



# Quinte CONSERVATION

*We do it for you!*  
your life. your home. your family.



*Bay of Quinte Monitoring*



*Habitat Restoration and enhancement*



*Water Quality Monitoring*

QuinteConservation.ca

# Quinte Conservation



- Community based environmental protection agency
- Provides cost-effective environmental expertise and leadership that develops and delivers programs to ensure the healthy coexistence between the community, its environment and its economy

**Our Mission** is to create a sustainable ecosystem where people and nature live in harmony.

**Our Vision** is to be the premier ecologically sustainable watershed.



*Rural Stewardship Projects*



*Environmental Service Projects*



*Educational Programing in Schools*

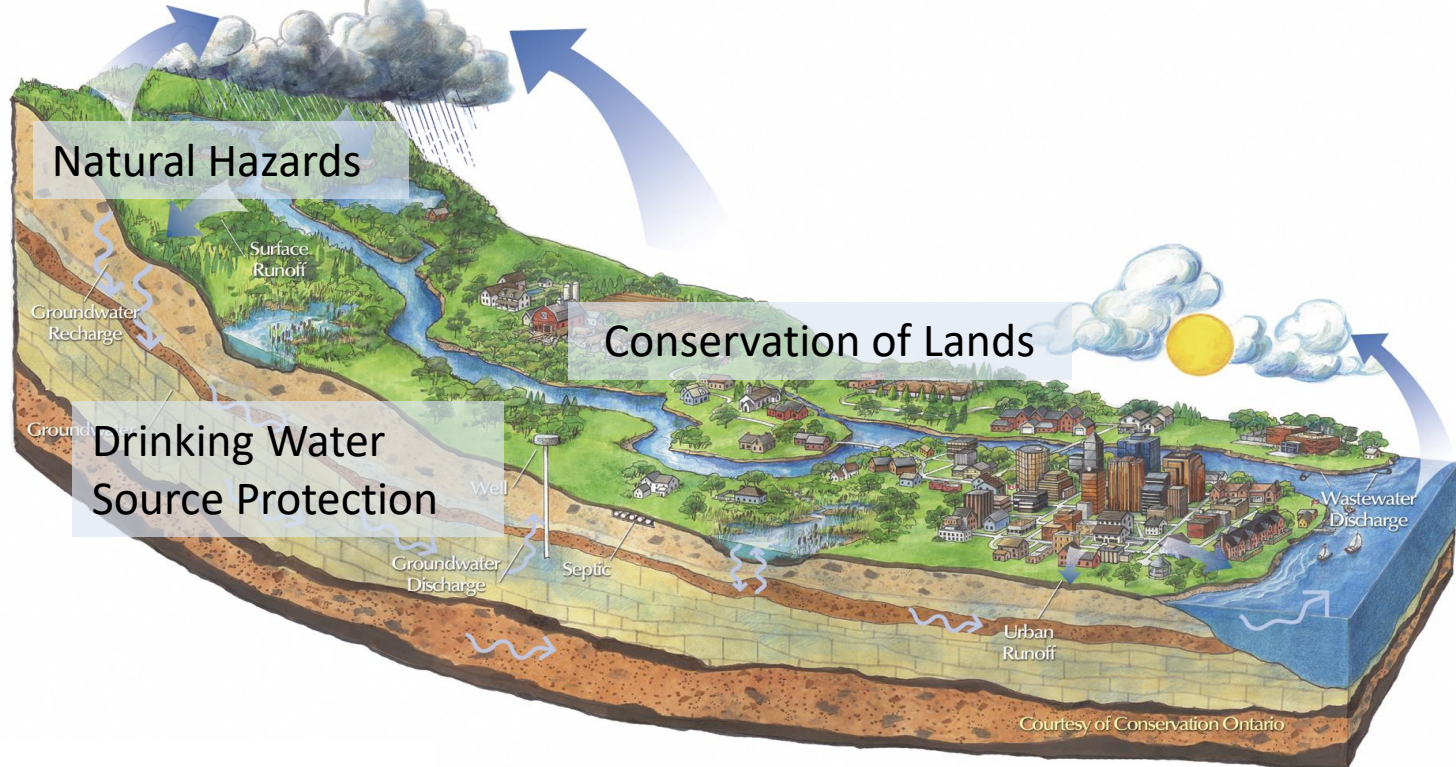
# Our Watershed

- Quinte Conservation is one of Ontario's 36 conservation authorities.
- Our 6,000 square kilometre area includes the drainage basins of the Moira, Napanee and Salmon Rivers and all of Prince Edward County and is home to over 167,000 people living in 18 municipalities.
- Quinte Conservation owns over 30,000 acres of land ranging from small parcels at some of our water control structures, to large tracts of over 1,000 acres, many with significant natural features.



# Foundational Watershed Management Activities Support Mandatory Programs

Watershed Monitoring | Data Collection & Modeling | Watershed Studies, Plans, Assessments & Strategies | Watershed Actions: Stewardship, Stormwater Management, Green Infrastructure, Outreach, Education & Communication



# Mandate of Conservation Authorities

To ensure the conservation, restoration and responsible management of Ontario's water, land and natural habitats through programs that balance environmental, human and economic needs.





- Our budget is supported by municipal levies and other funding sources such as; government, grants, user fees, donations and fundraising
- 2021 Budget, unanimously approved by QC Executive Board (3 absent members)



- Our staff of over 25 includes field technicians, forestry specialist, naturalist, a water resources engineer, regulation and enforcement officers, IT/GIS staff, financial coordinator, and other environmental specialists



- Local Municipalities
- Provincial & Federal Government
- Community Groups
- Trail & Naturalist Associations
- Landowners
- Service Groups
- “Friends Of” Groups
- Local School Boards
- Businesses



# PROGRAMS AND SERVICES





Quinte Conservation provides services to reduce the threat of loss of life and property damage

- Flood Warnings
- Flood Forecasting
- Operation and maintenance of flood control structures

# Low Water Response



- Quinte Conservation coordinates the local Low Water Response Team that provides information, leadership and preparedness in the event of a drought



- We sample in rivers and streams to better understand watershed health
- We participate in the Provincial Water Quality Monitoring Network and the Ontario Benthos Biomonitoring Network
- We collect water and quality and quantity data from 31 ground water monitoring wells
- We participate in the Provincial Groundwater Monitoring Network



- Quinte Conservation is active in promoting proper stormwater management of both new and existing developments throughout the watershed
- Work with local government , developers, and organizations on development reviews for stormwater solutions
- Provide environmental assessments for retrofit stormwater projects
- Demonstrate and promote low impact development solutions for stormwater management



- Protecting sources of municipal drinking water from over-use and contamination
- Clean Water Act
- Ministry of the Environment funded and directed
- Conservation Authorities are facilitators in developing a Source Water Protection Plan
- [quintesourcewater.ca](http://quintesourcewater.ca) for more information



- 39 Water control structures
- 14 are for flood control
- Others provide seasonal recreation, low flow augmentation and local water supply

# McLeod Dam Green Energy Project



- In 2007-2008 the McLeod Dam in Belleville was modified to generate electricity
- At peak performance it generates enough power for the equivalent of 400 homes
- This renewable energy reduces the equivalent of 5,000 tons of carbon dioxide each year from our air





- Floodplains and Wetlands are not good places to build
- Quinte Conservation provides technical advice to municipalities, landowners, lawyers and developers
- We review development proposals in regulated areas



- We partner with Lower Trent Conservation and work with federal and provincial partners on the “Big Cleanup” for the Bay of Quinte Remedial Action Plan





- Quinte Conservation staff have many years of experience managing and implementing monitoring programs as well as delivering high quality environmental projects
- Manage compensation projects
- Monitor compensation projects for vegetation, fish, and wildlife
- Provide financial compensation to private landowners and agricultural landowners for shoreline restoration and other water quality improvement projects



