

## **CHAPTER 15 – ENVIRONMENTAL SERVICES**

272. Amend Section 15 INTRODUCTION by adding “*and protection*” after “*recognition*” in the first line; by adding the following sentence after “petroleum resources” in the fifth line:” *“This is consistent with the 2007 – 2010 Council Strategic Plan which identifies Environmental Leadership as a strategic priority.”* in the fifth line; by adding “*known to be*” after “*lands*”; by deleting “*”B” – Flood Plain and Environmental Features*” at the end and replacing it with “*”B1” – Natural Heritage Features, and “B2” – Natural Resources and Natural Hazards. Where warranted on the basis of environmental studies, lands may be added to Schedules “B1” and “B2” through amendments to the Official Plan.*”
273. Amend paragraph 15.1.1. iii) by deleting “where possible” at the end and replacing it with “by protecting wetlands, groundwater recharge areas and headwater streams”.
274. Amend subsection 15.1.1. by adding the following at the end:
- “v) Maintain, restore, and improve the diversity and connectivity of natural features, and the long-term ecological function with biodiversity of natural heritage systems.
  - vi) Encourage, through education and incentive programs, the co-operation of property owners in the maintenance of or enhancement to the naturalization of lands.
  - vii) Develop targets for woodland cover through the preparation of an Urban Forest Strategic Plan.”
275. Amend paragraph 15.1.2. i) by deleting “Reduce” at the beginning and replacing it with “Minimize” and by adding “processes” at the end after “erosion”.
276. Amend paragraph 15.1.2. iv) by deleting “flood plain areas” after “regulate” in the first line and replacing it with “natural hazards”; by deleting “flood plain” after “provincial” in the first line and replacing it with “natural hazard” and by adding “including, but not limited to flood plain areas, slope hazards and erosion hazards” at the end after “act”.
277. Amend paragraph 15.1.2. v) by deleting “Reduce” at the beginning and replacing it with “Minimize”.
278. Amend subsection 15.1.3. by adding the following at the end:
- “ii) Encourage the restoration of contaminated land.
  - iii) Support development and redevelopment proposals that will facilitate the remediation of vacant or underutilized brownfield sites.”
279. Amend subsection 15.1.4. by inserting the following new clause:
- iii) Protect mineral aggregate resources for long-term use.”
- and by renumbering “(iii), iv)”, and “(v)” to “(iv), v)” and “(vi)” respectively.
280. Amend paragraph 15.1.5. iv) by deleting “this” after “policies of” and by adding “15” after “Section” in the third line.
281. Amend subsection 15.2.1. by deleting “Planning” after “Subwatershed” in the sidebar and in the first line; by adding “and Water Resources Management” after “Heritage” in the second line; by deleting “Planning S” after “These” in the third line and replacing it with “s” and by adding the following to the end of the first paragraph:
- “There are areas of the City not covered by the Subwatershed Studies, including much of the pre-annexation City. Environmental studies within these areas may identify lands that should be protected as part of the Natural Heritage System.

Such findings will result in amendments to Schedules “A” and/or “B1”, as necessary, to implement the policies of this Plan.”;

and by deleting “Planning” after Subwatershed” in the first line of the second paragraph; by adding “and restore natural features and” after “protect” in the third line; by adding “opportunities for enhancement and rehabilitation of natural features and ecological functions;” after “functions” in the fourth line; and by deleting “Planning” after “These” in the sixth line.

282. Amend subsection 15.2.2. by deleting “also” after “policies” in the first line; by adding “public ownership/acquisition, stewardship, management and rehabilitation, ecological buffers and” after “through” in the second line; by deleting “and” after “planning studies” in the third line and by replacing it with a comma; by adding “, environmental assessments or conservation master plans.” after “impact studies” in the third line; and by deleting “Such processes may warrant additions or changes to the Natural Heritage System and provide for the implementation of rehabilitation measures.” at the end.

283. Amend subsection 15.2.3. by adding “Many, but not all” before “Natural” in the second line”; by adding “Heritage” after “Natural” in the second line; by adding “,” after Schedule “A” in the fourth line; by deleting “Therefore” after “protection.” in the sixth line and replacing it “Where they are designated Open Space or Environmental Review,”.

284. Amend subsection 15.2. by adding the following new subsection:

**“15.2.4. Other Land Use Designations”** (in the sidebar)

“Components of the Natural Heritage System that are identified on Schedule “B1” but not designated Open Space or Environmental Review on Schedule “A”, will be evaluated to further assess their significance and determine the need for protection under the policies of the Official Plan. Where appropriate, these features and functions may be protected in whole or in part through measures such as, but not limited to, Open Space zoning, tree preservation plans associated with subdivision or site plan applications, public land acquisition, site alteration and tree conservation by-laws, conservation easements and private stewardship initiatives.”

285. Amend subsection 15.3. by deleting “*utilization*” in the fourth line and replacing it with “*rehabilitation*”; and by deleting “*It is the City’s intent to protect these areas for their natural features and ecological functions and to encourage their rehabilitation where warranted.*” at the end.

286. Amend paragraph 15.3.1. i) (f) by deleting “Areas of” at the beginning; by adding “Woodlands”, after “Significant Woodlands,” in the first line; by deleting “Vulnerable” after “Habitat of”; by adding “of Special Concern, Fish Habitat,” after “Species,” in the second line; by adding “s” to “Wetland” in the third line.

287. Amend paragraph by adding the following new clause after 15.3.1. i) (f):

“(g) Areas of significant groundwater recharge, headwaters and aquifers, where necessary to protect their hydrological function.”

288. Amend paragraph 15.3.1. ii) by adding “require or” after “may” in the first line and by adding “, Official Plan and/or Zoning By-law amendment, consent, variance” after “subdivision approval” the third line.

289. Amend subsection 15.3.1 by adding the following new clause at the end:

iii) Natural heritage areas may be identified on Schedule “B1” and designated as Open Space on Schedule “A” by an amendment to the Official Plan, where warranted on the basis of an environmental study accepted by the City and on consideration of the policies in Section 15.4.”

290. Amend paragraph 15.3.2. i) by deleting it in its entirety and replacing it with the following:

**“15.3.2. Permitted Uses”** in the sidebar)

- i) Notwithstanding policy 8A.2.2. development and site alteration shall not be permitted in Provincially Significant Wetlands or in the significant habitat of Endangered and Threatened Species, except for:
  - (a) activities that create or maintain infrastructure in accordance with Section 15.3.3.; or
  - (b) works subject to the *Drainage Act*.
- ii) Notwithstanding policy 8A.2.2., development and site alteration shall not be permitted in other natural heritage areas designated as Open Space, except:
  - (a) Existing development and uses, and expansions to existing uses provided that it can be demonstrated to the satisfaction of Council that there will be no negative impacts on the natural features or their ecological functions;
  - (b) Recreational uses associated with the passive enjoyment of natural features including pathways and trails provided that such uses are designed, constructed and managed to minimize their impact on the natural heritage area;
  - (c) Creation or maintenance of infrastructure subject to policy 15.3.3.;
  - (d) The harvesting of trees in accordance with good forestry management practices; and
  - (e) Conservation, mitigation and rehabilitation works.”

291. Amend paragraph 15.3.2. (d) by deleting “responsible” and replacing it with “good” after “with” in the first line.

292. Amend paragraph 15.3.2. (e) by adding “, mitigation and rehabilitation” between “Conservation” and “works”.

293. Amend paragraph 15.3.3. i) by deleting it in its entirety and replacing it with the following:

- “i) New or expanded infrastructure shall only be permitted within the Natural Heritage System where it is clearly demonstrated through an environmental assessment process under the *Environment Assessment Act* that it is the preferred location for the infrastructure, and that the alternatives are all evaluated having regard for the relevant policies of the Official Plan.

Where the preferred alternative is located within or adjacent to the Natural Heritage System, an environmental impact study, approved by the City, shall be completed to further assess potential impacts, identify mitigation requirements, and determine appropriate compensation where impacts cannot be mitigated.

