APPENDIX

F

AGENCY CONTACTS / CORRESPONDENCE

Drost, Alden

Sent:
To:
Subject:

Hi Alden,

I have answered your questions below in blue.

Kind regards,
Laura

Laura Warner | Resource Planner
Grand River Conservation Authority
400 Clyde Road, Cambridge ON N1R 5W6
P: (519) 621-2763 x 2231 | F: (519) 621-4844
lwarner@grandriver.ca | www.grandriver.ca

From: Drost, Alden <Alden.Drost@wsp.com>
Sent: Wednesday, September 30, 2020 2:32 PM
To: Laura Warner <lwarner@grandriver.ca>
Subject: RE: Background Natural Heritage Information Request for Five Bridges in Wellington County

Hi Laura,

Thanks so much for the quick response, much appreciated!

A couple more questions for you:

- Please confirm the Parker Creek location in SE quadrant of the Bosworth Bridge (see attached map). We are not anticipating any work on Parker Creek at this point but just in case is the warmwater timing window the same as for Conestogo River? Also would the fish species in Parker Creek be the same as the Conestogo River? And if possible please let me know where the Northern Pike spawning habitat is located (assume somewhere on Parker Creek)?
  Our information indicates this creek is indeed Parker Creek and is made up of the same fish community as the Conestogo River and is likely where the Northern Pike spawning habitat is located, though it has an unknown thermal code. I would recommend having this confirmed with the MNRF.
- Do you have pdf copies of the 2003 Scott Reid, MNR fish survey, and the 1999 MNR Upper Conestogo River Cursory Habitat Assessment and fisheries inventory that you could send? I couldn't find these online. No worries if you cant send.
  Unfortunately we do not have copies to send, though I would recommend checking with the MNRF Guelph district office to see if they can provide any copies.
- The Carroll Creek fish list is interesting in that is contains coldwater species (Brook Trout and Mottled Sculpin) but is designated coolwater with a warmwater timing window. Just want to confirm this. Quite a diverse fish community for sure, for such a small trib.!
  Our information has this creek designated as coolwater and our recommended timing window of March 15th-June 30th. You may wish to have this confirmed with the MNRF Guelph district office. The same goes for our

suggested timing window for Irish Creek.

Thanks again Laura,
Alden

Alden Drost
Project Manager / Senior Ecologist – Fisheries
Ecology & Environmental Impact Assessment (EIA)

T+ 1 519-904-1720

582 Lancaster Street West
Kitchener, Ontario
N2K 1M3 Canada

wsp.com

From: Laura Warner [mailto:lwarner@grandriver.ca]
Sent: September 30, 2020 10:35 AM
To: Drost, Alden <Alden.Drost@wsp.com>
Subject: RE: Background Natural Heritage Information Request for Five Bridges in Wellington County

Good morning Alden,

Please find information below on the individual project locations. Mapping or additional information can be obtained through our online mapping or through our Grand River Information Network (GRIN). I have included the links to both below for reference. Additionally, the Guelph District MNRF office will be able to provide specific information on each watercourse and bridge crossing along with any reports or studies looking at the fish community and fish habitat.

GRCA resource mapping: https://www.grandriver.ca/en/Planning-Development/Map-Your-Property.aspx
GRIN: https://data.grandriver.ca/

Boswoth Bridge – HWY 7 east of Cty Rd 11 Conestogo River; this site has the main channel of the Conestogo River as well as two tributaries very close to the work site. The recommended fisheries timing window would be to avoid March 15 to June 30 to capture the sensitive period for the local fish community. No SAR are identified on the DFO mapping. No wetlands are currently mapped in the immediate work area. The Conestogo River and Parker Creek fish community is made up of white sucker, bluntnose minnow, fathead minnow, creek chub, northern redbelly dace, central mudminnow, common shiner, brook stickleback, northern pike with confirmed pike spawning habitat. Boswoth Creek comes (in from the west side) has an unknown fish community and thermal code. The best reports for fish would be 2003 Scott Reid, MNR fish survey, and 1999 MNR Upper Conestogo River Cursory Habitat Assessment and fisheries inventory

Flax Bridge – Mitchells creek tributary of Conestogo River, County Rd. 11 south of Cty Rd. 109. Regulated for Slope Erosion and Slope Valley as well as Floodplain. No SAR are identified on the DFO mapping. Two small warm water tributaries east and west of the bridge. Fish community at Sideroad 10W, blackside darter, bluntnose minnow, central stoneroller, common shiner, creek chub, northern hog sucker, rainbow darter, river chub, rock bass, smallmouth bass, striped shiner, white sucker. The recommended in-water working timing

window would be to avoid in-water works from March 15 to June 30 to avoid impacts to the fish community. . Check 2003 MNR Scott Reid Fish survey, 1996 point survey site 65B sampling for greater redhorse, 2012 MNR study.

Irish Creek Bridge, Puslinch Twp., No SAR from DFO mapping. Site regulated for floodplain and Puslinch Lake Irish Creek Provincially Significant Wetland Complex immediately north and south of the site. Fish community of rock bass, white sucker, northern pike, brook trout, mottled sculpin, pumpkinseed, 1989 electrofishing Station #2, 2007 Temperature Report SVC 2 TUC, potential for snapping turtle and ribbon snake. Recommended fisheries timing window of March 15 to June 30 to avoid impacts to diverse fish community.

Carroll Creek culvert, BO17114 Conc. XI Nichol, Peel St.E. Alma, regulated for tributary of Carroll Creek, floodplain, also Cummings Municipal Drain, closed/tile drain north side of Peel St. E., Cool Water system supporting mottled sculpin, bluntnose minnow, American Brook Lamprey, largemouth bass, brown trout, brook trout, central stoneroller, rainbow darter, brook stickleback, blackside darter, river chub, longnose dace, white sucker, fantail darter, northern hog sucker, brassy minnow, stonecat, eastern blacknose dace, johnny/tessellated darter, northern redbelly dace, fathead minnow greenside darter. The recommended fisheries timing window would be March 15 to June 30 to avoid impacts to the diverse fish community.

Marden Creek bridge BOO7071, regulated for floodplain and Marden South Provincially Significant Wetland Complex north and south of Wellington Rd. 7. No known SAR from DFO mapping. Watercourse identified as a Cold Water system supporting, black crappie, bluntnose minnow, brook stickleback, brook trout, brown bullhead, central mudminnow, common carp, common shiner, creek chub, fantail darter, fathead minnow, johnny darter, largemouth bass, mottled sculpin, northern redbelly dace, pearl dace, pumpkinseed, rock bass, western blacknose dace, white sucker, yellow perch. . Information sources 1993 Port & Associates Fisheries assessment Station T2 report, 2006 TUC/Wellington Stewardship council summary of stream rehabilitation, 1999 A. Timmerman MNR Station 4. The recommended fisheries timing window would be May 15 to September 30 to avoid impacts to the diverse fish community.

Kind regards,
Laura

Laura Warner | Resource Planner
Grand River Conservation Authority
400 Clyde Road, Cambridge ON N1R 5W6
P: (519) 621-2763 x 2231 | F: (519) 621-4844
lwarner@grandriver.ca | www.grandriver.ca

From: Drost, Alden <Alden.Drost@wsp.com>
Sent: Tuesday, September 22, 2020 4:08 PM
To: Laura Warner <lwarner@grandriver.ca>
Subject: Background Natural Heritage Information Request for Five Bridges in Wellington County

Hello Laura,

WSP Canada Group Limited has been retained by the County of Wellington to complete the environmental component for five bridge/culvert replacements and/or rehabilitations. WSP is contacting GRCA to formally request if any Natural Heritage Feature background information is available in the vicinity of the structures. Please find attached five formal Information Request Letters (one for each structure). Note that we will also be contacting the MNRF and MECP for information.

Please let me know if you require any further details to complete this request.

Thank you,
Alden

Drost, Alden

From: Species at Risk (MECP) <SAROntario@ontario.ca>
Sent: January 11, 2021 1:12 PM
To: Drost, Alden
Subject: RE: Background Natural Heritage Information Request for Five Bridges in Wellington County

Hi Alden,
I've had a chance to screen the first 5 bridges and did not find anything more at these locations than you had identified in your letters.
Thank you for sending the coordinates, that was incredibly helpful.
Lisa

Lisa McShane
Management Biologist | Permissions and Compliance Section, Species at Risk Branch|Land and Water Division | Ministry of the Environment, Conservation and Parks | (226) 668-0527

From: Drost, Alden <Alden.Drost@wsp.com>
Sent: Tuesday, September 22, 2020 11:58 AM
To: Species at Risk (MECP) <SAROntario@ontario.ca>
Subject: Background Natural Heritage Information Request for Five Bridges in Wellington County

To whom it may concern,

WSP Canada Group Limited has been retained by the County of Wellington to complete the environmental component for five bridge/culvert replacements and/or rehabilitations. WSP is contacting MECP to formally request if any Natural Heritage Feature background information (mainly SAR) is available in the vicinity of the structures. Please find attached five formal Information Request Letters (one for each structure). Note that we will also be contacting the MNRF and GRCA for information.

Please let me know if you require any further details to complete this request.

Thank you,
Alden

Alden Drost
Project Manager / Senior Ecologist – Fisheries
Ecology & Environmental Impact Assessment (EIA)

T+ 1 519-904-1720

582 Lancaster Street West
Kitchener, Ontario
N2K 1M3 Canada

wsp.com

Drost, Alden

Sent:
To:
Subject:

Good morning Alden,

Please see my response below to your questions in red text.

Have a great day!

Darren Ungar
Management Biologist
Ministry of Natural Resources and Forestry
Guelph District
226-962-6870

From: Drost, Alden <Alden.Drost@wsp.com>
Sent: June 15, 2021 4:41 PM
To: Ungar, Darren (MNRF) <Darren.Ungar@ontario.ca>
Subject: FW: Background Natural Heritage Information Request for Five Bridges in Wellington County

Hi Darren,

Sorry I missed your call and I appreciate you following up on the email below to Melinda and / or Jamie, who apparently are not working in the District right now.

I have not received any information from my original email to Melinda on Sept. 21, 2020 or from my more recent email on May 25, 2021. I've attached the original letters that were sent to her and some previous emails. As noted below, GRCA sent me some good fisheries inventory info. so I just have a few questions relating to timing windows and the location of some Pike spawning habitat if available.

Thank you,
Alden

Alden Drost
Project Manager / Senior Ecologist – Fisheries
T+ 1 519-904-1720

From: Drost, Alden
Sent: May 25, 2021 4:41 PM
To: 'melinda.thompson@ontario.ca' <Melinda.Thompson@ontario.ca>

Cc: Wedgewood, Jamie R. (MNRF) <Jamie.R.Wedgewood@ontario.ca>
Subject: FW: Background Natural Heritage Information Request for Five Bridges in Wellington County

Hi Melinda,

Just wondering if you have had a chance to review the attached information requests as per my email below? I'm including the UTM coordinates for the five bridges as follows (please refer to the attached letter for each bridge with topo. map that was sent previously to reference the names) :

- Bosworth Bridge – 17T 529188 E, 4847856 N
- Flax Bridge – 17T 531376 E, 4853473 N
- Irish Creek – 17T 558356 E, 4809999 N
- Carrol Creek – 17T 540721 E, 4842672 N
- Marden Creek – 17T 554480 E, 4827027 N

I did hear back from Laura Warner from the GRCA as well as MECP. GRCA passed on some good fisheries information and relevant timing windows (see emails attached and as noted below) for each crossing, however we need a few clarifications from you (as recommended by GRCA) at three of the crossings as noted below:

For Bosworth Bridge (Conestoga River) the GRCA had the following response:

> GRCA response: **Bosworth Bridge** – HWY 7 east of Cty Rd 11 Conestogo River; this site has the main channel of the Conestogo River as well as two tributaries very close to the work site. The recommended fisheries timing window would be to avoid March 15 to June 30 to capture the sensitive period for the local fish community. No SAR are identified on the DFO mapping. No wetlands are currently mapped in the immediate work area. The Conestogo River and Parker Creek fish community is made up of white sucker, bluntnose minnow, fathead minnow, creek chub, northern redbelly dace, central mudminnow, common shiner, brook stickleback, northern pike with confirmed pike spawning . Boswoth Creek comes (in from the west side) has an unknown fish community and thermal code. The best reports for fish would be 2003 Scott Reid, MNR fish survey, and 1999 MNR Upper Conestogo River Cursory Habitat Assessment and fisheries inventory

- WSP question to GRCA: Please confirm the Parker Creek location in SE quadrant of the Bosworth Bridge (see attached map) **Melinda – please see map on attached Bosworth letter for location of this trib..**. We are not anticipating any work on Parker Creek at this point but just in case is the warmwater timing window the same as for Conestogo River? Also would the fish species in Parker Creek be the same as the Conestogo River? And if possible please let me know where the Northern Pike spawning habitat is located (assume somewhere on Parker Creek)?
  GRCA response: Our information indicates this creek is indeed Parker Creek and is made up of the same fish community as the Conestogo River and is likely where the Northern Pike spawning habitat is located, though it has an unknown thermal code. I would recommend having this confirmed with the MNRF.

Question to MNRF: With regard to the GRCA response on Parker Creek can you please confirm Parker Creek is warmwater (same timing window as Conestogo River above) and please let us know the location of the Pike spawning habitat which is assumed to be associated with Parker Creek?

MNRF Response: Northern pike are known to spawns throughout Parker Creek and this is classified as a warmwater system. Restricted in-water work timing windows for Parker Creek & the main Conestogo River are from March 15th to June 30th.

For Carrol Creek and Irish Creek the GRCA had the following responses:

GRCA response: **Carroll Creek culvert,** BO17114 Conc. XI Nichol, Peel St.E. Alma, regulated for tributary of Carroll Creek, floodplain, also Cummings Municipal Drain, closed/tile drain north side of Peel St. E., Cool Water system supporting mottled sculpin, bluntnose minnow, American Brook Lamprey, largemouth bass, brown trout, brook trout, central stoneroller, rainbow darter, brook stickleback, blackside darter, river chub, longnose dace, white sucker, fantail darter, northern hog sucker, brassy minnow, stonecat, eastern blacknose dace, johnny/tessellated darter, northern redbelly dace, fathead minnow greenside darter. The recommended fisheries timing window would be March 15 to June 30 to avoid impacts to the diverse fish community.

MNRF Response: Carroll Creek's diversity is due to groundwater input near the mid/bottom end of the creek as it connects into the Grand River. In the upper reaches of Carroll creek, significant agricultural practices can be viewed across the landscape with minimal tree coverage to help cool down the waterbody. As you move further downstream, there is still a large agriculture presence, however, groundwater seepages start to become more prominent, thus cooling down the system and allowing for more temperature sensitive species to take hold. On the bottom end of Carroll Creek at the confluence of the Grand River, these two systems meet up with a mix of cool water and cold water, Brook Trout and Brown Trout are known from this reach of the Grand River and some cold/cool water species will travel upstream to a certain extent. This is why Carroll Creek has such a large species list with a mix of warmwater to cold water species. The GRCA's recommended timing window of March 15 to June 30th covers off the warmwater species on the upper reach, while taking into consideration the cool/cold water species found further downstream.

GRCA response: **Irish Creek Bridge**, Puslinch Twp., No SAR from DFO mapping. Site regulated for floodplain and Puslinch Lake Irish Creek Provincially Significant Wetland Complex immediately north and south of the site. Fish community of rock bass, white sucker, northern pike, brook trout, mottled sculpin, pumpkinseed, 1989 electrofishing Station #2, 2007 Temperature Report SVC 2 TUC, potential for snapping turtle and ribbon snake. Recommended fisheries timing window of March 15 to June 30 to avoid impacts to diverse fish community.

MNRF Response: Irish Creek has a similar makeup to Carroll Creek, with a range of temperature profiles and fish species occurrences throughout its range based on the section of the creek you survey. In regards to your project location, the timing window of March 15th to June 30th is the recommended timing window to avoid impacts to a diverse fish community.

- WSP question to GRCA: The Carroll Creek fish list is interesting in that is contains coldwater species (Brook Trout and Mottled Sculpin) but is designated coolwater with a warmwater timing window. Just want to confirm this. Quite a diverse fish community for sure, for such a small trib.!
  GRCA response: Our information has this creek designated as coolwater and our recommended timing window of March 15th-June 30th. You may wish to have this confirmed with the MNRF Guelph district office. The same goes for our suggested timing window for Irish Creek.

Question to MNRF: With regard to the GRCA response on Carroll and Irish Creek timing windows I just to confirm that warmwater timing windows are recommended for each of these crossings. I'm asking since some to the fisheries information includes coldwater species.

MNRF Response: See highlighted comments above.

If you could answer the questions above it with regard to the three crossings it would be greatly appreciated.

Thank you,
Alden

Alden Drost

Project Manager / Senior Ecologist – Fisheries
T+ 1 519-904-1720

From: Drost, Alden
Sent: September 21, 2020 4:22 PM
To: Thompson, Melinda (MNRF) <Melinda.Thompson@ontario.ca>
Subject: Background Natural Heritage Information Request for Five Bridges in Wellington County

Hello Melinda,

WSP Canada Group Limited has been retained by the County of Wellington to complete the environmental component for five bridge/culvert replacements and/or rehabilitations. WSP is contacting MNRF to formally request if any Natural Heritage Feature background information is available in the vicinity of the structures that cannot be obtained from LIO. Please find attached five formal Information Request Letters (one for each structure). Note that we will also be contacting contacted the MECP and GRCA for information.

Please let me know if you require any further details to complete this request.

Thank you,
Alden

Alden Drost
Project Manager / Senior Ecologist – Fisheries
Ecology & Environmental Impact Assessment (EIA)

T+ 1 519-904-1720

582 Lancaster Street West
Kitchener, Ontario
N2K 1M3 Canada

wsp.com

March 4, 2021

Aamjiwnaang First Nation
978 Tashmoo Avenue
Sarnia ON N7T 7H5

RE: County of Wellington
Bosworth Bridge, No. B007028, Wellington Road 7
Schedule B Municipal Class Environmental Assessment
Notice of Study Commencement

Dear Madam/Sir:

Wellington County is carrying out a Municipal Class Environmental Assessment (Class EA) Study for the Bosworth Bridge, No. B007028, located on Wellington Road 7, in the Township of Mapleton. Please see the Notice of Study Commencement attached for your information.

The Bosworth Bridge (No. B007028) consists of a single span steel truss structure with a concrete deck over the Conestogo River. The bridge has a span and deck width of 40.1 m and 8.4 m respectively and was constructed circa 1949. The bridge is located on Wellington Road 7 in the Township of Mapleton, 0.8 km east of Wellington Road 11. The study area extends approximately 1 km on either side of the bridge. As part of a bridge inspection conducted in 2019, the Bosworth Bridge was found to be in poor condition with major elements showing signs of significant deterioration. WSP has been retained by the County of Wellington to complete a Municipal Class EA Study to address these items.

In accordance with the requirements for Schedule B projects of the Municipal Class Environmental Assessment, the study will confirm and document the existing structural deficiencies and identify alternative solutions, including rehabilitation or replacement of the bridge, and evaluate associated environmental impacts.

A Stage 1 Archeological Assessment and Natural Heritage Assessment will be undertaken as part of this study. Once complete, these reports will be provided to you for review and acceptance.

A key component of the study will be consultation with interested stakeholders including members of the public and technical agencies, as well as Indigenous communities. We want to ensure that anyone with an interest in this study has the opportunity to provide input and feedback.

This notice is being provided to you in hope that you can assist the Project Team in determining if your community has an interest in this project. Your comments are welcome and we encourage you to provide us with your views.

Unless you indicate otherwise, the Project Team will continue to provide you with updates throughout the Study including notification of an online public engagement event and Study completion.

The Project Team would be pleased to meet with you at any time during the Study. To request a meeting or to discuss the Study, please contact:

Joe de Koning, P.Eng.
Construction Manager
County of Wellington
74 Woolwich Street
Guelph ON N1H 3T9
Phone: (519) 837-2601 x 2270
Email: joedk@wellington.ca

William Van Ruyven, P. Eng.
Consultant Project Manager
WSP Canada Inc.
610 Chartwell Road, Suite 300
Oakville ON L6J 4A5
Phone: (289) 835-2627
Email: william.vanruyven@wsp.com

Information will be collected in accordance with the Freedom of Information and Protection of Privacy Act and will become part of the public record.

Yours truly,

Joe de Koning, P.Eng.
Wellington County

encl. Notice of Study Commencement

cc: Sharilyn Johnston, Aamjiwnaang First Nation, Environment Coordinator

March 4, 2021

Bkejwanong (Walpole Island)
117 Tahgahoning Road
R.R.#3
Wallaceburg ON N8A 4K9

RE: County of Wellington
Bosworth Bridge, No. B007028, Wellington Road 7
Schedule B Municipal Class Environmental Assessment
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Joe de Koning, P.Eng.
Construction Manager
County of Wellington
74 Woolwich Street
Guelph ON N1H 3T9
Phone: (519) 837-2601 x 2270
Email: joedk@wellington.ca

William Van Ruyven, P. Eng.
Consultant Project Manager
WSP Canada Inc.
610 Chartwell Road, Suite 300
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Phone: (289) 835-2627
Email: william.vanruyven@wsp.com

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Yours truly,

Joe de Koning, P.Eng.
Wellington County

encl. Notice of Study Commencement

cc: Dean Jacobs, Bkejwanong (Walpole Island), Consultation Manager

March 4, 2021

Chippewas of Kettle and Stony Point
6247 Indian Lane
Kettle Point ON N0N 1J1

RE: County of Wellington
Bosworth Bridge, No. B007028, Wellington Road 7
Schedule B Municipal Class Environmental Assessment
Notice of Study Commencement

Dear Madam/Sir:

Wellington County is carrying out a Municipal Class Environmental Assessment (Class EA) Study for the Bosworth Bridge, No. B007028, located on Wellington Road 7, in the Township of Mapleton. Please see the Notice of Study Commencement attached for your information.

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In accordance with the requirements for Schedule B projects of the Municipal Class Environmental Assessment, the study will confirm and document the existing structural deficiencies and identify alternative solutions, including rehabilitation or replacement of the bridge, and evaluate associated environmental impacts.

A Stage 1 Archeological Assessment and Natural Heritage Assessment will be undertaken as part of this study. Once complete, these reports will be provided to you for review and acceptance.

A key component of the study will be consultation with interested stakeholders including members of the public and technical agencies, as well as Indigenous communities. We want to ensure that anyone with an interest in this study has the opportunity to provide input and feedback.

This notice is being provided to you in hope that you can assist the Project Team in determining if your community has an interest in this project. Your comments are welcome and we encourage you to provide us with your views.

Unless you indicate otherwise, the Project Team will continue to provide you with updates throughout the Study including notification of an online public engagement event and Study completion.

The Project Team would be pleased to meet with you at any time during the Study. To request a meeting or to discuss the Study, please contact:

Joe de Koning, P.Eng.
Construction Manager
County of Wellington
74 Woolwich Street
Guelph ON N1H 3T9
Phone: (519) 837-2601 x 2270
Email: joedk@wellington.ca

William Van Ruyven, P. Eng.
Consultant Project Manager
WSP Canada Inc.
610 Chartwell Road, Suite 300
Oakville ON L6J 4A5
Phone: (289) 835-2627
Email: william.vanruyven@wsp.com

Information will be collected in accordance with the Freedom of Information and Protection of Privacy Act and will become part of the public record.

Yours truly,

Joe de Koning, P.Eng.
Wellington County

encl. Notice of Study Commencement

cc: Anna Batten, Chippewas of Kettle and Stone Point, Lands Manager

March 4, 2021

Haudenosaunee Confederacy Chiefs Council
16 Sunrise Court
P.O. Box 714
Ohsweken ON N0A 1M0

RE: County of Wellington
Bosworth Bridge, No. B007028, Wellington Road 7
Schedule B Municipal Class Environmental Assessment
Notice of Study Commencement

Dear Madam/Sir:

Wellington County is carrying out a Municipal Class Environmental Assessment (Class EA) Study for the Bosworth Bridge, No. B007028, located on Wellington Road 7, in the Township of Mapleton. Please see the Notice of Study Commencement attached for your information.

The Bosworth Bridge (No. B007028) consists of a single span steel truss structure with a concrete deck over the Conestogo River. The bridge has a span and deck width of 40.1 m and 8.4 m respectively and was constructed circa 1949. The bridge is located on Wellington Road 7 in the Township of Mapleton, 0.8 km east of Wellington Road 11. The study area extends approximately 1 km on either side of the bridge. As part of a bridge inspection conducted in 2019, the Bosworth Bridge was found to be in poor condition with major elements showing signs of significant deterioration. WSP has been retained by the County of Wellington to complete a Municipal Class EA Study to address these items.

In accordance with the requirements for Schedule B projects of the Municipal Class Environmental Assessment, the study will confirm and document the existing structural deficiencies and identify alternative solutions, including rehabilitation or replacement of the bridge, and evaluate associated environmental impacts.

A Stage 1 Archeological Assessment and Natural Heritage Assessment will be undertaken as part of this study. Once complete, these reports will be provided to you for review and acceptance.

A key component of the study will be consultation with interested stakeholders including members of the public and technical agencies, as well as Indigenous communities. We want to ensure that anyone with an interest in this study has the opportunity to provide input and feedback.

This notice is being provided to you in hope that you can assist the Project Team in determining if your community has an interest in this project. Your comments are welcome and we encourage you to provide us with your views.

Unless you indicate otherwise, the Project Team will continue to provide you with updates throughout the Study including notification of an online public engagement event and Study completion.

The Project Team would be pleased to meet with you at any time during the Study. To request a meeting or to discuss the Study, please contact:

Joe de Koning, P.Eng.
Construction Manager
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74 Woolwich Street
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Phone: (519) 837-2601 x 2270
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William Van Ruyven, P. Eng.
Consultant Project Manager
WSP Canada Inc.
610 Chartwell Road, Suite 300
Oakville ON L6J 4A5
Phone: (289) 835-2627
Email: william.vanruyven@wsp.com

Information will be collected in accordance with the Freedom of Information and Protection of Privacy Act and will become part of the public record.

Yours truly,

Joe de Koning, P.Eng.
Wellington County

encl. Notice of Study Commencement

cc: Todd E. Williams, Haudenosaunee Development Institute, Monitoring Program Coordinator

March 4, 2021

Chief R. Stacey LaForme
Mississaugas of the Credit First Nation
2789 Mississauga Road
R.R. #6
Hagersville ON N0A 1H0

RE: County of Wellington
Bosworth Bridge, No. B007028, Wellington Road 7
Schedule B Municipal Class Environmental Assessment
Notice of Study Commencement

Dear Madam/Sir:

Wellington County is carrying out a Municipal Class Environmental Assessment (Class EA) Study for the Bosworth Bridge, No. B007028, located on Wellington Road 7, in the Township of Mapleton. Please see the Notice of Study Commencement attached for your information.

The Bosworth Bridge (No. B007028) consists of a single span steel truss structure with a concrete deck over the Conestogo River. The bridge has a span and deck width of 40.1 m and 8.4 m respectively and was constructed circa 1949. The bridge is located on Wellington Road 7 in the Township of Mapleton, 0.8 km east of Wellington Road 11. The study area extends approximately 1 km on either side of the bridge. As part of a bridge inspection conducted in 2019, the Bosworth Bridge was found to be in poor condition with major elements showing signs of significant deterioration. WSP has been retained by the County of Wellington to complete a Municipal Class EA Study to address these items.

In accordance with the requirements for Schedule B projects of the Municipal Class Environmental Assessment, the study will confirm and document the existing structural deficiencies and identify alternative solutions, including rehabilitation or replacement of the bridge, and evaluate associated environmental impacts.

A Stage 1 Archeological Assessment and Natural Heritage Assessment will be undertaken as part of this study. Once complete, these reports will be provided to you for review and acceptance.

A key component of the study will be consultation with interested stakeholders including members of the public and technical agencies, as well as Indigenous communities. We want to ensure that anyone with an interest in this study has the opportunity to provide input and feedback.

This notice is being provided to you in hope that you can assist the Project Team in determining if your community has an interest in this project. Your comments are welcome and we encourage you to provide us with your views.

Unless you indicate otherwise, the Project Team will continue to provide you with updates throughout the Study including notification of an online public engagement event and Study completion.

The Project Team would be pleased to meet with you at any time during the Study. To request a meeting or to discuss the Study, please contact:

Joe de Koning, P.Eng.
Construction Manager
County of Wellington
74 Woolwich Street
Guelph ON N1H 3T9
Phone: (519) 837-2601 x 2270
Email: joedk@wellington.ca

William Van Ruyven, P. Eng.
Consultant Project Manager
WSP Canada Inc.
610 Chartwell Road, Suite 300
Oakville ON L6J 4A5
Phone: (289) 835-2627
Email: william.vanruyven@wsp.com

Information will be collected in accordance with the Freedom of Information and Protection of Privacy Act and will become part of the public record.

Yours truly,

Joe de Koning, P.Eng.
Wellington County

encl. Notice of Study Commencement

cc: Mark LaForme, Mississaugas of the Credit First Nation, Director of Consultation and Accommodation

Fawn Sault, Mississaugas of the Credit First Nation, Consultation Coordinator

March 4, 2021

Chief Mark Hill
Six Nations of the Grand River
2498 Chiefswood Road
P.O. Box 5000
Ohsweken ON N0A 1M0

RE: County of Wellington
Bosworth Bridge, No. B007028, Wellington Road 7
Schedule B Municipal Class Environmental Assessment
Notice of Study Commencement

Dear Madam/Sir:

Wellington County is carrying out a Municipal Class Environmental Assessment (Class EA) Study for the Bosworth Bridge, No. B007028, located on Wellington Road 7, in the Township of Mapleton. Please see the Notice of Study Commencement attached for your information.

