

## **APPENDIX 2**

### Correspondence Regarding Existing Humber River Hydrology and Flood Mapping (TRCA)

## Brad Kargus

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**From:** Mahdi Esmaili <Mahdi.Esmaili@trca.ca>  
**Sent:** August 21, 2020 4:37 PM  
**To:** Paul Chiocchio  
**Cc:** Dilnesaw Chekol; Andrew Fata  
**Subject:** RE: Humber Watershed - Bolton

Hi Paul,

Please find the Estimated HEC-RAS model for the subject area in the shared folder below:

[https://torontoregion-my.sharepoint.com/:f/g/personal/mahdi\\_esmaili\\_trca\\_ca/EsPyOFFrFTJNuUzkHmk9YNIB8kJ3Q8ZnhYZw8PjBy2xpug?e=y8AE1b](https://torontoregion-my.sharepoint.com/:f/g/personal/mahdi_esmaili_trca_ca/EsPyOFFrFTJNuUzkHmk9YNIB8kJ3Q8ZnhYZw8PjBy2xpug?e=y8AE1b)

Please note only the flows of the reaches located in the subject area are updated.

I will send send you the data sharing agreement as soon as it is signed and ready.

Have a good weekend.

### **Mahdi Esmaili, EIT, CAN-CISEC**

Technologist, Water Resources Engineering  
Engineering Services | Restoration and Infrastructure

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---

**From:** Paul Chiocchio <Pchiocchio@urbantech.com>  
**Sent:** Friday, August 21, 2020 10:59 AM  
**To:** Mahdi Esmaili <Mahdi.Esmaili@trca.ca>  
**Cc:** Dilnesaw Chekol <Dilnesaw.Chekol@trca.ca>; Andrew Fata <afata@urbantech.com>  
**Subject:** Re: Humber Watershed - Bolton

Hi Mahdi,

Thank you for your reply and looking forward to the circulation.

**Paul Chiocchio**  
Water Resources Coordinator  
**Urbantech® Consulting**

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---

**From:** Mahdi Esmaeili <[Mahdi.Esmaeili@trca.ca](mailto:Mahdi.Esmaeili@trca.ca)>  
**Sent:** Friday, August 21, 2020 10:57 AM  
**To:** Paul Chiocchio  
**Cc:** Dilnesaw Chekol; Andrew Fata  
**Subject:** RE: Humber Watershed - Bolton

Hi Paul,

We are in the process of having the data-sharing agreement signed by our procurement department.  
I will send you the models by either this afternoon or Monday.  
Hope that works for you.

**Mahdi Esmaeili, EIT, CAN-CISEC**  
Technologist, Water Resources Engineering  
Engineering Services | Restoration and Infrastructure

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---

**From:** Paul Chiocchio <[Pchiocchio@urbantech.com](mailto:Pchiocchio@urbantech.com)>  
**Sent:** Friday, August 21, 2020 10:38 AM  
**To:** Mahdi Esmaeili <[Mahdi.Esmaeili@trca.ca](mailto:Mahdi.Esmaeili@trca.ca)>  
**Cc:** Dilnesaw Chekol <[Dilnesaw.Chekol@trca.ca](mailto:Dilnesaw.Chekol@trca.ca)>; Andrew Fata <[afata@urbantech.com](mailto:afata@urbantech.com)>  
**Subject:** RE: Humber Watershed - Bolton

Hi Mahdi,

May you please return an executed copy of the attached signed agreement? Also, per the receipt, please advise on your timing to circulate the modelling files.

Thank you,

**Paul Chiocchio**

Water Resources Coordinator

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---

**From:** Paul Chiocchio <[Pchiocchio@urbantech.com](mailto:Pchiocchio@urbantech.com)>

**Sent:** August 19, 2020 10:31 AM

**To:** Mahdi Esmaeili <[Mahdi.Esmaeili@trca.ca](mailto:Mahdi.Esmaeili@trca.ca)>

**Cc:** Dilnesaw Chekol <[Dilnesaw.Chekol@trca.ca](mailto:Dilnesaw.Chekol@trca.ca)>; Andrew Fata <[afata@urbantech.com](mailto:afata@urbantech.com)>

**Subject:** RE: Humber Watershed - Bolton

Hi Mahdi,

The area within the yesterday's map includes both the BRES 3 & 4 lands as well as lands pertinent to our due diligence exercise.

If you have any further questions or comments, you can reach out on my mobile.

