



Essex Region Conservation
the *place* for life

Claire Sanders, Climate Change Specialist



Our Changing Climate



“Climate change has already begun and it is severe, pervasive, and irreversible”.

Intergovernmental Panel on Climate Change - IPCC, 2014



carbon dioxide level (parts per million)

480
460
440
420
400
380
360
340
320
300
280
260
240
220
200
180
160

800,000 700,000

For mi

The Rodney & Otamatea Times

WAITEMATA & KAIPARA GAZETTE.

PRICE—10s per annum in advance

WARKWORTH, WEDNESDAY, AUGUST 14, 1912.

3d per Copy.

Science Notes and News.

COAL CONSUMPTION AFFECTING CLIMATE.

The furnaces of the world are now burning about 2,000,000,000 tons of coal a year. When this is burned, uniting with oxygen, it adds about 7,000,000,000 tons of carbon dioxide to the atmosphere yearly. This tends to make the air a more effective blanket for the earth and to raise its temperature. The effect may be considerable in a few centuries.

this line

← current level

← 1950 level

100,000 0

Direct Impacts: Warmer.

climateatlas.ca

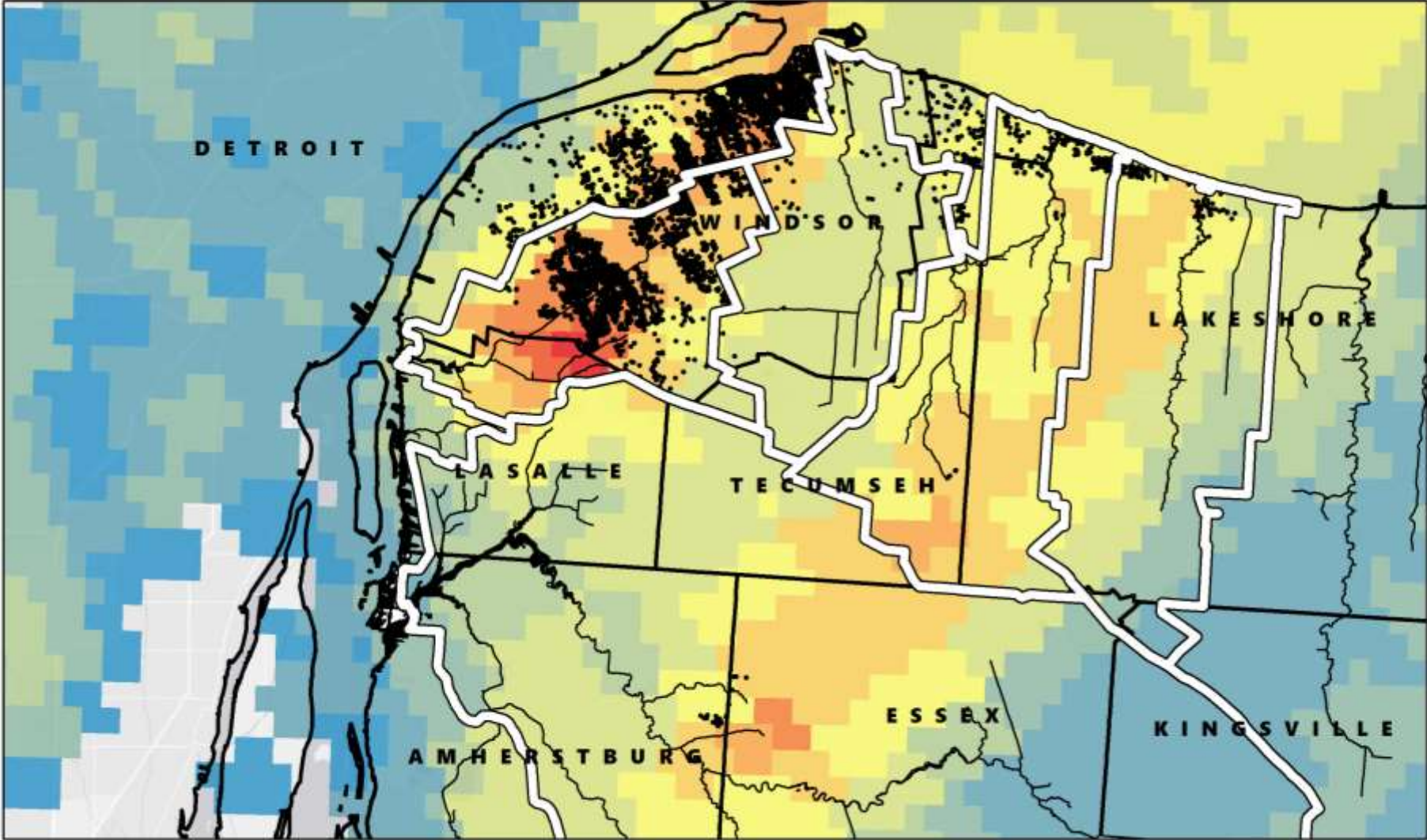


Direct Impacts: Wetter.

IBC reported the insured losses from the 2016 and 2017 storms totalled \$232 million



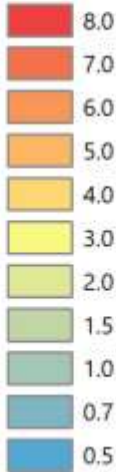
AUGUST 28/29, 2017



LEGEND

- Municipal Flooding Calls
- ▭ Subwatershed Boundary

NOAA NEXRAD Storm Totals (in.)



