



Run Date: June 26, 2018  
Figure Date: September 20, 2018

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- Little Etobicoke Catchment
- Lower Model Area
- 2D Model Results**  
**Maximum Depth (m)**
- <= 0.10
- 0.10 - 0.30
- 0.30 - 0.50
- 0.50 - 0.80
- 0.80 - 1.50
- 1.50 - 2.00
- > 2.00
- Watercourse
- Roads
- Buildings

0 250 500 750 1000 m  
1:17,500



**Matrix Solutions Inc.**  
ENVIRONMENT & ENGINEERING

Little Etobicoke Creek Phase 2  
Flood Evaluation Study

Project #24603

**PCSWMM Upper Model Results**  
**2 Year - Depth**

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A. MacKay  
K. Hofbauer  
Map 1.1



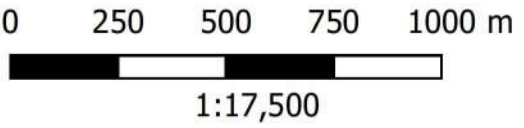


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T:\24603 - Little EtobicokeCr\_Flood\531\05 Analysis\GIS\Phase 2

- |   |   |
|---|---|
| <span style="border: 1px solid red; display: inline-block; width: 20px; height: 10px;"></span> Little Etobicoke Catchment | <span style="background-color: yellow; display: inline-block; width: 20px; height: 10px;"></span> 0.50 - 1.00 |
| <span style="background-color: grey; display: inline-block; width: 20px; height: 10px;"></span> Lower Model Area          | <span style="background-color: orange; display: inline-block; width: 20px; height: 10px;"></span> 1.00 - 1.70 |
| <b>2D Model Results</b>   |   |
| <b>Maximum Velocity (m/s)</b>   |   |
| <span style="background-color: purple; display: inline-block; width: 20px; height: 10px;"></span> <= 0.10                 | <span style="background-color: brown; display: inline-block; width: 20px; height: 10px;"></span> 1.70 - 2.00  |
| <span style="background-color: blue; display: inline-block; width: 20px; height: 10px;"></span> 0.10 - 0.25               | <span style="background-color: red; display: inline-block; width: 20px; height: 10px;"></span> > 2.00         |
| <span style="background-color: green; display: inline-block; width: 20px; height: 10px;"></span> 0.25 - 0.50              | <span style="border-bottom: 1px solid blue; display: inline-block; width: 20px;"></span> Watercourse          |
|   | <span style="border-bottom: 1px solid black; display: inline-block; width: 20px;"></span> Roads               |
|   | <span style="border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> Buildings    |



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Little Etobicoke Creek Phase 2  
Flood Evaluation Study

Project #24603

**PCSWMM Upper Model Results**  
**2 Year - Velocity**

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A. MacKay  
K. Hofbauer  
**Map 1.2**



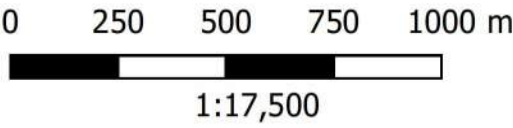


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- |   |   |
|---|---|
| <span style="border: 1px solid red; display: inline-block; width: 20px; height: 10px;"></span> Little Etobicoke Catchment | <span style="background-color: yellow; display: inline-block; width: 20px; height: 10px;"></span> 0.37 - 1.00 |
| <span style="background-color: grey; display: inline-block; width: 20px; height: 10px;"></span> Lower Model Area          | <span style="background-color: orange; display: inline-block; width: 20px; height: 10px;"></span> 1.00 - 1.50 |
| <b>2D Model Results</b>   |   |
| Maximum Depth x Velocity (m <sup>2</sup> /s)  |   |
| <span style="background-color: purple; display: inline-block; width: 20px; height: 10px;"></span> <= 0.10                 | <span style="background-color: brown; display: inline-block; width: 20px; height: 10px;"></span> 1.50 - 2.00  |
| <span style="background-color: blue; display: inline-block; width: 20px; height: 10px;"></span> 0.10 - 0.25               | <span style="background-color: red; display: inline-block; width: 20px; height: 10px;"></span> > 2.00         |
| <span style="background-color: green; display: inline-block; width: 20px; height: 10px;"></span> 0.25 - 0.37              | <span style="border-bottom: 1px solid blue; display: inline-block; width: 20px;"></span> Watercourse          |
|   | <span style="border-bottom: 1px solid black; display: inline-block; width: 20px;"></span> Roads               |
|   | <span style="border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> Buildings    |



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Little Etobicoke Creek Phase 2  
Flood Evaluation Study

Project #24603

PCSWMM Upper Model Results  
2 Year - Depth x Velocity

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A. MacKay  
K. Hofbauer  
Map 1.3





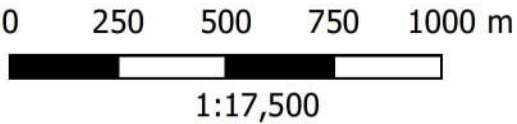
Flood risk characterization considers depth, velocity, and depth-velocity product with the following safe access limits:

- Low Risk: Vehicular and Pedestrian Access/Egress  
Maximum Depth: 0.3 m  
Maximum Velocity: 1.7 m/s  
Maximum Depth-Velocity product: 0.37 m<sup>2</sup>/s
- Medium Risk: Pedestrian Access/Egress Only  
Maximum Depth: 0.8 m  
Maximum Velocity: 1.7 m/s  
Maximum Depth-Velocity product: 0.37 m<sup>2</sup>/s
- High Risk: No Safe Access/Egress  
An area is considered high risk if any of the criteria is exceeded.  
Depth > 0.8 m  
Velocity > 1.7 m/s  
Depth-Velocity product > 0.37 m<sup>2</sup>/s

Run Date: June 26, 2018  
Figure Date: September 20, 2018

Little Etobicoke Catchment	Watercourse
Lower Model Area	Roads
<b>2D Model Results Risk</b>	Buildings
Low	
Medium	
High	

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Little Etobicoke Creek Phase 2  
Flood Evaluation Study

Project #24603

**PCSWMM Upper Model Results**  
**2 Year - Risk**

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A. MacKay  
K. Hofbauer  
**Map 1.4**

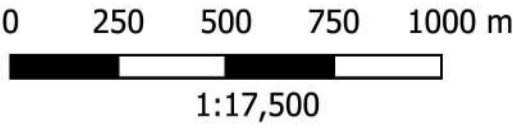





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- |   |   |
|---|---|
| <span style="border: 1px solid red; display: inline-block; width: 20px; height: 10px;"></span> Little Etobicoke Catchment | <span style="background-color: yellow; display: inline-block; width: 20px; height: 10px;"></span> 0.50 - 0.80 |
| <span style="background-color: grey; display: inline-block; width: 20px; height: 10px;"></span> Lower Model Area          | <span style="background-color: orange; display: inline-block; width: 20px; height: 10px;"></span> 0.80 - 1.50 |
| <b>2D Model Results</b>   | <span style="background-color: brown; display: inline-block; width: 20px; height: 10px;"></span> 1.50 - 2.00  |
| <b>Maximum Depth (m)</b>  | <span style="background-color: red; display: inline-block; width: 20px; height: 10px;"></span> > 2.00         |
| <span style="background-color: purple; display: inline-block; width: 20px; height: 10px;"></span> <= 0.10                 | <span style="color: blue;">—</span> Watercourse   |
| <span style="background-color: blue; display: inline-block; width: 20px; height: 10px;"></span> 0.10 - 0.30               | <span style="color: grey;">—</span> Roads   |
| <span style="background-color: green; display: inline-block; width: 20px; height: 10px;"></span> 0.30 - 0.50              | <span style="color: white;">—</span> Buildings  |



 <p><b>Matrix Solutions Inc.</b> ENVIRONMENT &amp; ENGINEERING</p>	
<p>Little Etobicoke Creek Phase 2 Flood Evaluation Study</p> <p style="text-align: right; font-size: small;">Project #24603</p>	
<p><b>PCSWMM Upper Model Results</b> <b>5 Year - Depth</b></p>	
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<p>A. MacKay K. Hofbauer</p>	<p>Map 2.1</p>



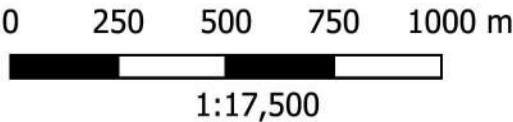


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- |   |   |
|---|---|
| <span style="border: 1px solid red; display: inline-block; width: 20px; height: 10px;"></span> Little Etobicoke Catchment | <span style="background-color: yellow; display: inline-block; width: 20px; height: 10px;"></span> 0.50 - 1.00 |
| <span style="background-color: grey; display: inline-block; width: 20px; height: 10px;"></span> Lower Model Area          | <span style="background-color: orange; display: inline-block; width: 20px; height: 10px;"></span> 1.00 - 1.70 |
| <b>2D Model Results</b>   |   |
| Maximum Velocity (m/s)  |   |
| <span style="background-color: white; display: inline-block; width: 20px; height: 10px;"></span> 0.00 - 0.00              | <span style="background-color: brown; display: inline-block; width: 20px; height: 10px;"></span> 1.70 - 2.00  |
| <span style="background-color: purple; display: inline-block; width: 20px; height: 10px;"></span> <= 0.10                 | <span style="background-color: red; display: inline-block; width: 20px; height: 10px;"></span> > 2.00         |
| <span style="background-color: blue; display: inline-block; width: 20px; height: 10px;"></span> 0.10 - 0.25               | <span style="color: blue;">—</span> Watercourse   |
| <span style="background-color: green; display: inline-block; width: 20px; height: 10px;"></span> 0.25 - 0.50              | <span style="color: grey;">—</span> Roads   |
|   | <span style="border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> Buildings    |



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Little Etobicoke Creek Phase 2  
Flood Evaluation Study

Project #24603

**PCSWMM Upper Model Results**  
**5 Year - Velocity**

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A. MacKay  
K. Hofbauer  
Map 2.2





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Little Etobicoke Catchment	0.37 - 1.00
Lower Model Area	1.00 - 1.50
<b>2D Model Results</b>	
Maximum Depth x Velocity (m <sup>2</sup> /s)	
<= 0.10	1.50 - 2.00
0.10 - 0.25	> 2.00
0.25 - 0.37	Watercourse
	Roads
	Buildings

0 250 500 750 1000 m

1:17,500

<b>Matrix Solutions Inc.</b> ENVIRONMENT & ENGINEERING	
Little Etobicoke Creek Phase 2 Flood Evaluation Study	
Project #24603	
<b>PCSWMM Upper Model Results</b> <b>5 Year - Depth x Velocity</b>	
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A. MacKay K. Hofbauer	Map 2.3





Flood risk characterization considers depth, velocity, and depth-velocity product with the following safe access limits:

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Maximum Velocity: 1.7 m/s  
Maximum Depth-Velocity product: 0.37 m<sup>2</sup>/s
- Medium Risk: Pedestrian Access/Egress Only  
Maximum Depth: 0.8 m  
Maximum Velocity: 1.7 m/s  
Maximum Depth-Velocity product: 0.37 m<sup>2</sup>/s
- High Risk: No Safe Access/Egress  
An area is considered high risk if any of the criteria is exceeded.  
Depth > 0.8 m  
Velocity > 1.7 m/s  
Depth-Velocity product > 0.37 m<sup>2</sup>/s

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Little Etobicoke Catchment	Watercourse
Lower Model Area	Roads
<b>2D Model Results Risk</b>	Buildings
Low	
Medium	
High	

0 250 500 750 1000 m

1:17,500

<b>Matrix Solutions Inc.</b> ENVIRONMENT & ENGINEERING	
Little Etobicoke Creek Phase 2 Flood Evaluation Study	
PCSWMM Upper Model Results 5 Year - Risk	
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A. MacKay K. Hofbauer	Map 2.4





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- |   |   |
|---|---|
| <span style="border: 1px solid red; display: inline-block; width: 20px; height: 10px;"></span> Little Etobicoke Catchment | <span style="background-color: yellow; display: inline-block; width: 20px; height: 10px;"></span> 0.50 - 0.80 |
| <span style="background-color: grey; display: inline-block; width: 20px; height: 10px;"></span> Lower Model Area          | <span style="background-color: orange; display: inline-block; width: 20px; height: 10px;"></span> 0.80 - 1.50 |
| <b>2D Model Results</b>   |   |
| <b>Maximum Depth (m)</b>  |   |
| <span style="background-color: purple; display: inline-block; width: 20px; height: 10px;"></span> <= 0.10                 | <span style="background-color: brown; display: inline-block; width: 20px; height: 10px;"></span> 1.50 - 2.00  |
| <span style="background-color: blue; display: inline-block; width: 20px; height: 10px;"></span> 0.10 - 0.30               | <span style="background-color: red; display: inline-block; width: 20px; height: 10px;"></span> > 2.00         |
| <span style="background-color: green; display: inline-block; width: 20px; height: 10px;"></span> 0.30 - 0.50              | <span style="border-bottom: 1px solid blue; display: inline-block; width: 20px;"></span> Watercourse          |
|   | <span style="border-bottom: 1px solid grey; display: inline-block; width: 20px;"></span> Roads                |
|   | <span style="border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> Buildings    |

0 250 500 750 1000 m

1:17,500



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ENVIRONMENT & ENGINEERING

Little Etobicoke Creek Phase 2  
Flood Evaluation Study

Project #24603

**PCSWMM Upper Model Results**  
**10 Year - Depth**

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A. MacKay  
K. Hofbauer  
**Map 3.1**

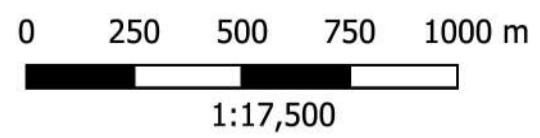




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- Little Etobicoke Catchment
- Lower Model Area
- 2D Model Results**  
Maximum Velocity (m/s)
- 0.00 - 0.00
- <= 0.10
- 0.10 - 0.25
- 0.25 - 0.50
- 0.50 - 1.00
- 1.00 - 1.70
- 1.70 - 2.00
- > 2.00
- Watercourse
- Roads
- Buildings



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ENVIRONMENT & ENGINEERING

Little Etobicoke Creek Phase 2  
Flood Evaluation Study

Project #24603

**PCSWMM Upper Model Results**  
**10 Year - Velocity**

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A. MacKay  
K. Hofbauer  
**Map 3.2**

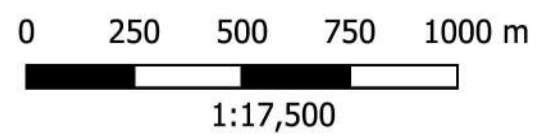




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- |   |   |
|---|---|
| <span style="border: 1px solid red; display: inline-block; width: 20px; height: 10px;"></span> Little Etobicoke Catchment | <span style="background-color: yellow; display: inline-block; width: 20px; height: 10px;"></span> 0.37 - 1.00 |
| <span style="background-color: grey; display: inline-block; width: 20px; height: 10px;"></span> Lower Model Area          | <span style="background-color: orange; display: inline-block; width: 20px; height: 10px;"></span> 1.00 - 1.50 |
| <b>2D Model Results</b>   |   |
| Maximum Depth x Velocity (m <sup>2</sup> /s)  |   |
| <span style="background-color: purple; display: inline-block; width: 20px; height: 10px;"></span> <= 0.10                 | <span style="background-color: brown; display: inline-block; width: 20px; height: 10px;"></span> 1.50 - 2.00  |
| <span style="background-color: blue; display: inline-block; width: 20px; height: 10px;"></span> 0.10 - 0.25               | <span style="background-color: red; display: inline-block; width: 20px; height: 10px;"></span> > 2.00         |
| <span style="background-color: green; display: inline-block; width: 20px; height: 10px;"></span> 0.25 - 0.37              | <span style="border-bottom: 1px solid blue; display: inline-block; width: 20px;"></span> Watercourse          |
|   | <span style="border-bottom: 1px solid black; display: inline-block; width: 20px;"></span> Roads               |
|   | <span style="border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> Buildings    |



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 ENVIRONMENT & ENGINEERING

Little Etobicoke Creek Phase 2  
 Flood Evaluation Study

Project #24603

**PCSWMM Upper Model Results**  
**10 Year - Depth x Velocity**

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A. MacKay  
 K. Hofbauer  
**Map 3.3**





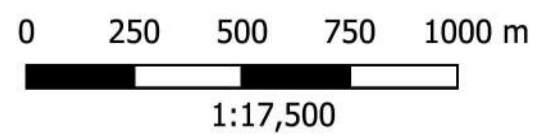
Flood risk characterization considers depth, velocity, and depth-velocity product with the following safe access limits:

- Low Risk: Vehicular and Pedestrian Access/Egress  
Maximum Depth: 0.3 m  
Maximum Velocity: 1.7 m/s  
Maximum Depth-Velocity product: 0.37 m<sup>2</sup>/s
- Medium Risk: Pedestrian Access/Egress Only  
Maximum Depth: 0.8 m  
Maximum Velocity: 1.7 m/s  
Maximum Depth-Velocity product: 0.37 m<sup>2</sup>/s
- High Risk: No Safe Access/Egress  
An area is considered high risk if any of the criteria is exceeded.  
Depth > 0.8 m  
Velocity > 1.7 m/s  
Depth-Velocity product > 0.37 m<sup>2</sup>/s

Run Date: June 26, 2018  
Figure Date: September 20, 2018

- Little Etobicoke Catchment
- Lower Model Area
- 2D Model Results Risk
  - Low
  - Medium
  - High
- Watercourse
- Roads
- Buildings

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ENVIRONMENT & ENGINEERING

Little Etobicoke Creek Phase 2  
Flood Evaluation Study

Project #24603

PCSWMM Upper Model Results  
10 Year - Risk

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A. MacKay  
K. Hofbauer  
Map 3.4

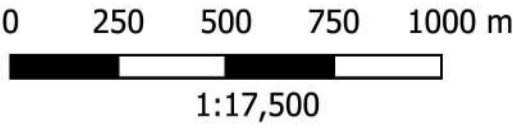




Run Date: July 27, 2018  
Figure Date: September 20, 2018

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- |                            |             |
|----------------------------|-------------|
| Little Etobicoke Catchment | 0.50 - 0.80 |
| Lower Model Area           | 0.80 - 1.50 |
| <b>2D Model Results</b>    |             |
| <b>Maximum Depth (m)</b>   |             |
| <= 0.10                    | 1.50 - 2.00 |
| 0.10 - 0.30                | > 2.00      |
| 0.30 - 0.50                | Watercourse |
|                            | Roads       |
|                            | Buildings   |



**Matrix Solutions Inc.**  
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Little Etobicoke Creek Phase 2  
Flood Evaluation Study

Project #24603

**PCSWMM Upper Model Results**  
**25 Year - Depth**

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A. MacKay  
K. Hofbauer  
**Map 4.1**

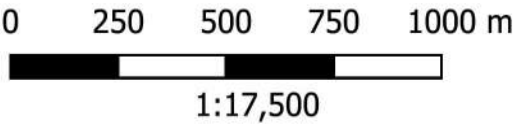




Run Date: July 27, 2018  
Figure Date: September 20, 2018

This drawing must be used in conjunction with the attached report, Progress Report #2 - Modelling for Flood Characterization and Analysis, (September 2018) and is subject to the same limitations and conditions stated in the report.

- |  |   |
|--|---|
| <span style="border: 2px solid red; padding: 2px;"> </span> Little Etobicoke Catchment                 | <span style="background-color: yellow; border: 1px solid black; padding: 2px;"> </span> 0.50 - 1.00 |
| <span style="background-color: grey; border: 1px solid black; padding: 2px;"> </span> Lower Model Area | <span style="background-color: orange; border: 1px solid black; padding: 2px;"> </span> 1.00 - 1.70 |
| <b>2D Model Results</b>  | <span style="background-color: brown; border: 1px solid black; padding: 2px;"> </span> 1.70 - 2.00  |
| <b>Maximum Velocity (m/s)</b>  | <span style="background-color: red; border: 1px solid black; padding: 2px;"> </span> > 2.00         |
| <span style="background-color: purple; border: 1px solid black; padding: 2px;"> </span> <= 0.10        | <span style="color: blue;">—</span> Watercourse   |
| <span style="background-color: blue; border: 1px solid black; padding: 2px;"> </span> 0.10 - 0.25      | <span style="color: grey;">—</span> Roads   |
| <span style="background-color: green; border: 1px solid black; padding: 2px;"> </span> 0.25 - 0.50     | <span style="color: white; border: 1px solid black; padding: 2px;"> </span> Buildings               |



**Matrix Solutions Inc.**  
ENVIRONMENT & ENGINEERING

Little Etobicoke Creek Phase 2  
Flood Evaluation Study

Project #24603

**PCSWMM Upper Model Results**  
**25 Year - Velocity**

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A. MacKay  
K. Hofbauer  
**Map 4.2**

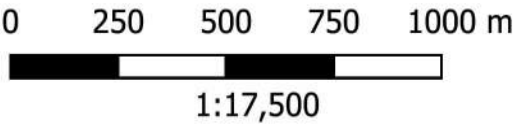




Run Date: July 27, 2018  
Figure Date: September 20, 2018

This drawing must be used in conjunction with the attached report, Progress Report #2 - Modelling for Flood Characterization and Analysis, (September 2018) and is subject to the same limitations and conditions stated in the report.

Little Etobicoke Catchment	0.37 - 1.00
Lower Model Area	1.00 - 1.50
<b>2D Model Results</b>	
Maximum Depth x Velocity (m <sup>2</sup> /s)	
<= 0.10	1.50 - 2.00
0.10 - 0.25	> 2.00
0.25 - 0.37	Watercourse
	Roads
	Buildings



**Matrix Solutions Inc.**  
ENVIRONMENT & ENGINEERING

Little Etobicoke Creek Phase 2  
Flood Evaluation Study

Project #24603

**PCSWMM Upper Model Results**  
**25 Year - Depth x Velocity**

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A. MacKay  
K. Hofbauer  
**Map 4.3**

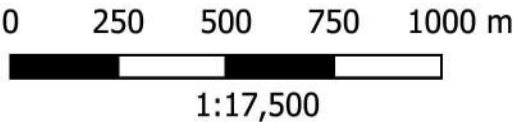




Run Date: July 27, 2018  
Figure Date: September 20, 2018

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- Little Etobicoke Catchment
- Lower Model Area
- 2D Model Results Risk
- Low
- Medium
- High
- Watercourse
- Roads
- Buildings



**Matrix Solutions Inc.**  
ENVIRONMENT & ENGINEERING

Little Etobicoke Creek Phase 2  
Flood Evaluation Study

Project #24603

PCSWMM Upper Model Results  
25 Year - Risk

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A. MacKay  
K. Hofbauer  
Map 4.4



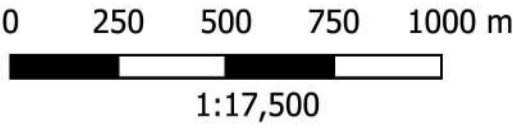


Run Date: June 14, 2018  
Figure Date: September 20, 2018

This drawing must be used in conjunction with the attached report, Progress Report #2 - Modelling for Flood Characterization and Analysis, (September 2018) and is subject to the same limitations and conditions stated in the report.