The Bosworth Bridge (No. B007028) consists of a single span steel truss structure with a concrete deck over the Conestogo River. The bridge has a span and deck width of 40.1 m and 8.4 m respectively and was constructed circa 1949. The bridge is located on Wellington Road 7 in the Township of Mapleton, 0.8 km east of Wellington Road 11. The study area extends approximately 1 km on either side of the bridge. As part of a bridge inspection conducted in 2019, the Bosworth Bridge was found to be in poor condition with major elements showing signs of significant deterioration. WSP has been retained by the County of Wellington to complete a Municipal Class EA Study to address these items.

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Joe de Koning, P.Eng.
Construction Manager
County of Wellington
74 Woolwich Street
Guelph ON N1H 3T9
Phone: (519) 837-2601 x 2270
Email: joedk@wellington.ca

William Van Ruyven, P. Eng.
Consultant Project Manager
WSP Canada Inc.
610 Chartwell Road, Suite 300
Oakville ON L6J 4A5
Phone: (289) 835-2627
Email: william.vanruyven@wsp.com

Information will be collected in accordance with the Freedom of Information and Protection of Privacy Act and will become part of the public record.

Yours truly,

Joe de Koning, P.Eng.
Wellington County

encl. Notice of Study Commencement

cc: Lonny Bomberry, Six Nations of the Grand River, Lands and Resource Director

Dawn LaForme, Six Nations of the Grand River, Consultation Administrative Assistant

March 4, 2021

Chippewas of the Thames First Nation
320 Chippewa Road
RR1
Muncey ON N0L 1Y0

RE: County of Wellington
Bosworth Bridge, No. B007028, Wellington Road 7
Schedule B Municipal Class Environmental Assessment
Notice of Study Commencement

Dear Madam/Sir:

Wellington County is carrying out a Municipal Class Environmental Assessment (Class EA) Study for the Bosworth Bridge, No. B007028, located on Wellington Road 7, in the Township of Mapleton. Please see the Notice of Study Commencement attached for your information.

The Bosworth Bridge (No. B007028) consists of a single span steel truss structure with a concrete deck over the Conestogo River. The bridge has a span and deck width of 40.1 m and 8.4 m respectively and was constructed circa 1949. The bridge is located on Wellington Road 7 in the Township of Mapleton, 0.8 km east of Wellington Road 11. The study area extends approximately 1 km on either side of the bridge. As part of a bridge inspection conducted in 2019, the Bosworth Bridge was found to be in poor condition with major elements showing signs of significant deterioration. WSP has been retained by the County of Wellington to complete a Municipal Class EA Study to address these items.

In accordance with the requirements for Schedule B projects of the Municipal Class Environmental Assessment, the study will confirm and document the existing structural deficiencies and identify alternative solutions, including rehabilitation or replacement of the bridge, and evaluate associated environmental impacts.

A Stage 1 Archeological Assessment and Natural Heritage Assessment will be undertaken as part of this study. Once complete, these reports will be provided to you for review and acceptance.

A key component of the study will be consultation with interested stakeholders including members of the public and technical agencies, as well as Indigenous communities. We want to ensure that anyone with an interest in this study has the opportunity to provide input and feedback.

This notice is being provided to you in hope that you can assist the Project Team in determining if your community has an interest in this project. Your comments are welcome and we encourage you to provide us with your views.

Unless you indicate otherwise, the Project Team will continue to provide you with updates throughout the Study including notification of an online public engagement event and Study completion.

The Project Team would be pleased to meet with you at any time during the Study. To request a meeting or to discuss the Study, please contact:

Joe de Koning, P.Eng.
Construction Manager
County of Wellington
74 Woolwich Street
Guelph ON N1H 3T9
Phone: (519) 837-2601 x 2270
Email: joedk@wellington.ca

William Van Ruyven, P. Eng.
Consultant Project Manager
WSP Canada Inc.
610 Chartwell Road, Suite 300
Oakville ON L6J 4A5
Phone: (289) 835-2627
Email: william.vanruyven@wsp.com

Information will be collected in accordance with the Freedom of Information and Protection of Privacy Act and will become part of the public record.

Yours truly,

Joe de Koning, P.Eng.
Wellington County

encl. Notice of Study Commencement

cc: Kelly Riley, Chippewas of the Thames First Nation, Director of Treaties, Lands & Environment

Furfurica, Silvia

	Furfurica, Silvia
Sent:	Thursday, April 1, 2021 9:06 AM
Cc:	Van Ruyven, William; Joe de Koning
Subject:	Wellington Road 7 Bosworth Bridge EA - Public Information Centre (PIC)
Attachments:	Wellington Road 7 Bosworth Bridge EA - Public Information Centre (PIC) Online Package.pdf; Wellington Road 7 Bosworth Bridge EA - Public Information Centre (PIC) Notice.pdf

Hello,

Wellington County is carrying out a Municipal Class Environmental Assessment (Class EA) Study for the Bosworth Bridge, No. B007028, located on Wellington Road 7, in the Township of Mapleton.

The County of Wellington has prepared an online Public Information Centre (PIC) package to allow those who are interested in the study an opportunity to review and comment on the alternative planning solutions under consideration, the evaluation process, next steps in the study, and seek input on these topics. Please refer to the attached Notice for more information. Display slides will be made available to the public on the County website beginning **April 1, 2021**. They can be viewed any time after this date by visiting:

www.wellington.ca/BosworthBridgeEA

In a continuing effort to provide your organization with study information, we are enclosing the Information Package which is posted on the County's website for your consideration and invite you to provide any comments or concerns your organization may have at this time. A Stage 1 Archaeological Report is available upon request.

We hope this information will assist your organization in identifying any potential interests or concerns in the project. If you have any questions, or would like to arrange a meeting with the project team, you can reach the County and WSP Project Managers listed in the notice attached.

Thank you,

Silvia Furfurica
Planner
Transportation – Planning

610 Chartwell Rd, Suite 300
Oakville, ON Canada L6J 4A5
t: 905.823.8500 | direct: 289.835.2480 | f: 905.823.8503
wsp.com

Furfurica, Silvia

Sent:
To:
Cc:
Subject:

Hi Anna,

Thank you for the clarification. We will ensure that Valerie will be included on all consultation moving forward.

Have a nice weekend!

Silvia

_____

Silvia Furfurica
Planner
Transportation – Planning

610 Chartwell Rd, Suite 300
Oakville, ON Canada L6J 4A5
t: 905.823.8500 | direct: 289.835.2480 | f: 905.823.8503
wsp.com

From: Anna Batten <anna.batten@kettlepoint.org>
Sent: March 5, 2021 1:08 PM
To: Furfurica, Silvia <Silvia.Furfurica@wsp.com>
Cc: Valerie George <Valerie.George@kettlepoint.org>
Subject: RE: Municipal Class EA Study for Bosworth Bridge No. B007028 - Notice of Study Commencement

Hello Silvia,

I am including Valerie George, Consultation Officer in this email as she will be your main contact regarding consultation.

Thank you,

Anna Batten
Lands Manager
CHIPPEWAS OF KETTLE AND STONY POINT F.N.

From: Furfurica, Silvia [mailto:Silvia.Furfurica@wsp.com]
Sent: March 4, 2021 4:23 PM
To: Jason Henry <Jason.Henry@kettlepoint.org>; Anna Batten <anna.batten@kettlepoint.org>

Cc: Van Ruyven, William <William.VanRuyven@wsp.com>; Joe de Koning <joedk@wellington.ca>
Subject: Municipal Class EA Study for Bosworth Bridge No. B007028 - Notice of Study Commencement

Good Afternoon,

The County of Wellington has initiated a Schedule B Municipal Class Environmental Assessment Study for the Bosworth Bridge (No. B007028) located on Wellington Road 7, in the Township of Mapleton.

Please see the attached documents for a letter along with the Notice of Study Commencement.

Unless requested otherwise, the Project Team will continue to provide study milestone notifications to you. Please refer to the Wellington County website for future project updates at https://www.wellington.ca/en/resident-services/rd-bosworth-bridge-ea.aspx.

If you have any questions, comments or concerns, you can reach the project team by responding to this email or by contacting the County and WSP Project Managers listed in the Notice.

Thank you,
Silvia

_____

Silvia Furfurica
Planner
Transportation – Planning

610 Chartwell Rd, Suite 300
Oakville, ON Canada L6J 4A5
t: 905.823.8500 | direct: 289.835.2480 | f: 905.823.8503
wsp.com

-LAEmHhHzdJzBlTWfa4Hgs7pbKI

Furfurica, Silvia

Sent:
To:
Cc:
Subject:
Attachments:

Follow Up Flag:
Flag Status:

Good afternoon,

Please find the attached email from John. It has the required comments regarding map mark up for:

Carroll Creek (B017114)
Irish Creek (B034123)
Marden Creek (B007071)
Salem Creek (C180210)
Bothwick Drain (B018150)

For Bosworth Bridge (B007028):

Maps show that there is an overhead line that runs along the north side of the road:

Let me know if there is any further information required.

Thank you,

Amanda Crow
Lines Customer Support Clerk
Distribution Work Management, WO1
Hydro One Networks Inc.
Tel: 226.705.5000 Ext 4822
Email: Amanda.Crow@HydroOne.com

From: Pasquale Costanzo [mailto:pasqualec@wellington.ca]
Sent: Wednesday, November 18, 2020 2:18 PM
To: SOUTHERN FBC PLANNING

Furfurica, Silvia

From: Van Ruyven, William
Sent: January 27, 2021 3:47 PM
To: Kevin Schimus; Joe de Koning
Cc: Furfurica, Silvia; Jack Chen
Subject: RE: Municipal Class EA Study for Bosworth Bridge No. B007028 - Notice of Study Commencement

Hi Kevin,

Thank you for your interest and for providing comments on the Notice of Commencement for the Bosworth Bridge No. B007028 Class EA. Your input is greatly appreciated and you will be notified of other key milestones of the study.
If you have any additional questions, comments or concerns, please feel free to reach out to me directly and I would be happy to review with you.

Best Regards,

William

William Van Ruyven, P.Eng., PMP
Project Manager

WSP Canada
t: 289-835-2627 c: 647-280-5895
William.VanRuyven@wsp.com

From: Kevin Schimus <Kevin.Schimus@enbridge.com>
Sent: January 25, 2021 8:33 AM
To: Joe de Koning <joedk@wellington.ca>; Van Ruyven, William <William.VanRuyven@wsp.com>
Cc: Furfurica, Silvia <Silvia.Furfurica@wsp.com>; Jack Chen <Jack.Chen1@enbridge.com>
Subject: FW: Municipal Class EA Study for Bosworth Bridge No. B007028 - Notice of Study Commencement

Good morning Joe/William,

Please find attached, as-built drawing from 2002 Union Gas Transmission System Looping "Owen Sound Reinforcement Phase 2". Gas main is not attached to bridge structure, main was directionally drilled under the Conestoga River.
The location of Enbridge Gas facilities on this drawing is approximate and is to be used for information purposes. It is understood that locates must be obtained through Ontario One Call Limited at 1-800-400-2255 to confirm location of our gas line prior to excavation.

Observation from a Enbridge Gas Representative is required for excavations within 1.5m above or adjacent to the NPS 12 High Pressure Steel Transmission Pipeline. (MOP) maximum operating pressure of this transmission main = 6160kPa (893 PSI).
Please call to schedule third party observation 1-855-2284909 minimum 3 business days in advance.

If you require any additional information, please contact me anytime.

Regards,

Kevin Schimus
Advisor, Construction and Project Management
Construction and Growth

ENBRIDGE GAS INC. OPERATING AS UNION GAS
TEL: 519-885-7400 x5067506 | CELL: 519-635-9488 | kschimus@uniongas.com
603 Kumpf Drive, Waterloo, Ontario, N2V 1K3

uniongas.com | enbridgegas.com
Safety. Integrity. Respect.

From: Furfurica, Silvia <Silvia.Furfurica@wsp.com>
Sent: Thursday, January 21, 2021 12:19 PM
Cc: Joe de Koning <joedk@wellington.ca>; Van Ruyven, William <William.VanRuyven@wsp.com>
Subject: [External] Municipal Class EA Study for Bosworth Bridge No. B007028 - Notice of Study Commencement

Good afternoon,

The County of Wellington has initiated a Schedule B Municipal Class Environmental Assessment Study for the Bosworth Bridge (No. B007028) located on Wellington Road 7, in the Township of Mapleton.

Please see the attached for the Notice of Study Commencement for more information, and submit the attached Agency Response Form by February 25, 2021. If this study falls under the jurisdiction of another representative of your office, please forward this email to them, and advise us at your earliest convenience.

Unless requested otherwise, the Project Team will continue to provide study milestone notifications to your agency. Please refer to the Wellington County website for future project updates at https://secure-web.cisco.com/1uNAKDuZVk6pKCe-7XIvaUExi3WvBOyzA4bBJz9FLwREwkjkwP8-lmbMwsjPhoQptKEFBYEABisb-4XxX-DKHnoc9wtQKvKwfj-SwGAGDBl1zm1lQRsUCVEdyko7jK0Y_SIskDUWV10NrP6iPV6GnloMeCSjw2BWBuv7EppObtV_jeock5jskysYT2TVApuZs7bZvfasU-4wVoqJkbs_EqFuZlp--hbcyVvYhxWvHYCqO_OGN3STwWERupT0vVH5eJS3N4NewJaoNu3VZzztAZxKumsTgkyPGHbGXG8ILrfmufYyCFjMUGhj8cgEJT2Th/https%3A%2F%2Fwww.wellington.ca%2Fbosworthbridgeea%2F.

If you have any questions, comments or concerns, you can reach the project team by responding to this email or by contacting the County and WSP Project Managers listed in the notice.

Thank you for your assistance,

Silvia Furfurica
Planner
Transportation – Planning

610 Chartwell Rd, Suite 300
Oakville, ON Canada L6J 4A5
t: 905.823.8500 | direct: 289.835.2480 | f: 905.823.8503
wsp.com

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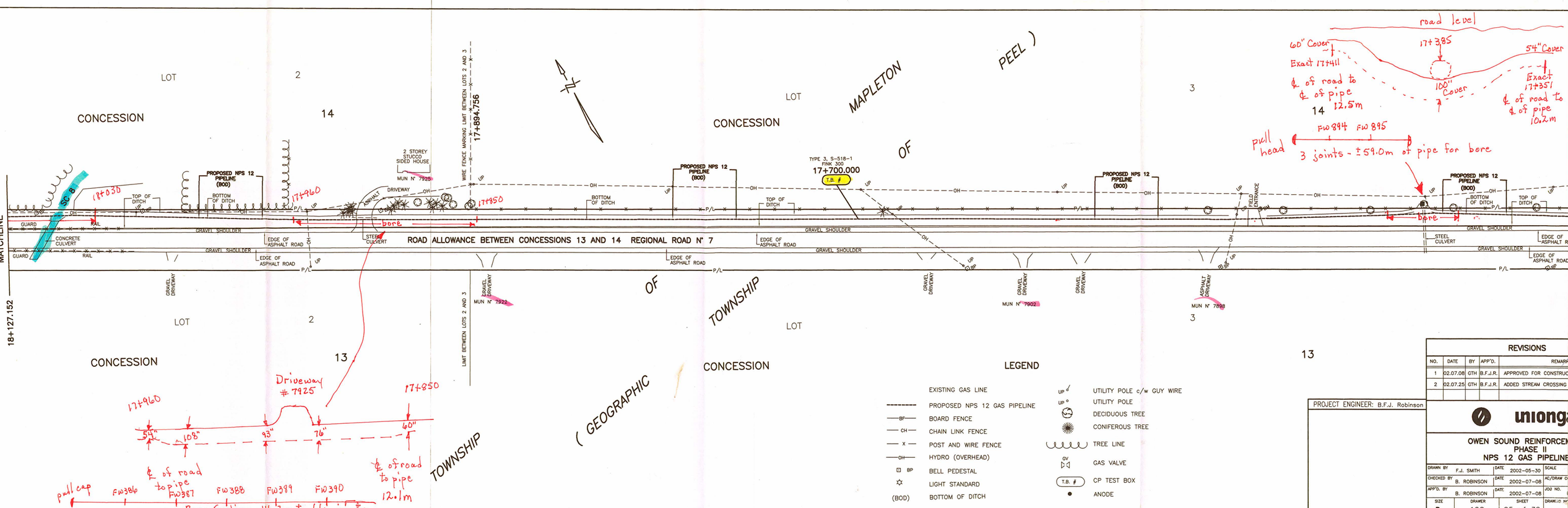


LEGEND

	EXISTING GAS LINE
----------	PROPOSED NPS 12 GAS PIPELINE
—BF—	BOARD FENCE
—CH—	CHAIN LINK FENCE
— x —	POST AND WIRE FENCE
—OH—	HYDRO (OVERHEAD)
⊡ BP	BELL PEDESTAL
☼	LIGHT STANDARD
(BOD)	BOTTOM OF DITCH
UP ∅	UTILITY POLE c/w GUY WIRE
UP ○	UTILITY POLE
	DECIDUOUS TREE
	CONIFEROUS TREE
	TREE LINE
GV ⋈	GAS VALVE
T.B. #	CP TEST BOX
●	ANODE

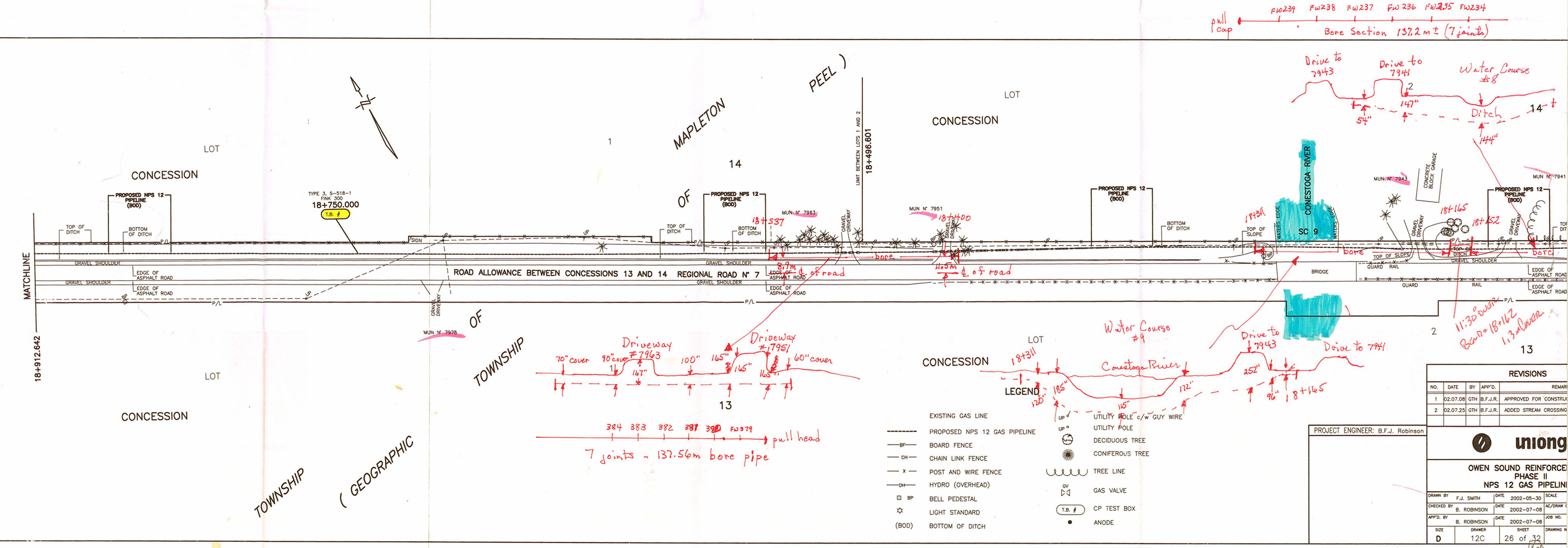
REVISIONS				
NO.	DATE	BY	APP'D.	REMARK
1	02.07.08	GTH	B.F.J.R.	APPROVED FOR CONSTRUC
2	02.07.25	GTH	B.F.J.R.	ADDED STREAM CROSSING

PROJECT ENGINEER: B.F.J. Robinson

uniong

OWEN SOUND REINFORCEM
PHASE II
NPS 12 GAS PIPELINE

DRAWN BY	F.J. SMITH	DATE 2002-05-30	SCALE
CHECKED BY	B. ROBINSON	DATE 2002-07-08	AC/DRAW C
APP'D. BY	B. ROBINSON	DATE 2002-07-08	JOB NO.
SIZE D	DRAWER 12C	SHEET 25 of 32	DRAWING N°



LEGEND

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REVISIONS				
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PROJECT ENGINEER: B.F.J. Robinson

uniong

OWEN SOUND REINFORCE
PHASE II
NPS 12 GAS PIPELIN

DRAWN BY	F.J. SMITH	DATE 2002-05-30	SCALE
CHECKED BY	B. ROBINSON	DATE 2002-07-08	AC/DRAW
APP'D. BY	B. ROBINSON	DATE 2002-07-08	JOB NO.
SIZE D	DRAWER 12C	SHEET 26 of 32	DRAWING N

(19)

County of Wellington
Wellington Road 7, Bosworth Bridge No. B007028
Township of Mapleton
Schedule B Municipal Class Environmental Assessment
Notice of Study Commencement

Agency/Utility Response Form

Name:	
Title:	
Agency Name & Division or Branch:	
Mailing Address:	
Email:	
Phone (optional):	

Our agency would like to be kept informed of the Study with direct mailings. Yes ☐ No ☐

Please remove our agency from the project mai ling list. Yes ☐ No ☐

Please provide any initial information or comments you may have:

Please return this form by February 25, 2021.

William Van Ruyven, P.Eng.
Consultant Project Engineer
WSP Canada Inc.
610 Chartwell Road, Suite 300
Oakville ON L6J 4A5
william.vanruyven@wsp.com

Information is being collected under the Freedom of Information and Protection of Privacy Act.
With the exception of personal information, all comments will become part of the public record.

County of Wellington
Wellington Road 7, Bosworth Bridge No. B007028
Township of Mapleton
Schedule B Municipal Class Environmental Assessment
Notice of Study Commencement

Agency/Utility Response Form

Name:	Jim Kluiber
Title:	CEO/President
Agency Name & Division or Branch:	Wellington North Power Inc.
Mailing Address:	290 Queen St W, PO Box 359 Mount Forest
Email:	jkluiber@wellingtonnorthpower.com
Phone (optional):	519 323 1710

Our agency would like to be kept informed of the Study with direct mailings. Yes ☐ No ☑

Please remove our agency from the project mailing list. Yes ☑ No ☐

Please provide any initial information or comments you may have:

Please return this form by February 25, 2021.

William Van Ruyven, P.Eng.
Consultant Project Engineer
WSP Canada Inc.
610 Chartwell Road, Suite 300
Oakville ON L6J 4A5
william.vanruyven@wsp.com

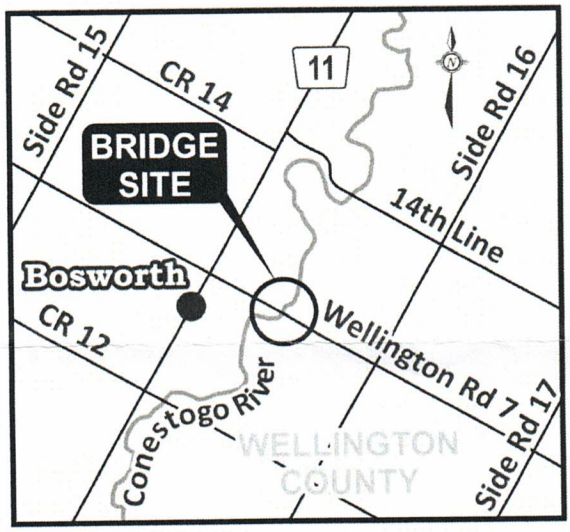
Information is being collected under the Freedom of Information and Protection of Privacy Act. With the exception of personal information, all comments will become part of the public record.

NOTICE OF STUDY COMMENCEMENT

County of Wellington
Wellington Road 7, Bosworth Bridge No. B007028
Township of Mapleton
Schedule B Municipal Class Environmental Assessment

The Study

The Bosworth Bridge (No. B007028) consists of a single span steel truss structure with a concrete deck over the Conestogo River. The bridge has a span and deck width of 40.1 m and 8.4 m respectively and was constructed circa 1949. The bridge is located on Wellington Road 7 in the Township of Mapleton, 0.8 km east of Wellington Road 11. The study area extends approximately 1 km on either side of the bridge. As part of a bridge inspection conducted in 2019, the Bosworth Bridge, No. B007028 was found to be in poor condition with major elements showing signs of significant deterioration. WSP has been retained by the County of Wellington to complete a Municipal Class EA Study to address these items.



The Process

The study is being conducted in accordance with Schedule B of the Municipal Class Environmental Assessment process (2000, as amended in 2015). The study will confirm and document the existing structural deficiencies and identify alternative solutions, including rehabilitation or replacement of the bridge, and evaluate associated environmental impacts.

Comment Invited

A key component of the study will be consultation with interested stakeholders including public, agencies and Indigenous communities. We want to ensure that anyone with an interest in this study has the opportunity to provide input and feedback. Project updates will be posted on the Wellington County website www.wellington.ca and you are invited to provide input to the Project Team. Upon completion of the study, the planning process and recommendations will be documented in a Project File and made available for public review.

If you have any questions or concerns at any time during the study, or wish to be placed on the study mailing list to receive study notices directly, please contact either of the project team members below:

Joe de Koning, P.Eng.
Construction Manager
County of Wellington
74 Woolwich Street
Guelph ON N1H 3T9
519.837.2601 x 2270
joedk@wellington.ca

William Van Ruyven, P.Eng.
Consultant Project Engineer
WSP Canada Inc.
610 Chartwell Road, Suite 300
Oakville ON L6J 4A5
905.823.8500
william.vanruyven@wsp.com

Covid-19
The County is keeping the community safe by complying with provincial guidelines, supporting physical distancing, and postponing in-person public meetings. Consultation and opportunities for public input will focus on web-based information packages with accommodations for alternative formats, as requested.

Information will be collected in accordance with the Freedom of Information and Protection of Privacy Act and will become part of the public record.

Alternate Formats Available Upon Request

This notice first issued on January 21, 2021.

Furfurica, Silvia

From: Van Ruyven, William
Sent: January 28, 2021 3:02 PM
To: Sandra Martin
Cc: Furfurica, Silvia
Subject: RE: Agency/Utility Response Form - No. B007028

Hi Sandra,

Sorry, I am catching up on a few things and see you've actually asked to be removed from the mailing list. As requested, you will not be informed of future updates for this project.

Kind Regards,

William

William Van Ruyven, P.Eng., PMP
Project Manager

WSP Canada
t: 289-835-2627 c: 647-280-5895
William.VanRuyven@wsp.com

From: Van Ruyven, William
Sent: January 27, 2021 3:48 PM
To: 'Sandra Martin' <smartin@wellingtonnorthpower.com>
Cc: Furfurica, Silvia <Silvia.Furfurica@wsp.com>; Joe de Koning <JoeDK@wellington.ca>
Subject: RE: Agency/Utility Response Form - No. B007028

Hi Sandra,

Thank you for your interest and for providing comments on the Notice of Commencement for the Bosworth Bridge No. B007028 Class EA. Your input is greatly appreciated and you will be notified of other key milestones of the study.
If you have any additional questions, comments or concerns, please feel free to reach out to me directly and I would be happy to review with you.

Best Regards,

William

William Van Ruyven, P.Eng., PMP
Project Manager

WSP Canada
t: 289-835-2627 c: 647-280-5895
William.VanRuyven@wsp.com

From: Sandra Martin <smartin@wellingtonnorthpower.com>
Sent: January 27, 2021 3:26 PM
To: Van Ruyven, William <William.VanRuyven@wsp.com>
Subject: Agency/Utility Response Form - No. B007028

Good Afternoon

Please find attached the Agency/Utility Response Form for the Bosworth Bridge No B007028.

Sandra Martin
Wellington North Power Inc.
Phone (519)323-1710
Fax (519) 323-2425
smartin@wellingtonnorthpower.com
ESA # 7012854

Furfurica, Silvia

From: Telus Utility Markups <telusutilitymarkups@Telecon.ca>
Sent: Monday, April 5, 2021 9:26 AM
To: Furfurica, Silvia
Subject: RE: Wellington Road 7 Bosworth Bridge EA - Public Information Centre (PIC) Telus 2021-1683

Categories: File

Telus has no underground infrastructure in your area of study.

Indira Sharma
Project Support
289-657-8256

www.telecon.ca

From: Furfurica, Silvia <Silvia.Furfurica@wsp.com>
Sent: Thursday, April 1, 2021 7:48 AM
Cc: Van Ruyven, William <William.VanRuyven@wsp.com>; Joe de Koning <joedk@wellington.ca>
Subject: Wellington Road 7 Bosworth Bridge EA - Public Information Centre (PIC)

Hello,

The County of Wellington is carrying out a Municipal Class Environmental Assessment (Class EA) Study for the Bosworth Bridge, No. B007028, located on Wellington Road 7, in the Township of Mapleton.

The County of Wellington has prepared an online Public Information Centre (PIC) package to allow local residents and interested members of the public an opportunity to review and comment on the alternative planning solutions under consideration, the evaluation process, next steps in the study, and seek input on these topics. Please refer to the attached Notice for more information. Display slides will be made available to the public on the County website beginning **April 1, 2021**. They can be viewed any time after this date by visiting:

www.wellington.ca/BosworthBridgeEA

If this study falls under the jurisdiction of another representative of your office, please forward this email to them and advise us at your earliest convenience.

If you have any questions, comments or concerns, you can reach the project team by contacting the County and WSP Project Managers listed in the notice.

