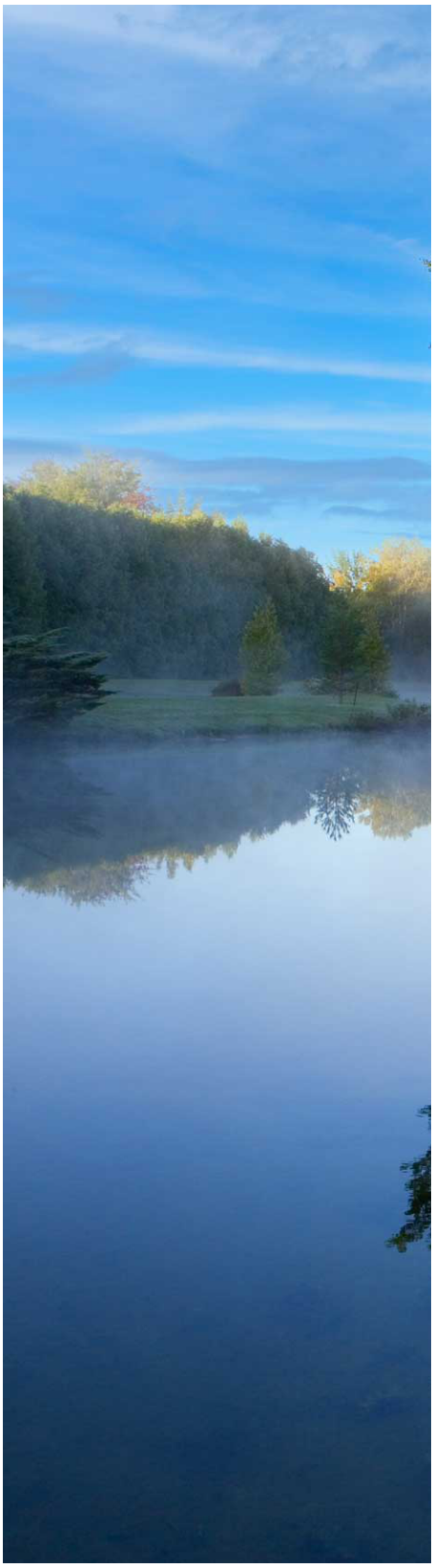


WHAT'S IT ALL ABOUT?

7-GENERATION GTB, BIOREGIONS, REGENERATION

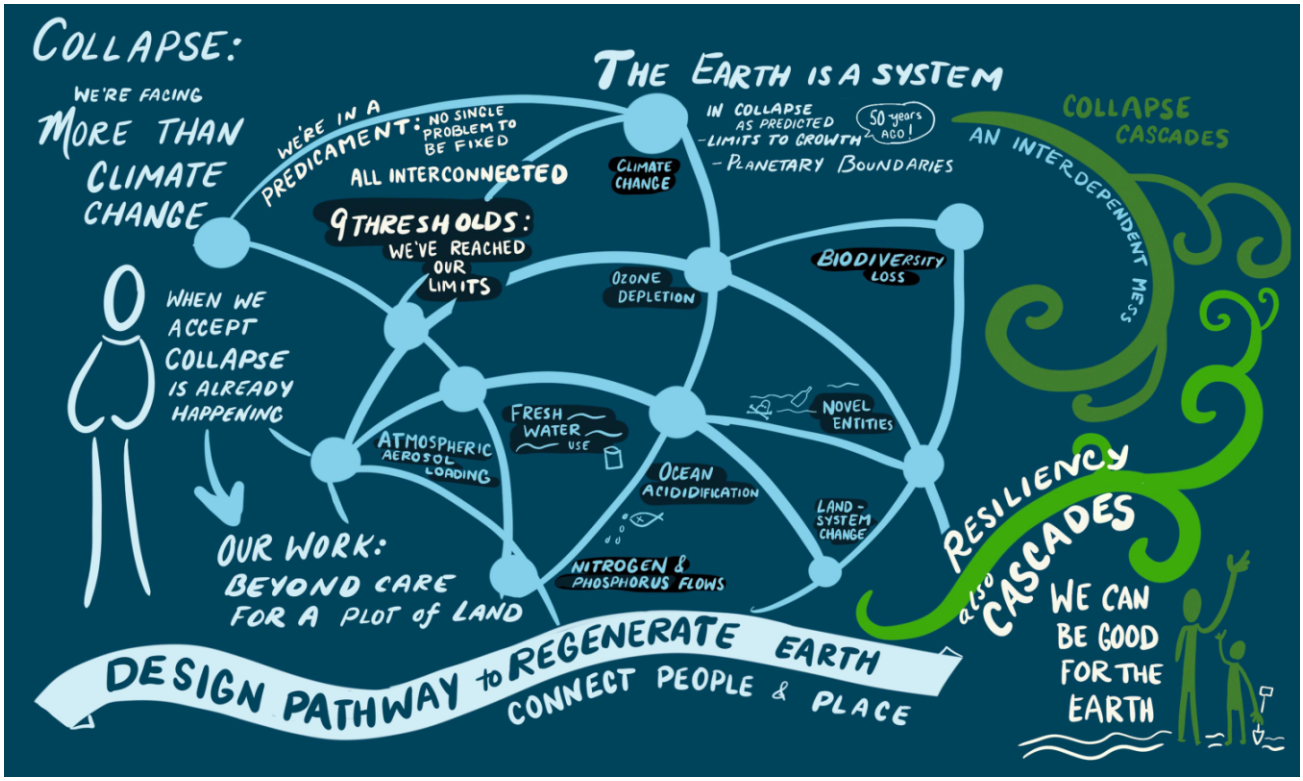
SUSAN V. BOSAK AND BRIAN A. PUPPA, LEGACY PROJECT CORE TEAM

7-Generation GTB (Greater Tkaronto Bioregion) is about **PEOPLE** of all ages learning together how to live in their **PLACE** on the Earth.

It's about a different way of thinking and being.