T:\24603 - Little EtobicokeCr\_Flood\531105 Analysis\GIS\Phase 2

- |   |   |
|---|---|
| <span style="border: 1px solid red; display: inline-block; width: 20px; height: 10px;"></span> Little Etobicoke Catchment | <span style="background-color: yellow; display: inline-block; width: 20px; height: 10px;"></span> 0.50 - 0.80 |
| <span style="background-color: grey; display: inline-block; width: 20px; height: 10px;"></span> Lower Model Area          | <span style="background-color: orange; display: inline-block; width: 20px; height: 10px;"></span> 0.80 - 1.50 |
| <b>2D Model Results</b>   |   |
| <b>Maximum Depth (m)</b>  |   |
| <span style="background-color: purple; display: inline-block; width: 20px; height: 10px;"></span> <= 0.10                 | <span style="background-color: brown; display: inline-block; width: 20px; height: 10px;"></span> 1.50 - 2.00  |
| <span style="background-color: blue; display: inline-block; width: 20px; height: 10px;"></span> 0.10 - 0.30               | <span style="background-color: red; display: inline-block; width: 20px; height: 10px;"></span> > 2.00         |
| <span style="background-color: green; display: inline-block; width: 20px; height: 10px;"></span> 0.30 - 0.50              | <span style="border-bottom: 1px solid blue; display: inline-block; width: 20px;"></span> Watercourse          |
|   | <span style="border-bottom: 1px solid black; display: inline-block; width: 20px;"></span> Roads               |
|   | <span style="border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> Buildings    |



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Little Etobicoke Creek Phase 2  
Flood Evaluation Study

Project #24603

**PCSWMM Upper Model Results**  
**50 Year - Depth**

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A. MacKay  
K. Hofbauer  
Map 5.1

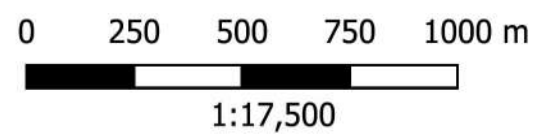




Run Date: June 14, 2018  
Figure Date: September 20, 2018

This drawing must be used in conjunction with the attached report, Progress Report #2 - Modelling for Flood Characterization and Analysis, (September 2018) and is subject to the same limitations and conditions stated in the report.

- |                               |             |
|-------------------------------|-------------|
| Little Etobicoke Catchment    | 0.50 - 1.00 |
| Lower Model Area              | 1.00 - 1.70 |
| <b>2D Model Results</b>       | 1.70 - 2.00 |
| <b>Maximum Velocity (m/s)</b> | > 2.00      |
| 0.00 - 0.00                   | Watercourse |
| <= 0.10                       | Roads       |
| 0.10 - 0.25                   | Buildings   |
| 0.25 - 0.50                   |             |



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Little Etobicoke Creek Phase 2 Flood Evaluation Study	
Project #24603	
<b>PCSWMM Upper Model Results</b> <b>50 Year - Velocity</b>	
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A. MacKay K. Hofbauer	Map 5.2

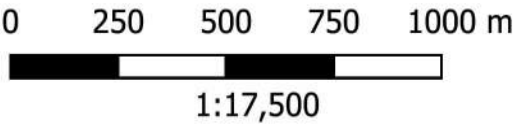




Run Date: June 14, 2018  
Figure Date: September 20, 2018

This drawing must be used in conjunction with the attached report, Progress Report #2 - Modelling for Flood Characterization and Analysis, (September 2018) and is subject to the same limitations and conditions stated in the report.

Little Etobicoke Catchment	0.37 - 1.00
Lower Model Area	1.00 - 1.50
<b>2D Model Results</b>	
Maximum Depth x Velocity (m <sup>2</sup> /s)	
<= 0.10	1.50 - 2.00
0.10 - 0.25	> 2.00
0.25 - 0.37	Watercourse
	Roads
	Buildings



**Matrix Solutions Inc.**  
ENVIRONMENT & ENGINEERING

Little Etobicoke Creek Phase 2  
Flood Evaluation Study

Project #24603

**PCSWMM Upper Model Results**  
**50 Year - Depth x Velocity**

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A. MacKay  
K. Hofbauer  
**Map 5.3**





Run Date: June 14, 2018  
Figure Date: September 20, 2018

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- Little Etobicoke Catchment
- Lower Model Area
- 2D Model Results Risk
- Low
- Medium
- High
- Watercourse
- Roads
- Buildings

0 250 500 750 1000 m  
1:17,500



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Little Etobicoke Creek Phase 2  
Flood Evaluation Study

Project #24603

PCSWMM Upper Model Results  
50 Year - Risk

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A. MacKay  
K. Hofbauer  
Map 5.4

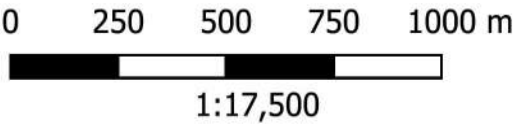




Run Date: June 5, 2018  
 Figure Date: September 20, 2018

This drawing must be used in conjunction with the attached report, Progress Report #2 - Modelling for Flood Characterization and Analysis, (September 2018) and is subject to the same limitations and conditions stated in the report.

- |   |   |
|---|---|
| <span style="border: 1px solid red; display: inline-block; width: 20px; height: 10px;"></span> Little Etobicoke Catchment | <span style="background-color: yellow; display: inline-block; width: 20px; height: 10px;"></span> 0.50 - 0.80 |
| <span style="background-color: grey; display: inline-block; width: 20px; height: 10px;"></span> Lower Model Area          | <span style="background-color: orange; display: inline-block; width: 20px; height: 10px;"></span> 0.80 - 1.50 |
| <b>2D Model Results</b>   |   |
| <b>Maximum Depth (m)</b>  |   |
| <span style="background-color: purple; display: inline-block; width: 20px; height: 10px;"></span> <= 0.10                 | <span style="background-color: brown; display: inline-block; width: 20px; height: 10px;"></span> 1.50 - 2.00  |
| <span style="background-color: blue; display: inline-block; width: 20px; height: 10px;"></span> 0.10 - 0.30               | <span style="background-color: red; display: inline-block; width: 20px; height: 10px;"></span> > 2.00         |
| <span style="background-color: green; display: inline-block; width: 20px; height: 10px;"></span> 0.30 - 0.50              | <span style="border-bottom: 1px solid blue; display: inline-block; width: 20px;"></span> Watercourse          |
|   | <span style="border-bottom: 1px solid black; display: inline-block; width: 20px;"></span> Roads               |
|   | <span style="border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> Buildings    |



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Little Etobicoke Creek Phase 2  
 Flood Evaluation Study

Project #24603

**PCSWMM Upper Model Results**  
**100 Year - Depth**

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A. MacKay  
 K. Hofbauer  
 Map 6.1



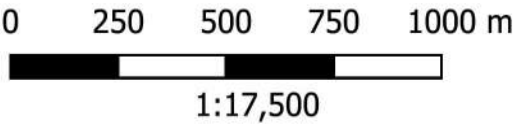


Run Date: June 5, 2018  
Figure Date: September 20, 2018

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- |   |  |
|---|--|
| <span style="border: 1px solid red; display: inline-block; width: 20px; height: 10px;"></span> Little Etobicoke Catchment                 | <span style="background-color: yellow; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> 0.50 - 1.00 |
| <span style="background-color: grey; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> Lower Model Area | <span style="background-color: orange; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> 1.00 - 1.70 |
| <b>2D Model Results</b>   |  |
| Maximum Velocity (m/s)  |  |
| <span style="background-color: white; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> 0.00 - 0.00     | <span style="background-color: brown; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> 1.70 - 2.00  |
| <span style="background-color: purple; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> <= 0.10        | <span style="background-color: red; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> > 2.00         |
| <span style="background-color: blue; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> 0.10 - 0.25      | <span style="border-bottom: 1px solid blue; display: inline-block; width: 20px;"></span> Watercourse                                   |
| <span style="background-color: green; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> 0.25 - 0.50     | <span style="border-bottom: 1px solid black; display: inline-block; width: 20px;"></span> Roads  |
|   | <span style="border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> Buildings                             |



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ENVIRONMENT & ENGINEERING

Little Etobicoke Creek Phase 2  
Flood Evaluation Study

Project #24603

**PCSWMM Upper Model Results**  
**100 Year - Velocity**

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A. MacKay  
K. Hofbauer  
Map 6.2

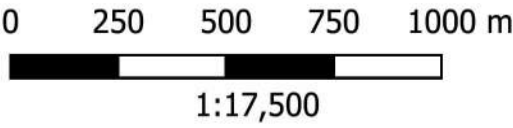




Run Date: June 5, 2018  
Figure Date: September 20, 2018

This drawing must be used in conjunction with the attached report, Progress Report #2 - Modelling for Flood Characterization and Analysis, (September 2018) and is subject to the same limitations and conditions stated in the report.

Little Etobicoke Catchment	0.37 - 1.00
Lower Model Area	1.00 - 1.50
<b>2D Model Results</b>	
Maximum Depth x Velocity (m <sup>2</sup> /s)	
≤ 0.10	1.50 - 2.00
0.10 - 0.25	> 2.00
0.25 - 0.37	Watercourse
	Roads
	Buildings



**Matrix Solutions Inc.**  
ENVIRONMENT & ENGINEERING

Little Etobicoke Creek Phase 2  
Flood Evaluation Study

Project #24603

**PCSWMM Upper Model Results**  
**100 Year - Depth x Velocity**

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A. MacKay  
K. Hofbauer  
Map 6.3





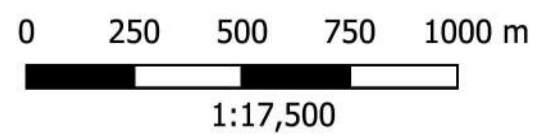
Flood risk characterization considers depth, velocity, and depth-velocity product with the following safe access limits:

- Low Risk: Vehicular and Pedestrian Access/Egress  
Maximum Depth: 0.3 m  
Maximum Velocity: 1.7 m/s  
Maximum Depth-Velocity product: 0.37 m<sup>2</sup>/s
- Medium Risk: Pedestrian Access/Egress Only  
Maximum Depth: 0.8 m  
Maximum Velocity: 1.7 m/s  
Maximum Depth-Velocity product: 0.37 m<sup>2</sup>/s
- High Risk: No Safe Access/Egress  
An area is considered high risk if any of the criteria is exceeded.  
Depth > 0.8 m  
Velocity > 1.7 m/s  
Depth-Velocity product > 0.37 m<sup>2</sup>/s

Run Date: June 5, 2018  
Figure Date: September 20, 2018

- |                              |             |
|------------------------------|-------------|
| Little Etobicoke Catchment   | Watercourse |
| Lower Model Area             | Roads       |
| <b>2D Model Results Risk</b> |             |
| Low                          | Buildings   |
| Medium                       |             |
| High                         |             |

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**Matrix Solutions Inc.**  
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Little Etobicoke Creek Phase 2  
Flood Evaluation Study

Project #24603

**PCSWMM Upper Model Results**  
**100 Year - Risk**

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A. MacKay  
K. Hofbauer  
**Map 6.4**



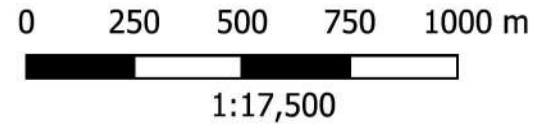



Run Date: June 24, 2018  
Figure Date: July 9, 2018

This drawing must be used in conjunction with the attached report, Little Etobicoke Creek Phase 2 Modelling for Flood Characterization and Analysis - Flood Evaluation Study, (July 2018) and is subject to the same limitations and conditions stated in the report.

T:\24603 - Little EtobicokeCr\_Flood\531105 Analysis\GIS\Phase 2

- |                                    |             |
|------------------------------------|-------------|
| Lower Model Area                   | 0.50 - 0.80 |
| Reported Flooding                  | 0.80 - 1.50 |
| Little Etobicoke Catchment         | 1.50 - 2.00 |
| 2D Model Results Maximum Depth (m) | > 2.00      |
| ≤ 0.10                             | Watercourse |
| 0.10 - 0.30                        | Roads       |
| 0.30 - 0.50                        | Buildings   |



 Matrix Solutions Inc. ENVIRONMENT & ENGINEERING	
Little Etobicoke Creek Phase 2 Flood Evaluation Study	
Project #24603	
PCSWMM Upper Model Results July 8, 2013 - Depth	
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A. MacKay K. Hofbauer	Map 7.1

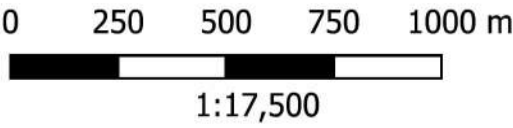




Run Date: June 24, 2018  
Figure Date: July 9, 2018

This drawing must be used in conjunction with the attached report, Little Etobicoke Creek Phase 2 Modelling for Flood Characterization and Analysis - Flood Evaluation Study, (July 2018) and is subject to the same limitations and conditions stated in the report.

Lower Model Area	0.50 - 1.00
Little Etobicoke Catchment	1.00 - 1.70
2D Model Results	1.70 - 2.00
Maximum Velocity (m/s)	> 2.00
<= 0.10	Watercourse
0.10 - 0.25	Roads
0.25 - 0.50	Buildings



**Matrix Solutions Inc.**  
ENVIRONMENT & ENGINEERING

Little Etobicoke Creek Phase 2  
Flood Evaluation Study

Project #24603

PCSWMM Upper Model Results  
July 8, 2013 - Velocity

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A. MacKay  
K. Hofbauer  
Map 7.2

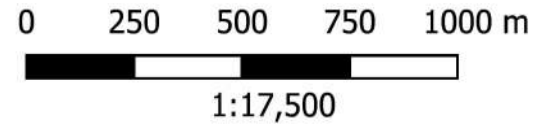




Run Date: June 24, 2018  
Figure Date: July 9, 2018

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Lower Model Area	0.37 - 1.00
Little Etobicoke Catchment	1.00 - 1.50
<b>2D Model Results</b>	
Maximum Depth x Velocity (m <sup>2</sup> /s)	
<= 0.10	1.50 - 2.00
0.10 - 0.25	> 2.00
0.25 - 0.37	Watercourse
	Roads
	Buildings



<b>Matrix Solutions Inc.</b> ENVIRONMENT & ENGINEERING	
Little Etobicoke Creek Phase 2 Flood Evaluation Study	
Project #24603	
<b>PCSWMM Upper Model Results</b> July 8, 2013 - Depth x Velocity	
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A. MacKay K. Hofbauer	Map 7.3

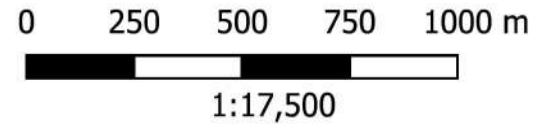




Run Date: June 24, 2018  
Figure Date: July 9, 2018

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- Lower Model Area
- Little Etobicoke Catchment
- 2D Model Results Risk
  - Low
  - Medium
  - High
- Watercourse
- Roads
- Buildings



**Matrix Solutions Inc.**  
ENVIRONMENT & ENGINEERING

Little Etobicoke Creek Phase 2  
Flood Evaluation Study

Project #24603

PCSWMM Upper Model Results  
July 8, 2013 - Risk

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A. MacKay  
K. Hofbauer  
Map 7.4

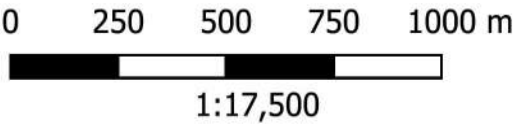




Run Date: July 9, 2018  
 Figure Date: September 20, 2018

This drawing must be used in conjunction with the attached report, Progress Report #2 - Modelling for Flood Characterization and Analysis, (September 2018) and is subject to the same limitations and conditions stated in the report.

- |   |  |
|---|--|
| <span style="border: 1px solid red; display: inline-block; width: 20px; height: 10px;"></span> Little Etobicoke Catchment                 | <span style="background-color: yellow; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> 0.50 - 0.80 |
| <span style="background-color: grey; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> Lower Model Area | <span style="background-color: orange; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> 0.80 - 1.50 |
| <b>2D Model Results</b>   |  |
| <b>Maximum Depth (m)</b>  |  |
| <span style="background-color: purple; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> <= 0.10        | <span style="background-color: brown; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> 1.50 - 2.00  |
| <span style="background-color: blue; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> 0.10 - 0.30      | <span style="background-color: red; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> > 2.00         |
| <span style="background-color: green; border: 1px solid black; display: inline-block; width: 20px; height: 10px;"></span> 0.30 - 0.50     | <span style="border-bottom: 1px solid blue; display: inline-block; width: 20px;"></span> Watercourse                                   |
|   | <span style="border-bottom: 1px solid black; display: inline-block; width: 20px;"></span> Roads  |
|   | <span style="border-bottom: 1px solid grey; display: inline-block; width: 20px;"></span> Buildings                                     |



**Matrix Solutions Inc.**  
 ENVIRONMENT & ENGINEERING

Little Etobicoke Creek Phase 2  
 Flood Evaluation Study

Project #24603

**PCSWMM Upper Model Results**  
**Regional Storm - Depth**

Disclaimer: The information contained herein may be compiled from numerous third party materials that are subject to periodic change without prior notification. While every effort has been made by Matrix Solutions Inc. to ensure the accuracy of the information presented at the time of publication, Matrix Solutions Inc. assumes no liability for any errors, omissions, or inaccuracies in the third party material.

A. MacKay  
 K. Hofbauer  
 Map 8.1





Run Date: July 9, 2018  
Figure Date: September 20, 2018

This drawing must be used in conjunction with the attached report, Progress Report #2 - Modelling for Flood Characterization and Analysis, (September 2018) and is subject to the same limitations and conditions stated in the report.

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Little Etobicoke Catchment	0.50 - 1.00
Lower Model Area	1.00 - 1.70
<b>2D Model Results</b>	
<b>Maximum Velocity (m/s)</b>	
<= 0.10	1.70 - 2.00
0.10 - 0.25	> 2.00
0.25 - 0.50	Watercourse
	Roads
	Buildings

0 250 500 750 1000 m

1:17,500



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ENVIRONMENT & ENGINEERING

Little Etobicoke Creek Phase 2  
Flood Evaluation Study

Project #24603

**PCSWMM Upper Model Results**  
**Regional Storm - Velocity**

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A. MacKay  
K. Hofbauer  
Map 8.2

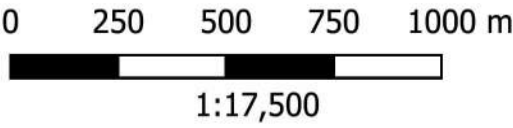




Run Date: July 9, 2018  
Figure Date: September 20, 2018

This drawing must be used in conjunction with the attached report, Progress Report #2 - Modelling for Flood Characterization and Analysis, (September 2018) and is subject to the same limitations and conditions stated in the report.

Little Etobicoke Catchment	0.37 - 1.00
Lower Model Area	1.00 - 1.50
<b>2D Model Results</b>	
Maximum Depth x Velocity (m <sup>2</sup> /s)	
<= 0.10	1.50 - 2.00
0.10 - 0.25	> 2.00
0.25 - 0.37	Watercourse
	Roads
	Buildings



**Matrix Solutions Inc.**  
ENVIRONMENT & ENGINEERING

Little Etobicoke Creek Phase 2  
Flood Evaluation Study

Project #24603

**PCSWMM Upper Model Results**  
**Regional Storm - Depth x Velocity**

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A. MacKay  
K. Hofbauer  
Map 8.3





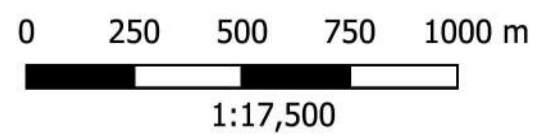
Flood risk characterization considers depth, velocity, and depth-velocity product with the following safe access limits:

- Low Risk: Vehicular and Pedestrian Access/Egress  
Maximum Depth: 0.3 m  
Maximum Velocity: 1.7 m/s  
Maximum Depth-Velocity product: 0.37 m<sup>2</sup>/s
- Medium Risk: Pedestrian Access/Egress Only  
Maximum Depth: 0.8 m  
Maximum Velocity: 1.7 m/s  
Maximum Depth-Velocity product: 0.37 m<sup>2</sup>/s
- High Risk: No Safe Access/Egress  
An area is considered high risk if any of the criteria is exceeded.  
Depth > 0.8 m  
Velocity > 1.7 m/s  
Depth-Velocity product > 0.37 m<sup>2</sup>/s

Run Date: July 9, 2018  
Figure Date: September 20, 2018

- |                              |             |
|------------------------------|-------------|
| Little Etobicoke Catchment   | Watercourse |
| Lower Model Area             | Roads       |
| <b>2D Model Results Risk</b> | Buildings   |
| Low                          |             |
| Medium                       |             |
| High                         |             |

This drawing must be used in conjunction with the attached report, Progress Report #2 - Modelling for Flood Characterization and Analysis, (September 2018) and is subject to the same limitations and conditions stated in the report.