The City and other relevant public authorities shall include methods for minimizing impacts when reviewing proposals to construct transportation, communication, sewerage or other infrastructure in the Natural Heritage System.”

294. Amend paragraph 15.3.3. iii) by deleting “natural heritage areas” after “projects in” in the first line and replacing it with “or adjacent to the Natural Heritage System”; by deleting “may” after “City” in the second line and replacing it with “will”; by adding “that are identified in the approved environmental impact study and/or environmental assessment, to address potential impacts on the” after

“compensation” in the third line; and by deleting “for the damage to” after “compensation” in the third line.

295. Amend subsection 15.3.4. by adding the following new clause at the end:
- “iv) Council may accept gifts of ecologically sensitive lands in accordance with the provisions of the Ecological Gifts Program administered by Environment Canada, or any other similar program administered by the Provincial or Federal governments.”
296. Amend paragraph 15.3.5. i) by deleting “conversation” in the 3<sup>d</sup> line and replacing it with “conservation”; by deleting “and” at the end of “(d)” by inserting the following new clause after “(d)”:
- “(e) Modification of property tax assessment and/or facilitation of the Provincial Conservation Land Tax Incentive Program or the Managed Forest Tax Incentive Program; and”;
297. Amend paragraph 15.3.5. i) by renumbering “(e)” to “(f)”.
298. Amend paragraph 15.3.5. ii) by deleting “designated as Open Space” after “areas” in the first line; by adding “,” and deleting “and” after “protection” in the third line and by adding “and enhancement” after “rehabilitation” in the fourth line.
299. Amend paragraph 15.3.6. i) by deleting “Buffers may” after “System.” in the second line and replacing it with “Ecological buffers will”; by deleting “the shorelines of lakes, rivers and streams and other” after “adjacent to,” in the third line; and by adding “,based upon the recommendations of an approved Environmental Impact Study” at the end after “System”.
300. Amend paragraph 15.3.6. ii) by adding “application of the Council approved Guidelines for Determining Setbacks and Ecological buffers as part of” after “through” in the third line.
301. Amend subsection 15.3.6. by deleting clause “(iv)” in its entirety.
302. Amend subsection 15.3.7. by adding “and enhancement” after “rehabilitation” in the first line; by adding “, the environmental assessment process,” after “impact studies” in the fourth line; by adding “and enhancement” after “Rehabilitation” in the fifth line; and by deleting “the management of” after “implemented through” in the sixth line and replacing it with “conservation master plans or woodland management plans on”.
303. Amend paragraph 15.3.7. i) by adding “and enhancing” after “rehabilitating” in the first line.
304. Amend paragraph 15.3.7. ii) (b) by adding “natural features and ecological” after “protect the” in the first line; by deleting “existing” after “functions of all” in the first line and replacing it with “Provincially and Locally Significant”.
305. Amend paragraph 15.3.7. ii) (c) by adding “Significant” at the beginning and by adding “and Woodlands” after “Woodlands” in the first line.
306. Amend paragraph 15.3.7. ii) (d) by adding “maintain water resource functions,” after “functions,” in the second line; by deleting “to” before “rehabilitate” in the second line and by deleting “degraded shorelines” in the last line and replacing it with “eroded banks and channels”.
307. Amend paragraph 15.3.7. ii) (g) by adding “, Riparian” after “Fish” at the beginning; by adding “and riparian” after “create fish” in the first line and by deleting “fish” after “capacity of” at the end of the second line.
308. Amend paragraph 15.3.7. ii) (h) by deleting “to naturalize areas within fill regulated areas of streams, rivers and ravine corridors” after “Areas –” and replacing it with “to restore or replace connections between and within vegetation patches, riparian corridors and wildlife habitat”.

309. Amend paragraph 15.3.7. ii) by adding the following new clause at the end:
- “(i) Groundwater Recharge Areas, Headwaters and Aquifers – to protect hydrological functions and source water.”
310. Amend paragraph 15.3.8. i) by adding “s” to Plan” after “Master” in the third line.
311. Amend paragraph 15.3.8. ii) (c) by adding “pathways and” after “formalized” in the fourth line.
312. Amend subsection 15.4. by adding “1” or features that may be considered for inclusion on Schedule “B1”.” after “Schedule “B” in the second line; by “deleting “and” after “B”; by adding “These policies are” before “supplemental” in the third line; and by adding “water quantity,” after “quality,” in the fifth line.
313. Amend subsection 15.4.1. by adding the following new sentence at the end: “Environmentally Significant Areas (ESA’s) are identified through the application of the Council approved Environmentally Significant Areas Identification and Boundary Delineation Guideline Document and through the application of Provincial guidelines.”
314. Amend subsection 15.4.1.1. by adding “(ESA’s)” after “Areas” in the first line; by adding “1”” after “Schedule “B” in the fourth line; by deleting “Flood Plain and Environmental” after “B” in the fourth line and replacing it with “Natural Heritage”; and by adding the following new sentence after “Features.” in the fourth line: “New Environmentally Significant Areas may identified by City Council and added to Schedule “B1” by amendment to this Plan and in accordance with the provisions of Section 15.4.1.3.. Areas which have the potential to meet the criteria for an ESA but have not been thoroughly studied are identified as “Potential ESA’s” on Schedule “B1””.
315. Amend paragraph 15.4.1.1. i) by adding “/Byron Botanical Bog” after “Sifton Bog” in the sidebar; by deleting “by the Province of Ontario and the Upper Thames River Conservation Authority” after “recognized” in the first line; by adding “and a regional life science ANSI” after “Wetland” in the third line; and by adding “It represents a relic landscape and disjunct boreal ecosite.” at the end.
316. Amend paragraph 15.4.1.1. ii) by adding “and a Regional Life Science ANSI” at the end. After “complex”
317. Amend paragraph 15.4.1.1. iv) by adding “,” and deleting “and” after “Masonville” in the first line; by adding “and Sunningdale” after “Medway” in the second line; by deleting “largely within the flood plain” after “areas, is” in the second line and replacing it with “an abrupt spillway valley through which the Medway Creek flows”
318. Amend paragraph 15.4.1.1. v) by deleting “by the Province of Ontario” after “classified” in the first line; by deleting “An Area of Natural and Scientific Interest (ANSI) (Byron Woods) after “as” in the second line and replacing it with “A Provincial Life Science ANSI,”.
319. Amend paragraph 15.4.1.1. vi) by deleting “northwest” after “located in” in the first line and replacing it with “northeast”; by adding “that straddles Stoney Creek” after “Wetlands)” in the second line and by deleting “and a locally significant wetland (Ballymote Wetland) after “Wetlands)” in the second line.
320. Amend paragraph 15.4.1.1. vii) by adding “/Komoka Park Reserve” after “Kilworth” in the sidebar’ and by deleting the second sentence and replacing it with: “This Provincial Park contains diverse natural communities, rare species, distinctive relic shoreline landforms, and is recognized as a Provincial Earth Science ANSI and a Provincial Life Science ANSI.”
321. Amend paragraph 15.4.1.1. viii) by adding “and Forest” to the sidebar; by adding “and Kilally Forest” after “Meadows” in the first line; by adding “North Branch of the” after “straddles the” in the first line; by deleting “just north of Kilally Road” after “River” in the first line; by adding : “, between Adelaide Street and Clarke Road and includes Meander Creek” after “Thames River” in the second line; and by adding “meadows, woodland and” after “contains” in the third line.

