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Subject: Gabriola Groundwater

Trustees Elliot, Patric and Yates

The recent submission of the GWSolutions study and the introduction of the Freshwater Hazard Map provide a critical "triage" tool for identifying immediate vulnerabilities in Gabriola's groundwater system. However, as the OCP review progresses, it is paramount to distinguish between **hazard mitigation** (avoiding localized failure) and **hydrological integrity** (ensuring systemic health).

The Trust is urged to view the GWS study not as the final word on carrying capacity, but as the technical baseline for a broader **Hydrological Integrity Framework**. The public discussion should benefit from the significant five-year investment in the Trust's freshwater expertise, ensuring that the insights gained are applied to the whole system rather than just its fragments.

A primary concern remains the potential for ecosystem deterioration driven by groundwater level decline and quality shifts. Gabriola's biological health is not a secondary byproduct of water management, but the **primary infrastructure** for its retention. If groundwater levels fall below the thresholds required for ecosystem survival (**Biological Retention Targets**), the island's natural "sponges"—its wetlands and forest soils—will degrade, permanently compromising the aquifer's ability to recharge.

If the OCP utilizes the Freshwater Hazard Map as its sole guide, the result will be a "checkerboard" of development based on where the water hasn't run out yet. This approach ignores the **One Aquifer** reality and the cumulative impact of climate change on island-wide evapotranspiration.

The attached appendix suggests the prime pillars of a Hydrological Integrity Framework and cautions against a parochial orientation. It poses 18 questions—prompted by the GWS study—aimed at ensuring the OCP reflects a **systemic rather than fragmented understanding** of our aquifer. These inquiries seek to identify the critical gaps between "Micro-Regional" data and "Macro-Systemic" health—specifically the role of the **Big Ridge "Water Tower"** and the risks of regional segmentation.

Hopefully these inquiries will be addressed in a suitable public forum, furthering a broad community appreciation of the linchpin function of water within the OCP.

Regards

Ewout van Dishoeck