



ECOLOGY AND CLIMATE CHANGE

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CONSERVATION HALTON

FOUNDED: **1956**

OWNED AREA: **3,905** hectares

WATERSHED AREA: **1,059** km²

WATERSHED POPULATION: **612,401**

PERMANENT STAFF: **120**

SEASONAL STAFF: **800**

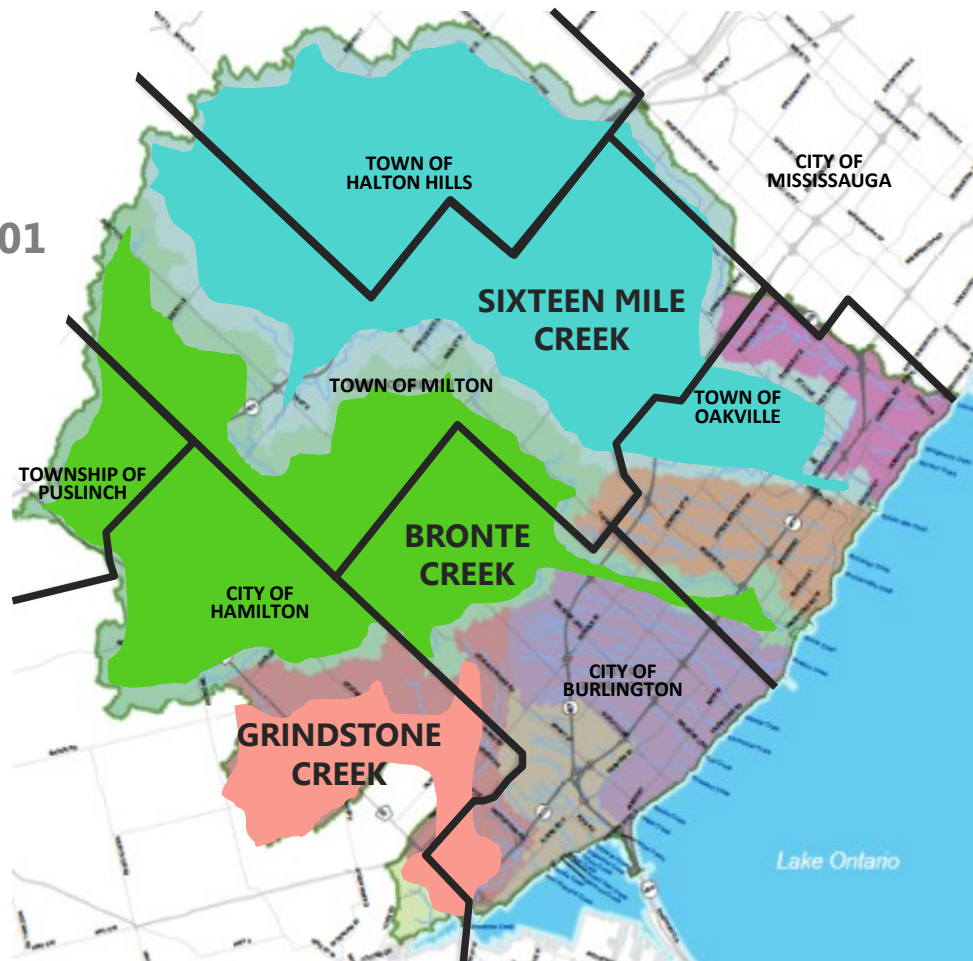
WATERSHEDS

GRINDSTONE CREEK

BRONTE CREEK

SIXTEEN MILE CREEK

URBAN CREEKS (23)



AQUATIC INDICATORS



- Water Quality
- Benthic Invertebrate Community
- Fish Community
- Water Temperature
- Channel Morphology



TERRESTRIAL INDICATORS



- Ecological Land Classification
- Salamander Abundance
- Forest Pests
- Forest Birds
- Forest Health
- Marsh Birds
- Marsh Frogs

WATERSHED RESIDENTS



WHAT LIVES IN HALTON REGION:

Plants	1,445 species (948 native)
Birds	351
Herptiles	37
Butterflies	89
Odonates	80
Fishes	93
Mammals	45



WATERSHED REPORT CARD



- Groundwater Quality
- Surface Water Quality
- Forest Conditions
- Impervious Cover