Thank you,

**Paul Chiocchio**

Water Resources Coordinator

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---

**From:** Mahdi Esmaeili <[Mahdi.Esmaeili@trca.ca](mailto:Mahdi.Esmaeili@trca.ca)>  
**Sent:** August 19, 2020 10:15 AM  
**To:** Paul Chiochio <[Pchiocchio@urbantech.com](mailto:Pchiocchio@urbantech.com)>  
**Cc:** Dilnesaw Chekol <[Dilnesaw.Chekol@trca.ca](mailto:Dilnesaw.Chekol@trca.ca)>; Andrew Fata <[afata@urbantech.com](mailto:afata@urbantech.com)>  
**Subject:** RE: Humber Watershed - Bolton

Hi Paul,

Thank you for sending the data sharing agreement and making the payment. Can you please send me a map with the exact location of the lands BRES 3 and 4? The map that was sent to me yesterday is covering a large area. Thank you.

**Mahdi Esmaeili, EIT, CAN-CISEC**  
Technologist, Water Resources Engineering  
Engineering Services | Restoration and Infrastructure

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**From:** Paul Chiochio <[Pchiocchio@urbantech.com](mailto:Pchiocchio@urbantech.com)>  
**Sent:** Tuesday, August 18, 2020 2:38 PM  
**To:** Mahdi Esmaeili <[Mahdi.Esmaeili@trca.ca](mailto:Mahdi.Esmaeili@trca.ca)>  
**Cc:** Dilnesaw Chekol <[Dilnesaw.Chekol@trca.ca](mailto:Dilnesaw.Chekol@trca.ca)>; Andrew Fata <[afata@urbantech.com](mailto:afata@urbantech.com)>  
**Subject:** RE: Humber Watershed - Bolton

Hi Mahdi,

Please advise if the above revisions (**highlighted in green**) are sufficient to prepare an executed copy.

We have received your invoice and will arrange payment following the above confirmation.

Thank you,

**Paul Chiocchio**

Water Resources Coordinator

**Urbantech® Consulting**

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**From:** Mahdi Esmaili <[Mahdi.Esmaili@trca.ca](mailto:Mahdi.Esmaili@trca.ca)>

**Sent:** August 18, 2020 12:37 PM

**To:** Paul Chiocchio <[Pchiocchio@urbantech.com](mailto:Pchiocchio@urbantech.com)>

**Cc:** Dilnesaw Chekol <[Dilnesaw.Chekol@trca.ca](mailto:Dilnesaw.Chekol@trca.ca)>; Andrew Fata <[afata@urbantech.com](mailto:afata@urbantech.com)>

**Subject:** RE: Humber Watershed - Bolton

Hi Paul,

Hope you are doing well.

Please complete and sign the attached data sharing agreement. I will send you the invoice in a separate email. Thank you.

**Mahdi Esmaili, EIT, CAN-CISEC**

Technologist, Water Resources Engineering

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---

**From:** Paul Chiocchio <[Pchiocchio@urbantech.com](mailto:Pchiocchio@urbantech.com)>  
**Sent:** Tuesday, August 18, 2020 12:23 PM  
**To:** Mahdi Esmaeili <[Mahdi.Esmaeili@trca.ca](mailto:Mahdi.Esmaeili@trca.ca)>  
**Cc:** Dilnesaw Chekol <[Dilnesaw.Chekol@trca.ca](mailto:Dilnesaw.Chekol@trca.ca)>; Andrew Fata <[afata@urbantech.com](mailto:afata@urbantech.com)>  
**Subject:** RE: Humber Watershed - Bolton

Hi Mahdi,

Please advise if you have any questions in preparing the data sharing agreement for signature.

Thank you,

**Paul Chiocchio**  
Water Resources Coordinator  
**Urbantech® Consulting**  
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**From:** Andrew Fata <[afata@urbantech.com](mailto:afata@urbantech.com)>  
**Sent:** August 18, 2020 11:56 AM  
**To:** Mahdi Esmaeili <[Mahdi.Esmaeili@trca.ca](mailto:Mahdi.Esmaeili@trca.ca)>  
**Cc:** Dilnesaw Chekol <[Dilnesaw.Chekol@trca.ca](mailto:Dilnesaw.Chekol@trca.ca)>; Paul Chiocchio <[Pchiocchio@urbantech.com](mailto:Pchiocchio@urbantech.com)>  
**Subject:** RE: Humber Watershed - Bolton

Thanks for clarifying!

Yes, we'll take it! Paul from our office will coordinate with you.

Thanks and have a great week!