1. MAPLE, BLACK
Acer nigrum

Large
Hardy
Fast growing, yellow fall colour.



Our world faces complex challenges and an uncertain future.

Scientists tell us we're exceeding **Planetary Boundaries**, destabilizing the complex and interrelated Earth systems that regulate the stability and resilience of the planet. This goes way beyond just the focus on carbon you see in the news.

Find out more about Planetary Boundaries in this report summary and this article.

Can we connect people (generations) and places (bioregions) around the world in ways that will enable us to **heal and regenerate the Earth together** – to counter collapse cascades with a **cascade of resiliency**?

2. MAPLE, RED
Acer rubrum

Large
Very sensitive
Fast growing, green leaves with bright red fall colour.

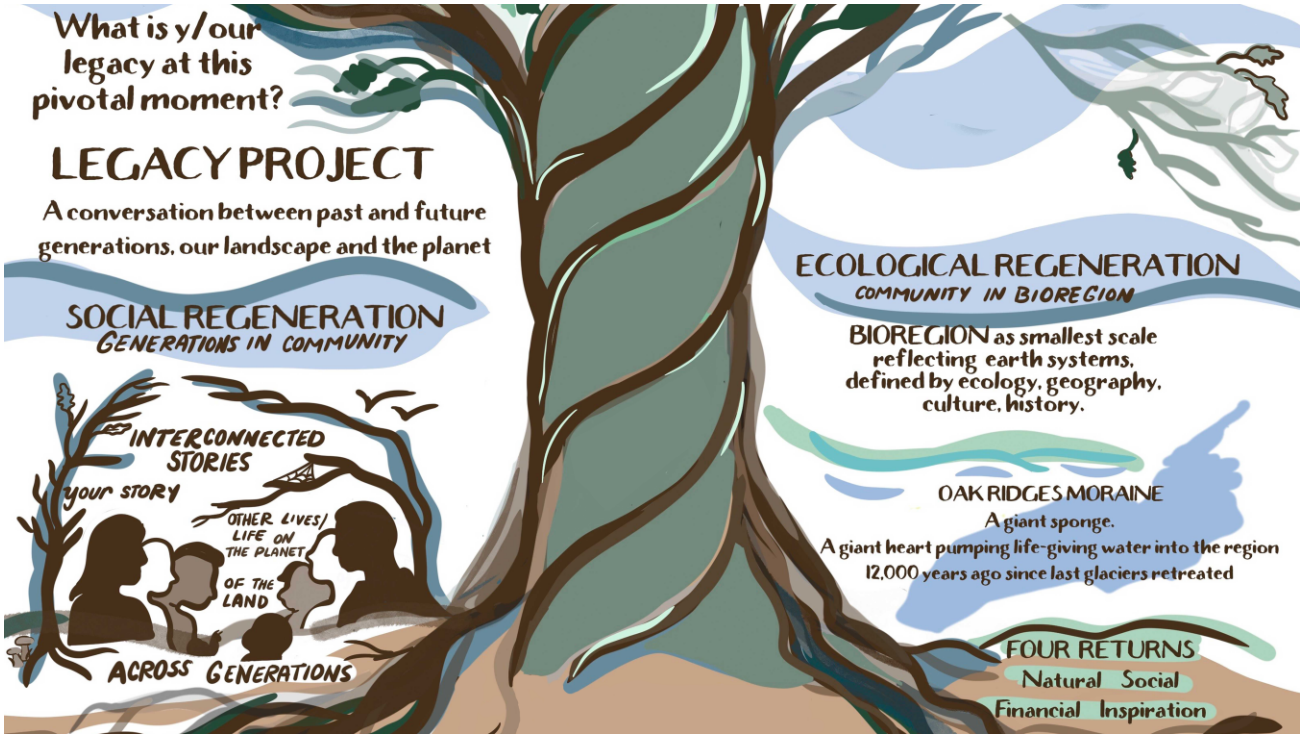
Regeneration is the powerful process of life restoring and renewing itself. A baby being born is regeneration of humanity. A lush green area of plant life in a desert is regeneration of land.

"Life finds a way," said Dr. Ian Malcolm, a character in the movie *Jurassic Park*. As humans, our job is to **steward life**. That's the most powerful legacy each of us can create.

"When we talk about regenerative design, it is the intentional application of *knowledge and tools* to create **possibilities by making use of the regeneration that is inherent in all living systems**. Regenerative design is collaborative and co-creative. It is a dance with life. More deeply still, it is **a dance of life**." Joe Brewer, *The Design Pathway to Regenerating Earth*

3. MAPLE, SILVER
Acer saccharinum

Large
Very hardy
Fast growing,
Yellow fall colour.