SURFACE WATER QUALITY

Too much salt



Loss of biodiversity, increase in invasive species

Warming trend



Loss of coldwater fish, increase in algae

Sediment and phosphorus



Reduction in aquatic plant growth, increase in algae

STRESSORS

Imperviousness



Higher rate of runoff, less groundwater recharge

Loss of habitat and connectivity



Reduced biodiversity and resilience to climate change

Roads



Loss of genetic diversity, driver safety

CLIMATE CHANGE: TAKING ON THE CHALLENGE

STEWARDSHIP AND RESTORATION



LIVESTOCK ACCESS RESTRICTION PROJECT
BEFORE



LIVESTOCK ACCESS RESTRICTION PROJECT
AFTER

WORK WITH LANDOWNERS ON HABITAT REHABILITATION PROJECTS:

- Creek habitat enhancement
- Manure management
- Tree planting
- Wetland creation
- Livestock access restriction
- Pollinator gardens

BRIGHTON BEACH BIOSWALE – BURLINGTON

MANAGING STORMWATER FLOWS AND PREVENTING EROSION



COMMUNITY AND CITY OF BURLINGTON COLLABORATION PROJECT



ENGINEERING & CLIMATE CHANGE

Floodplain Mapping

Flood Management Infrastructure

Flood Forecasting & Operations

Janelle Wepler, B.Sc. (Env.), P.Eng.
Associate Director, Engineering



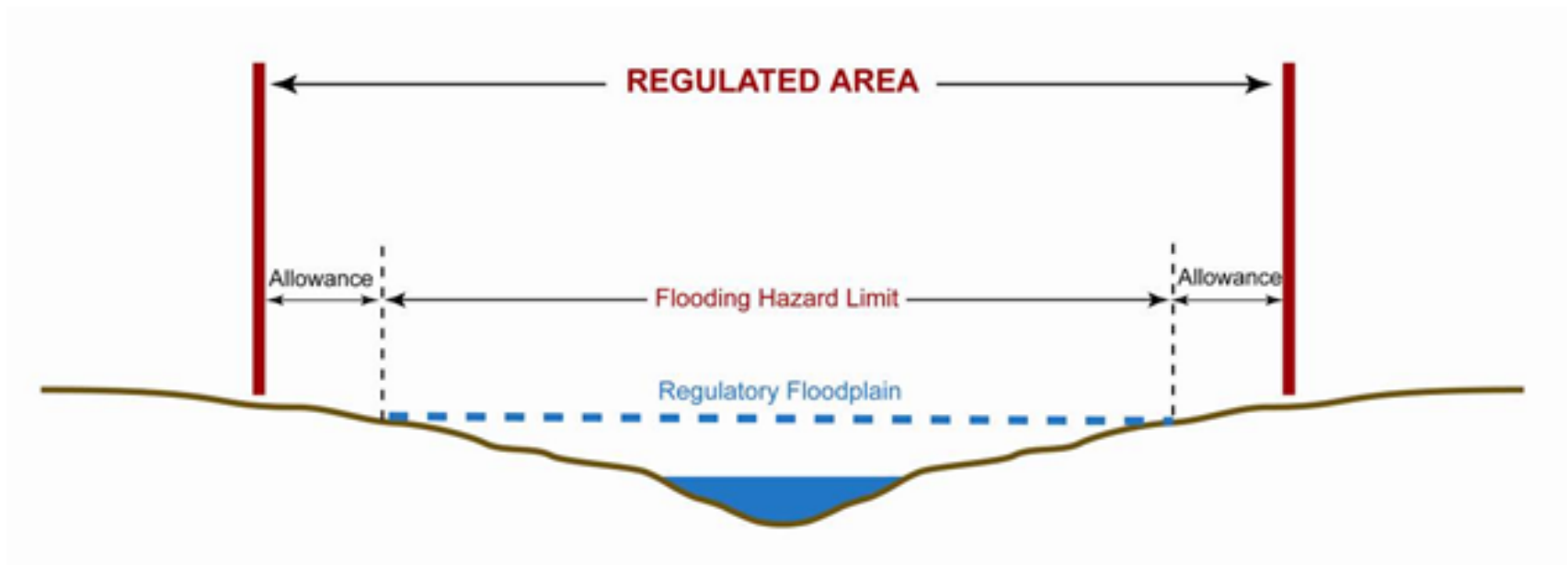
FLOODPLAIN MAPPING

DEFINITION

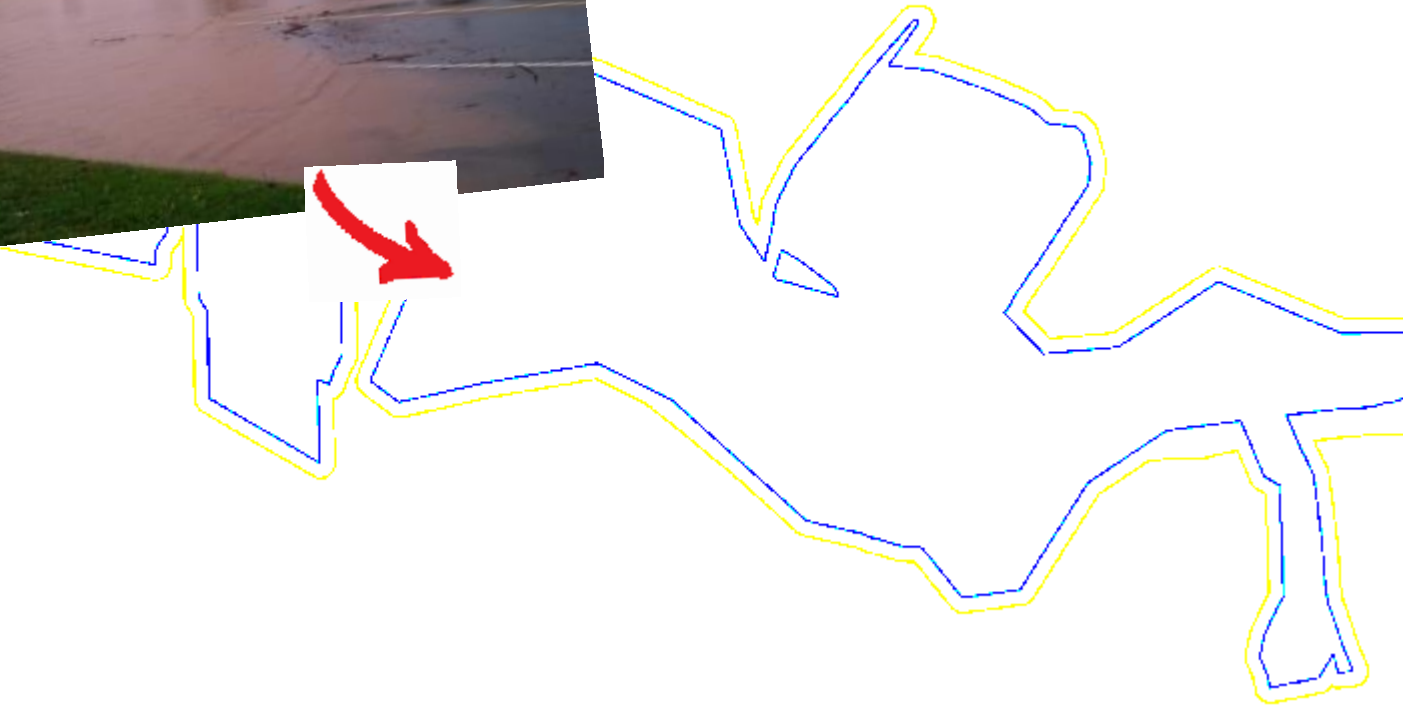
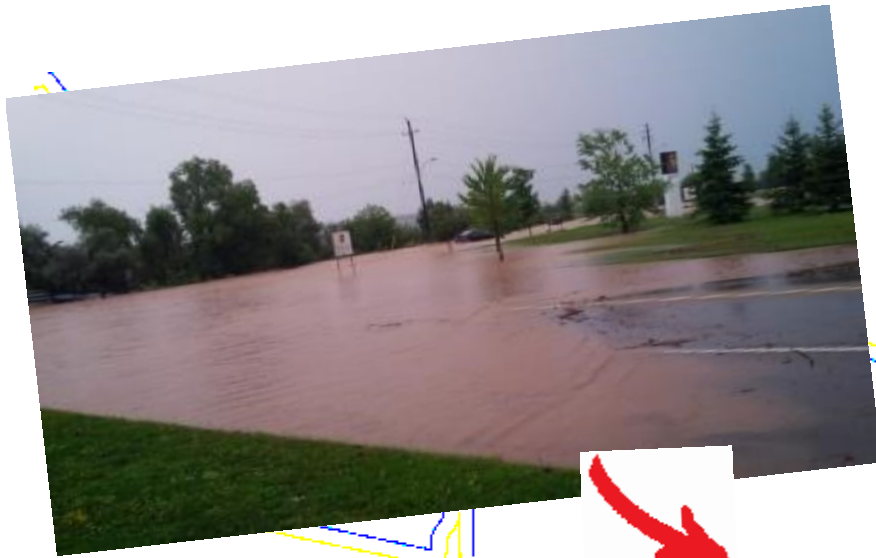
Extent of flooded lands when flow exceeds system capacity

