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NRAR Quarterly Report 3: Q1 2024

11/04/2024

To: Alex Bowlay
Senior Investigator
Natural Resources Access Regulator (NRAR)

Enforceable Undertaking Commitments

Contents

Water Balance Model (WBM).

The Goldsim WBM has been implemented and reported internally every month which is assisting in guiding a wholistic approach to water management, across the site.

The WBM is also allowing BCOP to validate water intercepted from undisturbed catchments and forecast when groundwater/river extraction will be required due to low site water storage.

Proposed Water Metering.

All metering and telemetry capabilities have been installed as mentioned in Appendix 1 of the EU.

The improvements to the metering and telemetry of the pumping system have included:

- Standardising controllers for all pumps.
- Introducing remote start capabilities for diesel pumps and utilising solar for start batteries to reduce time in jump starting pumps that are used infrequently.
- Regular email reports are provided to the site team to inform the Water Balance Model and support day to day decision making.

Calculating Water Take

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A verification model was run to assess the model's accuracy in representing the rainfall runoff response to the WMS and to estimate the volume of runoff intercepted from the undisturbed catchment in the previous quarter.

The Site Water Balance data in **Figure 1** indicates the modelled storage volume (blue line) is similar to the observed storage volume (orange line) with similar responses to rainfall occurring for both results. The slightly below average rainfall during Q1 with the hotter than average temperatures saw another month of decreasing site storages. This also led to very little runoff from the non-minor and minor catchments, which is represented in the model. Due to the low site storages, water import from production bores commenced at the end of 2023, with approx. 90ML imported water year to date.

Figure 1: Water Model Run as of 31 March 2024.

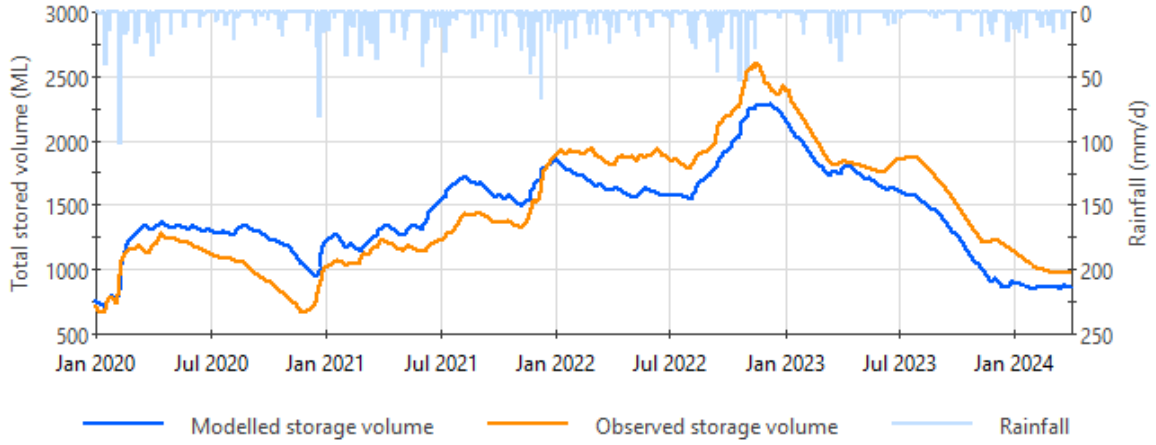

Table 1: Rainfall during reporting period

Month	**Rainfall (mm)**
January 2024	*72.2*
February 2024	43.6
March 2024	31.0

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Table 2: Estimated & Actual volume of runoff intercepted from soil stockpile dam undisturbed catchment Jan-Mar 2024

	Estimated runoff Volumes into Soil Stockpile dam from undisturbed catchment	Metered pump volumes Actual Interception (Soil Stockpile dam)
Volume (ML	0.05ML	0.69ML

Due to the low amount of water intercepted during the reporting period, it is difficult to compare between modelled and pumped water, however the model generally represented the rainfall runoff response.

Table 3: Total Licensable take for Jan-Mar 2024

	Runoff from Third order and higher watercourses	Runoff from minor watercourses	Runoff from minor watercourses in excess of landholdings' harvestable rights
Volume (ML)	0.18ML	0.021ML	0ML

Bluevale water used July-Dec 2023 = 19.23ML

Bleuvale water used Jan-Mar 2024= 0.18ML

Bluevale water used Water Year to date = 19.41

Forecasting water take for acquisition allocation.