NOTES:
Municipal Flooding data provided by municipal sources.

NOAA NEXRAD radar data retrieved online. Storm totals are compiled by radar reflectivity and are not verified. This is not a final assessment.

Map compiled by ERCA, September 2017.

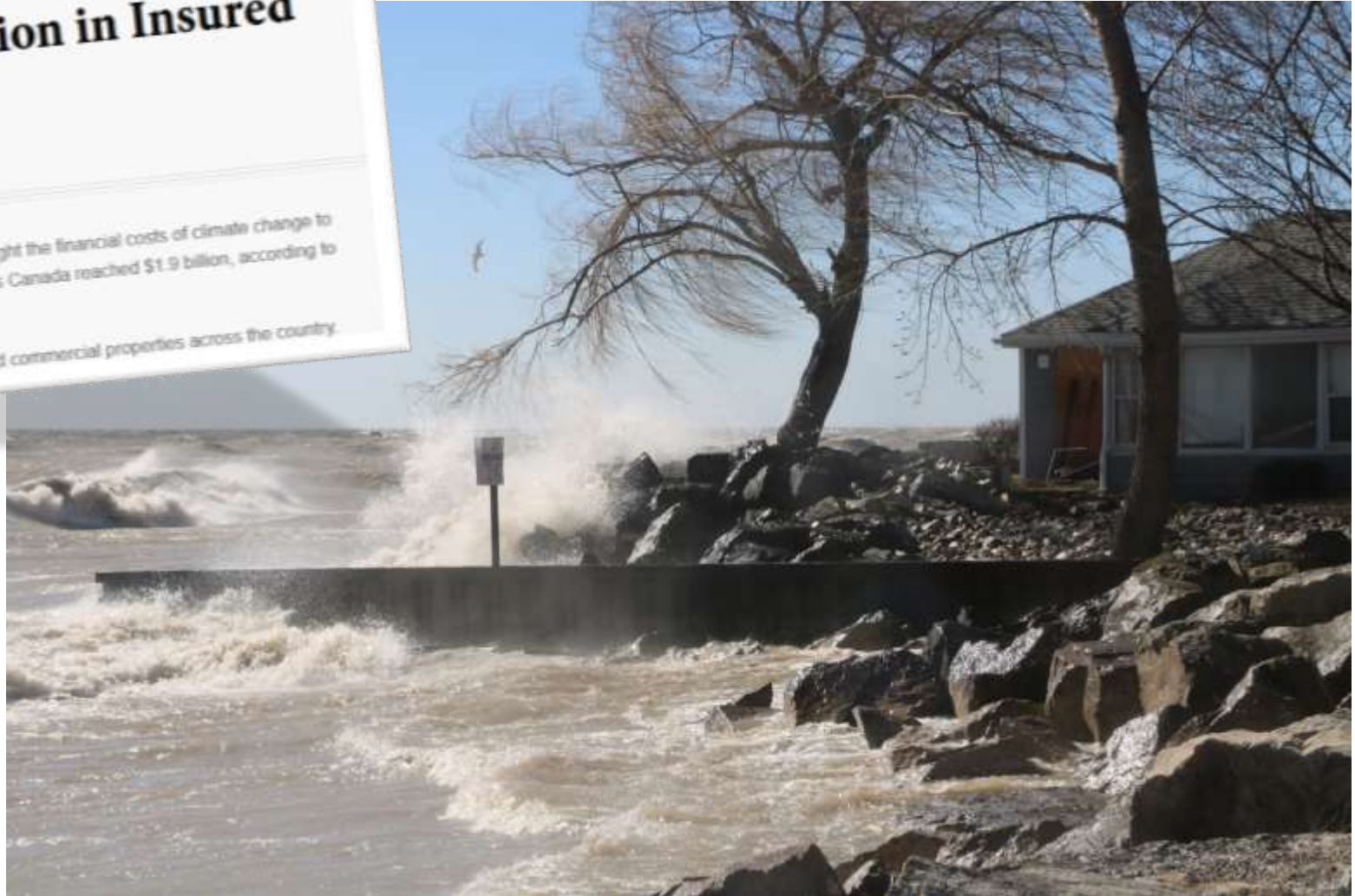


Direct Impacts: Wilder.

Severe Weather Causes \$1.9 Billion in Insured Damage in 2018

January 16, 2019 (OTTAWA) – Severe weather across Canada continues to highlight the financial costs of climate change to insurers and taxpayers. In 2018, insured damage for severe weather events across Canada reached \$1.9 billion, according to Catastrophe Indices and Quantification Inc.

Ice storms, floods, windstorms and tornadoes, did damage to homes, vehicles and commercial properties across the country.



Indirect Impacts: Human Health.

Climate change is the greatest health challenge of the 21st century.

- Physiological effects.
- Mental health effects.
- Vector-borne diseases.
- Children, elderly, and New Canadians are at greatest risk



Indirect Impacts: Nature and Ecosystems.

Warmer lakes, tributaries and terrestrial ecosystems.

- Increased harmful algal blooms.
- Wetland loss.
- New invasive species.
- Species displacement & local extinction.



Indirect Impacts: Agriculture.

How corn farmers are adapting to climate change

Written by Allison Myles 9 days ago

Read 13 min



Share

A new study analyzing U.S. corn yields over the last few decades seems to support that notion. It looked at temperature trends in the Midwest, examined how farmers adjusted their planting practices to take advantage of them, and showed that U.S. farmers were able to grow more corn, not less.