322. Amend paragraph 15.4.1.1. ix) by adding “to the City Limits. It forms a continuous linkage with the Dingman Creek Fen Provincially Significant Wetland Complex and a Kilworth Shoreline Provincial Earth Science ANSI,” after “Lambeth” in the second line; and by deleting “Provincially Significant Wetland complex,” after “contains a” in the second line.
323. Amend paragraph 15.4.1.1. xi) by inserting “complex” after “Wetland” in the second line; by deleting “and a locally significant wetland (Elliot-Laidlaw Wetland) and replacing it with “which includes the Elliot-Laidlaw Wetland located within the Dingman Creek Subwatershed area” after “Wetland)” in the fourth line.
324. Amend paragraph 15.4.1.1. xii) by adding “Allen” at the beginning of the sidebar and deleting “;s” from the end of White’s” in the sidebar; by adding “Allen” and deleting “s” from “White’s” at the beginning of the paragraph.
325. Amend paragraph 15.4.1.1. xiii) by deleting “Wetland” from the sidebar and replacing it with “ESA”; by deleting “Wetland” after “Glanworth” in the first line and replacing it with “ESA”; by deleting “is a” after “Glanworth” at the end of first line” and by adding “complex and mature upland woodland” at the end.
326. Amend paragraph 15.4.1.1. xv) by adding “It is a Regional Life Science ANSI.” at the end of the paragraph.
327. Amend subsection 15.4.1.1. by adding the following clauses at the end:
- “Dingman Creek Fen Wetland Complex” (in the sidebar)
- “xvii) The Dingman Creek Fen Wetland Complex is located in the western end of the City, between the Lower Dingman Creek ESA and Kilworth ESA. It is a Provincially Significant Wetland representing a rare community type. The wetland is associated with the Kilworth Shoreline Provincial Earth Science ANSI.”
- “Ballymote ESA” (in the sidebar)
- “xviii) The Ballymote ESA is located in northeast London along a tributary of Stoney Creek. It is considered part of the Arva Moraine Provincially Significant Wetland Complex that extends to the north of the City boundary and contains forest interior and area sensitive bird species.”
- “Delaware East Woodland ESA” (in the sidebar)
- “xvii) This large, mature wooded area is located on steep slopes and floodplain lands of the Dingman Creek Corridor at the eastern edge of the City and extends into Delaware Township. It is part of the Lower Dingman Corridor ESA.”
- “Arva Moraine ESA” (in the sidebar)
- “xvii) This complex of uplands and provincial significant wetland vegetation patches is located on the Arva Moraine landform unit located along the northern limit of the City, generally bounded by Fanshawe Park Road, Richmond Street and Highbury Avenue.”
328. Amend subsection 15.4.1.2. by inserting “, or the application of boundary delineation guidelines.” after “studies” in the fourth line and by deleting “Such lands are designated as “Environmental Review” on Schedule “A” and are shown as “Potential Environmentally Significant Areas” on Schedule “B””. from the end.
329. Amend subsection 15.4.1.5. by deleting the “;” at the end of “iii) Silver Swamp” and replacing it with a “.”; and by deleting “iv) Arva” from the end.
330. Amend subsection 15.4.2. by deleting the first two paragraphs in their entirety and replacing them with the following:

“Wetlands provide important habitat for plants, fish and other wildlife that are fully dependent on the presence of a wetland, and for wildlife that need wetlands to complete some life cycle requirements. Wetlands provide important staging and breeding areas for waterfowl. They also influence the quality, temperature and flow of water and provide storage capacity to offset peak flows associated with storm events. They are important source water protection areas and have groundwater recharge and discharge functions. Some types of wetlands have deep organic soils. Wetlands are also important for their social values including such activities as hunting, recreation, education and research, and cultural heritage.

The determination of significant wetlands in accordance with the Provincial Policy Statement (PPS) is made by the Ministry of Natural Resources using evaluation procedures established by the Province, as amended from time to time. Evaluated wetlands are classified on the basis of scores received through the evaluation and are identified on Schedule “B1”:

- i) Provincially Significant Wetlands are identified by the Ministry of Natural Resources and include wetlands that achieve a score in the Wetland Evaluation Manual for Southern Ontario of 600 points, or over 200 points in either Biological or Special Features components;
- ii) Locally Significant Wetlands are identified in London as wetlands that achieve a score in the Wetland Evaluation Manual for Southern Ontario of 400 points, or over 100 points in either Biological or Special Features components.”

Development and site alteration shall not be permitted in Provincially Significant Wetlands, except for:

- i) activities that create or maintain infrastructure, in accordance with Section 15.3.3.; or
- ii) works subject to the *Drainage Act*.”

- 331. Amend subsection 15.4.2. in the last paragraph by adding “Known wetlands that have not yet been evaluated are also identified on Schedule “B1” as “Unevaluated Wetlands.” at the beginning; by deleting “unclassified” after “any” in the first line and replacing it with “identified or unevaluated”; by deleting “, or” after “area study” in the second line; by adding “or Environmental Impact Study,” after “environmental study” in the second line; by deleting “Provincial” after “accordance with the” in the third line and by adding “for Southern Ontario” after “System” at the end.
- 332. Amend subsection 15.4.3. by adding “(ANSI’s)” after “Interest” in the first line; and by adding “glacial” between “and” and “landforms” in the last line of the first paragraph.
- 333. Amend subsection 15.4.3. by deleting the second paragraph and replacing it with “There are two Provincial Life Science Areas of Natural and Scientific Interest in London: Warbler Woods or the Byron Woods; and the Komoka Park Reserve. The Komoka Park Reserve ANSI exhibits part of a Lake Maumee II bluff, which is a Provincial Earth Science ANSI. The Kilworth Shoreline Provincial Earth Science ANSI also represents a Lake Maumee shoreline and bluff. There are several Regional Life Science ANSI’s located within ESA’s. These include Byron Bog, Westminster Ponds, and Kains Road River Valley. These areas are included within recognized Environmentally Significant Areas as shown on Schedule “B1”.”
- 334. Amend subsection 15.4.3. by deleting “provincial” in the second line of the third paragraph and replacing it with “Provincial”.
- 335. Amend subsection 15.4.4. by deleting “Habitat of Endangered, Threatened and Vulnerable” from the sidebar and adding “at Risk” after “Species”; by adding “Ontario” after “The” in the first line; by deleting “identifies” after “Resources” in the first line and replacing it with “designates”; by adding “at risk” after “species” in the first line; by deleting “endangered, threatened and vulnerable” after

“categories of” in the first line and replacing it with “Endangered-Regulated, Endangered-Not Regulated, Threatened, and Special Concern (formerly vulnerable)” In the first paragraph.

336. Amend paragraph 15.4.4. iii) by adding “or Department of Fisheries and Oceans (DFO) approvals,” after “guidelines” in the second line.

337. Amend subsection 15.4.4. by adding the following paragraph at the end:

“Development and site alteration shall not be permitted in the significant habitat of Endangered Species and Threatened Species, except for:

- i) activities that create or maintain infrastructure in accordance with Section 15.3.3.; or
- ii) works subject to the *Drainage Act*.”

338. Amend subsection 15.4.5. by adding “Significant Woodlands and” before “Woodlands” in the sidebar; by adding “,” after “woodlots” in the fourth line; by deleting “and” after “woodlots” in the fourth line; by deleting “and” after “wood lots” in the fourth line; by adding “and naturalizing woodland edges” after “forested areas” in the fourth line; by deleting “Planning” after “Subwatershed” in the fifth line; by adding “1” after “ Schedule B” in the seventh line and adding “New woodland vegetation patches may be added to Schedule “B1”, through an amendment to this Plan, on the basis of more detailed environmental studies.” at the end of the first paragraph.

339. Amend subsection 15.4.5. further by adding “Potentially significant woodlands and other vegetation forms that have not been evaluated are designated as Environmental Review on Schedule “A” and delineated as “Unevaluated Vegetation Patches” on Schedule “B1”.” to the beginning of the second paragraph.

340. Amend paragraph 15.4.5. ii) by deleting it in its entirety and replacing it with “ ii) The Woodland provides important ecological functions and has an age, size, site quality, diversity of biological communities and associated species that is uncommon for the planning area.”

341. Amend paragraph 15.4.5. iv) by deleting “endangered or threatened” at the end and replacing it with “species at risk”.

342. Amend subsection 15.4.5. by adding the following two paragraphs at the end:

“Woodlands that are determined to be ecologically significant on the basis of these Official Plan criteria and the application of the Council approved Guideline Document for the Evaluation of Ecologically Significant Woodlands will be designated as Open Space on Schedule “A” and delineated as “Significant Woodlands” on Schedule “B1”.