Thank you,

Silvia Furfurica
Planner
Transportation – Planning

610 Chartwell Rd, Suite 300
Oakville, ON Canada L6J 4A5
t: 905.823.8500 | direct: 289.835.2480 | f: 905.823.8503
wsp.com

Furfurica, Silvia

From: Kevin Schimus <Kevin.Schimus@enbridge.com>
Sent: Monday, April 12, 2021 8:07 AM
To: Furfurica, Silvia
Cc: Van Ruyven, William; Joe de Koning
Subject: RE: Wellington Road 7 Bosworth Bridge EA - Public Information Centre (PIC)
Attachments: 2002 Owen Sound Reinforcement Phase II NPS Gas Pipeline Mark Up 25-26.pdf; Wellington Road 7 Bosworth Bridge EA - Public Information Centre (PIC).pdf

Good morning Silvia,

Please find attached as-built dwg with depths identified for Enbridge Gas NPS 12 High Pressure Steel 6160kPa Transmission "Owen Sound Reinforcement Line" in respect to the above-mentioned project, for engineering purposes only. The location of Enbridge Gas facilities on this drawing is approximate and is to be used for information purposes. It is understood that locates must be obtained through Ontario One Call Limited at 1-800-400-2255 to confirm location of our gas line prior to excavation. Due to the sensitivity of this pipeline, observation from a Enbridge Gas Representative is required when third party excavations are completed within 1.5m above or adjacent to this pipeline. This pipeline is not attached to the existing bridge and was directional drilled under Conestogo River in 2002. See Sheet 26 attached for details. If you have any additional questions or concerns contact me anytime. Thanks.

Regards,

Kevin Schimus
Sr. Advisor, Construction and Project Management
Southeast Region Construction and Growth

Enbridge Gas Inc
Cell: 519-635-9488 | Kevin.Schimus@enbridge.com
603 Kumpf Drive, Waterloo, Ontario, N2V 1K3

enbridgegas.com
Safety. Integrity. Respect. Inclusion.

From: Furfurica, Silvia <Silvia.Furfurica@wsp.com>
Sent: Thursday, April 1, 2021 7:48 AM
Cc: Van Ruyven, William <William.VanRuyven@wsp.com>; Joe de Koning <joedk@wellington.ca>
Subject: [External] Wellington Road 7 Bosworth Bridge EA - Public Information Centre (PIC)

Hello,

The County of Wellington is carrying out a Municipal Class Environmental Assessment (Class EA) Study for the Bosworth Bridge, No. B007028, located on Wellington Road 7, in the Township of Mapleton.

The County of Wellington has prepared an online Public Information Centre (PIC) package to allow local residents and interested members of the public an opportunity to review and comment on the alternative planning solutions under

consideration, the evaluation process, next steps in the study, and seek input on these topics. Please refer to the attached Notice for more information. Display slides will be made available to the public on the County website beginning **April 1, 2021**. They can be viewed any time after this date by visiting:

http://secure-web.cisco.com/1OzppvRWHxYXvNqMfZ-lQZKCmKCptrmcclDXrOU-Xv_l75XXVkxFb3VftdPEiJ87kd8pn-Nz_KEx7H0c0ft0lrbMEKBij7DtUZEc0KzbblInrJbKBqJD3ZnKBQSIdw9syinJRv0gRer2ibnM0sJZ0r1W3SERVRjz4GZFiPTnx_Smex8A8BnaLhCjXPDyvZU3qqFB9QjHJJexFJWAXViJYPCIQMaWGOtNnqK5oA5Z2qtf-9chbCyklTeBt8Cpg4J3SUn1KJ0HgOewisuDip2RiqpobqnaBofTlgSXWvD_AjDJa2Q3VM9DZSHzqX4wlzqip/http%3A%2F%2Fwww.wellington.ca%2FBosworthBridgeEA

If this study falls under the jurisdiction of another representative of your office, please forward this email to them and advise us at your earliest convenience.

If you have any questions, comments or concerns, you can reach the project team by contacting the County and WSP Project Managers listed in the notice.

Thank you,

_____

Silvia Furfurica
Planner
Transportation – Planning

610 Chartwell Rd, Suite 300
Oakville, ON Canada L6J 4A5
t: 905.823.8500 | direct: 289.835.2480 | f: 905.823.8503
wsp.com

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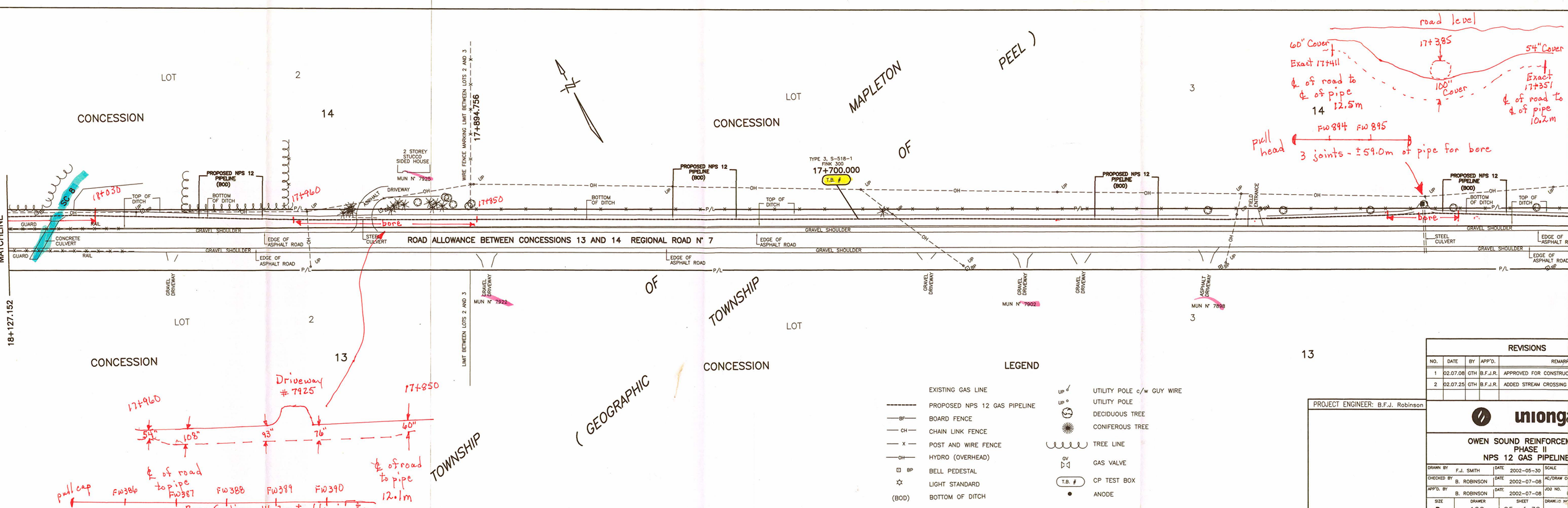


LEGEND

	EXISTING GAS LINE
----------	PROPOSED NPS 12 GAS PIPELINE
—BF—	BOARD FENCE
—CH—	CHAIN LINK FENCE
— x —	POST AND WIRE FENCE
—OH—	HYDRO (OVERHEAD)
⊡ BP	BELL PEDESTAL
☼	LIGHT STANDARD
(BOD)	BOTTOM OF DITCH
UP ∅	UTILITY POLE c/w GUY WIRE
UP ○	UTILITY POLE
	DECIDUOUS TREE
	CONIFEROUS TREE
	TREE LINE
GV ⋈	GAS VALVE
T.B. #	CP TEST BOX
●	ANODE

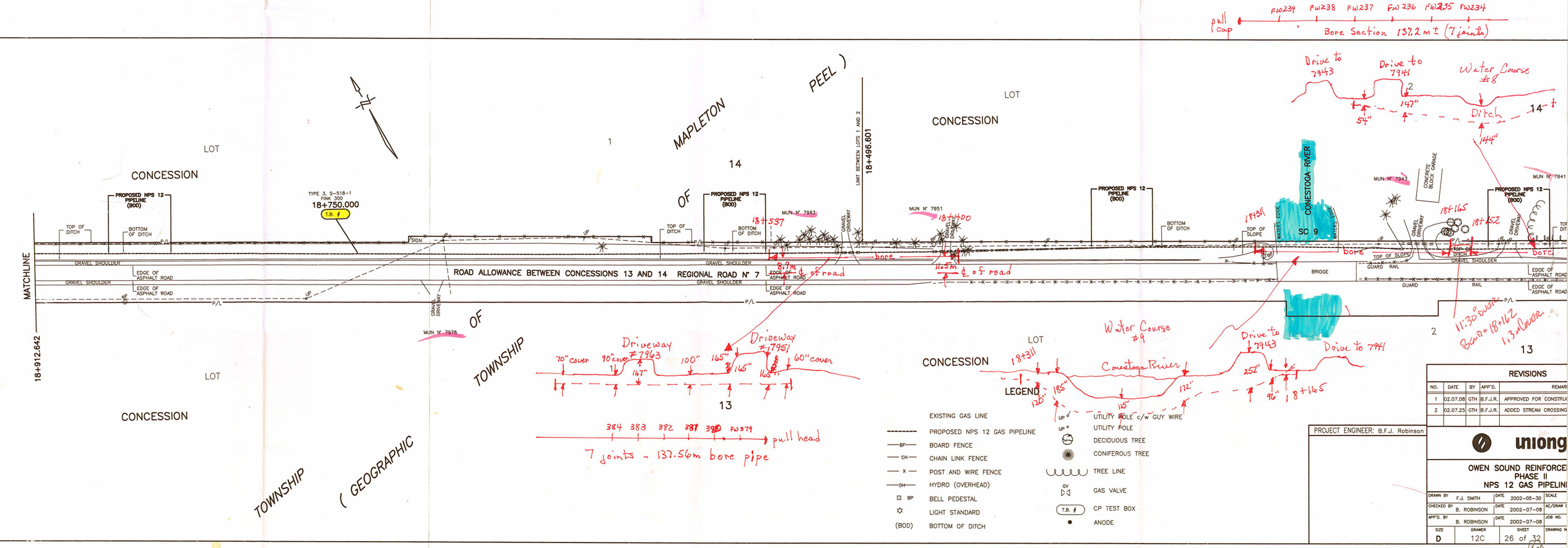
REVISIONS				
NO.	DATE	BY	APP'D.	REMARK
1	02.07.08	GTH	B.F.J.R.	APPROVED FOR CONSTRUC
2	02.07.25	GTH	B.F.J.R.	ADDED STREAM CROSSING

PROJECT ENGINEER: B.F.J. Robinson

uniong

OWEN SOUND REINFORCEM
PHASE II
NPS 12 GAS PIPELINE

DRAWN BY	F.J. SMITH	DATE 2002-05-30	SCALE
CHECKED BY	B. ROBINSON	DATE 2002-07-08	AC/DRAW C
APP'D. BY	B. ROBINSON	DATE 2002-07-08	JOB NO.
SIZE D	DRAWER 12C	SHEET 25 of 32	DRAWING N°



LEGEND

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UP ○	UTILITY POLE
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	CONIFEROUS TREE
	TREE LINE
GV ⋈	GAS VALVE
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PROJECT ENGINEER: B.F.J. Robinson

uniong

OWEN SOUND REINFORCE
PHASE II
NPS 12 GAS PIPELIN

DRAWN BY	F.J. SMITH	DATE 2002-05-30	SCALE
CHECKED BY	B. ROBINSON	DATE 2002-07-08	AC/DRAW
APP'D. BY	B. ROBINSON	DATE 2002-07-08	JOB NO.
SIZE D	DRAWER 12C	SHEET 26 of 32	DRAWING N

(19)

Furfurica, Silvia

From: EA Notices to CRegion (MECP) <eanotification.cregion@ontario.ca>
Sent: January 21, 2021 12:18 PM
To: Furfurica, Silvia
Subject: Automatic reply: Municipal Class EA Study for Bosworth Bridge No. B007028 - Notice of Study Commencement

This is to acknowledge your email has been delivered to the Regional EA Notifications email account. A Regional EA Coordinator will contact you if additional information is needed. To contact a Regional EA Coordinator directly, go to the INFO-GO website and under our ministry, select: 1) Environmental Assessment and Permissions Division; 2) Environmental Assessment Branch; 3) Environmental Assessment Services; 4) Project Review.

Furfurica, Silvia

From: Joe de Koning <joedk@wellington.ca>
Sent: January 22, 2021 9:07 AM
To: Van Ruyven, William; Furfurica, Silvia
Subject: FW: Bosworth Bridge Environmental Assessment
Attachments: Bosworth Bridge No. B007028 Class EA - Notice of Commencement.pdf

FYI

Joe de Koning, P.Eng.
Manager of Roads
County of Wellington
Phone (519) 837-2601 X-2270

From: Joe de Koning
Sent: Friday, January 22, 2021 9:05 AM
To: Scott Wilson <scottw@wellington.ca>; Andy Lennox <andyl@wellington.ca>; Kelly Linton <kellyl@wellington.ca>; Allan Alls <allana@wellington.ca>; James Seeley <jamess@wellington.ca>; 'smattina@mapleton.ca' <smattina@mapleton.ca>; Gregg Davidson <greggd@wellington.ca>; Earl Campbell <earlc@wellington.ca>; Jeff Duncan <jeffd@wellington.ca>
Cc: Don Kudo <donk@wellington.ca>; Donna Bryce <donnab@wellington.ca>; Brad Hutchinson <bradh@wellington.ca>
Subject: Bosworth Bridge Environmental Assessment

Good Morning,

This email is to inform you of the Notice of Commencement for the Environmental Assessment Study for the Bosworth Bridge (No. B007028) located in Mapleton Township on Wellington Road 7.

WSP Canada has been retained by the County to complete this Schedule B Municipal Class Environmental Assessment (EA).

For more information please use the link provided below.

www.wellington.ca/bosworthbridgeea

Do not hesitate to contact myself with any questions you may have.

Kindest Regards,

Joe de Koning, P.Eng.
Manager of Roads
County of Wellington
Phone (519) 837-2601 X-2270

Furfurica, Silvia

From: Van Ruyven, William
Sent: January 27, 2021 3:48 PM
To: Hodgins, Allan (MTO); Joe de Koning; Furfurica, Silvia
Cc: Santos, Paul (MTO); DeVos, Kevin (MTO)
Subject: RE: Municipal Class EA Study for Bosworth Bridge No. B007028 - Notice of Study Commencement

Hi Allan,

Thank you for your interest and for providing comments on the Notice of Commencement for the Bosworth Bridge No. B007028 Class EA. Your input is greatly appreciated and you will be notified of other key milestones of the study.
If you have any additional questions, comments or concerns, please feel free to reach out to me directly and I would be happy to review with you.

Best Regards,

William

William Van Ruyven, P.Eng., PMP
Project Manager

WSP Canada
t: 289-835-2627 c: 647-280-5895
William.VanRuyven@wsp.com

From: Hodgins, Allan (MTO) <Allan.Hodgins@ontario.ca>
Sent: January 24, 2021 8:21 AM
To: Joe de Koning <joedk@wellington.ca>; Van Ruyven, William <William.VanRuyven@wsp.com>; Furfurica, Silvia <Silvia.Furfurica@wsp.com>
Cc: Santos, Paul (MTO) <Paul.Santos@ontario.ca>; DeVos, Kevin (MTO) <Kevin.Devos@ontario.ca>
Subject: RE: Municipal Class EA Study for Bosworth Bridge No. B007028 - Notice of Study Commencement

Hello All,

The Ministry of Transportation (MTO) has no objection to this study (Bosworth Bridge No. B007028, Wellington Rd 7). The subject site is located beyond our limits of permit control, therefore MTO review, approval and permits will not be required.

Please update the County distributions list to include:

- Myself, Allan Hodgins (MTO-Corridor Management Planner); and
- Paul Santos (MTO-Senior Project Manager).
- Please remove Michael Nadeau on subsequent County notifications.

For your reference, for future circulations or site specific question, I would suggest utilizing the recently launched MTO Highway Corridor Management System (HCMS) web-portal, with a “Request a Pre-Consultation” and “General Inquiry” functions (https://www.hcms.mto.gov.on.ca). This platform has been

developed to better serve the general public and development sectors to track the status of a submission. Once submitted the file will be assigned to the appropriate MTO staff to facilitate (Please note standard digital circulations are still being accepted should you choose).

I have also uploaded this circulation as a Pre-Consultation through the Highway Corridor Management System (https://www.hcms.mto.gov.on.ca), just for tracking purposes.

Regards,

Allan Hodgins | Corridor Management Planner (A)

Ph. (226) 973-8580 | Fax (519) 873-4228
Email: allan.hodgins@ontario.ca

Ontario

The Ministry of Transportation of Ontario
West Operations Branch | Corridor Management Section, West
1st Floor | 659 Exeter Road, London, Ontario, N6E 1L3
https://www.hcms.mto.gov.on.ca

From: Furfurica, Silvia <Silvia.Furfurica@wsp.com>
Sent: January-21-21 12:17 PM
Cc: Joe de Koning <joedk@wellington.ca>; Van Ruyven, William <William.VanRuyven@wsp.com>
Subject: Municipal Class EA Study for Bosworth Bridge No. B007028 - Notice of Study Commencement

Good afternoon,

The County of Wellington has ini ated a Schedule B Municipal Class Environmental Assessment Study for the Bosworth Bridge (No. B007028) located on Wellington Road 7, in the Township of Mapleton.

Please see the a ached for the No ce of Study Commencement for more informa on, and submit the a ached Agency Response Form by February 25, 2021. If this study falls under the jurisdic on of another representa ve of your office, please forward this email to them, and advise us at your earliest convenience.

Unless requested otherwise, the Project Team will con nue to provide study milestone no fica ons to your agency. Please refer to the Wellington County website for future project updates at h ps://www.wellington.ca/bosworthbridgeea/.

If you have any ques ons, comments or concerns, you can reach the project team by responding to this email or by contac ng the County and WSP Project Managers listed in the no ce.

Thank you for your assistance,

Silvia Furfurica
Planner
Transportation – Planning

wsp

610 Chartwell Rd, Suite 300
Oakville, ON Canada L6J 4A5
t: 905.823.8500 | direct: 289.835.2480 | f: 905.823.8503
wsp.com

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County of Wellington
Wellington Road 7, Bosworth Bridge No. B007028
Township of Mapleton
Schedule B Municipal Class Environmental Assessment
Notice of Study Commencement

Agency/Utility Response Form

Name:	LARRY WHEELER
Title:	CLERK
Agency Name & Division or Branch:	TOWNSHIP OF MAPLETON
Mailing Address:	P.O. Box 160, DRAYTON, ON. N0G 1P0
Email:	lwheeler@mapleton.ca
Phone (optional):	

Our agency would like to be kept informed of the Study with direct mailings. Yes ☒ No ☐

Please remove our agency from the project mailing list. Yes ☐ No ☐

Please provide any initial information or comments you may have:

Please return this form by February 25, 2021.

William Van Ruyven, P.Eng.
Consultant Project Engineer
WSP Canada Inc.
610 Chartwell Road, Suite 300
Oakville ON L6J 4A5
william.vanruyven@wsp.com

Information is being collected under the Freedom of Information and Protection of Privacy Act.
With the exception of personal information, all comments will become part of the public record.

Furfurica, Silvia

From: Van Ruyven, William
Sent: January 27, 2021 3:48 PM
To: Larry Wheeler
Cc: Furfurica, Silvia; Joe de Koning
Subject: RE: WR7, Bosworth Bridge No. B007028 > Schedule B Enviro Assess

Hi Larry,

Thank you for your interest and for providing comments on the Notice of Commencement for the Bosworth Bridge No. B007028 Class EA. Your input is greatly appreciated and you will be notified of other key milestones of the study.
If you have any additional questions, comments or concerns, please feel free to reach out to me directly and I would be happy to review with you.

Best Regards,

William

William Van Ruyven, P.Eng., PMP
Project Manager

WSP Canada
t: 289-835-2627 c: 647-280-5895
William.VanRuyven@wsp.com

-----Original Message-----
From: Larry Wheeler <LWheeler@mapleton.ca>
Sent: January 25, 2021 12:20 PM
To: Van Ruyven, William <William.VanRuyven@wsp.com>
Subject: WR7, Bosworth Bridge No. B007028 > Schedule B Enviro Assess

Hello

Please find attached 'Response Form'.

Kind Regards
Larry Wheeler
Clerk
Township of Mapleton

Furfurica, Silvia

From: Van Ruyven, William
Sent: February 5, 2021 3:11 PM
To: Furfurica, Silvia
Subject: FW: Bosworth Bridge EA Acknowledgement Letter
Attachments: Bosworth Bridge Acknowledgement Letter.docx; Notice of Completion Wording 08-28.docx; A Proponent's Introduction to the Delegated Aspects of Consultation with....pdf; Client Guide to Preliminary Screening-May 2019.pdf; MOECC Guide - Climate Change in EA - Rev 0 - Oct 2017.pdf

FYI, see attached.

William Van Ruyven, P.Eng., PMP
Project Manager

WSP Canada
t: 289-835-2627 c: 647-280-5895
William.VanRuyven@wsp.com

From: Slattery, Barbara (MECP) <barbara.slattery@ontario.ca>
Sent: February 5, 2021 3:01 PM
To: Joe de Koning <joedk@wellington.ca>; Van Ruyven, William <William.VanRuyven@wsp.com>
Subject: Bosworth Bridge EA Acknowledgement Letter

With best regards,

Barb Slattery, EA/Planning Coordinator
Ministry of the Environment, Conservation and Parks
Project Review Unit, Environmental Assessment Branch
(365) 366-8185

We want to hear from you. How was my service? You can provide feedback at 1-888-745-8888.

Ministry of the Environment, Conservation and Parks

Environmental Assessment Branch

1st Floor
135 St. Clair Avenue W
Toronto ON M4V 1P5
Tel.: 416 314-8001
Fax.: 416 314-8452

Ministère de l'Environnement, de la Protection de la nature et des Parcs

Direction des évaluations environnementales

Rez-de-chaussée
135, avenue St. Clair Ouest
Toronto ON M4V 1P5
Tél. : 416 314-8001
Téléc. : 416 314-8452

365-366-8185
Via email only

February 5, 2021

Joe de Koning, P.Eng.
County of Wellington

William Van Ruyven
WSP

Re: Response to Notice of Commencement
Bosworth Bridge No. B007028
County of Wellington
MEA Class EA Schedule "B" Undertaking

This letter is in response to the Notice of Commencement for the above noted project. The Ministry of the Environment, Conservation and Parks (MECP) acknowledges that the County of Wellington has initiated an EA process that will follow the requirements for Schedule "B" projects to assess the improvement options to the Bosworth Bridge, a crossing over the Conestogo River. The EA is being undertaken due to the significant deterioration of this bridge.

It is expected that the EA, will consider the following in the identification and evaluation of improvement options:

- How each alternative will address climate change adaptation and mitigation which includes resiliency to more severe storm events and the manner in which surface run-off will be addressed. A document is included with this correspondence to provide guidance in this regard;
- Is this an area that has been assessed for the presence of any Species at Risk and their habitats? If so, is there any potential for proposed improvements to have an adverse effect that would require mitigation measures? You are encouraged to contact the

ministry's Species At Risk unit at SARSOntario@ontario.ca with detailed locational information and a complete project description to obtain direction as to what needs to be done at the EA stage to facilitate the issuance of any authorizations or permits that might be required when the project is being implemented. A guidance document has also been included to assist with this;
- The best management practices that will be incorporated into the implementation of any works that are required in order to be sufficiently protective of the surface water;
- All permits, licences and approvals that would be required in order to implement the identified preferred alternatives for the bridge; and
- Consideration of waste management if demolition of the existing structure, or any components of it will be required.

The Crown has a legal duty to consult Aboriginal communities when it has knowledge, real or constructive, of the existence or potential existence of an Aboriginal or treaty right and contemplates conduct that may adversely impact that right. Before authorizing this project, the Crown must ensure that its duty to consult has been fulfilled where such a duty is triggered. Although the duty to consult with Aboriginal peoples is a duty of the Crown, the Crown may delegate procedural aspects of this duty to project proponents while retaining oversight of the consultation process.

Your proposed project may have the potential to affect Aboriginal or treaty rights protected under Section 35 of Canada's *Constitution Act* 1982. Where the Crown's duty to consult is triggered in relation to your proposed project**, the MECP is delegating the procedural aspects of rights-based consultation to you through this letter.** The Crown intends to rely on the delegated consultation process in discharging its duty to consult and maintains the right to participate in the consultation process as it sees fit.

Based on information you have provided to date and the Crown`s preliminary assessment you are required to consult with the following communities who have been identified as potentially affected by your proposed project:

- Aamjiwnaang First Nation
- Bkejwanong (Walpole Island)
- Chippewas of Kettle and Stony Point
- Chippewas of the Thames First Nation
- Mississaugas of the Credit First Nation
- Six Nations of the Grand River (Both Six Nations Elected Council and the Haudenosaunee Confederacy Chiefs Council)

Steps that you may need to take in relation to Aboriginal consultation for your proposed project are outlined in the "Code of Practice for Consultation in Ontario's Environmental Assessment Process" which can be found at the following link: https://www.ontario.ca/document/consultation-ontarios-environmental-assessment-process Additional information related to Ontario's Environmental Assessment Act is available online at: www.ontario.ca/environmentalassessments

You must contact the Director of Environmental Approvals Branch under the following circumstances subsequent to initial discussions with the communities identified by MECP:

- Aboriginal or treaty rights impacts are identified to you by the communities
- You have reason to believe that your proposed project may adversely affect an Aboriginal or treaty right
- Consultation has reached an impasse
- A Part II Order request is expected

The MECP will then assess the extent of any Crown duty to consult for the circumstances and will consider whether additional steps should be taken, including what role you will be asked to play in them.

Royal Assent to Bill 197 was given on July 22, 2020, changing certain aspects of the provincial environmental assessment process. Proponents are still required to prepare and issue a Notice of Completion providing at least 30 days during which documentation may be reviewed and comment and input submitted to the Proponent. Now however, the Notice of Completion will advise that outstanding concerns are to be directed to the Proponent for a response, and that in the event the outstanding concerns relate to **potential adverse impacts to constitutionally protected Aboriginal and treaty rights,** Part II Order requests on those matters (only) should be addressed in writing to:

Minister Jeff Yurek
Ministry of Environment, Conservation and Parks
777 Bay Street, 5th Floor
Toronto ON M7A 2J3
minister.mecp@ontario.ca

and

Director, Environmental Assessment Branch
Ministry of Environment, Conservation and Parks
135 St. Clair Ave. W, 1 st Floor
Toronto ON, M4V 1P5
ClassEAnotices@ontario.ca

Please note that you cannot proceed with the project until at least 30 days after the end of the comment period provided for in the Notice of Completion.

You may not proceed after this time if:

- a Part II Order request has been submitted to the ministry regarding **potential adverse impacts to constitutionally protected Aboriginal and treaty rights**, or
- the Director has issued a Notice of Proposed order regarding the project.

If other concerns with the Project File and/or EA process are made known to the minister, or determined following a review of the document, the Minister reserves the right to issue an order on his or her own initiative within a specified time period. Within the 30 days following the Notice of Completion, the Director would first issue a Notice of Proposed Order to you if the Minister is considering an order for the project. At that time, the Director may request additional information from you.

Once the requested information has been received, the Minister will have 30 days within which to make a decision or impose conditions on your project. I have also attached template wording for the Notice of Completion that describes the new process.
Should you have questions or wish to discuss these comments, please contact me at Barbara.slattery@ontario.ca or by calling me at (365) 366-8185.

With regards,

EA/Planning Coordinator

SAMPLE NOTICE OF COMPLETION TEMPLATE – FOR REFERENCE

Interested persons may provide written comments to our project team by DATE. All comments and concerns should be sent directly to PROPONENT CONTACT at the COMPANY/MUNICIPALITY.

In addition, a request may be made to the Ministry of the Environment, Conservation and Parks for an order requiring a higher level of study (i.e. requiring an individual/comprehensive EA approval before being able to proceed), or that conditions be imposed (e.g. require further studies), only on the grounds that the requested order may prevent, mitigate or remedy adverse impacts on constitutionally protected Aboriginal and treaty rights. Requests on other grounds will not be considered. Requests should include the requester contact information and full name for the ministry.

Requests should specify what kind of order is being requested (request for additional conditions or a request for an individual/comprehensive environmental assessment), how an order may prevent, mitigate or remedy those potential adverse impacts, and any information in support of the statements in the request. This will ensure that the ministry is able to efficiently begin reviewing the request.

The request should be sent in writing or by email to:

Minister of the Environment, Conservation and Parks
Ministry of Environment, Conservation and Parks
777 Bay Street, 5th Floor
Toronto ON M7A 2J3
minister.mecp@ontario.ca

and

Director, Environmental Assessment Branch
Ministry of Environment, Conservation and Parks
135 St. Clair Ave. W, 1st Floor
Toronto ON, M4V 1P5
EABDirector@ontario.ca

Requests should also be sent to the PROPONENT by mail or by e-mail.

This Notice issued DATE.

Information will be collected in accordance with the Municipal Freedom of Information and Protection of Privacy Act. With the exception of personal information, all comments will become part of the public record.

A PROPONENT'S INTRODUCTION TO THE DELEGATION OF PROCEDURAL ASPECTS OF CONSULTATION WITH ABORIGINAL COMMUNITIES

DEFINITIONS

The following definitions are specific to this document and may not apply in other contexts:

Aboriginal communities – the First Nation or Métis communities identified by the Crown for the purpose of consultation.

Consultation – the Crown's legal obligation to consult when the Crown has knowledge of an established or asserted Aboriginal or treaty right and contemplates conduct that might adversely impact that right. This is the type of consultation required pursuant to s. 35 of the *Constitution Act, 1982*. Note that this definition does not include consultation with Aboriginal communities for other reasons, such as regulatory requirements.

