Nose Creek Watershed Partnership

November 30, 2022

Interim Bulletin - Runoff Volume Control Targets in the Nose Creek Watershed

The Nose Creek Watershed Partnership (NCWP) acknowledges the ongoing challenges related to the implementation of the Runoff Volume Control Targets in the Nose Creek watershed. This Interim Bulletin is circulated to the NCWP Partners (Calgary Airport Authority, City of Airdrie, The City of Calgary, Rocky View County, Bow River Basin Council and Town of Crossfield), Alberta Environment and Protected Areas (AEPA) and the development industry in effort to alleviate some of the short-term challenges identified in the implementation of interim runoff volume control targets until such time as the Nose Creek Hydrologic, Hydraulic and Water Quality project is complete. The estimated date of completion is 2026. The NCWP acknowledges that AEPA remains the regulator for water management in the Nose Creek watershed, and that AEPA continues to support the implementation of the Nose Creek Watershed Water Management Plan (NCWWMP), with consideration for the interim measures outlined in this bulletin.

In the *2018 Nose Creek Watershed Water Management Plan (NCWWMP),* runoff volume control targets were set on the principle of maintaining streamflow that protect channel morphology, riparian areas, water quality and aquatic life. The historic runoff volume control targets were established based on pre-development runoff volumes of 6.1 mm (Nose Creek) and 9.6 mm (West Nose Creek) (April-October) (WER, 2006). The current Low Energy Release (LER) study was initiated by The City of Calgary and undertaken to explore alternatives to existing runoff volume control options and to update the previous work (WER, 2006) by investigating pre-development runoff volumes using a longer historical period of record. The preliminary results of the LER study indicate that the original pre-development runoff volumes are likely closer to 25 mm.

To align Partners in their approach to implementing interim runoff volume targets that reflect scientific principles, and until such time as the Nose Creek Model Project is complete, the NCWP recommends that Partners adopt:

- An average annual runoff volume target equal to 25 mm without implementation of LER principles; or

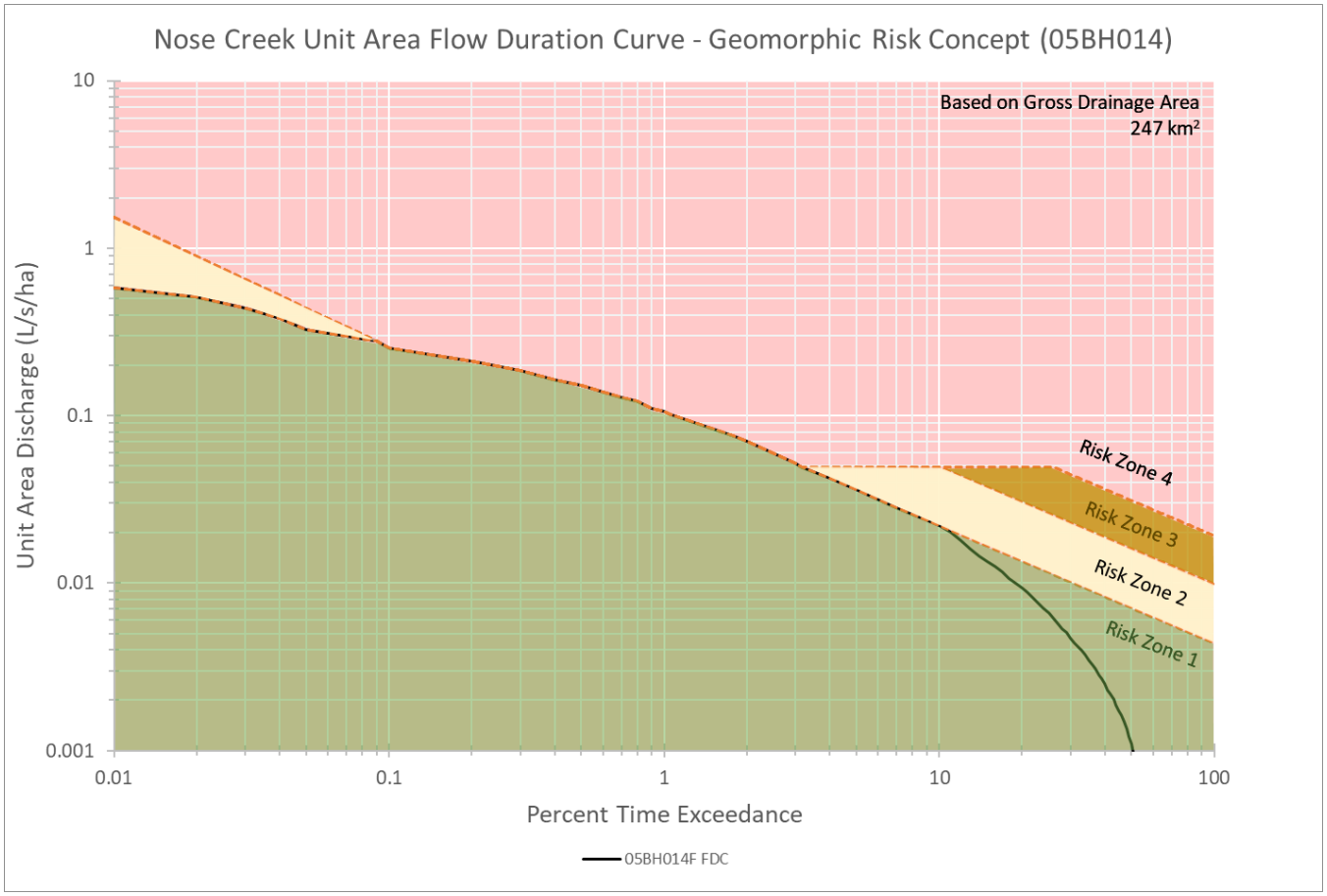
- A volume target under the flow duration curves (Attachment 1) for the March 1st – October 31st period as per Risk Zone 2 (yellow zone denoting medium risk impact) with implementation of LER principles. For the period November 1st - Feb 28/29th, a maximum release of 10 mm at rate no higher than 0.025 L/s/ha and 0.017 L/s/ha shall be met for Nose and West Nose Creek, respectively.

These targets should be applied on an interim basis. It is acknowledged that the LER Project is still ongoing and there may be further refinement of these interim targets and further recommendations from the project. Every reasonable attempt should be made by proponents of development within the Nose Creek watershed to meet these targets. The runoff volume targets do not need to be uniformly applied over the entire catchment. Rather, localized deviations from these targets within a catchment may be possible if the area weighted contribution at outfalls would still meet the above targets.

It is the intent of this bulletin that Partners continue to uphold the spirit of the *NCWWMP* in that all Partners recognize that this interim target is a measure proposed to reflect the updated science.

Nose Creek Watershed Partnership

Attachment 1. Flow duration curves applied to the Low Energy Release interim runoff volume control approach.



Nose Creek Watershed Partnership