Woodlands that are not determined to be ecologically significant but are to be retained for public open space or park purposes according to criterion iii) above, or woodlands to be retained at the landowners request as a private woodland, will be designated as Open Space on Schedule “A” and delineated as “Woodlands” on Schedule “B1”. If a woodland is evaluated and confirmed as not being ecologically significant, and the landowner or the City have no interest in their retention, the lands may be redesignated from Environmental Review to another designation in keeping with the policies of this Plan, and the “Woodlands” or “Unevaluated Vegetation Patch” delineation on Schedule “B1” may be removed.”

343. Amend subsection 15.4.6. by adding “natural features and ecological” after “important” in the first line; by deleting “erosion and other hazards” after “flooding” in the seventh line and replacing it with “and other natural hazard processes” and by inserting the following two paragraphs after the first paragraph:

“River, Stream and Ravine Corridors identified on Schedule “B1” include “Significant River Stream and Ravine Corridors” that have been identified in the

Subwatershed Studies according to the criteria in i) below; and other “Unevaluated Stream or Ravine Corridors” that require further evaluation. Significant River, Stream and Ravine Corridors are designated Open Space on Schedule “A”. Unevaluated Stream or Ravine Corridors are designated Environmental Review, pending further evaluation.

Within the City of London the entire length of the Thames River corridor is recognized as a “Significant River, Stream and Ravine Corridor” on Schedule “B1”. Also, the main branches of Stoney Creek, Medway Creek, Dingman Creek, Pottersburg Creek, Wabuno Creek, Mud Creek, Stanton Drain, Kelly Drain and several tributary streams are Significant River, Stream and Ravine Corridors. Determination of the width of Significant River, Stream and Ravine Corridors will be in accordance with ii) below:”

- 344. Amend paragraph 15.4.6. i) by adding “Significant” at the beginning of the sidebar; by deleting “significance of” after “The” in the first line and replacing it with “identification of”; by deleting “surface” after “and” and by adding “resources” after “water” both in the third line.
- 345. Amend paragraph 15.4.6. i) (a) by deleting “hydrological” after “important” in the first line and replacing it with “water resources”; by adding “or discharge,” after “recharge” in the second line; and by adding “, or is located in a headwater area” after “sediments” at the end.
- 346. Amend paragraph 15.4.6. i) (c) by adding “for wildlife movement” after “provide” in the second line and by adding “that typically extend” after “connections” in the second line.
- 347. Amend subsection 15.4.6. by inserting the following new clause:

“Width of Significant River, Stream and Ravine Corridors” (in the sidebar)

- “ii) Significant River, Stream and Ravine Corridors are designated Open Space on Schedule “A”, and delineated on Schedule “B1” with the corridor width to be determined on the basis of the following criteria:
  - (a) The corridor width shall be sufficient to accommodate the natural features and ecological functions that contribute to its significance including water resource functions such as flood plain and erosion hazards, riparian buffers for natural features, ecological functions and water quality and quantity, and provision for future pathways or access trails. This will be determined through the preparation of an Area Plan, Environmental Impact Study and/or Subject Lands Status Report; and
  - (b) The minimum width of Significant River, Stream and Ravine Corridors will be generally comprised of 30 metres on each side of the watercourse measured from the high water mark. The ultimate width of a corridor will be established on a case-by-case basis through application of the Guidelines for Determining Setback and Ecological Buffers, as part of an Environmental Impact Study and/or Subject Lands Status Report approved by the City.”

- 348. Amend subsection 15.4.6. by deleting clause ii) in it’s entirety and replacing it with the following:

- “iii) Council may consider alterations to stream corridors to enhance, rehabilitate and restore the system through such measures as:
  - (a) bank stabilization;
  - (b) the creation of riffles and pools;
  - (c) restoration of meandering and natural stream fluvial morphology;

- (d) plantings; and
  - (e) removal of barriers.”
349. Amend paragraph 15.4.6. “iii)” by renumbering it “iv)”; by deleting after “Corridors” in the first line and by replacing it with “are”; and by adding “1” after “Schedule “B” at the end.
350. Amend subsection 15.4.6. by adding the following new clause:
- “v)” Potential locations for future upland corridors are identified on Map Schedule “B1”. Upland Corridors will be encouraged to be established through a variety of measures such as stewardship agreements or conservation easements with private landowners, planting programs, and acquisition by the City through purchase, dedication, donation and/or bequest. Upland Corridors that have been established may be designated Open Space and zoned in a manner that will ensure their long-term protection.”
351. Amend subsection 15.4.7. by deleting the first and second paragraphs and by replacing them with the following: “Habitat functions as a home for wildlife. In addition to common requirements like nutrient sources and physical space, many types of wildlife have specific, individual habitat requirements that can change during different periods in their life cycles. Some specific wildlife habitats are particularly important, and should be considered significant. These are habitats that support important wildlife species, or that are particularly susceptible to impacts, or are habitats that are under-represented in the City of London.”
352. Amend paragraph 15.4.7. i) by adding “that have had regard for and having regard for the Significant Wildlife Habitat Technical Guide prepared by the Ministry of Natural Resources, which provides information on the identification, description and prioritization of significant wildlife habitats.” at the end after “considerations.
353. Amend paragraph 15.4.7. i) (a) by deleting the “:” after “cycle” and replacing it with a “.” and by adding “These areas include but are not limited to: seasonal concentration areas; rare vegetation communities or specialized habitat for wildlife; habitats for species of conservation concern; and animal movement corridors.” at the end.
354. Amend paragraph 15.4.7. i) (b) by deleting “; and” and replacing it with a “.” after “System” in the third line and by adding “In the City of London, examples of under-represented habitat types include marshes, tall grass prairie and savannah, bog, fen, bluff, shallow aquatic and open aquatic.” at the end.
355. Amend subsection 15.4.7. by adding the following new clause at the end:
- “ii) Areas of Significant Wildlife Habitat will be identified on Schedule “B1” and designated Open Space on Schedule “A””.
356. Amend subsection 15.4.8. by deleting “communities” after “aquatic” in the first line and replacing it with “organisms which together make up the aquatic ecosystem”; by adding “untreated urban runoff,” after “vegetation” in the sixth line; by deleting “and” after “vegetation,” in the sixth line; by deleting “stormwater flows and” after “increased” in the sixth line; by adding “and changes in the timing and amount of stormwater entering the watercourse” after “sedimentation” in the seventh line; by adding “generally” after “habitat is” in the eighth line; and by adding “Development and site alteration shall not be permitted in areas of fish habitat except in accordance with relevant provincial and federal requirements.” at the end.
357. Amend subsection 15.4.9. by adding “, and Headwater Streams,” and by deleting “and Aquifers” after “Areas,” in the third line; by adding “and Headwater Streams” after “Areas” in the third line; by adding “1” after “B” in the fourth line; by deleting “the Flood Plain and Environmental” after “Schedule “B”” in the fourth line and replacing it with “Natural Heritage”; and by adding “New Groundwater Recharge Areas, Headwater Streams and Aquifers that are identified through subsequent

environmental studies may be added to Schedule “B1” through an amendment to the Official Plan.” after “Features Map.” in the fifth line.