A Water Balance Model forecast was run to ensure BCOPL holds sufficient water allocation to account for future surface water take (See figure 2). See results below:

Three-month BOM Climate Outlook Apr-Jun: Dry

Table 4: Predicted water take Apr-Jun 2024

	Predicted Runoff from Third order and higher watercourses	Predicted runoff from minor watercourses	Predicted runoff from minor watercourses in excess of landholdings' harvestable rights	Predicted volume requiring licencing
Volume (ML)	19.26	2.16	0	19.26

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Current allocation held in WAL44134: 400ML

93 Unit Shares of Bluevale Unregulated Water licence was purchased on 15 December 2023. Although this does not increase allocation for the 23/24 Water Year, it will provide greater water security in future years. Additional temporary water will continue to be acquired as necessary. An additional 150ML of Bluevale allocation was purchased in January 2024 to account for the potential wet forecast.

Industry learnings

- The installation of real-time metering has allowed BCOP water managers to make real-time decisions around storages and water movement across the site.
- Additional pumping, pipework and filtration installed as part of the process has facilitated the use of dam water in the Coal Processing Plant, thereby reducing the requirement for the use of bore water.
- The real-time storage monitoring will also reduce the need for regular survey pickup of dam storage levels which is a strain on resources and can vary with human error.
- The Goldsim model has provided reliable modelling of our site water storages recently during dry times which has allowed the mine to adequately prepare groundwater bore infrastructure and implement water saving initiatives on site.

Surface Water Management Plan (SWMP)

BCO submitted the SWMP for consultation on 20 March 2024. Feedback was received from DPE water & included in the SWMP which was submitted to DPHI & NRAR on 10 April.

Consultation

Initial consultation has been conducted with members of the local Aboriginal community (25 July 2023) to discuss the background to the Enforceable Undertaking and to commence the discussion on past impact of water take on Aboriginal communities and their cultural practices. Follow up meetings were held in October 2023 and January 2024. No concerns were raised at the meeting and BCO agreed to continue to explore the topic at subsequent meetings. The next ASCF is planned for Q2 2024.

A copy of this report will be disseminated to the Registered Aboriginal Parties (RAPs)

Consultation also took place at the February 2023 CCC meeting. No issues were raised.

The 2023 Annual Review was submitted to DPHI in March 2024 and contained information about the Enforceable Undertaking and water account details for the previous water year.

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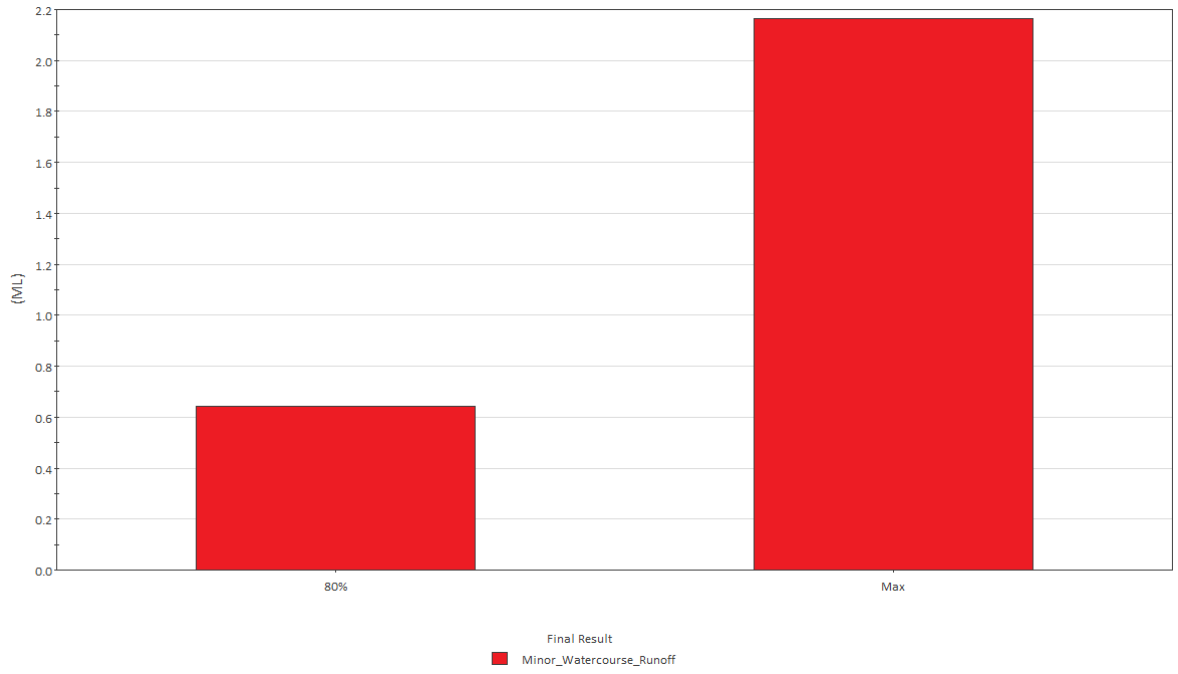

