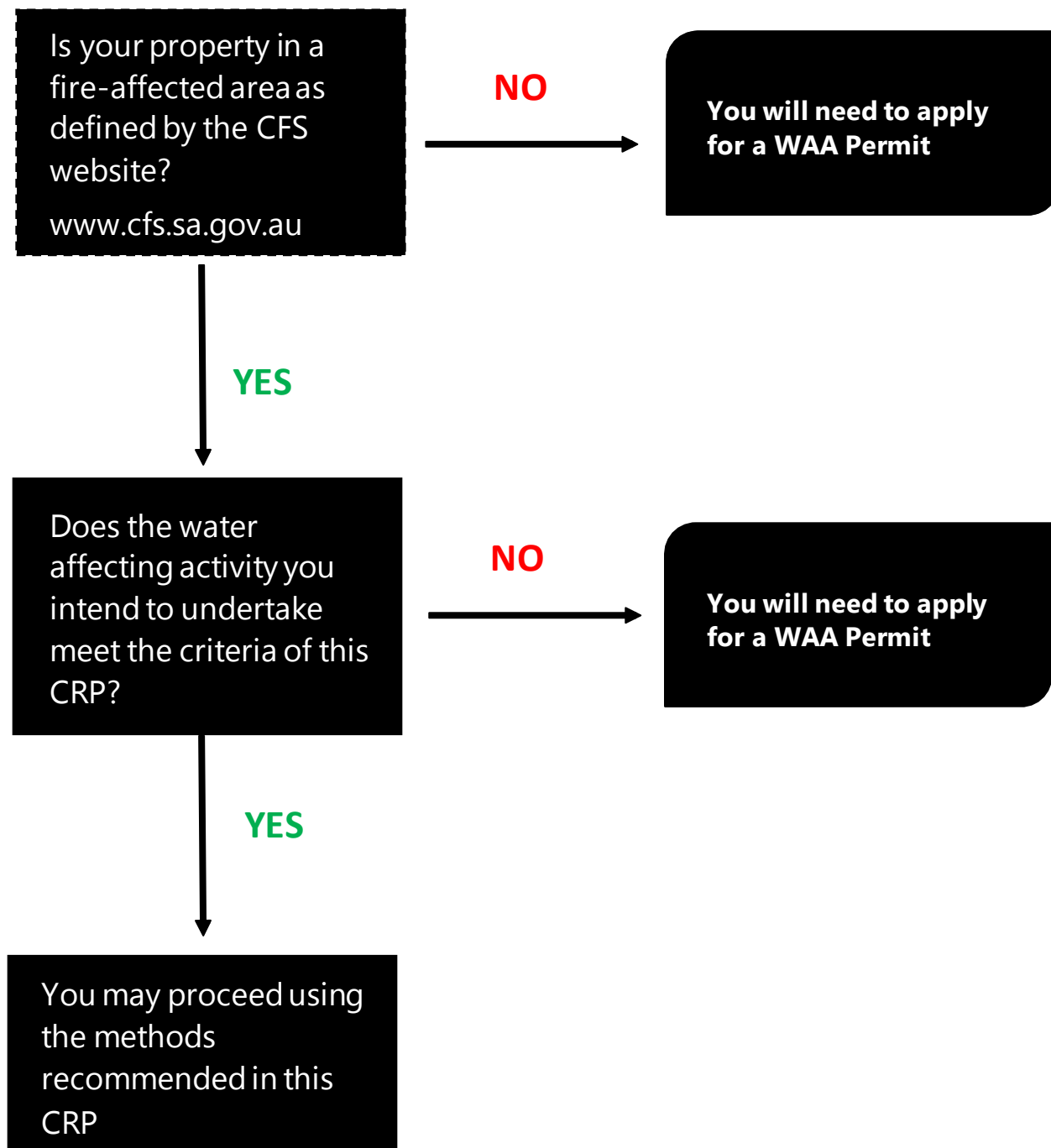
refer to the Hills and Fleurieu Water-Affecting Activities Control policy.

* For the placement of control measures, such as straw bales, to control of sediment and ash in the landscape (regulated by section 104(4)(f), and sediment and ash removal from watercourses (regulated by section 104(4)(h).



An example of sediment control using straw bales

Will you need a WAA permit?



Please note, if works sit outside of the scope of this current recommended practice, a WAA permit must be sought. Please contact us if you require more information.