358. Amend subsection 15.4.10. by adding “, improve and/or restore” after “protect” in the first line of the second paragraph and by adding “The City will also promote efficient and sustainable use of water resources including practices for water conservation and sustaining water quality.” at the end of the second paragraph.
359. Amend subsection 15.4.10. by adding the following at the beginning of the third paragraph: “Development and site alteration will be restricted and mitigative measures or alternative development approaches may be required in or near sensitive surface water features and sensitive ground water features in order to protect, improve and/or restore these features and their related hydrologic functions. The City will participate in the preparation of a source protection plan under the provisions of the *Clean Water Act* and the Official Plan will be amended, as required, to conform with relevant policies set out in the approved source protection plan.”
360. Amend subsection 15.4.11. by deleting “shown” after “are” in the fourth line and replacing it with “identified as Potential Naturalization Areas” and by adding “1” after “B” at the end.
361. Amend subsection 15.4. by adding the following at the end:

**“15.4.12. Carolinian Canada Big Picture Concept”** (in the sidebar)

“In addressing opportunities for Potential Naturalization Areas that will form part of the Natural Heritage System, consideration will be given to the context of London within the surrounding ecological region that extends beyond the City limits. A concept plan prepared by Carolinian Canada, identifies large core natural areas, other significant natural areas, and corridors and linkages connecting the system together. This concept, referred to as the “Big Picture” vision, is designed to complement other analyses of natural heritage conducted by municipalities, conservation authorities, provincial and federal agencies.

The “Big Picture Meta-Cores and Meta-Corridors” have been refined to reflect local conditions and are identified on Schedule “B1” for reference purposes. The core areas and corridors are represented conceptually, and not to be interpreted as rigid boundary delineations.

The “Big Picture” concept is not a component of London’s Natural Heritage System. While policies for land use and development activity within the area will continue to be guided by the designations on Schedule “A”, naturalization projects and landowner stewardship initiatives that support the “Big Picture” system of core natural areas and corridor connections will be encouraged by the City of London.”

**“15.4.13. Unevaluated Vegetation Patches”** (in the sidebar)

“Unevaluated Vegetation Patches, as delineated on Schedule “B1”, were identified through the Subwatershed Studies or other environmental studies. These features may include treed areas, swamps, wetlands, savannahs, old field plantations, or other similar natural features. Most large Unevaluated Vegetation Patches are designated Environmental Review on Schedule “A”. Smaller patches may have previously been designated for development or agricultural activity.

The “Environmental review” designation and “Unevaluated Vegetation Patches” delineation are considered to be interim in nature, until such time as the significance of these patches can be confirmed through the completion of an environmental study of the Environmental Review Lands outside the Urban Growth Boundary as directed by policy 8B.3.1.ii), or an Area Plan, Environmental Impact Study and/or Subject Lands Status Report accepted by the City, and Map Schedules “A” and “B1” have been amended to reflect the final designation and delineation.”

**“15.4.14. Other Woodland Patches larger than 0.5 Hectares”** (in the sidebar)

“In addition to areas that are designated Environmental Review or Open Space, woodland patches in other designations that are larger than 0.5 hectares in size shall be evaluated in order to determine the significance of vegetation and identify the need for protection prior to development approvals. Where it is considered appropriate, the protection of trees or other vegetation will be required through measures such as, but not limited to, Tree Preservation Plans for subdivision or site plan applications, acquisition of land through parkland dedication and/or purchase by the City, conservation easements, landowner stewardship initiatives and zoning provisions. Pending an evaluation and decision on long term protection, woodland patches that are larger than 0.5 hectares in size will be identified as “Unevaluated Vegetation Patches” on Schedule “B1” and may be regulated under the City of London tree Conservation By-law.”

**“15.4.15. Other Drainage Features”** (in the sidebar)

“In addition to the “Significant River, Stream and Ravine Corridors” and “Unevaluated Stream and Ravine Corridors” that comprise part of the Natural Heritage System, the base map features on Schedules “A”, “B1” and “B2” also identify “Watercourses/Ponds” to delineate the location of municipal or agricultural drains, intermittent or headwater streams and man-made or natural ponds. These features are identified for information purposes and may be added or removed from the base map without an Official Plan Amendment, to reflect changes over time in drainage patterns and features on the ground. The ecological contribution of these drainage features as headwaters, recharge areas and riparian corridors, will be addressed as part of the Area Plan, Environmental Assessment and/or EIS process.”

362. Amend subsection 15.5. by deleting “*whether a more detailed Environmental Impact Study is required*” after “*determine*” in the last line of the second paragraph and replacing it with “*the significance of any natural heritage feature*”.
363. Amend paragraph 15.5.1. i) by deleting “will” after “development” in the second line and replacing it with “may”; by deleting “may” after “They” in the fourth line and replacing it with “will confirm or”; by deleting “may” after “and” in the fifth line and replacing it with “will” and by adding “Council has approved “Guidelines for the Preparation and Review of Environmental Impact Studies” to implement the Official Plan policies.” at the end.
364. Amend paragraph 15.5.1. ii) by adding “Environmental Impact Studies are required where development or site alteration is proposed within or adjacent to components of the Natural Heritage System.” at the beginning and by adding “consent application” after “subdivision application” in the fourth line.
365. Amend Table 15-1 in the “COMPONENTS” column as follows:
- delete the “Within 100 metres” column and replace it with “-Locations of endangered or threatened species”
  - delete the “Within 50 metres” column and replace it with the following:
    - Environmentally Significant Areas
    - Life Science Areas of Natural and Scientific Interest
    - Locations of special concern species
    - Significant Woodlands
    - Significant Wildlife Habitat
    - Significant River, Stream and Ravine Corridors”
  - Amend the “Within 30 metres” column by adding “-Woodlands” at the end under “- Fish Habitat”.
  - Amend the “Within” column by adding “- Groundwater Recharge Areas” at the end.
366. Amend paragraph 15.5.1. v) (b) by inserting “and their temporal and spatial scales” at the end after “occur”.

367. Amend paragraph 15.5.1. v) (c) by deleting it in its entirety and replacing it with “development criteria to maintain natural features and ecological functions, and mitigate the impacts of development within or on adjacent lands; and.
368. Amend paragraph 15.5.1. v) (d) by adding “an implementation strategy for mitigation measures including” at the beginning.
369. Amend paragraph 15.5.1. vi) by adding “and study scope” after “plan” in the first line.
370. Amend paragraph 15.5.1. vi) (a) by adding “and map” after “confirm” in the first line.
371. Amend paragraph 15.5.1. vi) (b) by adding “the” after “evaluate” in the first line and by adding “in accordance with the criteria outlined in Section 15.4.” at the end after “A”.
372. Amend paragraph 15.5.1. vi) (c) by adding “the” after “evaluate” in the first line; by adding “rivers,” after “areas,” and by deleting “, and” after “streams” both in the fourth line and by adding “and other vegetation patches greater than 0.5 hectares in size” after “corridors” at the end.
373. Amend paragraph 15.5.1. vi) by adding “The results of this initial stage of the Environmental Impact Study are to be reviewed and confirmed by the City prior to completing the balance of the study.” at the end and by deleting clauses (d) and (e) in their entirety.
374. Amend paragraph 15.5.1. vii) by deleting “that assessment will be considered as fulfilling the Environmental Impact required by this Plan” after “legislation” in the third line and replacing it with “any required EIS will be scoped to include only those matters that have not been adequately addressed through the Environmental Assessment. For any proposal carried out under the Ontario *Environmental Assessment Act* or relevant Federal legislation, alternatives involving development and site alteration within the Natural Heritage System will only be considered after the evaluation of options that would avoid development and site alteration within the Natural Heritage System.”
375. Amend paragraph 15.5.1. viii) by adding “,Consent” after “Subdivision” in the fourth line.
376. Amend paragraph 15.5.2. i) by deleting “, prior to approving new development” after “completed” in the first line and by adding “The work plan for the Subject Land Status Report will be determined in consultation with the City and relevant public agencies:” at the end.
377. Amend paragraph 15.5.2. ii) by deleting the number “ii)” and replacing it with “(a)” at the beginning; by deleting “a preliminary” after “provide” in the first line and replacing it with “an”; and by adding “in accordance with the requirements of 15.4.” at the end.
378. Amend paragraph 15.5.2. iii) by deleting the number “iii)” and replacing it with “(b)” at the beginning and adding “in accordance with the requirements of 15.5.2.” after “these lands” in the fifth line.
379. Amend subsection 15.5.3. by deleting “shall” after “City” in the first line and replacing it with “has”; by adding a “d” to the end of “prepare” in the first line; by deleting “the” after “requirements of” in the second line; and by deleting “component of” after “environmental” in the second line and replacing it with “studies for”.
380. Amend subsection 15.6. by adding “2” after “B” in the fourth line; by deleting “Flood Plain and Environmental Features” after “Schedule B” in the fourth line and replacing it with “Natural Resources and Natural Hazards”, by adding “, which represents the equivalent of a one in 250 year return flow occurrence” after “Flood Event” in the sixth line; and by adding “2” after “B” at the end of the third paragraph.

