

## Fw: Lake Medlow and Cascade Dam Catchment Risk Assessment



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**From:** Lorena Oliveira <  
**To:** Fiona Loadsman  
**Date:** Fri, 23 Aug 2024 16:34:10 +1000

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**Lorena Oliveira**  
Manager Operating Strategy

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**From:** Lorena Oliveira  
**Sent:** Friday, 23 August 2024 4:33 PM  
**To:** Camilla Edmunds <

Evan Webb

**Subject:** Fw: Lake Medlow and Cascade Dam Catchment Risk Assessment

See my edits in yellow, thank you

**Lorena Oliveira**  
Manager Operating Strategy

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**From:** Evan Webb <  
**Sent:** Friday, 23 August 2024 4:00 PM  
**To:** Camilla Edmunds <

Lorena Oliveira

**Subject:** Lake Medlow and Cascade Dam Catchment Risk Assessment

Good Afternoon,

Please see below update and recommended next steps based on the information provided recently regarding Lake Medlow and Cascade Dam. I am hoping this can be sent to Fiona today.

### Situation

#### **Water Quality Risk (Supply)**

Ongoing works by the Water Quality & Risk Strategy team to further investigate PFAS detection by Sydney Water have lead to the collection of a number of water samples within the Cascade Dam system. A comprehensive catchment risk assessment is being developed assessing potential sources within the watershed of Cascade dams and Lake Medlow. Initial sample results indicated proportionally high concentrations in Lake Medlow with repeat samples returning values that exceed PFAS guideline levels within the Australian Drinking Water guideline values. Lake Medlow does not supply water directly and the system is composed by a number of dams, the monitoring shows raw water supply point to cascades is significantly below the ADWG.

Following this, sampling of tributaries to Medlow Dam undertaken by ALS returned results at higher concentrations. WaternSW operations is managing the source water quality in consultation with NSW and Sydney Water. The supply from from Medlow Dam was disconnected

Document tendered by

Ms Cate Faehrmann MLC

Received by

ANGELA FINNI

Date: 22 / 08 / 2025

Resolved to publish Yes / No



from the system as a precautionary measure.

**Water Quality Risk (Environmental)**

Lake Medlow and Cascades dams release and or spill into sensitive downstream receivers being the Blue Mountains National Park and are considered as a freshwater habitat. The relevant assessment criteria for PFAS in freshwater is the PFAS National Environmental Management Plan Version 2.0. Table 5. The relevant criteria for this setting will be 99% species protection (0.0002 ug/L PFOS, 19mg/L PFOA).

Sampling to date indicates that results exceed 99% threshold in all results from the 3 sampled dams at Cascades and at both depths sampled in Lake Medlow for the 99% UCL threshold.

*Legislative excerpt*

"Section 60 of the Contaminated Land Management (CLM) Act requires land owners of sites that have been contaminated to notify the EPA in writing if and when:

"(a) each of the following is true--

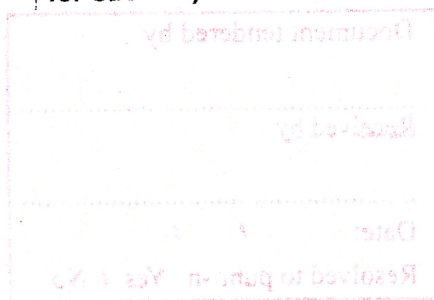
- (i) the substance contaminating the land (the "contaminant" ) or any by-product of the contaminant has entered or will foreseeably enter neighbouring land, the atmosphere, groundwater or surface water,
- (ii) the regulations prescribe for the purposes of this subparagraph, or the guidelines specify, a level of the contaminant or by-product in the neighbouring land, atmosphere, groundwater or surface water,
- (iii) the level of the contaminant or by-product after that entry is, or will foreseeably be, above the level prescribed or specified and will foreseeably continue to remain above that level, or

(b) a guideline specifies a level of the contaminant in soils with respect to a current or approved use of the land and the level of the contaminant on or in any part of the soil on that land is equal to or above that specified in the guideline and a person has been, or foreseeably will be, exposed to the contaminant or any by-product of the contaminant, or

(c) the contamination meets any other criteria that may be prescribed by the regulations for the purposes of this subsection.

**Maximum penalty--**

- (a) for a corporation--\$2,000,000 and, for a continuing offence, a further penalty of \$240,000 for each day the offence continues, or
- (b) for an individual--\$500,000 and, for a continuing offence, a further penalty of \$120,000 for each day the offence continues.