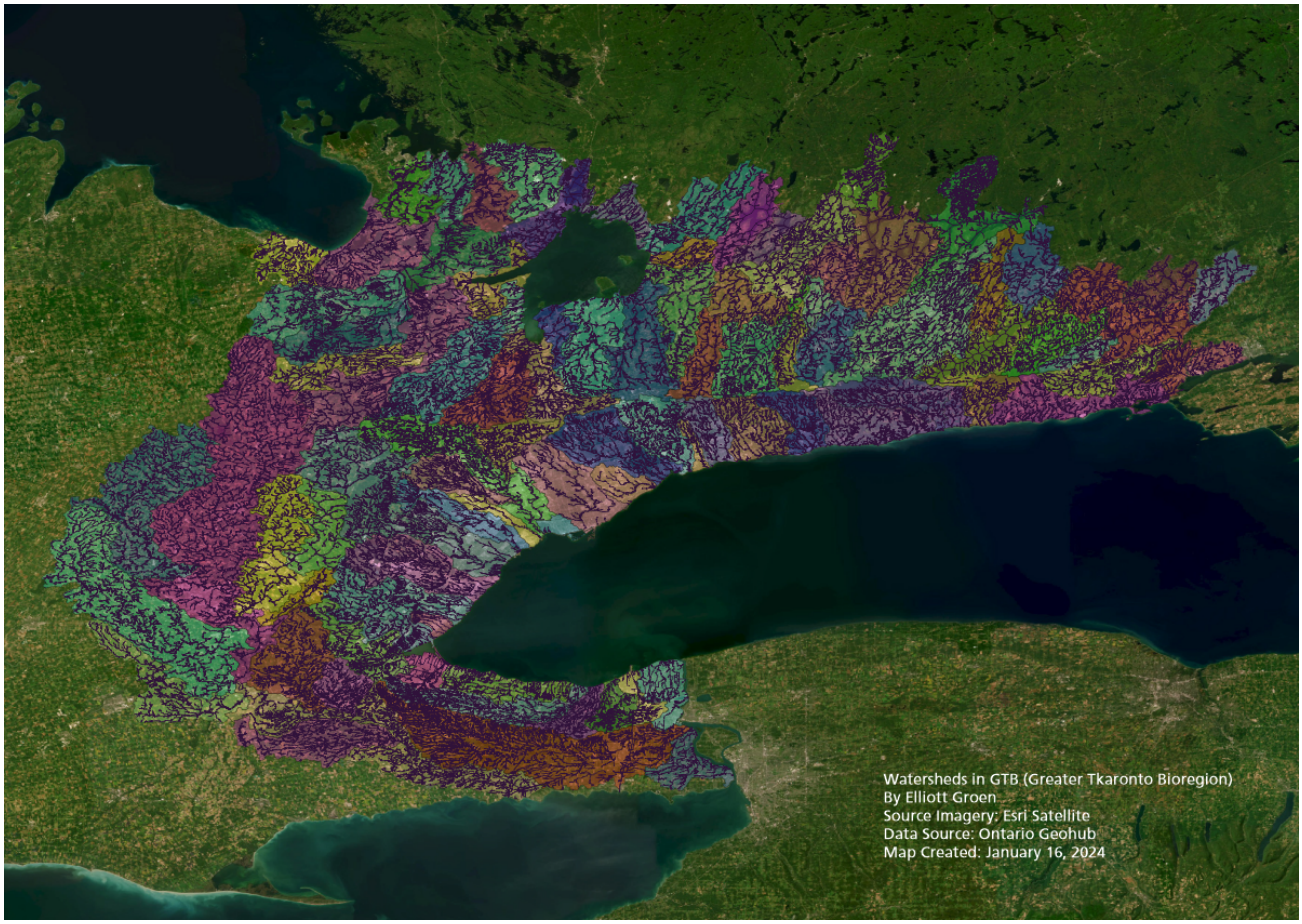


7-Generation GTB is about both **social regeneration** (bringing together generations in community for mutual learning and collective action) and **ecological regeneration** (building community and regenerative practices across the local bioregion).

This means the most important things you can do in the world right now are 1) foster an attitude in yourself of **humility and curiosity**; 2) **collaborate** with others with integrity and fairness; 3) take **responsibility** for forging a new path in the world of right relationship with others and the land; and 4) act in **service** to the land (and water, air, other living things, etc.) by centering regenerating life in every choice and action.

4. MAPLE, SUGAR
Acer saccharum

Large
Sensitive
Fast growing, brilliant orange-red fall colour.



What's real?

Drawing a line across a river, with one part of the river in one city and another part in another city, is a fiction. When you look at a map, you usually see the world divided up by artificial boundaries of cities and countries. What if, instead, we looked at what's *real*, like rivers, and **organized areas by watersheds**?

7-Generation GTB draws on The Honourable David Crombie's (former Toronto Mayor and MP) seminal 1992 *Regeneration* report. He said there's another way to look at place, and he described our **bioregion**.

From the report, the GTB is generally defined by "the natural features of the Niagara Escarpment on the west, the Oak Ridges Moraine to the north and east, and Lake Ontario to the south."

5. BUCKEYE, OHIO
Aesculus glabra

Large
Moderately hardy
Cream flowers in late spring, nut-like seeds in fall.

Welcome to the **Greater Tkaronto Bioregion** (GTB) – with a "fuzzy boundary" determined by natural features like the Niagara Escarpment, Oak Ridges Moraine, and watersheds (i.e. local Conservation Authorities).

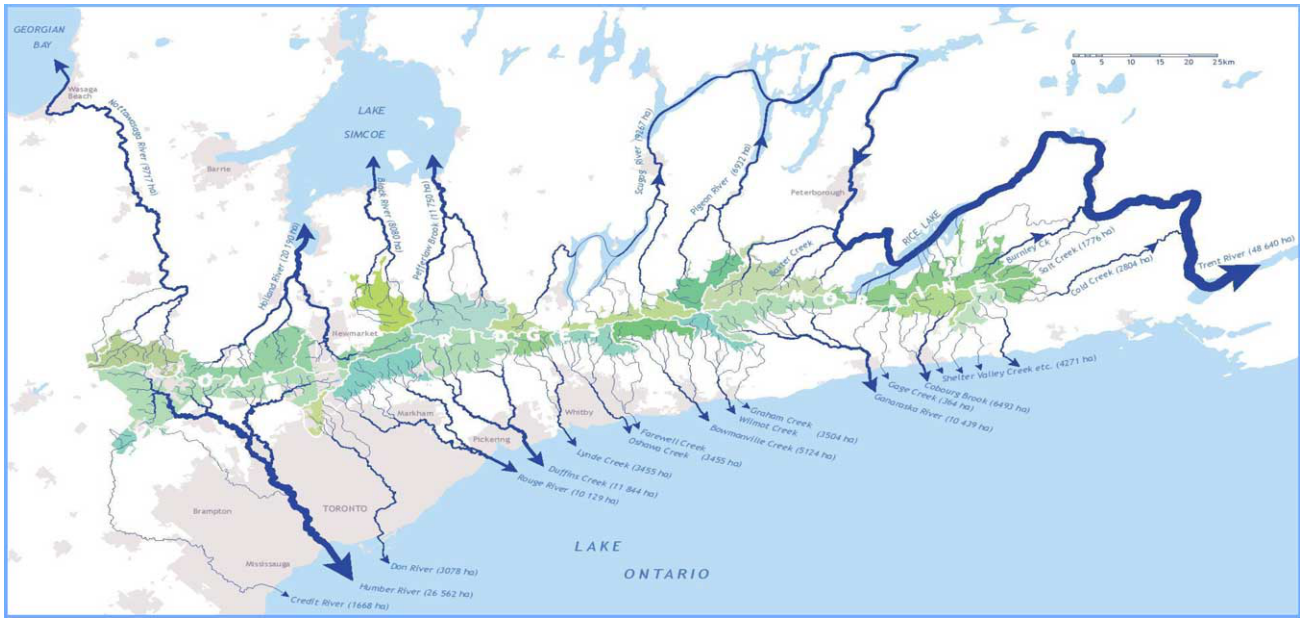
You live in the GTB. The GTB is our *real* home on Earth – defined by geology, ecology, culture, and history. Note that a bioregion isn't the same as an "eco-zone" (which is defined based only on ecology). A bioregion considers both **natural and social factors**, including Indigenous territories and land uses.

