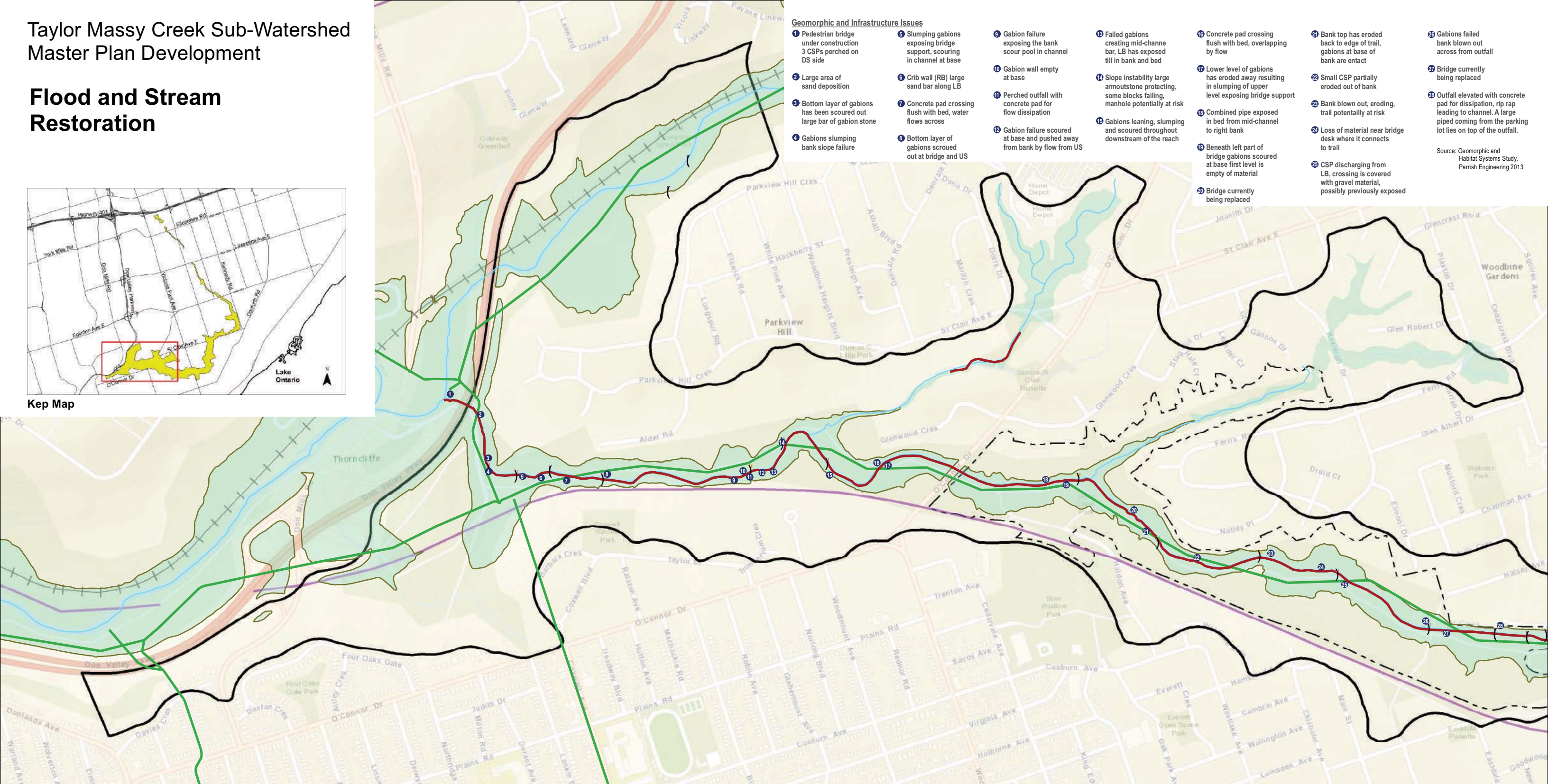


Taylor Massy Creek Sub-Watershed Master Plan Development

Flood and Stream Restoration



Kep Map



- Geomorphic and Infrastructure Issues**
- 1 Pedestrian bridge under construction 3 CSPs perched on DS side
 - 2 Large area of sand deposition
 - 3 Bottom layer of gabions has been scoured out large bar of gabion stone
 - 4 Gabions slumping bank slope failure
 - 5 Slumping gabions exposing bridge support, scouring in channel at base
 - 6 Crib wall (RB) large sand bar along LB
 - 7 Concrete pad crossing flush with bed, water flows across
 - 8 Bottom layer of gabions scroued out at bridge and US
 - 9 Gabion failure exposing the bank scour pool in channel
 - 10 Gabion wall empty at base
 - 11 Perched outfall with concrete pad for flow dissipation
 - 12 Gabion failure scoured at base and pushed away from bank by flow from US
 - 13 Failed gabions creating mid-channel bar, LB has exposed till in bank and bed
 - 14 Slope instability large armoutstone protecting, some blocks failing, manhole potentially at risk
 - 15 Gabions leaning, slumping and scoured throughout downstream of the reach
 - 16 Concrete pad crossing flush with bed, overlapping by flow
 - 17 Lower level of gabions has eroded away resulting in slumping of upper level exposing bridge support
 - 18 Combined pipe exposed in bed from mid-channel to right bank
 - 19 Beneath left part of bridge gabions scoured at base first level is empty of material
 - 20 Bridge currently being replaced
 - 21 Bank top has eroded back to edge of trail, gabions at base of bank are entact
 - 22 Small CSP partially eroded out of bank
 - 23 Bank blown out, eroding, trail potentially at risk
 - 24 Loss of material near bridge desk where it connects to trail
 - 25 CSP discharging from LB, crossing is covered with gravel material, possibly previously exposed
 - 26 Gabions failed bank blown out across from outfall
 - 27 Bridge currently being replaced
 - 28 Outfall elevated with concrete pad for dissipation, rip rap leading to channel. A large piped coming from the parking lot lies on top of the outfall.
- Source: Geomorphic and Habitat Systems Study, Parrish Engineering 2013

— Planned Stream Restoration Projects (1 S year horizon)