- We provide technical environmental information services to municipalities, the public and the media
- Educational programming in schools and through the H.R. Frink Centre Outdoor Education Program
- Stewardship and outreach to lake associations and stewardship councils
- Educational talks and public events

# Conservation Lands and Areas



- We own over 30,000 acres of land
- We have conservation areas open to the public daily dawn until dusk
- One conservation area doubles as a campground

# Depot Lakes Campground



- 3,000 acres
- 4 lakes
- Interior and seasonal sites
- Back country camping experience



- 8, 000 acres of managed forest plantation for long term ecological restoration (converting old fields into natural forest cover)
- 22,000 acres of sensitive lands set aside as conservation reserves (areas of natural scientific interest, wetlands, rock barrens, waterfront, and natural forest)



- Work with local groups and organizations to offer free public information seminars and events
- Develop fundraising strategies to support needed maintenance at conservation areas
- Communicate with the public and internally with staff through a variety of mediums



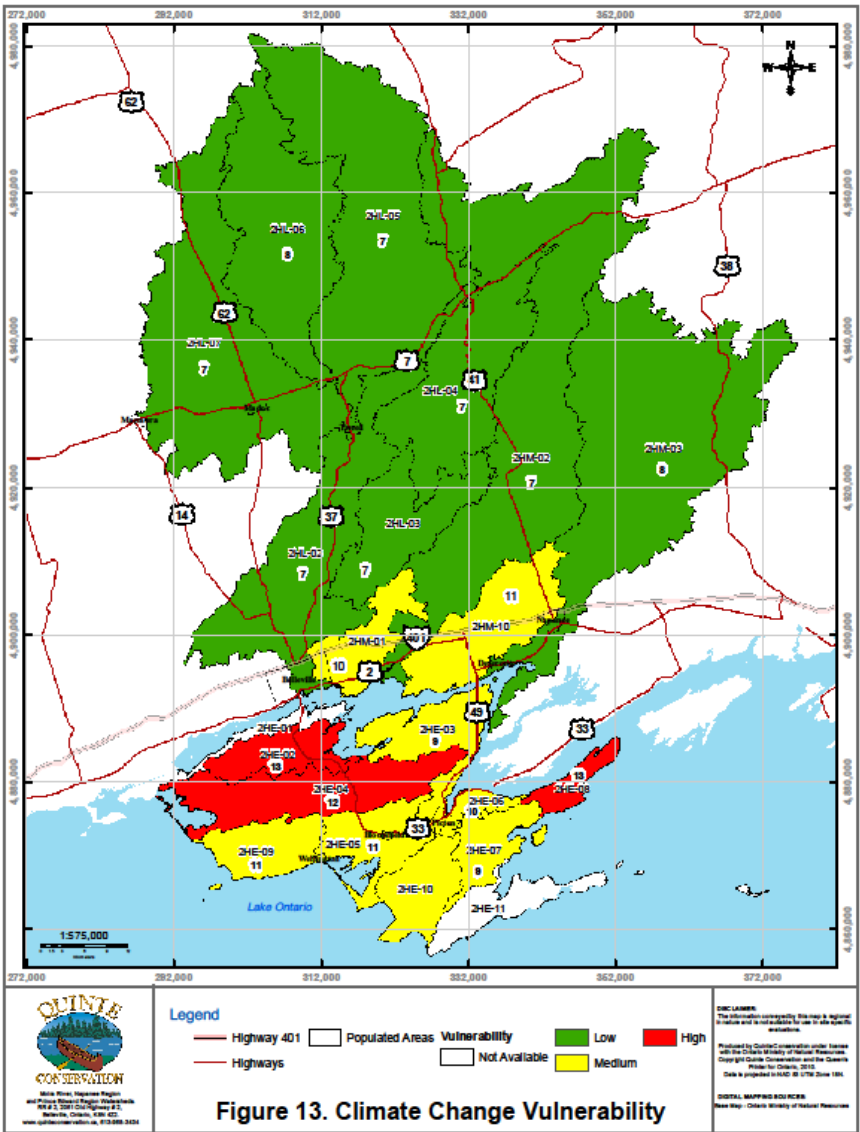
# Climate Change



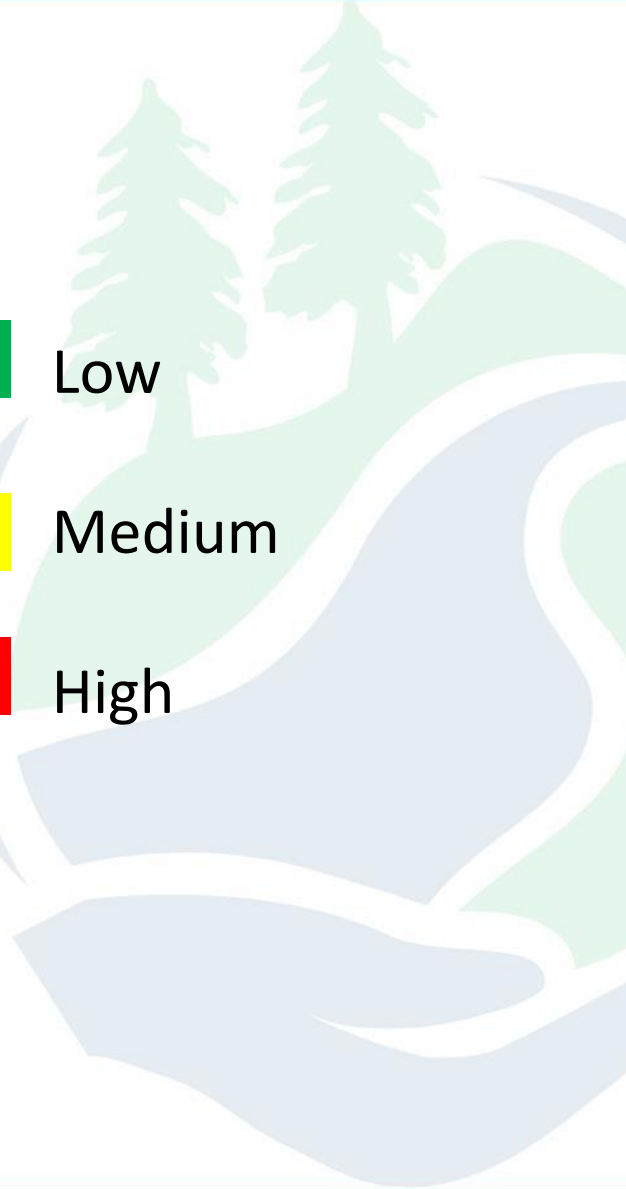
# Impacts of Climate Change



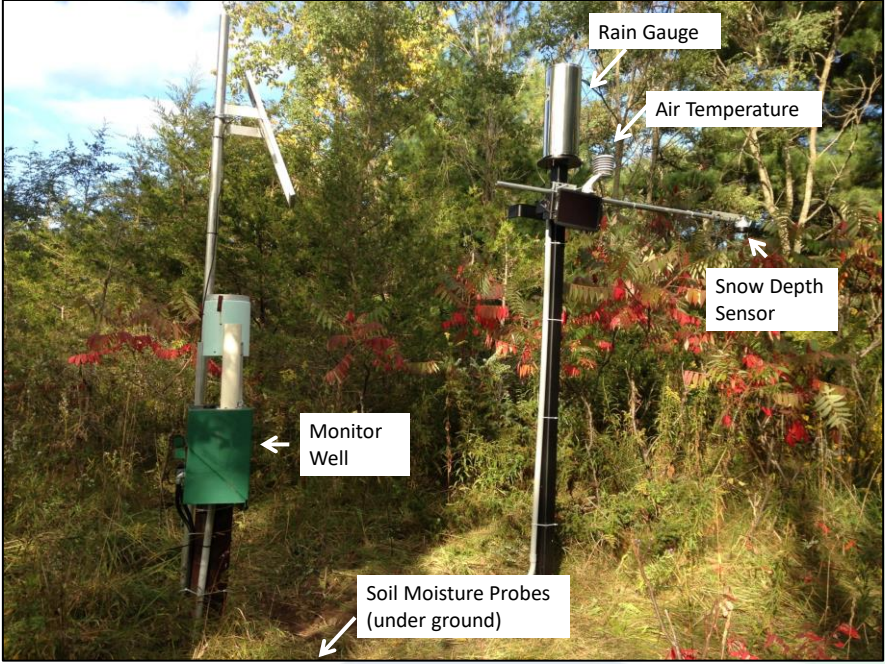
# Climate Change Sensitivity



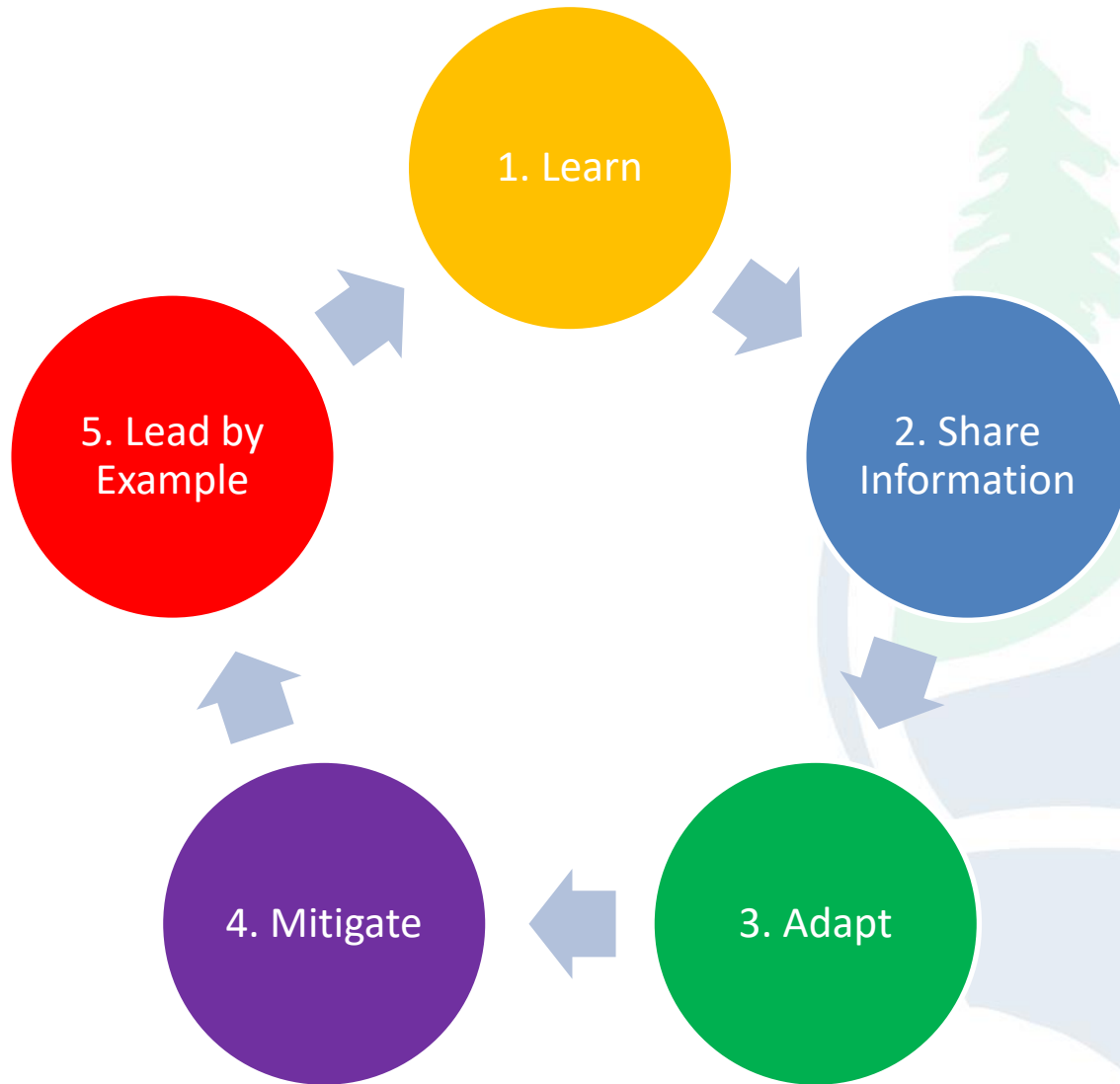
- Low
- Medium
- High



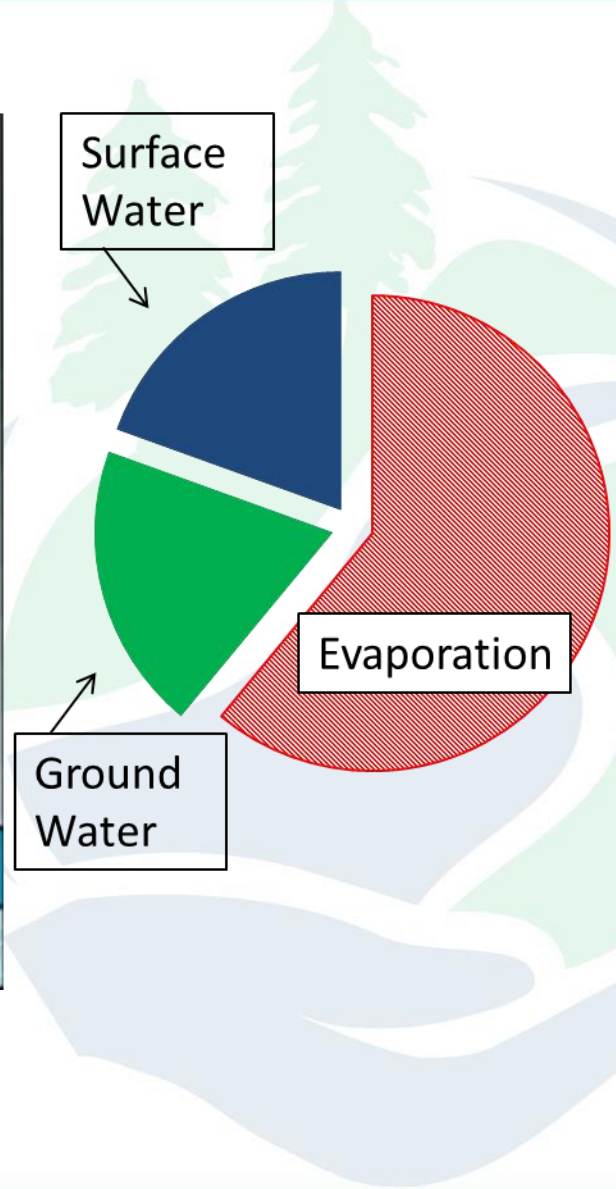
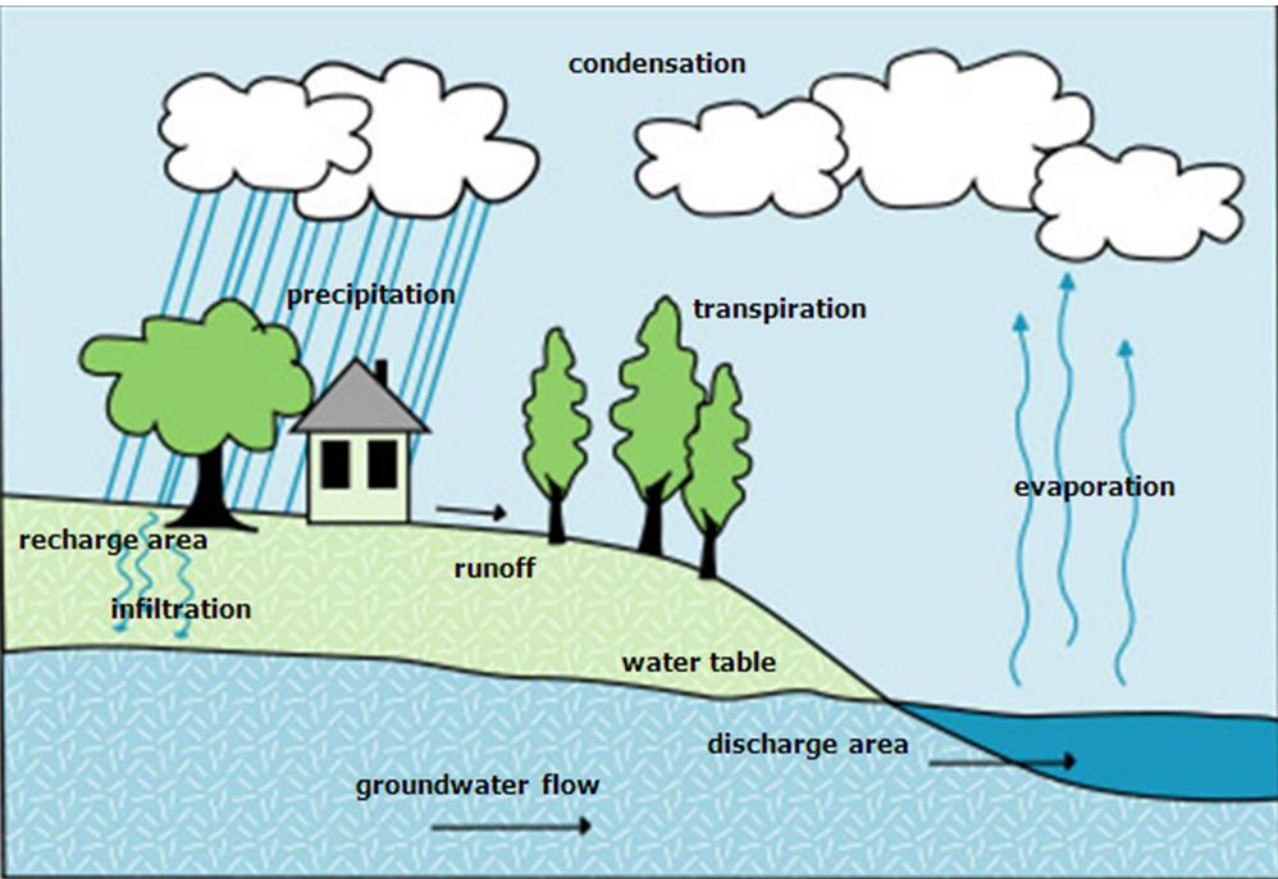
# Climate Change Monitoring