Crown – the Ontario Crown, acting through a particular ministry or ministries.

Procedural aspects of consultation – those portions of consultation related to the process of consultation, such as notifying an Aboriginal community about a project, providing information about the potential impacts of a project, responding to concerns raised by an Aboriginal community and proposing changes to the project to avoid negative impacts.

Proponent – the person or entity that wants to undertake a project and requires an Ontario Crown decision or approval for the project.

I. PURPOSE

The Crown has a legal duty to consult Aboriginal communities when it has knowledge of an existing or asserted Aboriginal or treaty right and contemplates conduct that may adversely impact that right. In outlining a framework for the duty to consult, the Supreme Court of Canada has stated that the Crown may delegate procedural aspects of consultation to third parties. This document provides general information about the Ontario Crown's approach to delegation of the procedural aspects of consultation to proponents.

This document is not intended to instruct a proponent about an individual project, and it does not constitute legal advice.

II. WHY IS IT NECESSARY TO CONSULT WITH ABORIGINAL COMMUNITIES?

The objective of the modern law of Aboriginal and treaty rights is the *reconciliation* of Aboriginal peoples and non-Aboriginal peoples and their respective rights, claims and interests. Consultation is an important component of the reconciliation process.

The Crown has a legal duty to consult Aboriginal communities when it has knowledge of an existing or asserted Aboriginal or treaty right and contemplates conduct that might adversely impact that right. For example, the Crown's duty to consult is triggered when it considers issuing a permit, authorization or approval for a project which has the potential to adversely impact an Aboriginal right, such as the right to hunt, fish, or trap in a particular area.

The scope of consultation required in particular circumstances ranges across a spectrum depending on both the nature of the asserted or established right and the seriousness of the potential adverse impacts on that right.

Depending on the particular circumstances, the Crown may also need to take steps to accommodate the potentially impacted Aboriginal or treaty right. For example, the Crown may be required to avoid or minimize the potential adverse impacts of the project.

III. THE CROWN'S ROLE AND RESPONSIBILITIES IN THE DELEGATED CONSULTATION PROCESS

The Crown has the responsibility for ensuring that the duty to consult, and accommodate where appropriate, is met. However, the Crown may delegate the procedural aspects of consultation to a proponent.

There are different ways in which the Crown may delegate the procedural aspects of consultation to a proponent, including through a letter, a memorandum of understanding, legislation, regulation, policy and codes of practice.

If the Crown decides to delegate procedural aspects of consultation, the Crown will generally:

- Ensure that the delegation of procedural aspects of consultation and the responsibilities of the proponent are clearly communicated to the proponent;
- Identify which Aboriginal communities must be consulted;
- Provide contact information for the Aboriginal communities;
- Revise, as necessary, the list of Aboriginal communities to be consulted as new information becomes available and is assessed by the Crown;
- Assess the scope of consultation owed to the Aboriginal communities;

- Maintain appropriate oversight of the actions taken by the proponent in fulfilling the procedural aspects of consultation;
- Assess the adequacy of consultation that is undertaken and any accommodation that may be required;
- Provide a contact within any responsible ministry in case issues arise that require direction from the Crown; and
- Participate in the consultation process as necessary and as determined by the Crown.

IV. THE PROPONENT'S ROLE AND RESPONSIBILITIES IN THE DELEGATED CONSULTATION PROCESS

Where aspects of the consultation process have been delegated to a proponent, the Crown, in meeting its duty to consult, will rely on the proponent's consultation activities and documentation of those activities. The consultation process informs the Crown's decision of whether or not to approve a proposed project or activity.

A proponent's role and responsibilities will vary depending on a variety of factors including the extent of consultation required in the circumstance and the procedural aspects of consultation the Crown has delegated to it. Proponents are often in a better position than the Crown to discuss a project and its potential impacts with Aboriginal communities and to determine ways to avoid or minimize the adverse impacts of a project.

A proponent can raise issues or questions with the Crown at any time during the consultation process. If issues or concerns arise during the consultation that cannot be addressed by the proponent, the proponent should contact the Crown.

a) What might a proponent be required to do in carrying out the procedural aspects of consultation?

Where the Crown delegates procedural aspects of consultation, it is often the proponent's responsibility to provide notice of the proposed project to the identified Aboriginal communities. The notice should indicate that the Crown has delegated the procedural aspects of consultation to the proponent and should include the following information:

- a description of the proposed project or activity;
- mapping;
- proposed timelines;
- details regarding anticipated environmental and other impacts;
- details regarding opportunities to comment; and
- any changes to the proposed project that have been made for seasonal conditions or other factors, where relevant.

Proponents should provide enough information and time to allow Aboriginal communities to provide meaningful feedback regarding the potential impacts of the project. Depending on the nature of consultation required for a project, a proponent also may be required to:

- provide the Crown with copies of any consultation plans prepared and an opportunity to review and comment;
- ensure that any necessary follow-up discussions with Aboriginal communities take place in a timely manner, including to confirm receipt of information, share and update information and to address questions or concerns that may arise;
- as appropriate, discuss with Aboriginal communities potential mitigation measures and/or changes to the project in response to concerns raised by Aboriginal communities;
- use language that is accessible and not overly technical, and translate material into Aboriginal languages where requested or appropriate;
- bear the reasonable costs associated with the consultation process such as, but not limited to, meeting hall rental, meal costs, document translation(s), or to address technical & capacity issues;
- provide the Crown with all the details about potential impacts on established or asserted Aboriginal or treaty rights, how these concerns have been considered and addressed by the proponent and the Aboriginal communities and any steps taken to mitigate the potential impacts;
- provide the Crown with complete and accurate documentation from these meetings and communications; and
- notify the Crown immediately if an Aboriginal community not identified by the Crown approaches the proponent seeking consultation opportunities.

b) What documentation and reporting does the Crown need from the proponent?

Proponents should keep records of all communications with the Aboriginal communities involved in the consultation process and any information provided to these Aboriginal communities.

As the Crown is required to assess the adequacy of consultation, it needs documentation to satisfy itself that the proponent has fulfilled the procedural aspects of consultation delegated to it. The documentation required would typically include:

- the date of meetings, the agendas, any materials distributed, those in attendance and copies of any minutes prepared;
- the description of the proposed project that was shared at the meeting;
- any and all concerns or other feedback provided by the communities;
- any information that was shared by a community in relation to its asserted or established Aboriginal or treaty rights and any potential adverse impacts of the proposed activity, approval or disposition on such rights;

- any proposed project changes or mitigation measures that were discussed, and feedback from Aboriginal communities about the proposed changes and measures;
- any commitments made by the proponent in response to any concerns raised, and feedback from Aboriginal communities on those commitments;
- copies of correspondence to or from Aboriginal communities, and any materials distributed electronically or by mail;
- information regarding any financial assistance provided by the proponent to enable participation by Aboriginal communities in the consultation;
- periodic consultation progress reports or copies of meeting notes if requested by the Crown;
- a summary of how the delegated aspects of consultation were carried out and the results; and
- a summary of issues raised by the Aboriginal communities, how the issues were addressed and any outstanding issues.

In certain circumstances, the Crown may share and discuss the proponent's consultation record with an Aboriginal community to ensure that it is an accurate reflection of the consultation process.

c) Will the Crown require a proponent to provide information about its commercial arrangements with Aboriginal communities?

The Crown may require a proponent to share information about aspects of commercial arrangements between the proponent and Aboriginal communities where the arrangements:

- include elements that are directed at mitigating or otherwise addressing impacts of the project;
- include securing an Aboriginal community's support for the project; or
- may potentially affect the obligations of the Crown to the Aboriginal communities.

The proponent should make every reasonable effort to exempt the Crown from confidentiality provisions in commercial arrangements with Aboriginal communities to the extent necessary to allow this information to be shared with the Crown.

The Crown cannot guarantee that information shared with the Crown will remain confidential. Confidential commercial information should not be provided to the Crown as part of the consultation record if it is not relevant to the duty to consult or otherwise required to be submitted to the Crown as part of the regulatory process.

V. WHAT ARE THE ROLES AND RESPONSIBILITIES OF ABORIGINAL COMMUNITIES' IN THE CONSULTATION PROCESS?

Like the Crown, Aboriginal communities are expected to engage in consultation in good faith. This includes:

- responding to the consultation notice;
- engaging in the proposed consultation process;
- providing relevant information;
- clearly articulating the potential impacts of the proposed project on Aboriginal or treaty rights; and
- discussing ways to mitigate any adverse impacts.

Some Aboriginal communities have developed tools, such as consultation protocols, policies or processes that provide guidance on how they would prefer to be consulted. Although not legally binding, proponents are encouraged to respect these community processes where it is reasonable to do so. Please note that there is no obligation for a proponent to pay a fee to an Aboriginal community in order to enter into a consultation process.

To ensure that the Crown is aware of existing community consultation protocols, proponents should contact the relevant Crown ministry when presented with a consultation protocol by an Aboriginal community or anyone purporting to be a representative of an Aboriginal community.

VI. WHAT IF MORE THAN ONE PROVINCIAL CROWN MINISTRY IS INVOLVED IN APPROVING A PROPONENT'S PROJECT?

Depending on the project and the required permits or approvals, one or more ministries may delegate procedural aspects of the Crown's duty to consult to the proponent. The proponent may contact individual ministries for guidance related to the delegation of procedural aspects of consultation for ministry-specific permits/approvals required for the project in question. Proponents are encouraged to seek input from all involved Crown ministries sooner rather than later.

Client's Guide to Preliminary Screening for Species at Risk

Ministry of the Environment, Conservation and Parks

Species at Risk Branch, Permissions and Compliance

DRAFT - May 2019

Table of Contents

1.0 Purpose, Scope, Background and Context

1.1 Purpose of this Guide

This guide has been created to:

- help clients better understand their obligation to gather information and complete a preliminary screening for species at risk before contacting the ministry,
- outline guidance and advice clients can expect to receive from the ministry at the preliminary screening stage,
- help clients understand how they can gather information about species at risk by accessing publicly available information housed by the Government of Ontario, and
- provide a list of other potential sources of species at risk information that exist outside the Government of Ontario.

It remains the client's responsibility to:

- carry out a preliminary screening for their projects,
- obtain best available information from all applicable information sources,
- conduct any necessary field studies or inventories to identify and confirm the presence or absence of species at risk or their habitat,
- consider any potential impacts to species at risk that a proposed activity might cause, and
- comply with the *Endangered Species Act* (ESA).

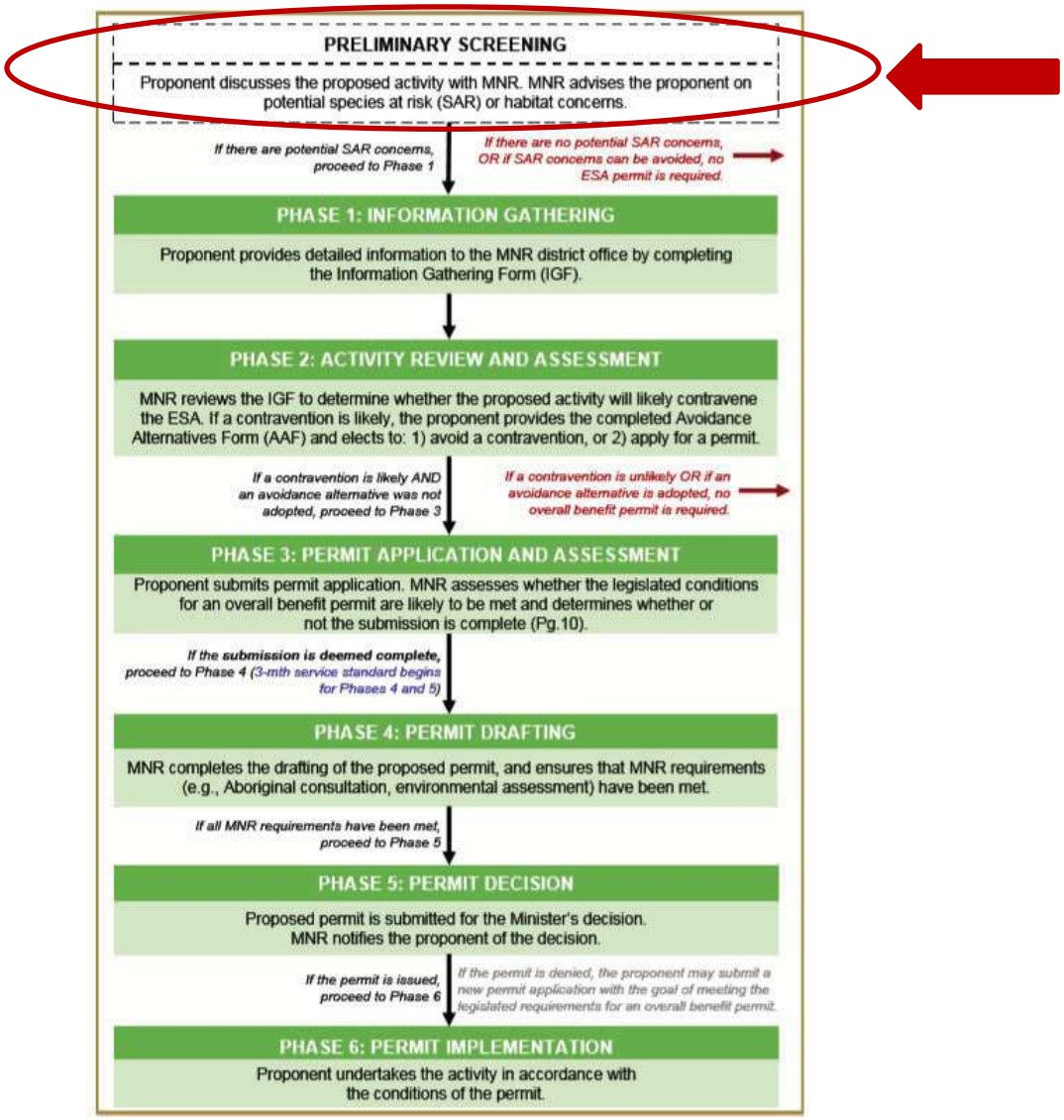
To provide the most efficient service, clients should initiate species at risk screenings and seek information from all applicable information sources identified in this guide, at a minimum, prior to contacting Government of Ontario ministry offices for further information or advice.

1.2 Scope

This guide is a resource for clients seeking to understand if their activity is likely to impact species at risk or if they are likely to trigger the need for an authorization under the ESA. It is not intended to circumvent any detailed site surveys that may be necessary to document species at risk or their habitat nor to circumvent the need to assess the impacts of a proposed activity on species at risk or their habitat. This guide is not an exhaustive list of available information sources for any given area as the availability of information on species at risk and their habitat varies across the province. This guide is intended to support projects and activities carried out on Crown and private land, by private landowners, businesses, other provincial ministries and agencies, or municipal government.

1.3 Background and Context

To receive advice on their proposed activity, clients must first determine whether any species at risk or their habitat exist or are likely to exist at or near their proposed activity, and whether their proposed activity is likely to contravene the ESA. Once this step is complete, clients may contact the ministry at SAROntario@ontario.ca to discuss the main purpose, general methods, timing and location of their proposed activity as well as information obtained about species at risk and their habitat at, or near, the site. At this stage, the ministry can provide advice and guidance to the client about potential species at risk or habitat concerns, measures that the client is considering to avoid adverse effects on species at risk or their habitat and whether additional field surveys are advisable. This is referred to as the "Preliminary Screening" stage. For more information on additional phases in the diagram below, please refer to the *Endangered Species Act Submission Standards for Activity Review and 17(2)(c) Overall Benefit Permits* policy available online at https://www.ontario.ca/page/species-risk-overall-benefit-permits. Please note: any reference to MNR in the diagram is replaced by MECP.



2.0 Roles and Responsibilities

To provide the most efficient service, clients should initiate species at risk screenings and seek information from all applicable information sources identified in this guide prior to contacting Government of Ontario ministry offices for further information or advice.

Step 1: Client seeks information regarding species at risk or their habitat that exist, or are likely to exist, at or near their proposed activity by referring to all applicable information sources identified in this guide.

Step 2: Client reviews and consider guidance on whether their proposed activity is likely to contravene the ESA (see section 3.4 of this guide for guidance on what to consider).

Step 3: Client gathers information identified in the checklist in section 4 of this guide.

Step 4: Client contacts the ministry at SAROntario@ontario.ca to discuss their preliminary screening. Ministry staff will ask the client questions about the main purpose, general methods, timing and location of their proposed activity as well as information obtained about species at risk and their habitat at, or near, the site. Ministry staff will also ask the client for their interpretation of the impacts of their activity on species at risk or their habitat as well as measures the client has considered to avoid any adverse impacts.

Step 5: Ministry staff will provide advice on next steps.

Option A: Ministry staff may advise the client they can proceed with their activity without an authorization under the ESA where the ministry is confident that:

- no protected species at risk or habitats are likely to be present at or near the proposed location of the activity; or
- protected species at risk or habitats are known to be present but the activity is not likely to contravene the ESA; or
- through the adoption of avoidance measures, the modified activity is not likely to contravene the ESA.

Option B: Ministry staff may advise the client to proceed to Phase 1 of the overall benefit permitting process (i.e. Information Gathering in the previous diagram), where:

- there is uncertainty as to whether any protected species at risk or habitats are present at or near the proposed location of the activity; or
- the potential impacts of the proposed activity are uncertain; or
- ministry staff anticipate the proposed activity is likely to contravene the ESA.

3.0 Information Sources

Land Information Ontario (LIO) and the Natural Heritage Information Centre (NHIC) maintain and provide information about species at risk, as well as related information about fisheries, wildlife, crown lands, protected lands and more. This information is made available to organizations, private individuals, consultants, and developers through online sources and is often considered under various pieces of legislation or as part of regulatory approvals and planning processes.

The information available from LIO or NHIC and the sources listed in this guide should not be considered as a substitute for site visits and appropriate field surveys. Generally, this information can be regarded as a starting point from which to conduct further field surveys, if needed. While this data represents best available current information, it is important to note that a lack of information for a site does not mean that species at risk or their habitat are not present. There are many areas where the Government of Ontario does not currently have information, especially in more remote parts of the province. The absence of species at risk location data at or near your site does not necessarily mean no species at risk are present at that location. On-site assessments can better verify site conditions, identify and confirm presence of species at risk and/or their habitats.

Information on the location (i.e. observations and occurrences) of species at risk is considered sensitive and therefore publicly available only on a 1km square grid as opposed to as a detailed point on a map. This generalized information can help you understand which species at risk are in the general vicinity of your proposed activity and can help inform field level studies you may want to undertake to confirm the presence, or absence of species at risk at or near your site.

Should you require specific and detailed information pertaining to species at risk observations and occurrences at or near your site on a finer geographic scale; you will be required to demonstrate your need to access this information, to complete data sensitivity training and to obtain a Sensitive Data Use License from the NHIC. Information on how to obtain a license can be found online at https://www.ontario.ca/page/get-natural-heritage-information.

Many organizations (e.g. other Ontario ministries, municipalities, conservation authorities) have ongoing licensing to access this data so be sure to check if your organization has this access and consult this data as part of your preliminary screening if your organization already has a license.

3.1 Make a Map: Natural Heritage Areas

The Make a Natural Heritage Area Map (available online at https://www.ontario.ca/page/make-natural-heritage-area-map provides public access to natural heritage information, including species at risk, without the user needing to have Geographic Information System (GIS) capability. It allows users to view and identify generalized species at risk information, mark areas of interest, and create and print a custom map directly from the web application. The tool also shows topographic information such as roads, rivers, contours and municipal boundaries.

Users are advised that sensitive information has been removed from the natural areas dataset and the occurrences of species at risk has been generalized to a 1-kilometre grid to mitigate the risks to the species (e.g. illegal harvest, habitat disturbance, poaching).

The web-based mapping tool displays natural heritage data, including:

- Generalized Species at risk occurrence data (based on a 1-km square grid),
- Natural Heritage Information Centre data.

Data cannot be downloaded directly from this web map; however, information included in this application is available digitally through Land Information Ontario (LIO) at https://www.ontario.ca/page/land-information-ontario.

3.2 Land Information Ontario (LIO)

Most natural heritage data is publicly available. This data is managed in a large provincial corporate database called the LIO Warehouse and can be accessed online through the LIO Metadata Management Tool at https://www.javacoeapp.lrc.gov.on.ca/geonetwork/srv/en/main.home. This tool provides descriptive information about the characteristics, quality and context of the data. Publicly available geospatial data can be downloaded directly from this site.

While most data are publicly available, some data may be considered highly sensitive (i.e. nursery areas for fish, species at risk observations) and as such, access to some data maybe restricted.

3.3 Additional Species at Risk Information Sources

- The Breeding Bird Atlas can be accessed online at http://www.birdsontario.org/atlas/index.jsp?lang=en
- eBird can be accessed online at https://ebird.org/home
- iNaturalist can be accessed online at https://www.inaturalist.org/
- The Ontario Reptile and Amphibian Atlas can be accessed online at https://ontarionature.org/programs/citizen-science/reptile-amphibian-atlas
- Your local Conservation Authority. Information to help you find your local Conservation Authority can be accessed online at https://conservationontario.ca/conservation-authorities/find-a-conservation-authority/

  Local naturalist groups or other similar community-based organizations
- Local Indigenous communities
- Local land trusts or other similar Environmental Non-Government Organizations
- Field level studies to identify if species at risk, or their habitat, are likely present or absent at or near the site.
- When an activity is proposed within one of the continuous caribou ranges, please be sure to consider the caribou Range Management Policy. This policy includes figures and maps of the continuous caribou range, can be found online at https://www.ontario.ca/page/range-management-policy-support-woodland-caribou-conservation-and-recovery

3.4 Information Sources to Support Impact Assessments

- Guidance to help you understand if your activity is likely to adversely impact species at risk or their habitat can be found online at https://www.ontario.ca/page/policy-guidance-harm-and-harass-under-endangered-species-act and https://www.ontario.ca/page/categorizing-and-protecting-habitat-under-endangered-species-act
- A list of species at risk in Ontario is available online at https://www.ontario.ca/page/species-risk-ontario. On this webpage, you can find out more about each species, including where is lives, what threatens it and any specific habitat protections that apply to it by clicking on the photo of the species.

4.0 Check-List

Please feel free to use the check list below to help you confirm you have explored all applicable information sources and to support your discussion with Ministry staff at the preliminary screening stage.

- ✓ Land Information Ontario (LIO)
- ✓ Natural Heritage Information Centre (NHIC)
- ✓ The Breeding Bird Atlas
- ✓ eBird
- ✓ iNaturalist
- ✓ Ontario Reptile and Amphibian Atlas
- ✓ List Conservation Authorities you contacted:_____

  _____
- ✓ List local naturalist groups you contacted:_____

  _____
- ✓ List local Indigenous communities you contacted:_____

  _____
- ✓ List any other local land trusts or Environmental Non-Government Organizations you contacted:_____

  _____
- ✓ List and field studies that were conducted to identify species at risk, or their habitat, likely to be present or absent at or near the site: _____

  _____
- ✓ List what you think the likely impacts of your activity are on species at risk and their habitat (e.g. damage or destruction of habitat, killing, harming or harassing species at risk):_____

  _____

Guide

Consideration of Climate Change in Environmental Assessment in Ontario

Legislative Authority:

Environmental Assessment Act, RSO 1990, chapter E.18

ontario.ca/climatechange

Climate Change Action Plan

Ontario

Readers should check with the Client Services and Permissions Branch of the Ministry of the Environment and Climate Change to find out if there have been any revisions:

Ministry of the Environment and Climate Change
Client Services and Permissions Branch
135 St. Clair Avenue West
Toronto, Ontario M4V 1L5 Canada

Telephone: 416-314-8001
Toll Free: 1-800-461-6290
Fax: 416-314-8452
E-mail: MOECCpermissions@ontario.ca
Website: www.ontario.ca/environmentalassessments

This Guide is published as a living document that will be reviewed and revised as necessary. Readers are advised to consult the up-to-date version of Guide posted on Ontario.ca for any revisions. Any comments and suggestions for clarification are welcomed and should be sent to the Director of the Client Services and Permissions Branch at the address listed above. This Guide does not constitute legal advice. A lawyer should be consulted on questions about the application or interpretation of the laws of Ontario as they relate to matters covered by this Guide.

Under clause 31(1)(e) of the *Environmental Assessment Act*, the Minister of the Environment and Climate Change may gather, publish and disseminate information with respect to the environment or environmental assessments for the purposes of the administration and enforcement of the *Environmental Assessment Act* and its regulations. Therefore, the ministry expects that this Guide will be considered by proponents.

Ce document est aussi disponible en français.

PIBS is 9952E

Revision 0 October 2017

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1. Introduction

Environmental assessment is a planning and decision-making process used to promote environmentally responsible decision-making. In Ontario, this process is governed by the *Environmental Assessment Act.* T

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The *Environmental Assessment Act* sets out a process that requires proponents to consider impacts on the environment which is broadly defined to include the natural, social, economic, cultural and built environments. The Act also ensures that interested persons have an opportunity to *comment* on undertakings that may affect them.

The Ministry of the Environment and Climate Change (ministry) has developed Codes of Practice (Codes) to provide guidance on key aspects of the environmental assessment process. The Codes include:

- Preparing and Reviewing Terms of Reference for Environmental Assessments in Ontario;
- Preparing and Reviewing Environmental Assessments in Ontario;
- Consultation in Ontario's Environmental Assessment Process;
- Using Mediation in Ontario's Environmental Assessment Process; and
- Preparing, Reviewing and Using Class Environmental Assessments in Ontario.

Together, the Codes of Practice:

- Set out the ministry's expectations for the content of a variety of environmental assessment documents and provide guidance on the roles and responsibilities of all participants in an environmental assessment process;
- Provide clear direction to proponents, environmental assessment practitioners, and other stakeholders involved in the environmental assessment process on terms of reference, environmental assessments, consultation, and mediation; and,
- Promote the transparency of government involvement and the decision-making process when projects must meet the requirements of provincial environmental assessment legislation.

This Guide is a companion to the Codes of Practice and sets out the ministry's expectations for considering climate change in the preparation, execution and documentation of environmental assessment studies and processes (see also Table 1).

This Guide also supports the province's Climate Change Action Plan by outlining how environmental assessment processes and studies can incorporate climate change impacts considerations.

This Guide covers the consideration of:

- the impacts of a project on climate change;
- the impacts of climate change on a project; and
- various means of identifying and minimizing negative impacts during project implementation.

A climate change consideration during the environmental assessment process results in an undertaking or project:

- that has taken into account alternative methods to reduce its greenhouse gas emissions and negative impacts on carbon sinks; and
- that has been planned in a manner that takes into account future changes in climate and the impacts a changing climate could have on the project.

Environmental Assessment process	Refer to this Guide	Climate Change Mitigation Consideration	Climate Change Adaptation Consideration
Environmental Assessment (i.e., "individual")	Yes	Yes	Yes
Class Environmental Assessment projects	Consult Guide if approved class environmental assessment has no climate consideration method or method does not meet ministry expectations	Consideration scaled to the significance of the project's potential environmental effects. Screening criteria, class environmental assessment methodology may support consideration.	Consideration scaled to the significance of the project's potential environmental effects Screening criteria, class environmental assessment methodology may support consideration.
Renewal / Major Amendment of Approved Class Environmental Assessments	Yes	Mitigation methods in Guide to be considered for use in approved class environmental assessment processes	Adaptation methods in Guide to be considered for use in approved class environmental assessment processes
Environmental Assessment projects under Waste, Transit, Electricity regulations	Yes	Consideration scaled to the significance of the project's potential environmental effects	Consideration scaled to the significance of the project's potential environmental effects

Table 1: Use of Guide in relation to environmental assessment processes

Planning and Climate Change Impacts in Ontario

Climate Change in Provincial Policy Statement

The directions and methods outlined in this guidance will complement and support the climate-focused policies of the 2014 Provincial Policy Statement. The 2014 Provincial Policy Statement issued under the *Planning Act* advises planning authorities of the need to consider development that reduces greenhouse gas emissions and reduces the potential risk of climate change related events like droughts or intense precipitation. A partial listing of applicable policies in the 2014 Provincial Policy Statement include:

- Policies 1.6.2, 1.6.6.7 - Encourage green infrastructure (e.g., permeable surfaces) and strengthen stormwater management requirements
- Policy 1.8 - Require the consideration of energy conservation and efficiency, reduced greenhouse gas emissions and climate change adaptation (e.g., tree cover for shade and for carbon sequestration)
- Policy 3.1.3 - Requires consideration of the potential impacts of climate change that may increase the risk associated with natural hazards (e.g., flooding due to severe weather)

For a complete description of the statements above, please refer to the 2014 Provincial Policy Statement issued under section 3 of the Planning Act.

Using This Guide

A proponent should consult this Guide when preparing a terms of reference for an environmental assessment, when preparing an environmental assessment study, or when planning projects carried out as part of a class environmental assessment or other streamlined environmental assessment process.

Proponents should seek to determine as early as possible in the environmental assessment process whether there are likely to be relevant climate change considerations associated with the project that should be addressed in more detail. The ministry expects proponents to take into account:

- the project's expected production of greenhouse gas emissions and impacts on carbon sinks (climate change mitigation); and
- resilience or vulnerability of the undertaking to changing climatic conditions (climate change adaptation);

during the assessment of alternatives to the undertaking and alternative methods of implementing the undertaking stages of the environmental assessment. In concluding an environmental assessment study, the proponent

should also include a discrete statement in their study report detailing how climate change was considered in the environmental assessment.