— Sanitary Trunk Sewer

(TRCA Erosion Control Structures

TW Erosion Control Works

) 5 - 10 years

) 2018 - 2020

) completed

) unknown

— TRCA Floodline

TRCA Floodplain

— Hydro Line

— Railway

— Creeks

— Taylor Creek ESA Boundary

Taylor Massey Sub-Watershed Study Area

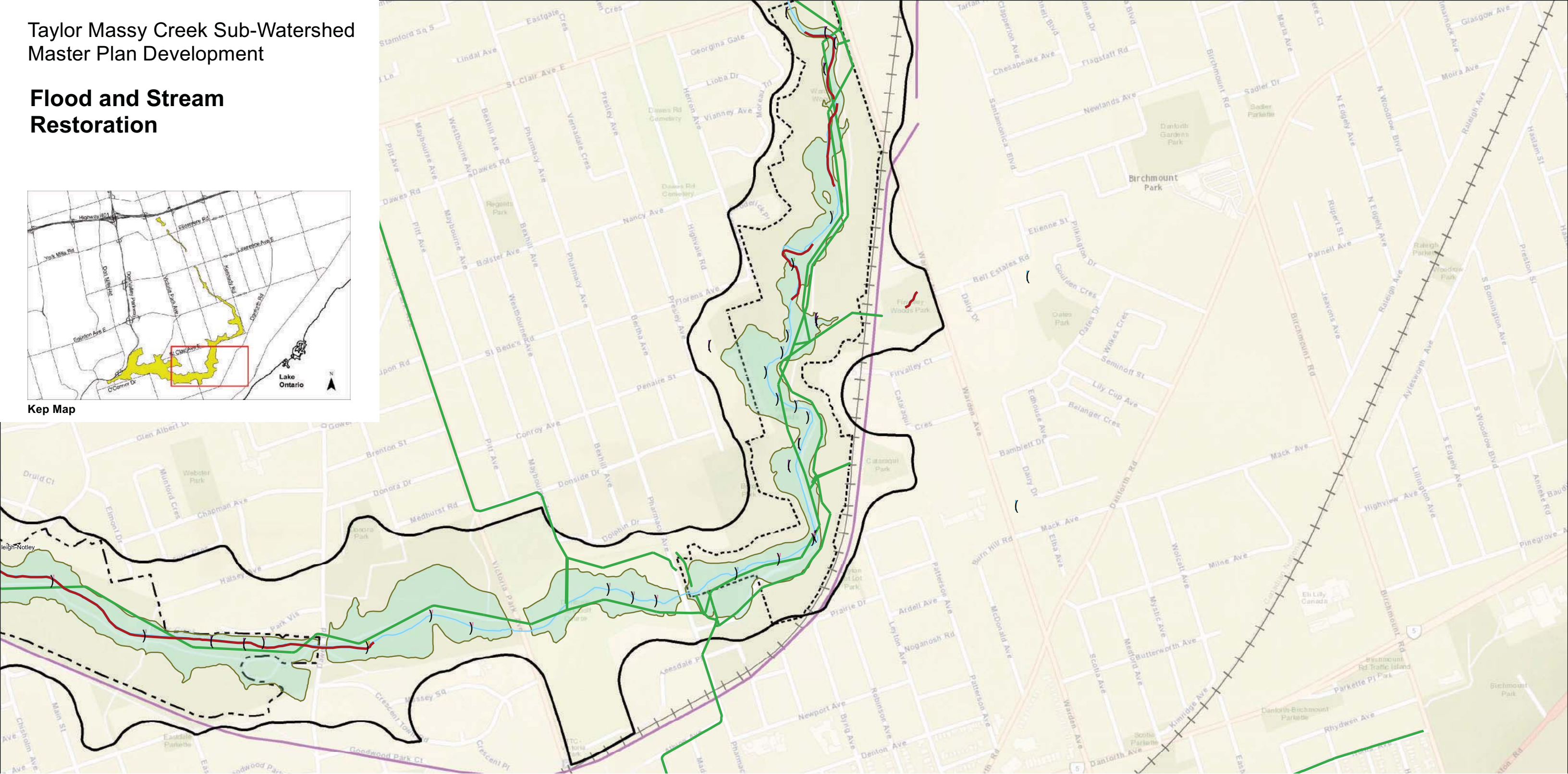
Area 1 & 2

Taylor Massy Creek Sub-Watershed
Master Plan Development

Flood and Stream
Restoration



Keyp Map



- Planned Stream Restoration Projects
(1 S year horizon)

Sanitary Trunk Sewer

(

TRCA Erosion Control Structures

(

Stormwater Management Facility
- TW Erosion Control Works**

)

0 - 5 years

)

5 - 10 years

)

2018 - 2020

)

completed

)