Your bioregion is the area you might be able to walk across over several days, where you can find your food and clean water, where you can find medicines and materials to build shelter. It is **your local place that can give you the essentials you need to live your life**.

The GTB covers approximately 3 million hectares, and has about 10 million people (about a quarter of the population of Canada). Find out more about bioregions.

6. HACKBERRY
Celtis occidentalis

Large
Hardy
Interesting bark,
attractive to pollinators.



The **Oak Ridges Moraine is the HEART of the GTB**.

The Moraine is a unique and amazing geology of glacial gravel/sand deposits (up to 200 metres thick) that formed a ridge that soaks up rain (like a sponge) to create over 65 waterways running north and south in the GTB. It's literally like a heart, pumping life-giving water throughout our bioregion.

Find out how the Oak Ridges Moraine formed.

In a world facing more frequent droughts, the Oak Ridges Moraine, and the fresh water it provides, is both special and important.

What's your nearest river?

7. KENTUCKY COFFEETREE
Gymnocladus dioicus

Large
Very hardy
Provides dappled shade, open branching.

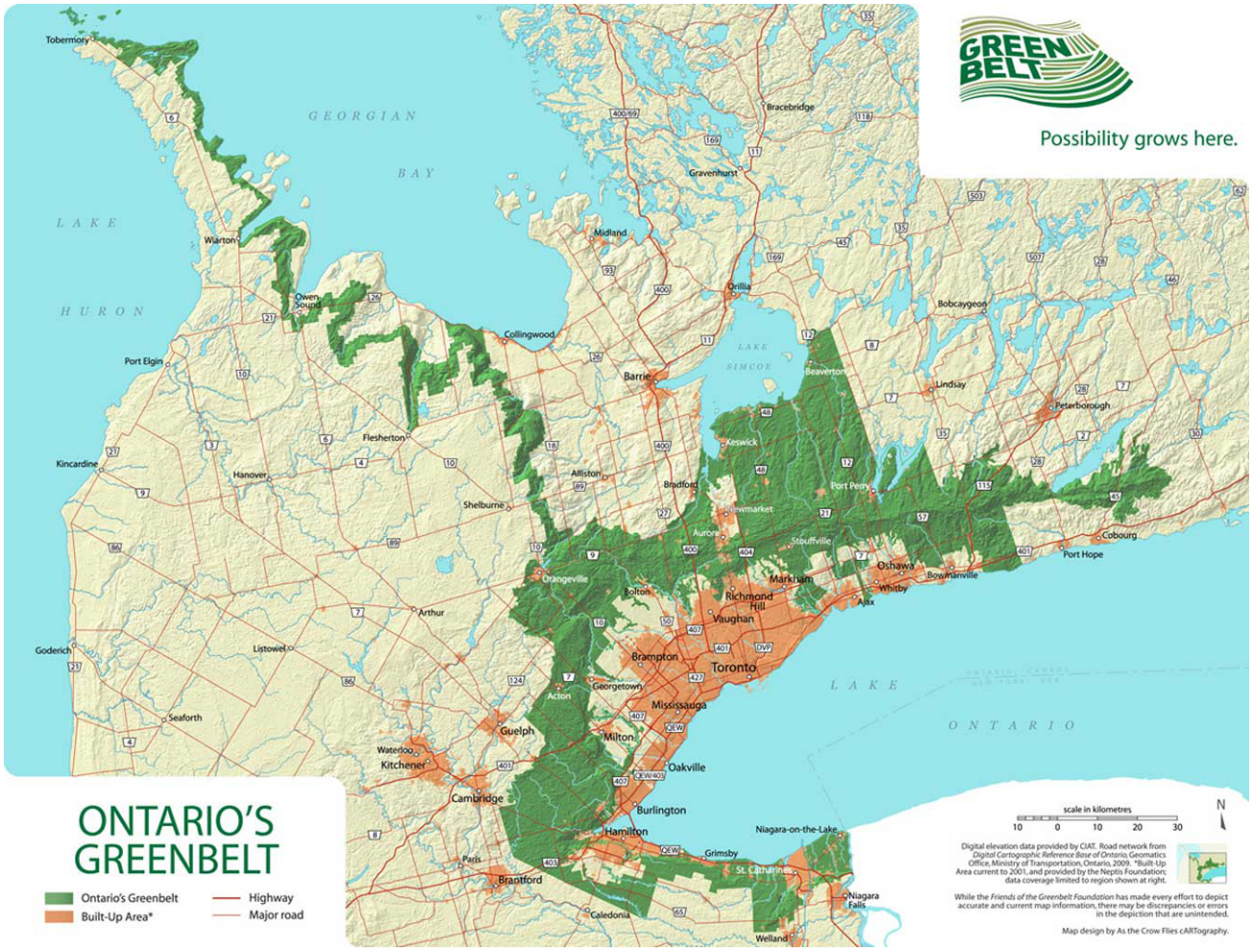
The **Niagara Escarpment** is a key feature of the GTB. It spans 725 km from the tip of the Niagara Region to the top of the Bruce Peninsula. More than 450 million years old, the Escarpment makes up almost a quarter of Ontario's Greenbelt and is home to Canada's longest footpath, the Bruce Trail. It has the **oldest forest ecosystem** in eastern North America, with some Cedars over 1,300 years old.

