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Sent: Monday, September 14, 2026 3:14 PM
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Subject: ATTN: District Development Officer & Approving Officer

TO: Provincial Approving Officer (PAO) & Development Services Team
Ministry of Transportation and Infrastructure (MoTI) — Vancouver Island District

DELIVERED VIA EMAIL / REFERRAL INTAKE

SUBJECT: Section 475 Local Government Act Referral — Draft Gabriola Island Official Community Plan (OCP) Bylaw:

Subdivision Standards, Surface Runoff Acceleration, Road Rights-of-Way Ditching, and Bedrock Aquifer Recharge Integrity

EXECUTIVE SUMMARY

As part of the statutory agency referral window under Section 475 of the *Local Government Act* for the First Reading draft Gabriola Island Official Community Plan (OCP), this memorandum brings critical technical considerations to the attention of the Provincial Approving Officer (PAO) and Ministry development staff.

Gabriola Island relies exclusively on a single, highly fractured sandstone bedrock aquifer matrix for all domestic and commercial freshwater supplies. Modern hydrogeological assessment demonstrates that conventional roadside ditching practices, mandatory asphalt paving for intra-subdivision roads, and unmodeled surface hardening within right-of-way (RoW) corridors accelerate stormwater conveyance directly into the marine environment. This process deprives high-elevation recharge zones of atmospheric infiltration, worsening seasonal well depletion and coastal saltwater intrusion island-wide.

Because the PAO holds direct statutory authority under the *Land Title Act* to approve or condition rural subdivision layouts, the Ministry is urged to include explicit permeable surfacing and retention guidelines in its formal Section 475 referral response to the Local Trust Committee (LTC).

KEY TECHNICAL CONCERNS FOR MINISTRY & APPROVING OFFICER REVIEW

1. Impermeable Asphalt Barriers vs. Atmospheric Recharge

- **Static Assessment Deficits:** Build-out capacity assumptions in the First Reading draft OCP fail to account for cumulative surface impermeability caused by road paving, driveway cut-ins, and adjacent site hardening within subdivision corridors.

- **Loss of Deep Aquifer Infiltration:** In fractured bedrock systems, standard continuous asphalt roadways act as impermeable seals across key fracture zones. Turning rainwater into rapid surface discharge deprives the deep sandstone matrix of the atmospheric recharge required to maintain freshwater hydraulic pressure.

2. Drainage Infrastructure as a Recharge Depletion Vector

- **Standard Ditching Dynamics:** Conventional trapezoidal roadside ditching designed purely for rapid roadbed drainage acts as an unintended interceptor of shallow subsurface interflow.
- **Loss of Hydraulic Head Pressure:** High-elevation sandstone ridges (such as the Kensington Upland) provide the hydraulic pressure head that forces freshwater deep into down-gradient bedrock fracture zones. Intercepting and shedding this water along MoTI rights-of-way directly diminishes the recharge potential of coastal aquifers.

3. Erosion, Infrastructure Maintenance, and Downstream Scour

- **Increased Maintenance Liabilities:** Rapid concentration of stormwater within narrow roadside swales exacerbates shoulder erosion, culvert blowout risk, and downstream sediment discharge into marine foreshore environments during major rain events.

RECOMMENDED MINISTRY & APPROVING OFFICER SUBMISSION TO THE LTC

To safeguard transportation corridor integrity while protecting Gabriola's delicate water balance, it is requested that the Ministry's official Section 475 referral reply include the following specific recommendations to the LTC:

1. **Permeable Surface Standards for Rural Subdivisions:** Formally endorse policy text in the OCP enabling the Provincial Approving Officer to accept permeable asphalt, porous concrete, or engineered permeable gravel/aggregate matrices for low-density intra-subdivision roads, shoulders, and turnaround bays to maximize direct rainwater infiltration.
2. **Retention of Unpaved/Gravel Rural Road Designations:** Explicitly support the retention and maintenance of low-volume gravel or permeable aggregate intra-subdivision roads within sensitive groundwater recharge zones, recognizing their vital role as functional infiltration surfaces rather than impermeable runoff vectors.
3. **Integrated Infiltration Design Standards:** Require all future road realignments, frontage improvements, and commercial access approvals to incorporate Green Stormwater Infrastructure (GSI)—such as check dams, bioswales, and permeable ditch-liner matrices—that promote localized ground absorption rather than rapid marine discharge.

4. **High-Elevation Recharge Corridor Protection:** Establish a joint MoTI–Islands Trust protocol for roadside drainage maintenance in mapped high-elevation recharge corridors to maximize retention time and deep-bedrock infiltration.
5. **Biological Retention Multipliers:** Advise the LTC to adopt binding biological retention targets and canopy preservation thresholds along transportation corridors in the OCP text prior to Second Reading.

Respectfully submitted for Ministry and Approving Officer consideration,

Ewout van Dishoeck

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Copy provided to the Gabriola Island Local Trust Committee for the official Section 475 referral record.