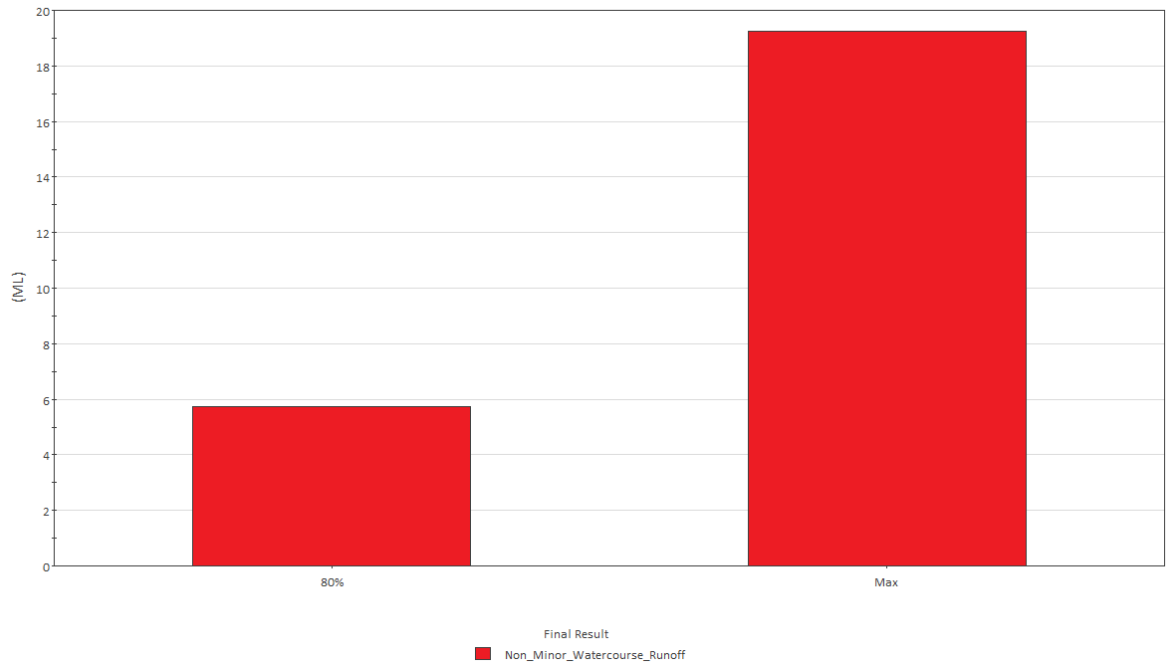

Figure 2: Predicted licensable water take for Jan-Mar 2024.

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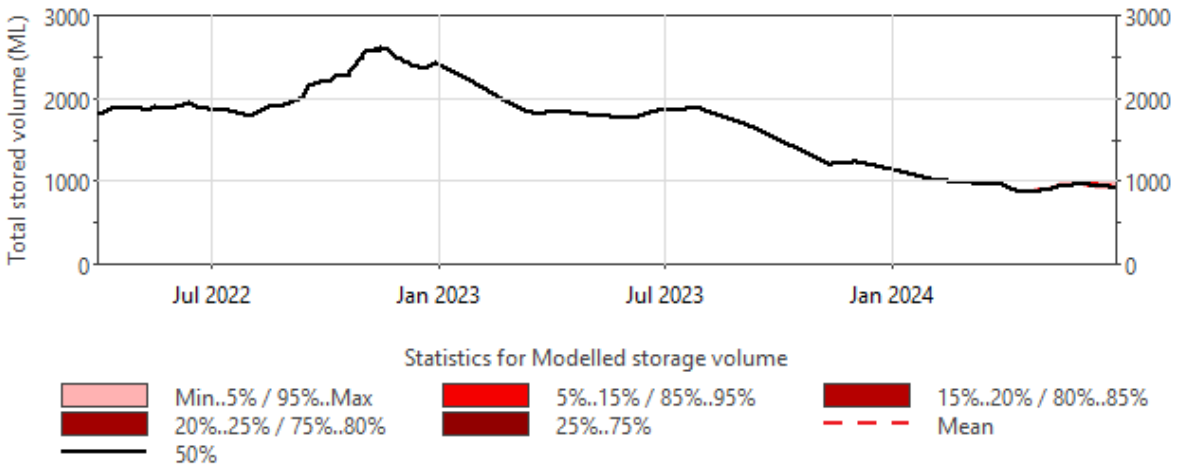

Figure 3: Predicted Site storage Volumes Apr-Jun 2024.