The Escarpment has amazing topographic variability, with habitats ranging over more than 430 m in elevations and including Great Lakes coastlines, cliff edges, talus slopes, wetlands, woodlands and many others. It has around 70 waterfalls – most notably, Niagara Falls. The habitats boast a high level of species diversity, including more than 300 bird species, 55 mammals, 36 reptiles and amphibians, 90 fish and 100 varieties of special-interest flora.

The Niagara Escarpment is a UNESCO World Biosphere Reserve.

8. TULIP TREE
Liriodendron tulipifera

Large
Sensitive
Unique green flowers in late spring.



After the Niagara Escarpment (1985) and Oak Ridges Moraine (2001) became protected areas, the expanded **Greenbelt** area was created.

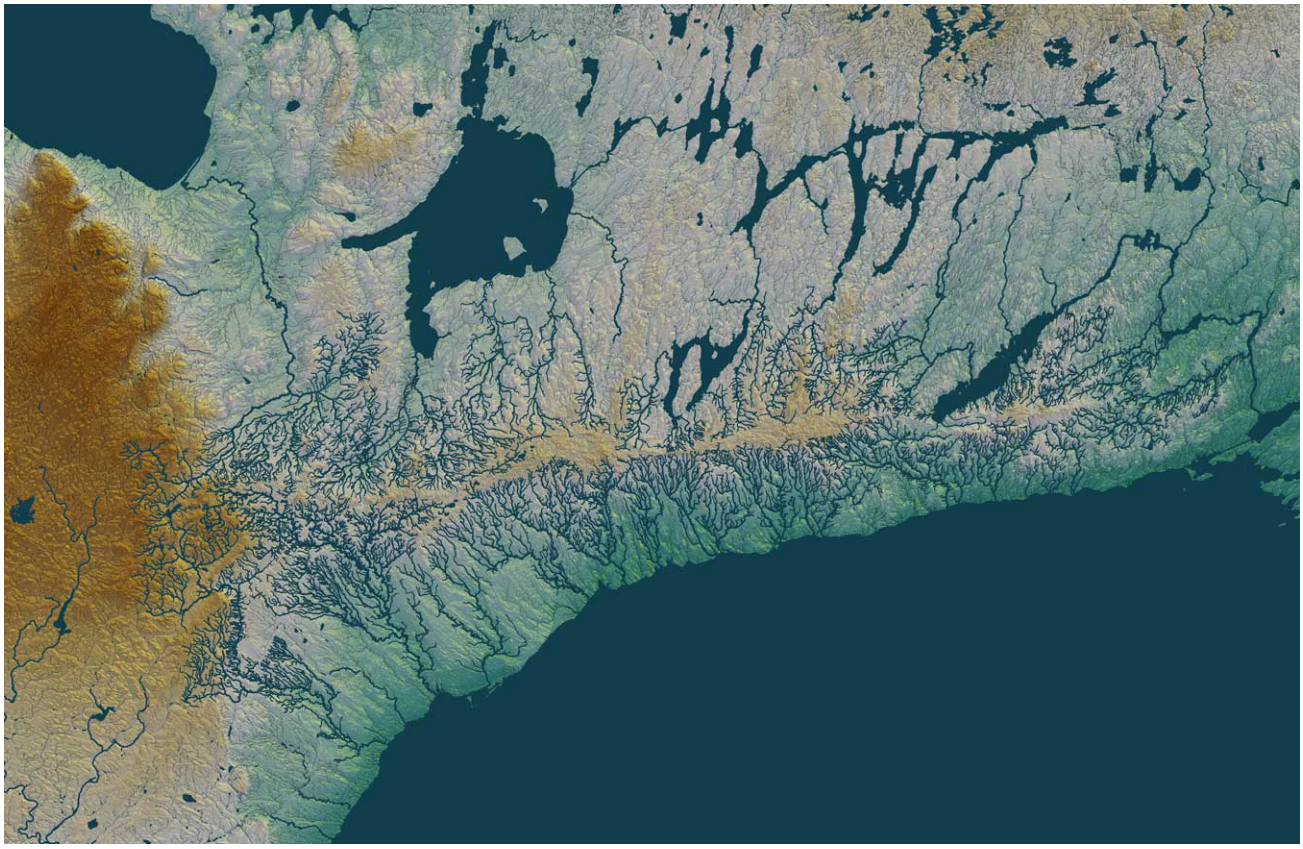
When the Government of Ontario passed legislation in 2005 to create the Greenbelt, the world's largest, it became an admired model of land-use planning. Ontario's Greenbelt **protects farmland, forests, wetlands, rivers, and lakes**, while leaving room for urban development without uncontrolled sprawl.

At over 800,000 hectares, the Greenbelt contains environmentally-sensitive areas, protects our drinking water, and stewards forests in the face of climate change. Diversity defines the Greenbelt – from its wide range of habitats and landscapes to all the forms of life within them (including 78 species at risk).

Watersheds cover 7,821 hectares of the Greenbelt, and it has 4,783 farms. It includes Rouge National Urban Park (primarily in Markham and Toronto), Canada's largest at 7,900 hectares.

9. IRONWOOD
Ostrya virginiana

Medium
Sensitive
Interesting shaggy bark.