unknown
- TRCA Floodline

TRCA Floodplain

Hydro Line

+ +

Railway

Creeks

- - -

Taylor Creek ESA Boundary

- - -

Warden Woods ESA Boundary

Taylor Massey Sub-Watershed Study Area

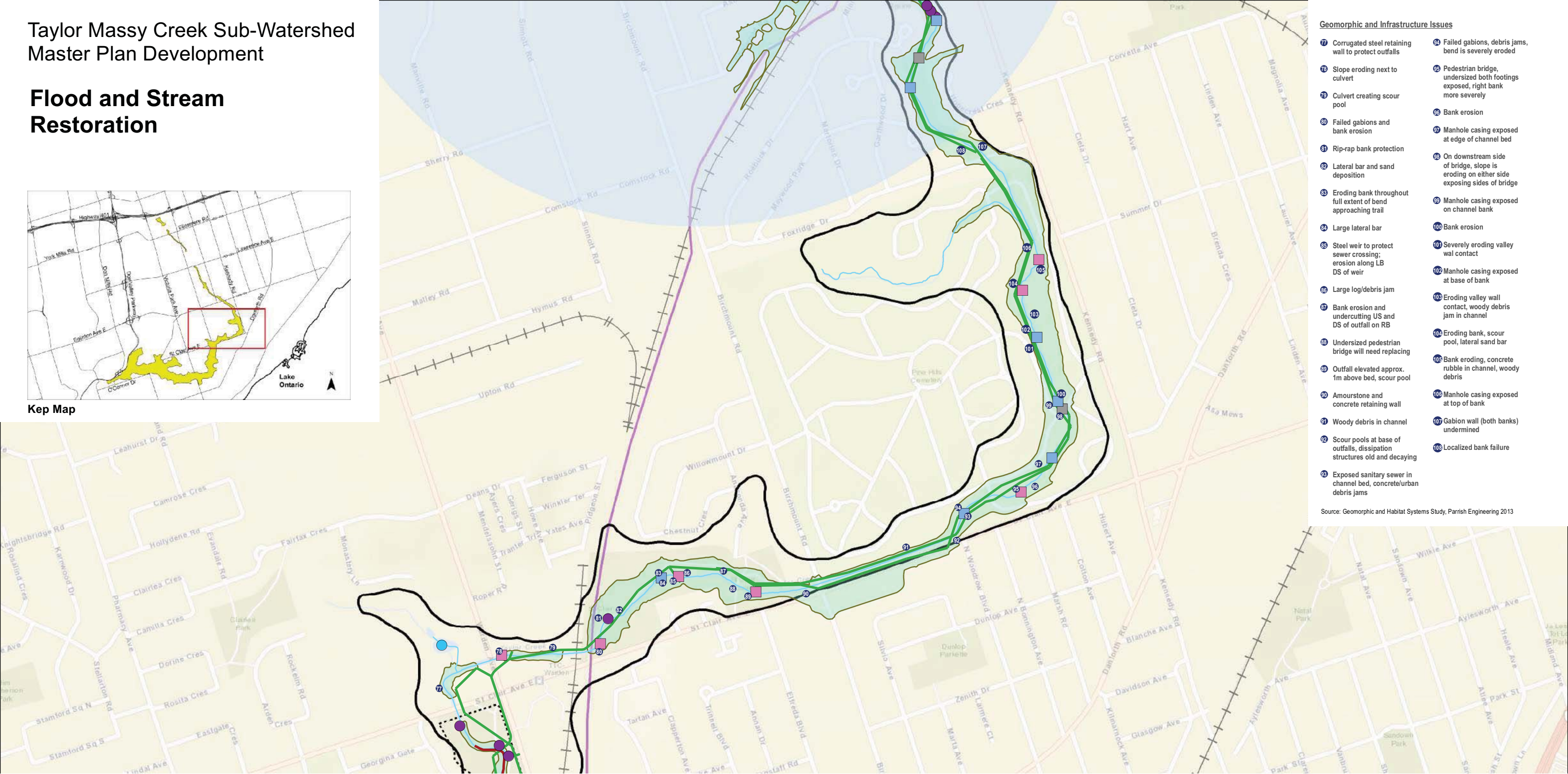
Area 3 & 4

Taylor Massy Creek Sub-Watershed Master Plan Development

Flood and Stream Restoration



Kep Map



Geomorphic and Infrastructure Issues

- 71 Corrugated steel retaining wall to protect outfalls
- 72 Slope eroding next to culvert
- 73 Culvert creating scour pool
- 80 Failed gabions and bank erosion
- 81 Rip-rap bank protection
- 82 Lateral bar and sand deposition
- 83 Eroding bank throughout full extent of bend approaching trail
- 84 Large lateral bar
- 85 Steel weir to protect sewer crossing; erosion along LB DS of weir
- 86 Large log/debris jam
- 87 Bank erosion and undercutting US and DS of outfall on RB
- 88 Undersized pedestrian bridge will need replacing
- 89 Outfall elevated approx. 1m above bed, scour pool
- 90 Amourstone and concrete retaining wall
- 91 Woody debris in channel
- 92 Scour pools at base of outfalls, dissipation structures old and decaying
- 93 Exposed sanitary sewer in channel bed, concrete/urban debris jams