REGULATION

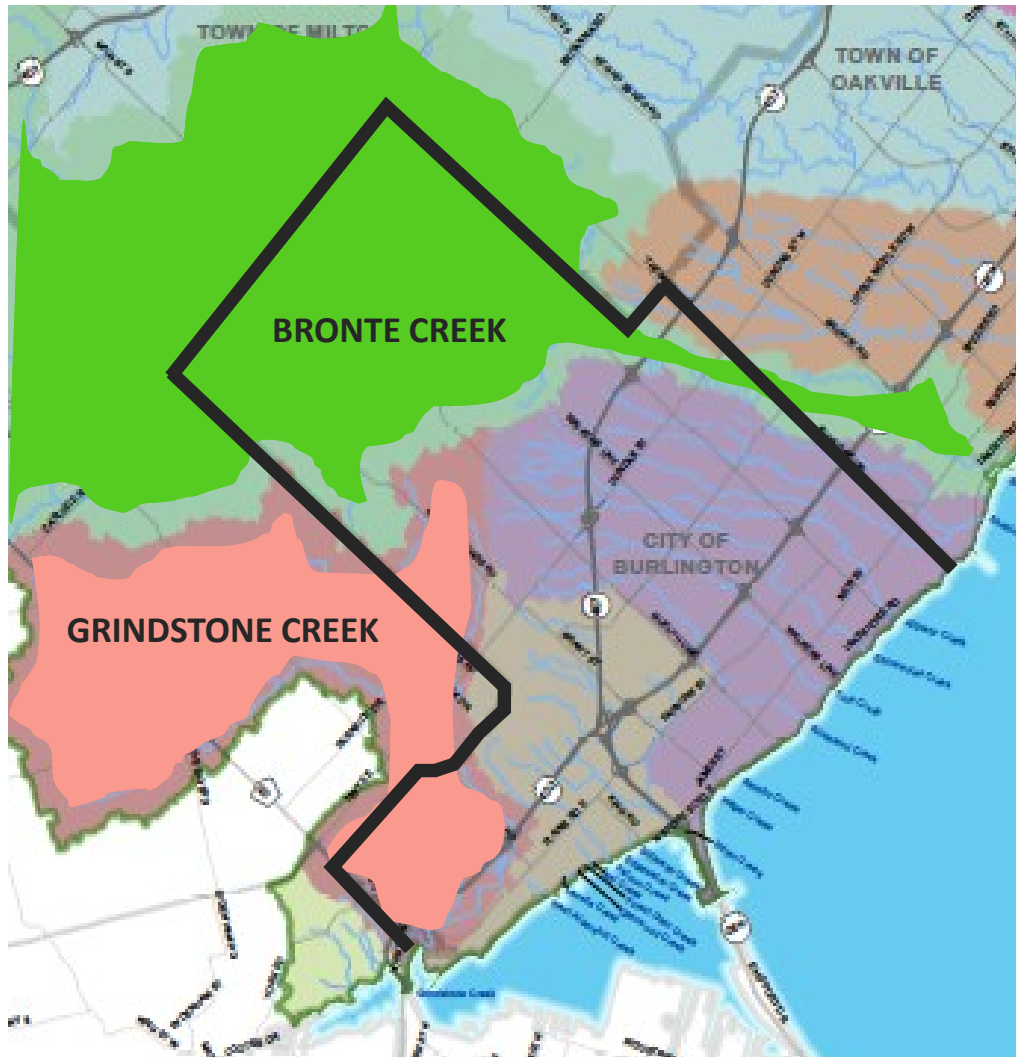
Flood Hazard + Allowance (Ontario Regulation 162/06)