381. Amend subsection 15.6.1. by adding “2” after “B” at the end of the second paragraph; by deleting “Where detailed flood line studies have not been completed, the extent of the flood plain hazard is generally identified for fill regulation by the conservation authority having jurisdiction. The fill line areas are identified as a constraint area on Schedule “B.” from the beginning of the third paragraph; by adding “2” after “B” in the first line of i); and by adding “2” after “B” in the fifth line of iii).
382. Amend subsection 15.6.3. by adding “2” after “B” in the last line of the first paragraph.
383. Amend paragraph 15.6.4. ii) by deleting “the “Coves” area;” after “River;” in the third line and by adding “2” after “B” at the end.
384. Amend paragraph 15.6.4. v) by adding “2” after “B” in the first line.
385. Amend subsection 15.6.4. by adding the following new section:

**“15.6.4.1. Coves Special Policy Area”** (in the sidebar)

“The Coves Special Policy Area, identified on Schedule “B2” – Natural Resources and Natural Hazards, contains important natural features and a viable low density residential neighbourhood that has historically existed within the flood plain of the Thames River. While a berm/dyke structure provides protection up to the Regulatory elevation of the Thames River, there continues to be a potential for flooding from the river, as well as from internal drainage sources in the Coves basin.

The standard two-zone (floodway-flood fringe) cannot be reasonable applied to development in the area. In order to provide for the continued viability of the existing community and an appropriate level of flood damage reduction, the coves is recognized as a Special Policy Area pursuant to Section 3.1. of the Provincial Policy Statement. Accordingly, the following special policies will apply in the area:

- i) For the purposes of the Coves Special Policy Area:
  - (a) “Development” shall mean the creation of a new lot, a change in the land use, or the construction of buildings or structures, requiring approval under the *Planning Act* but does not include activities that create or maintain infrastructure authorized under the environmental assessment process; or works subject to the *Drainage Act*.
  - (b) “Essential Emergency Services” shall mean services such as those provided by fire, police and ambulance stations and electrical substations, which would be impaired during an emergency as a result of flooding, the failure of floodproofing measures and/or protection works, and/or erosion.
  - (c) “Floodproofing” shall mean structural changes and/or adjustments incorporated into the basic design and/or construction or alteration or placement of individual buildings, structures or properties to protect them from flood damage, or to reduce or eliminate flood damages.
  - (d) “Hazardous Substances” shall mean substances which, individually, or in combination with other substances, are normally considered to pose a danger to public health, safety and the environment. These substances generally include a wide array of materials that are toxic, ignitable, corrosive, reactive, radioactive or pathological.
  - (e) “Infilling” shall mean development on previously undeveloped lots, generally bounded by existing development on adjacent sides.
  - (f) “Institutional Uses” shall mean those uses, associated with hospitals, nursing homes, pre-schools, school nurseries, day care

and schools, where there is a threat to the safe evacuation of the sick, the elderly, the physically challenged or the young during an emergency as a result of flooding, failure of floodproofing measures or protection works, or erosion.

- (g) “Regulatory Flood Standard” shall mean the level of flooding which has been calculated by the Upper Thames River Conservation Authority and recognized by the Province, to define the Thames River flood plain limits for regulatory purposes. The 1937 observed historical event, which represents the equivalent of a one in 250 year return flow occurrence, is recognized by the Province as the Regulatory Flood Standard for the Upper Thames Watershed. The Regulatory Flood Standard for the Thames River is delineated by the 235.6 metre contour.
  - (h) “100-Year Flood Standard” shall mean the level of flooding which has been calculated by the Upper Thames River Conservation Authority for the Thames River flood plain based on an analysis of precipitation, snow melt, or a combination thereof, having a return occurrence of 100 years on average or having a 1% chance of occurring or being exceeded in any given year. The 100-year flood standard for the Thames River is delineated by the 234.8 metre contour.
  - (i) “Coves Flood Standard” shall mean the level of flooding which has been calculated by the Upper Thames River Conservation Authority to define the flood plain limits from internal drainage sources within the Coves basin, based on a one in 250 year return flow occurrence. The Coves flood standard is delineated by the 232.33 metre contour.
  - (j) “Replacement” shall mean removing an existing structure and erecting a new structure.
  - (k) “Site Alteration” shall mean activities such as fill, grading and excavation, that would change the landform and natural vegetative characteristics of a site.
- ii) All development within the Coves Special Policy Area will be encouraged to incorporate floodproofing to the level of the Regulatory flood standard, if possible, and to the level of the 100 year flood standard at a minimum.
  - iii) Applications for Official Plan and/or Zoning By-law amendments, plans of subdivision and consents that would have the effect of increasing the amount or intensity of residential development within the Special Policy Area will not be supported.
  - iv) Applications for Official Plan and/or Zoning By-law amendments that would have the effect of permitting institutional uses, essential emergency services or hazardous substances within the Special Policy Area will not be supported.
  - v) On existing lots of record that are designated and zoned for residential development, minor additions and alterations to existing structures will be permitted, in accordance with relevant zoning and building guidelines, provided it is floodproofed to the elevation of the main floor (first floor) of adjacent structures at a minimum, and in no case less than the elevation of the coves flood standard.
  - vi) On existing lots of record that are designated and zoned for residential development, infilling and replacement will be encouraged to incorporate floodproofing to the level of the Regulatory flood standard. Where this level of protection would be impractical, obtrusive, or out of context with adjacent development patterns, floodproofing shall be required to the elevation of the main floor (first floor) or adjacent structures at a minimum, and in no case less than the elevation of the Coves flood standard. Basements will not be permitted.

- vii) Applications for Official Plan and/or Zoning By-law amendments to permit open space uses will be evaluated on the basis of relevant policies in the Plan. Development within the Open Space designation will generally be restricted to non-intensive or passive uses that are not susceptible to significant flood damages. Associated structures, uses and parking areas may only be permitted on lands that are above the elevation of the Coves flood standard.
  - viii) All infill, replacement, building additions and site alteration activity within the Coves Special Policy Area will continue to be regulated under the requirements of the *Conservation Authorities Act* and this will be denoted on Zoning maps to increase the awareness of landowners and area residents.
  - ix) The City of London and Upper Thames River Conservation Authority will continue to co-operate in order to ensure the ongoing maintenance, repair and servicing of the Thames River dyking system, which provides flood damage reduction to the Coves Special Policy Area.
  - x) The City of London, in co-operation with the Upper Thames River Conservation Authority, will maintain, update and enhance the local Flood Contingency Plan on an ongoing basis. The City will support the efforts of the Conservation Authority to maintain, update and enhance the Flood Warning System Plan, which provides flood forecasting, control and warning services in the watershed area.”
386. Amend subsections 15.7. and 1.5.7.1. by deleting them in their entirety and replacing them with the following:

**“15.7. EROSION AND WETLAND HAZARDS**

Ravines, river valleys, stream corridors, slopes and wetlands may be subject to natural hazards that preclude or restrict land use and development activity. The lands susceptible to natural hazards are subject to the policies in this section and may be identified for reference purposes on Schedule “B2” – Natural Resources and Natural Hazards. In addition to satisfying the policies in this section, all site alteration, land use and development activity within the applicable Regulation Limit, will be subject to review and approval by the Conservation Authority having jurisdiction.”