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Little Etobicoke Creek Phase 2  
Flood Evaluation Study

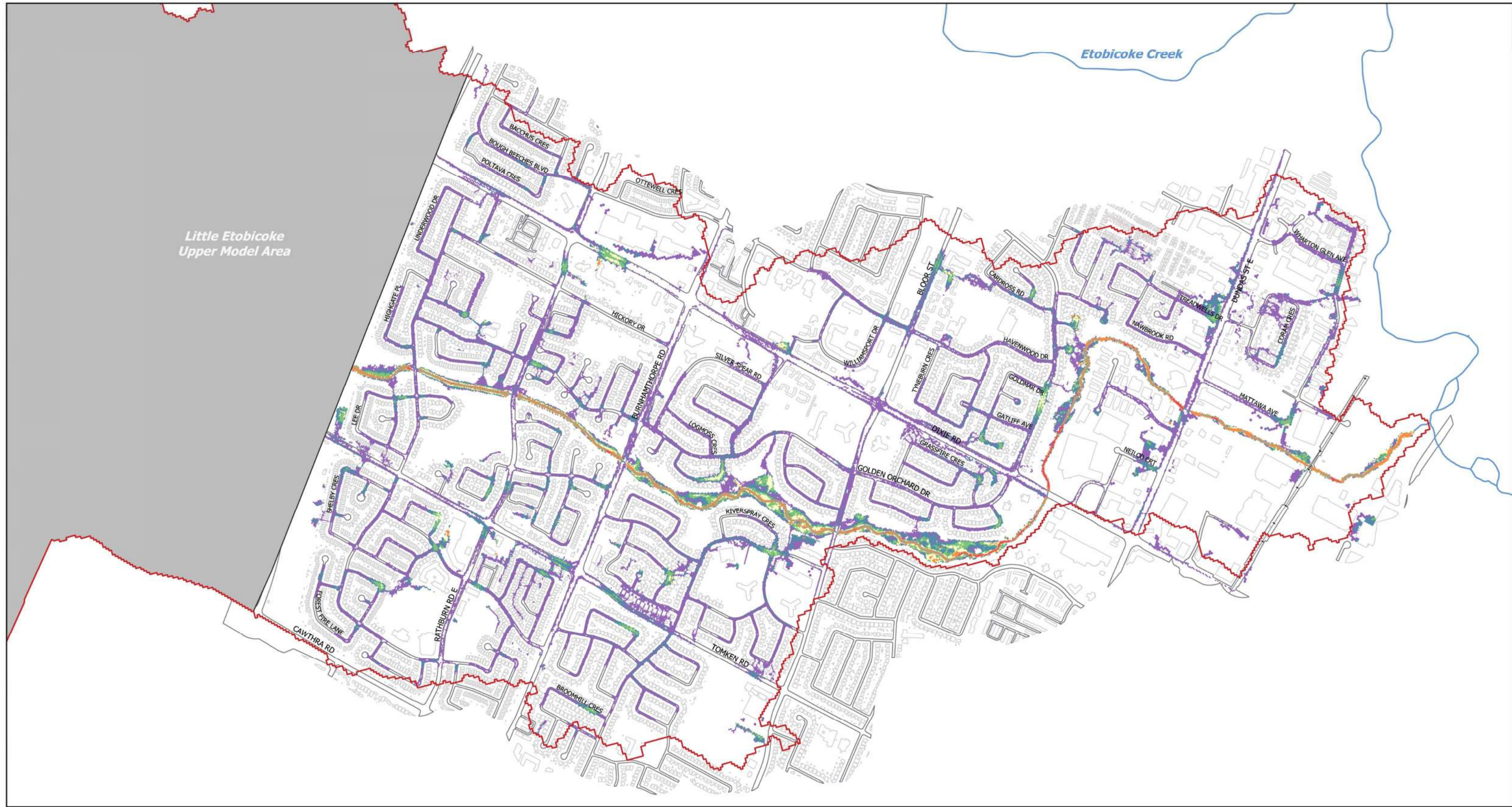
Project #24603

PCSWMM Upper Model Results  
Regional Storm - Risk

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A. MacKay  
K. Hofbauer  
Map 8.4





Run Date: June 27, 2018  
Figure Date: September 20, 2018

This drawing must be used in conjunction with the attached report, Progress Report #2 - Modelling for Flood Characterization and Analysis, (September 2018) and is subject to the same limitations and conditions stated in the report.

Little Etobicoke Catchment

Upper Model Area

2D Model Results

Maximum Depth (m)

<= 0.10

0.10 - 0.30

0.30 - 0.50

0.50 - 0.80

0.80 - 1.50

1.50 - 2.00

> 2.00

Railway

Watercourse

Roads

Buildings

0

250

500

750

1000 m

1:15,000



Matrix Solutions Inc.

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Little Etobicoke Creek Phase 2

Flood Evaluation Study

PCSWMM Lower Model Results

2 Year - Depth

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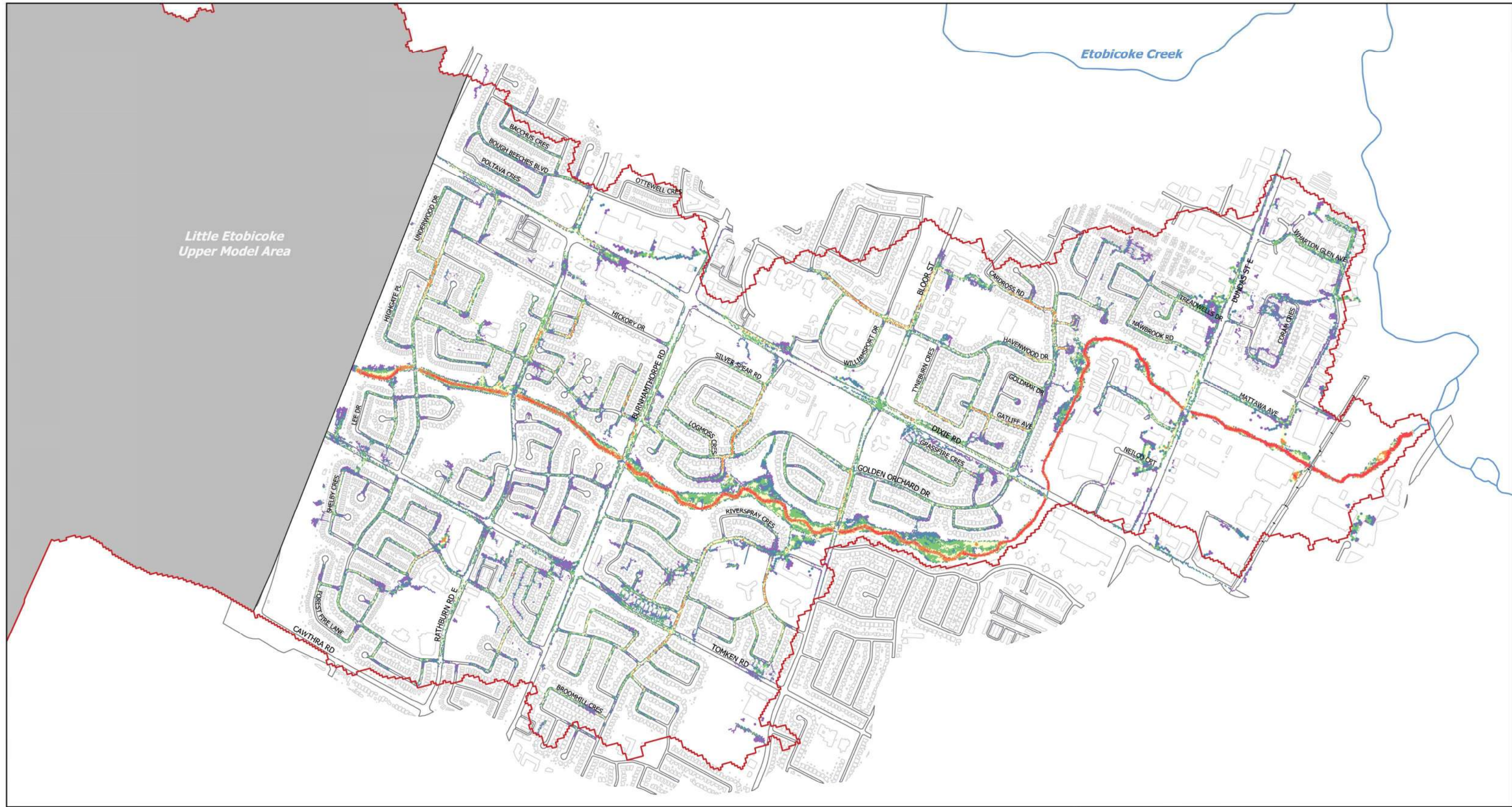
A. MacKay  
K. Hofbauer

Map 9.1

Project #24603

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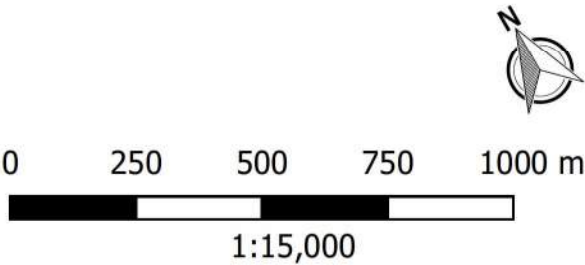


Run Date: June 27, 2018  
Figure Date: September 20, 2018

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- |                               |             |
|-------------------------------|-------------|
| Little Etobicoke Catchment    | 1.00 - 1.70 |
| Upper Model Area              | 1.70 - 2.00 |
| <b>2D Model Results</b>       | > 2.00      |
| <b>Maximum Velocity (m/s)</b> | Railway     |
| <= 0.10                       | Watercourse |
| 0.10 - 0.25                   | Roads       |
| 0.25 - 0.50                   | Buildings   |
| 0.50 - 1.00                   |             |



Little Etobicoke Creek Phase 2  
Flood Evaluation Study

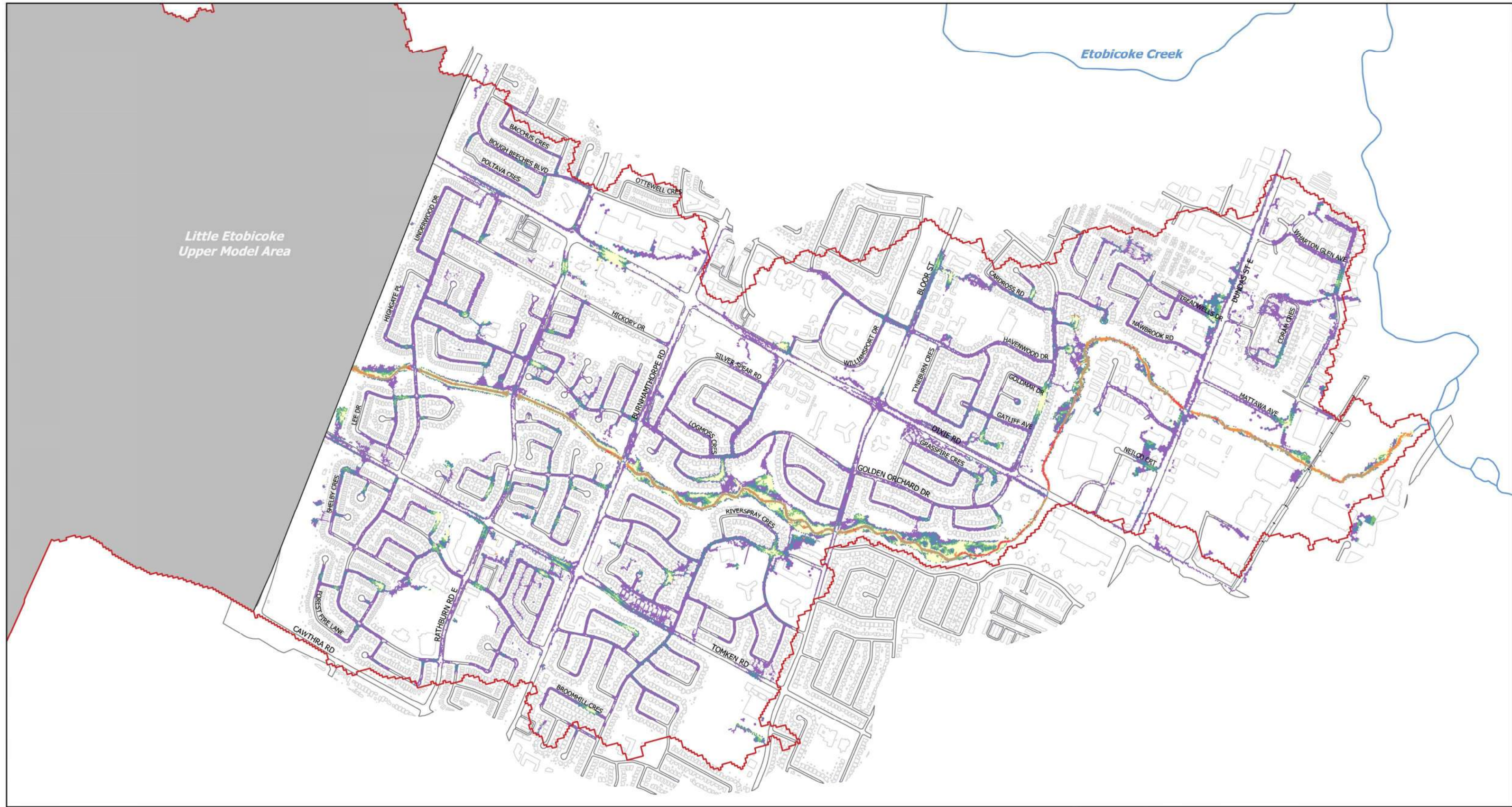
Project #24603

PCSWMM Lower Model Results  
2 Year - Velocity

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A. MacKay  
K. Hofbauer  
Map 9.2

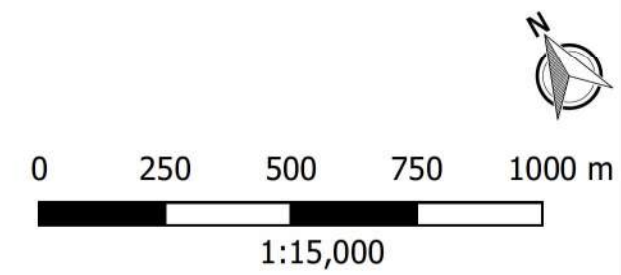




Run Date: June 27, 2018  
Figure Date: September 20, 2018

- |                                 |             |
|---------------------------------|-------------|
| Little Etobicoke Catchment      | 1.00 - 1.50 |
| Upper Model Area                | 1.50 - 2.00 |
| <b>2D Model Results</b>         |             |
| Maximum Depth x Velocity (m²/s) |             |
| ≤ 0.10                          | > 2.00      |
| 0.10 - 0.25                     | Railway     |
| 0.25 - 0.37                     | Watercourse |
| 0.37 - 1.00                     | Roads       |
|                                 | Buildings   |

This drawing must be used in conjunction with the attached report, Progress Report #2 - Modelling for Flood Characterization and Analysis, (September 2018) and is subject to the same limitations and conditions stated in the report.



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Little Etobicoke Creek Phase 2  
Flood Evaluation Study

Project #24603

PCSWMM Lower Model Results  
2 Year - Depth x Velocity

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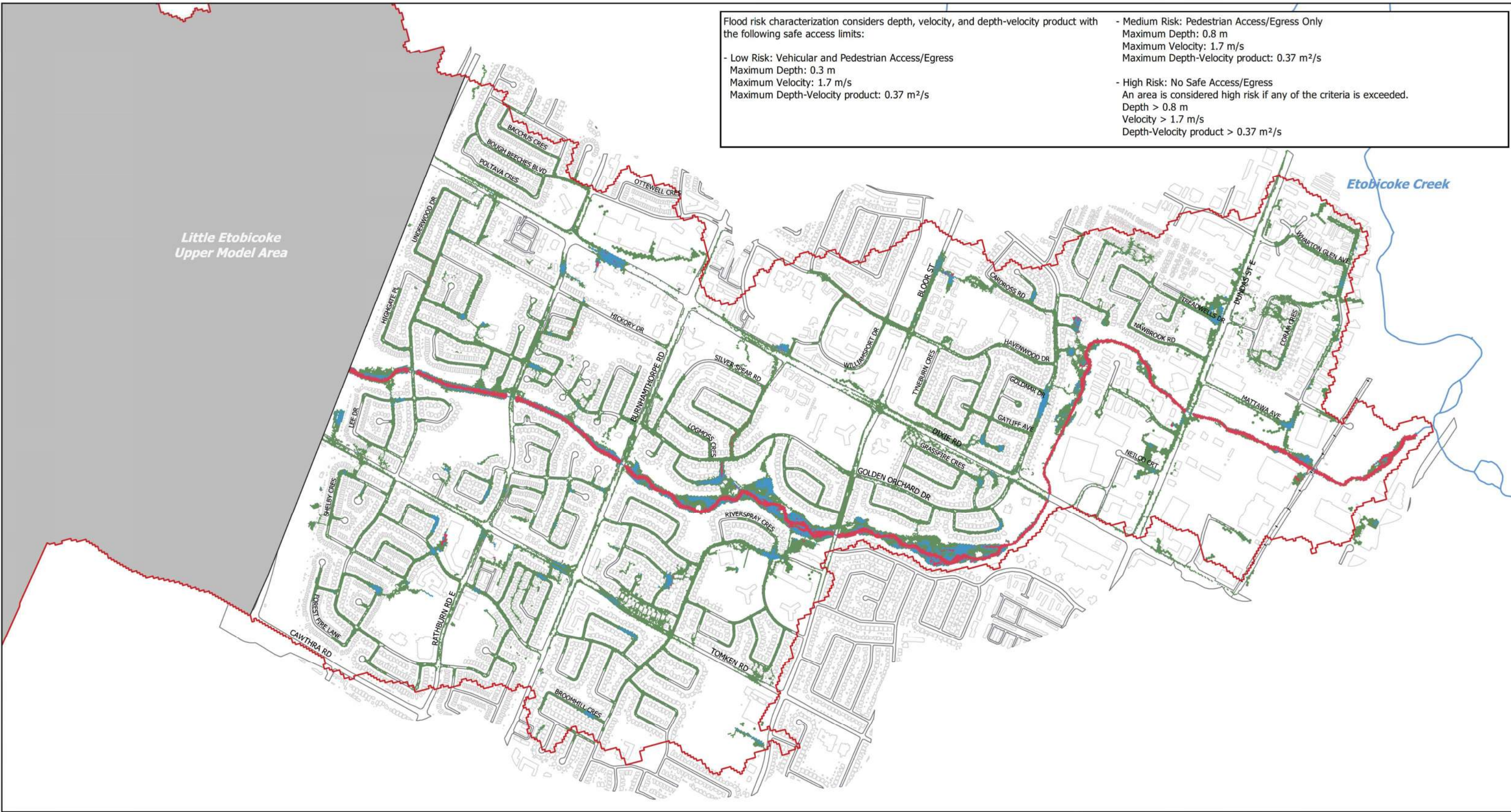
A. MacKay  
K. Hofbauer  
Map 9.3



Flood risk characterization considers depth, velocity, and depth-velocity product with the following safe access limits:

- Low Risk: Vehicular and Pedestrian Access/Egress  
Maximum Depth: 0.3 m  
Maximum Velocity: 1.7 m/s  
Maximum Depth-Velocity product: 0.37 m<sup>2</sup>/s
- Medium Risk: Pedestrian Access/Egress Only  
Maximum Depth: 0.8 m  
Maximum Velocity: 1.7 m/s  
Maximum Depth-Velocity product: 0.37 m<sup>2</sup>/s
- High Risk: No Safe Access/Egress  
An area is considered high risk if any of the criteria is exceeded.  
Depth > 0.8 m  
Velocity > 1.7 m/s  
Depth-Velocity product > 0.37 m<sup>2</sup>/s

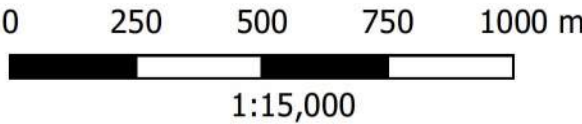
Little Etobicoke  
Upper Model Area



Run Date: June 27, 2018  
Figure Date: September 20, 2018

This drawing must be used in conjunction with the attached report, Progress Report #2 - Modelling for Flood Characterization and Analysis, (September 2018) and is subject to the same limitations and conditions stated in the report.

- Little Etobicoke Catchment
- Upper Model Area
- 2D Model Results Risk
  - Low
  - Medium
  - High
- Railway
- Watercourse
- Roads
- Buildings



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ENVIRONMENT & ENGINEERING

Little Etobicoke Creek Phase 2  
Flood Evaluation Study

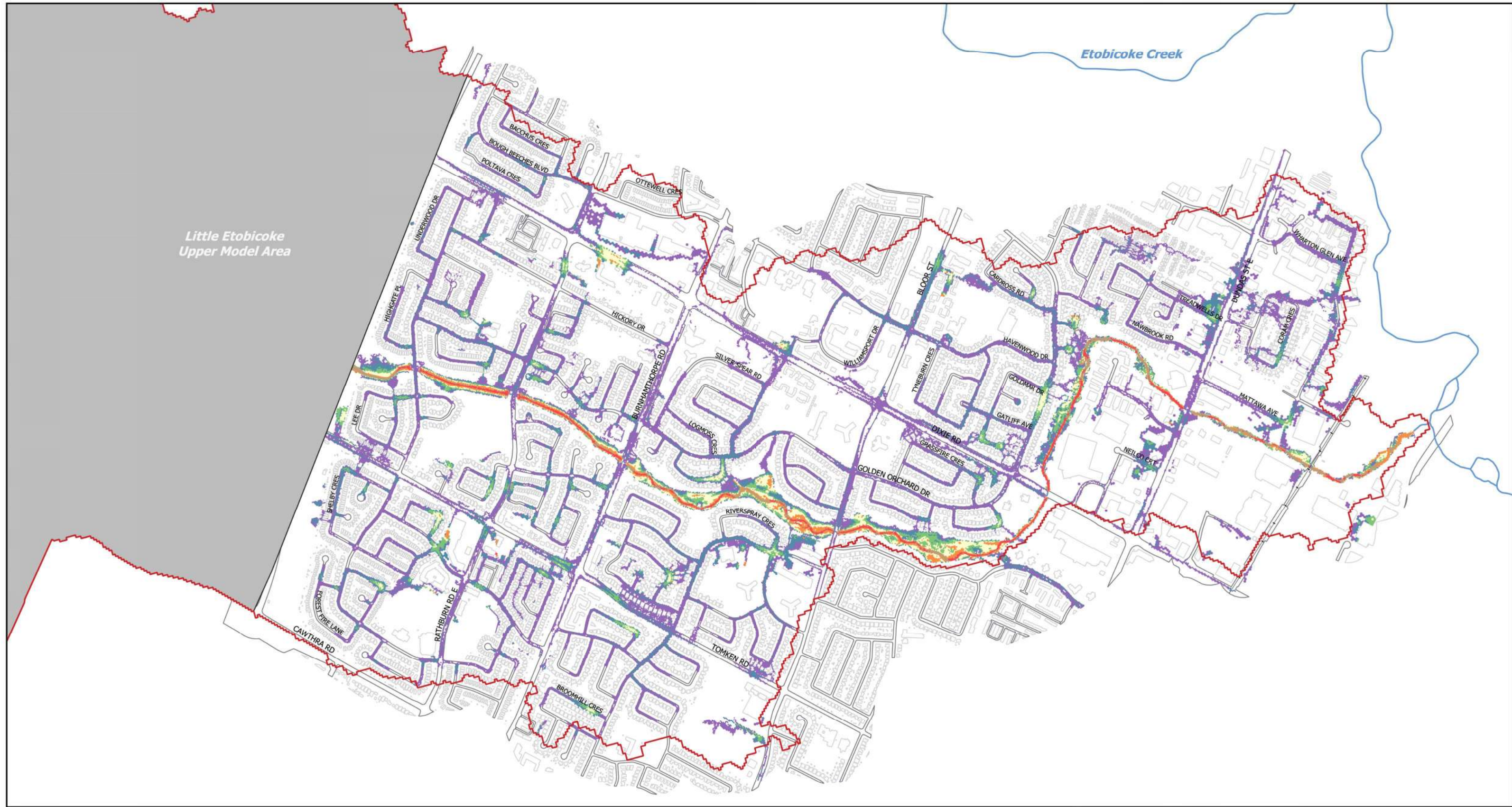
Project #24603

PCSWMM Lower Model Results  
2 Year - Risk

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A. MacKay  
K. Hofbauer  
Map 9.4