# Climate Change Monitoring

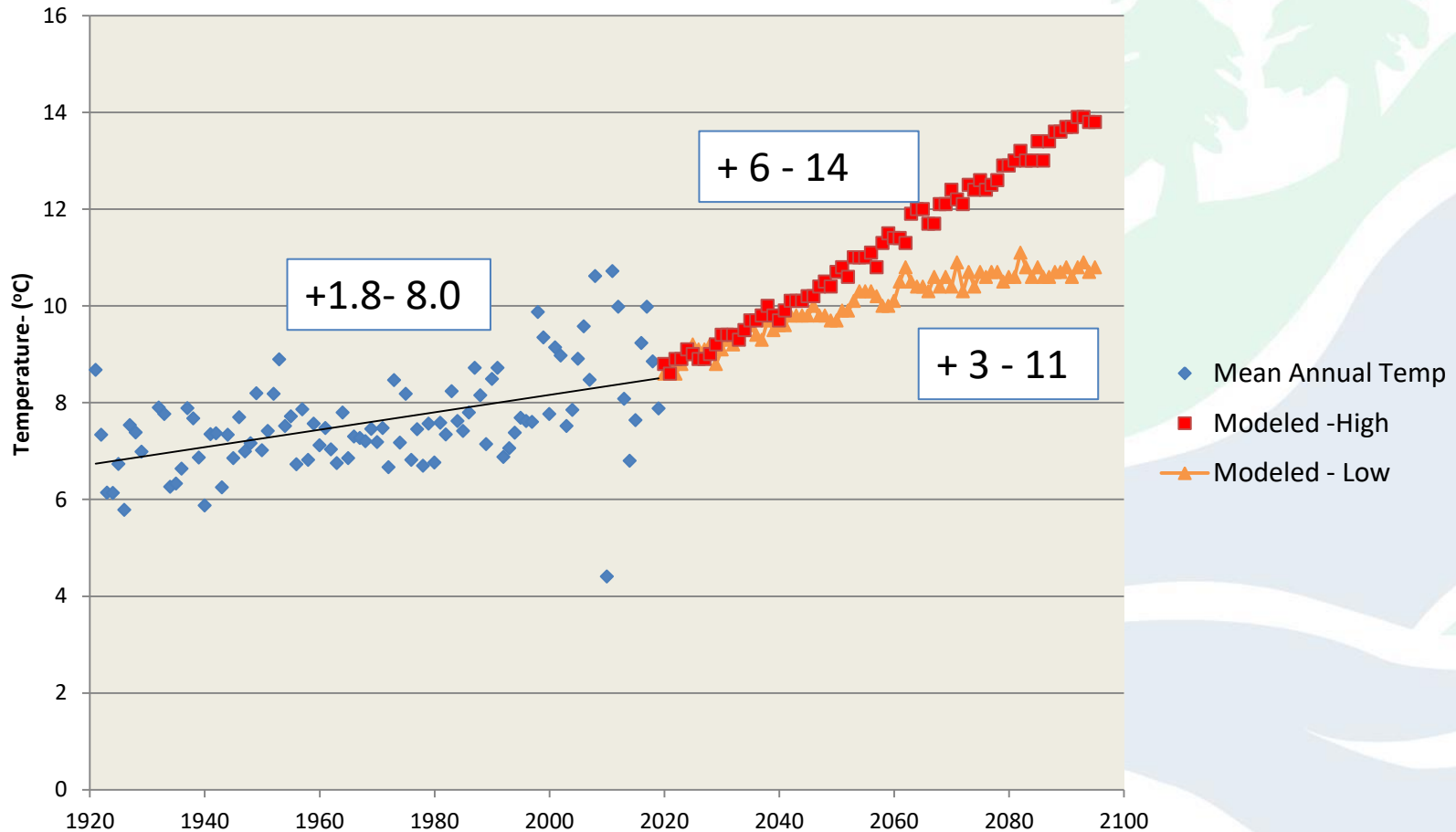


# Understanding Impacts from Climate Change

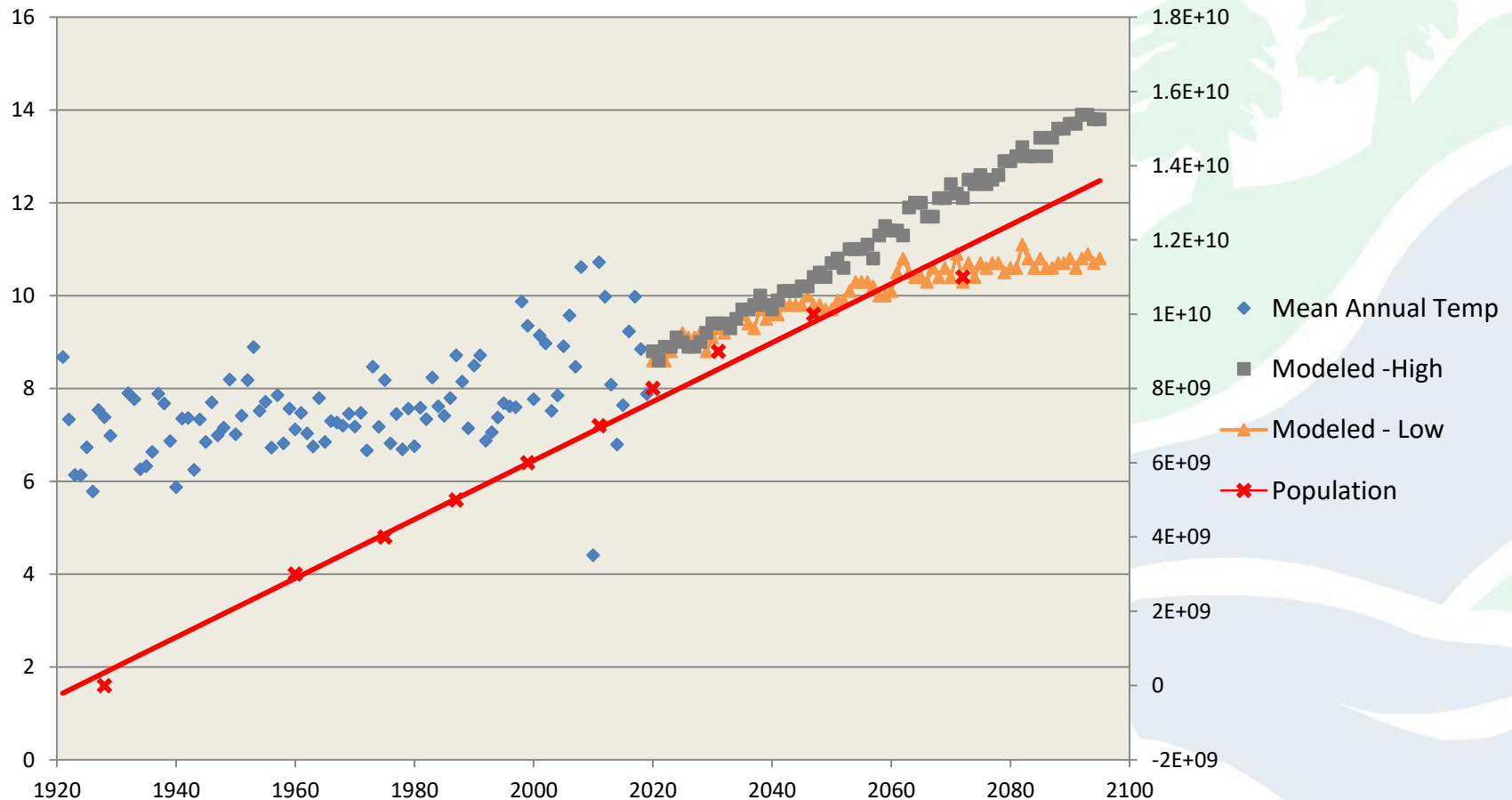


# Is Our Climate Changing ?

## Belleville Annual Average Temperature (°C)

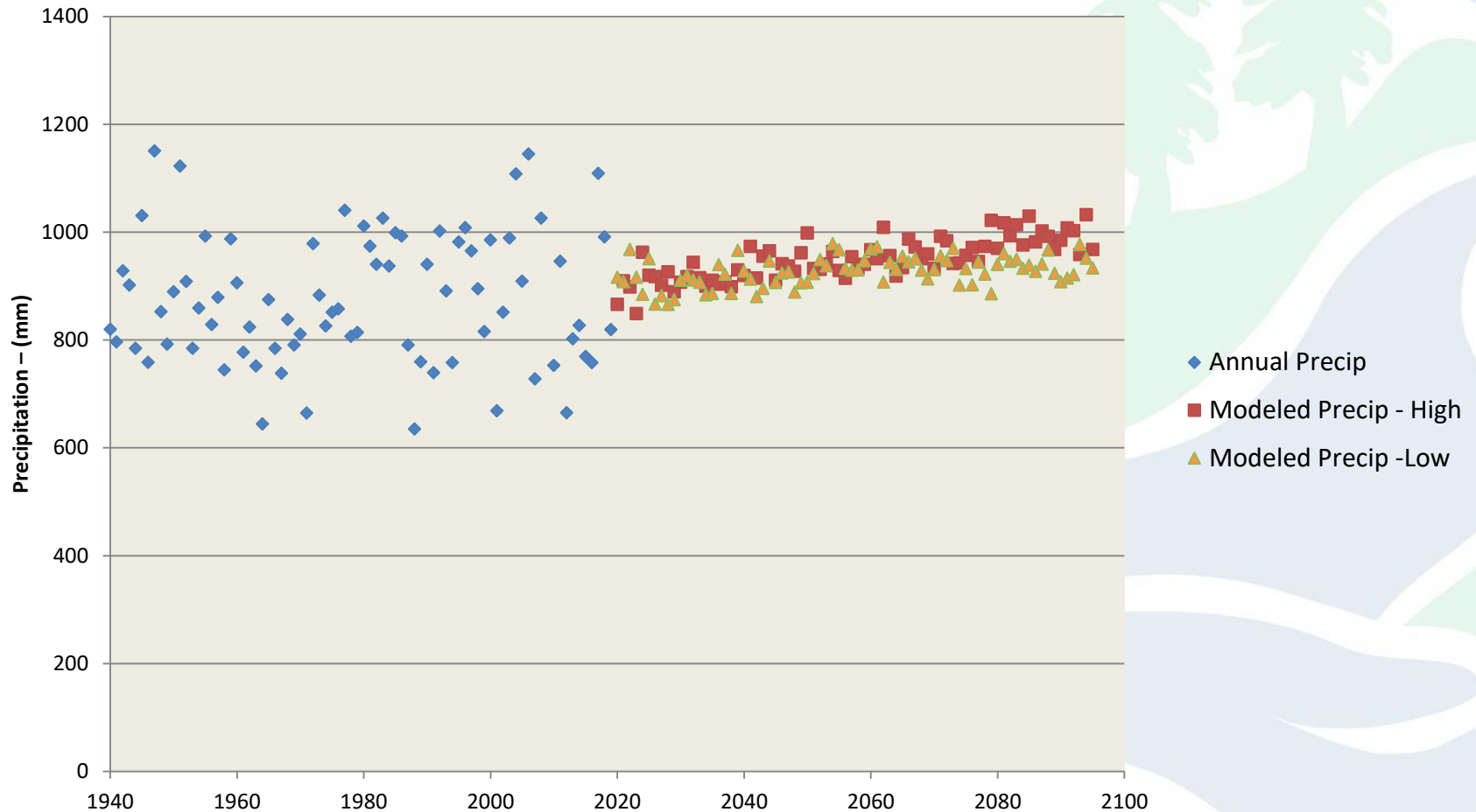


## Belleville Annual Average Temperature - C - Global