Yes, but what does this MEAN to us?

How will this impact things in our lives that have always been there?

- No more outdoor ice rinks
- Impacts to recreation and tourism
 - Bird watching
 - Water sports, boating, fishing
 - Local wine!
- Disappearing / shifting family farms
- What else matters to us in Windsor-Essex?

What's Canada without backyard hockey rinks?

BY CLAIRE BRASSARD

POSTED MAY 14, 2019 6:08 AM EDT LAST UPDATED MAY 21, 2019 AT 12:38 PM EDT



LOCAL LOCAL SPORTS NATIONAL SPORTS



What does this mean to me?



MENU CBCNEWS

Hamilton | FOOTPRINT


What heat waves and climate change mean for the future of kids' camps and sports

The Hamilton-Toronto area could see 50 days of 30 C plus temperatures by 2050

Dan Taekema - CBC News

Posted: July 30, 2019
Last Updated: July 30, 2019

A young girl in a green soccer jersey with 'Tim Hortons' on it is kicking a soccer ball on a grassy field. She is wearing black socks and pink shoes.



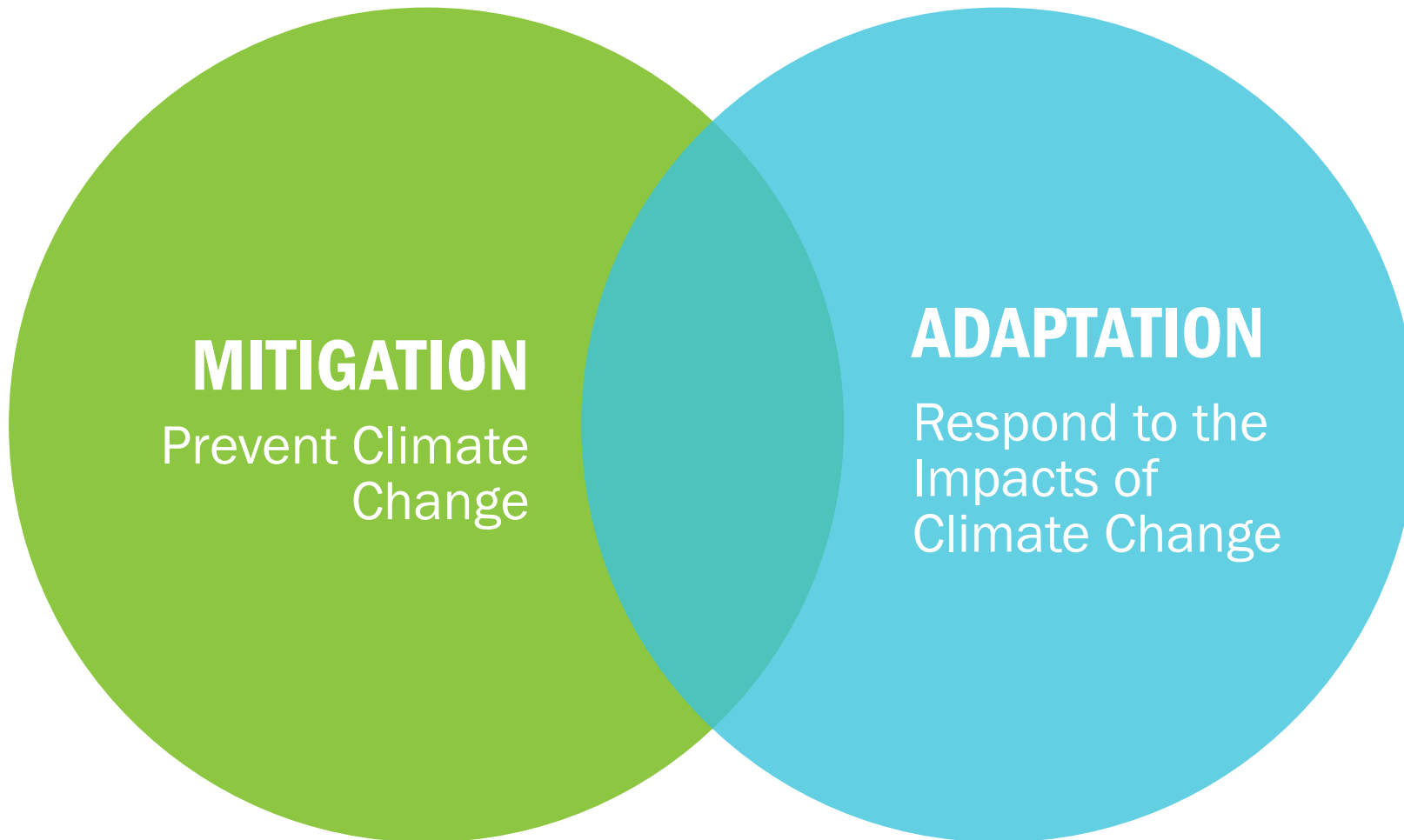
Climate change challenges are too big and too complex to be addressed by a single organization alone.