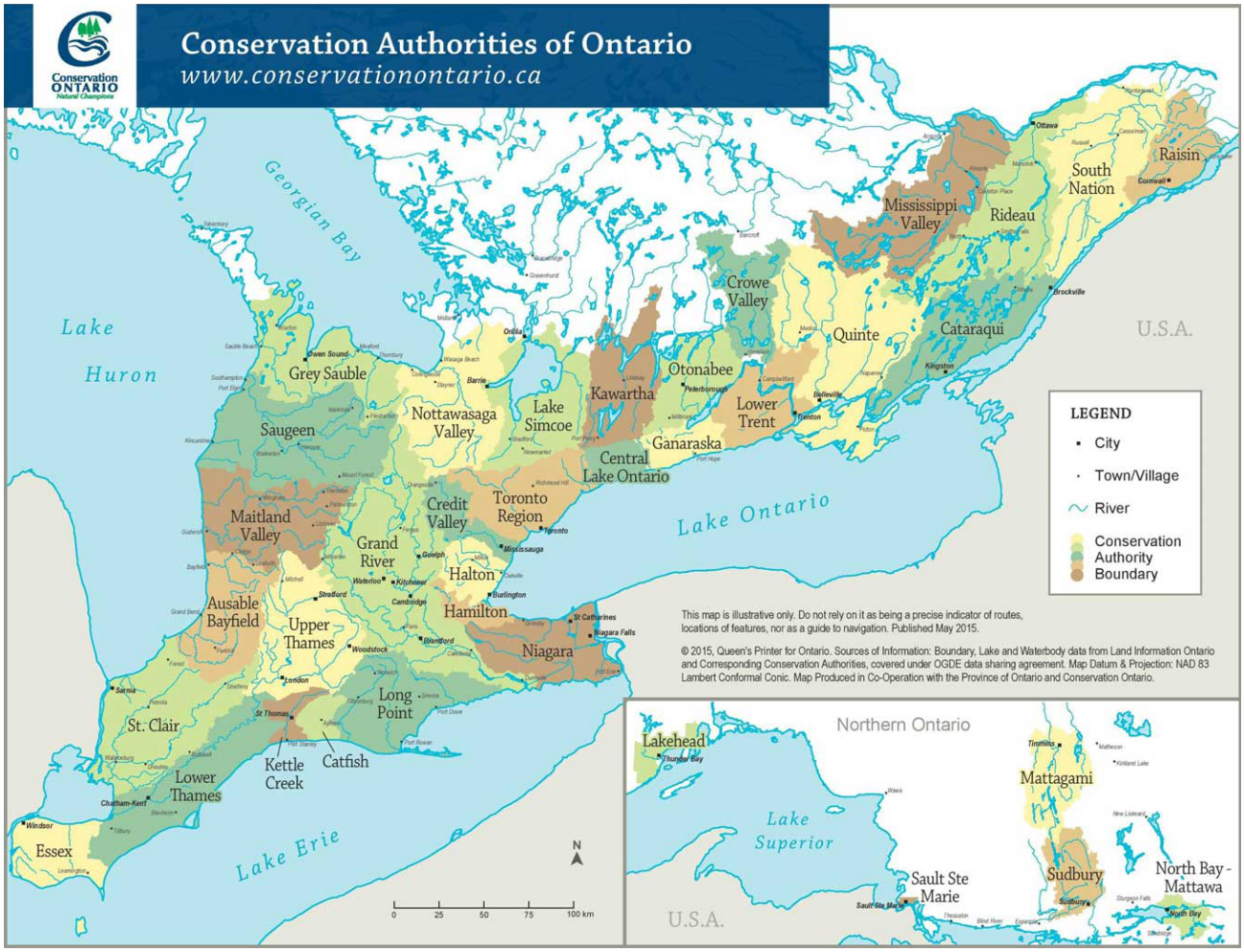
"Our **deepest folly is the notion that we are in charge of a place**, that we own it and can somehow run it. We are beginning to treat the Earth as a sort of domesticated household pet, living in an environment invented by us, part kitchen garden, part park, part zoo. It is an idea we must rid ourselves of soon, for it is not so. It is the other way around. We are not separate beings. **We are a living part of the Earth's life**." Kirkpatrick Sale, *Dwellers in The Land: The Bioregional Vision*

"The bioregional approach is both **a way of doing things and a way of thinking**, a renewal of values and philosophy. It is not really a new concept: since time immemorial, Indigenous peoples around the world have understood their connectedness to the rest of the ecosystem – the land, water, air, and other life. But, under many influences, and over many centuries, our society has lost its awareness of our place in ecosystems and, with it, our understanding of how they function." David Crombie, *Regeneration*

"People must acquire in their bones a sense that violation of the biosphere is a violation of self… A key to understanding our place is to recognize that **everything is interconnected to everything else**." Bill Rees, Professor, University of BC

10. OAK, WHITE
Quercus alba

Large
Very sensitive
Slow growing, acorns in fall, leaves remain over winter.



Unique to Ontario, **Conservation Authorities** protect, restore, and steward water (lakes, rivers, streams and groundwater), surrounding land, and local ecosystems. Conservation Authorities are organized by "watersheds."

The simple definition of a watershed is that it's the area of land that catches rain and snow that drains or seeps into a common marsh, stream, river, or lake. Think of it like a bowl or a bathtub. Find out more about watersheds.

When you're working to regenerate a watershed, you always start at the top, where the water starts, and work your way down.

The GTB includes 13 Conservation Authorities: Toronto and Region Conservation Authority (the largest in the GTB), Credit Valley, Halton, Hamilton, Niagara Peninsula, Central Lake Ontario, Ganaraska, Lake Simcoe, Nottawasaga Valley, Kawartha, Otonabee, Lower Trent, Grand River.

11. OAK, SWAMP WHITE
Quercus bicolor

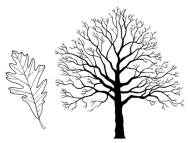
Large
Moderately hardy
Slow growing, acorns in fall, interesting peeling bark.

GTB = Greater **Tkaronto** Bioregion. We're using the Indigenous name for what's now known as Toronto.