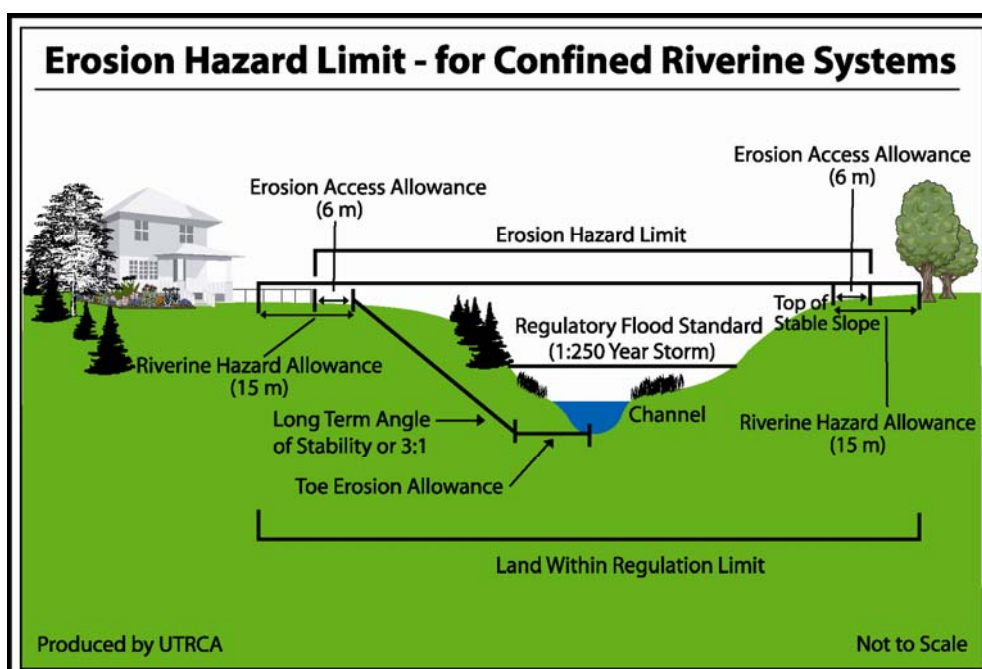
**“15.7.1. Ravine Erosion Hazards”** (in the sidebar)

“The natural movement of watercourses and valley slopes due to erosion can be aggravated by human activities and the impact of the activity can be transferred some distance from the impact site. The risk of erosion is managed by planning for the 100 year erosion rate (the average annual rate or recession extended over a one hundred year time span). The extent of the Riverine Erosion Hazard Limit depends on whether the erosion is occurring in a Confined System (where the physical presence of a valley corridor containing the system is visibly discernable), or an Unconfined System (where there is no discernable valley slope or bank that can be detected from the surrounding landscape). In keeping with the hazard avoidance approach, development and site alteration is generally not permitted in areas that are subject to riverine erosion hazards. Riverine erosion hazards are further addressed by the following criteria and illustrations:”

“Confined Systems” (in the sidebar)

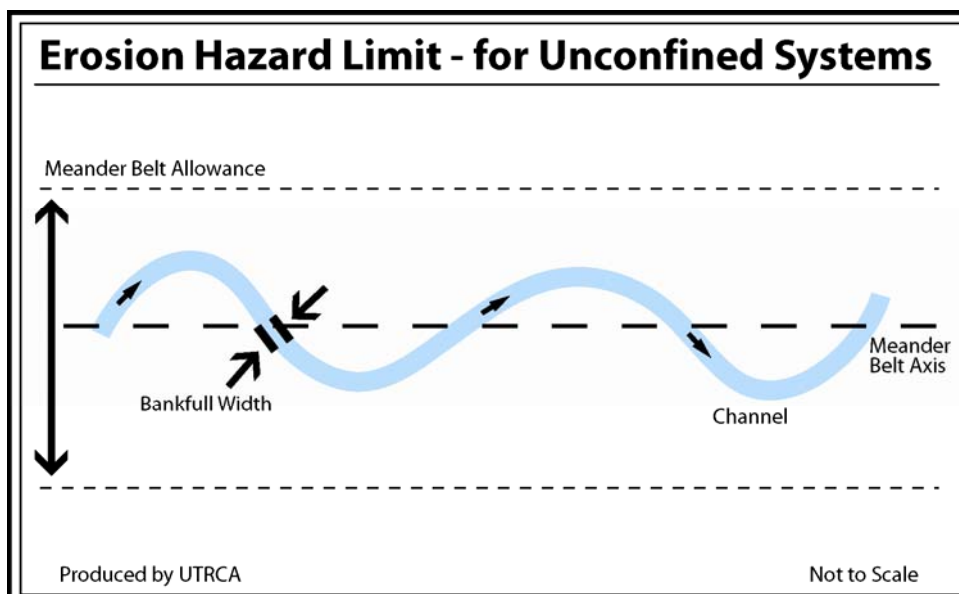
- “i) The Riverine Erosion Hazard Limit to Confined Systems is comprised of the combined effect of the following:
  - (a) In cases where valley slopes are found to be at a stable angle, and not subject to the potential influence of toe erosion, the Valley Top of Slope, located at the break in slope point between the valley side slope and the tableland, is the Riverine Erosion Hazard Limit.

- (b) In cases where there is a potential for erosion at the toe of the slope from natural processes, the Riverine Erosion Hazard Limit needs to be shifted to include a toe erosion allowance.
- (c) In cases where a slope is steeper than its determined long term angle of stability, the Riverine Erosion Hazard Limit needs to be shifted to account for slope movement over time. In the absence of detailed geotechnical information, the stable slope allowance is based on an assumed stable slope gradient of three horizontal units to one vertical unit (3:1). For slopes having a steeper gradient, the allowance is equal to the distance between the actual valley top of slope and the point at which a slope at a 3:1 gradient, rising from the same toe position, would intersect the ground surface.
- (d) A six (6) metre erosion access allowance added to the valley top of slope or the combined toe erosion and stable slope allowances, is required for the purposes of providing sufficient access for emergencies, maintenance and construction activities.



“Unconfined Systems” (in the sidebar)

- “ii) The Riverine Erosion Hazard Limit for Unconfined Systems, where there is not discernable valley slope or bank, is the combined limit of:
  - (a) the meander belt allowance, which provides a limit to development within those areas where the river system is likely to shift. It is based on twenty (20) times the bankfull channel width; and
  - (b) the erosion access allowance, a six (6) metre allowance added to the meander belt. The erosion access allowance is required for the purpose of maintaining sufficient access for emergencies, maintenance and construction activities.”



“Boundaries” (in the sidebar)

- “(iii) The alignment of the Riverine Erosion Hazard Limit shall be determined by the City, in consultation with the Conservation Authority having jurisdiction. The delineations on Schedule “B2” are subject to interpretation and refinement without an amendment to the Official Plan, on the basis of a technical study prepared in accordance with policy 15.7.6. and completed to the satisfaction of the City, in consultation with the Conservation Authority having jurisdiction.”

“Permitted Uses” (in the sidebar)

- “(iv) Most areas of riverine erosion hazards are designated Open Space and in keeping with Provincial policy, new development shall be directed away from lands that are subject to riverine erosion hazards. In areas of new development, the use of hazard avoidance, vegetative plantings and other non-structural solutions are the preferred method of addressing riverine erosion hazards.
- (v) In areas of existing development, uses permitted by an underlying land use designation may only be developed on lands that are subject to riverine erosion hazards if the following criteria can be addressed to the satisfaction of the City and the Conservation Authority having jurisdiction:
- (a) the riverine erosion hazard can be safely addressed and new or existing hazards are not created or aggravated, including possible impacts on upstream and downstream areas;
  - (b) vehicles and people have a way of entering and exiting the area during times of emergencies;
  - (c) the development does not involve institutional uses, essential emergency services or the storage of hazardous substances, which could pose an unacceptable threat to public safety if damaged or impacted by erosion forces;
  - (d) permitted uses may also include works required to be undertaken for the creation or maintenance of infrastructure authorized under an environmental assessment process, and works required for flood and erosion control and bank stabilization to protect areas of existing development.”