In some cases, particularly with projects being planned under streamlined environmental assessment processes, a proponent might conclude that an undertaking is sufficiently minor in scale and short in lifespan that a climate change consideration cannot be practically carried out or is not applicable. In this instance, the proponent should provide a rationale in the environmental assessment documentation as to why the consideration of climate change could not be completed or is not applicable.

Ontario environmental assessment processes where proponents are expected to give consideration to climate change are briefly described below.

Environmental Assessments

An environmental assessment (i.e., "individual" environmental assessment) is a term that describes both a study that is conducted to assess the potential environmental effects of a proposed undertaking, and the resulting report that includes documentation of that analysis. The environmental assessment report documents the results of the study and includes both positive and negative potential environmental effects. Key components of an environmental assessment process and of the resulting report include consultation with government agencies, Indigenous communities and the public; consideration and evaluation of alternatives; and the management of potential environmental effects. Conducting an environmental assessment promotes good environmental planning before decisions are made about proceeding with a proposal.

The first step in the application for approval to proceed with an undertaking under the *Environmental Assessment Act* is the approval of a terms of reference by the Minister of the Environment and Climate Change. The terms of reference creates a framework for the environmental assessment and acts as a roadmap for reviewers and interested parties. Once approved, the proponent relies on the terms of reference to guide the preparation of the environmental assessment. Therefore, it is critical that the terms of reference consider climate change, particularly in identifying environmental components, identifying alternatives, and describing the existing environment and potential effects of the undertaking.

The proponent can start preparing the environmental assessment when the terms of reference is approved. The planning process for an environmental assessment must be documented in its entirety in the environmental assessment report. The environmental assessment must provide a plan that sets out how and when all commitments, including impact management measures, made in the document will be fulfilled and how the proponent will report to the ministry about compliance. The environmental assessment must be submitted by the proponent to the ministry for review and approval. For greater detail on the

environmental assessment process, see the ministry's *Code of Practice: Preparing and Reviewing Environmental Assessments in Ontario*.

Streamlined Environmental Assessments

Streamlined self-assessment processes are available for certain classes of projects that are carried out routinely and have predictable environmental effects that can be readily managed. Streamlined environmental assessment processes in Ontario include those established by regulation (for electricity projects, transit projects and waste management projects) and those approved as part of a class environmental assessment.

A class environmental assessment is a planning document prepared by a proponent that must be approved under the *Environmental Assessment Act.* Once approved, the class environmental assessment serves as the process guiding document and can therefore be used to plan projects subject to the class, as defined in the document.

These streamlined processes provide an efficient, timely and environmentally responsible approach to the planning of these projects. As with environmental assessments, public notification/consultation with interested persons, government agencies and Indigenous peoples and communities is integral to these processes.

Some class environmental assessment processes may already include climate change considerations in the process of determining the potential environmental effects for any given project.

Content of This Guide

The content of this Guide is generic in nature and not dedicated to any specific type of project. The Guide provides ideas on how to incorporate climate change considerations into the environmental assessment process and documentation. It also provides examples of climate change mitigation and adaptation efforts. Case studies are provided with detailed examples of how climate change can be considered in project planning. Specifically, the Guide provides environmental assessment proponents and practitioners with:

- Several approaches to considering climate change in project planning;
- A concise and select overview of tools and methodologies from the field of climate change adaptation and project resiliency research; and
- Examples of how climate change impacts have been incorporated into project planning and how climate change vulnerability has been assessed for existing built and ecological components of the environment.

This Guide does not limit a proponent's choice of methodologies, approaches and modelling information. This Guide will be updated and amended when appropriate to reflect future policy changes or new approaches for consideration of climate change in environmental assessment.

2. Climate Change and Climate Impacts

Climate Change

The potential contribution of carbon emissions from human activities to the atmosphere's naturally-occurring greenhouse effect was first identified in the late nineteenth century. Systematic, annual monitoring of the carbon dioxide concentration in the atmosphere has been undertaken by climate researchers at the Mauna Loa Observatory in Hawaii beginning in the late 1950s. This monitoring identified that the atmospheric concentration of carbon dioxide was increasing at a gradual rate on a year-after-year basis.

Carbon dioxide is one of approximately two dozen greenhouse gases in significant concentration in the Earth's atmosphere; others include methane, nitrous oxide and certain halogenated carbon compounds. Greenhouse gases can exhibit heat-trapping properties in the earth's atmosphere and are rated according to their global warming potential over different atmospheric time frames.

The concern that rising concentrations of greenhouse gases in the atmosphere could be contributing to a rise in global mean surface temperature began to mount in the 1980s. Climate and geologic records indicate that a rapid increase in global mean surface temperature has been associated with disturbances in global climate and hydrological patterns, often with significantly varying impacts on regional climate and hydrology. Some of the phenomena associated with this form of climate disturbance include:

- Changes in the frequency, intensity and duration of precipitation, wind and heat events;
- Changes in soil moisture and permafrost;
- Changes in sea levels and polar ice cover;
- Shifts in plant growth and growing season; and
- Changes in the geographic extent of species range, habitat and forest cover.

Climate change and related extreme weather events are of concern to many segments of society and sectors of the economy. Two approaches for considering and addressing climate change in project planning are through:

- Reducing a project's impact on climate change (climate change mitigation) and

- Increasing the project's and local ecosystem's resilience to climate change (climate change adaptation).

Before knowing what mitigation or adaptation is appropriate for a project, it is important to consider and understand the potential impacts that a project may have on climate change, the potential impacts that climate change may have on a project, and the impact of the project on the local environment's resilience to climate change.

A Project's Impacts on Climate Change

In the last several decades, the relationship between human generated (anthropogenic) greenhouse gas emissions and rising greenhouse gas concentrations in the atmosphere has become more clearly understood. Most recently, the global scientific community has provided evidence that the rise of greenhouse gas emissions is influencing climate patterns, hydrology, ecosystems and ocean chemistry. Any greenhouse gas emission from a project or landscape change that affects the removal of carbon dioxide from the atmosphere or the storage of carbon on the landscape potentially contributes to global climate changes.

The ministry considers focussing efforts on reducing greenhouse gas emissions and avoiding increases in the levels of these gases in the atmosphere to be in keeping with the principle of pollution prevention and the precautionary approach.

Impacts of Climate Change on a Project

Climate change and extreme weather events are of concern to many segments of society and sectors of the economy. Impacts of climate change range from property-specific concerns such as flooding and sewer overflow or ice storm damage; regional-level issues such as changes in agricultural productivity and ecosystem resilience, to system-wide impacts on water demand and electricity consumption. Any weather event related to climate change that exerts an influence on a project may be considered an impact of climate change on a project.

Many jurisdictions worldwide are implementing programs and policies that increase the adaptive capacity and resilience of human-built structures and land use activities. Planning processes for long-term projects are beginning to consider greater variation in future climate scenarios, resulting in projects that are more adaptable, more resilient and less likely to cause negative environmental effects. The ministry considers this to be a prudent and diligent approach to project planning.

3. Considering a Project's Impacts on Climate Change

Many types of projects planned through environmental assessment processes will have an impact on the atmosphere through the emission of greenhouse gases or through changes to the landscape which alter the ecosystems' ability to remove carbon dioxide from the atmosphere (e.g., changes to site and vicinity plant cover). These impacts on the atmosphere and the landscape can contribute to climate change. Landscape changes are often described in terms of carbon stocks, sinks and sources; proponents of natural resource related projects should consult Appendix B for treatment of carbon stocks as sinks versus sources.

This section provides proponents with an overview of how a proposed project's impacts on climate change may be considered in environmental assessment processes. This section is partly modelled on existing climate change guidance from the Nova Scotia Department of the Environment and the Canadian Environmental Assessment Agency (see references in Appendix D).

Proponents should include evaluation criteria, such as greenhouse gas emissions and impacts on carbon sinks, in the assessment of alternatives and alternative methods. In concluding an environmental assessment study, the proponent should also include a statement in their study report about how climate change was considered in the environmental assessment and how the preferred alternative (project) is expected to perform with climate change considered. The following approach may assist in completing the climate change consideration.

A proponent considering the potential impacts on climate change of the project (or its alternatives) could begin by assessing the expected direct greenhouse gas emissions of the project/alternatives and whether the project/alternatives will positively or negatively affect the storage of carbon or removal of carbon dioxide from the atmosphere. The proponent could undertake this consideration by addressing questions such as the following:

1. How might the project/alternatives generate greenhouse gas emissions or affect carbon storage or the removal of carbon dioxide from the atmosphere?
2. To what extent have the project/alternatives already taken into account impacts on climate change in project planning?
3. Are there alternative methods to implement the project that would reduce any adverse contributions to a changing climate?
4. How might the project/alternatives give rise to climate change impacts, positive or negative, on Indigenous people and/or communities?
5. What commitments can be made to reduce the impacts on climate change from the project over time, i.e., when the project is implemented?

Approaches to addressing these questions include:

1. How might the project/alternative generate greenhouse gas emissions or affect carbon storage or the removal of carbon dioxide from the atmosphere?

   A proponent may need to consider all direct and indirect greenhouse gas emissions that would be generated by the project, or indirectly stimulated by its implementation. A proponent may need to consider changes in local hydrology and vegetation that could result in changes to the carbon sequestration and storage capacity of a local landscape feature (e.g., wood lot, soils, shrubbery).

2. To what extent have the project/alternatives already taken into account impacts on climate change in project planning?

   A proponent may need to review existing features of the project and detail those features which may reduce greenhouse gas emissions, like energy and water efficiency measures or adaptive re-use of buildings or structures to reduce new energy or material demands. A proponent may need to identify impact management measures intended to limit the project's interference with the local landscape, plant cover, and other natural features. A proponent may wish to describe contributions to or investments in natural spaces projects that offset or mitigate the project's climate change impacts.

3. Are there alternative methods to implement the project that would reduce any adverse contributions to a changing climate?

   A proponent should consider alternative methods to project implementation in order to reduce the project's greenhouse gas emissions or any negative impacts on carbon storage or the removal of carbon dioxide from the atmosphere. This may entail aspects of the proposed project's scheduling, footprint, operation, or function. For example, a proponent could consider the scheduling and roll-out of construction activities in a way and at a time of year that would limit the negative impacts on the vegetation of the site and vicinity. A proponent may need to consult industry standards, best practices, and best available technology, in identifying alternative methods.

4. How might the project/alternatives give rise to climate change impacts, positive or negative, on Indigenous people and/or communities?

   A proponent will need to undertake special considerations where an environmental assessment project could affect Indigenous communities and interests. See description of Far North and Traditional Knowledge on pages 25-26.

5. What commitments can be made to reduce the impacts on climate change from the project over time, i.e., when the project is implemented?

   During the project planning phase, a proponent could consider near-term potential policy or technology developments that could have bearing on the project when implemented. A proponent could consider and make commitments about ongoing assessment of best practices, continual improvement, or the ability to adopt technology that will further reduce greenhouse gas emissions, especially for projects with long lifespans.

This generic approach to climate change consideration could potentially inform a variety of environmental assessment studies and processes, or be adapted to a variety of activities, proposals, and plans including those involving components of the built and natural environment.

Approaches to Considering Project Impacts on Climate Change

Many projects that are planned in accordance with the *Environmental Assessment Act* will result in the generation of greenhouse gas emissions in the construction, operation and decommissioning of the project. For example, greenhouse gas emissions like carbon dioxide could be emitted from heavy vehicles during the construction of a wastewater collection system, treatment plant, municipal road, or dam. Impacts on atmospheric levels of greenhouse gases could also occur through changes that alter the landscape's ability to store carbon or remove carbon dioxide from the atmosphere. Emissions of methane may be generated from a waste management project that involves the landfilling of organic waste.

Advancements in technology have provided greater opportunities to limit greenhouse gas emissions. For example, if a project involves a new building or structure that requires heating, cooling, and lighting, there may be an opportunity to reduce carbon emissions associated with these systems. Measures such as using low carbon and/or renewable energy sources, insulation, and even changes in the design and layout of the structure can reduce the life-time generation of carbon emissions arising from the project.

Business-as-Usual[1] vs. Climate-Focussed Approaches

A proponent has several means to demonstrate that climate change impacts have been factored into project planning. A proponent could make a comparison between two scenarios involving the same project. The first scenario would be the project's greenhouse gas emissions where climate change mitigation measures were not factored into the project design (business-as-usual). The

[1] "business-as-usual" assumes that future development trends follow those of the past and no changes in policies will take place (source: Intergovernmental Panel on Climate Change).

second scenario would be the project's greenhouse gas emissions where climate change mitigation measures were factored into the project design (climate-focussed).

Or, a proponent could rely on a comparison of the greenhouse gas emissions of the planned project to the average of similar existing facilities to demonstrate how project planning took into measures to reduce or offset greenhouse gas emissions.

Finally, a proponent could compare the greenhouse gas emissions of the preferred alternative to the other alternatives to demonstrate how the preferred alternative would lead to lower greenhouse gas emissions.

These comparisons could be detailed in a qualitative or quantitative manner.

Qualitative Consideration of the Impacts on Climate Change

A qualitative consideration of a project's potential impacts on climate change can be carried out by using the steps shown in Table 2: Qualitative Consideration of Greenhouse Gas Emissions. To begin, a proponent would consider what the project would be like if no particular regard was given to climate change mitigation measures (business-as-usual).

In step two, the proponent could review the project plan to identify any project features or planned measures that could mitigate climate change, e.g., the use of different technologies, energy efficiency, waste reduction measures, building materials, site re-vegetation, and other factors.

In step three, the proponent would document the identified features and measures and where possible, detail the avoided greenhouse gas emissions and enhancements to carbon storage that would result by implementing the project in the climate change consideration included in the environmental assessment study.

1. Consider what the project would be like if climate change mitigation was not a priority (business-as-usual).
2. Review the project as planned to identify any measures that could contribute to climate change mitigation. (climate-focussed).
3. Document any measures that could reduce or avoid greenhouse gas emissions and enhance carbon storage when the project is implemented.

Table 2: Qualitative Consideration of Project-related Greenhouse Gas Emissions

The outcome of step three is primarily expected and should be documented in a proponent's environmental assessment report. A proponent may document the outcome of all steps if needed to make the climate change consideration clearer and more meaningful to understand.

Quantitative Consideration of Impacts on Climate Change

A quantitative consideration of a project's potential impacts on climate change could be carried out in a manner similar to the qualitative consideration but with the added step of quantifying greenhouse gas emission reductions by incorporating climate change mitigation measures.

Quantifying greenhouse gas emission reductions requires some understanding of emission calculations, emission estimation factors, and the global warming potential of various greenhouse gases. References are included in Appendix C for proponents seeking approaches to quantifying project-related greenhouse gas emissions. Proponents may also draw upon information from manufacturers about project-related equipment and materials, such as energy consumption ratings, embodied energy, recycled content, and emission estimates, to characterize the project's reduced impact on climate change. Where emission factors or ratings are used, the proponent is advised to cite the source so that the results are replicable and traceable.

The ministry recognizes that the calculation or estimation of greenhouse gas emissions is difficult for many environmental assessment project types. The effort may be warranted only where emissions of carbon dioxide, methane, or other gases are significant, e.g., natural gas fired generating station or landfill, or if the proponent requires quantification of emissions for other purposes such as regulatory reporting requirements.

A quantitative consideration of a project would begin by describing and quantifying the project's greenhouse gas emissions as if the project were to be implemented with no particular regard for climate change mitigation measures (business-as-usual). The greenhouse gas emissions of the alternatives to the project or the average of similar facilities could also be used as the point of comparison.

The next step would be to describe and quantify the greenhouse gas emissions of the project where it includes all proposed climate change mitigation measures to be incorporated (climate-focussed).

The final step is to describe and quantify the potential avoided greenhouse gas emissions and improvements to carbon storage that could be achieved by implementing the project with climate change mitigation measures (see Figure 1: Quantifying Greenhouse Gas Emissions below).

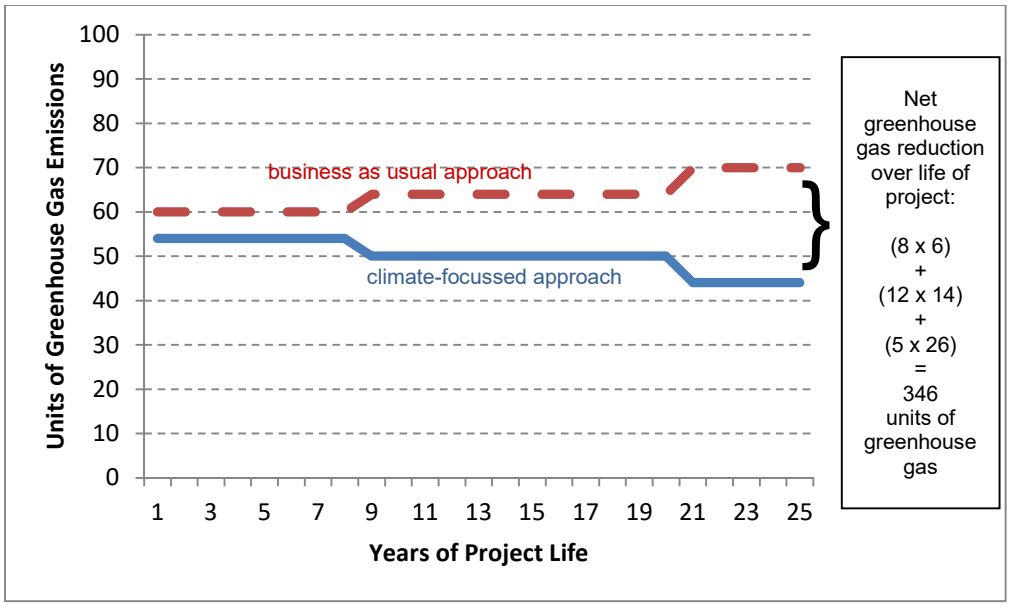

Figure 1: Quantifying Greenhouse Gas Emission Reductions

4. Considering the Impacts of Climate Change on a Project

A number of environmental assessment principles are key to successful planning and approval under the *Environmental Assessment Act.*

One principle is that an environmental assessment consider all aspects of the environment, including the interrelationships between various components of the environment. Environmental assessments typically evaluate the effects of the project on the environment. Climate change requires that environmental assessments also consider the impacts the environment (climate) could have on the project. The latter consideration helps to address any unintended risks or impacts to human health or the environment when climate impacts are added to the project's effects on the environment.

Proponents should include evaluation criteria such as extreme weather events in their screening of alternatives, and alternative methods. Proponents should also include in their study report, a statement about how climate change was considered in the environmental assessment, specifically in relation to the preferred alternative (project).

Broad Consideration of Impacts of Climate Change on a Project

Proponents could consider the potential impacts of climate change on a proposed project by addressing the following questions:

1. How vulnerable is the proposed project to a changing climate during its construction, operation, decommissioning, or post-closure?
2. Does the proposed project directly or indirectly contribute to the vulnerability or resilience of surrounding ecosystems to climate change?
3. Are there potential impacts that climate change may exert on the proposed project that may pose a risk to the environment?
4. Are there alternative methods of carrying out the proposed project that could reduce the negative impacts of climate change on the project thereby reducing the risk to the local environment?
5. Could the project, with the impacts of future climate change factored in, result in disruption to lands or waters associated with Indigenous cultural resources?

Approaches to addressing these questions could include:

1. How vulnerable is the proposed project to a changing climate during its construction, operation, decommissioning, or post-closure?

   A proponent would need to consult existing project plans and documentation, historical and present climate data, and future climate projections. The effect of variation in climate parameters such as temperature, precipitation, wind gust, or others, on the proposed project and its alternatives over time, could be considered. If any of the climate variation aggravates any of the environmental effects of the project, this should be identified in the environmental assessment study and measures considered to manage the impacts.

2. Does the proposed project directly or indirectly contribute to or diminish the resilience of surrounding ecosystems to climate change?

   The inventory of environmental features carried out as part of the environmental assessment study assists in understanding and describing the environment surrounding the project. This step will help to assess how the project may affect the surrounding environment's ability to be resilient and maintain its adaptive capacity to climate change. A proponent would need to consult historical, present, and future climate information in the area of the undertaking or project.

   Specifically, a proponent could examine the effect of projected changes in temperature, precipitation, or other features of the local environment when the project is implemented compared to if the project was not implemented. For example, could the project's alteration of local drainage patterns exacerbate impacts to water resources projected to occur with climate change? How might this affect the health and resiliency of the surrounding forest and wetlands?

3. Are there potential impacts that climate change may exert on the proposed project that may pose a risk to the environment?

   A proponent may need to review existing features of the project and detail those features which may reduce the risk of climate change. A proponent may need to consult existing project plans and documentation, and present and future climate data, to carry out such a consideration.

   In considering the impacts of climate change on a project, a proponent should be aware that the environmental effects of a project may be greater when coupled with the projected climate changes. For example, a project's demand on a local water supply may need to factor in a projected decline in water supply due to climate changes such as warmer temperatures and increased evaporation.

4. Are there alternative methods of carrying out the proposed project that could reduce the negative impacts of climate change on the project thereby reducing the risk to the local environment?

   A proponent may need to consult industry standards, best practices and best available technology in relation to existing project plans and documentation, future climate projections, and the potential environmental effects under current and changing climate conditions.

   A proponent should be aware of future climate change risks in the area of a project that may necessitate consideration of alternative methods. For example, a proponent of a storage yard with extensive paved surfaces in a location where climate change projections include more frequent and severe rain events, may need to consider alternative methods in order to reduce impervious surfaces and limit runoff to nearby water bodies.

   In order to reduce future climate-related risks to the local environment, a proponent could consider climate change adaptation measures that increase resilience of any aspect of the proposed project's design, operation and function which could be susceptible to climate variability.

5. Could the proposed project, with the impacts of future climate change factored in, result in disruption to lands or waters associated with Indigenous cultural resources.

   A proponent may need to consider whether the project coupled with climate change could exacerbate the project's anticipated environmental effects and pose additional challenges facing Indigenous communities in a particular area. Existing challenges reported by Indigenous communities include decreased availability of traditional foods and need of reliable infrastructure and transportation corridors.

Detailed Consideration of Impacts of Climate Change on a Project

Table 3: Conceptual Approach to Considering Impacts of Climate Change on a Project provides an approach for a detailed consideration of the impacts of climate change on a project in the planning stage. The project components in this example could be altered to better suit projects involving wildlife habitat, ecosystem protection, or other components of the natural environment.

The generic examples in Table 3: Conceptual Approach to Considering Impacts of Climate Change on a Project demonstrate that consideration of climate change impacts in project planning could involve many points of analysis, or interactions, for example:

COLUMN 1 Climate Variable		COLUMN 2 Generic Project Component
Temperature extremes • High • Low • Warmest / coldest period Precipitation (Rain) • Freezing rain • Intensity • Flooding return period • Wettest / driest period • Total annual Precipitation (Snow) • Snow load • Snow water equivalent Wind Speed • Extreme gusts • Gale, hurricane force winds, tornados • Fog, hail, lightning	***If the frequency, severity, or duration of any of the variables in Column 1 changes, what will be the effect on any component in Column 2?***[1,2]	Utilities • Air intake • Water intake • Drainage / wastewater • Electrical and gas • Fire and Safety • Communications • Transport (road, rail) Operations • Maintenance • Continuity • Reliability Administration • Personnel • Occupational Safety • Insurance / liability Buildings • Structural integrity • Fatigue / stress / failure

Table 3: Conceptual Approach to Considering Impacts of Climate Change on a Project

- What effect, if any, would a projected change in maximum wind gust have on project-related communications installations?
- What effect could a short-term disruption of utility services due to an extreme climate event have on project operations?
- What effect would a projected increase in certain precipitation events, fog, or snow conditions have for staff mobility, waterway navigation, access to natural resource operations, or access to equipment vital to project operation? Could any variation in a climate variable be significant enough to warrant additional project consideration?

Not all points of analysis or interactions between climate and the project need to be considered to the equivalent degree. For example, increased precipitation could be a significant concern for a roadway project. Drought, low precipitation, or low soil moisture conditions could be of greater concern to projects involving public water supplies or components of the natural environment, like forests, protected areas, or natural resource operations. Nevertheless, all climate

[1] Approach is adapted from that formulated by the Public Infrastructure Engineering Vulnerability Committee, see Appendix A. or www.pievc.ca.

[2] Neither the list of climate variables nor generic project components is meant to be exhaustive. Examples are provided for illustrative purposes.

parameters with potential to interact with a project should be defined and considered at a screening level to fully understand which interactions pose higher risk.

The projected magnitude of future climate variation would factor into the determination of which, if any, project components require greater consideration. Most importantly, proponents need to be aware of the potential of future variability of climate parameters, and what impacts, positive or negative, this variability could have on the environmental effects of a proposed project.

Proponents should also document any uncertainty related to either downscaling climate change projections to specific sites, or expected impacts to the environment or project, within the environmental assessment. For example, a proponent may not be able to precisely predict an impact because of time frame, geographic scale, complexity, or other factors. In this case, the proponent could discuss why the impact may vary, identify the expected range of impacts, and identify the level of certainty associated with the climate change consideration.

5. Outcomes of Climate Change Impacts Consideration

This section provides examples of how proponents can prepare and incorporate climate change impact considerations into their terms of reference and environmental assessment processes. The consideration of climate change impacts can also be incorporated into streamlined environmental assessment processes.

Environmental Assessments

Considering climate change in the terms of reference for an environmental assessment should commit he proponent to considering climate change impacts in related project studies prepared in support of the environmental assessment report.

Considering climate change in an environmental assessment should result in the proponent refining and documenting measures for dealing with climate change impacts as the undertaking moves toward implementation stage. Examples could include adapted design or maintenance schedules, additional studies, and revised operating procedures.

Processes that Establish or Renew Class Environmental Assessments

Considering climate change in the development or review of class environmental assessments could result in a description of how the proponent would consider climate change impacts in environmental assessments for that class of projects. For example, climate change impacts may be incorporated as criteria for evaluating alternatives to and alternative methods of implementing the undertaking.

Streamlined Environmental Assessment Processes

Considering climate change in streamlined environmental assessment processes and studies could result in the inclusion of a commitment on how the proponent will implement climate change adaptation and mitigation measures during the detailed design phase of any given project.

The consideration of climate change impacts in environmental assessments enables a proponent to demonstrate due diligence in relation to reducing the impacts of climate change in relation to the project proposal.

6. Documenting Climate Change Impacts in Environmental Assessment

Environmental assessments are able to consider and document relationships between climate change, environment, and the project, i.e.:

- the project's potential impacts on climate change; and
- the potential impact of climate change on the project.

Broadly, these climate change considerations involve:

- Reviewing the potential for a project to generate greenhouse gas emissions and affect carbon sinks;
- Assessing the vulnerability of the project to changing climatic conditions; and
- Examining the impact of a project on the environment's adaptive capacity.

The following guidance applies primarily to the preparation of individual environmental assessments, but may also be considered relevant to proponents of larger scale projects of class environmental assessment processes. Ministry reviews of assessment documentation will evaluate the extent to which climate change impacts were considered during the planning and environmental assessment processes. The documentation of a climate change considerations may vary depending on the undertaking.

Documenting Climate Change Considerations in Environmental Assessment

An environmental assessment can track and document climate change considerations like other environmental components such as air, water, and natural features. Climate change considerations could be added to the following chapters of the environmental assessment:

- Existing Environment
- Environmental Effects
- Cumulative Effects (where applicable).

The climate change consideration section would be enhanced by the inclusion of historical climate data for the study area (where available) and representation of data through charts, graphs, and tables. This will facilitate the ability of the reviewers to identify trends. Comparing historical information to future climate

projections provides a clearer understanding of the likely impacts and vulnerabilities of a project from climate change impacts. Proponents could include any of the following information for the study area in the "Existing Environment" section:

- A graph showing annual and/or monthly high and low temperatures and precipitation amounts along with projected changes based on best available climate modeling results.
- A discussion of the freeze/thaw cycles in the local area and nearby waterways and potential effect to or from the undertaking.
- A map showing the contours, location, and extent of the local floodplain based on historical flood information.

The consideration of climate change in an environmental assessment could result in a proponent including:

- An analysis of alternatives with respect to their potential contributions to climate change, as well as their potential vulnerability from the impacts of climate change.
- A consideration of climate change mitigation measures with respect to avoiding, minimizing, or offsetting impacts of the undertaking on climate change.
- A consideration of climate change impacts in any alternative screening process.

Additional Considerations

The following guidance may be relevant to proponents of either individual or class environmental assessment processes.

Existing Climate Change Strategies

Proponents may wish to draw upon or make reference to their own, or other existing climate change strategies or policies in carrying out an environmental assessment. For example, the proponent of a road project may consider including references to the jurisdiction's policies or programs aimed at reducing greenhouse gas emissions through car-pooling, or the promotion of cycling or electric vehicles. Proponents should consider whether making reference to existing climate change strategies or policies alone is sufficient as a consideration of climate change, or whether a more detailed consideration of climate change should be carried out when conducting project-specific environmental assessment studies. Documentation of the results of this consideration should be included as part of project reporting.

Regional Government Plans and Master Plans

Many regional municipalities in Ontario have developed master plans for water, sewer, transportation, and other services, and some have included reference to future climate change impacts in these plans and/or their Official Plans. Proponents are encouraged to consider master plan documents in relation to relevant project specific environmental assessment studies and processes. Proponents are encouraged to consider whether climate change impacts should be considered at a project level, i.e., beyond a consideration made within master plan documents, or whether the considerations made within the planning documents have implications for project-level planning.

Emergency Management Plans

Ontario municipalities are required to have an emergency management program under the *Emergency Management and Civil Protection Act* (EMPCPA). The EMCPA, administered by the Ministry of Community Safety and Correctional Services (MCSCS), also requires municipalities to adopt emergency response plans to describe the method by which the municipality and its agencies will respond to an emergency. MCSCS also has guidance available to assist municipalities interested in preparing an emergency plan related to a flood emergency. A municipal proponent may be able to draw upon its emergency management program or plans in documenting the consideration of climate change impacts on a project as proposed as part of an environmental assessment process.