Windsor Essex County Climate Collaborative (WEC3)

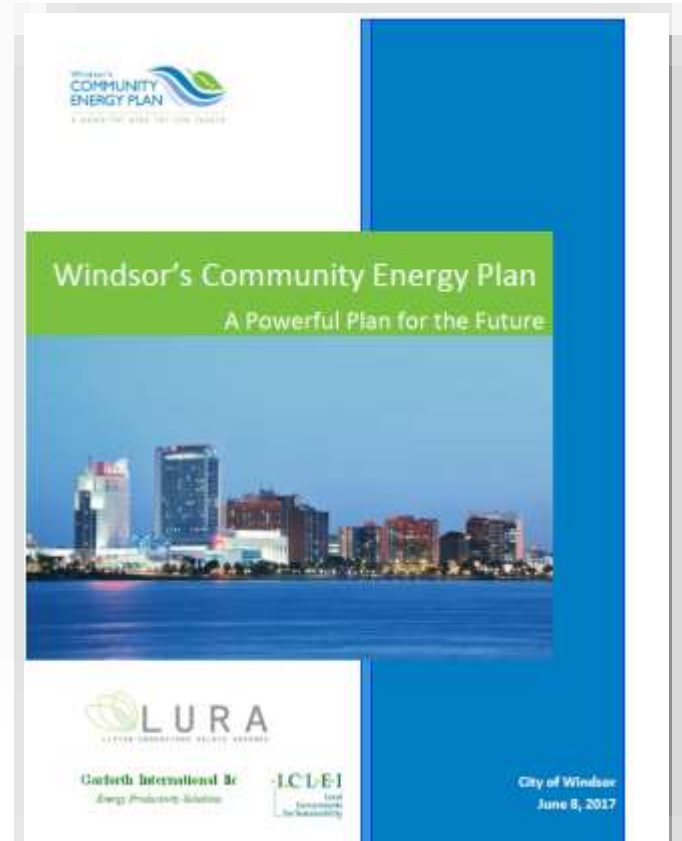
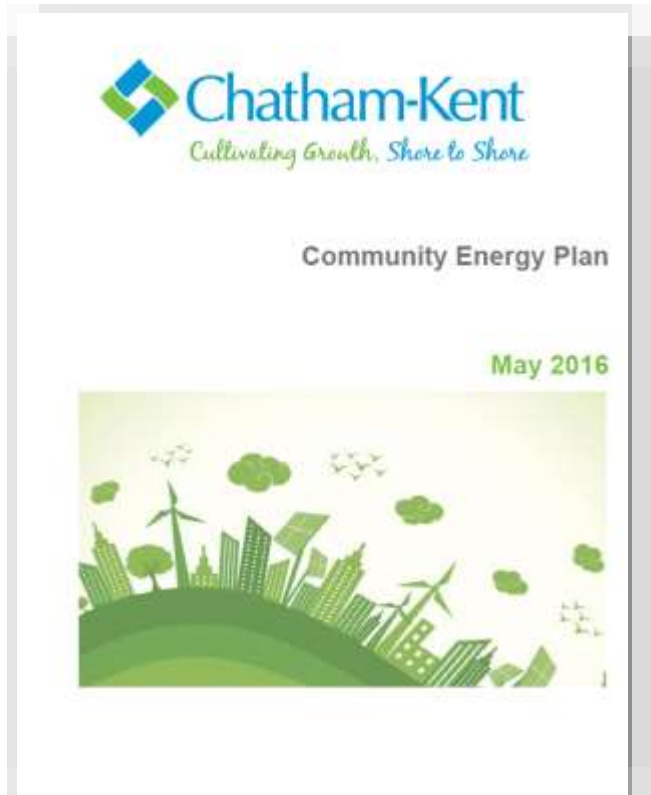


Nature & Ecosystems:	Agriculture	Water Resources
<p>Areas of Interest</p> <ul style="list-style-type: none"> • Urban forest management, species adaptation, and tree genetics • Forest conservation policies • Natural Areas Systems/Management • Invasive Species <p>Resources</p> <ul style="list-style-type: none"> • A Practitioner's Guide to Climate Change Adaptation in Ontario's Ecosystems (MNRF) • Essex Region Natural Heritage System Strategy <p>Lead</p> <ul style="list-style-type: none"> • ERCA 	<p>Areas of Interest</p> <ul style="list-style-type: none"> • Nutrient management • Drainage/Rural Stormwater Management • Soil Management <p>Resources</p> <ul style="list-style-type: none"> • Ontario Climate and Agriculture Assessment Framework (OCAAF) <p>Lead:</p> <ul style="list-style-type: none"> • Essex County Federation of Agriculture • Essex Soil and Crop Improvement Association 	<p>Areas of Interest</p> <ul style="list-style-type: none"> • Flood plain mapping • Stormwater Management Planning • LID and Green Infrastructure • Urban flooding • Building codes and resilience standards for new buildings & retrofits • Water/Climate monitoring networks • Source Water Protection <p>Resources</p> <ul style="list-style-type: none"> • IDF Study <p>Lead</p> <ul style="list-style-type: none"> • ERCA
Land Use & Watershed Planning	Human Health & Well-being	Energy
<p>Areas of Interest</p> <ul style="list-style-type: none"> • Watershed planning and policy • Land-based carbon inventories • Active Transportation and Transit • Road maintenance • Waste reduction <p>Resources</p> <p>??</p> <p>Lead:</p> <ul style="list-style-type: none"> • ERCA 	<p>Areas of Interest</p> <ul style="list-style-type: none"> • Heat index • Vector-borne disease <p>Resources</p> <ul style="list-style-type: none"> • Local government adaptation planning and Ontario Climate Change toolkit <p>Lead:</p> <ul style="list-style-type: none"> • Windsor-Essex Health Unit 	<p>Areas of Interest</p> <ul style="list-style-type: none"> • Energy use and greenhouse gas emissions profile • Region-wide energy plan • County-wide renewable energy targets <p>Resources</p> <ul style="list-style-type: none"> • Ontario's Climate Action Plan <p>Lead:</p> <ul style="list-style-type: none"> • Enwin/Enbridge

Mitigation and Adaption.