Silt

Occasionally water resources such as dams may require sediment control structures be placed in-stream. Similarly, heavy rains can cause pools in watercourses to fill with silt. While post-fire siltation is a natural process, where it presents a flooding risk to infrastructure or a threat to native species such as fish, de-silting activities may be warranted. This can lead to extensive mobilisation and loss of topsoils within fire grounds and the accelerated siltation of watercourses following heavy rain.

Vegetation

Burnt vegetation may need to be removed due to safety or flood mitigation. Exemptions are available to remove some plant species following current recommended practice. Methods that can be used are detailed in Table 1 of the 'Current Recommended Practice - removing vegetation from a watercourse, lake or floodplain', which can be found on the Hills and Fleurieu landscape Board webpage at www.landscape.sa.gov.au/hf/waa

Issues and recommended methods Sediment and ash removal

Removing sediment and ash from a watercourse will be considered acceptable if there is a benefit to the watercourse and surrounding environment. For example, where a build-up of materials has occurred in a section of a watercourse, causing a stream to deviate or erosion. Potential issues associated with extracting materials within waterways include:

- Acceleration of erosion and sedimentation
- A deepening of the bed which may trigger headward erosion or bank erosion
- Altered flow regime during and after the works
- Loss of habitat and breeding areas for instream biota
- Loss of vegetation on stream banks and large woody debris instream
- Potential for the stream to change course
- Potential to alter floodplain flows
- Potential for contaminants from machinery to reduce water quality
- Onstream sediment mobilization.



An example of sediment control using wire and hessian cloth.

The preferred approach is to work from downstream to upstream and for the extractions to be undertaken above the low flow water level or in a dry watercourse, paying attention to the following:

- Avoid deepening the bed of the watercourse
- The finished slopes of the bed and banks of the watercourse must be stable; maximum slopes upstream and downstream of the site are to be 1(vertical):10(horizontal), with side slopes of 1(vertical):3(horizontal).
- No machinery with defective hydraulics that could discharge hydraulic fluid is permitted in the stream environment.
- Install sediment control measures before starting any works that may cause sediment mobilisation, and ensure they stay in place until the site has stabilised.
- Ensure machinery is operated from the bank of the stream and not in the stream channel wherever possible to reduce mobilisation of sediment. Ensure machinery is refueled at a minimum distance of 20 meters away from the watercourse.
- Minimise the disturbance to existing vegetation on and adjacent to the stream banks.

- Regularly remove excavated material and debris from the site or place it in a stable area above the high-water mark or active floodplain of the stream and / or as far as practicable from the channel.
- When material is moved offsite, dispose of it in a manner that prevents its entry into any watercourse or floodplain.

Site rehabilitation

The works site is to be rehabilitated with the following considerations:

- A revegetation plan using indigenous plants.
- Pool / riffle sequence restored.
- Large woody debris replaced.
- Access tracks scarified and topsoiled.
- A maintenance program is defined for a period of time to monitor the site and ensure vegetation becomes established, and pest plant invasion is suppressed.



An example of erosion.

Sediment control

Strategically placed sediment fences or other types of sediment interception measures may help trap soil and debris before they reach watercourses and dams, preventing water quality problems.

Ensure the design of the silt trap will prevent water turbulence, which will mix the sediment and maintain it in suspension.

The images in this document are examples of various sediment fences. The materials used to construct a fence generally include star droppers, hay/straw bales, chicken mesh, fence wire, and shade or hessian cloth.

The materials you use will depend of what you have available.

The design of your structure will depend on your needs. When designing your fence, remember that it should allow for:

- Effective filtering of fine sediment (i.e. through shade cloth or straw)
- Natural overflow of some runoff water (aiming to fully dam the water will likely cause the structure to collapse)
- The prevention of erosion around the sides or underneath the structure.

More information

This web page has resources relating to sediment control and land management within fire grounds:

<http://tiny.cc/cudlee-creek-recovery>.

Look for the 'land, livestock and pasture care after fire' webpage:

- Bushfire recovery and your property
- Bushfire recovery, erosion and water supply
- Contaminated farm dams
- Farm recovery after bushfire
- Post-bushfire water quality in farm dams and creeks (with respect to livestock).

Finishing your work

Remove all material from your temporary sediment fence, taking care that no material escapes into the drainage system. Dismantle and remove your temporary sediment fence.

Need more information

Contact the Hills and Fleurieu Landscape Board at Mt Barker on (08) 8391 7500

www.landscape.sa.gov.au/hf/waa