- 94 Failed gabions, debris jams, bend is severely eroded
- 95 Pedestrian bridge, undersized both footings exposed, right bank more severely
- 96 Bank erosion
- 97 Manhole casing exposed at edge of channel bed
- 98 On downstream side of bridge, slope is eroding on either side exposing sides of bridge
- 99 Manhole casing exposed on channel bank
- 100 Bank erosion
- 101 Severely eroding valley wal contact
- 102 Manhole casing exposed at base of bank
- 103 Eroding valley wall contact, woody debris jam in channel
- 104 Eroding bank, scour pool, lateral sand bar
- 105 Bank eroding, concrete rubble in channel, woody debris
- 106 Manhole casing exposed at top of bank
- 107 Gabion wall (both banks) undermined
- 108 Localized bank failure

Source: Geomorphic and Habitat Systems Study, Parrish Engineering 2013

- Planned Stream Restoration Projects (1 S year horizon)
- Sanitary Trunk Sewer
- TRCA Erosion Control Structures
- Stormwater Management Facility

TW Erosion Control Works

- 0 - 5 years
- 5 - 10 years
- unknown

TRCA Floodline

- TRCA Floodplain
- Flood Vulnerable Area Clusters

Hydro Line

- Railway
- Creeks
- Warden Woods ESA Boundary
- Taylor Massey Sub-Watershed Study Area