Population



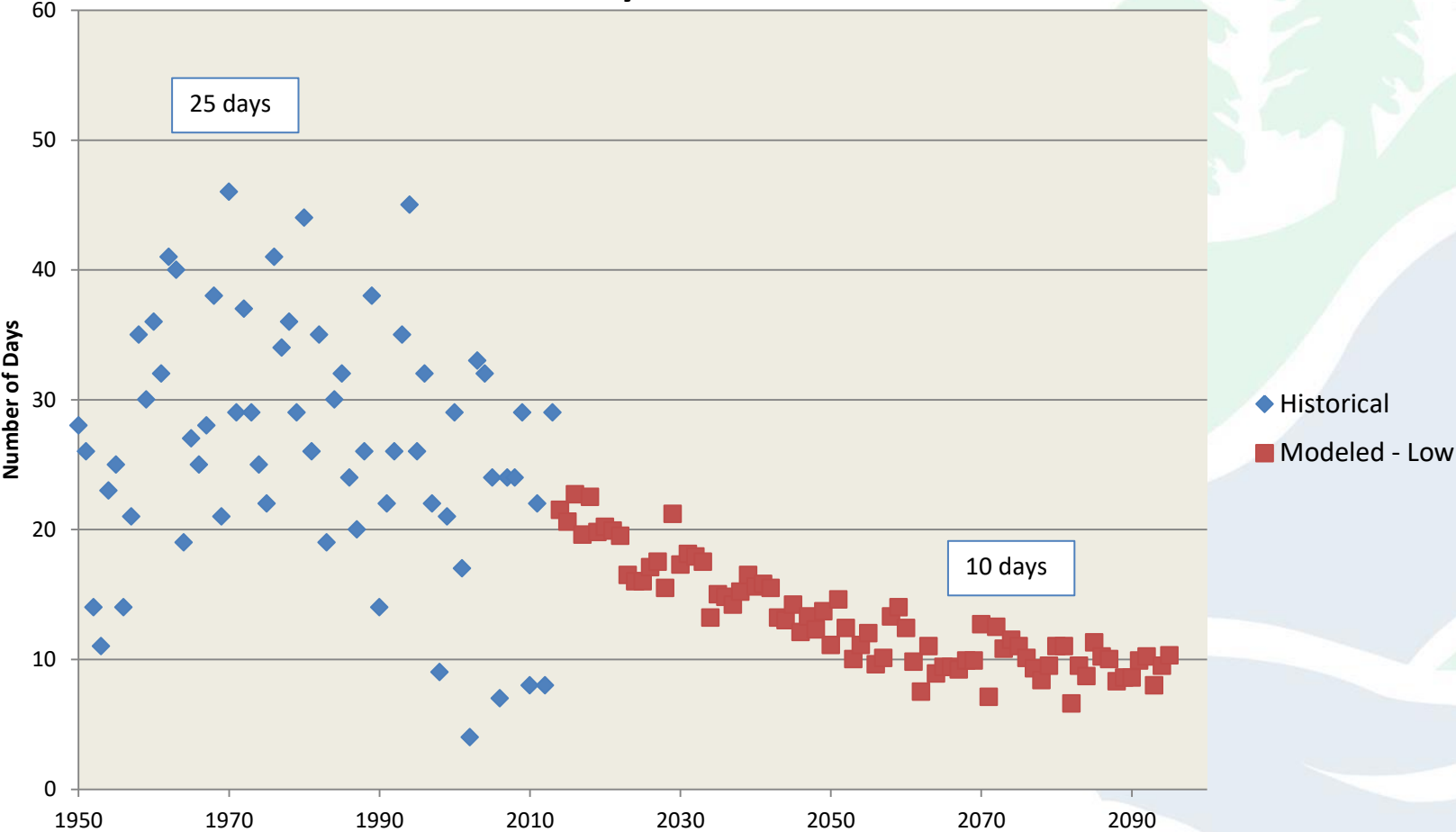


## Annual Precipitation - Belleville



# Cold Winter Days

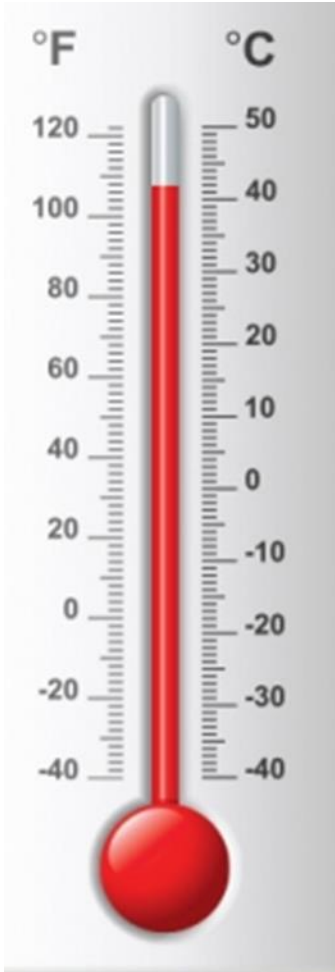
### Number of Winter Days Below -15



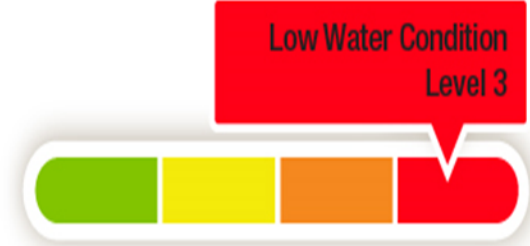
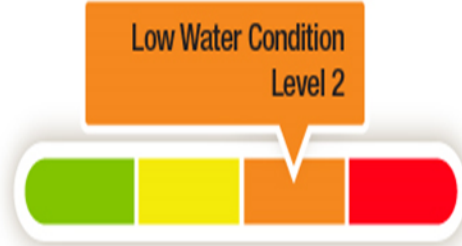
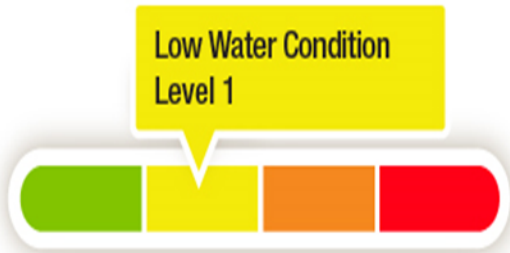
# Future Climate