Run Date: June 27, 2018  
Figure Date: September 20, 2018

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Little Etobicoke Catchment

Upper Model Area

2D Model Results  
Maximum Depth (m)

<= 0.10

0.10 - 0.30

0.30 - 0.50

0.50 - 0.80

0.80 - 1.50

1.50 - 2.00

> 2.00

Railway

Watercourse

Roads

Buildings

02505007501000 m

1:15,000

N

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ENVIRONMENT & ENGINEERING

Little Etobicoke Creek Phase 2  
Flood Evaluation Study

PCSWMM Lower Model Results  
5 Year - Depth

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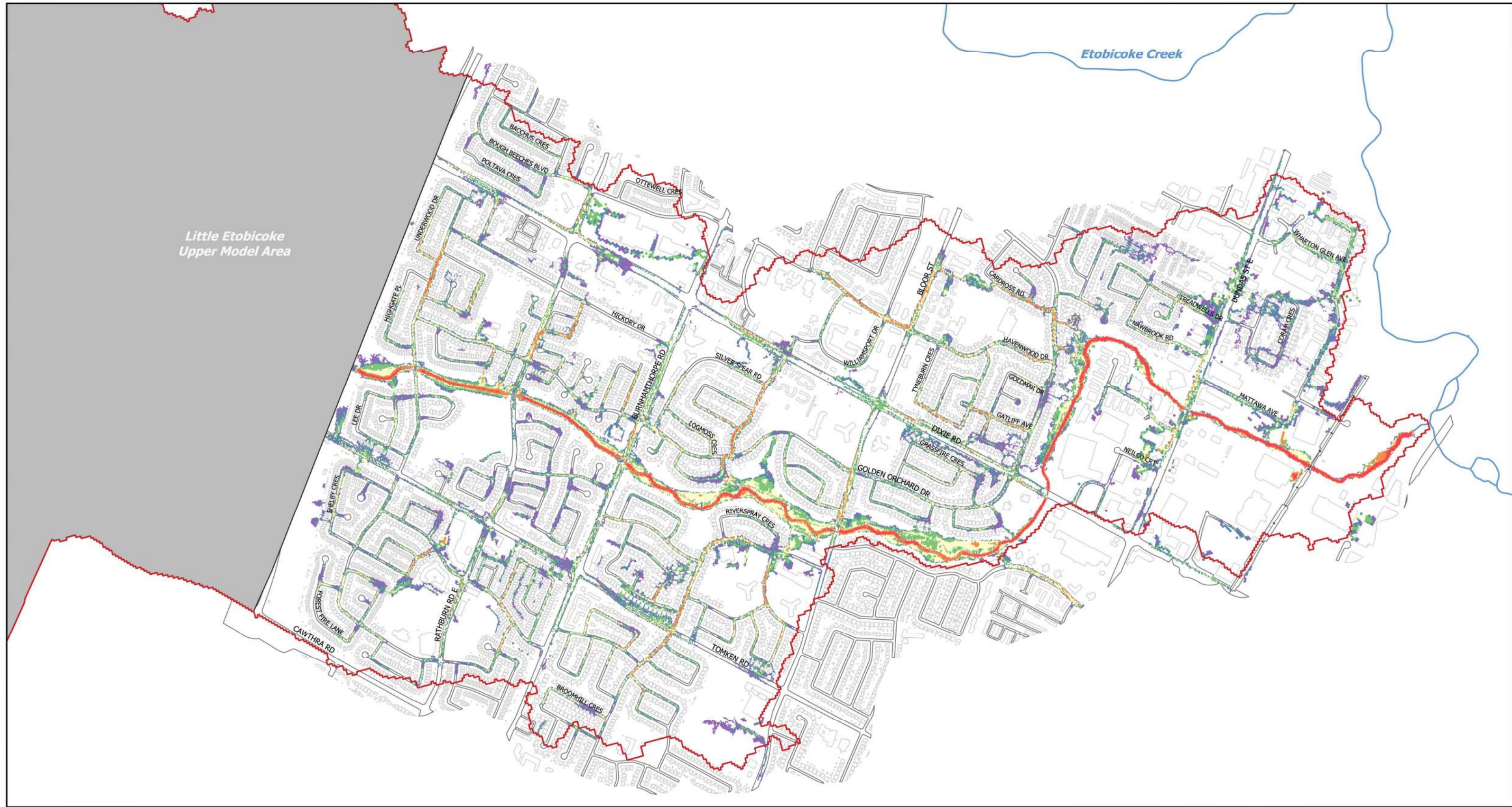
A. MacKay  
K. Hofbauer

Map 10.1

Project #24603

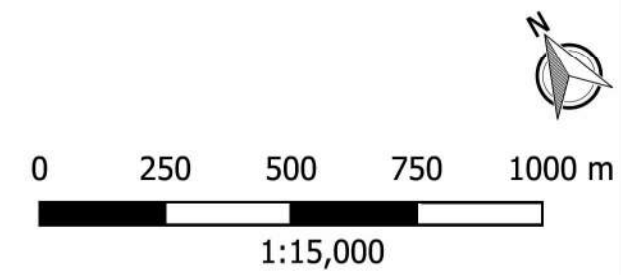
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Run Date: June 27, 2018  
Figure Date: September 20, 2018

- |                               |             |
|-------------------------------|-------------|
| Little Etobicoke Catchment    | 1.00 - 1.70 |
| Upper Model Area              | 1.70 - 2.00 |
| <b>2D Model Results</b>       |             |
| <b>Maximum Velocity (m/s)</b> |             |
| <= 0.10                       | > 2.00      |
| 0.10 - 0.25                   | Railway     |
| 0.25 - 0.50                   | Watercourse |
| 0.50 - 1.00                   | Roads       |
|                               | Buildings   |



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Little Etobicoke Creek Phase 2  
Flood Evaluation Study

Project #24603

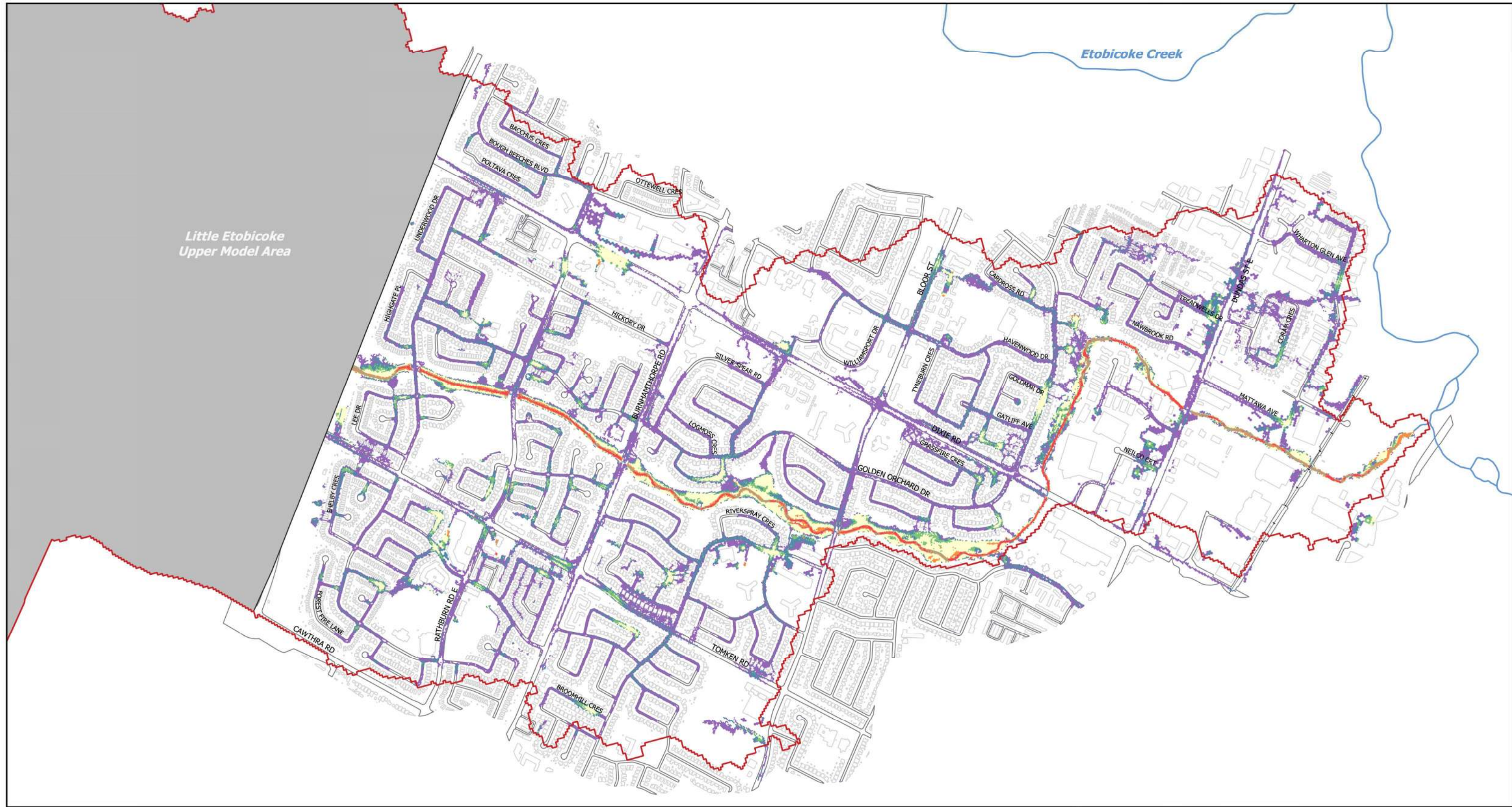
**PCSWMM Lower Model Results**  
**5 Year - Velocity**

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A. MacKay  
K. Hofbauer  
Map 10.2





Run Date: June 27, 2018  
Figure Date: September 20, 2018

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Little Etobicoke Catchment

Upper Model Area

2D Model Results

Maximum Depth x Velocity (m<sup>2</sup>/s)

<= 0.10

0.10 - 0.25

0.25 - 0.37

0.37 - 1.00

1.00 - 1.50

1.50 - 2.00

> 2.00

Railway

Watercourse

Roads

Buildings

0

250

500

750

1000 m

1:15,000

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Little Etobicoke Creek Phase 2  
Flood Evaluation Study

PCSWMM Lower Model Results  
5 Year - Depth x Velocity

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A. MacKay  
K. Hofbauer

Map 10.3

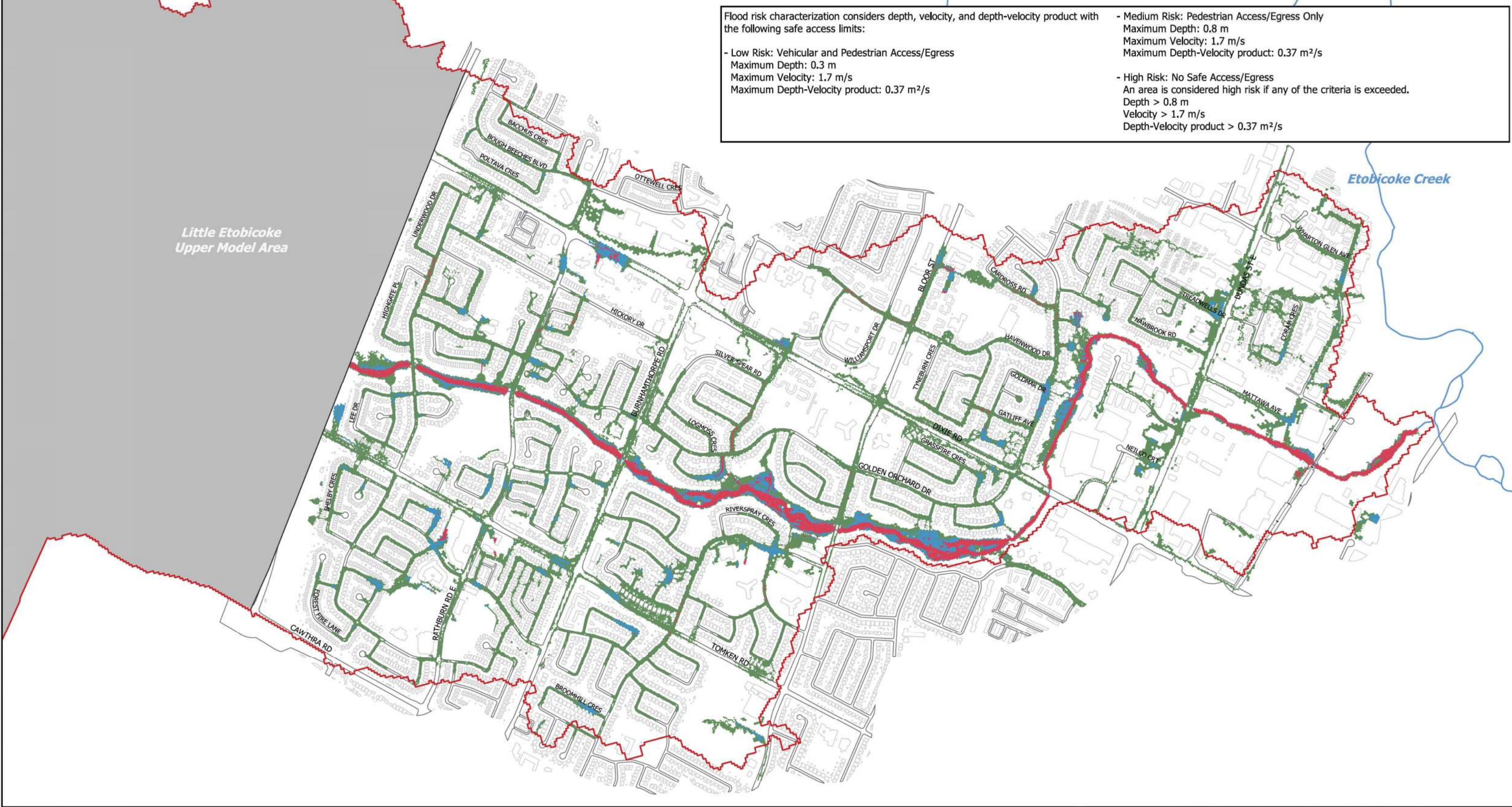
Project #24603



Flood risk characterization considers depth, velocity, and depth-velocity product with the following safe access limits:

- Low Risk: Vehicular and Pedestrian Access/Egress  
Maximum Depth: 0.3 m  
Maximum Velocity: 1.7 m/s  
Maximum Depth-Velocity product: 0.37 m<sup>2</sup>/s
- Medium Risk: Pedestrian Access/Egress Only  
Maximum Depth: 0.8 m  
Maximum Velocity: 1.7 m/s  
Maximum Depth-Velocity product: 0.37 m<sup>2</sup>/s
- High Risk: No Safe Access/Egress  
An area is considered high risk if any of the criteria is exceeded.  
Depth > 0.8 m  
Velocity > 1.7 m/s  
Depth-Velocity product > 0.37 m<sup>2</sup>/s

Little Etobicoke  
Upper Model Area



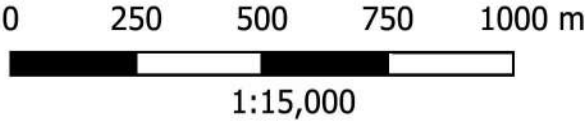
Run Date: June 27, 2018  
Figure Date: September 20, 2018

**2D Model Results Risk**

- Low
- Medium
- High

- Little Etobicoke Catchment
- Upper Model Area
- Railway
- Watercourse
- Roads
- Buildings

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Little Etobicoke Creek Phase 2  
Flood Evaluation Study

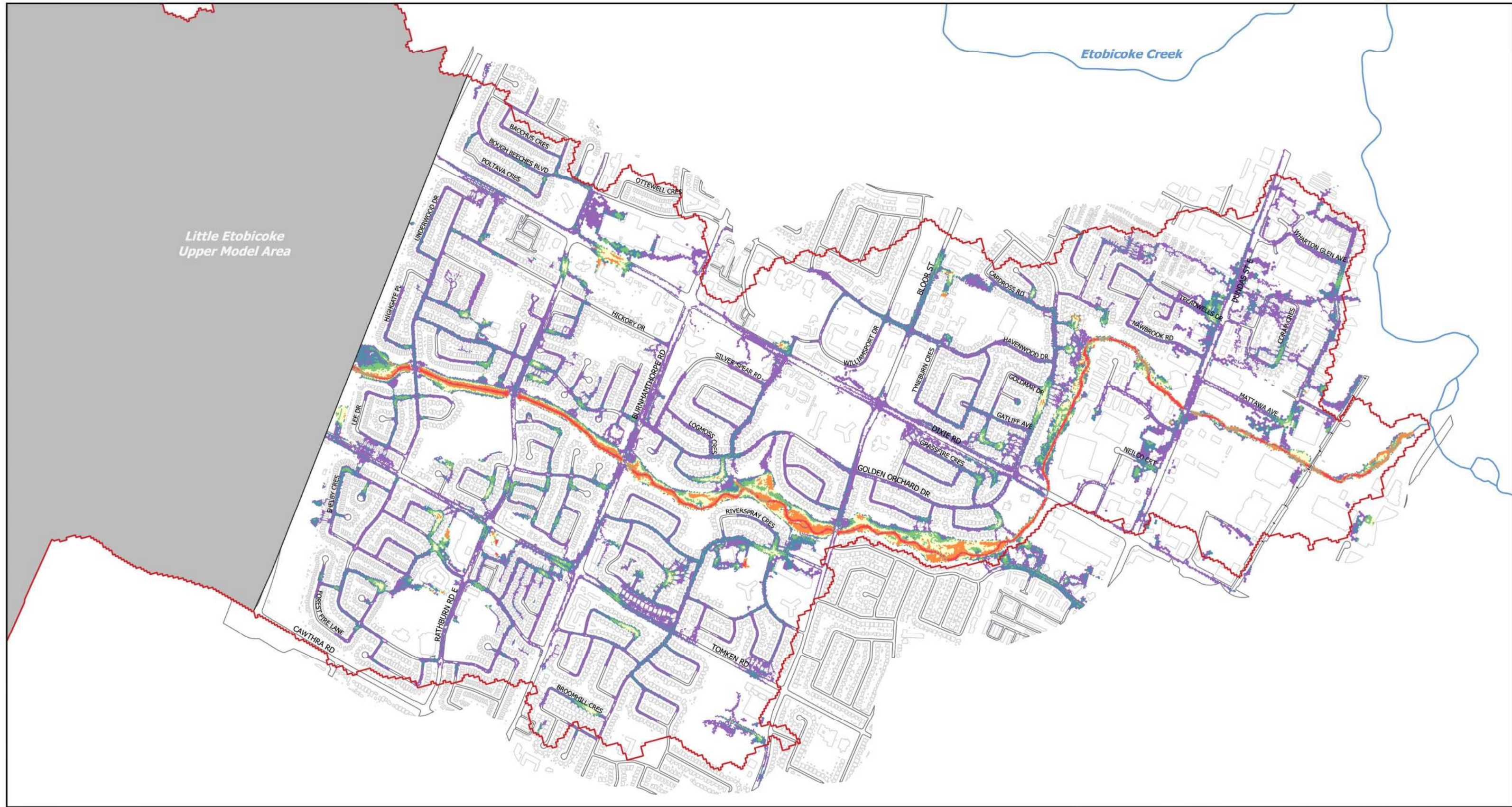
Project #24603

PCSWMM Lower Model Results  
5 Year - Risk

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A. MacKay  
K. Hofbauer  
Map 10.4

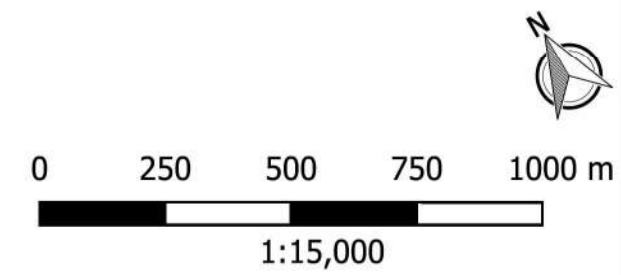




Run Date: June 27, 2018  
Figure Date: September 20, 2018

- |                            |             |
|----------------------------|-------------|
| Little Etobicoke Catchment | 0.80 - 1.50 |
| Upper Model Area           | 1.50 - 2.00 |
| <b>2D Model Results</b>    | > 2.00      |
| <b>Maximum Depth (m)</b>   | Railway     |
| <= 0.10                    | Watercourse |
| 0.10 - 0.30                | Roads       |
| 0.30 - 0.50                | Buildings   |
| 0.50 - 0.80                |             |

This drawing must be used in conjunction with the attached report, Progress Report #2 - Modelling for Flood Characterization and Analysis, (September 2018) and is subject to the same limitations and conditions stated in the report.