FLOODPLAIN MAPPING



FLOOD CONTROL STRUCTURES



KELSO: 1962
SIXTEEN MILE CREEK

MOUNTSBERG: 1965
BRONTE CREEK

SCOTCH BLOCK: 1971
SIXTEEN MILE CREEK

HILTON FALLS: 1973
SIXTEEN MILE CREEK



MOUNTSBERG DAM, 1965

FLOOD CONTROL STRUCTURES – CHANNELS

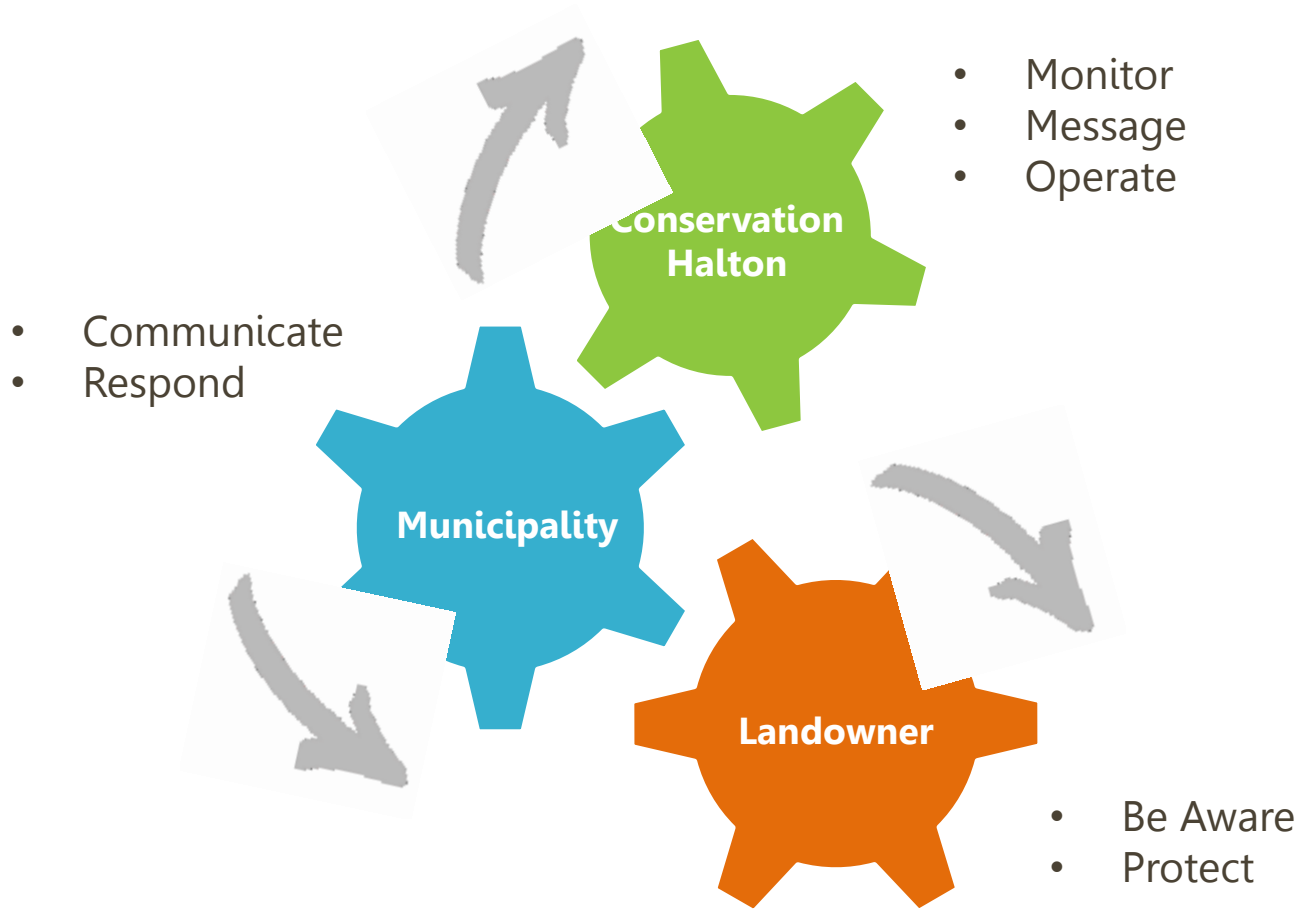
HISTORY

- Constructed **1970-1990**
- Outlets into Hamilton Harbour
- Concrete-lined
- 4.2 km