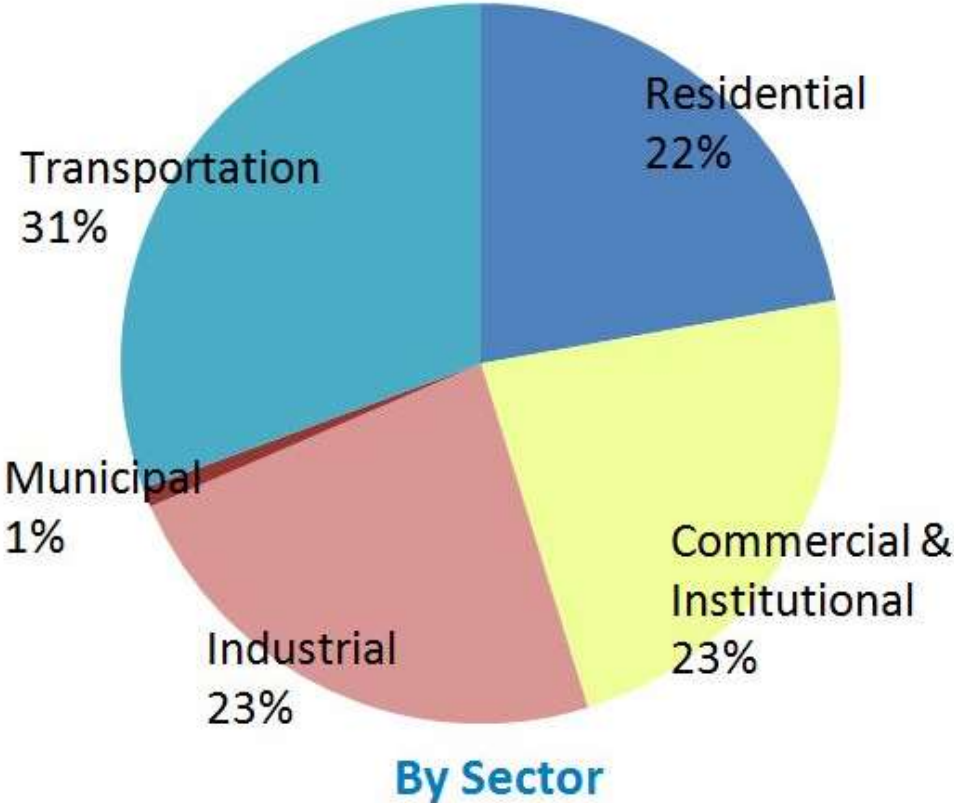
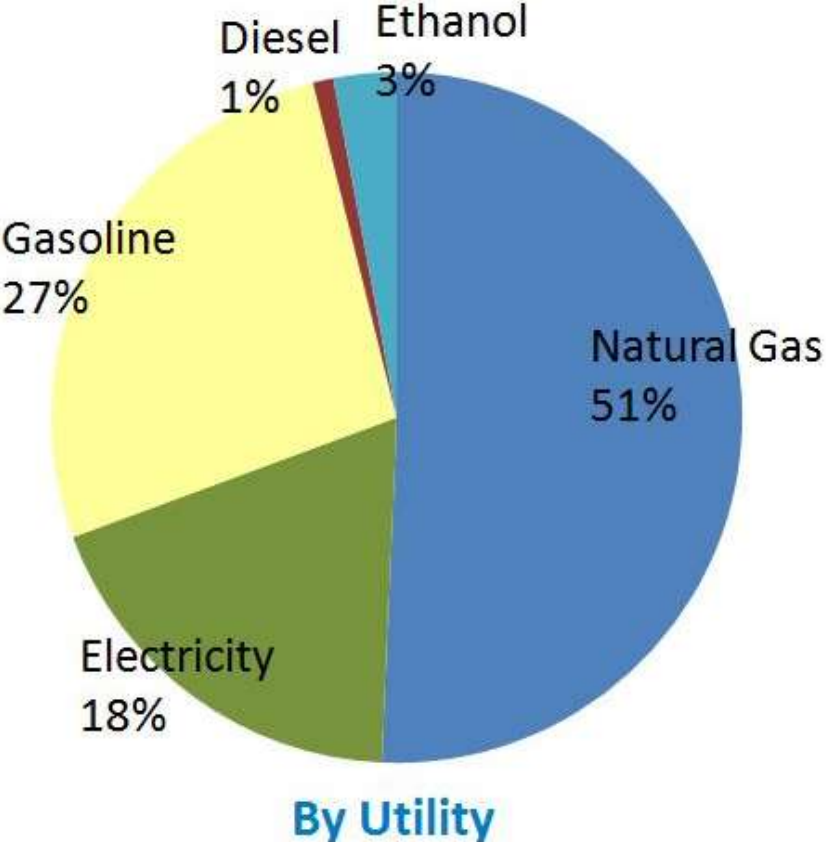


Mitigation: Energy Planning.

