

Subject: Re: Strada Proposed Quarry - NDACT Peer Review - Impact Assessment

From: Garry Hunter <ghunter@hunter-gis.com>

Date: 2024-08-30, 4:04 p.m.

To: Alicia Kimberley <akimberley@tathameng.com>, Natalie Kotyck <nkotyck@gmail.com>, Dirk Kassenaar <dirk@earthfx.com>

CC: James Newlands <jnewlands@mhbcplan.com>, E J Wexler <ejw@earthfx.com>, Gabriel Bacca Cortes <gabrielbc@earthfx.com>, Sydney Gilmour <sgilmour@nrsi.on.ca>

Dirk,

With regard to the Earthfx Wetland Water Budgets (say for Nat 03 Model Baseline and Quarry Phase 1 Conditions) please provide a text description for the left column descriptors in the Tables. What is the convention for the +/- mean in the entries? What descriptions did Earthfx provide to NRSI to interpret these Tables?

Also provide the information necessary for conversion of wetland runoff in and out from mm/month to L/s or add to the Tables.

This information is not just relevant to wetlands.

Thanks,

--+

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>

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On 2024-08-28 8:58 a.m., Alicia Kimberley wrote:

Thank you Garry.

This is confirmation that we have received your Impact Assessment comments, including the two emails sent

Monday.

The team is reviewing the comments and will reach out to NDACT regarding next steps to ensure we are following the NDACT-peer reviewer communication procedures.

In the meantime, have you had the opportunity to review the updated Appendix A/B, C and D deliverables as well as the updated comment matrix? We are looking forward to seeing the comment matrix comment status' for some of these outstanding comments for Appendix A/B, C and D be 'closed' following your review of the updated documents.

Alicia



Alicia Kimberley P.Geo.
Group Leader - Hydrogeology

akimberley@tathameng.com T 705-733-9037 x2252 C 705-888-1868
645 Veterans Drive, Unit D, Barrie, Ontario L4N 9H8

tathameng.com



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From: Garry Hunter <gghunter@hunter-gis.com>

Sent: Tuesday, August 27, 2024 1:36 PM

To: Alicia Kimberley <akimberley@tathameng.com>; Natalie Kotyck <nkotyck@gmail.com>; Dirk Kassenaar <dirk@earthfx.com>

Cc: Brian Zeman <bzeman@mhbcplan.com>; James Newlands <jnewlands@mhbcplan.com>; Daniel Twigger <dtwigger@tathameng.com>; E J Wexler <ejw@earthfx.com>; Gabriel Bacca Cortes <gabrielbc@earthfx.com>; Kevin Powers <kevinp@campbellstrategies.com>; Sydney Gilmour <sgilmour@nrsi.on.ca>

Subject: Re: Strada Proposed Quarry - NDACT Peer Review - Supplementary Impact Assessment

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Alicia, Dirk and Natalie et al,

Continuing with my Peer Review 'Essence' email below.

Adverse Groundwater Quality

The predicted reduction in groundwater flow east and downgradient of the proposed Strada Quarry will reduce dilution and increase concentration of ambient recharged contaminants. These contaminant sources include Quarry AN/FO, agricultural nutrients, County Road 124 road salt and village effluents (septic, road salt and water softener salts).

These contaminant concentration increases, due to reduced groundwater flow, may contribute to further Nitrate (as N) exceedances above Provincial Drinking Water Standards and Sodium to above Medical Alert Advisory levels in some TPA drinking water wells.

Pine River Headwater Fishery

Groundwater flow reductions and related quality degradation is also expected to adversely impact the Pine River headwater fishery. Strada's NRSI (2024) Report is not available to this Peer Review for additional perspective.

Questioned Model Calibration

The Draft Impact Assessment Report groundwater model predicts dry weather stream flow base conditions at zero or near zero at station STR2 (Fig 3.21 pg 36 and 3.22 pg 37) for the period Jan 2016 to Jan 2024. These virtual zero or near zero flows are in direct contradiction to the real evidence of the late Doug Newell describing the constant flow at his immediately downgradient Fish Hatchery and Fish Rearing Ponds (3rd Line and 15th SR).

Genivar (DP-SW-8) also monitored actual stream flows at or near this location on behalf of the failed Mega Quarry proposal. The Draft Impact Assessment Report does not include this Genivar monitoring data for validation. Strada has advised that it has performed Pine River Headwater stream flow monitoring in 2024 but no data has been disclosed to this Peer Review.

The Strada Model Calibration and results continue to be questioned despite the related voluminous repetitive draft reports. MNRF in Jan 2024 advised the CBM Caledon Quarry applicant that Model Calibration statistics showing a mean absolute error of 1.7 m may not be sufficient for predictive simulations related to evaluating impact to surface streams. Strada current Model Calibration Mean Absolute Errors are 2 to nearly 3 times this amount.

Reduction of these errors would appear to require classification of Strada Site groundwater monitor screens by Model Layer, rigorous editing of MECP water well databases informed by the TPA program, integration of local headwater surface flow data, increase of model cell resolution as well as other factors.

III Advised Current Site Plans

The current proposed Strada Quarry Extraction Site Plans, as provided to this Peer Review, are considered ill advised and not supported by the science despite the many thousands of pages of draft process documents made available by Strada consultants.

I continue to be available for discussions.

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>

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On 2024-08-26 4:43 p.m., Garry Hunter wrote:

Alicia and Natalie,

For simplified public communication, I enclose four Figures and one Table derived at face value from the Aug 15, 2024 version Draft Impact Assessment Report information. These four Figures demonstrate the simplified essence of my Peer Review and why I consider the Impacts of the current proposed single Strada Extraction Site Plan Scenario to be unacceptable for the NDACT community. Most of these Impacts are not even recognized as significant in the Strada's Site Plan Scenario Draft Impact Assessment.

- The Hornings Mills Lake Dry Weather Stream Flow In and Out is reduced by 54 % and 41 % respectively for Phase 4 Model Layer 6 Extraction Activities. This is excessive and has adverse pond water quality implications. Other Pine River headwater springs, ponds and streams are also adversely effected by quarry flow reductions.
- The Strada Assessment has not recognized rising water table impacts to farm fields, residential lots, septic fields and adjacent aggregate operations.

- The stability of the lower barrier bench berm is questioned under the predicted Model Layer 6 high hydraulic pressures especially on the 4th Line Prince Pit area.

I am available to discuss these Exhibits in greater detail or provide updates if Strada considers that I have misinterpreted any fundamental assessment data provided.

My detailed Impact Assessment Peer Review follows.

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

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