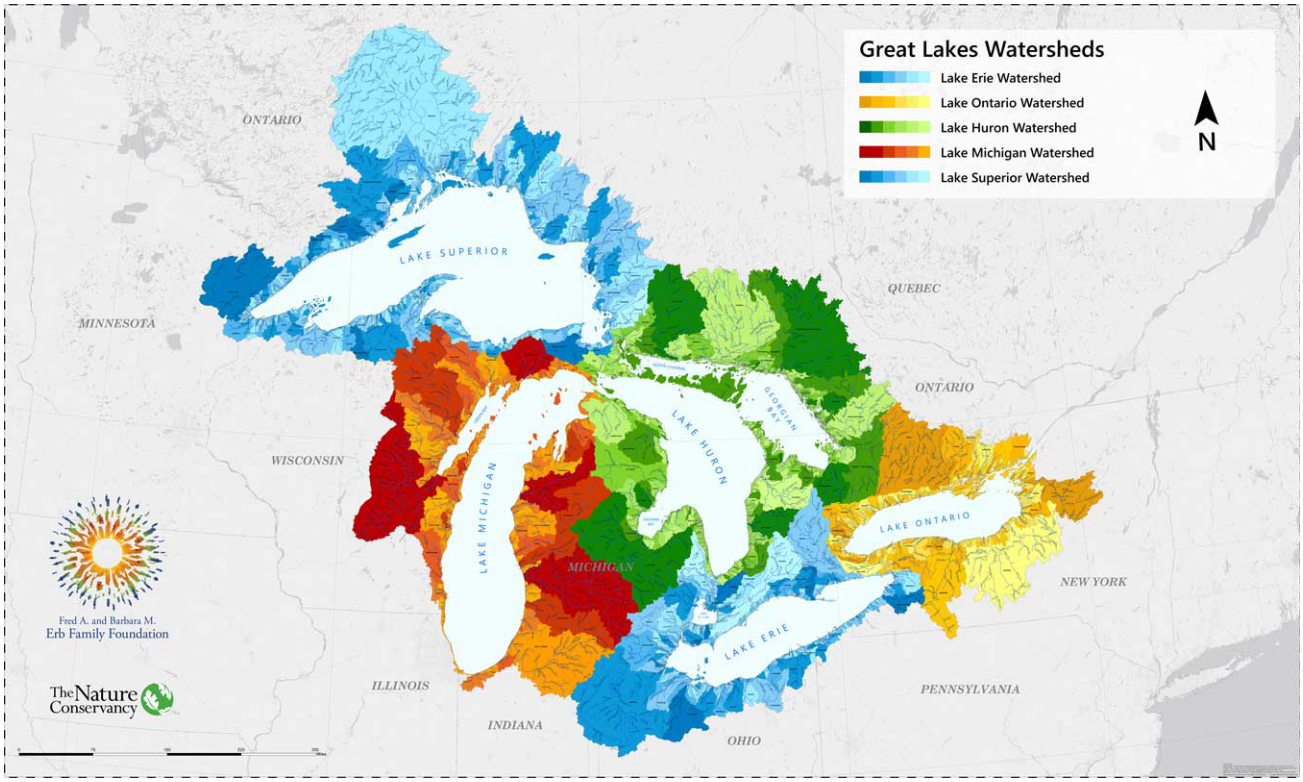
A long time ago, before the time of the pyramids, Indigenous peoples here observed that the fish would cross at a certain location from one lake, now named Simcoe, to another lake, now named Couchiching. Over time, they developed a technology to trap these fish in areas where they could be speared: they drove stakes into the lake bottom. These weirs, also known as fences, would force the fish into areas where waiting fishers could spear them (as they did on land with larger mammals like deer). Indigenous peoples would travel three days from Lake Ontario up the Carrying Place trail (with routes along both the Humber and Rouge rivers) to get to tkaronto, **place of trees in the water**, Atherley Narrows.

Another general interpretation of tkaronto is where the trees meet the water, as the large forest in the area was nourished by all the water of the Oak Ridges Moraine. Find out about the Tkaronto Food Forest.

12. OAK, BUR
Quercus macrocarpa



Large
Hardy
Slow growing, acorns in fall, leaves remain in winter.



The **Great Lakes/St. Lawrence River Basin** is the **single largest watershed in the world**, ranging from beyond the western point of Lake Superior to Trois-Rivières, Quebec. The entire basin covers about 240,000 km². It contains more than **20% of the world's supply of surface fresh water** and about 84% of North America's surface fresh water.

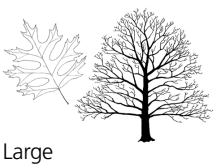
Approximately 34 million people in the United States and Canada live in the Great Lakes Basin, along with more than 3,500 species of plants and animals, including 170+ species of fish. About 185 First Nations, Métis, or Native American Tribes' communities reside and have traditional Territories and homelands around the Great Lakes Basin.

The **GTB is on the north shore of Lake Ontario**, one of the five Great Lakes.