# The Future Of Our Water



# Quinte Conservation Low Water Program



**Early Warning**  
**< 80 %**

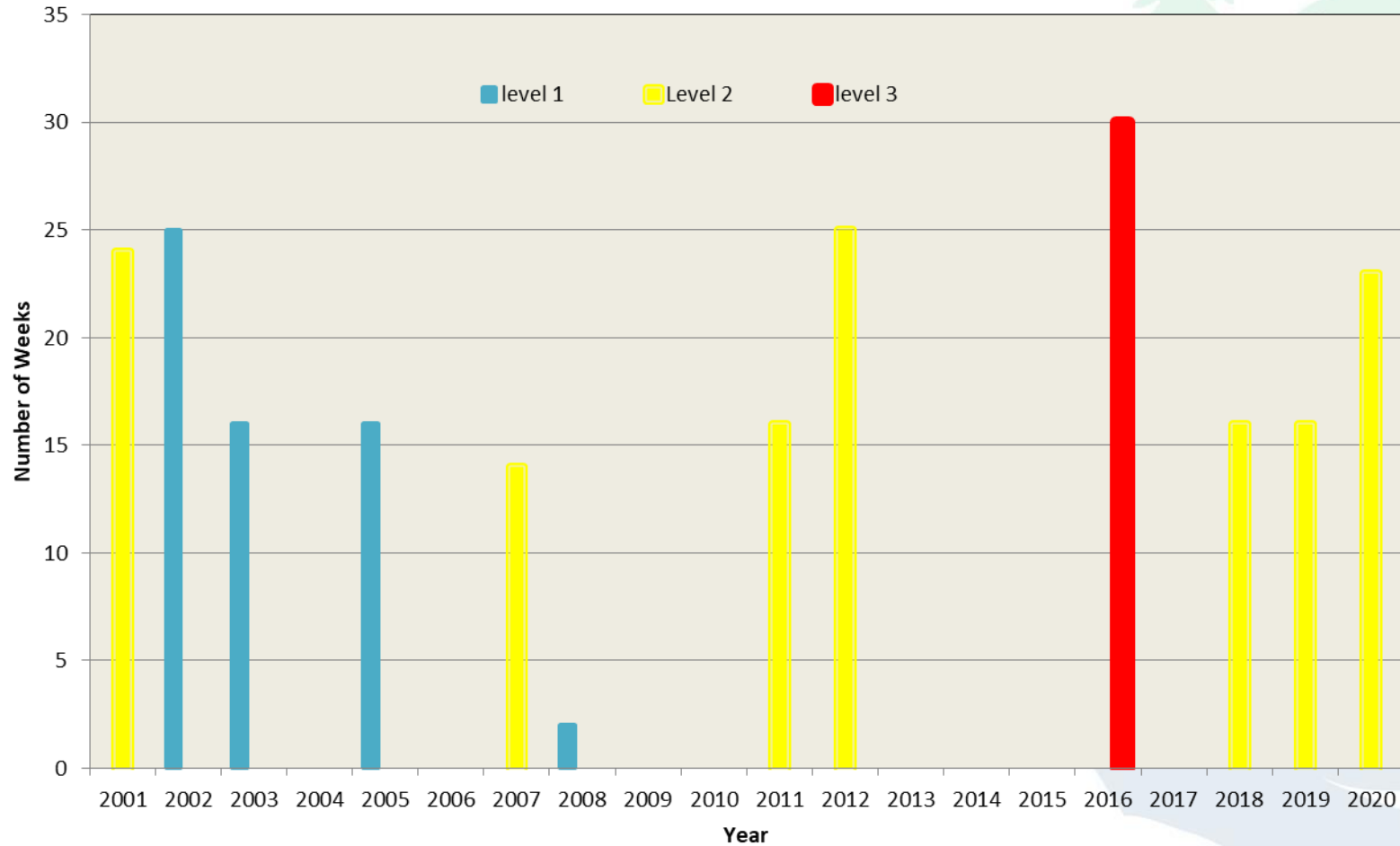
**Potential Water Supply Problem - < 60%**