387. Amend subsection 15.7.2. in the sidebar by deleting “One Hundred Year” after “Outside the” and replacing it with “Riverine” and by inserting “Hazard” after “Erosion”.
388. Amend subsection 15.7.2. by deleting “One Hundred Year” and replacing it with “Riverine” and by adding “Hazard” after “Erosion” in the first line; by deleting “One Hundred Year” and replacing it with “Riverine” after “outside of the” and by adding “Hazard” after “Erosion” in the fifth line; by adding “;identified on Schedule “B2”” after “features” in the fifth line and by deleting “identified and” after “will be” in the fifth line; by adding “and/or other supporting technical study” after “geotechnical study” in the ninth line; and by changing “15.7.4.” to “15.7.6.” at the end.
389. Amend subsection 15.7.3. by deleting it in its entirety and replacing it with the following:

**“15.7.3. Lands Within the Regulation Limit”** (in the sidebar)

“Regulation Limits may be mapped by the respective Conservation Authority, pursuant to the *Conservation Authorities Act* and enacting regulations, to represent the outside limit of all potential hazards and adjacent lands associated with riverine flooding and erosion, wetlands and watercourses. The Regulation Limit typically includes a 15 metre allowance adjacent to riverine systems, and an area of interference of between 30 metres and 120 metres adjacent to wetlands. Within the Regulation Limit, all site alteration and development activity is regulated and subject to approval, conditional approval or prohibition by the Conservation Authority having jurisdiction and subject to approval by the City Engineer.

The Regulation Limits are delineated on Schedule “B2”, to denote areas within which approval for site alteration and development activity is required from the Conservation Authority having jurisdiction. The Regulation Limits are subject to interpretation and refinement, without an amendment to the Official Plan, to reflect changes that have been enacted by the Conservation Authority having jurisdiction.”

390. Amend section 15.7. by inserting the following new subsection 15.7.4.:

**“15.7.4. Wetlands and Areas of Interference”** (in the sidebar)

“Wetlands and their surrounding areas of interference are subject to regulation under the *Conservation Authorities Act* due to the potential hazards associated with flooding, organic soils and interference with water source/recharge areas. Filling or draining can have an impact on the hydrologic functions of a wetland which, in turn, may influence the flooding and erosion processes in the area. The incremental impact of widespread wetland interference can also have a significant impact on downstream hydrology. The Regulation Limit also applies to surrounding areas of interference, for a distance of 120 metres around Provincially Significant Wetlands and other wetlands larger than two hectares in size, and 30 metres around wetlands that are less than two hectares in size and not Provincially Significant.

Mapping for the wetlands and areas of interference included within the Regulation Limit, is maintained by the Conservation Authority having jurisdiction and may be reflected on Schedule “B2” of the Official Plan for information purposes. Within regulated wetlands and their areas of interference, development or site alteration that are consistent with the underlying land use designation and zoning may only be permitted if prior approval is received from the Conservation Authority having jurisdiction.”

391. Amend section 15.7. by adding the following new subsection 15.7.5.:

**“15.7.5. Maximum Hazard Line”** (in the sidebar)

“The Maximum Hazard Line, which represents the general extent of combined natural hazards associated with the flood plain, areas of unstable or organic soils and steep slopes, including steep slopes outside of the Riverine Erosion Hazard Limit, is delineated on Schedule “B1” for information purposes. This delineation

is subject to interpretation and refinement without an amendment to the Official Plan, to reflect changes that have been enacted by the Conservation Authority having jurisdiction.”

392. Amend subsection “15.7.4”. by renumbering it “15.7.6.” and making the following changes:
- in i) by adding “, hydrogeological studies, river morphology studies, erosion control plans and/or other supporting technical studies” after “assessments” in the first line;
  - in i) (a) by deleting “refine boundaries of” and replacing it with “accurately delineate”; by deleting “One Hundred Year” and replace it with “Riverine” and by adding “Hazard” after “Erosion”;
  - i) (d) by deleting “and” at the end;
  - in i) (e) by deleting the text in it’s entirety and replacing it with “identify measures to safely avoid the potential hazards, including appropriate development setbacks from the Riverine Erosion Hazard Limit; and,”
  - in i) by adding the following new clause:
    - “(f) identify and address any associated impacts that development adjacent to the Riverine Erosion Hazard Limit will have on components of the Natural Heritage System.”
  - in ii) by adding “and other technical studies” after “assessment” in the first line and by adding “Conservation Authority and other” after “relevant” in the second line.
  - in iii) by adding “and other required technical studies” after “assessment” in the first line; and by adding “, Environmental Assessment” after “Area Plan” in the second line.
393. Amend the subsection 15.9. title by deleting it in entirety and replacing it with: **“ABANDONED OIL OR GAS WELLS”**
394. Amend subsection 15.9.1. by deleting the first paragraph in it’s entirety and replacing it with the following:
- “For information purposes, the approximate locations of known or suspected former petroleum wells are identified on Schedule “B2”. Prior to approving new development on or adjacent to former petroleum (oil and gas) well locations, the City will require the proponent to demonstrate that the known or suspected hazard has been mitigated in accordance with relevant provisions of the *Oil, Gas and Salt Resources Act.*”
395. Amend the second paragraph of subsection 15.10. by adding “2” after “B” in the last line; and by deleting “*Flood Plain and Environmental Features*” from the last line and replacing it with “*Natural Resources and Natural Hazards*”.
396. Amend subsection 15.10.1. by adding “2” after “B” in the second line.
397. Amend paragraph 15.10.1. i) by adding “2” after “B” in the first line and by deleting “*Flood Plain and Environmental Features*” and replacing it with “*Natural Resources and Natural Hazards*” in the first line.
398. Amend paragraph 15.10.1. ii) by adding “2” after “B” in the first line.
399. Amend paragraph 15.10.1. iii) by adding “2 after “B” in the second line; by deleting “*Flood Plain and Environmental Features*” and replacing it with “*Natural Resources and Natural Hazards*” after “B” in the second line; by deleting “To reduce conflicts between the new development and the aggregate resource extraction, the following measure may be required” from the end and replacing it with “Existing mineral aggregate extraction operations shall be protected from new development and activities that would preclude or hinder their expansion or continued use, or which would be incompatible for reasons of public health,

public safety or environmental impact. The following measures may be required to ensure that extraction is undertaken in a manner which minimizes social and environmental impacts between the mineral aggregate resource extraction and new development”.

400. Amend subsection 15.10.2. by adding “Mineral” at the beginning of the sidebar; by adding “Council will promote the conservation of mineral aggregate resources by making provision for the recovery of these resources, wherever feasible.” to the beginning; by adding “2” after “B” in the first line; by deleting “Flood Plain and Environmental Features” after “B” in the first line and replacing it with “Natural Resources and Natural Hazards” and by adding the following as a new paragraph at the end:

“In areas within or adjacent to known mineral aggregate resources, development and activities that would preclude the establishment of new aggregate extraction operations, or access to the resources will only be permitted if:

- (a) resource use would not be feasible; or
- (b) the proposed land use or development serves a greater long-term public interest; and
- (c) issues of public health, public safety and environmental impact are addressed.”

401. Amend paragraph 15.10.3. (a) by adding “2” after “B” in the fourth line; by deleting “Flood Plain and Environmental Features” in the fourth line and replacing it with “Natural Resources and Natural Hazards”.

402. Amend paragraph 15.10.3. (b) by adding “2” after “B” in the second line; by deleting “Flood Plain and Environmental Features” in the second line and replacing it with “Natural Resources and Natural Hazards” and by adding “Mineral” after “Industrial Area or” third line.

403. Amend paragraph 15.10.5. ii) by deleting “Fill, Construction, and Alteration to Waterways regulations” after “subject to the” in the fourth line and replacing it with “Regulations for Development, Interference with Wetlands and Alterations to Shorelines and Watercourses”.

404. Amend paragraph 15.10.6. by adding “2” after “B” in the second line; by deleting “Floodplain and Environmental Features” in the second line and replacing it with “Natural Resources and Natural Hazards”; and by adding “2” after “B” in the sixth line.