EMERGENCY REPOSENSE

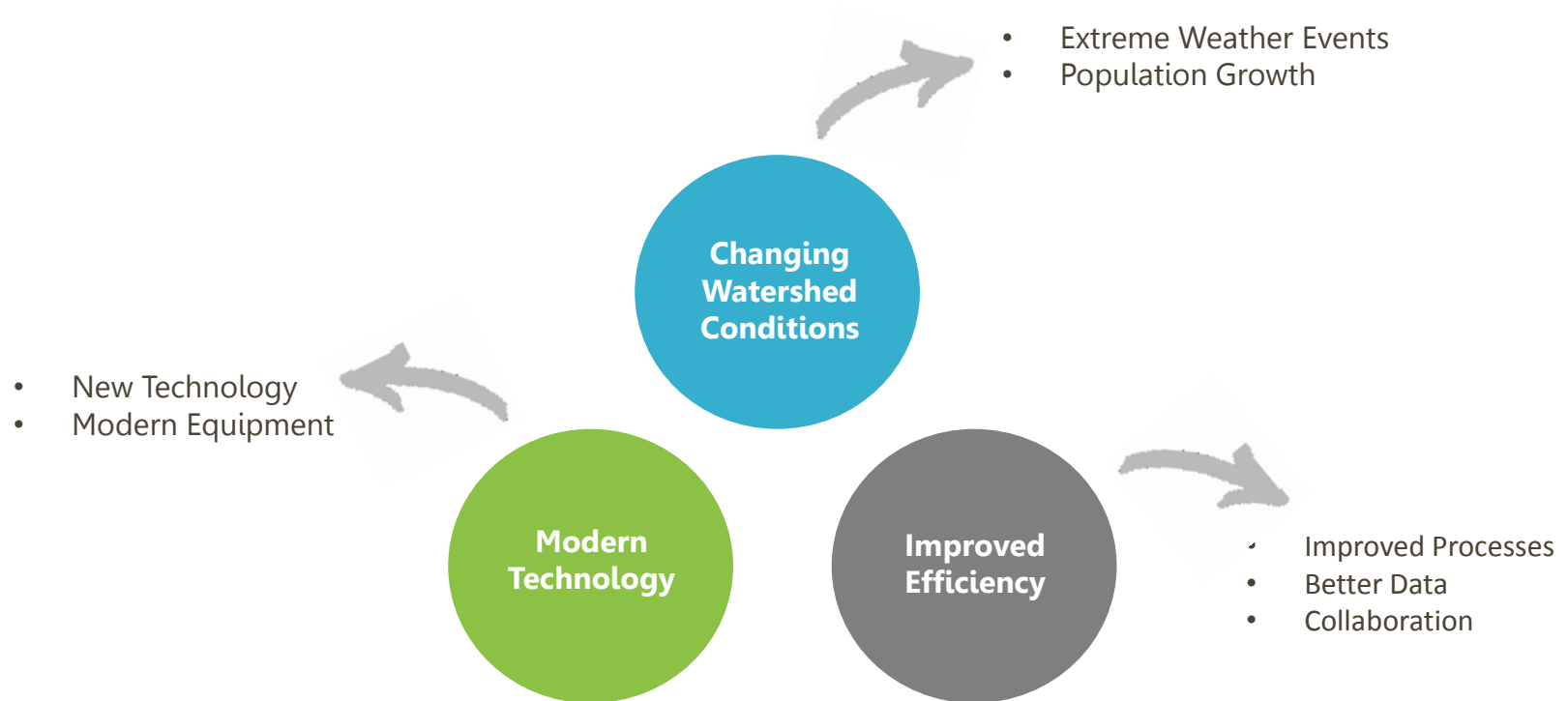
ROLES AND RESPONSIBILITIES

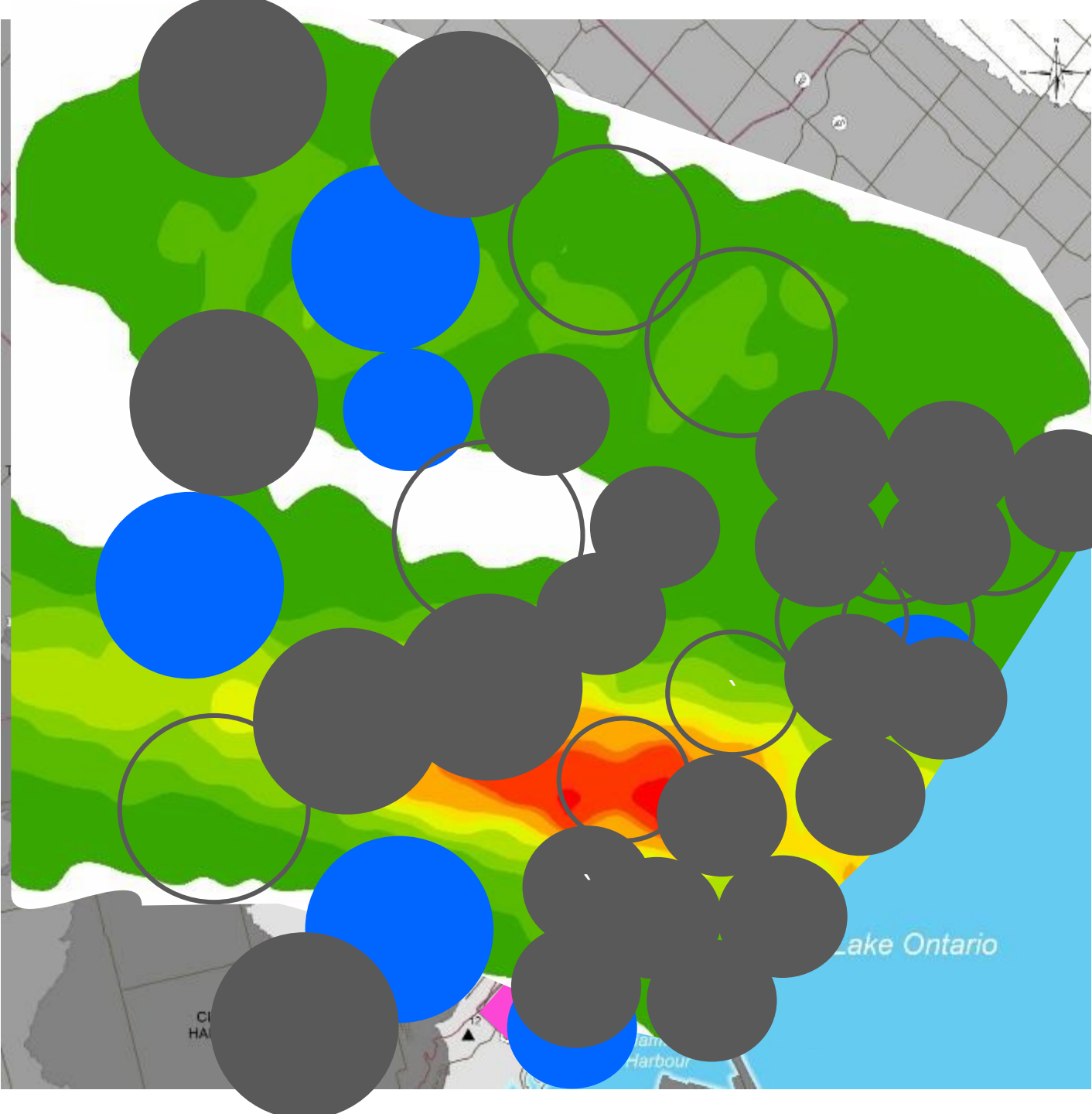


STRATEGIC PLAN

KEY OBJECTIVE

Enhance public safety through the modernization of flood management operations to provide communities from severe weather and natural hazards.





Thank you.