**Andrew Fata, M.Sc., P.Eng.**

Senior Associate, Water Resources

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On Aug 18, 2020 11:45 AM, Mahdi Esmaili <[Mahdi.Esmaili@trca.ca](mailto:Mahdi.Esmaili@trca.ca)> wrote:

Hi Andrew,

The TRCA hydraulic modeling for this area is "Estimated".

The Estimated floodplain modelling and mapping was intended to be used as a screening tool for development applications submitted to the TRCA, to determine whether existing or proposed sites, properties or structures are potentially susceptible to flooding. This information is the best available at this time but is not appropriate for many uses since the model doesn't include crossing structures, doesn't have refined Manning's n values, and the crossing geometry is not detailed. Thus, TRCA water resources engineering staff recommend that the proponent use TRCA's available modelling and mapping to conduct the hydraulic analysis for their project, refine the model and create an engineered HEC-RAS model.

If you are interested in obtaining the estimated model, please let me know and I will send you the TRCA Data Sharing Agreement and the invoice. The fee for the model is 100\$+HST.

Should you have any questions let me know please. Thank you.

**Mahdi Esmaili, EIT, CAN-CISEC**

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---

**From:** Andrew Fata <[afata@urbantech.com](mailto:afata@urbantech.com)>  
**Sent:** Tuesday, August 18, 2020 11:04 AM  
**To:** Dilnesaw Chekol <[Dilnesaw.Chekol@trca.ca](mailto:Dilnesaw.Chekol@trca.ca)>  
**Cc:** Mahdi Esmaeili <[Mahdi.Esmaeili@trca.ca](mailto:Mahdi.Esmaeili@trca.ca)>; Paul Chiocchio <[Pchiocchio@urbantech.com](mailto:Pchiocchio@urbantech.com)>  
**Subject:** RE: Humber Watershed - Bolton

Hi Dilnesaw & Mahdi,

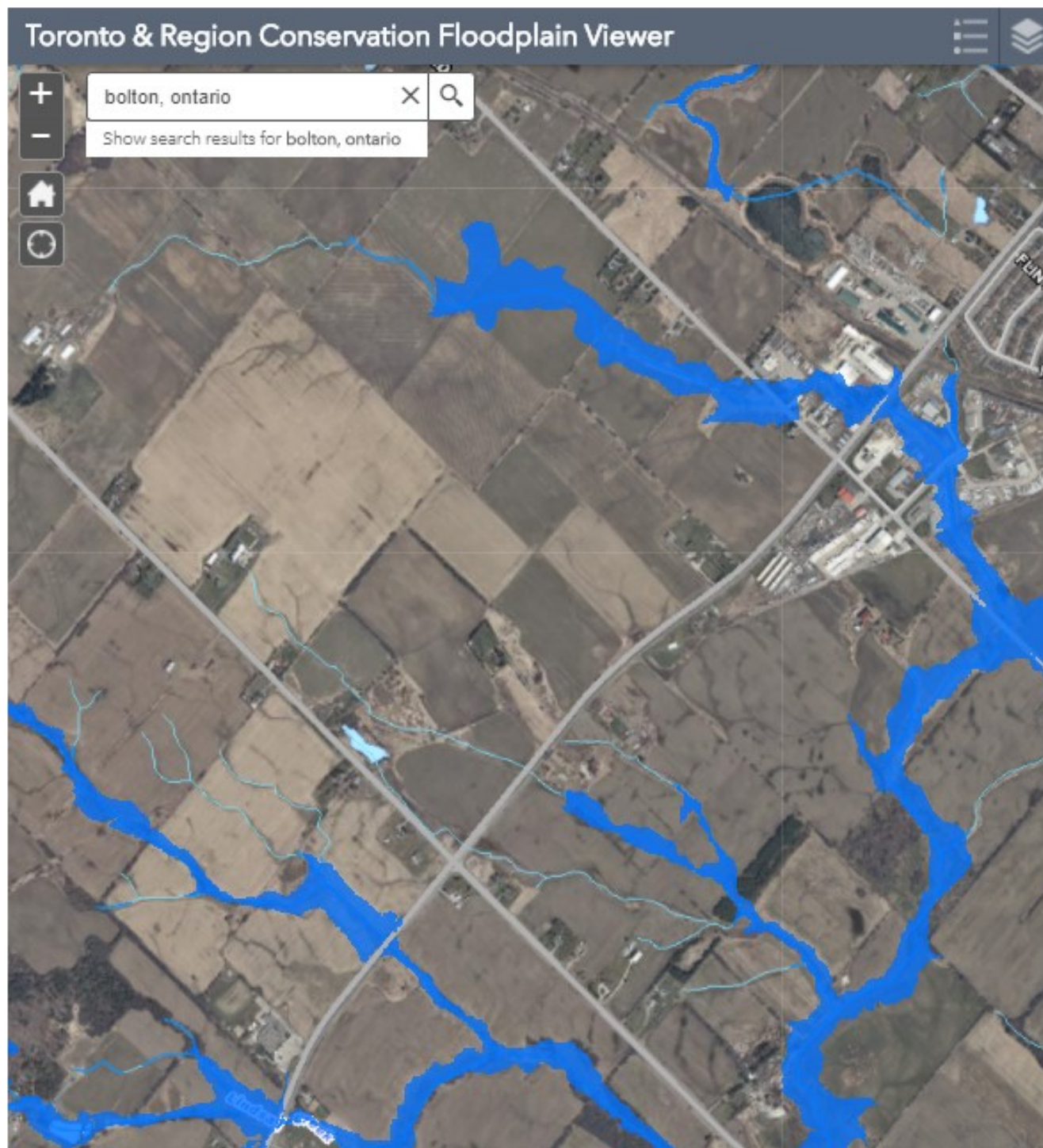
Hope you're doing well!