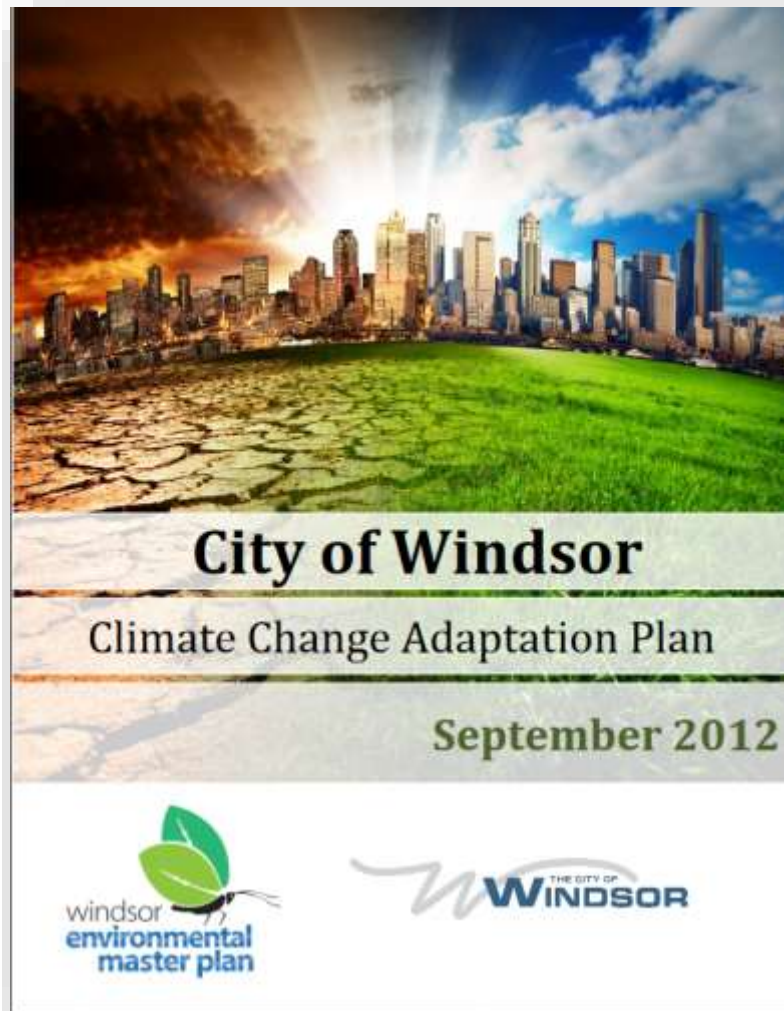


- Understand energy use and emissions
- Sustainability and Security
- Cost Savings
- Innovation
- Green Initiatives
- Economic Development

Windsor's 2014 Greenhouse Gas Emissions.



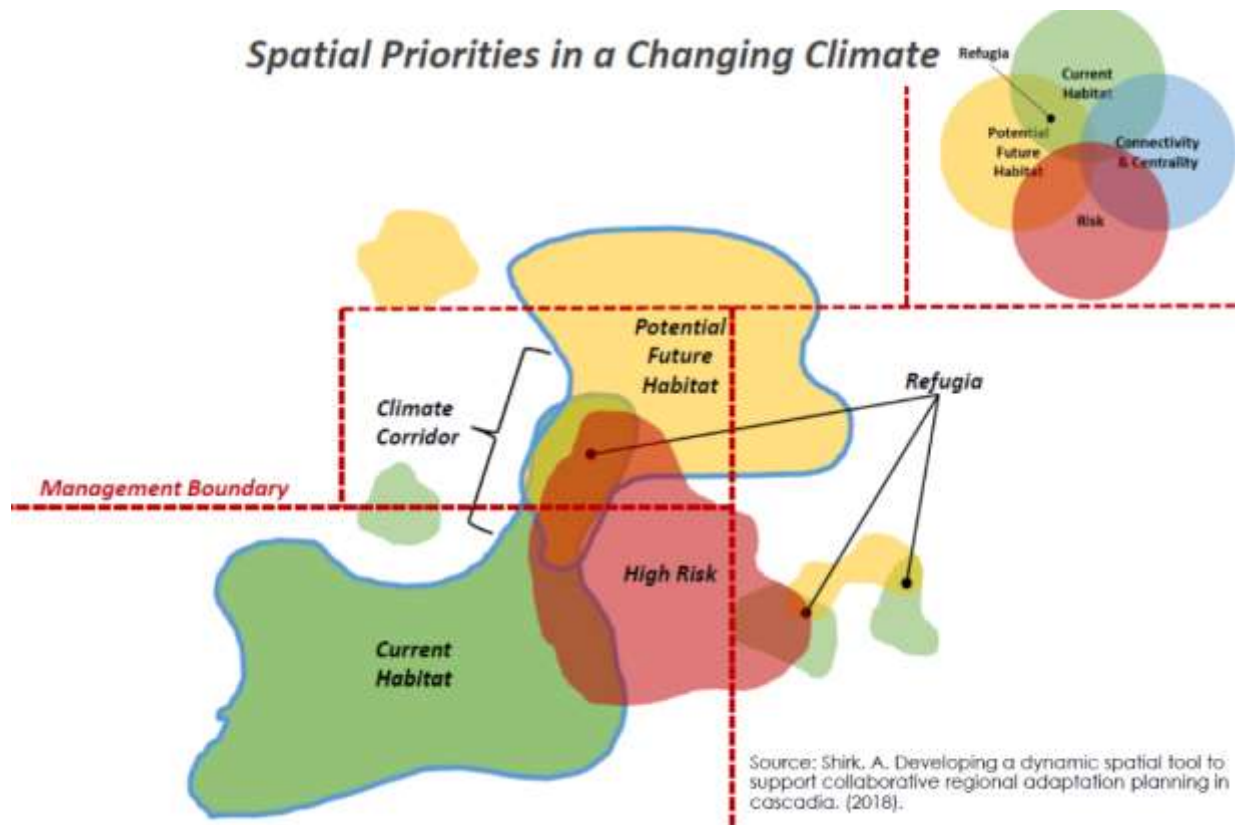
Municipal Adaptation: Addressing Unavoidable Impacts