Operation of Project, Service

In certain instances, the temporary loss of project service or function due to climate related extremes might be an acceptable project design or adaptation approach. For example, in rural areas, some roads and rights-of-way are operational on a weather-permitting or seasonal basis. A road may become impassable due to flooding or drifting snow for several weeks per year and may be temporarily closed. The risk of brief closures could be acceptable for the community that uses the road. If so, this consideration could form part of the conception of the project from the outset. Before conditions like this are applied in project planning, design, and operation, the proponent should consult with the affected community, reach a shared understanding of this risk, and document this understanding.

Conversely, if a road or right-of-way is vitally needed by a community as the principal or only route to medical care or other vital services, then the community may have little tolerance for service disruption. This would be the case whether or not the source of disruption was a weather-related event. In this instance the community's tolerance to risk of closure is low, and the road should be planned, designed, built, and operated to a very high standard.

Projects in the Far North of Ontario

Some Indigenous communities, especially in the Far North of Ontario, have already experienced significant impacts related to climate change which have affected the reliability of winter/ice roads, resulted in water quality issues, and caused community flooding. Such impacts could continue to pose challenges for communities.

The consideration of climate change impacts in project planning is particularly important in regions where climate change is projected to occur at a greater pace or extent. This includes much of northern and western Ontario, where projected surface temperature change is among the most significant of all regions of the province.

Ministry staff carrying out reviews of environmental assessment documentation will need to consider whether the proponent has taken climate change into account when developing the environmental assessment.

Factors that the ministry has considered or specified to be included in the terms of reference for environmental assessment projects in the Far North include:

- Assessment of how the proponent's construction practices, operational procedures, and the design of the undertaking, will respond to storms, flooding, drought, fires, or other severe weather events resulting from climate change.
- Assessment of how the site will be decommissioned to ensure resilience to climate change impacts.
- Discussion and assessment of whether climate change scenarios could alter the anticipated effects on the environment and affect the adaptive capacity of the ecosystem.
- Discussion and assessment of impacts of all phases and components of the project on air quality and climate change, including assessment of emission rates of greenhouse gases.
- Discussion and assessment of project's contribution to climate change related to the disturbance of the peatlands and release of carbon and other greenhouse gases.
- Description of proposed mitigation measures to avoid, offset, or minimize the contribution of the project to climate change.

Traditional Ecological Knowledge

In some cases, a proponent can reduce a project's climate change impacts on Indigenous people by working with affected Indigenous communities to identify potential climate change concerns or opportunities related to the project. A community may decide to share traditional ecological knowledge with the proponent to document knowledge regarding particular areas and relay concerns of community members. A proponent could then involve the community in

creating and implementing impact mitigation measures to address those concerns or provide for enhanced protection of the environment.

This Guide is intended to provide proponents and other interested persons with an understanding of how climate change impacts could be considered as part of an environmental assessment. The ministry regards a climate change impact consideration to be a demonstration of responsible planning and due diligence. Questions about a specific project or environmental assessment should be referred to the ministry staff assigned to the project or environmental assessment.

Those interested in information about Ontario's environmental assessment process should consult the ministry's website or contact the ministry at the address below to obtain process, consultation, and mediation guidance.

Ministry of the Environment and Climate Change
Client Services and Permissions Branch
135 St. Clair Avenue West
Toronto, Ontario M4V 1L5 Canada

Telephone: 416-314-8001
Toll Free: 1-800-461-6290
Fax: 416-314-8452
E-mail: MOECCpermissions@ontario.ca
Website: www.ontario.ca/environmentalassessments

In addition, the ministry has developed guidance materials for the following key elements of the environmental assessment process:

- Class environmental assessments
- Consultation
- Coordinating federal and provincial environmental assessment requirements
- Electricity projects
- Environmental assessments
- Glossary
- How to make a Part II Order request
- Making a hearing request
- Mediation
- Terms of reference
- Transit projects
- Waste management projects

Appendix A

Examples of Considering Climate Change Impacts in Project Planning

Overview of the Work of the Public Infrastructure Engineering Vulnerability Committee (see www.pievc.ca)

Engineers Canada, Natural Resources Canada, and partner organizations established the Public Infrastructure Engineering Vulnerability Committee (the committee) in 2005 to assess the challenge to the built environment posed by climate change. The committee includes representation from all three levels of government in Canada as well as many non-governmental organizations.

Since 2008, the committee has carried out a series of studies and the development of a protocol for assessing the vulnerability of a range of infrastructure to changing climatic conditions. The committee's approach has involved a broad and systematic review of infrastructure vulnerability to climate change.

The committee originally studied four categories of public infrastructure: buildings; roads and associated structures; storm water and wastewater systems; and water resources. Initial "scoping" studies examined the current state of each infrastructure, availability of climate data, and indicators of adaptive capacity.

The initial studies formed the basis for Engineers Canada to develop an engineering protocol, known as the PIEVC Engineering Protocol or "the Protocol". To date, it has been used to assess the vulnerability and climate risk of over 40 various types and sizes of infrastructure systems across Canada. For example, the Protocol was used to assess the vulnerability of water resources infrastructure as described in two of the case studies in Appendix A, those for the Toronto and Region Conservation Authority and the Union Water Supply System in southwestern Ontario.

One of the key challenges identified through the committee was the traditional reliance on historical data to design long-lasting, safe, and reliable infrastructure. New practices will require the accommodation of increased uncertainties because modelling results which characterize future climate are never as accurate as historical data. This creates a challenge to existing infrastructure design approaches and practices. As a first step to dealing with this challenge, the committee structured a two-part approach:

- Evaluate the vulnerability of Canada's infrastructure to the impacts of climate change from an engineering perspective; and,

- Derive key findings of the vulnerability assessment to inform the review of design, operation, and maintenance codes, standards and practices.

Based on the committee's approach, the engineering profession is developing new design and operational practices to withstand changing climate conditions – both extremes and gradual changes.

Toronto and Region Conservation Authority: Flood Control Dam Water Resources Infrastructure Assessment

Key Points of Analysis: The risks of various climate events increasing in occurrence between approximately the 1970s and 2050s and the vulnerabilities these pose to flood control dams.

The climate change analysis and projections portion of this study included the establishment of a set of climate parameters describing climatic and meteorological phenomena relevant to the geographic areas of the Claireville and G. Ross Lord flood control dams. The analysis resulted in the determination of general probability scores reflective of the occurrence of each phenomenon, both historically and in the future.

Climate parameters were selected on the basis of relevance to the region (southern Ontario) given the region's known seasonal variability. Parameter selection was also based on those with the potential to present vulnerability to the infrastructure and its components as a result of either extreme or persistent occurrences. In this evaluation, parameter usefulness was based on three factors:

- usefulness of the climate parameter in determining vulnerability;
- availability of information; and
- ability to relate this information to a probability.

In total, more than twenty parameters were selected including five-day total rainfall, heavy rain, ice storm, heat wave and hurricane/tropical storm occurrence, cold wave, freeze thaw, and snow accumulation.

The following parameters were predicted to have a greater probability of occurrence between the historical (1970s to 2000s) and future (2040s to 2070s) time periods: heat wave, heavy rain, five-day total rainfall, ice storm, and hurricane/tropical storm. The parameters: cold wave, freeze thaw, and snow accumulation were predicted to have a lower probability of occurrence, with reference to the two time periods.

Follow-up actions from the evaluation, for consideration, included:

- a review of emergency operational plans to ensure they are adequate for all types of extreme climate events – rain, snow, ice, and high winds;
- a review of backup systems by simulating various catastrophic events, e.g., a loss of electrical power plus a loss of cellphone network;
- maintaining dam-side operator's residences to minimize the travel time of operators during severe weather events; and
- developing emergency response plans for a number of climate events that have low risk of occurrence but would result in extremely severe impacts. These events are heavy long-term rainfall, ice storms, lightning, hurricane/tropical storms, and tornados.

Intensity Duration Frequency Curves – Road, Highway, Urban Drainage Design

Key Points of Analysis: Design implications for storm sewer, road, and highway drainage infrastructure from rain events of various frequencies, intensities, and durations.

When designing drainage infrastructure such as culverts, bridges, sewer systems, and roadside ditches, good estimates of peak rainfall intensity are essential. Quality rainfall data enable designers to make calculations that meet drainage capacity design standards and avoid the over- or under-design of drainage elements. Design flow rates for a particular area are typically estimated using rainfall Intensity Duration Frequency curves. The curves summarize extreme rainfall patterns for a particular location, by representing the statistical relationship of rainfall intensity corresponding to storm duration and frequency, by graph or table.

The ministry has obtained climate model results which allow the generation of Intensity Duration Frequency curves over an extensive time frame for locations throughout Ontario (see Drainage in Appendix C). Curves created using projected (future) climate conditions can be compared to curve information from the present or past to assess the significance of changes to climate on a localized basis.

Research through the University of Western Ontario has assessed the variation in Intensity Duration Frequency curves used by the City of London to account for changing climatic conditions, as the design of municipal wastewater management infrastructure (sewers, storm water management ponds or detention basins, street curbs and gutters, catchbasins, swales) is typically based on these curves.

Ontario's Ministry of Transportation has funded the development of a web-based tool that provides Intensity Duration Frequency curves for provincial highway design at any location across Ontario using up-to-date data from Environment Canada. Updating Intensity Duration Frequency curves as additional data and

new techniques become available is essential so that if or when a change in key climate variables occurs, this occurrence is reflected in a timely fashion.

Highway 407 East Extension – Effect of the Environment on the Project

Key Points of Analysis: Effect of eight climatic variables on the construction and operation of a major highway development.

As part of a Comprehensive Study Report pursuant to the former *Canadian Environmental Assessment Act* (CEAA), the Ontario Ministry of Transportation conducted an evaluation of the potential effect of the environment on the preferred route selection for the Highway 407 East Extension. CEAA requirements included the identification of likely effects, mitigation measures, and residual effects after mitigation is applied. The proponent carried out a high-level evaluation of the potential effects of the environment on the project. The evaluation was conducted in consultation with experts on climate change. Some of the climate phenomena and effects which were identified and evaluated included:

Lightning

- A potential increase in lightning strikes on light standards and other tall structures associated with highway development. Mitigation measures include back-up systems for critical electrical systems.

Hail

- Increased frequency of hail storms on the operation of the proposed highway. Mitigation measures include restrictions to operations in accordance with standard Ministry of Transportation practices.

Heavy Rain/Flooding

- Design standards for major watercourse crossing structures based on the Regional Storm event (Hurricane Hazel) to prevent potential flooding effects.

Fog

- Mitigation measures include installation of reflective markers on the roadway surface.

Drought

- Where long term effects to groundwater cannot be avoided at major fills or deep cuts, long-term engineering / foundation design measures will be undertaken as appropriate. Specific outfall control measures will be implemented for all storm water management facilities to prevent erosion of the receiving streams, with specific attention to outfalls to the deeper valleys

and at many of the high sensitivity watercourses in the eastern portion of the study area.

The proponent concluded at the outcome of the evaluation that after taking into consideration the likelihood of extreme weather and incorporating mitigation measures (some of which are described above) no residual adverse effects of the environment on the project were anticipated. After the evaluation, the proponent concluded that the probability of weather events of such extremity to cause damage or major disruption in the area of the 407 East Transportation Corridor was low.

Climate Change Risk Assessment and Vulnerability Analysis of a Municipal Water Treatment System in Southwestern Ontario

Key Points of Analysis: To assess the potential impacts of climate change on public infrastructure and to advance planning and prioritization of adaptation strategies. A case study of a municipal drinking water treatment system.

The Union Water Supply System (UWSS) is a municipal water supply system jointly owned by the Ontario municipalities of Leamington, Kingsville, Essex, and Lakeshore. Treated water from UWSS is supplied to the four owner municipalities for local distribution to residents, businesses, and the agricultural sector.

In 2012, the Ministry of the Environment and Climate Change procured the services of Engineers Canada to assess the vulnerability of the UWSS infrastructure to the potential impacts of future climate and provide recommendations for operational modifications to address potential impacts.

The primary objective of the study was to identify the areas within the current design, construction, operation, and management of the UWSS that are at an increased or decreased risk of failure and/or damage due to potential changes in climatic conditions. The study was carried out using Engineers Canada's Public Infrastructure Engineering Vulnerability Committee Protocol (version 10) and delivered recommendations for remedial action and/or further study.

The climate change analysis and projections portion of the study included the establishment of a set of climate parameters describing climatic and meteorological phenomena relevant to the geographic areas of the UWSS service area. This included: high temperature, low temperature, heat wave, cold wave, extreme diurnal temperature variability, freeze-thaw, heavy rain, sustained high temperature in winter with snow on ground, heavy 5-day total rainfall, winter rain, freezing rain, ice storm, heavy snow, snow accumulation, blowing snow/blizzard, lightning, hailstorm, hurricane/tropical storm, high wind, tornado, drought/dry period, and heavy fog. Climate parameter selection for the study was based on a parameter's potential to present vulnerability to the

infrastructure and its components as a result of either an extreme or persistent occurrence.

Future climate projections were analyzed using climate model outputs from Environment Canada's Canadian Climate Change Scenario Network Plots, the Intergovernmental Panel on Climate Change 4th Assessment Report Regional Climate Projections chapter (and others, where applicable), and scientific journal articles presenting regional and local projections and predictions.

The following interactions were assessed as having the highest risk scores for both existing and future climate conditions:

- Lightning's impact on communications, transformers, transmission lines, and data acquisition systems
- The impact of blowing snow or a blizzard on chemical storage
- The impact of lake water level on the emergency water intake

Some of the recommendations arising from the study include:

- Review the emergency response policies and procedures for various components of the UWSS
- Review the potential need for the existing emergency water intake (and potential modifications to it) to be investigated to ensure it remains functional during lower lake levels
- Accelerate modifications to older storage tanks to ensure adequate circulation of water in storage
- Investigate the condition of electrical transformers
- Continue to monitor the risks identified through the assessment, particularly as components continue to age

Appendix B

Considering Climate Change Impacts in Natural Resource Project Planning

Some projects involving natural resources, particularly forests, soils, and wetlands, may result in aspects of climate change mitigation and adaptation being undertaken in the same measure. For example, reforesting lands will result in removing carbon from the atmosphere (mitigation). The same initiative may result in a landscape better adapted to reducing the impacts of climate extremes – tree cover can provide shade and cooling for soils and buildings, and delay the rate of overland drainage from intense precipitation events (adaptation). For reasons such as this, climate change impact considerations for natural resource projects may vary somewhat from other project types. Specific variations include:

Carbon Stock

Carbon stock is the quantity of carbon in a carbon pool. Carbon pool refers to a physical component or components of the climate system where carbon is stored. Examples of carbon pools are forest biomass, wood products, soils, and the atmosphere. The carbon stock in a pool can change due to the difference between additions of carbon and losses of carbon. When the losses are larger than the additions, the carbon stock becomes smaller and the pool acts as a source to the atmosphere; when the losses are smaller than the additions, the pools acts as a sink to the atmosphere.

Climate Change Impacts Consideration

The outcome of a climate change impacts consideration for natural resource projects may include an assessment of ecological integrity and resilience as part of, or in addition to, mitigation and adaptation.

The outcome of a climate change consideration is an undertaking or project that has taken into account the means to reduce its direct greenhouse gas emissions and impacts on carbon sinks/sources, that is more resilient to projected changes in climate, and that helps to maintain the ecological integrity of the local environment through an assessment of present and future environmental impacts in the face of a changing climate.

Case Study – Climate Change Considerations in MNRF's Class Environmental Assessment Processes

The Ministry of Natural Resources and Forestry (MNRF) has identified a way in which climate change considerations may be accounted for in their class environmental processes.

Class Environmental Assessment for Parks Protected Areas and Conservation Reserves (Class EA-PPCR)

There are several ways that consideration of climate change is inherently built into the Class EA-PPCR process.

The screening criteria in Table 3.1 of MNRF's Class EA-PPCR is used to rate the potential net effect of a proposed project against criteria in the categories of:

- natural environmental considerations;
- land use, resource management considerations;
- social, cultural, and economic considerations; and,
- aboriginal considerations.

These criteria incorporate potential effects related to climate change. For example, the screening table includes evaluation of several criteria related to assessing effects of projects on ecosystem resilience and adaptive capacity, as well as effects to air and water quality, land subject to natural or human-made hazards, drainage or flooding, and permafrost.

The Class EA-PPCR provides guidance for assessing the significance of environmental effects, including elements related to consideration of climate change, such as geographic extent, duration, and frequency of effects, direct and indirect effects, and cumulative effects.

As part of the Class EA-PPCR process, mitigation must be identified to reduce effects on environmental components, including measures that would reduce effects from or on climate change. MNRF is proposing to add descriptions of typical mitigation measures to include examples of mitigation measures specific to climate change.

Additionally, the Class EA-PPCR process outlines the need for project monitoring, which allows for assessment of predicted effects with respect to acceptable outcomes, which may include effects as a result of a changing climate and the potential to identify remedial actions.

Consideration of Climate Change in the Class Environmental Assessment for Resource Stewardship and Facilities Development (Class EA-RSFD)

The screening criteria in Table 3.1 of the Class EA-RSFD are used to rate the potential net effect of a proposed project against criteria in the categories of:

- natural environmental considerations;
- land use, resource management considerations;
- social, cultural, and economic considerations; and,
- aboriginal considerations.

The criteria allow for consideration of potential effects related to climate change (e.g. air and water quality, water quantity (flows and levels, drought response), and land subject to natural or human-made hazards).

MNRF is proposing to add direction specific to climate change impacts consideration in the application of the screening criteria, e.g.,

> *"The effects of climate change are pervasive, alter the composition and function of Ontario's ecosystems, and include more frequent extreme weather events (e.g., flooding, drought, and wind storms) that compromise or destroy infrastructure with significant implications to the future health and well-being of people and their communities.*
>
> *Consideration should be given to the known and anticipated effects of climate change on a proposed project and whether the project description includes adequate mitigation and adaptation options."*

MNRF is also proposing generic examples of typical mitigation measures for use by environmental assessment project staff. The examples provide more detail in responding to paragraph 5 of subsection 14(2) of the *Environmental Assessment Act* (description of mitigation measures for undertakings subject to the class environmental assessment). The examples of mitigation measures will include those which mitigate the impacts of climate change.

Appendix C

Availability and Use of Climate Model Results

Sources of climate model results that focus on Ontario and other evaluation tools are available for climate change impacts consideration.

Ontario Climate Change Scenarios

Climate model results have been generated for Ontario and can be used in the evaluation of future climate change impacts. Data can be downloaded from various websites to construct climate scenarios, as well as data used as input variables for further downscaling.

Climate data are provided as long-term (usually 3 decades) averages or time-series at daily, monthly, seasonal, or annual scales. Long-term average climate information is available for the baseline period (1961–1990 or 1981-2010) and three future periods (2011–2040, 2041–2070, and 2071–2100), while time series are available continuously from 1960 to 2100. In addition to the typical climate variables (temperature and precipitation), extreme climate indices (i.e. heat waves, IDF curves, and droughts) are also available as well. While climate data is available at many sources, Ontario-specific high resolution regional climate data can be found at:

Ontario Climate Change Data Portal

and

Ontario Climate Change Projections

These are the two major data portals with the most up-to-date climate change information when this document was written, developed by partner academic institutions with funding from the ministry.

Canadian Climate Data and Scenarios

The Canadian Climate Data and Scenarios (CCDS) site is an interface for distributing climate change information. The goals of CCDS are to:

- Support climate change impact and adaptation research in Canada and other countries;
- Support stakeholders requiring scenario information for decision making and policy development;
- Provide access to Canadian research on the development of scenarios and adaptation research.

Scientific Literature

Proponents are encouraged to consult the peer reviewed scientific literature as a matter of good practice and due diligence. The following papers are two examples.

Gula, J. and Peltier, W.R. 2012. Dynamical downscaling over the Great Lakes Basin of North America using the WRF Regional Climate Model: The impact of the Great Lakes System on regional greenhouse warming, Jnl. of Climate, 25, (Nov.), 7723-7742, doi: 10.1175/JCLI-D-11-00388.1

Mckenney, D. W., Hutchinson, M. F., Papadopol, P., Lawrence, K., Pedlar, J. H., Campbell, K., Owen, T. (2011). Customized Spatial Climate Models for North America. *American Meteorological Society*, 1611–1622. doi:10.1175/BAMS-D-10-3132.1

Drainage Information

Information about, and tools for, generating Intensity Duration Frequency curves are available through:

Ministry of the Environment and Climate Change

AR4:A1B. Dynamically-downscaled climate projections with the PRECIS model under A1B emissions scenario, projected rainfall intensity-duration-frequency (IDF) curves and daily and hourly time series data for climate change impact assessment.

Ministry of Transportation

The IDF Curve Lookup is a web-based application provided by the Ontario Ministry of Transportation (MTO) for the purpose of retrieving Intensity-Duration-Frequency (IDF) curves.

Greenhouse Gas Emission Quantification and Reporting

Ontario Regulation and Guideline for Greenhouse Gas Emissions Reporting

Ontario filed a new Quantification, Reporting, and Verification of Greenhouse Gas Emissions Regulation O. Reg. 143/16 made under the *Climate Change Mitigation and Low-carbon Economy Act, 2016* on May 19, 2016, to support implementation of Ontario's cap and trade program. The new Quantification, Reporting and Verification of Greenhouse Gas Emissions Regulation (the "QRV Regulation") and

incorporated Guideline took effect on January 1, 2017, and applies to activities carried out by persons on and after January 1, 2017. The Guideline and QRV Regulation support the collecting and public reporting on industrial greenhouse gas emissions.

National and International

Technical Guidance on Reporting Greenhouse Gas Emissions / Facility Greenhouse Gas Emissions Reporting Environment and Climate Change Canada (December 2016)

2006 IPCC Guidelines for National Greenhouse Gas Inventories - Volume 3 -Industrial Processes and Product Use

Appendix D

Additional Resources

Published Sources of Climate Change Consideration in Project Planning, Environmental Assessment

For additional reference, approaches, and methods for incorporating climate change considerations in project planning and environmental assessment, see:

- Alberta Environment. February 2011. Guide to Preparing Environmental Impact Assessment Reports in Alberta.
- Canadian Environmental Assessment Agency. November 2003. Incorporating Climate Change Considerations in Environmental Assessment: General Guidance for Practitioners.
- Engineers Canada, Public Infrastructure Engineering Vulnerability Committee (PIEVC). November 2007. City of Portage la Prairie: Water Resources Infrastructure Assessment Phase II – Pilot Study.
- Engineers Canada, Public Infrastructure Engineering Vulnerability Committee (PIEVC). April 2008. Adapting to Climate Change: Canada's First National Engineering Vulnerability Assessment of Public Infrastructure.
- Intergovernmental Panel on Climate Change (IPCC). 2014: Summary for policymakers. In: Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Field, C.B., V.R. Barros, D.J. Dokken, K.J. Mach, M.D. Mastrandrea, T.E. Bilir, M. Chatterjee, K.L. Ebi, Y.O. Estrada, R.C. Genova, B. Girma, E.S. Kissel, A.N. Levy, S. MacCracken, P.R. Mastrandrea, and L.L. White (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp. 1-32.
- Ministry of Natural Resources and Ontario Centre for Climate Impacts and Adaptation Resources. 2011. A Practitioner's Guide to Climate Change Adaptation in Ontario's Ecosystems.
- Ministry of Transportation. 2012. Environmental Guide for Assessing and Mitigating the Air Quality Impacts and Greenhouse Gas Emissions of Provincial Transportation Projects.
- Nova Scotia Environment. February 2011. Guide to Considering Climate Change in Project Development in Nova Scotia.
- Toronto and Region Conservation Authority. June 2010. National Engineering Vulnerability Assessment of Public Infrastructure to Climate Change: Toronto and Region Conservation Authority Flood Control Dam Water Resources Infrastructure Assessment.

- Warren, F.J. and Lemmen, D.S., editors (2014): Canada in a Changing Climate: Sector Perspectives on Impacts and Adaptation; Government of Canada, Ottawa, ON, 286p.

Glossary

The definitions in this glossary are intended to assist the reader in understanding the terms used in this Guide. The definitions for some of these terms were derived from the Fourth and Fifth Assessment Reports (AR4, AR5) of the Intergovernmental Panel on Climate Change (2007, 2013) and the Report of the Expert Panel on Climate Change Adaptation (2009). For terms that are also contained in the *Environmental Assessment Act*, the wording and meaning contained in the *Environmental Assessment Act* shall prevail.

adaptation
Adaptation is the process of adjustment in the built and natural environments in response to actual or expected climate change and its impacts. In human systems, adaptation seeks to moderate or avoid harm or exploit beneficial opportunities. In some natural systems, human intervention may facilitate adjustment to expected climate change and its impacts.

In natural resources management, adaptation seeks to address the vulnerability of species or natural systems and processes by reducing threats, enhancing resilience, engaging people, and improving knowledge.

adaptive capacity
Adaptive capacity is the ability or potential of a species or ecological system to respond successfully to climate variability and change.

alternative methods
Alternative methods of carrying out the proposed undertaking are different ways of doing the same activity. Alternative methods could include consideration of one or more of the following: alternative technologies, alternative methods of applying specific technologies, alternative sites for a proposed undertaking, alternative design methods, and alternative methods of operating facilities associated with a proposed undertaking.

carbon sink
A carbon sink is any process, activity, or mechanism that removes carbon dioxide from the atmosphere. Examples of carbon sinks include, but are not limited to, oceans, forests, soils, peatlands, and wetlands.

carbon source
A carbon source is any process, activity, or mechanism that releases carbon dioxide into the atmosphere. Carbon sources may be anthropogenic, as in the combustion of fossil fuels, or natural in origin, as when plants release carbon dioxide into the atmosphere through respiration.

carbon stock

Carbon stock is the quantity of carbon in a carbon pool. Carbon pool refers to a physical component of the climate system where carbon is stored. Examples of carbon pools are forest biomass, wood products, soils, and the atmosphere.

climate change

Climate change refers to a change in the state of the climate that can be identified (e.g., by using statistical tests) by changes in the mean and/or the variability of its properties, and that persists for an extended period, typically decades or longer.

climate change impacts

The term "climate change impacts" refers to both a project's impacts on climate change and the impacts to a project from climate change.

impacts of climate change

The impacts of climate change refers to the consequences of climate change on natural and human systems, such as on projects and the resulting environmental effects.

impacts on climate change

Impacts on climate change refers to a project's greenhouse gas emissions and any changes to carbon sinks, i.e., changes to the landscape that alters its ability to remove carbon dioxide from the atmosphere. These project effects could lead to increased levels of greenhouse gases in the atmosphere.

environment[*]

The *Environmental Assessment Act* defines "environment" to mean:

(a) air, land or water,
(b) plant and animal life, including human life,
(c) the social, economic and cultural conditions that influence the life of humans or a community,
(d) any building, structure, machine or other device or thing made by humans,
(e) any solid, liquid, gas, odour, heat, sound, vibration or radiation resulting directly or indirectly from human activities, or
(f) any part or combination of the foregoing and the interrelationships between any two or more of them,
in or of Ontario.

impact management measures

[*] An asterisk (*) beside a defined term indicates that the term is defined in the *Environmental Assessment Act.*

Measures which can lessen potential negative environmental effects or enhance positive environmental effects are referred to impact management measures. These measures could include mitigation, compensation, or community involvement.

mitigation (climate change)

Mitigation in the context of climate change refers to the use of measures or actions to avoid or reduce greenhouse gas emissions, to avoid or reduce impacts on carbon sinks, or to protect, enhance, or create carbon sinks.

proponent*

"Proponent" means a person who,
(a) carries out or proposes to carry out an undertaking, or
(b) is the owner or person having charge, management or control of an undertaking.

resilience

Resilience is the ability of a social or ecological system to absorb disturbances while retaining the same basic structure and ways of functioning, the capacity for self-organization, and the capacity to adapt to stress and change.

terms of reference

An approved terms of reference sets out the framework for the planning and decision-making process to be followed by the proponent during the preparation of an environmental assessment. In other words, it is the proponent's work plan for what is going to be studied. The environmental assessment must be prepared in accordance with the approved terms of reference.

undertaking*

"Undertaking" means,
(a) an enterprise or activity or a proposal, plan or program in respect of an enterprise or activity by or on behalf of Her Majesty in right of Ontario, by a public body or public bodies or by a municipality or municipalities,
(b) a major commercial or business enterprise or activity or a proposal, plan or program in respect of a major commercial or business enterprise or activity of a person or persons other than a person or persons referred to in clause (a) that is designated by the regulations, or
(c) an enterprise or activity or a proposal, plan or program in respect of an enterprise or activity of a person or persons, other than a person or persons referred to in clause (a), if an agreement is entered into under section 3.0.1 in respect of the enterprise, activity, proposal, plan or program.
(Undertaking is also referred to as "project" in this Guide for brevity).

vulnerability

The degree to which components of the natural and built environment are susceptible to, and unable to withstand, the adverse impacts of climate change is referred to as vulnerability. Vulnerability is a function of the character, magnitude, and rate of climate change combined with the sensitivity and adaptive capacity of a system or thing.