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Little Etobicoke Creek Phase 2  
Flood Evaluation Study

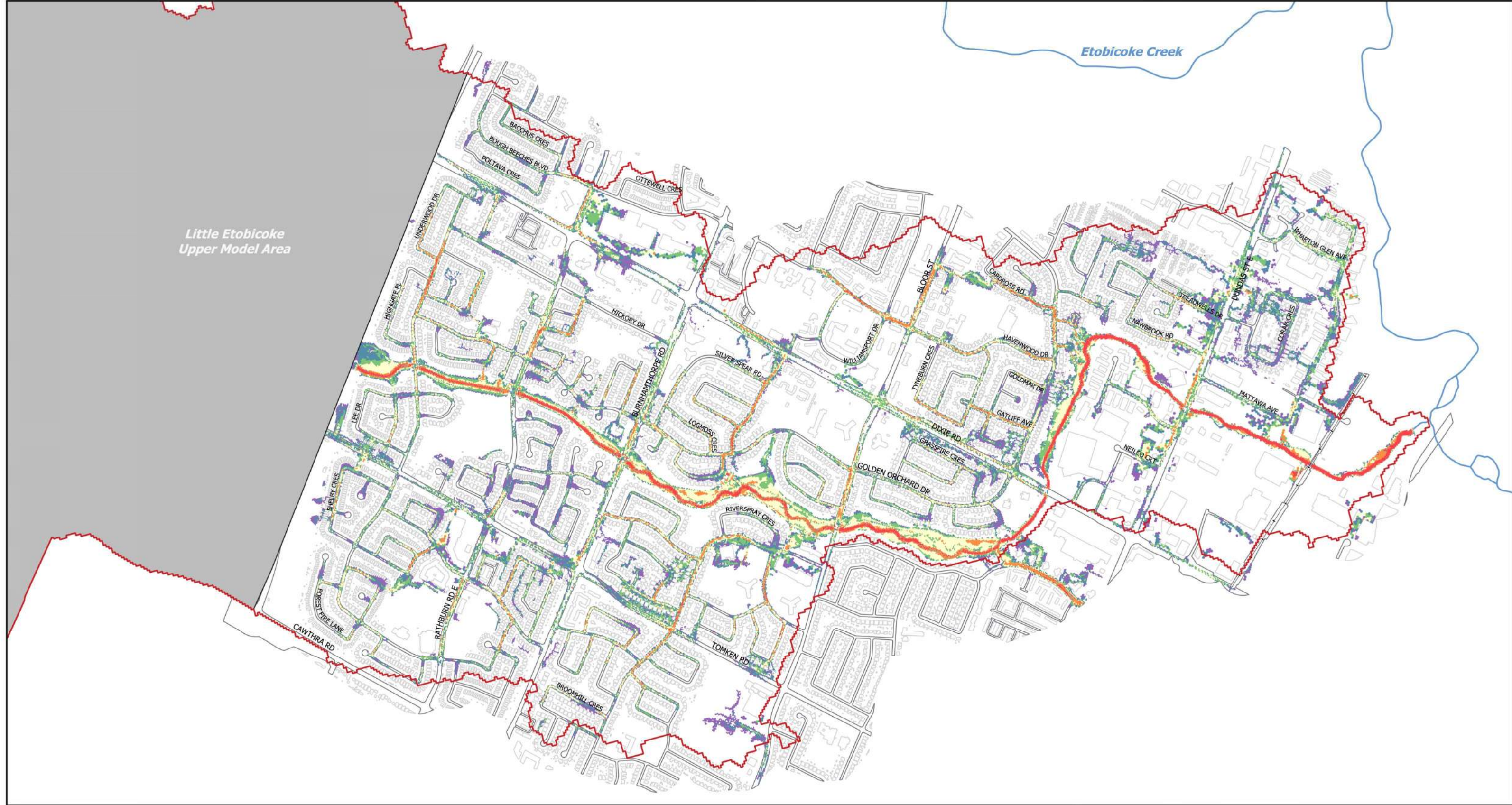
Project #24603

PCSWMM Lower Model Results  
10 Year - Depth

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A. MacKay  
K. Hofbauer  
Map 11.1





Run Date: June 27, 2018  
Figure Date: September 20, 2018

This drawing must be used in conjunction with the attached report, Progress Report #2 - Modelling for Flood Characterization and Analysis, (September 2018) and is subject to the same limitations and conditions stated in the report.

Little Etobicoke Catchment

Upper Model Area

2D Model Results

Maximum Velocity (m/s)

<= 0.10

0.10 - 0.25

0.25 - 0.50

0.50 - 1.00

1.00 - 1.70

1.70 - 2.00

> 2.00

Railway

Watercourse

Roads

Buildings

0

250

500

750

1000 m

1:15,000



Matrix Solutions Inc.

ENVIRONMENT & ENGINEERING

Little Etobicoke Creek Phase 2

Flood Evaluation Study

PCSWMM Lower Model Results

10 Year - Velocity

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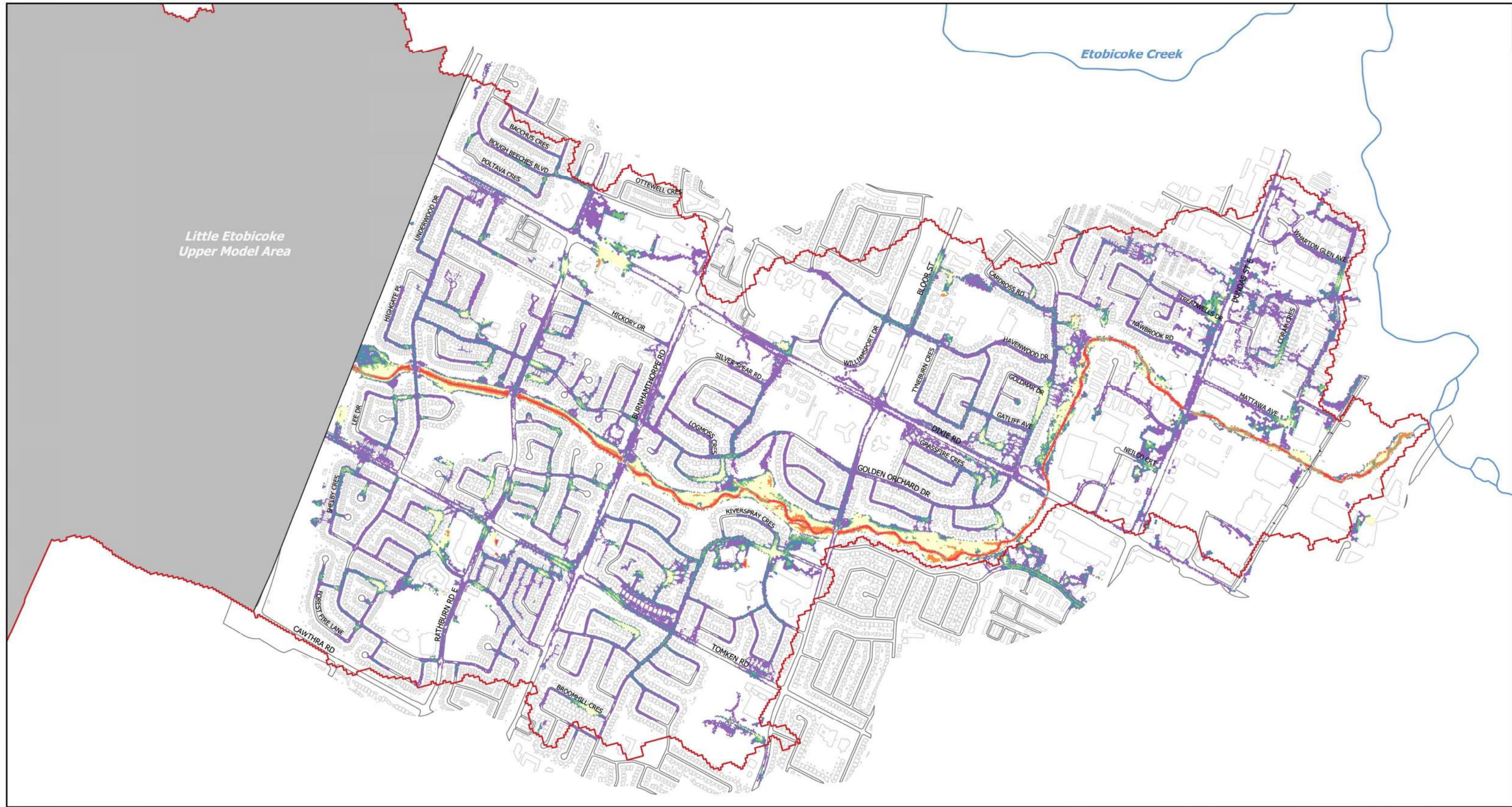
A. MacKay  
K. Hofbauer

Map 11.2

Project #24603

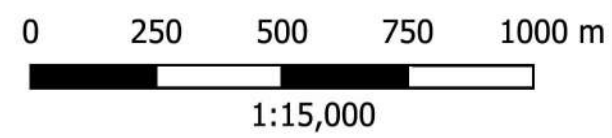
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Run Date: June 27, 2018  
Figure Date: September 20, 2018

- |  |             |
|--|-------------|
| Little Etobicoke Catchment                   | 1.00 - 1.50 |
| Upper Model Area                             | 1.50 - 2.00 |
| <b>2D Model Results</b>                      |             |
| Maximum Depth x Velocity (m <sup>2</sup> /s) |             |
| <= 0.10                                      | > 2.00      |
| 0.10 - 0.25                                  | Railway     |
| 0.25 - 0.37                                  | Watercourse |
| 0.37 - 1.00                                  | Roads       |
|  | Buildings   |



**Matrix Solutions Inc.**  
ENVIRONMENT & ENGINEERING

Little Etobicoke Creek Phase 2  
Flood Evaluation Study

Project #24603

**PCSWMM Lower Model Results**  
**10 Year - Depth x Velocity**

This drawing must be used in conjunction with the attached report, Progress Report #2 - Modelling for Flood Characterization and Analysis, (September 2018) and is subject to the same limitations and conditions stated in the report.

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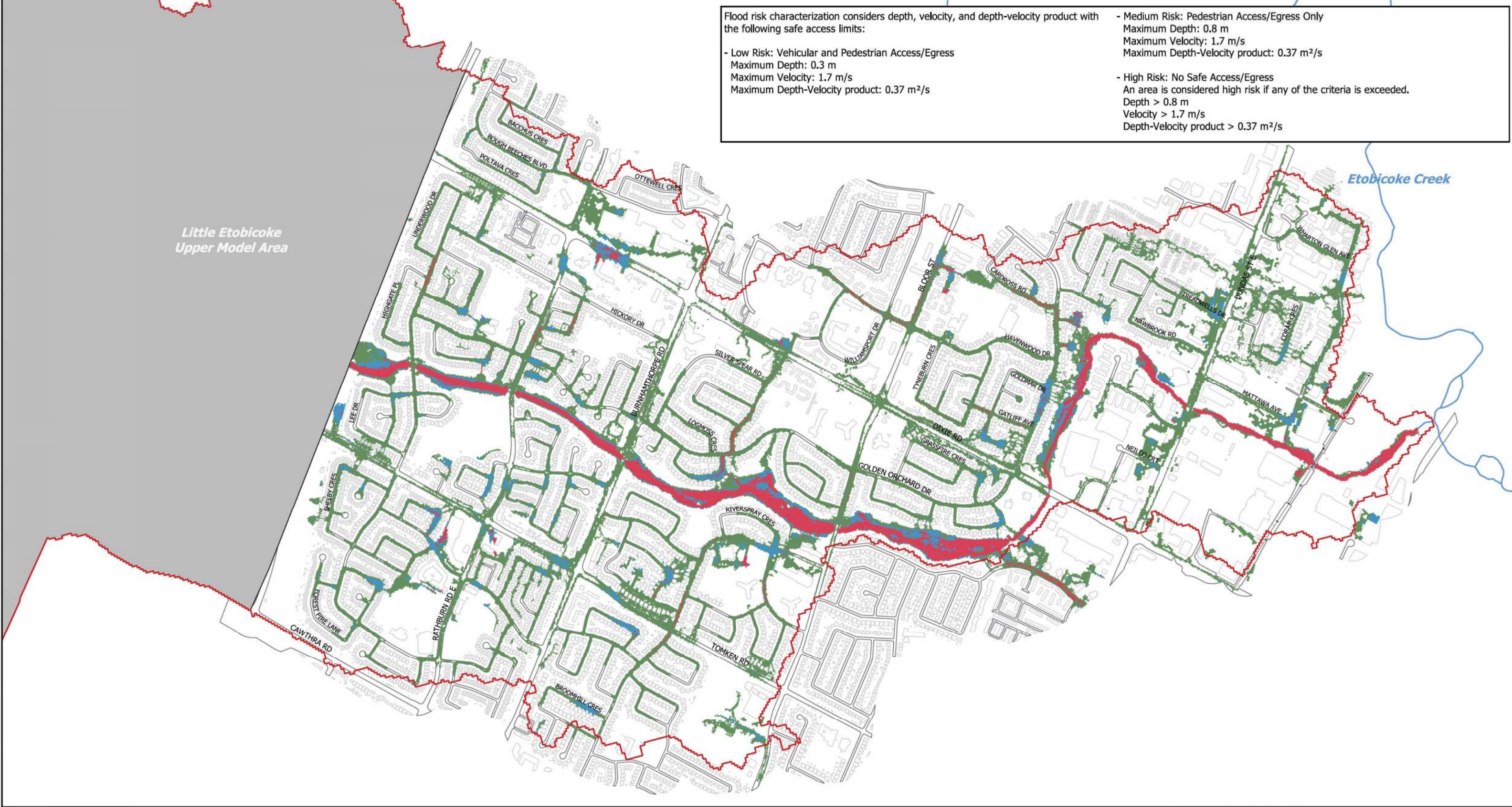
A. MacKay  
K. Hofbauer  
Map 11.3



Flood risk characterization considers depth, velocity, and depth-velocity product with the following safe access limits:

- Low Risk: Vehicular and Pedestrian Access/Egress  
Maximum Depth: 0.3 m  
Maximum Velocity: 1.7 m/s  
Maximum Depth-Velocity product: 0.37 m<sup>2</sup>/s
- Medium Risk: Pedestrian Access/Egress Only  
Maximum Depth: 0.8 m  
Maximum Velocity: 1.7 m/s  
Maximum Depth-Velocity product: 0.37 m<sup>2</sup>/s
- High Risk: No Safe Access/Egress  
An area is considered high risk if any of the criteria is exceeded.  
Depth > 0.8 m  
Velocity > 1.7 m/s  
Depth-Velocity product > 0.37 m<sup>2</sup>/s

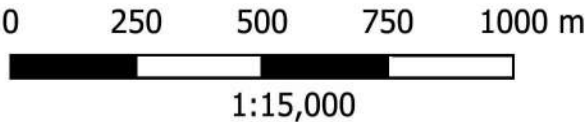
Little Etobicoke  
Upper Model Area



Run Date: June 27, 2018  
Figure Date: September 20, 2018

- Little Etobicoke Catchment
- Upper Model Area
- 2D Model Results Risk
  - Low
  - Medium
  - High
- Railway
- Watercourse
- Roads
- Buildings

This drawing must be used in conjunction with the attached report, Progress Report #2 - Modelling for Flood Characterization and Analysis, (September 2018) and is subject to the same limitations and conditions stated in the report.



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ENVIRONMENT & ENGINEERING

Little Etobicoke Creek Phase 2  
Flood Evaluation Study

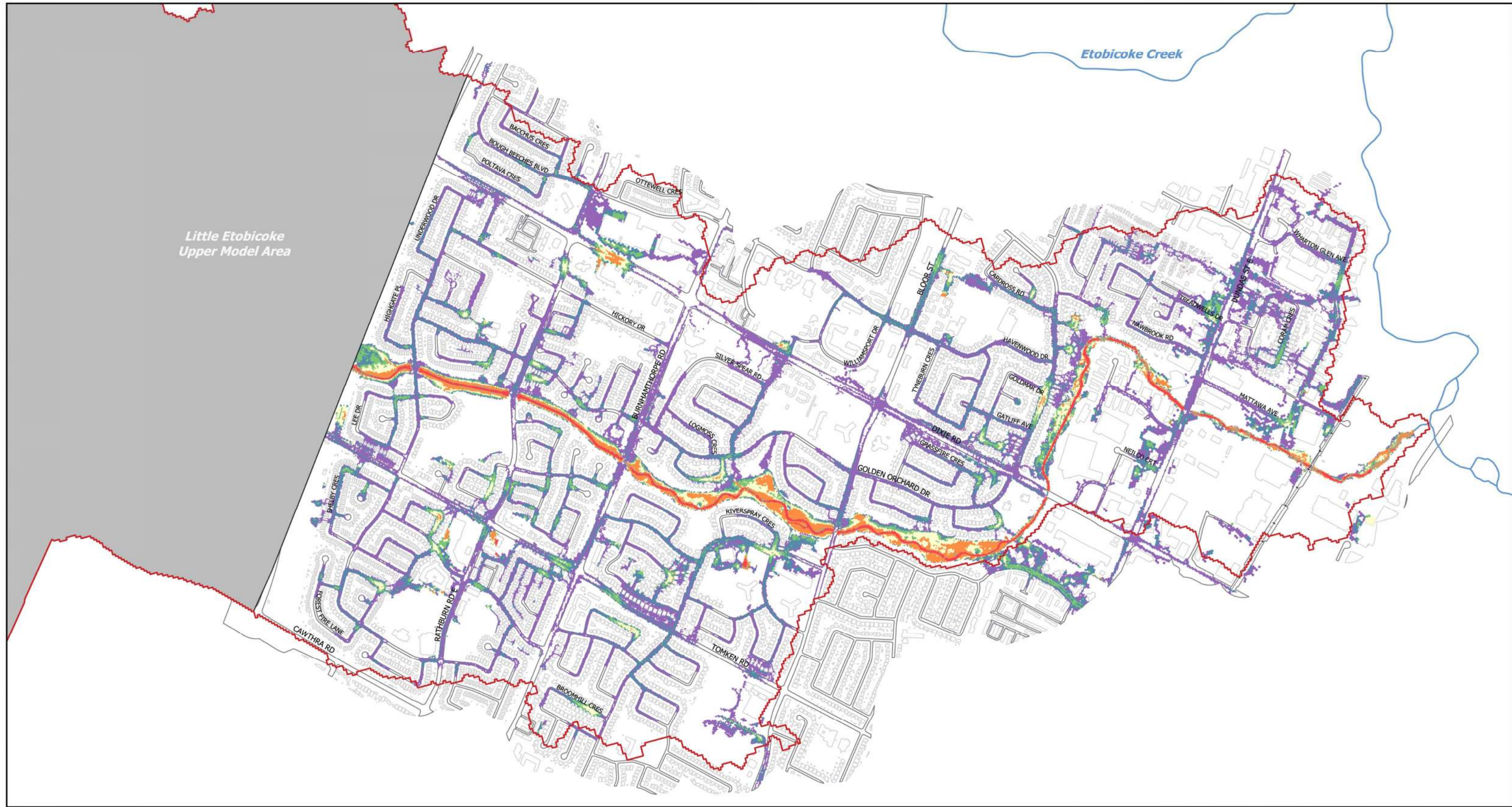
Project #24603

PCSWMM Lower Model Results  
10 Year - Risk

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A. MacKay  
K. Hofbauer  
Map 11.4

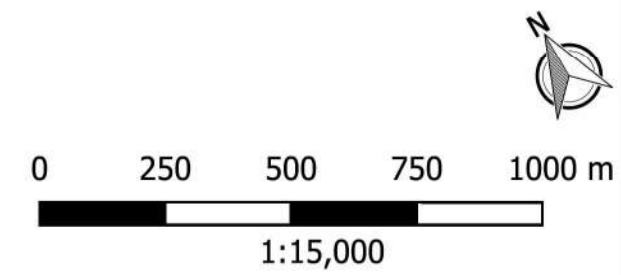




Run Date: July 23, 2018  
Figure Date: September 20, 2018

- |                            |             |
|----------------------------|-------------|
| Little Etobicoke Catchment | 0.80 - 1.50 |
| Upper Model Area           | 1.50 - 2.00 |
| <b>2D Model Results</b>    | > 2.00      |
| <b>Maximum Depth (m)</b>   | Railway     |
| <= 0.10                    | Watercourse |
| 0.10 - 0.30                | Roads       |
| 0.30 - 0.50                | Buildings   |
| 0.50 - 0.80                |             |

This drawing must be used in conjunction with the attached report, Progress Report #2 - Modelling for Flood Characterization and Analysis, (September 2018) and is subject to the same limitations and conditions stated in the report.



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Little Etobicoke Creek Phase 2  
Flood Evaluation Study

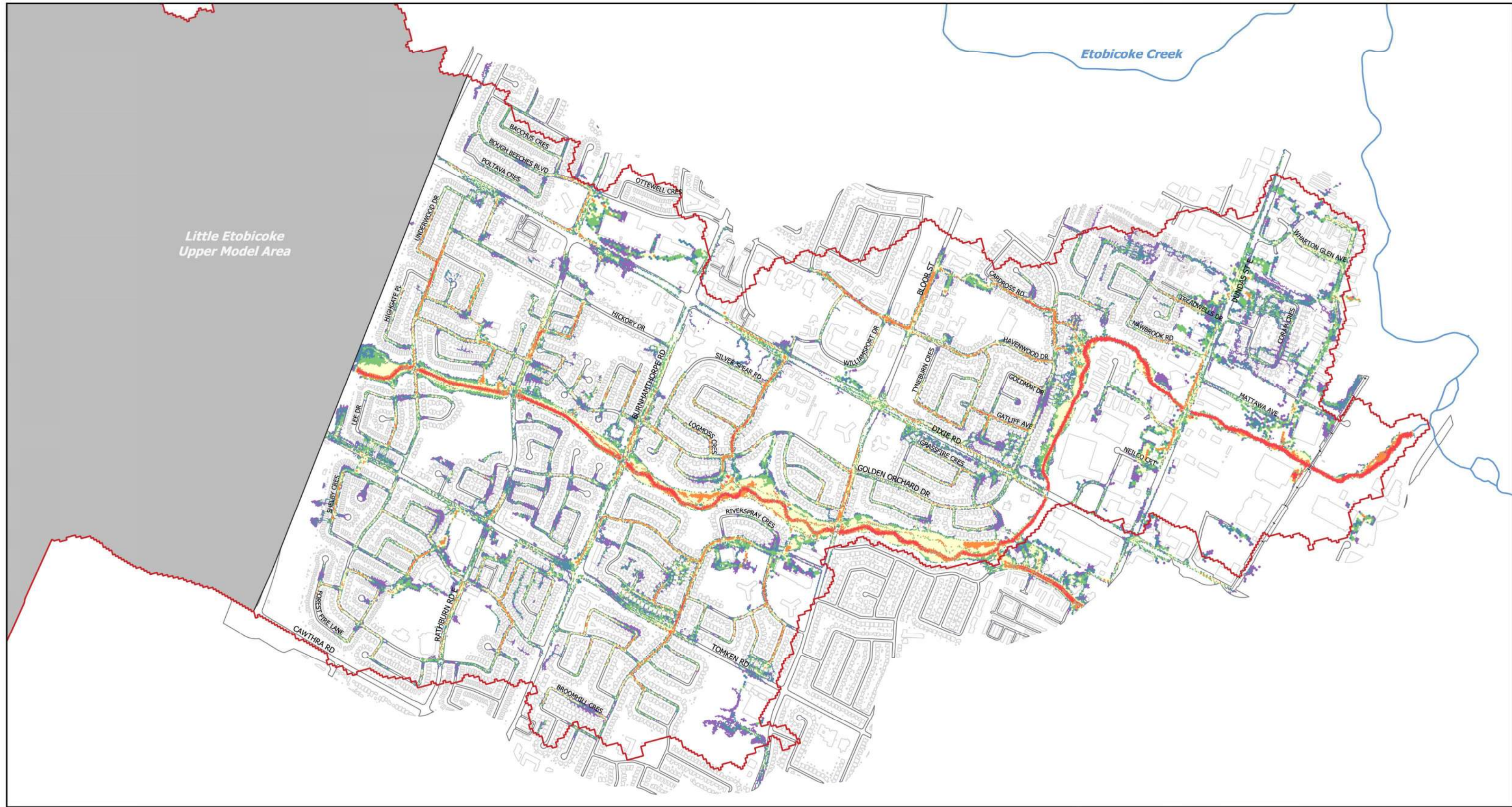
Project #24603

PCSWMM Lower Model Results  
25 Year - Depth

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A. MacKay  
K. Hofbauer  
Map 12.1

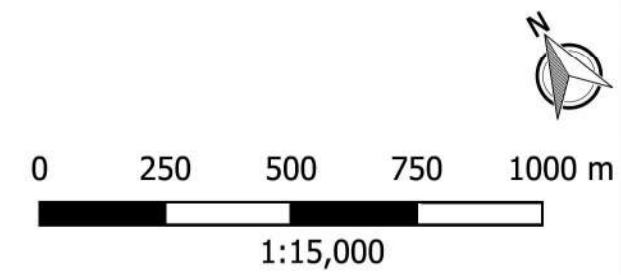




Run Date: July 23, 2018  
Figure Date: September 20, 2018

This drawing must be used in conjunction with the attached report, Progress Report #2 - Modelling for Flood Characterization and Analysis, (September 2018) and is subject to the same limitations and conditions stated in the report.