Just wondering if TRCA has HEC-RAS modelling that supports the flood mapping shown in the BRES 3 and 4 lands in Bolton (see below).

If so, can we make a formal data request to get these models?

Thanks!

# Flood Plain Map Viewer



**Andrew Fata, M.Sc., P.Eng.**

Senior Associate, Water Resources

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---

**From:** Dilnesaw Chekol <[Dilnesaw.Chekol@trca.ca](mailto:Dilnesaw.Chekol@trca.ca)>

**Sent:** April 17, 2020 11:45 AM

**To:** Dave Leighton <[dleighton@urbantech.com](mailto:dleighton@urbantech.com)>

**Cc:** Andrew Fata <[afata@urbantech.com](mailto:afata@urbantech.com)>; Mahdi Esmaeili <[Mahdi.Esmaeili@trca.ca](mailto:Mahdi.Esmaeili@trca.ca)>; Jason Wagler <[Jason.Wagler@trca.ca](mailto:Jason.Wagler@trca.ca)>

**Subject:** RE: Humber Watershed - Bolton

Hi Dave,

Please note that TRCA outlined SWM criteria for each Watersheds in 2012 TRCA Stormwater management Criteria document. As the development site is about 160 ha, TRCA staff strongly recommends that you refer this document to get information about the SWM criteria that applies on the site.