Furfurica, Silvia

From: MNRF Ayl Planners (MNRF) <MNRF.Ayl.Planners@ontario.ca>
Sent: Monday, February 8, 2021 9:19 AM
To: Joe de Koning; Van Ruyven, William
Cc: Furfurica, Silvia
Subject: RE: Municipal Class EA Study for Bosworth Bridge No. B007028 - Notice of Study Commencement
Attachments: image001.wmz; Bosworth Bridge No. B007028 Class EA - Notice of Commencement.pdf; NHGuide_MNRF_2019-04-01.pdf

Ministry of Natural Resources and Forestry **Ministère des Richesses naturelles et des Forêts**

Ontario

February 8, 2021

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Consultant Project Engineer
WSP Canada Inc.
610 Chartwell Road, Suite 300
Oakville ON L6J 4A5
905.823.8500
william.vanruyven@wsp.com

Subject: Municipal Class EA Study for Bosworth Bridge No. B007028 - Notice of Study Commencement

The Ministry of Natural Resources and Forestry (MNRF) received the attached notice for the proposed Bosworth Bridge project. Thank you for circulating this information to our office, however, please note that we have not completed a screening of natural heritage or other resource values for the project at this time. Please also note that it is your responsibility to be aware of and comply with all relevant federal or provincial legislation, municipal by-laws or other agency approvals.

This response provides information to guide you in identifying and assessing natural features and resources as required by applicable policies and legislation, and engaging with the MNRF for advice as needed.

Natural Heritage & Endangered Species Act

In order to provide the most efficient service possible, the attached Natural Heritage Information Request Guide has been developed to assist you with accessing natural heritage data and values from convenient online sources.

It remains the proponent's responsibility to complete a preliminary screening for each project, to obtain available information from multiple sources, to conduct any necessary field studies, and to consider any potential environmental impacts that may result from an activity. We wish to emphasize the need for the proponents of development activities to complete screenings prior to contacting the Ministry or other agencies for more detailed technical information and advice.

The Ministry continues to work on updating data housed by Land Information Ontario and the Natural Heritage Information Centre, and ensuring this information is accessible through online resources. Species at risk data is regularly being updated. To ensure access to reliable and up to date information, please contact the Ministry of the Environment, Conservation and Parks at SAROntario@ontario.ca.

Petroleum Wells & Oil, Gas and Salt Resource Act

There may be petroleum wells within the proposed project area. Please consult the Ontario Oil, Gas and Salt Resources Library website (www.ogsrlibrary.com) for the best known data on any wells recorded by MNRF. Please reference the 'Definitions and Terminology Guide' listed in the publications on the Library website in order to better understand the well information available. Any oil and gas wells in your project area are regulated by the *Oil, Gas and Salt Resource Act*, and the supporting regulations and operating standards. If any unanticipated wells are encountered during development of the project, or if the proponent has questions regarding petroleum operations, the proponent should contact the Petroleum Operations Section at POSRecords@ontario.ca or 519-873-4634.

Public Lands Act & Lakes and Rivers Improvement Act

Some projects may be subject to the provisions of the *Public Lands Act* or the *Lakes and Rivers Improvement Act*. Please review the information on MNRF's web pages provided below regarding when an approval is required or not. Please note that many of the authorizations issued under the *Lakes and Rivers Improvement Act* are administered by the local Conservation Authority.

- For more information about the Public Lands Act: https://www.ontario.ca/page/crown-land-work-permits
- For more information about the Lakes and Rivers Improvement Act: https://www.ontario.ca/document/lakes-and-rivers-improvement-act-administrative-guide

The MNRF would appreciate the opportunity to review any draft reporting completed in support of this project when it becomes available.

If you have any questions or concerns, please feel free to contact me.

Sincerely,
Karina

Karina erniavskaja, District Planner
Ministry of Natural Resources and Forestry
Email: MNRF.Ayl.Planners@ontario.ca

Ontario

As part of providing accessible customer service, please let me know if you have any accommodation needs or require communication supports or alternate formats.

From: Furfurica, Silvia <Silvia.Furfurica@wsp.com>
Sent: January-21-21 12:17 PM
Cc: Joe de Koning <joedk@wellington.ca>; Van Ruyven, William <William.VanRuyven@wsp.com>
Subject: Municipal Class EA Study for Bosworth Bridge No. B007028 - Notice of Study Commencement

Good afternoon,

The County of Wellington has initiated a Schedule B Municipal Class Environmental Assessment Study for the Bosworth Bridge (No. B007028) located on Wellington Road 7, in the Township of Mapleton.

Please see the attached for the Notice of Study Commencement for more information, and submit the attached Agency Response Form by February 25, 2021. If this study falls under the jurisdiction of another representative of your office, please forward this email to them, and advise us at your earliest convenience.

Unless requested otherwise, the Project Team will continue to provide study milestone notifications to your agency. Please refer to the Wellington County website for future project updates at https://www.wellington.ca/bosworthbridgeea/.

If you have any questions, comments or concerns, you can reach the project team by responding to this email or by contacting the County and WSP Project Managers listed in the notice.

Thank you for your assistance,

Silvia Furfurica
Planner
Transportation – Planning

WSP

610 Chartwell Rd, Suite 300
Oakville, ON Canada L6J 4A5
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Ministry of Natural Resources and Forestry

Ontario

Natural Heritage Information Request Guide

Regional Operations Division, Ministry of Natural Resources & Forestry

Update – April 1, 2019

Table of Contents

1.0 Background, Purpose and Scope

1.1 Background

The Ministry of Natural Resources and Forestry (MNRF) maintains a substantial amount of natural heritage information. The Government of Ontario is committed to transparency, customer service, and making information more publicly accessible. Access to natural heritage information is critical to informing municipal planning processes, development activities, and other initiatives such as science and research. To make natural heritage information more accessible and better understood, this document consolidates available MNRF natural heritage information and outlines how this information can be accessed.

1.2 Purpose of this Guide

The purpose of this guide is three-fold:

1. To provide a directory of natural heritage information sources available from the MNRF;
2. To reduce wait times for users to access the data, especially considering that much of the information is open and accessible; and
3. To help users efficiently access available data.

It remains the proponent's responsibility to:

- Complete a preliminary screening for their projects,
- Obtain available information from multiple sources,
- Conduct any necessary field studies, and
- Consider any potential environmental impacts that may result from a proposed activity.

To provide the most efficient service possible, proponents should complete natural heritage screenings **prior** to contacting Government of Ontario Ministry offices or other agencies for more detailed technical information and advice. This guide provides detailed information on where and how to access information to screen a study area in advance of consulting with Ministries.

1.3 Scope

MNRF maintains and provides information related to its resource management and land use planning mandate, including natural heritage, fisheries, wildlife, mineral aggregate resources, crown lands, protected lands and more. This information is made available to organizations, private individuals, consultants, and developers through online sources and is often considered under various pieces of legislation or as part of regulatory

approvals and planning processes. This guide has been created to help users navigate the available natural heritage information to support various activities. This guide additionally provides a list of other sources of information beyond MNRF, although it is not intended to be an exhaustive list of available sources.

This guide does not replace the Natural Heritage Reference Manual but is intended to support it. This guide is not intended to circumvent any field studies that may be necessary to document features and assess impacts.

This guide is a resource for proponents during project planning. Reviewing the layers listed in the appendices will enable proponents to prepare for both proponent and government led Environmental Assessments. For projects proposed on crown land, MNRF is the permitting agency and there may be additional initial screening requirements. Further studies may be required depending on the nature and location of the project.

1.4 Audience

The intent of this public guide is to make it easier for the proponents and consultants to access relevant information. This guide will also help internal Ministry staff who are responding to information requests or site screenings.

1.5 Disclaimer

The information available from MNRF and the sources listed below in the appendices should **not be considered as a substitute for site visits and appropriate field surveys.** Generally, information available from MNRF can be regarded as a starting point from which to conduct further field studies, if needed. While this data represents MNRF's best available current information, it is important to note that a lack of information for a site does not mean that additional features and values are not present. There are many areas where MNRF does not currently have information. On-site assessments can better verify site conditions, identify natural features and values and confirm presence of species at risk and/or their habitats.

This guide will be updated from time to time. For a current version of this guide, please contact your local or regional Government of Ontario Ministry office. Up-to-date contact information for Ministry offices can be obtained through the Government of Ontario Employee and Organization Directory, Info-GO, available at http://www.infogo.gov.on.ca/infogo/home.html.

2.0 Data Resources

2.1 Make a Map: Natural Heritage Areas

The MNRF maintains the Make a Natural Heritage Area Map: http://www.gisapplication.lrc.gov.on.ca/mamnh/Index.html?site=MNR_NHLUPS_NaturalHeritage&viewer=NaturalHeritage&locale=en-US which provides public access to natural heritage information without the user needing to have Geographic Information System (GIS) capability. It allows users to view and identify natural heritage features, mark areas of interest, and create and print a custom map directly from the web application. The tool also shows topographic information such as roads, rivers, contours and municipal boundaries.

Make a Natural Heritage Area Map should be consulted as a first step in screening for natural heritage features. This tool does not provide access to all of the MNRF's natural heritage information and some layers may be incomplete.

Users are advised that sensitive information has been removed from the natural areas dataset and the occurrences of species at risk, rare plant communities and wildlife concentration areas has been generalized to a 1-kilometre grid.

The web-based mapping tool displays natural heritage data, including:

- Generalized Species at risk occurrence data (based on a 1-km square grid),
- provincial parks and conservation reserves,
- Areas of Natural and Scientific Interest,
- Wetlands,
- Woodlands, and
- Natural Heritage Information Centre data.

Data cannot be downloaded directly from this web map, however, information included in this application is available digitally through Land Information Ontario: https://www.ontario.ca/page/land-information-ontario (LIO).

2.2 Land Information Ontario (LIO)

Most natural heritage data is publicly available. This data is managed in a large corporate database called the LIO Warehouse and can be discovered through the LIO Metadata Management Tool: https://www.javacoeapp.lrc.gov.on.ca/geonetwork/srv/en/main.home. This tool provides descriptive information about the characteristics, quality and context of the data. Publicly available geospatial data can be downloaded directly from this site.

- **Aquatic Resource Area (ARA) data classes:** general fisheries spatial data including water body type, thermal regime and fish species
- **Spawning Area (fish)**
- **Nursery Area (fish)**
- **Nesting Site (birds)**
- **Areas of Natural and Scientific Interest (ANSIs)**
- **Wetlands**
- **Wintering Area (deer, moose, etc.)**
- **Fire (Potential Hazardous Forest Types for Wildland Fire**

Appendix A links MNRF's authoritative, relevant data sets to the location in the LIO Database where the data can be downloaded.

Note that while most data is publicly available, some data may be considered highly sensitive (i.e., Nursery Areas for fish, species at risk observations), and as such, restrictions are in place limiting access to this information.

2.3 Species at Risk

For detailed information on species at risk, please visit Make a Natural Heritage Areas Map or contact the Ministry of Environment, Conservation and Parks at SAROntario@ontario.ca.

2.4 Public Agencies

Ministries, Municipalities and Conservation Authorities may have proposed infrastructure work that requires screening. In these instances, these broader public sector organizations should contact the appropriate Ministry Office to explore more efficient ways to access information and make decisions. This could include entering into data sharing agreements. Please note that many public agencies already have ongoing data sharing agreements in place with LIO and the Natural Heritage Information Centre (NHIC).

2.5 For Additional Information

For further information pertaining to the NHIC, including data sharing agreements, please email NHICrequests@ontario.ca or call 705-755-2159.

There may be circumstances where a local Government of Ontario office should be consulted for additional information and/or technical advice. For instance, projects proposed on Crown Land should be discussed early in the project planning process with local MNRF District staff.

A listing of District offices can be found on this web page https://www.ontario.ca/page/ministry-natural-resources-and-forestry-regional-and-district-offices

Appendix A: Natural Heritage Mapping Resources

The table below provides users links to maps and GIS data depicting natural heritage. This list is intended to help guide a natural heritage screening exercise. Click in the *Information Source* column for hyperlinks.

Information Source	Theme	Instructions for using this information
Wetland	Significant Wetlands	Use field" WETLAND_SIGNIFICANCE = Evaluated-Provincial" for provincially significant wetlands.
	Coastal Weltands	Use field"COASTAL_IND=Yes" for Coastal Wetlands
	Fish & Wildlife, Wetlands	Support evaluation and identification of habitat and wetlands. Please consult user guide for details. Consult the User Guide for more information.
Make a Natural Heritage Areas Map	Endangered and Threatened Species	Turn on the NHIC 1 km Grid square and use the Find… tool to query for species intersecting the grid. Consult the User guide for more information.
	Fish & Wildlife Habitat	Turn on the NHIC 1 km Grid square and use the Find… tool to query for species intersecting the grid. Consult the User guide for more information.
Provincially Tracked Species 1KM Grid	Endangered and Threatened Species	Use field "SARO_STAUS= 'Endangered' or SARO_STATUS='Threatened'" for Endangered and Threatened species.
Wintering Area	Wildlife Habitat	Supports evaluation and identification of wildlife habitat.
Aquatic Feeding Area	Wildlife Habitat	Supports evaluation and identification of wildlife habitat.
Breeding Area	Wildlife Habitat	Supports evaluation and identification of wildlife habitat.
Calving Fawning Site	Wildlife Habitat	Supports evaluation and identification of wildlife habitat.

Information Source	Theme	Instructions for using this information
Den Site	Wildlife Habitat	Supports evaluation and identification of wildlife habitat.
Feeding Area, Wildlife	Wildlife Habitat	Supports evaluation and identification of wildlife habitat.
Habitat Planning Range	Wildlife Habitat	Supports evaluation and identification of wildlife habitat.
Mineral Lick	Wildlife Habitat	Supports evaluation and identification of wildlife habitat.
Nesting Site	Wildlife Habitat	Supports evaluation and identification of wildlife habitat.
Nursery Area, Wildlife	Wildlife Habitat	Supports evaluation and identification of wildlife habitat.
Resting Area	Wildlife Habitat	Supports evaluation and identification of wildlife habitat.
Staging Area, Wildlife	Wildlife Habitat	Supports evaluation and identification of wildlife habitat.
Travel Corridor, Wildlife	Wildlife Habitat	Supports evaluation and identification of wildlife habitat.
ANSI	Significant Areas of Natural and Scientific Interest	Use the field "ANSI_SIGNIFICANCE = Provincial" if you need to view only Provincially Significant ANSI. Consult the User Guide for more information.
Wooded Area	Woodlands	Supports evaluation and identification of significant woodlands and wildlife habitat
ARA Line Segment	Fish Species and Habitat	Supports evaluation and identification of fish habitat by indicating fish species present in the water feature. Consult the User Guide for more information.

Information Source	Theme	Instructions for using this information
ARA Polygon Segment	Fish Species and Habitat	Supports evaluation and identification of fish habitat by indicating fish species present in the water feature. Consult the User Guide for more information.
	At Capacity Lake Trout Lakes	Use field" AT_DEVELOPMENT_CAPACITY_IND = Yes" for designated at capacity lakes
Aquatic Resource Area (ARA) Survey Point	Fish Species	Supports evaluation and identification of fish habitat by indicating fish species present at that location. Consult the User Guide for more information.
Spawning Area	Fish Habitat	Supports evaluation and identification of fish habitat
Nursery Area, Fish	Fish Habitat	Supports evaluation and identification of fish habitat
Staging Area, Fish	Fish Habitat	Supports evaluation and identification of fish habitat
Feeding Area, Fish	Fish Habitat	Supports evaluation and identification of fish habitat
Travel Corridor Fish	Fish Habitat	Supports evaluation and identification of fish habitat
Ecoregion	Ecoregions	Used to determine what ecoregion covers your area
Natural heritage System Area	Natural Heritage System	Identifies Natural Heritage System Areas within the Greenbelt Plan, the Oak Ridges Moraine Conservation Plan, the Niagara Escarpment Plan and the Growth Plan for the Greater Golden Horseshoe. Consult this guide for more information.
Breeding Bird Atlas	Wildlife Habitat	Provides additional information on the location of Breeding Birds
eBird	Wildlife Habitat	Provides additional information on bird sightings

Information Source	Theme	Instructions for using this information
Ontario Reptile and Amphibian Atlas	Wildlife Habitat	Provides additional information on Reptile and Amphibian sightings
iNaturalist	Fish & Wildlife Habitat	Provides additional information on fish & wildlife sightings

Appendix B: Natural Heritage Information Resources

The table below provides users links to Natural Heritage policies and documentation that should be referenced when conducting a natural heritage screening exercise. Click in the *Information Source* column for hyperlinks

Information Source	Theme	Description
https://www.ontario.ca/document/water-work-timing-window-guidelines	Water Work Timing windows	An information source that can be used to determine in-water work timing windows
Inland Lakes designated for Lake Trout management	Fish Habitat	A list of lakes in Ontario that are managed as Lake Trout lakes
Significant wildlife habitat guide	Wildlife Habitat	Provides detailed information on the identification, description and prioritization of significant wildlife habitat.
Significant wildlife habitat ecoregional criteria schedules: Ecoregion 6E	Wildlife Habitat	Provides detailed information on the description, criteria, information sources and assessment methods for significant wildlife habitat in Ecoregion 6E
Significant wildlife habitat ecoregional criteria schedules: Ecoregion 7E	Wildlife Habitat	Provides detailed information on the description, criteria, information sources and assessment methods for significant wildlife habitat in Ecoregion 7E
Significant wildlife habitat ecoregional criteria schedules: Ecoregion 5E	Wildlife Habitat	Provides detailed information on the description, criteria, information sources and assessment methods for significant wildlife habitat in Ecoregion 5E
Significant wildlife habitat ecoregional criteria schedules: Ecoregion 3E	Wildlife Habitat	Provides detailed information on the description, criteria, information sources and assessment methods for significant wildlife habitat in Ecoregion 3E
Significant wildlife habitat ecoregional criteria schedules: Ecoregion 3W	Wildlife Habitat	Provides detailed information on the description, criteria, information sources and assessment methods for significant wildlife habitat in Ecoregion 3E
Significant wildlife habitat ecoregional criteria schedules: Ecoregion 4E	Wildlife Habitat	Provides detailed information on the description, criteria, information sources and assessment methods for significant wildlife habitat in Ecoregion 3E
Significant wildlife habitat mitigation support tool	Wildlife Habitat	Provides advice and recommendations on how to mitigate wildlife habitat during a development process
Natural heritage reference manual	Natural Heritage	Provides guidance for implementing the natural heritage policies of the Provincial policy Statement

Appendix C: Other information Sources

The table below provides users links to other data and resources that could be relevant when screening for development. Click in the *Information Source* column for hyperlinks

Information Source	Theme
Crown Land Use Policy Atlas	Crown Land
Make a Topographic Map	Base Data Mapping
Pits and Quarries	Aggregates
Aggregate resources policies and procedures	Aggregates
Aggregate resources study	Aggregates
Exploring for and extracting oil, natural gas and salt resources	Oil, Gas and Salt Resources
Petroleum wells	Oil, Gas and Salt Resources
Great Lakes – St. Lawrence River System and Large inland lakes: Technical Guides for flooding, erosion and dynamic beaches in support of natural hazards policies 3.1 of the provincial policy statement	Hazards
Adaptive Management of Stream Corridors in Ontario including Natural Hazards Technical Guides	Hazards
The Wildland Fire Risk Assessment and Mitigation Reference Manual	Hazards

Information Source	Theme
Public Lands Act	Crown Land
Crown land work permits	Crown Land
Aggregate resources	Aggregates
Lakes and Rivers Improvement Act	Crown Land
Licence to collect fish for scientific or education purposes	Fish
https://www.ontario.ca/search/data-catalogue	Base Data mapping
Fire - Potential Hazardous Forest Types for Wildland Fire	Hazards
MNR Region	Base Data mapping
MNR District	Base Data mapping
GeoBase	Base Data mapping
Mining Lands Administration System (MLAS) – Map Viewer	Mines
Geoconnections	Base Data mapping

Information Source	Theme
Ministry of Northern Development and Mines Mapping and link to Geology Ontario databases	Mines
Ministry of Environment, Conservation and Parks Data	Environment
National Air Photo Library	Aerial photos
Archives Ontario Aerial Photography	Aerial photos
GEOGratis	Base Data mapping
County Soils Maps	Base Data mapping
Forest Fire Info Map	Hazards
Agricultural Information Atlas	Agriculture
Crown Land Automated Internet Mapping System	Mines
COSINE	Base Data mapping
GEONAME	Base Data mapping
Government-wide data inventory	Base Data mapping

Furfurica, Silvia

	Harvey, Joseph (MHSTCI) <Joseph.Harvey@ontario.ca>
Sent:	Wednesday, February 17, 2021 4:33 PM
To:	Van Ruyven, William
Cc:	Barboza, Karla (MHSTCI); Kirzati, Katherine (MHSTCI); Joe de Koning; Furfurica, Silvia
Subject:	File 0013388: Municipal Class EA Study for Bosworth Bridge No. B007028 - Notice of Study Commencement
Attachments:	2021-02-17_BosworthBridgeMHSTCI-Ltr.pdf
Categories:	File

William Van Ruyven,

Please find attached MHSTCI's comments on the above referenced project notice. Please do not hesitate to contact Katherine Kirzati if you have any questions.

Regards,

Joseph Harvey
On behalf of

Katherine Kirzati
Heritage Planner
Heritage Planning Unit
Katherine.Kirzati@Ontario.ca

Ministry of Heritage, Sport, Tourism and Culture Industries

Programs and Services Branch
401 Bay Street, Suite 1700
Toronto, ON M7A 0A7
Tel: 416-728-3494

Ministère des Industries du Patrimoine, du Sport, du Tourisme et de la Culture

Direction des programmes et des services
401, rue Bay, Bureau 1700
Toronto, ON M7A 0A7
Tél: 416-728-3494

Ontario

February 17, 2021 EMAIL ONLY

William Van Ruyven, P.Eng.
Consultant Project Engineer
WSP Canada Inc.
610 Chartwell Road, Suite 300
Oakville ON L6J 4A5
william.vanruyven@wsp.com

MHSTCI File	**:**	**0013388**
Proponent	**:**	**The County of Wellington**
Subject	**:**	**Notice of Study Commencement– Schedule B – Municipal Class EA**
Project	**:**	**Wellington Road 7, Bosworth Bridge No. B007028**
Location	**:**	**Township of Mapleton, The County of Wellington**

Dear William Van Ruyven:

Thank you for providing the Ministry of Heritage, Sport, Tourism and Cultural Industries (MHSTCI) with the Notice of Study Commencement for the above-referenced project. MHSTCI's interest in this environmental assessment (EA) project relates to its mandate of conserving Ontario's cultural heritage.

Project Summary
WSP has been retained by the County of Wellington to conduct a Schedule B Municipal Class Environmental Assessment (2000, as amended in 2015) for the Bosworth Bridge. The study will confirm and document the existing structural deficiencies and identify alternative solutions, including rehabilitation or replacement of the bridge, and evaluate associated environmental impacts.

Identifying Cultural Heritage Resources
While some cultural heritage resources may have already been formally identified, others may be identified through screening and evaluation. Indigenous communities may have knowledge that can contribute to the identification of cultural heritage resources, and we suggest that any engagement with Indigenous communities includes a discussion about known or potential cultural heritage resources that are of value to these communities. Municipal Heritage Committees, historical societies and other local heritage organizations may also have knowledge that contributes to the identification of cultural heritage resources.

Municipal Heritage Bridges: Cultural, Heritage & Archaeological Resources Assessment Checklist

Under the EA process, the proponent is required to determine a project's potential impact on cultural heritage resources. The Municipal Engineers Association provides screening criteria for work on bridges that falls under the Municipal Class EA with a *checklist* and *background material* available online, developed in coordination with MHSTCI.

Part A – Municipal Class EA Activity Selection

The *checklist* and *background material* can be used to determine the Municipal Class EA schedule (A, A+, B or C) for the project. Completing the remainder of this checklist determines what technical cultural heritage studies may be required.

Part B - Cultural Heritage Assessment

If Part B of the checklist determines that the bridge or study area warrants the preparation of a Cultural Heritage Evaluation Report (CHER), and the undertaking of a Heritage Impact Assessment (HIA), our ministry's *Info Sheet #5: Heritage Impact Assessments and Conservation Plans* outlines the scope of HIAs. CHERs and HIAs are to be prepared by qualified consultants. Please send HIAs to MHSTCI for review and make copies available to local organizations or individuals who have expressed an interest in cultural heritage.

Part C – Heritage Assessment

If Part C of the checklist determines that the CHER has identified heritage features on the project and recommends that a Heritage Impact Assessment (HIA) be undertaken, our Ministry's *Info Sheet #5: Heritage Impact Assessments and Conservation Plans* outlines the scope of HIAs. CHERs and HIAs are to be prepared by qualified consultants. Please send HIAs to MHSTCI for review and make copies available to local organizations or individuals who have expressed an interest in cultural heritage.

Part D – Archaeological Resources Assessment

Our records indicate that a Stage 1 archaeological assessment has been submitted under Project Information Form (PIF) P1078-0091-2020, which is awaiting review.

Archaeological concerns have not been addressed until reports have been entered into the Ontario Public Register of Archaeological Reports where those reports recommend that:

- the archaeological assessment of the project area is complete and
- all archaeological sites identified by the assessment are either of no further cultural heritage value or interest (as per Section 48(3) of the Ontario Heritage Act) or that mitigation of impacts has been accomplished through an avoidance and protection strategy.

Environmental Assessment Reporting
All technical cultural heritage studies and their recommendations are to be addressed and incorporated into EA projects. If the screening has identified no known or potential cultural heritage resources, or no impacts to these resources, please include the completed checklists and supporting documentation in the EA report or file.

Thank you for consulting MHSTCI on this project. Please continue to do so through the EA process, and contact Katherine Kirzati for any questions or clarification.

Sincerely,

Joseph Harvey
On behalf of

Katherine Kirzati
Heritage Planner
Heritage Planning Unit
Katherine.Kirzati@Ontario.ca

Copied to: Joe de Koning, Construction Manager, County of Wellington
Silvia Furfurica, Planner, WSP Canada Inc.

County of Wellington
Wellington Road 7, Bosworth Bridge No. B007028
Township of Mapleton
Schedule B Municipal Class Environmental Assessment
Notice of Study Commencement

Agency/Utility Response Form

Name:	WELLINGTON COUNTY HISTORICAL SOCIETY
Title:	
Agency Name & Division or Branch:	
Mailing Address:	PO Box 5 FERGUS ONT N1M 2W7
Email:	
Phone (optional):	

Our agency would like to be kept informed of the Study with direct mailings. Yes ☐ No ☐

Please remove our agency from the project mailing list. Yes ☒ No ☐

Please provide any initial information or comments you may have:

Please return this form by February 25, 2021.

William Van Ruyven, P.Eng.
Consultant Project Engineer
WSP Canada Inc.
610 Chartwell Road, Suite 300
Oakville ON L6J 4A5
william.vanruyven@wsp.com

Information is being collected under the Freedom of Information and Protection of Privacy Act. With the exception of personal information, all comments will become part of the public record.

Furfurica, Silvia

From: Furfurica, Silvia
Sent: Thursday, April 1, 2021 7:48 AM
Cc: Van Ruyven, William; Joe de Koning
Subject: Wellington Road 7 Bosworth Bridge EA - Public Information Centre (PIC)
Attachments: Wellington Road 7 Bosworth Bridge EA - Public Information Centre (PIC).pdf

Hello,

The County of Wellington is carrying out a Municipal Class Environmental Assessment (Class EA) Study for the Bosworth Bridge, No. B007028, located on Wellington Road 7, in the Township of Mapleton.

The County of Wellington has prepared an online Public Information Centre (PIC) package to allow local residents and interested members of the public an opportunity to review and comment on the alternative planning solutions under consideration, the evaluation process, next steps in the study, and seek input on these topics. Please refer to the attached Notice for more information. Display slides will be made available to the public on the County website beginning **April 1, 2021**. They can be viewed any time after this date by visiting:

www.wellington.ca/BosworthBridgeEA

If this study falls under the jurisdiction of another representative of your office, please forward this email to them and advise us at your earliest convenience.

If you have any questions, comments or concerns, you can reach the project team by contacting the County and WSP Project Managers listed in the notice.

Thank you,

_____

Silvia Furfurica
Planner
Transportation – Planning

610 Chartwell Rd, Suite 300
Oakville, ON Canada L6J 4A5
t: 905.823.8500 | direct: 289.835.2480 | f: 905.823.8503
wsp.com

Furfurica, Silvia

From: Van Ruyven, William
Sent: Thursday, May 27, 2021 1:42 PM
To: Furfurica, Silvia; Falcone, Olivia
Subject: FW: WR109 Bridges Environmental Assessment PIC2
Attachments: WR109 PIC2 Notice.docx

FYI.

William Van Ruyven, P.Eng., PMP
Project Manager

WSP Canada
t: 289-835-2627 c: 647-280-5895
William.VanRuyven@wsp.com

From: Joe de Koning <joedk@wellington.ca>
Sent: May 27, 2021 9:10 AM
To: Scott Wilson <scottw@wellington.ca>; Don Kudo <donk@wellington.ca>; Andrea Ravensdale <andrear@wellington.ca>; Brad Hutchinson <bradh@wellington.ca>; Doug Shaw <dougs@wellington.ca>; Emily Goemans <emilyg@wellington.ca>; Pasquale Costanzo <pasqualec@wellington.ca>; Brittany Boomer <brittanyboo@wellington.ca>; Angela Peck <angelapec@wellington.ca>; Andy Lennox <andyl@wellington.ca>; Kelly Linton <kellyl@wellington.ca>; James Seeley <jamess@wellington.ca>; Rachel Wilson <rachelw@wellington.ca>; Michael Givens <mgivens@wellington-north.com>; Allan Alls <allana@wellington.ca>; Jeff Duncan <jeffd@wellington.ca>; Don McKay <donmk@wellington.ca>; Doug Breen <dougb@wellington.ca>; Diane Ballantyne <dianeb@wellington.ca>; Mary Lloyd <maryl@wellington.ca>; Earl Campbell <earlc@wellington.ca>; Steve O'Neill <steveo@wellington.ca>; Campbell Cork <campbellc@wellington.ca>; David Anderson <dave.anderson@4roads.ca>; George Bridge <georgeb@wellington.ca>; Gregg Davidson <greggd@wellington.ca>; Chris White <chrisw@wellington.ca>
Cc: Keegan Kozolanka <keegan@guelphtoday.com>; 'news@wellingtonadvertiser.com' <news@wellingtonadvertiser.com>; Austin Cardinell <austinradiocardinell@gmail.com>; Van Ruyven, William <William.VanRuyven@wsp.com>
Subject: WR109 Bridges Environmental Assessment PIC2

Good morning,

The County of Wellington is undertaking a Municipal Class Environmental Assessment (Class EA) study to consider potential solutions to address the poor condition of four structures that cross the Conestogo River on Wellington Road 109, just east of Arthur.