Area 5 & 6



0 50 100 200 Meters

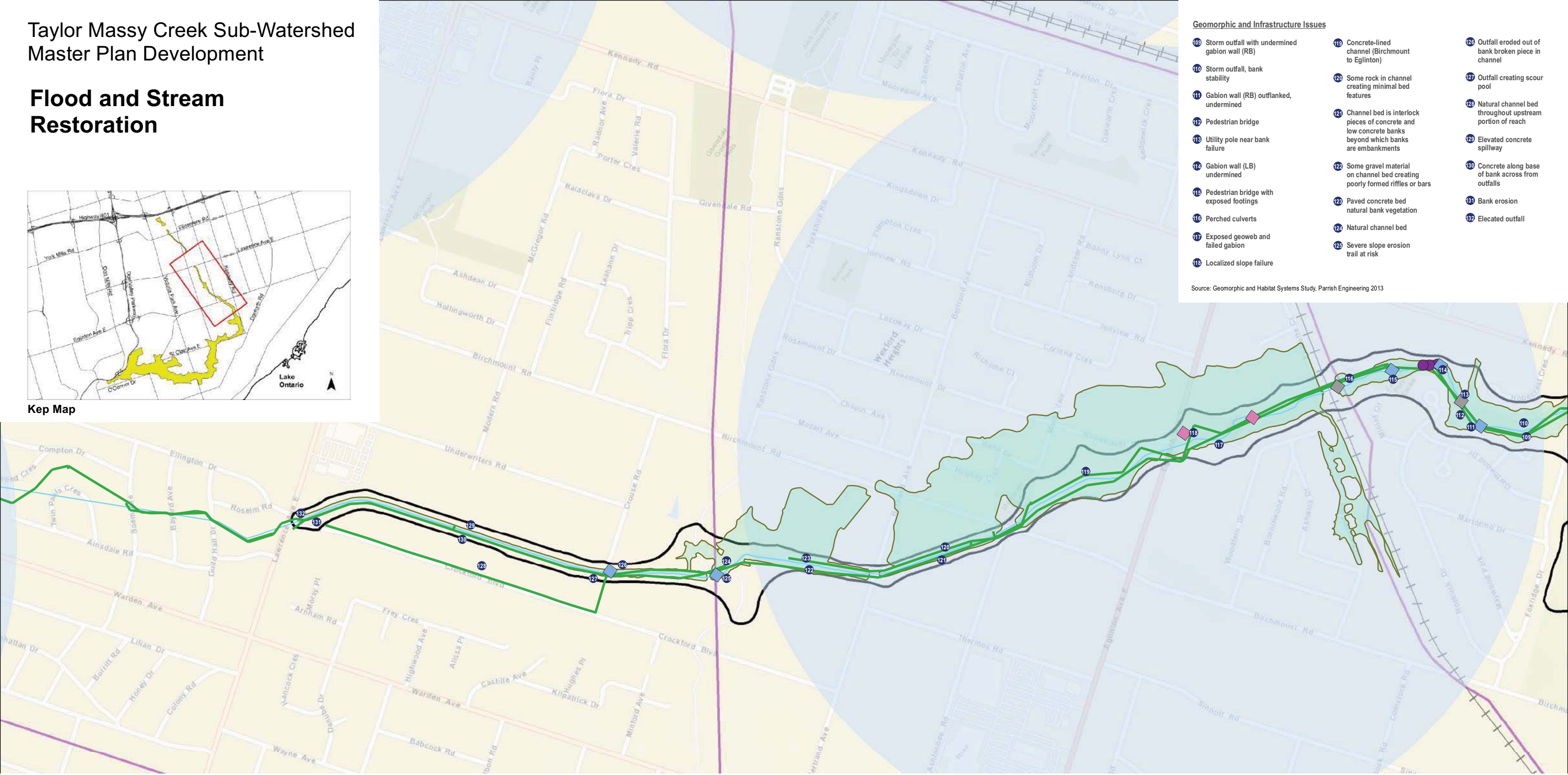
April 13, 2017

Taylor Massy Creek Sub-Watershed Master Plan Development

Flood and Stream Restoration



Kep Map



Geomorphic and Infrastructure Issues

109

Storm outfall with undermined gabion wall (RB)

110

Storm outfall, bank stability

111

Gabion wall (RB) outflanked, undermined

112

113

114

115

116

117

118

119

Concrete-lined channel (Birchmount to Eglinton)