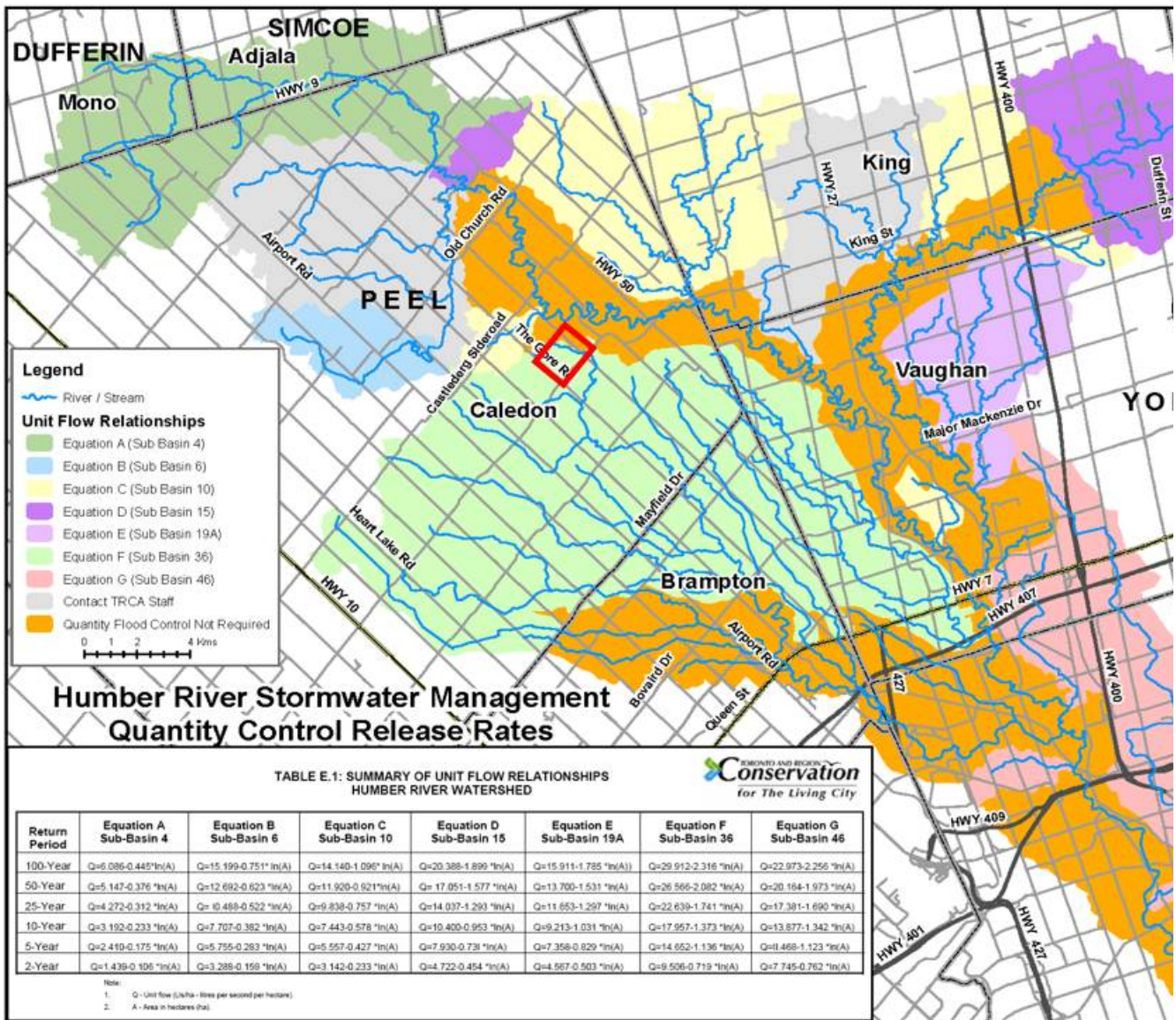
Here are SWM criteria for the site.

1. Quantity control:

As it is shown in the map below, the northeast section of the property (the orange section), quantity control is not required, however quantity control is required for the remaining section of the site. The quantity control for this site is as follows post-development peak flows should be controlled pre-development peak flows and pre-development target flows for quantity control should be based on unit flow rates of Equation F (see the map below) and existing drainage draining in to the receiving features for the 2-100 year.

It appears that as this site was not included in the approved OP when the Humber River Hydrology was updated in 2015, Regional control is required as per Humber River Watershed Plan.





2. Quality Control.  
Enhanced level treatment is required for the site.
3. Site Water Balance  
On-site retention of 5mm runoff from total impervious area.

4. Erosion Control.  
If the site discharges to the main Humber River, then the generic erosion criteria of retaining runoff generated from 25mm of rain for 48 hrs. However, if the site is discharging to any headwater features or an ephemeral watercourse, then TRCA requires a full-fledged erosion assessment should be conducted as per the methodology referenced in Section 4 and Appendix B of TRCA's SWM Criteria Document in order to avoid stream erosion on these features.

Andrew: Please send us the type of information you would like us to send you.

Regards,

**Dilnesaw Chekol, Ph.D, P.Eng**

Senior Engineer, Water Resources

Engineering Services | Development and Engineering Services

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---

**From:** Dave Leighton <[dleighton@urbantech.com](mailto:dleighton@urbantech.com)>

**Sent:** Friday, April 17, 2020 9:27 AM

**To:** Eric Wang <[Eric.Wang@trca.ca](mailto:Eric.Wang@trca.ca)>

**Cc:** Dilnesaw Chekol <[Dilnesaw.Chekol@trca.ca](mailto:Dilnesaw.Chekol@trca.ca)>; Andrew Fata <[afata@urbantech.com](mailto:afata@urbantech.com)>

**Subject:** RE: Humber Watershed - Bolton

Great thanks Eric,

Hi Dilnesaw,

We represent landowners in the BRES expansion area, specifically in the vicinity of King Road (hwy 7) and Humber Station, approximately 400 acres. We are advancing the preliminary engineering and would appreciate your input on TRCA's runoff control criteria for this area. I've attached the Humber watershed map and have added a sticky note identifying the location of the subject lands and that there within subwatersheds 2 & 8.

Your input and assistance would be greatly appreciated.

Thanks

**J. David Leighton, C.E.T.**

President

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