- |                               |             |
|-------------------------------|-------------|
| Little Etobicoke Catchment    | 1.00 - 1.70 |
| Upper Model Area              | 1.70 - 2.00 |
| <b>2D Model Results</b>       | > 2.00      |
| <b>Maximum Velocity (m/s)</b> | Railway     |
| <= 0.10                       | Watercourse |
| 0.10 - 0.25                   | Roads       |
| 0.25 - 0.50                   | Buildings   |
| 0.50 - 1.00                   |             |



**Matrix Solutions Inc.**  
ENVIRONMENT & ENGINEERING

Little Etobicoke Creek Phase 2  
Flood Evaluation Study

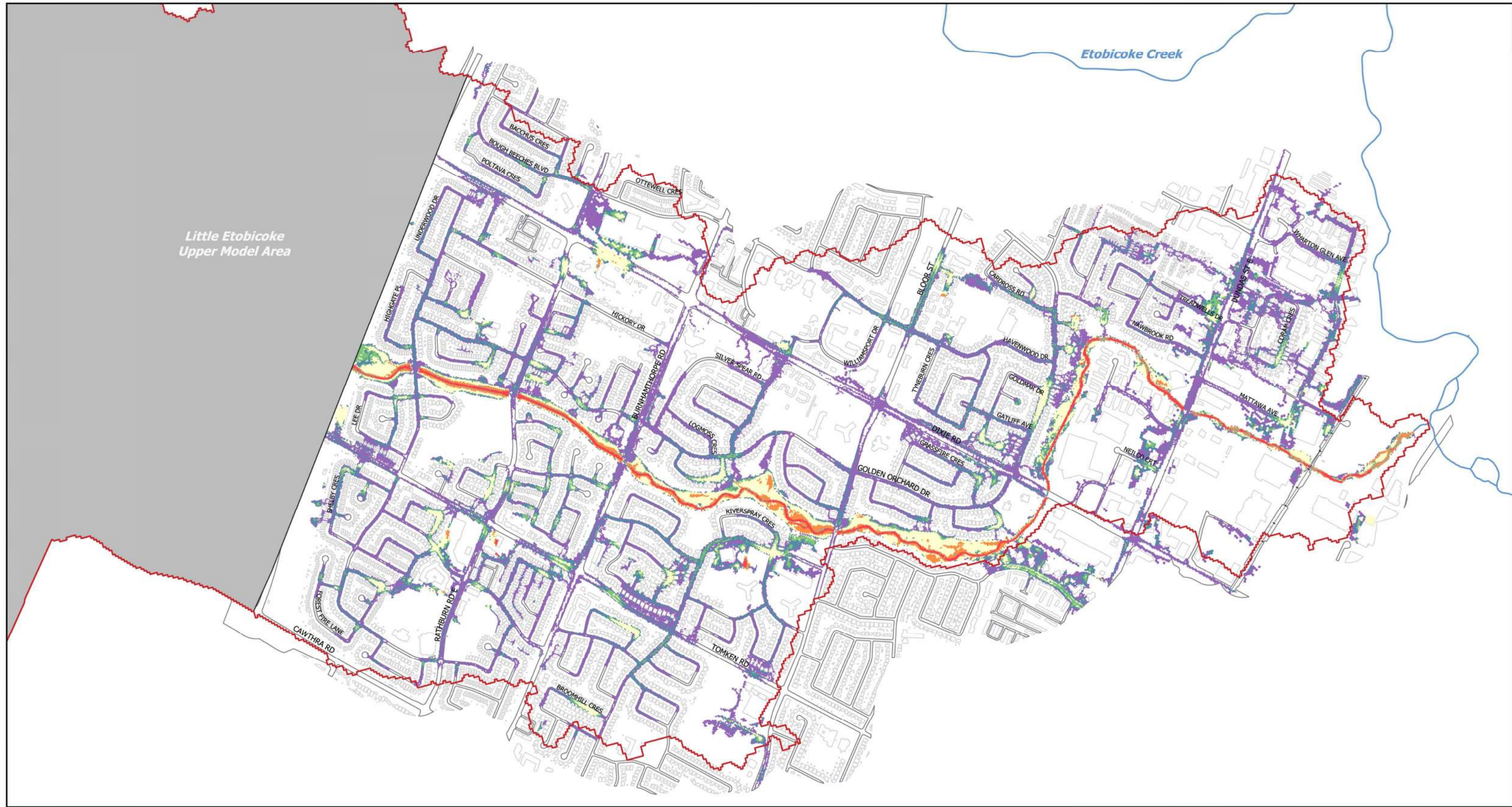
Project #24603

PCSWMM Lower Model Results  
25 Year - Velocity

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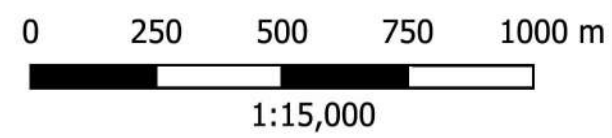
A. MacKay  
K. Hofbauer  
Map 12.2





Run Date: July 23, 2018  
Figure Date: September 20, 2018

- |                                 |             |
|---------------------------------|-------------|
| Little Etobicoke Catchment      | 1.00 - 1.50 |
| Upper Model Area                | 1.50 - 2.00 |
| <b>2D Model Results</b>         |             |
| Maximum Depth x Velocity (m²/s) |             |
| ≤ 0.10                          | > 2.00      |
| 0.10 - 0.25                     | Railway     |
| 0.25 - 0.37                     | Watercourse |
| 0.37 - 1.00                     | Roads       |
|                                 | Buildings   |



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Little Etobicoke Creek Phase 2  
Flood Evaluation Study

Project #24603

**PCSWMM Lower Model Results**  
**25 Year - Depth x Velocity**

This drawing must be used in conjunction with the attached report, Progress Report #2 - Modelling for Flood Characterization and Analysis, (September 2018) and is subject to the same limitations and conditions stated in the report.

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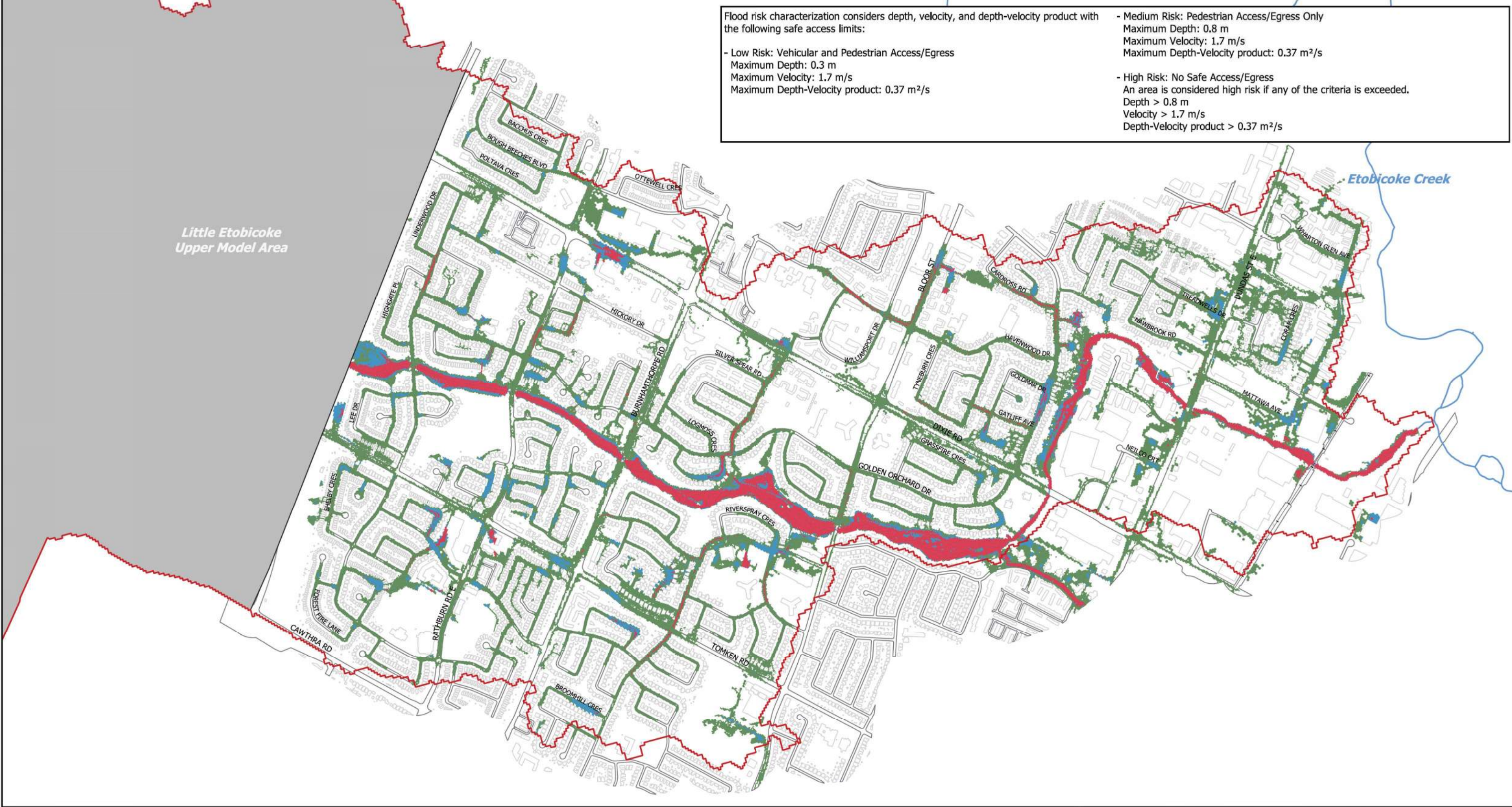
A. MacKay  
K. Hofbauer  
Map 12.3



Flood risk characterization considers depth, velocity, and depth-velocity product with the following safe access limits:

- Low Risk: Vehicular and Pedestrian Access/Egress  
Maximum Depth: 0.3 m  
Maximum Velocity: 1.7 m/s  
Maximum Depth-Velocity product: 0.37 m<sup>2</sup>/s
- Medium Risk: Pedestrian Access/Egress Only  
Maximum Depth: 0.8 m  
Maximum Velocity: 1.7 m/s  
Maximum Depth-Velocity product: 0.37 m<sup>2</sup>/s
- High Risk: No Safe Access/Egress  
An area is considered high risk if any of the criteria is exceeded.  
Depth > 0.8 m  
Velocity > 1.7 m/s  
Depth-Velocity product > 0.37 m<sup>2</sup>/s

Little Etobicoke  
Upper Model Area



Run Date: July 23, 2018  
Figure Date: September 20, 2018

Little Etobicoke Catchment

Upper Model Area

Low

Medium

High

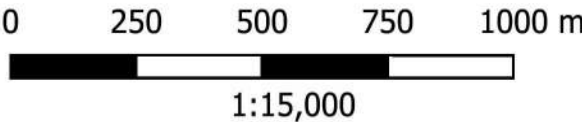
Railway

Watercourse

Roads

Buildings

This drawing must be used in conjunction with the attached report, Progress Report #2 - Modelling for Flood Characterization and Analysis, (September 2018) and is subject to the same limitations and conditions stated in the report.



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Little Etobicoke Creek Phase 2  
Flood Evaluation Study

Project #24603

PCSWMM Lower Model Results  
25 Year - Risk

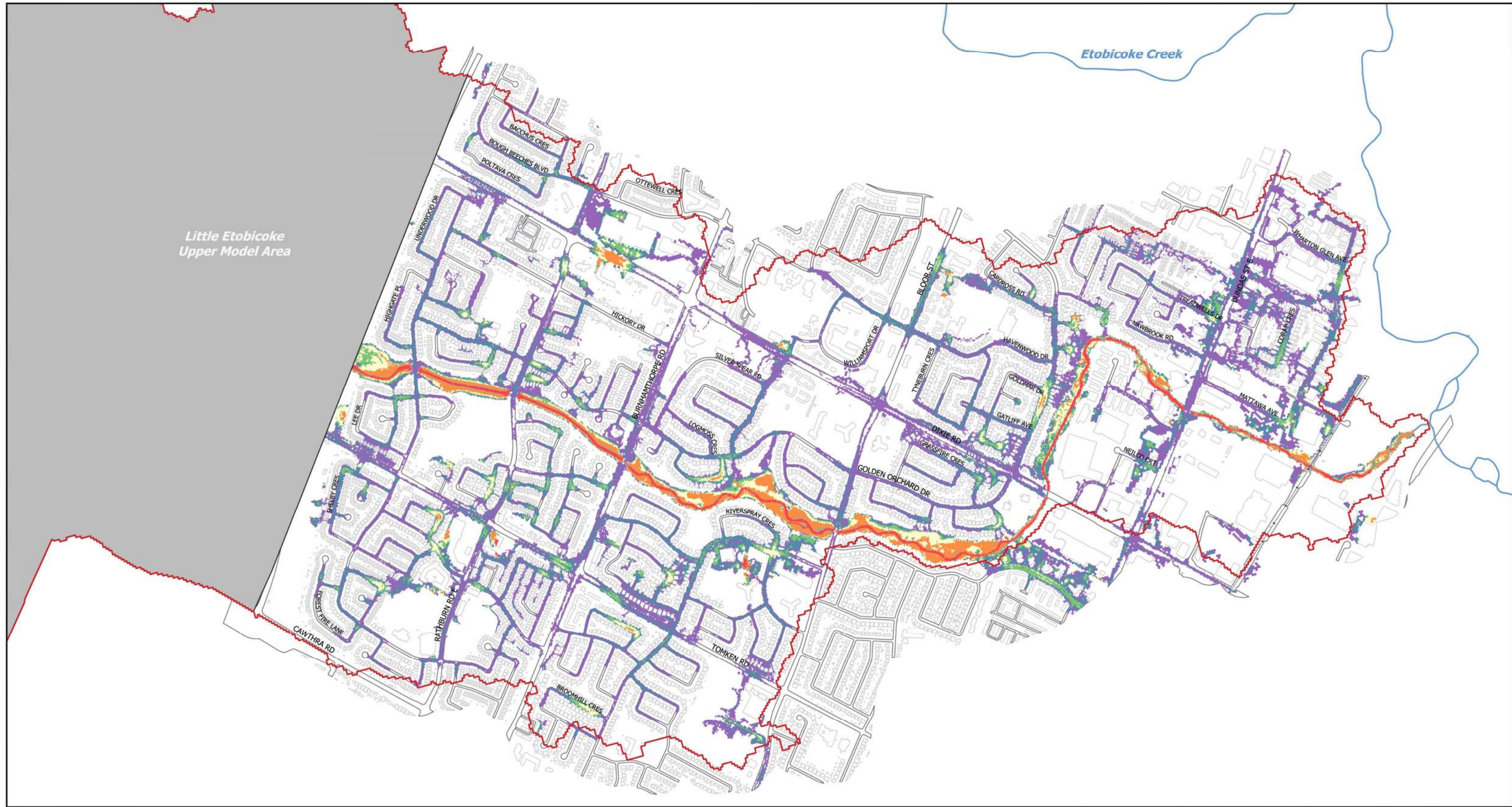
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A. MacKay  
K. Hofbauer

Map 12.4

T:\24603 - Little EtobicokeCr\_Flood\531105 Analysis\GIS\Phase 2



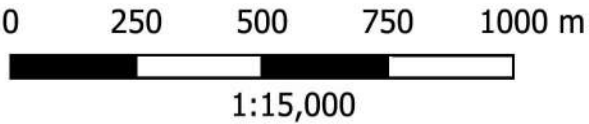


Run Date: June 27, 2018  
Figure Date: September 20, 2018

This drawing must be used in conjunction with the attached report, Progress Report #2 - Modelling for Flood Characterization and Analysis, (September 2018) and is subject to the same limitations and conditions stated in the report.

T:\24603 - Little EtobicokeCr\_Flood\531105 Analysis\GIS\Phase 2

- |                            |             |
|----------------------------|-------------|
| Little Etobicoke Catchment | 0.80 - 1.50 |
| Upper Model Area           | 1.50 - 2.00 |
| <b>2D Model Results</b>    | > 2.00      |
| <b>Maximum Depth (m)</b>   | Railway     |
| <= 0.10                    | Watercourse |
| 0.10 - 0.30                | Roads       |
| 0.30 - 0.50                | Buildings   |
| 0.50 - 0.80                |             |



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Little Etobicoke Creek Phase 2  
Flood Evaluation Study

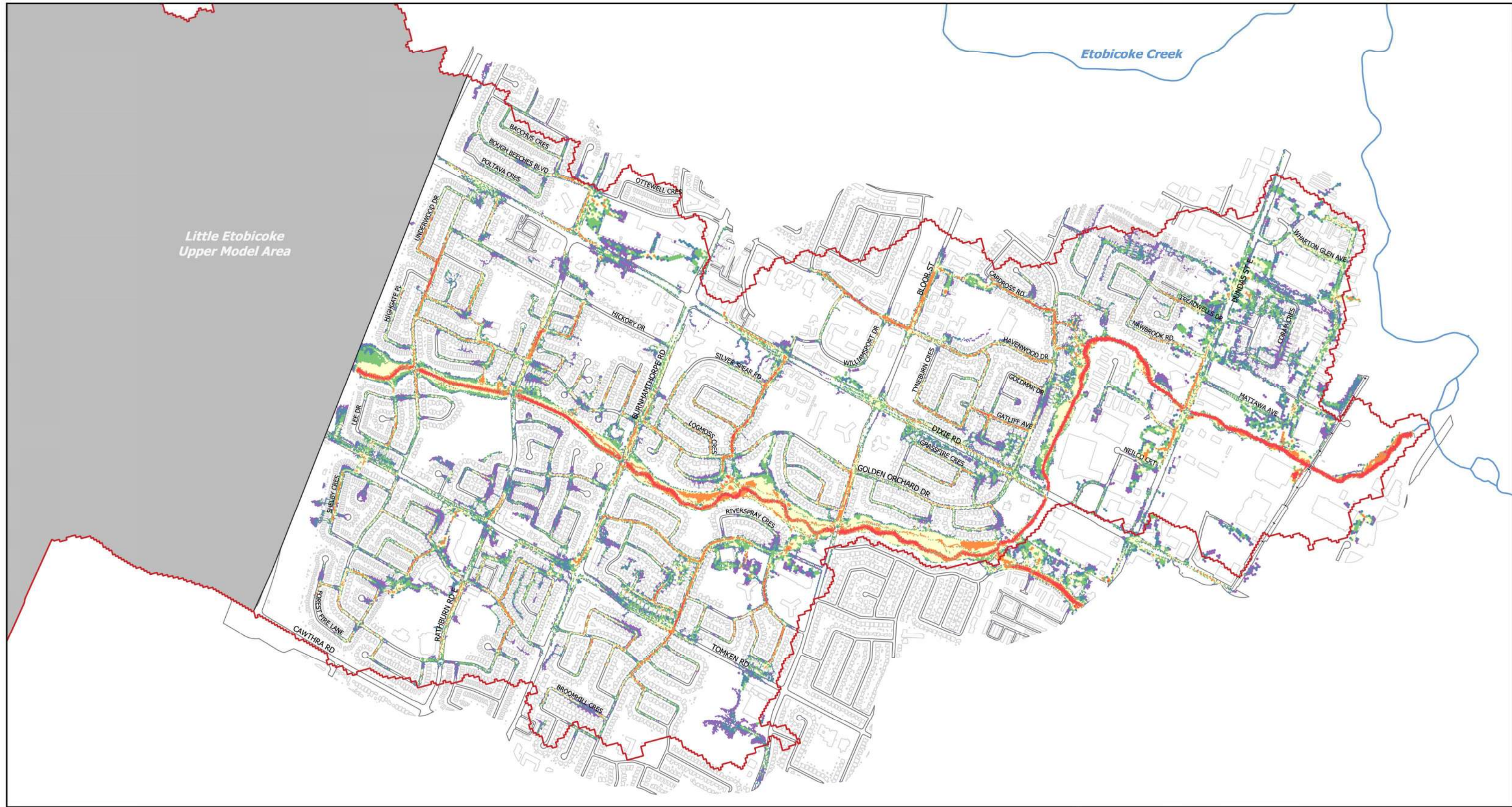
Project #24603

PCSWMM Lower Model Results  
50 Year - Depth

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A. MacKay  
K. Hofbauer  
Map 13.1





Run Date: June 27, 2018  
Figure Date: September 20, 2018

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Little Etobicoke Catchment

Upper Model Area

2D Model Results  
Maximum Velocity (m/s)