**Serious Drought Conditions - < 40%**

## Conserve & Reduce Water Use !

# Low Water Conditions - Quinte

## Quinte - Low Water Declarations



# Impacts From Drought



# Climate Change Adaptation

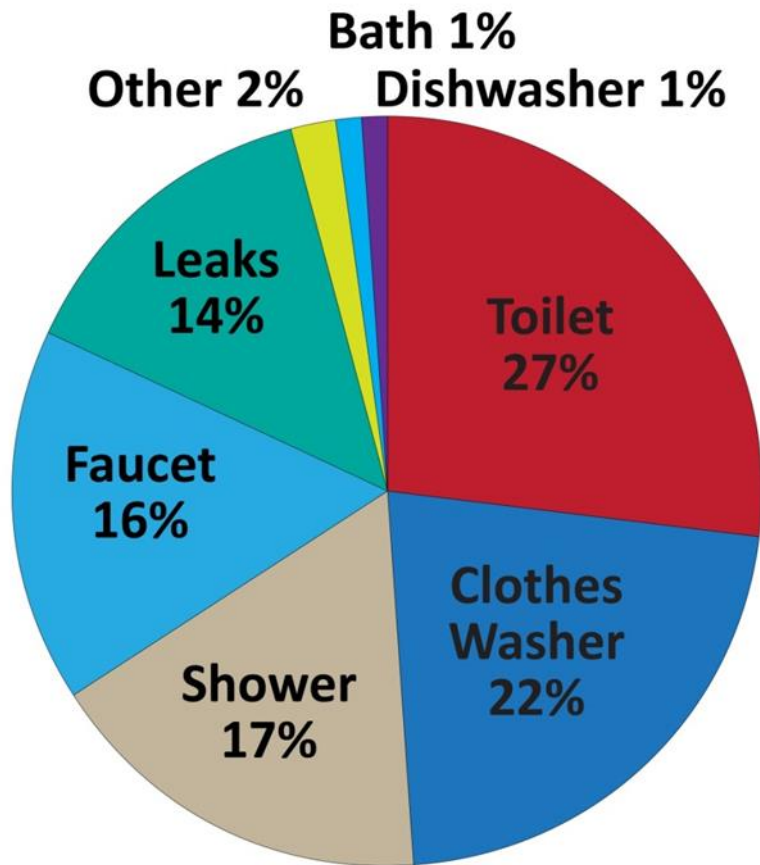




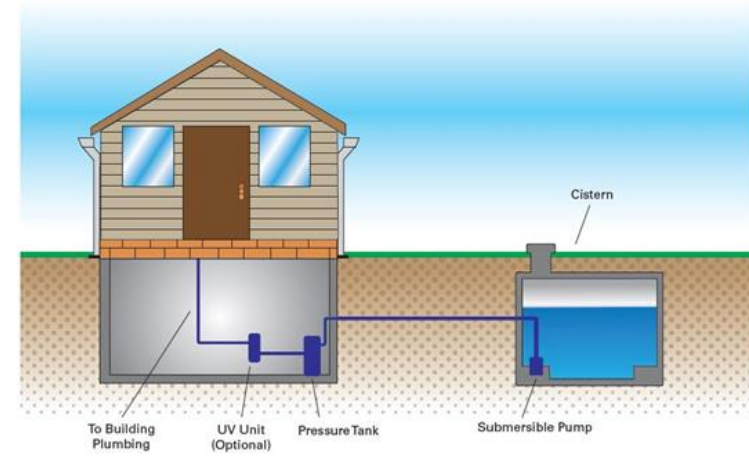


Specific Recommendations for water conservation

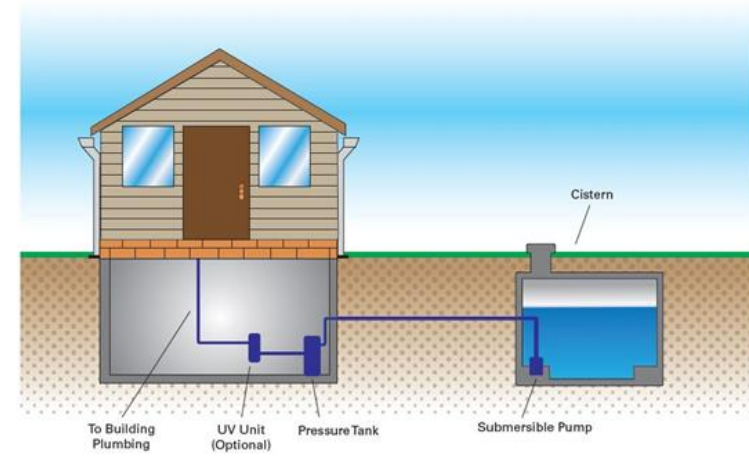
# Grey Water Recycling



# Alternate Water Sources



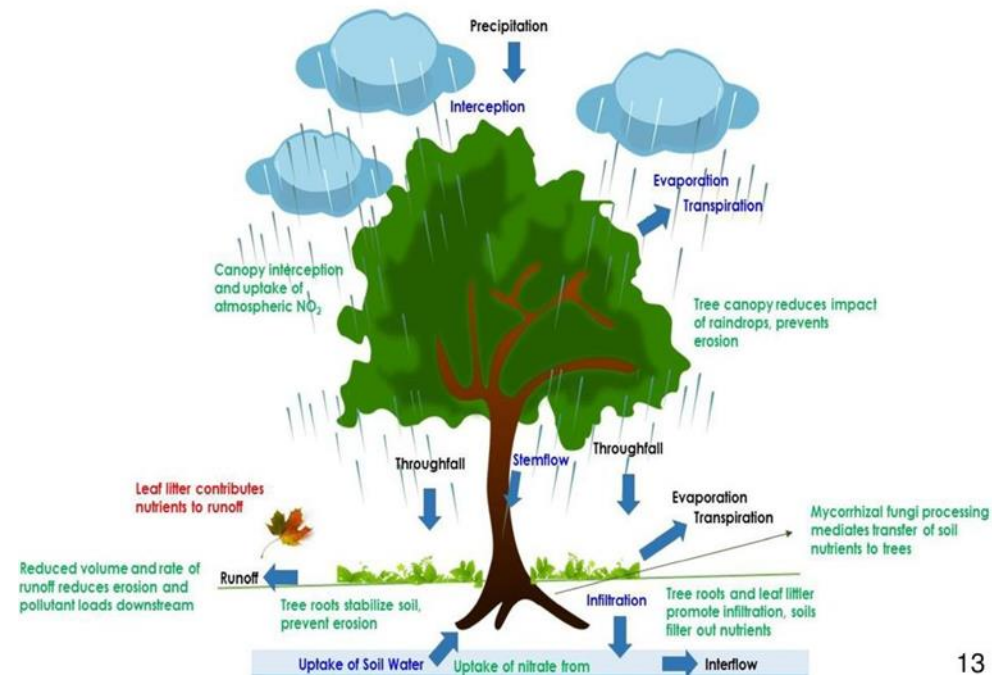
# Alternate Water Sources



# Trickle System



## Urban Tree Impacts on Hydrology and Water Quality



## What does a sustainable community look like?



## *Green Streets Seattle*



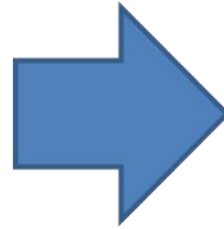