(4) A person is required to notify the EPA under this section as soon as practicable after the person becomes aware of the contamination."

**Based on the above criteria WaterNSW meets the requirement to report.**

Under current operating model responsibility for Contaminated Site Investigations, engagement of consultants and management of risk assessment is the responsibility of the Environmental Services Team. The Environmental Services has 2 staff with experience in CLM consulting and project management of remediation projects that can be augmented with the support of SME advice. It is recommended that this emerging issue be approached separately to the Water Quality supply risk assessment to enable a more comprehensive Conceptual Site Model (CSM) be developed with ongoing collaboration and support provided to each other and from the rest of the business.

**Actions to date**

- Briefing of NSW Health, Sydney Water and internal staff
- Contact made with NSW RFS requesting prioritisation of the site based risk assessment for Medlow RFS (NB expectation for higher level communication required)
- Contact made with FRNSW in writing and via phone requesting information regarding knowledge of fire fighting activities undertaken in the Lake Medlow & Cascade Catchment Boundaries
- Sydney Water confirmed water supply is safe. WaterNSW has isolated supply from Medlow Dam and is developing an operational plan for medium term risk management in consultation with Sydney water and NSW Health
- 2 rounds of sampling to provide representation of current water quality and inform catchment risk assessment
- Scheduling of further sampling for next week
- Review of the Sampling Plan by Environmental Services and recommendation for the addition of extra analytes to inform the Conceptual Site Model and the nature of the source of contaminants
- Briefing of Legal team with regards to duty to notify
- Initial contact and with SME to receive expert advice on next steps and feed into the scoping of a comprehensive Site Investigation through existing panel agreement with Jacobs who have available suitably qualified experts experienced in advising state and government authorities on PFAS matters (CV to follow <https://qaehs.centre.uq.edu.au/profile/3455/dr-karl-bowles>) with an estimated fee of \$20K for advice. Services to include support in development of stakeholder communication plans with comprehensive technical knowledge to manage local government and other stakeholder communication issues. Note the NEMP has a specific and detailed guideline on Consultation for PFAS matters.

**Actions to be completed**

- Drafting of 'Duty to Notify form' with review by EM Strategy and Performance, Legal and Water Quality and Risk Strategy team. Informal comms will be completed ASAP with the form to be completed as a priority within usual business hours considered in keeping with intent of the act
- Identify method and operational issues associated with ceasing all offsite releases of any water from Cascades and Lake Medlow water bodies as a priority
- Active request from WNSW senior management to NSW RFS and FRNSW to support expedited collation of information, in particular regarding RFS Medlow Bath site.
- Review of federal legislation in regards to notification obligations for potential pollution of World



**Heritage Listed Sites**

- Engage consultant to inform likely timeline, key considerations, scope of investigation provide concrete next steps in the event that regulator and or government request action plan
- Undertake site reconnaissance to review soil disturbance and stockpiles associated with construction works within the Lake Medlow Catchment
- Development of communications plan and risk assessment from corporate comms perspective
- Consultation with relevant stakeholders in relation to potential offsite migration sources (BMCC, NPWS, Sydney Water, NSW EPA)

This will be an ongoing and emerging issues requiring regular updates and review of strategy. Collaboration across the business in a coordinated manner is required.

**Issue(s)**

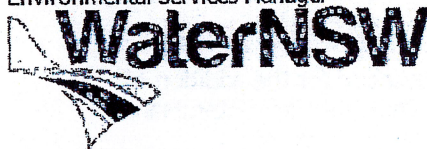
- Highly contentious issue with media attention, numerous stakeholders and reputational risk
- Current source, nature and extent of contamination is unknown as well as migration pathway (i.e Groundwater or surface water)
- Currently WaterNSW is the only known entity with data indicating presence of contamination and therefore further investigation in the nature and extent sits with WNSW until such time as alternate source is identified

Please give me a call if you have any questions.

Kind regards,

**Evan Webb**

Environmental Services Manager



[www.waternsw.com.au](http://www.waternsw.com.au)

WaterNSW acknowledges the Traditional Custodians of the land and water on which we work and recognises the continuing cultural and spiritual connections that Aboriginal and Torres Strait Islander People have to Country. We pay our respects to Elders past, present and emerging.