<= 0.10

0.10 - 0.25

0.25 - 0.50

0.50 - 1.00

1.00 - 1.70

1.70 - 2.00

> 2.00

Railway

Watercourse

Roads

Buildings

02505007501000 m

1:15,000



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ENVIRONMENT & ENGINEERING

Little Etobicoke Creek Phase 2  
Flood Evaluation Study

Project #24603

PCSWMM Lower Model Results  
50 Year - Velocity

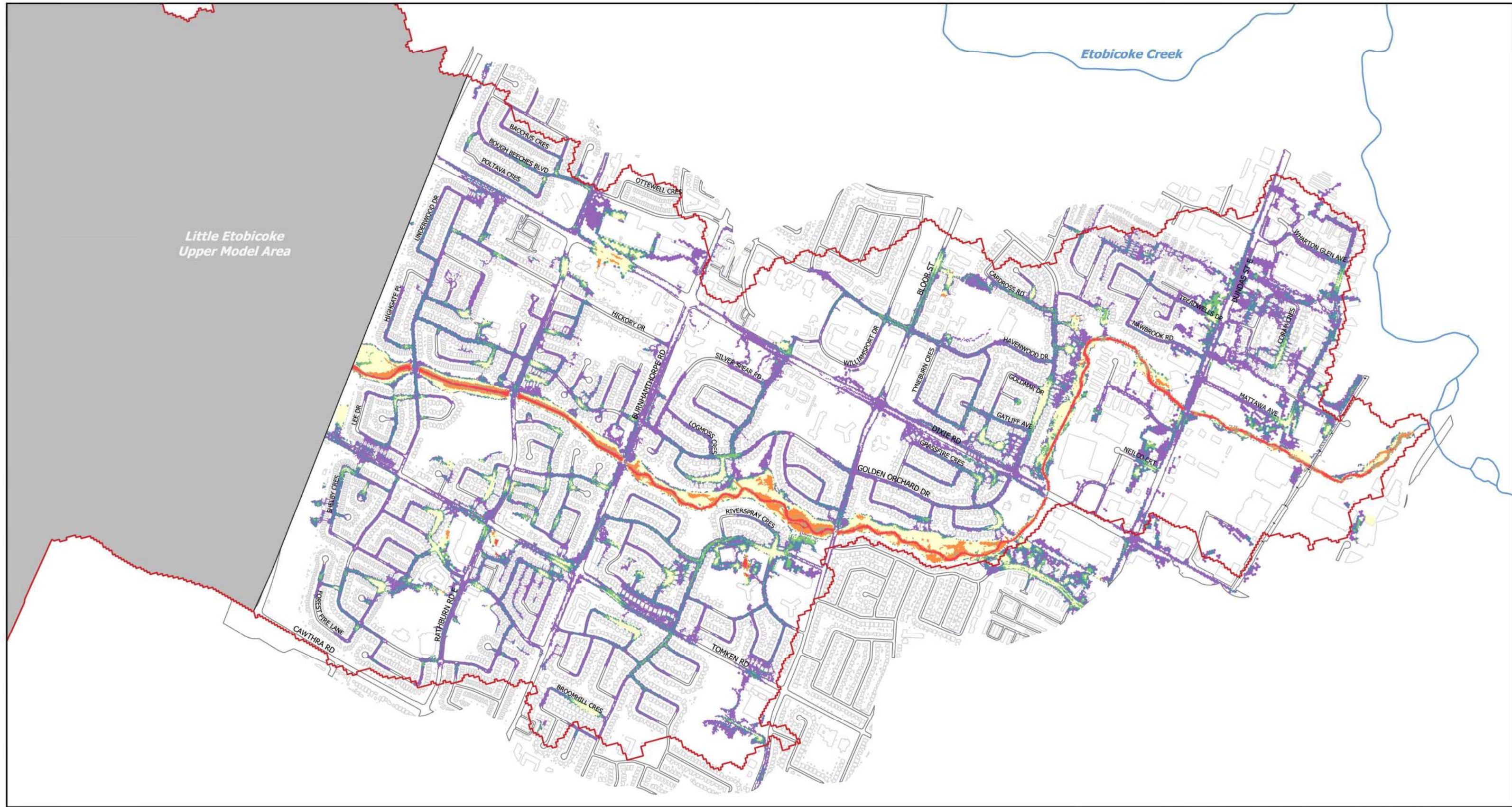
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A. MacKay  
K. Hofbauer

Map 13.2

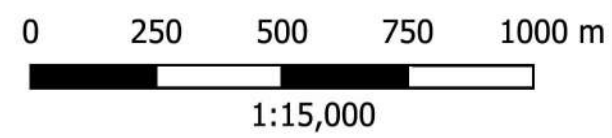
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Run Date: June 27, 2018  
Figure Date: September 20, 2018

- |                                 |             |
|---------------------------------|-------------|
| Little Etobicoke Catchment      | 1.00 - 1.50 |
| Upper Model Area                | 1.50 - 2.00 |
| <b>2D Model Results</b>         |             |
| Maximum Depth x Velocity (m²/s) |             |
| ≤ 0.10                          | > 2.00      |
| 0.10 - 0.25                     | Railway     |
| 0.25 - 0.37                     | Watercourse |
| 0.37 - 1.00                     | Roads       |
|                                 | Buildings   |



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Little Etobicoke Creek Phase 2  
Flood Evaluation Study

Project #24603

**PCSWMM Lower Model Results**  
**50 Year - Depth x Velocity**

This drawing must be used in conjunction with the attached report, Progress Report #2 - Modelling for Flood Characterization and Analysis, (September 2018) and is subject to the same limitations and conditions stated in the report.

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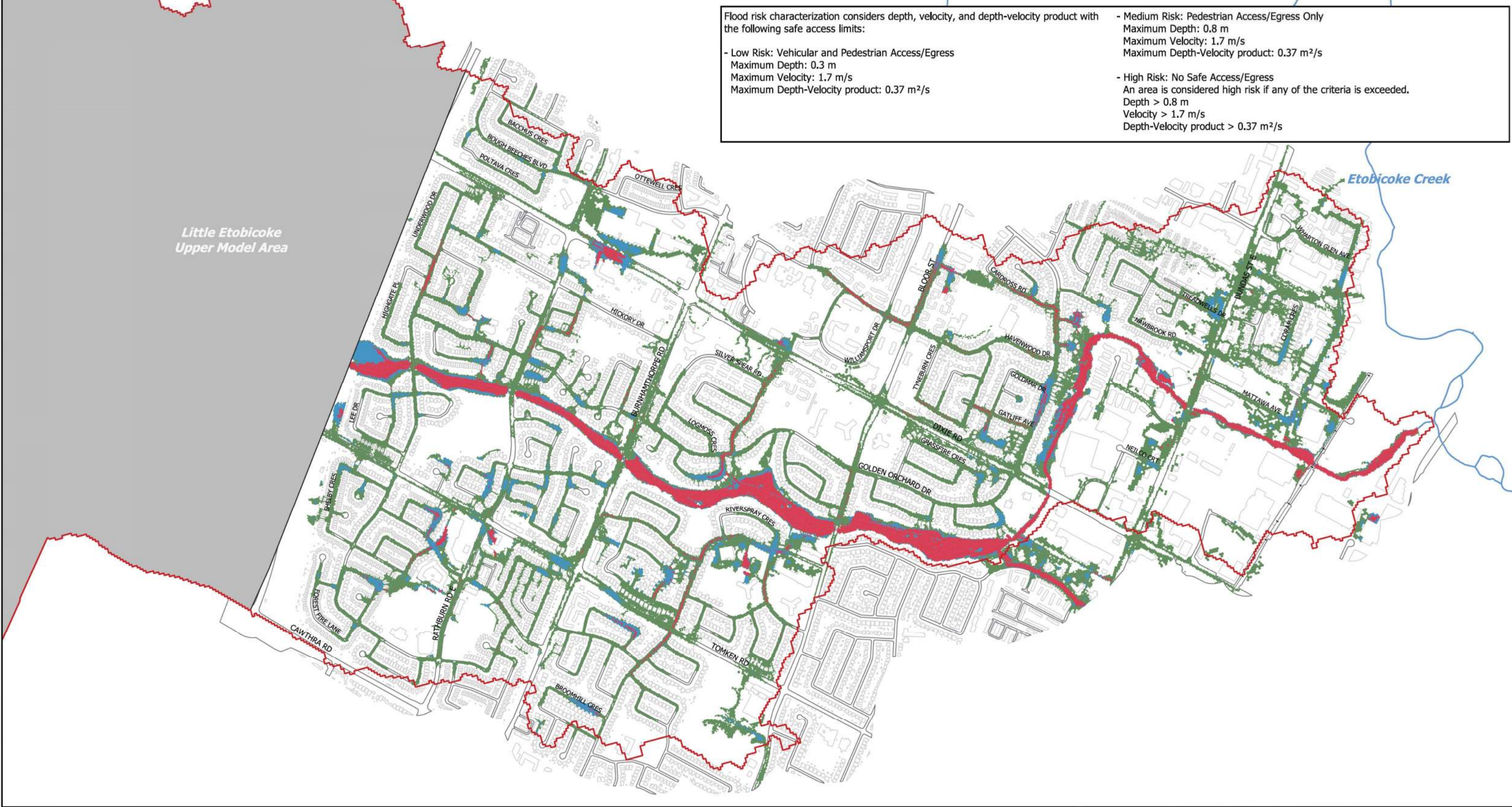
A. MacKay  
K. Hofbauer  
Map 13.3



Flood risk characterization considers depth, velocity, and depth-velocity product with the following safe access limits:

- Low Risk: Vehicular and Pedestrian Access/Egress  
Maximum Depth: 0.3 m  
Maximum Velocity: 1.7 m/s  
Maximum Depth-Velocity product: 0.37 m<sup>2</sup>/s
- Medium Risk: Pedestrian Access/Egress Only  
Maximum Depth: 0.8 m  
Maximum Velocity: 1.7 m/s  
Maximum Depth-Velocity product: 0.37 m<sup>2</sup>/s
- High Risk: No Safe Access/Egress  
An area is considered high risk if any of the criteria is exceeded.  
Depth > 0.8 m  
Velocity > 1.7 m/s  
Depth-Velocity product > 0.37 m<sup>2</sup>/s

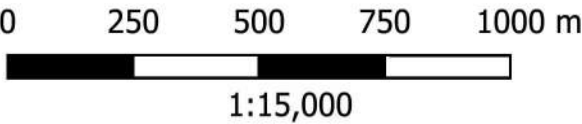
Little Etobicoke  
Upper Model Area



Run Date: June 27, 2018  
Figure Date: September 20, 2018

This drawing must be used in conjunction with the attached report, Progress Report #2 - Modelling for Flood Characterization and Analysis, (September 2018) and is subject to the same limitations and conditions stated in the report.

- Little Etobicoke Catchment
- Upper Model Area
- 2D Model Results Risk
  - Low
  - Medium
  - High
- Railway
- Watercourse
- Roads
- Buildings



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Little Etobicoke Creek Phase 2  
Flood Evaluation Study

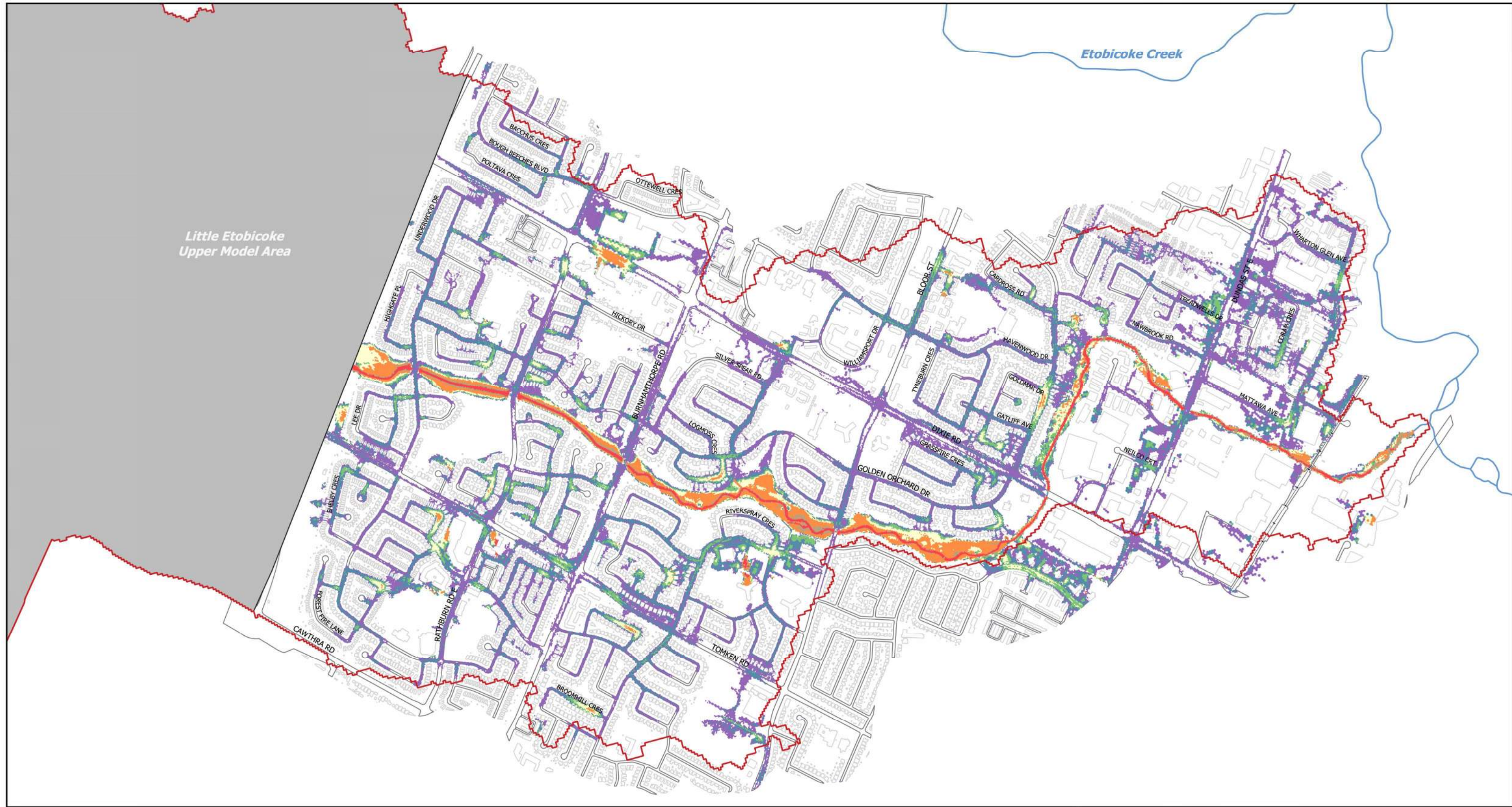
Project #24603

PCSWMM Lower Model Results  
50 Year - Risk

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A. MacKay  
K. Hofbauer  
Map 13.4

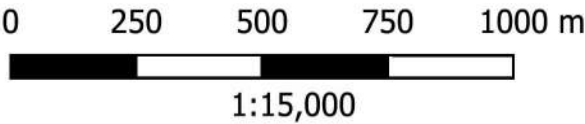




Run Date: June 14, 2018  
Figure Date: September 20, 2018

This drawing must be used in conjunction with the attached report, Progress Report #2 - Modelling for Flood Characterization and Analysis, (September 2018) and is subject to the same limitations and conditions stated in the report.

- |                            |             |
|----------------------------|-------------|
| Little Etobicoke Catchment | 0.80 - 1.50 |
| Upper Model Area           | 1.50 - 2.00 |
| <b>2D Model Results</b>    | > 2.00      |
| <b>Maximum Depth (m)</b>   | Railway     |
| <= 0.10                    | Watercourse |
| 0.10 - 0.30                | Roads       |
| 0.30 - 0.50                | Buildings   |
| 0.50 - 0.80                |             |



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Little Etobicoke Creek Phase 2  
Flood Evaluation Study

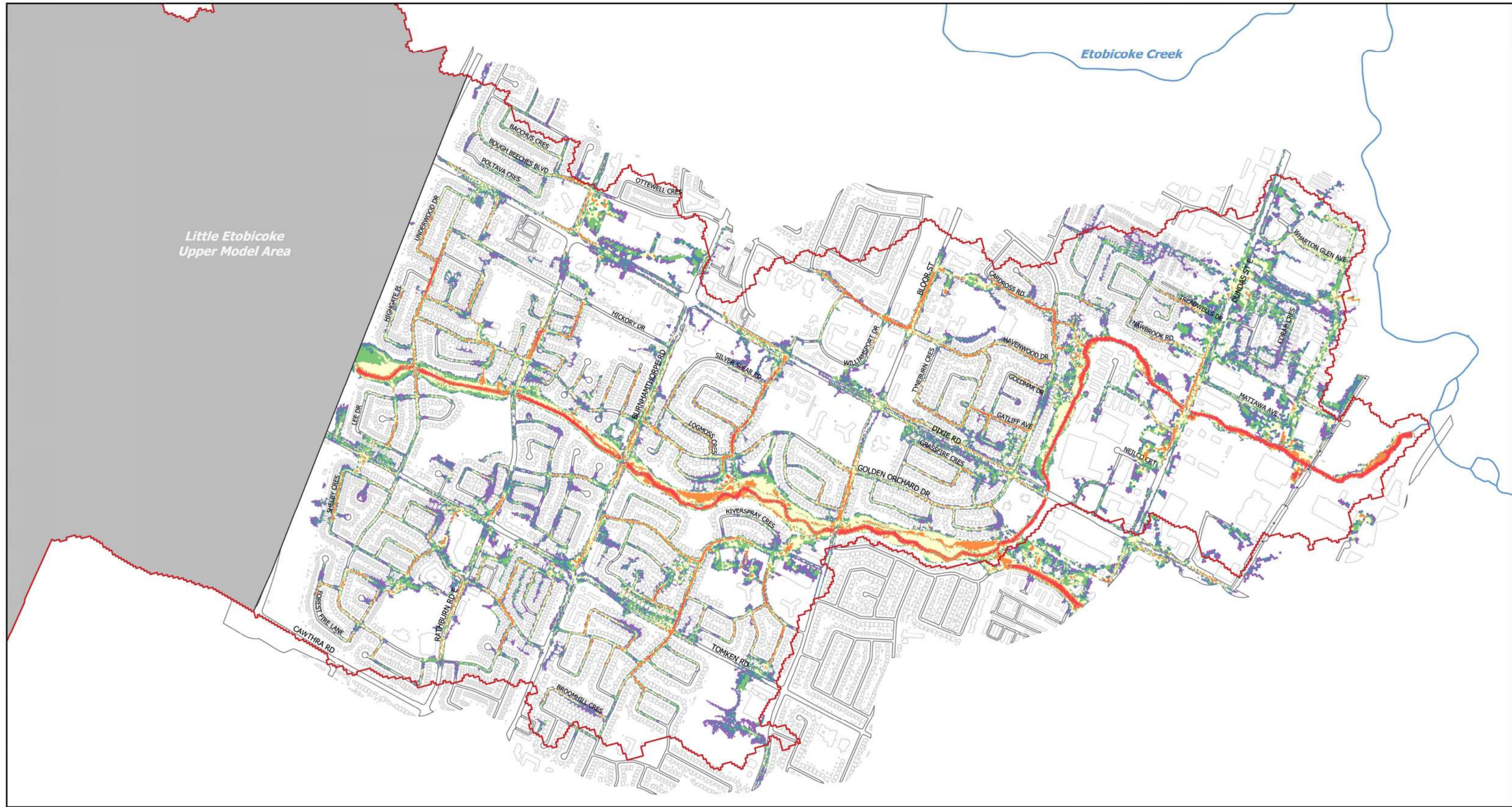
Project #24603

PCSWMM Lower Model Results  
100 Year - Depth

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A. MacKay  
K. Hofbauer  
Map 14.1

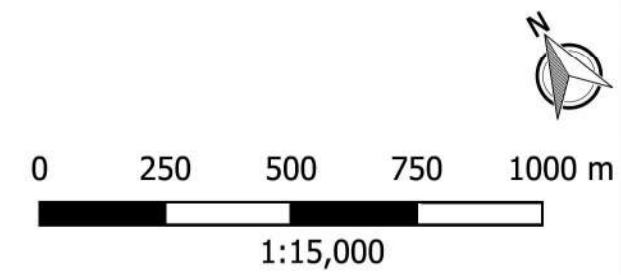




Run Date: June 14, 2018  
Figure Date: September 20, 2018

- |                               |             |
|-------------------------------|-------------|
| Little Etobicoke Catchment    | 1.00 - 1.70 |
| Upper Model Area              | 1.70 - 2.00 |
| <b>2D Model Results</b>       | > 2.00      |
| <b>Maximum Velocity (m/s)</b> | Railway     |
| <= 0.10                       | Watercourse |
| 0.10 - 0.25                   | Roads       |
| 0.25 - 0.50                   | Buildings   |
| 0.50 - 1.00                   |             |

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ENVIRONMENT & ENGINEERING

Little Etobicoke Creek Phase 2  
Flood Evaluation Study

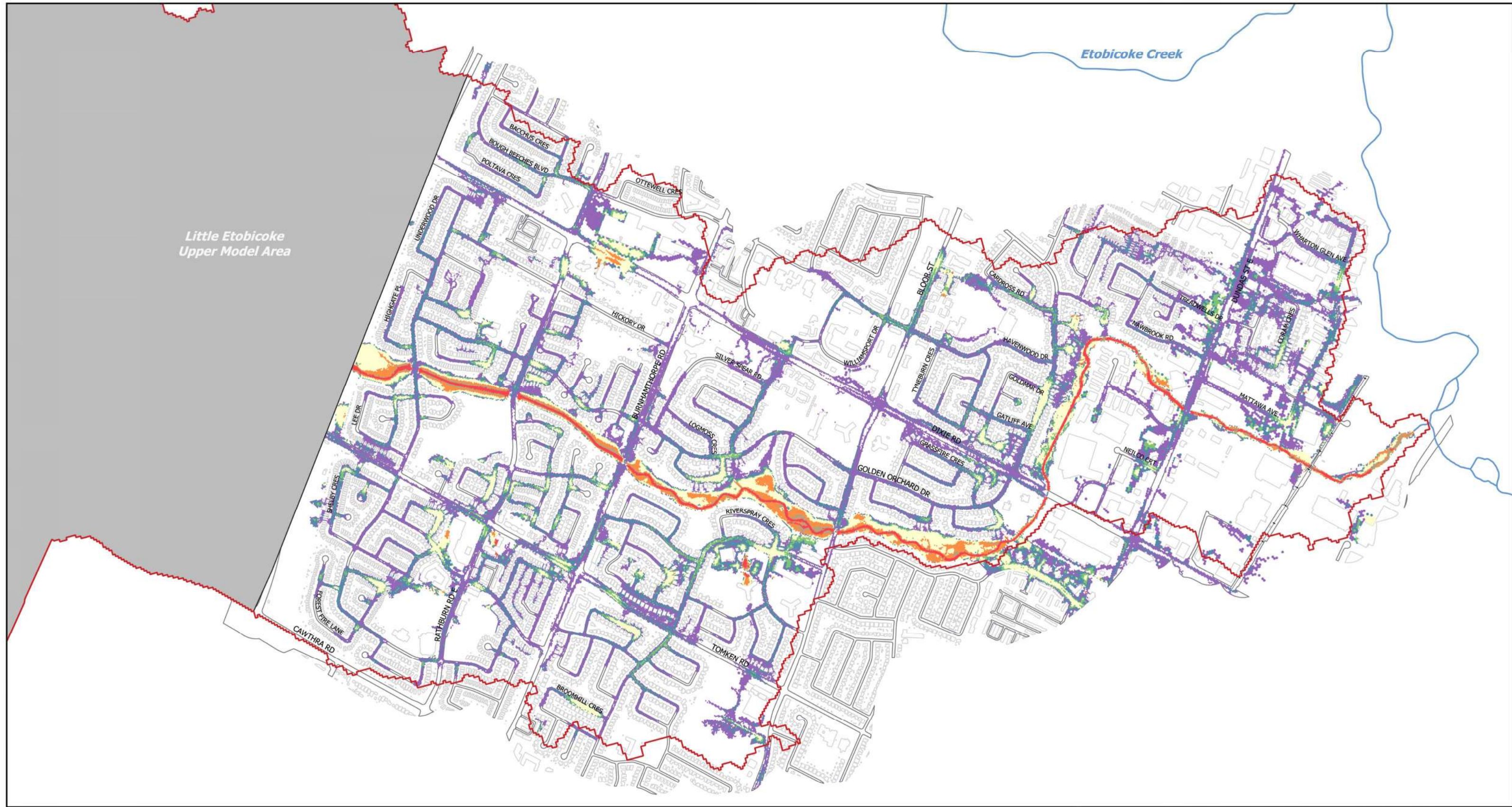
Project #24603

**PCSWMM Lower Model Results**  
**100 Year - Velocity**

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A. MacKay  
K. Hofbauer  
Map 14.2