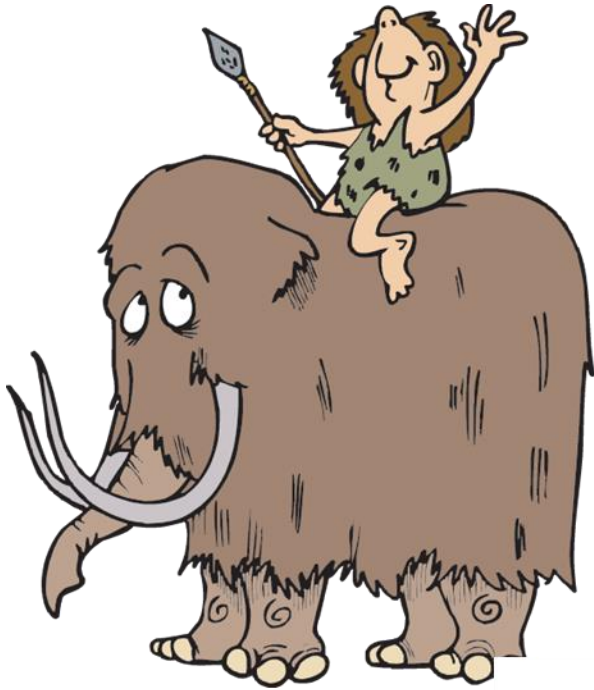
**STONE AGE PAVERS**  
Engineered Hardscape Solutions



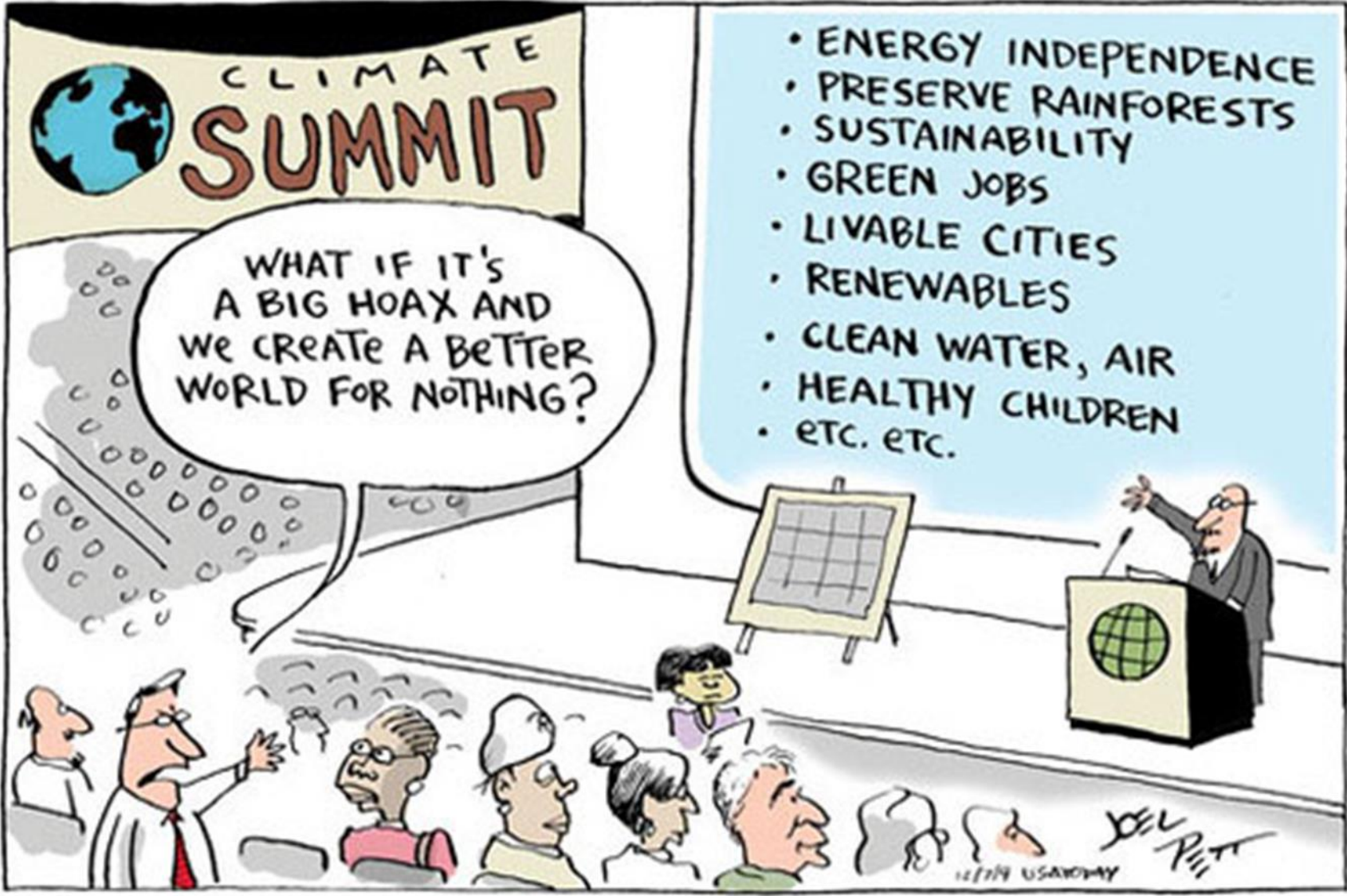
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# There is a Better Way !



# Lets Create a Better World!





**613-968-3434**  
**[www.QuinteConservation.ca](http://www.QuinteConservation.ca)**



Quinte  
CONSERVATION



Conservation  
ONTARIO  
*Natural Champions*



- References

- <https://climateatlas.ca/>
- <https://www.canada.ca/en/environment-climate-change/services/climate-change/canadian-centre-climate-services/about.html>
- <https://www.ouranos.ca/en/>
- TED TALKS – Per Espen Stoknes