120

121

122

123

124

125

126

Outfall eroded out of bank broken piece in channel

127

128

129

130

131

132

Source: Geomorphic and Habitat Systems Study, Parrish Engineering 2013

Sanitary Trunk Sewer

TRCA Erosion Control Structures

TW Erosion Control Works

0 - 5 years

5 - 10 years

unknown

TRCA Floodline

TRCA Floodplain

Flood Vulnerable Area Clusters

Hydro Line

Railway

Creeks

Taylor Massey Sub-Watershed Study Area

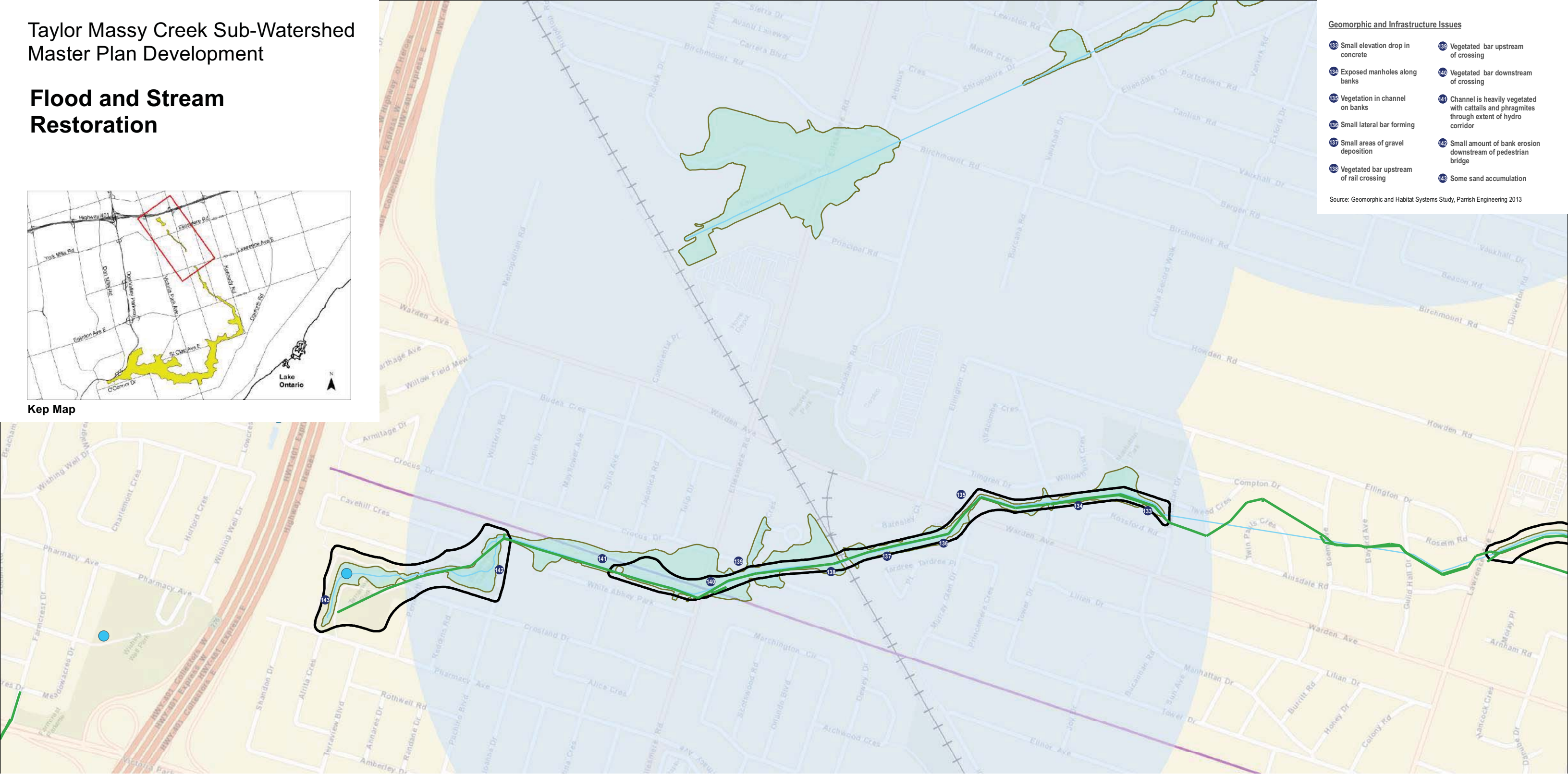
Area 7

Taylor Massy Creek Sub-Watershed
Master Plan Development

Flood and Stream
Restoration



Keyp Map



- Geomorphic and Infrastructure Issues
- | | |
|---|--|
| 133 Small elevation drop in concrete | 139 Vegetated bar upstream of crossing |
| 134 Exposed manholes along banks | 140 Vegetated bar downstream of crossing |
| 135 Vegetation in channel on banks | 141 Channel is heavily vegetated with cattails and phragmites through extent of hydro corridor |
| 136 Small lateral bar forming | 142 Small amount of bank erosion downstream of pedestrian bridge |
| 137 Small areas of gravel deposition | 143 Some sand accumulation |
| 138 Vegetated bar upstream of rail crossing | |
- Source: Geomorphic and Habitat Systems Study, Parrish Engineering 2013

- | | | |
|--------------------------------|--------------------------------|--|
| Sanitary Trunk Sewer | TRCA Floodline | Hydro Line |
| Stormwater Management Facility | TRCA Floodplain | Railway |
| | Flood Vulnerable Area Clusters | Creeks |
| | | Taylor Massey Sub-Watershed Study Area |

Area 8



0 50 100 200
Meters

April 13, 2017