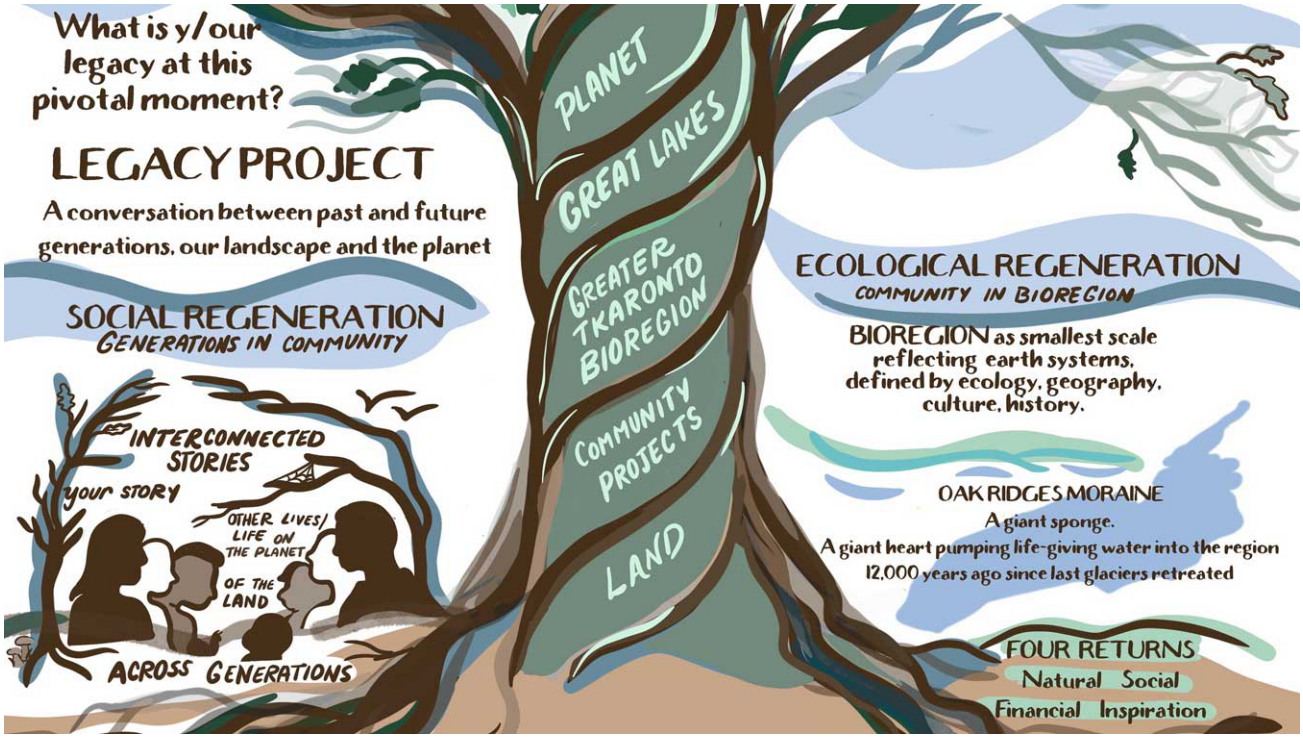
The Great Lakes Basin has nearly 25% of Canadian agricultural production. 5% of Ontario is farmland, with all Class 1 and 2 farmland found in the GTB.

So, the GTB has a lot of fresh water and some of the best soil in Canada. Find out more about the Great Lakes Basin.

13. OAK, SHUMARD
Quercus shumardii



Large
Very sensitive
Shiny green leaves, pyrimidal form, reddish-brown fall colour.



From earth systems science, the bioregion – not your neighbourhood or city – is the **smallest scale where we need to take action that will make a difference**. If we do the right things relative to the bioregion, this can affect planetary processes and have meaningful long-term impact.

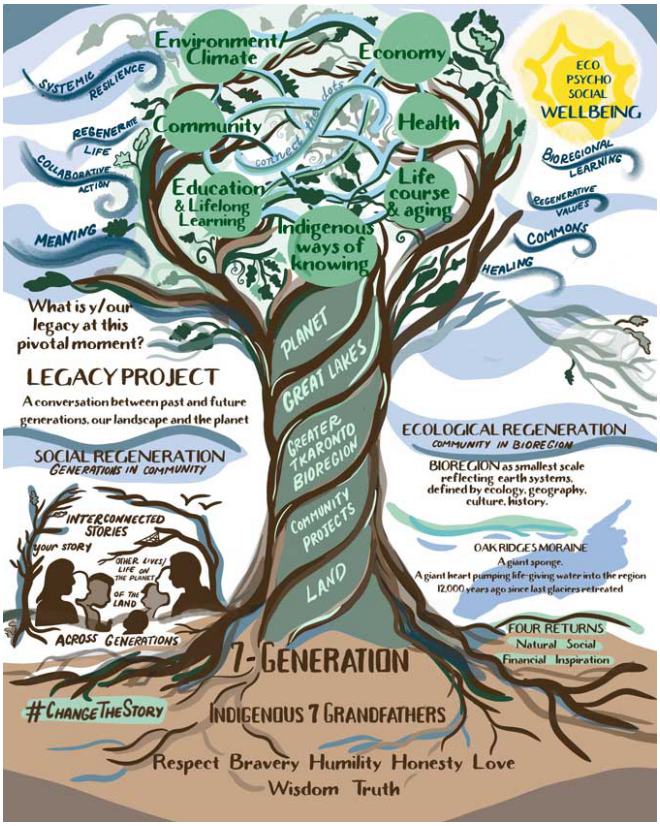
We exist in *relationship* – with our own bodies, each other, and the planet. The smallest unit of "health" isn't the cell or the individual, but the bioregion. Without healthy bioregions, you can't have healthy people or families or communities. And if the planet itself doesn't have healthy bioregions, then it will not be healthy.

When the focus is on the bioregion, one person's backyard makes more sense in the larger story. What happens on the **land** through **community projects** must be coherent within the **bioregion**, and then what happens in the GTB connects into the subcontinental scale of the **Great Lakes Basin** and ultimately **planetary processes** (e.g. jet stream, patterns of heat and drought). A **fractally scale-linked** (i.e. nested) network of activated bioregions of at least 500,000 ha each reaching a critical mass of 1,000 landscapes could, cumulatively, regenerate the entire Earth.

Every bioregion is unique; bioregions design locally while learning globally. The GTB is part of the new Bioregional Earth network, both leading and learning from others.

14. OAK, RED
Quercus rubra

Large
Hardy
Slow growing, red leaves in fall, leaves remain over winter.



"**Regenerative design** can bring a river back to life. It can restore the health and vitality of an individual and their family. It can transform grief and trauma into vital pathways of healing for people, community, and ecosystems. Combining Indigenous lifeways with the best scientific knowledge about human behaviour, cultural evolution, and the dynamic Earth, a path can be made by walking it throughout the rest of this century and beyond." Joe Brewer, *The Design Pathway to Regenerating Earth*

Listen to grade 12 student Ethan Bonerath interview global regeneration leader Joe Brewer, who is working in his own 500,000 ha bioregion around Barichara, Colombia.

Through 7-Generation GTB, we are all, young and old, helping to grow a Tree of Life.

15. BASSWOOD
Tilia americana

Large
Moderately sensitive
Small, fragrant flowers in June, yellow fall colour.