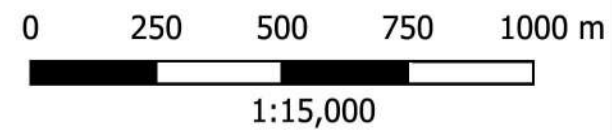




Run Date: June 14, 2018  
Figure Date: September 20, 2018

- |  |             |
|--|-------------|
| Little Etobicoke Catchment                   | 1.00 - 1.50 |
| Upper Model Area                             | 1.50 - 2.00 |
| <b>2D Model Results</b>                      |             |
| Maximum Depth x Velocity (m <sup>2</sup> /s) |             |
| <= 0.10                                      | > 2.00      |
| 0.10 - 0.25                                  | Railway     |
| 0.25 - 0.37                                  | Watercourse |
| 0.37 - 1.00                                  | Roads       |
|  | Buildings   |

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**Matrix Solutions Inc.**  
ENVIRONMENT & ENGINEERING

Little Etobicoke Creek Phase 2  
Flood Evaluation Study

Project #24603

**PCSWMM Lower Model Results**  
**100 Year - Depth x Velocity**

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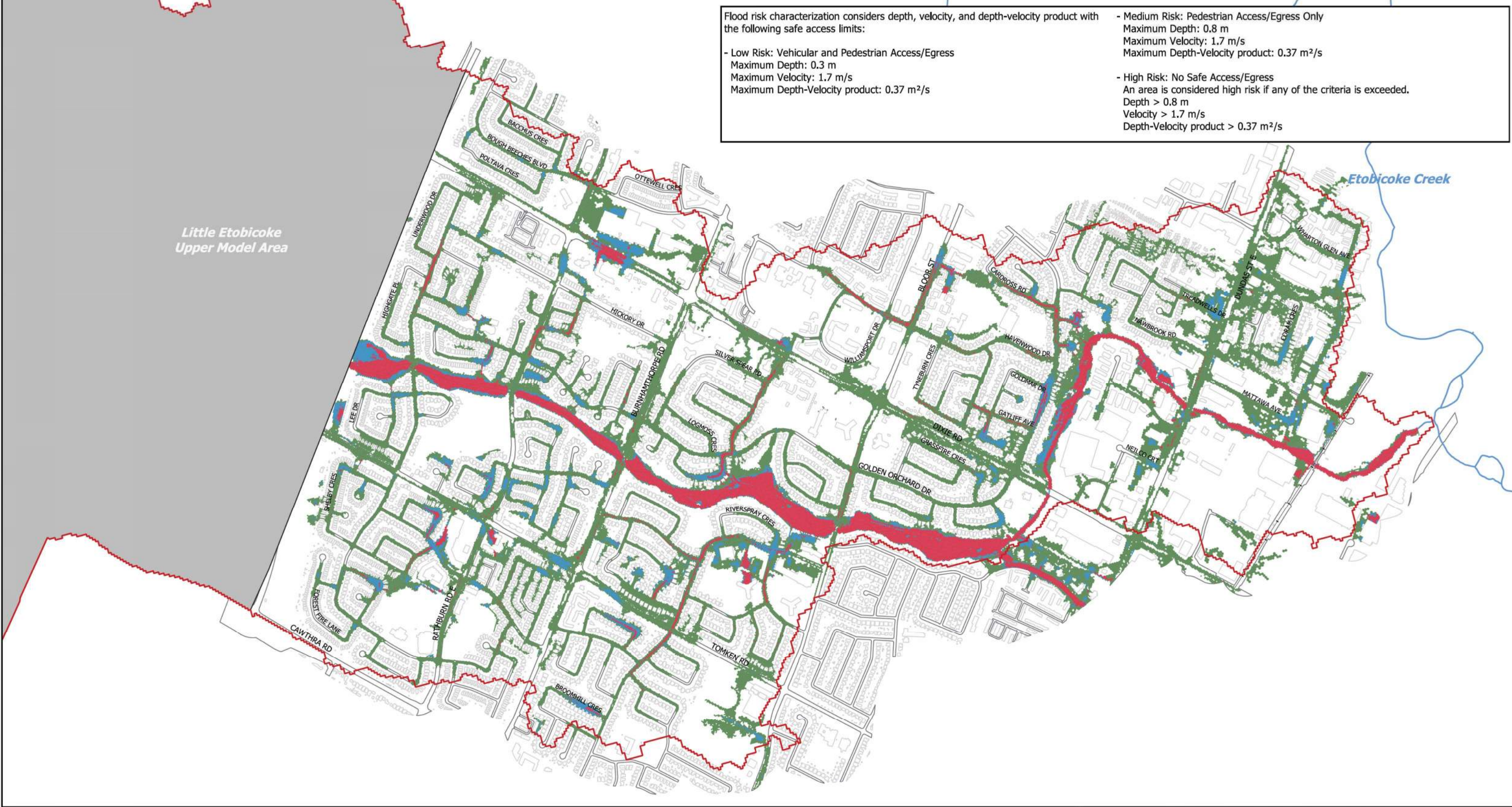
A. MacKay  
K. Hofbauer  
Map 14.3



Flood risk characterization considers depth, velocity, and depth-velocity product with the following safe access limits:

- Low Risk: Vehicular and Pedestrian Access/Egress  
Maximum Depth: 0.3 m  
Maximum Velocity: 1.7 m/s  
Maximum Depth-Velocity product: 0.37 m<sup>2</sup>/s
- Medium Risk: Pedestrian Access/Egress Only  
Maximum Depth: 0.8 m  
Maximum Velocity: 1.7 m/s  
Maximum Depth-Velocity product: 0.37 m<sup>2</sup>/s
- High Risk: No Safe Access/Egress  
An area is considered high risk if any of the criteria is exceeded.  
Depth > 0.8 m  
Velocity > 1.7 m/s  
Depth-Velocity product > 0.37 m<sup>2</sup>/s

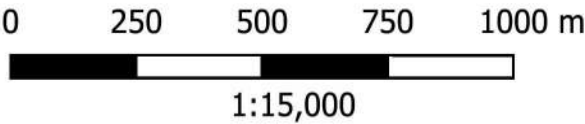
Little Etobicoke  
Upper Model Area



Run Date: June 14, 2018  
Figure Date: September 20, 2018

This drawing must be used in conjunction with the attached report, Progress Report #2 - Modelling for Flood Characterization and Analysis, (September 2018) and is subject to the same limitations and conditions stated in the report.

- Little Etobicoke Catchment
- Upper Model Area
- 2D Model Results Risk
  - Low
  - Medium
  - High
- Railway
- Watercourse
- Roads
- Buildings



**Matrix Solutions Inc.**  
ENVIRONMENT & ENGINEERING

Little Etobicoke Creek Phase 2  
Flood Evaluation Study

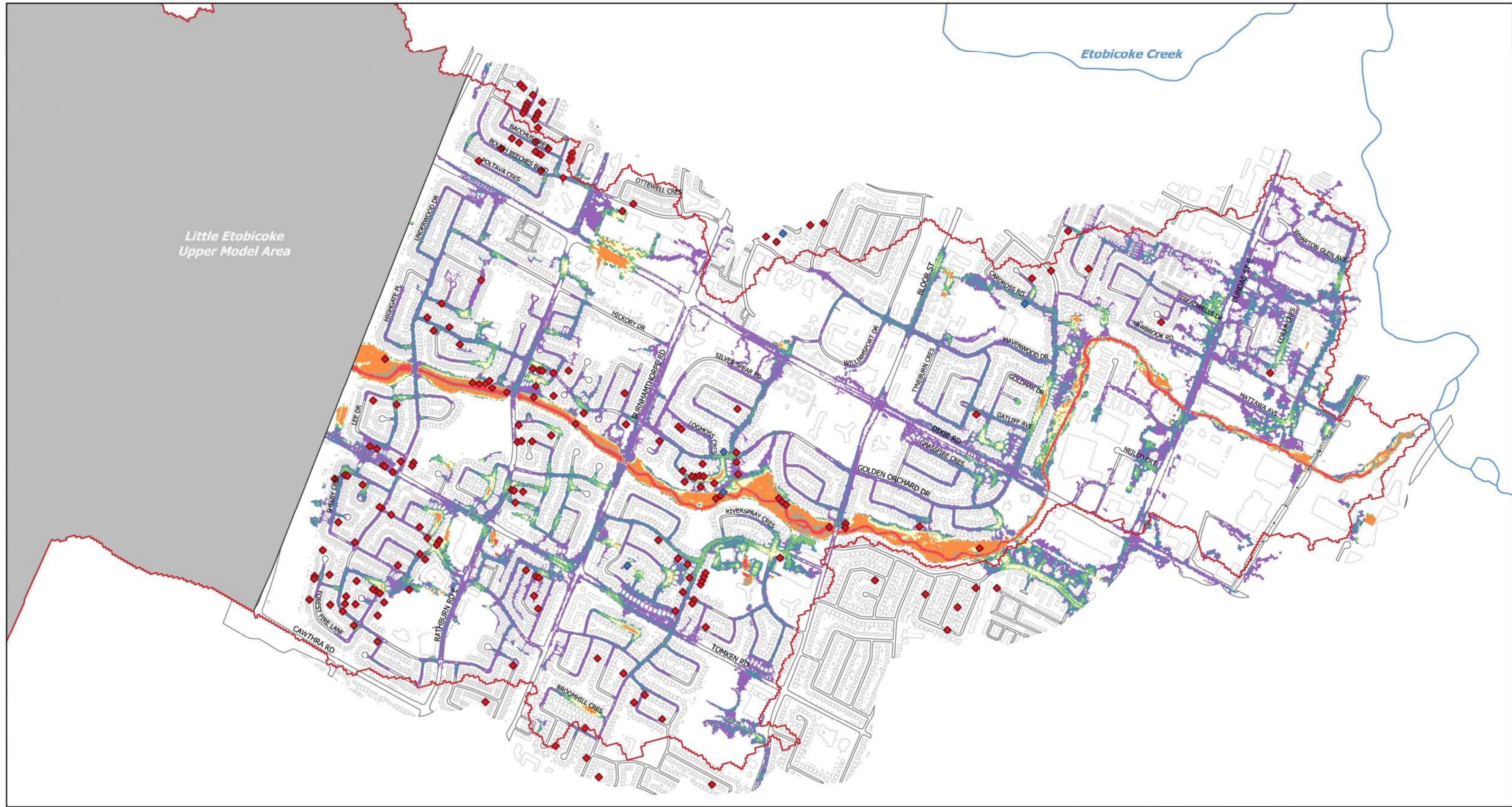
Project #24603

PCSWMM Lower Model Results  
100 Year - Risk

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A. MacKay  
K. Hofbauer  
Map 14.4

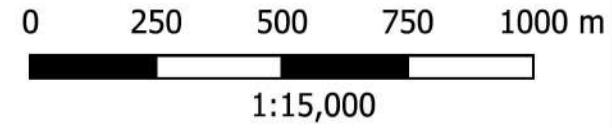




Run Date: June 28, 2018  
Figure Date: July 9, 2018

This drawing must be used in conjunction with the attached report, Little Etobicoke Creek Phase 2 Modelling for Flood Characterization and Analysis - Flood Evaluation Study, (July 2018) and is subject to the same limitations and conditions stated in the report.

- |   |                         |                   |                  |
|---|-------------------------|-------------------|------------------|
| Little Etobicoke Catchment                | Reported Sewer Blockage | Reported Flooding | Upper Model Area |
| <b>2D Model Results Maximum Depth (m)</b> |                         |                   |                  |
| 0.50 - 0.80                               | 0.80 - 1.50             | 1.50 - 2.00       | > 2.00           |
| <= 0.10                                   | 0.10 - 0.30             | 0.30 - 0.50       |                  |
| Railway                                   | Watercourse             | Roads             | Buildings        |



Little Etobicoke Creek Phase 2  
Flood Evaluation Study

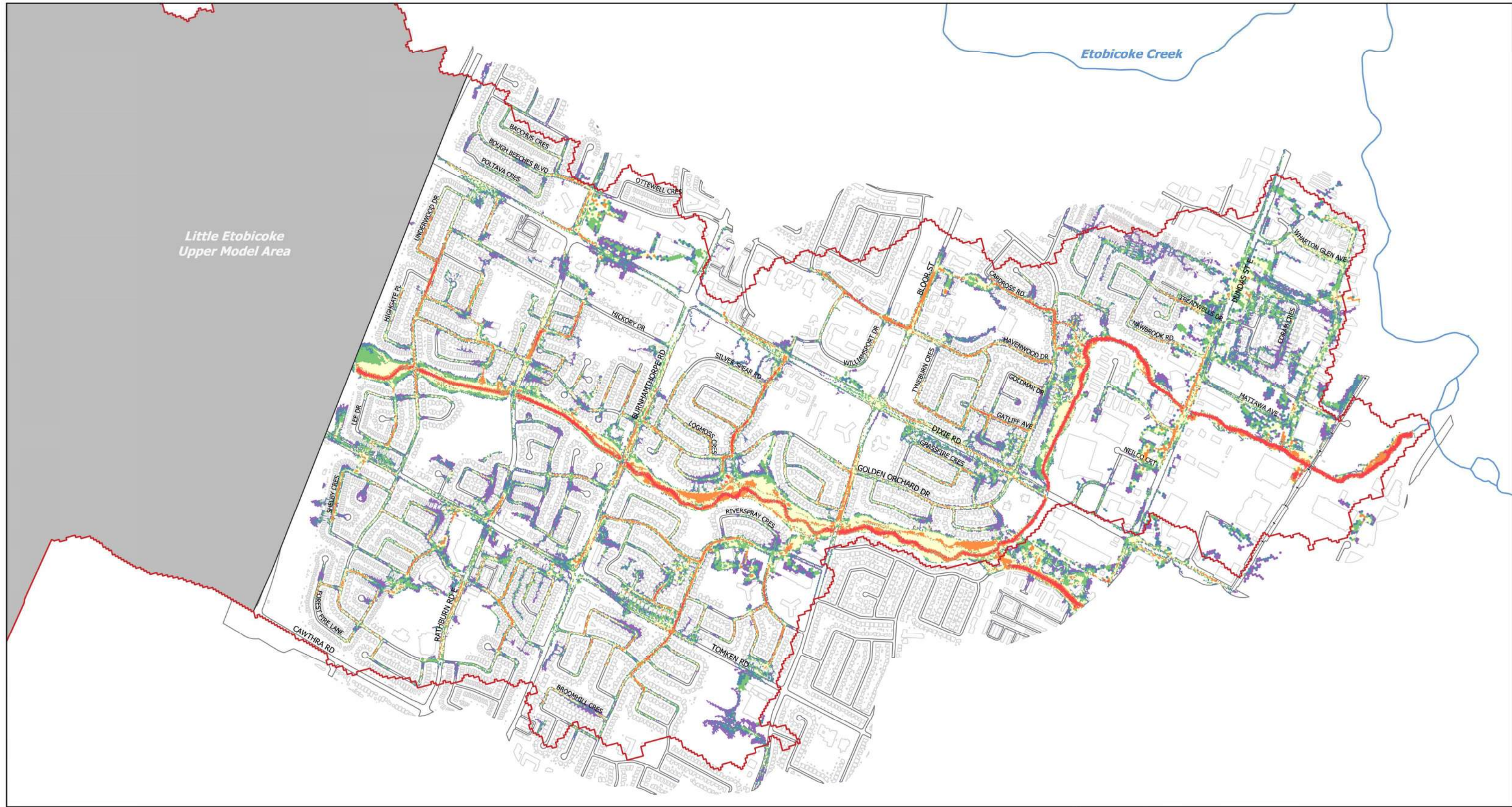
Project #24603

PCSWMM Lower Model Results  
July 8, 2013 - Depth

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A. MacKay  
K. Hofbauer  
Map 15.1

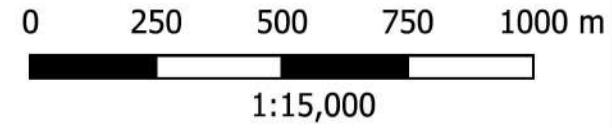




Run Date: June 28, 2018  
Figure Date: July 9, 2018

This drawing must be used in conjunction with the attached report, Little Etobicoke Creek Phase 2 Modelling for Flood Characterization and Analysis - Flood Evaluation Study, (July 2018) and is subject to the same limitations and conditions stated in the report.

- |                               |             |
|-------------------------------|-------------|
| Little Etobicoke Catchment    | 1.00 - 1.70 |
| Upper Model Area              | 1.70 - 2.00 |
| <b>2D Model Results</b>       | > 2.00      |
| <b>Maximum Velocity (m/s)</b> | Railway     |
| <= 0.10                       | Watercourse |
| 0.10 - 0.25                   | Roads       |
| 0.25 - 0.50                   | Buildings   |
| 0.50 - 1.00                   |             |



Little Etobicoke Creek Phase 2  
Flood Evaluation Study

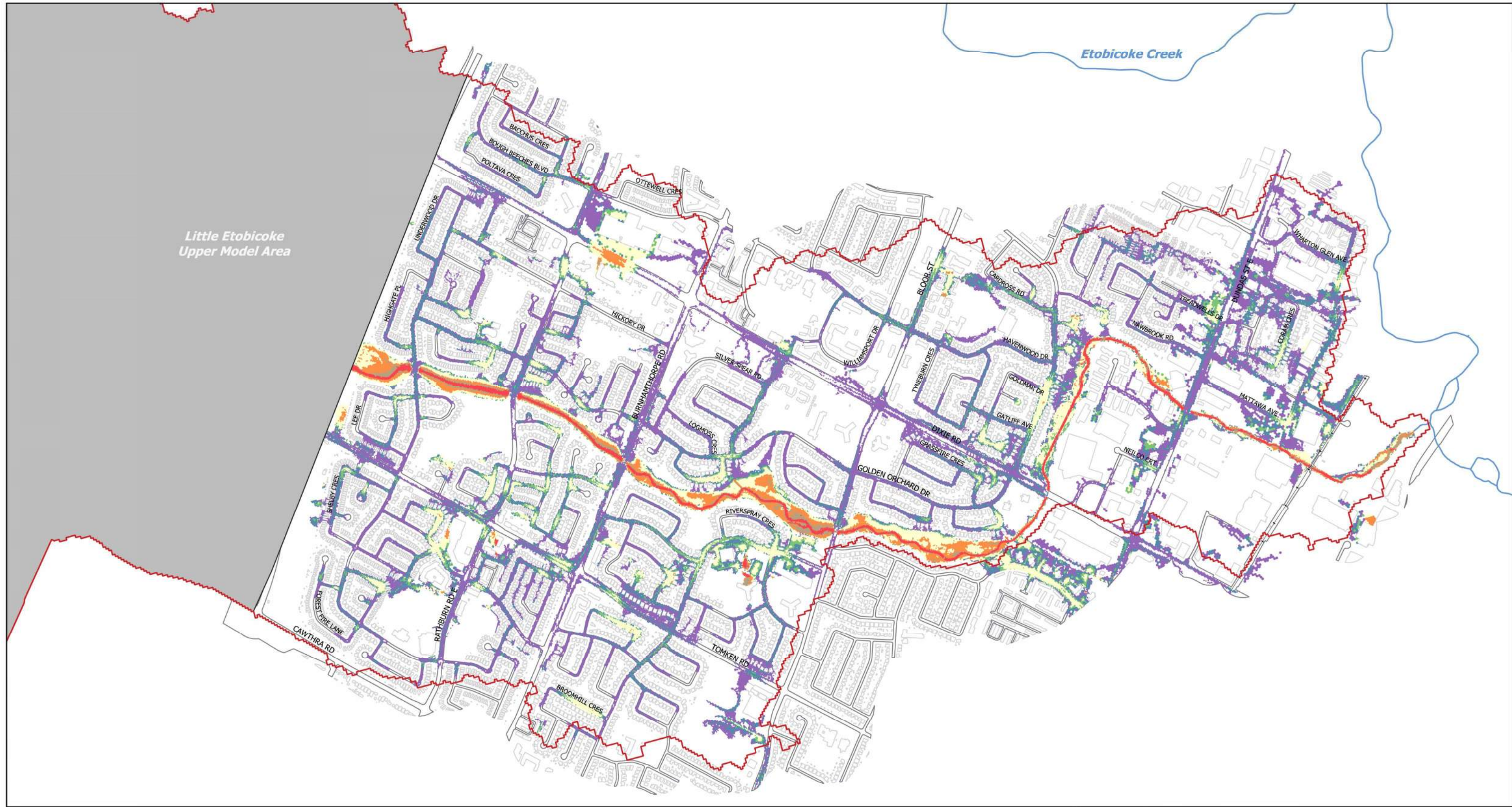
Project #24603

PCSWMM Lower Model Results  
July 8, 2013 - Velocity

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A. MacKay  
K. Hofbauer  
Map 15.2





Run Date: June 28, 2018  
Figure Date: July 9, 2018

This drawing must be used in conjunction with the attached report, Little Etobicoke Creek Phase 2 Modelling for Flood Characterization and Analysis - Flood Evaluation Study, (July 2018) and is subject to the same limitations and conditions stated in the report.

T:\24603 - Little EtobicokeCr\_Flood\531105 Analysis\GIS\Phase 2

Little Etobicoke Catchment

Upper Model Area

2D Model Results

Maximum Depth x Velocity (m<sup>2</sup>/s)

<= 0.10

0.10 - 0.25

0.25 - 0.37

0.37 - 1.00

Railway

Watercourse

Roads

Buildings

1.00 - 1.50

1.50 - 2.00

> 2.00

0

250

500

750

1000 m

1:15,000

Matrix Solutions Inc.

ENVIRONMENT & ENGINEERING

Little Etobicoke Creek Phase 2

Flood Evaluation Study

PCSWMM Lower Model Results

July 8, 2013 - Depth x Velocity

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Map 15.3