Municipalities have a significant role to play in adapting to climate change and reducing the risk associated with increased:

- Precipitation
- Temperatures

Regional Adaptation: Addressing Unavoidable Impacts



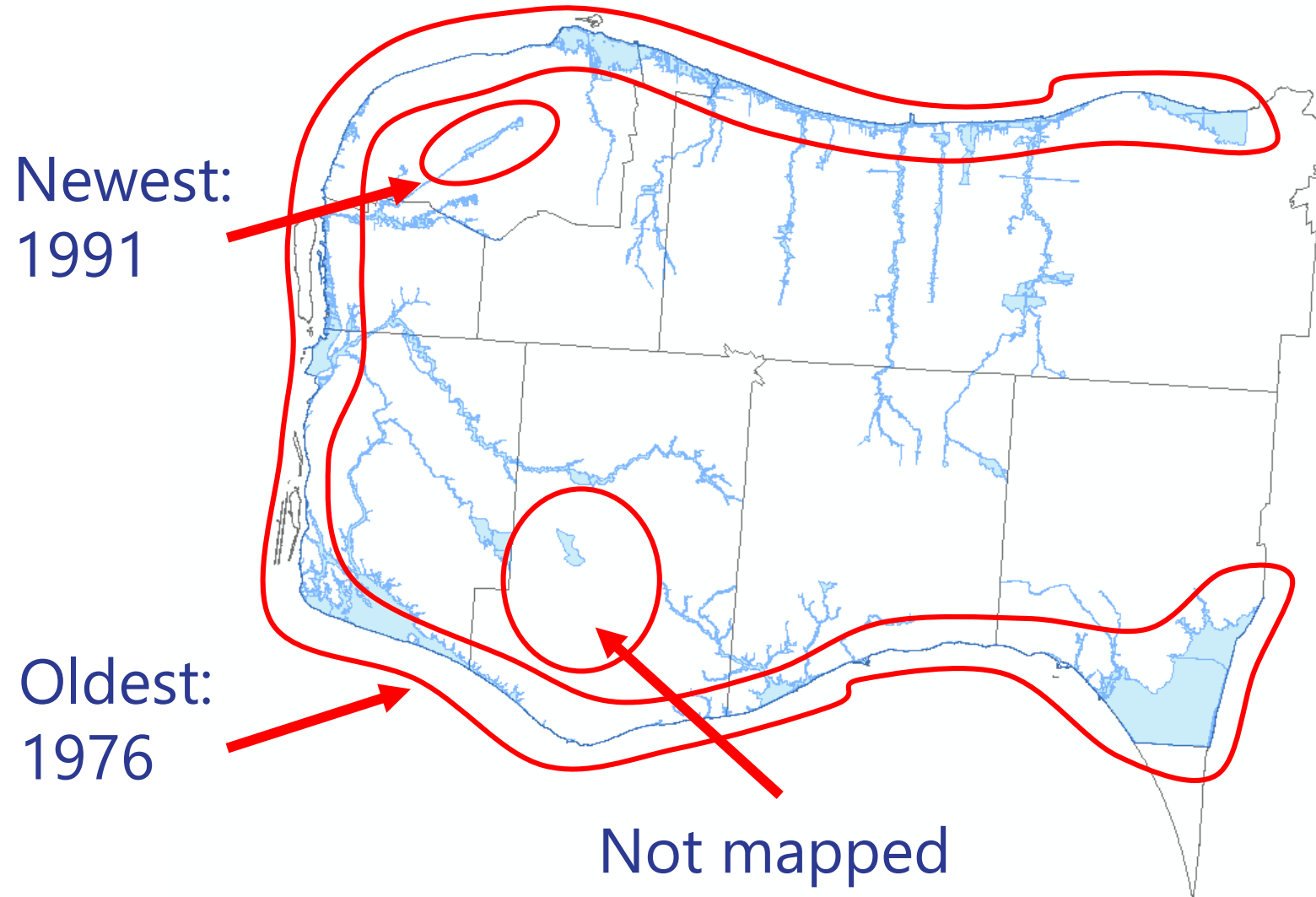
- What species are most vulnerable?
- Develop adaptation strategies for species
- Identify adaptation options for restoration programs
- What invasive species do we need to prepare for?

