



Agricultural Service Board

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| Subject: | Understanding Groundwater – Surface Water Connection for Watershed Stewardship |
| Date: | March 13, 2025 |
| Presenter: | Kristyn Lines, Manager Agricultural & Environmental Services |
| Department: | Agricultural & Environmental Services |

REPORT SUMMARY

Masaki Hayashi is a professor in the Department of Earth, Energy & Environment at the University of Calgary. His main research interests are in the connection among groundwater, surface water and atmospheric moisture in various environments ranging from the prairies to the mountains.

ADMINISTRATION'S RECOMMENDATION

THAT the Agricultural Service Board receives the Understanding Groundwater – Surface Water Connection for Watershed Stewardship report for information.

BACKGROUND

Surface water is always connected to groundwater and as such, they need to be understood as a single resource in the context of integrated watershed management. Most of the water flowing in creeks are sourced by headwater springs in small tributaries feeding the creek. Therefore, flow rates in creek and groundwater levels in local aquifers are closely connected. Therefore, for the effective stewardship of watersheds within Rocky View County, it is important to monitor groundwater level in local aquifers.

DISCUSSION

Dr. Masaki will present basic scientific principles on groundwater – surface water connection using examples from Bighill Creek and West Nose Creek, and practical approaches to monitor groundwater – surface water systems using domestic water-supply wells.

ALTERNATE DIRECTION

Administration has no alternate direction for the Board's consideration.

ATTACHMENTS

There are no attachments.