Subject: Re: Strada - Pine River - Headwater Streams Aquitard Support
From: Garry Hunter <ghunter@hunter-gis.com>
Date: 2025-03-10, 5:49 p.m.
To: "McFarland, Sean" <sean.mcfarland@wsp.com>
CC: Dirk Kassenaar <dirk@earthfx.com>, E J Wexler <ejw@earthfx.com>, Gabriel Bacca Cortes <gabrielbc@earthfx.com>, Grant Horan <ghoran@strada-aggregates.com>, Natalie Kotyck <info@ndact.ca>
BCC: Carl Cosack <cosack@zing-net.ca>, Kevin Powers <kevinp@campbellstrategies.com>, Brian Bell <bw.bell@sympatico.ca>

I think the Pine River headwater streams east of the Fourth Line are all mainly groundwater fed. The headwater streams and wetlands, in general, at least near the Escarpment slopes along 15th Sideroad, Mill Lane and Main Street South are supported by the Goat Island (Niagaran) Aquitard. The River Road and Main Street Streams and Ponds are supported by the Cabot Head Aquitard.

We will run surface / subsurface contours in these horizontally elevation controlled spring seepage discharges once we have updated the water well databases with the WELLness data.

However streams like Marshall Brook upstream of Third Line and north of 15th Sideroad and Campbell Brook upstream of CR 124 may reflect the sloping Guelph epikarst top of bedrock. The widespread epikarst layer is likely the underdrain for the well drained extensive Honeywood Soil areas north of 15th Sideroad. This drainage pattern may also be reflected in our Guelph Aquifer and Vertical Gradient maps at the Fourth Line and Prince Pit.

Do you have a pdf version of your 2004 South Simcoe study?

Yours truly,

Garry T. Hunter M.A.Sc. P.Eng.
President

Hunter and Associates / Hunter GIS
2285 Dunwin Drive, Unit 18
Mississauga, ON L5L 3S3

Tel (905) 607-4120
Fax (905) 607-1132
Email ghunter@hunter-gis.com
Website http://www.hunter-gis.com

This message contains confidential information intended only for the use of the person or entity named as recipient. The distribution or copying of this e-mail by anyone other than the intended recipient is prohibited. If you have received this message in error, please notify us and delete your copy. Thank you for your cooperation.

On 2025-03-10 5:16 p.m., McFarland, Sean wrote:

> Hi Garry-I indicated that I would like to subtract the groundwater surface minus the simulated shallow groundwater levels at the stream locations. This way we could see which streams may interact with the groundwater table and which streams would be well above it to allow for a focus on the streams that interact with the groundwater table for impact assessment and mitigation. Sean
>
> Get Outlook for iOS
>
> ---
>
> **From:** Garry Hunter <ghunter@hunter-gis.com>
> **Sent:** Monday, March 10, 2025 4:52:39 PM
> **To:** McFarland, Sean <sean.mcfarland@wsp.com>
> **Cc:** Dirk Kassenaar <dirk@earthfx.com>; E J Wexler <ejw@earthfx.com>; Gabriel Bacca Cortes <gabrielbc@earthfx.com>; Grant Horan <ghoran@strada-aggregates.com>; Natalie Kotyck <info@ndact.ca>
> **Subject:** Strada - Model Layer 4 and 6 High Quality Hydraulic Surfaces (Potentials) and Subtraction - Offset Model Inferred Zones of Increased Flow.
>
> Sean,
>
> At our Mar 6 meeting you indicated it would be desireable to subtract hydraulic surfaces for the Upper (Guelph) and Deep Aquifer (Gasport) Hydraulic surfaces. We have already performed this task as described for the referenced Figures below.
>
> **1. Previously Prepared Tables and Figures**
>
> I am providing three previously prepared figures and one table from our project files. Original versions, as prepared circa May / June 2024, informed our early conceptual Alternative Site Plan as circulated to NDACT and Strada about July 2024. These 'patched up' dry weather hydraulic surfaces appear to be the best currently available for incorporation into the Strada May 2024 updated groundwater model calibration (unless Strada wants to install additional groundwater monitors).
>
> **2. Modellers Inferred Zone of Increased Flow**
>
> A number of these Figures include the modeller's 'Inferred Zone of Increased Flow' between Horning's Mills and the proposed Strada quarry site. I agree with this concept but I am puzzled why this 'Inferred Zone' is not informed by the Tatham now high quality site groundwater monitoring