Regional Adaptation: Addressing Unavoidable Impacts



- What will be the impact on our water quality?
- What will be the impact on our water quantity?
- Identify adaptation options for restoration programs (agricultural BMPs)

Regional Adaptation: Addressing Unavoidable Impacts

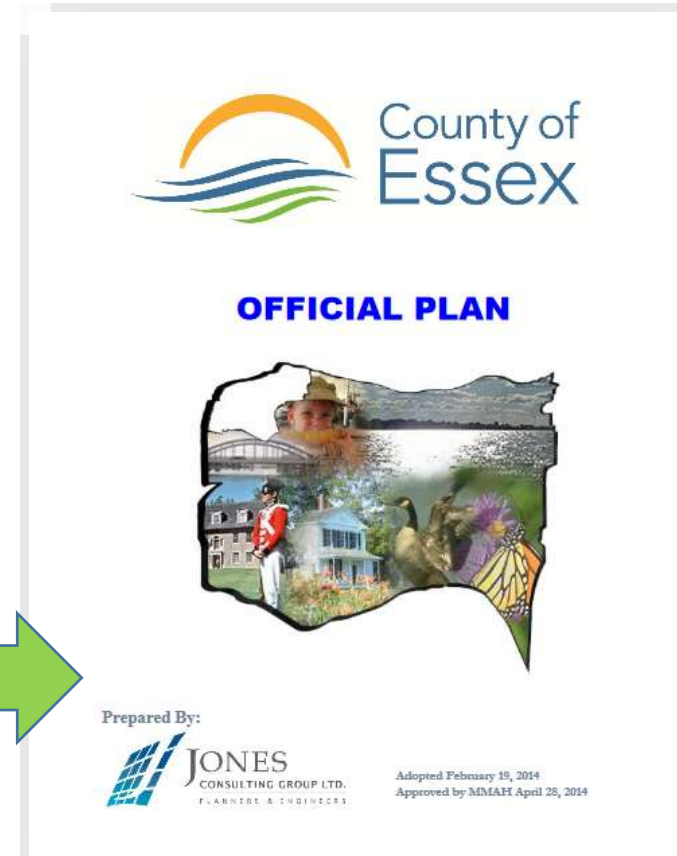
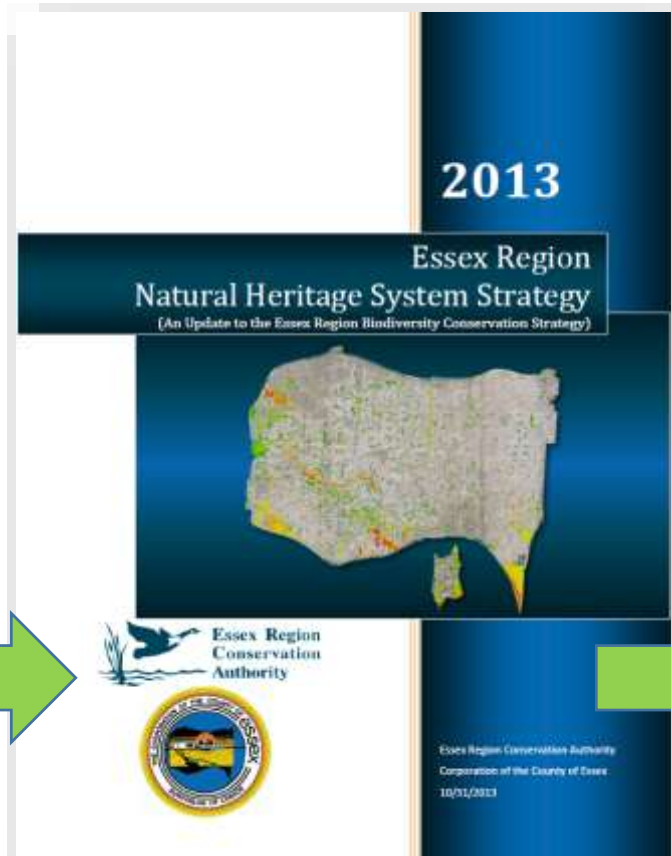
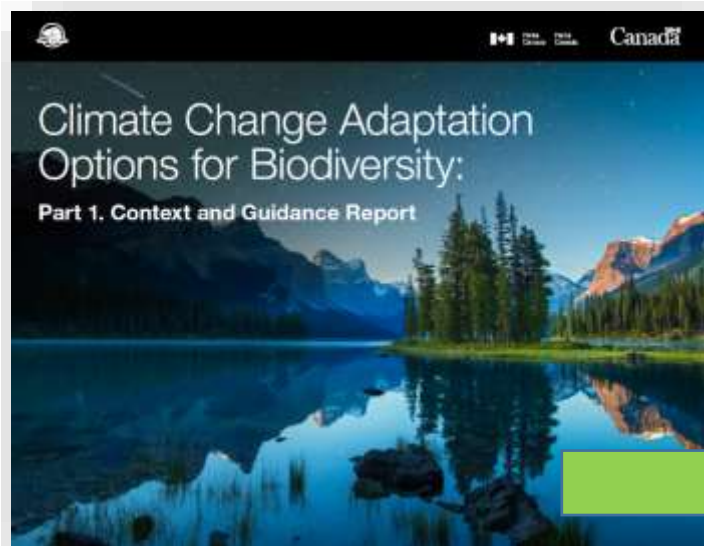


- Updating hazard maps



DEVELOPING THE STRATEGY





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What can we all do for the climate?

- Consume and use less... everything! (energy, plastic, water)
- Drive/fly less, change your thermostat (↑ summer, ↓ winter), use those energy rebate coupons...
- Use renewable energy and invest in it.
- Plant more trees!
- Eat for a climate-stable planet (less meat, eat local, reduce food waste, compost.)
- Tell your story. Listen to others.

SAVE ON ENERGY
POWER WHAT'S NEXT



“Anything is possible...it’s not too late to turn things around.”



“Anything is possible...it’s not too late to turn things around.”