A Public Information Centre (PIC) package is being made available online to confirm the preferred solution to replace the four structures, evaluate design and construction options including traffic management, and seek input on these topics. This is the second and final PIC planned for the study.

Your feedback is important. The PIC package includes information about how you can share your comments and questions with the Project Team.

Thank you,

Joe de Koning, P.Eng.
Manager of Roads
County of Wellington
Phone (519) 837-2601 X-2270

Ministry of Heritage, Sport, Tourism and Culture Industries

Programs and Services Branch
401 Bay Street, Suite 1700
Toronto, ON M7A 0A7
Tel: 613.242.3743

Ministère des Industries du Patrimoine, du Sport, du Tourisme et de la Culture

Direction des programmes et des services
401, rue Bay, Bureau 1700
Toronto, ON M7A 0A7
Tél: 613.242.3743

Ontario

August 16, 2021 EMAIL ONLY

Silvia Furfurica
Planner
WSP Canada Inc.
610 Chartwell Road, suite 300
Oakville ON L6J 4A5
Silvia.Furfurica@wsp.com

MHSTCI File : 0013388
Proponent : County of Wellington
Subject : Heritage Impact Assessment – Schedule B – Municipal Class EA
Project : Wellington Road 7, Bosworth Bridge No. B007028
Location : Township of Mapleton, County of Wellington

Dear Silvia:

Thank you for providing the Ministry of Heritage, Sport, Tourism and Cultural Industries (MHSTCI) with the Heritage Impact Assessment (HIA) for the above-mentioned bridge on Wellington Road 7, prepared by WSP Canada Inc. and dated July 2021 for review and comment. Thanks also for sending the Cultural Heritage Evaluation Report (CHER) for the above-mentioned bridge prepared by Unterman McPhail Associates dated April 2015 (revised 2015).

As you are aware, MHSTCI's interest in this Environmental Assessment (EA) project relates to its mandate of conserving Ontario's cultural heritage, which includes archaeological resources, built heritage resources and cultural heritage landscapes. Under the EA process, the proponent is required to determine a project's potential impact on cultural heritage resources.

Project Summary
WSP has been retained by the County of Wellington to conduct a Schedule B Municipal Class Environmental Assessment study for the Bosworth Bridge. The study will confirm and document the existing structural deficiencies and identify alternative solutions, including rehabilitation or replacement of the bridge, and evaluate associated environmental impacts.

Comments
We have reviewed the above referenced CHER and HIA and finds that both reports are consistent with the requirements, guidance and standards of the Municipal Class EA and with best practice guidance prepared by MHSTCI. However, we have the following comments and recommendations and more detailed comments in the attached table.

Cultural Heritage Evaluation Report (CHER).

- Section 5.3 (Summary of Cultural Heritage Value) – The title should be revised, and the organization be aligned with Ontario's current legislative framework. We recommend that the draft Statement of Cultural Heritage Value be shared with the Township for their review and comments.

Heritage Impact Assessment (HIA)

- Section 4 (Results of Heritage Evaluation) – See comments above re. the Statement of Cultural Heritage Value.
- Section 5 (Proposed Undertaking and Impacts) – we recommend that this section be reorganized.
- Section 6 (Alternatives, Mitigation and Conservation Recommendations) - Alternatives considered and proposed mitigation measures should be revised.

Environmental Assessment Reporting

All technical cultural heritage studies and their recommendations are to be addressed and incorporated into EA projects.

Given that the bridge was found to be of cultural heritage value or interest, MHSTCI recommends that the CHER and HIA be publicly disclosed for any interested groups and persons for review and comment as part of the EA process. Please continue to send any notices or information related to this project to me and Karla Barboza (karla.barboza@ontario.ca).

Thank you for the opportunity to review the CHER and HIA. We would be happy to discuss our comments, should you wish.

Sincerely,

Joseph Harvey
Heritage Planner
Heritage Planning Unit
joseph.harvey@Ontario.ca

Copied to: Joe de Koning, Construction Manager, County of Wellington
Christine Vazz, Planner, WSP
Lindsay Benjamin, Cultural Heritage, WSP
Jamie Yeung, Project Engineer, WSP
William Van Ruyven, Consultant Project Engineer, WSP
Karla Barboza, (A) Team Lead – Heritage, MHSTCI

Item	Section	Given Text	MHSTCI Comments
	Cultural Heritage Evaluation Report prepared by Unterman McPhail Associates dated April 2015 (revised 2015).		
1.	Section 5.3 (Summary of Cultural Heritage Value) Page 24		• The title should be changed to "Draft Statement of Cultural Heritage Value" and the organization be aligned with Ontario's current legislative framework. The Statement will provide the following information: o Description of Property – briefly describes the property location so that the property can readily ascertained. It includes: the location of the property, the principal resources that form the property and any discernible boundaries. o Cultural Heritage Value or Interest – describes why the property is of cultural heritage value or interest and it should focus on what makes the property important (not provide a broad history); explain the cultural meaning, associations and connections the property holds for the community and reflect one or more of the criteria from Ontario Regulation 9/06. o Description of Heritage Attributes – a list of the key attributes or elements that must be retained to conserve the cultural heritage value or interest. We recommend that the draft Statement of Cultural Heritage Value be shared with the Township for their review and comments.
	Heritage Impact Assessment prepared by WSP Canada Inc. and dated July 2021		
2.	Whole document	Terminology "cultural heritage resource"	The HIA should be revised to clarify the types of cultural heritage resources being assessed, e.g. - Built heritage resources and cultural heritage landscapes – vs. cultural heritage resources, which also includes archaeological resources.
3.	Executive Summary Page V	As a requirement of the MCEA Study, WSP has completed a Heritage Impact Assessment (HIA) of the Bosworth Bridge to assess the impacts of the structure's proposed replacement and recommend appropriate mitigation measures. This document builds upon the CHER to address the requirements for the HIA.	A heritage impact assessment is a study to determine if any built heritage resources and cultural heritage landscapes (including those previously identified and those found as part of the site assessment) are impacted by a proposed development, site alteration or undertaking. It can also demonstrate how the resource will be conserved in the context of redevelopment or site alteration. Mitigative or avoidance measures or alternative development or site alteration approaches may be recommended.

Item	Section	Given Text	MHSTCI Comments
			Under the Municipal Class EA, proponents are required to identify existing environmental conditions, identify potential environmental impacts and describe proposed measures to mitigate potential negative impacts, if any. Therefore, we recommend that the purpose of the HIA is revised in the Executive Summary and Section 1.1. The recommendations should be revised – see comments below. .
4.	2.1.1 Provincial Policy Context Page 3	This cultural heritage assessment considers cultural heritage resources in the context of proposed highway intersection improvements under the Environmental Assessment Act (1990), as well as the Planning Act (1990). This assessment addresses above-ground cultural heritage resources over 40 years old (Ministry of Transportation 2007; Ontario Realty Corporation 2007) as well as through the application of the Ministry of Heritage, Tourism, Sport, Tourism and Culture Industries' Criteria for Evaluating Potential for Built Heritage Resources and Cultural Heritage Landscapes (2016).	The report should make references to the Municipal Class EA and its associated checklist for municipal bridges (Municipal Heritage Bridges Cultural, Heritage and Archaeological Resources Assessment Checklist Revised April 11, 2014). We note that it is mentioned under Section 2.2. (Methodology). The report should also make references to Ontario Regulation 160/02 (Standards for Bridges).
5.	2.3 Consultation Page 6	Wellington County was consulted as a part of this project for information regarding any cultural heritage interests or concerns related to the Bosworth Bridge	Please clarify whether the intent of this consultation was for information gathering and/or about the proposed and preferred alternatives. This paragraph should also be revised to acknowledge that the Township of Mapleton was also consulted, according to the table. See comment below – item 7 (summary of community engagement).

Item	Section	Given Text	MHSTCI Comments
5.	3 Existing Conditions Page 7		This section should also inform whether the bridge has any current heritage recognitions and a brief summary of due diligence related to archaeological resources.
6.	4 Results of Cultural Heritage Evaluation Page 15	The 2015 CHER found the Bosworth Bridge to possess CHVI, which was expressed through the following Statement of Cultural Heritage Value or Interest and List of Heritages Attributes prepared by UMcA.	MHSTCI recommends the following edits: The CHER **(dated xx)** found the Bosworth Bridge to possess CHVI~~, which was expressed through the following Statement of Cultural Heritage Value or Interest and List of Heritages Attributes prepared by UmcA.~~ **according to Ontario Regulation 9/06 (Ontario Heritage Act)**. See also comments above re. the draft Statement of Cultural Heritage Value.
7.	5 Proposed Undertaking and Impacts Page 17		MHSTCI recommends that this section be reorganized as follows: 5.1 Description and Purpose of Proposed Undertaking – this section provides a detailed written and visual description of the proposed activity, and the rationale, purpose and need for the proposed undertaking. See language in the notice of commencement "The Bosworth Bridge (No. B007028) consists of a single span steel truss structure with a concrete deck over the Conestogo River. The bridge has a span and deck width of 40.1 m and 8.4 m respectively and was constructed circa 1949. The bridge is located on Wellington Road 7 in the Township of Mapleton, 0.8 km east of Wellington Road 11. The study area extends approximately 1 km on either side of the bridge. As part of a bridge inspection conducted in 2019, the Bosworth Bridge, No. B007028 was found to be in poor condition with major elements showing signs of significant deterioration. WSP has been retained by the County of Wellington to complete a Municipal Class EA Study to address these items." 5.2 Impact Assessment – this section identifies and articulates how the proposed activity will affect the cultural heritage value or interest of the property and assesses impacts, whether positive or negative, directed or indirect. 5.3 Considered Alternatives and Mitigation Measures – this section provides details of alternative options that were considered and that would reduce or mitigate negative impacts.

Item	Section	Given Text	MHSTCI Comments
			5.4 Summary of Community Engagement – this section provides a brief summary of the groups and individuals who were engaged, how and when community engagement was undertaken and the results of the engagement, including responses, comments or concerns expressed and how these were considered. Also indicate whether engagement was combined with the requirements of the EA process (e.g. Public Information Centres). See comments above on Section 2.3. 5.5 Recommendations - This section describes how the proposed activity may proceed, the mitigation measures that are to be implemented, and provide direction for any additional requirements.
8.	5.1 Description of Proposed Undertaking and Potential Impacts Page 17	The following four alternatives are being considered for the Bosworth Bridge as a result of the MCEA Study	See comments above re. Section organization. For bridges, including municipal bridges, the process and the options to be considered are the ones in Section 4.3 of the Ontario Heritage Bridge Guidelines (MTO, 2008). The options are regarded as appropriate in managing interventions on heritage bridges. They are arranged according to level or degree of intervention from minimum to maximum. They are to be applied in rank order such that Option 1 must be shown to be non-viable, before Option 2 can be considered and so on. There are eight options to consider and, all other alternatives having been considered, consider removal or demolition as a last resort. Discussion around the bridge condition and associated Municipal Structure Inspection Report should be discussed Section 3 (Existing Conditions). MHSTCI recommends that this section be revised accordingly.

Item	Section	Given Text	MHSTCI Comments
9.	6.2 Results of Alternatives, Mitigation and Recommendations Page 28	The following conservation recommendations are suggested for the Bosworth Bridge: 1. The Bosworth Bridge should be recorded through a Documentation and Salvage Report containing measured drawings, a thorough photographic record and written description of the bridge as well as recommendations for elements worthy of salvage prior to demolition (i.e., steel truss members, commemorative bridge plaque). This report should be shared with the County of Wellington and the County of Wellington Museum & Archives. 2. Commemoration opportunities should be explored for the bridge with community input. 3. The construction of a new bridge should be designed in a manner that draws from the design inspiration and materials of the extant bridge while maintaining legibility. Design considerations should explore the incorporation of the scale and rhythm of the members of a Warren pony truss, the placement and design of the concrete railings, and siting at the same location over the Conestogo River.	Where feasible, the preferred alternative should be selected to ensure the fewest direct and permanent impacts to the identified heritage attributes of the subject bridge. In this respect, the retention of the subject bridge following rehabilitation or its replacement with sympathetically designed structure are considered to be the least impactful solutions and are preferred from a cultural heritage perspective. The removal of the subject bridge without replacement is a permanent, negative impact the cultural heritage value of the structure, and should be avoided in favor of less impactful alternatives, where feasible. It seems that Option 5 (Remove and replace the Bosworth Bridge with a sympathetically designed structure) was determined to be the preferred and only viable option. we recommend the following revisions: **Given the identified cultural heritage value or interest of Bosworth Bridge and the preferred option being carried forward as part of the Environmental Assessment involving the complete removal and replacement of subject bridge, t~~h~~e** following **mitigation measures are recommended** ~~conservation recommendations are suggested for the Bosworth Bridge~~: 1. The Bosworth Bridge should be recorded through a Documentation and Salvage Report containing measured drawings, a thorough photographic record and written description of the bridge as well as recommendations for elements worthy of salvage prior to demolition (i.e., steel truss members, commemorative bridge plaque). This report should be shared with the County of Wellington and the County of Wellington Museum & Archives. **The bridge be documented to the standard outlined according to section 6.3.1.4 of the MTO Environmental Guide for Built Heritage and Cultural Heritage Landscapes (2007), as well as to be documented according to the Historic American Engineering Record (HAER) guidelines.** *However, it seems that the CHER and HIA completed for the bridge are sufficient documentation.*

Item			
			2. Commemoration opportunities should be explored for the bridge with community input. 3. The construction of a new bridge should be designed in a manner that draws from the design inspiration and materials of the extant bridge while maintaining legibility. Design considerations should explore the incorporation of the scale and rhythm of the members of a Warren pony truss, the placement and design of the concrete railings, and siting at the same location over the Conestogo River. *MHSTCI recommends that additional guidelines be included to guide the design for the replacement of the bridge and ensure the replacement bridge is sympathetic to surroundings. The final design for the replacement bridge incorporates the scale, massing, materials and finishes of the original bridge where possible and appropriate*

From: Vazz, Christine
Sent: Friday, September 17, 2021 2:22 PM
To: Harvey, Joseph (MHSTCI)
Cc: Barboza, Karla (MHSTCI); Joe de Koning; Yeung, Jamie; Benjamin, Lindsay
Subject: RE: File 0013388: Bosworth Bridge EA HIA
Attachments: Bosworth Bridge HIA (Final Revised Sept 16 2021).pdf

Hi Joseph,

Please see the updated HIA revised in Sections 5.3 and 5.3.1 to reflect your comments related to the incorporation of an impact assessment reflective of the eight conservation options detailed in the Ontario Heritage Bridge Guidelines.

Have a great weekend

Thanks,

Christine Vazz, MCIP, RPP
Senior Environmental Planner, Environmental Planning
Pronouns: She / Her

T+ 1-905-823-8500
D+ 1-289-835-2528

From: Harvey, Joseph (MHSTCI) <Joseph.Harvey@ontario.ca>
Sent: Tuesday, September 14, 2021 5:25 PM
To: Vazz, Christine <Christine.Vazz@wsp.com>
Cc: Barboza, Karla (MHSTCI) <Karla.Barboza@ontario.ca>; Joe de Koning <joedk@wellington.ca>; Yeung, Jamie <Jamie.Yeung@wsp.com>; Benjamin, Lindsay <Lindsay.Benjamin@wsp.com>
Subject: RE: File 0013388: Bosworth Bridge EA HIA

HI Christine,

Thank you for providing us with an updated draft of the HIA.

We continue to recommend section 5.3.1 (Description of Proposed Undertaking and Potential Impacts) of the HIA be revisited as per our advice. We provided two examples of how the assessment of impacts to preferred alternatives should be discussed/documented recently for another study - Wellington Road 109 Bridges MCEA (See attached). The examples provided reflect the eight conservation options provided in Section 4.3 of the Ontario Heritage Bridge Guidelines (OHBG) - alternatives from a minimum to a maximum intervention - from most to least preferred. The demolition or removal of a bridge should be considered a last resort after all other alternatives have been considered.

Please do not hesitate to contact me if you have any additional questions or concerns.

Joseph Harvey | Heritage Planner (A)
Heritage, Tourism and Culture Division | Programs and Services Branch | Heritage Planning Unit

Ministry of Heritage, Sport, Tourism and Culture Industries
613.242.3743
Joseph.Harvey@ontario.ca

From: Vazz, Christine <Christine.Vazz@wsp.com>
Sent: August 25, 2021 4:35 PM
To: Harvey, Joseph (MHSTCI) <Joseph.Harvey@ontario.ca>
Cc: Barboza, Karla (MHSTCI) <Karla.Barboza@ontario.ca>; Joe de Koning <joedk@wellington.ca>; Yeung, Jamie <Jamie.Yeung@wsp.com>; Benjamin, Lindsay <Lindsay.Benjamin@wsp.com>
Subject: RE: File 0013388: Bosworth Bridge EA HIA

Hi Joseph,

The HIA has been revised to reflect MHSTCI's comments and is attached for reference.

Thanks,

Christine Vazz, MCIP, RPP
Senior Environmental Planner, Environmental Planning
Pronouns: She / Her

T+ 1-905-823-8500
D+ 1-289-835-2528

From: Harvey, Joseph (MHSTCI) <Joseph.Harvey@ontario.ca>
Sent: Monday, August 16, 2021 12:29 PM
To: Furfurica, Silvia <Silvia.Furfurica@wsp.com>
Cc: Barboza, Karla (MHSTCI) <Karla.Barboza@ontario.ca>; William.VanRuyven@wsp.com; Joe de Koning <joedk@wellington.ca>; Yeung, Jamie <Jamie.Yeung@wsp.com>; Vazz, Christine <Christine.Vazz@wsp.com>; Benjamin, Lindsay <Lindsay.Benjamin@wsp.com>
Subject: File 0013388: Bosworth Bridge EA HIA

Silvia Furfurica,

Please find attached MHSTCI's comments on the above referenced HIA. Do not hesitate to contact me with any questions or concerns.

Regards,

Joseph Harvey | Heritage Planner (A)
Heritage, Tourism and Culture Division | Programs and Services Branch | Heritage Planning Unit
Ministry of Heritage, Sport, Tourism and Culture Industries
400 University Avenue

613.242.3743
Joseph.Harvey@ontario.ca

-LAEmHhHzdJzBITWfa4Hgs7pbKI

From: Katelyn Lynch <klynch@grandriver.ca>
Sent: February 23, 2021 11:25 AM
To: Baral, Madhav
Cc: Van Ruyven, William; Laura Warner
Subject: RE: Wellington County Road 7 - Bosworth Bridge-Flow confirmation for HEC-RAS Model

Hi Madhav,

The flows in this HEC-RAS model were based on the Grand River Hydrology Study, a calibrated and validated model approved by the GRCA. I would just like to confirm that your proposal is to change the flows that are in **GRHS 98 FlowsJP.f03** to new values based on your flood frequency analysis, and change the Regional flows based on your SWMHYMO model at all upstream river stations or at River Station 17.225 (Wellington Rd 7)?

The Grand River Hydrology Study reduced the flows at Drayton by 15%-29%. If different flows than what are currently approved in this model for the Regional flows are being proposed then a full hydrologic study of the upstream catchment will be required, including calibration and validation, along with a report to be reviewed and approved by GRCA for use.

Feel free to call me to discuss if that is easier to clarify anything – my cell # is (519) 242-6692.

Our in-house flood-frequency analysis was last updated in 2018 for Gauge 02GA039 (Conestogo River above Drayton) (based on data to 2018). As you are aware, this gauge is located at the bridge on Wellington Rd 7.

Station Alias WSC	Station	Period of Flow Record Analyzed	Drainage Area (km^2)	Distribution Type	1.25	1.5	2	
02GA039	Conestogo River at Above Drayton	1951 to 2018	272	LN	86	106	133	

Based on this FFA, the June 2017 flow is estimated to be a 1:95 year return period.

If you wish to use the flows based on your analysis for the 1.25-Yr through the 100-Yr as shown in your attachment "Bosworth Bridge Replacement, Wellington County Flow of Conestogo River at Welling Road 7 (Bosworth Bridge)", that will be acceptable.

At this time we can not recommend approval of changes to the Regional flow at the river stations through the model without a supporting hydrologic study, calibration/validation and GRCA review and approval of the report.

Please let me know if you would like to discuss further.

Regards,

Katelyn Lynch, P.Eng.
Water Resources Engineer
Grand River Conservation Authority

From: Baral, Madhav <Madhav.Baral@wsp.com>
Sent: February 22, 2021 7:58 PM

From:
Sent:
To:
Cc:
Subject:

Hi Madhav,

The flows in this HEC-RAS model were based on the Grand River Hydrology Study, a calibrated and validated model approved by the GRCA. I would just like to confirm that your proposal is to change the flows that are in **GRHS 98 FlowsJP.f03** to new values based on your flood frequency analysis, and change the Regional flows based on your SWMHYMO model at all upstream river stations or at River Station 17.225 (Wellington Rd 7)?

The Grand River Hydrology Study reduced the flows at Drayton by 15%-29%. If different flows than what are currently approved in this model for the Regional flows are being proposed then a full hydrologic study of the upstream catchment will be required, including calibration and validation, along with a report to be reviewed and approved by GRCA for use.

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Station Alias WSC	Station	Period of Flow Record Analyzed	Drainage Area (km^2)	Distribution Type
02GA039	Conestogo River at Above Drayton	1951 to 2018	272	LN

Based on this FFA, the June 2017 flow is estimated to be a 1:95 year return period.

If you wish to use the flows based on your analysis for the 1.25-Yr through the 100-Yr as shown in your attachment "Bosworth Bridge Replacement, Wellington County Flow of Conestogo River at Welling Road 7 (Bosworth Bridge)", that will be acceptable.

At this time we can not recommend approval of changes to the Regional flow at the river stations through the model without a supporting hydrologic study, calibration/validation and GRCA review and approval of the report.

Please let me know if you would like to discuss further.

Regards,

Flood Frequency Unit Area Flows ($m^3/s/km^2$)											Max Recorded			Links	Max Measured		
1.25	1.5	2	5	10	20	25	50	100	200	500	m^3/s	Year	RP		m^3/s	Year	%+
0.32	0.39	0.49	0.75	0.94	1.14	1.20	1.40	1.61	1.83	2.14	433	2017	95		237	1976	55%

To: Katelyn Lynch <klynch@grandriver.ca>
Cc: Van Ruyven, William <William.VanRuyven@wsp.com>; Laura Warner <lwarner@grandriver.ca>
Subject: RE: Wellington County Road 7 - Bosworth Bridge-Flow confirmation for HEC-RAS Model

Hi Katelyn,

This is just the follow up of our Feb 3rd 2021 email regarding flow confirmation for HEC-RAS model at Bosworth bridge location and at upstream sections.

We would like to have your feedback soon to carry out further analysis.

Please let us know if you need any further information.

Thank you.

Regards,

Madhav Baral, M.A.Sc., P.Eng.
Senior Project Manager, M.A.Sc., P.Eng.

T+ **1 289 825 0206**

From: Baral, Madhav
Sent: February 3, 2021 1:26 PM
To: Katelyn Lynch <klynch@grandriver.ca>
Cc: Van Ruyven, William <William.VanRuyven@wsp.com>; Laura Warner <lwarner@grandriver.ca>
Subject: RE: Wellington County Road 7 - Bosworth Bridge-Flow confirmation for HEC-RAS Model

Hi Katelyn,

We would like to confirm the flow to be used in the Conestogo River Hydraulic Model (*upperCon2011.prj)* at Wellington Road 7 Bridge (Bosworth Bridge – B007028) before doing further analysis.

The total Drainage area of Conestogo River at Bosworth bridge location is 276 km^2. We have used following methodology to determine the flow at Bridge location which are:

- Consolidated Flood Frequency (CFA) of Station 02GA039 using Maximum Instantaneous Flow Data
- CFA of Station 02GA039 using Maximum Dailey Flow Data
- SWMHYMO Modelling using SCS-12-hour Distribution
- Index Flood Method from OFAT Tool
- Primary Multiple Regression Using OFAT Tool
- Regional Storm Hazel using SWMHYMO

These flows are compared with the flow used in the existing HEC-RAS Model.

In SWMHYMO Modelling, no aerial reduction is applied for the 2-year to the 100-year storm, but 0.90 reduction factor is applied for the Regional Storm Hazel as per MNRF guideline based on the Equivalent Circular Area of the watershed. The Regional Flow result (741 m^3/s) is comparable with the Regional Flow used in Existing HEC-RAS Model.

Regarding the frequency flow (2-year to 100-year), an instantaneous flow of 433 m^3/s was measured at Station 02GA039 on 2017 June 23 as per Environment Canada Flow data. Other large flow events were 388 m^3/s in 1975 and 317 m^3/s in 2018. Because of these frequent large flow events, flood frequency analysis with Instantaneous maximum flow is more reasonable. The results from Log Person Type III is more appropriate and can be used for the hydraulic analysis.

The highlighted flow data in the attached table will be used at River Station 17.225 in the HEC-RAS Model. Please confirm if GRCA agrees with this flow values to be used in the HEC-RAS model.

We have noticed in the HEC-RAS model that Regional flow used in Stations 20.66, 23.17, 23.768 and 24.025 are larger then the estimated flow at Station 17.225. Please see below the flow data clipped from the model.

Conestoge River
Flow from Existing HEC-RAS Model

	River	Reach	RS	Reg	100-yr	50-yr	20-yr	10-yr	5-yr	2-yr	
10	RIVER-1	Reach-1	24.025	1039.3	379.9	345.6	312.7	248.5	217.5	144.8	Upstream of Line 16
11	RIVER-1	Reach-1	23.768	997.6	390.3	355.2	321.5	255.6	223.7	149.2	
12	RIVER-1	Reach-1	23.17	981.6	389.3	353.2	318.3	251.4	219.2	144.9	
13	RIVER-1	Reach-1	20.66	974.7	388.9	352.3	317	249.6	217.2	142.7	
14	RIVER-1	Reach-1	19.85	726	391.8	355.3	319.8	251.6	218.8	143.4	
15	RIVER-1	Reach-1	18.355	738	360	325	272	230	191	135	
16	RIVER-1	Reach-1	17.225	738	360	325	272	230	191	135	Wellington Road 7
17	RIVER-1	Reach-1	15.685	749	432	389	327	277	229	160	
18	RIVER-1	Reach-1	15.07	804	432	389	327	277	229	160	

Station 24.025 is located upstream of Line 16 which is approximately 6.5 km upstream of Bosworth Bridge. Drainage area at this location is about 243 km^2.
The Regional flow of 974 m^3/s to 1039 m^3/s seems quite high at these locations. We have tried to plot the frequency flow with regular probability plot and Weibull probability plot. It seems line 1039 m^3/s of flow is above 10000-year return frequency.
Sudden increase or decrease in flow could happen if there is a dam. It does not look like there is any dam on the upstream. A dam is located approximately 11 km down stream.

Therefore, please confirm if GRCA would like to continue with flow values used in the existing HEC-RAS model or use the new estimated flow data same as for Station 17.225.

Thank you.

Regards,

Madhav Baral, M.A.Sc., P.Eng.

Senior Project Manager, M.A.Sc., P.Eng.

wsp

T+ **1 289 825 0206**

From: Katelyn Lynch <klynch@grandriver.ca>
Sent: January 27, 2021 11:59 AM
To: Baral, Madhav <Madhav.Baral@wsp.com>
Cc: Van Ruyven, William <William.VanRuyven@wsp.com>; Laura Warner <lwarner@grandriver.ca>
Subject: RE: Wellington County Road 7 - Bosworth Bridge Replacement on Conestogo River

Hi Madhav,

I have reviewed the location for Bosworth Bridge B007028 and can confirm the model previously sent as per my below emails (upperCon2011.prj) is the current model for this location as well.

The approach presented in your email below is agreeable. Please let me know if you require any further information.

Regards,

Katelyn Lynch, P.Eng.

Water Resources Engineer

Grand River Conservation Authority

From: Baral, Madhav <Madhav.Baral@wsp.com>
Sent: January 27, 2021 10:22 AM
To: Katelyn Lynch <klynch@grandriver.ca>
Cc: Van Ruyven, William <William.VanRuyven@wsp.com>; Laura Warner <lwarner@grandriver.ca>
Subject: RE: Wellington County Road 7 - Bosworth Bridge Replacement on Conestogo River

Hi Katelyn,

We have another Bridge Replacement EA Project (Bosworth Bridge B007028) on Wellington County located on Wellington County Road 7 over Conestogo River.

We have received Conestogo River Hydraulic Modelling data from GRCA for Wellington County Road 109 EA Project (per email below).

Bosworth Bridge is located on the middle reach of the Conestogo River.

We will use the same hydraulic model for this bridge too.

We will carry out the hydrologic analysis at the bridge site.

There is a flow gauge station (O2GA039) near the bridge location. Along with the flood frequency analysis, we will also use modelling tools and compare the flow.

Flow in the hydraulic model will be updated at the bridge site, if required, comparing to the flow used in the existing hydraulic model.

Please let us know if you agree with this approach.

Thank you.

Regards,

Madhav Baral, M.A.Sc., P.Eng.

Senior Project Manager, M.A.Sc., P.Eng.