



Carp River Regulatory Floodplain Mapping Update

Board of Directors

July 8, 2024

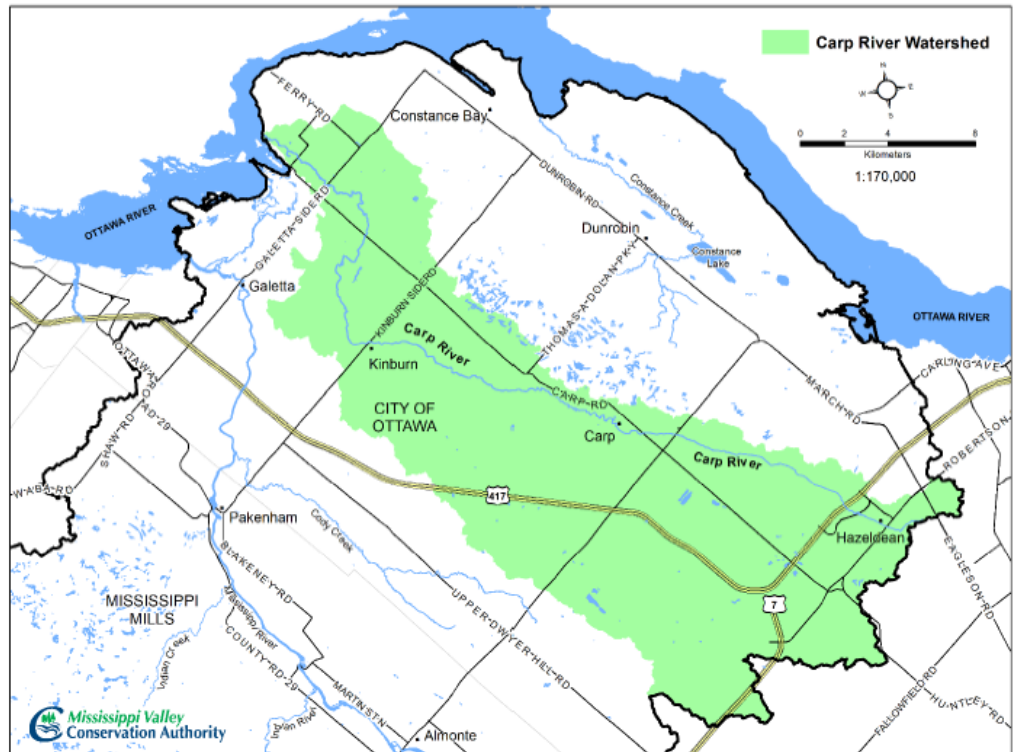
Background

- ❑ Existing regulatory hazard mapping completed in 1983
- ❑ Major development in upper Carp River watershed
- ❑ Carp River Restoration Project
- ❑ Slope hazard previously not mapped
- ❑ Completed in partnership and financial support from City of Ottawa

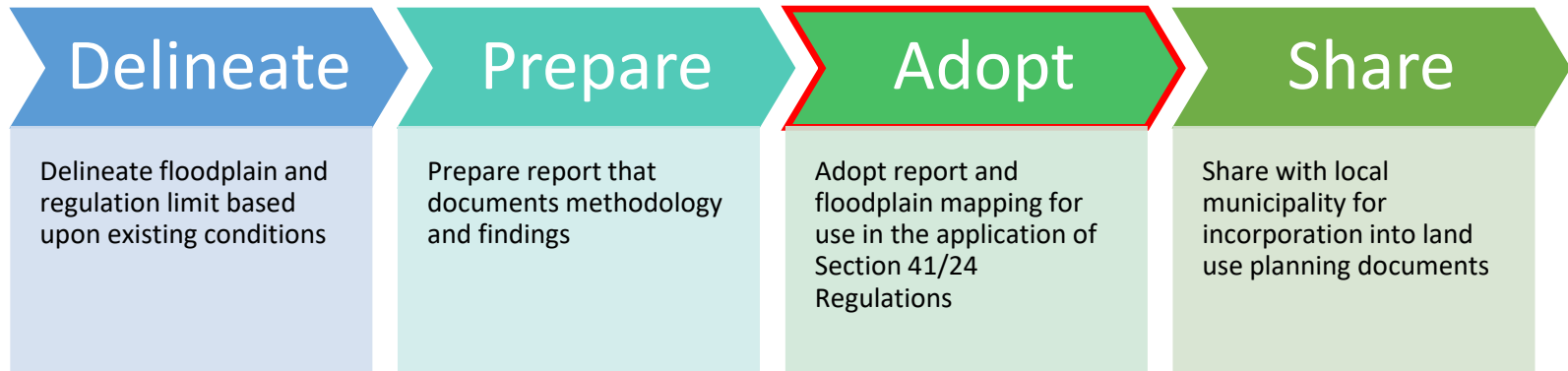


Study Area

- ❑ Carp River watershed approx. 300 km²
- ❑ Entire river mapped approx. 50 km of floodplain
- ❑ Flood and erosion hazards mapped



Approach



Municipal Technical Guidelines: *City of Ottawa Sewer Design Guidelines*

Flood Hazard Mapping Methodology (MVCA, RVCA, SNC)

Provincial Technical Guidelines: *Guidelines for Developing Schedules of Regulated Areas*

River & Stream Systems: Flooding Hazard Limit

River & Stream Systems: Erosion Hazard Limit

Federal Technical Guidelines: *Federal Land Use Guide for Flood Risk Areas*

Bibliography of Best Practices for Flood Mitigation

*Federal Hydrologic and Hydraulic Procedures for
Flood Hazard Delineation*

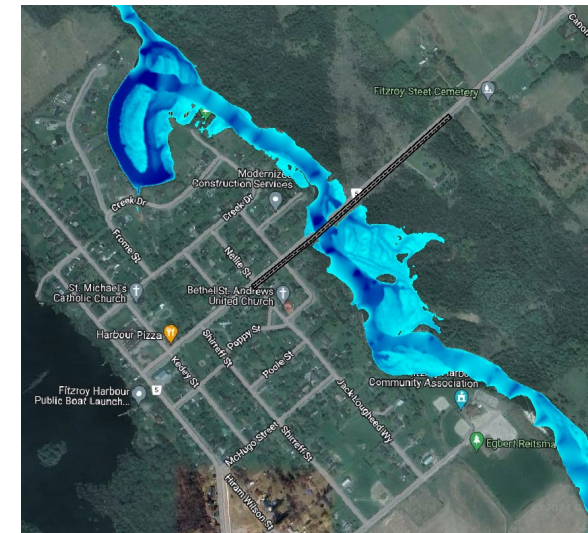
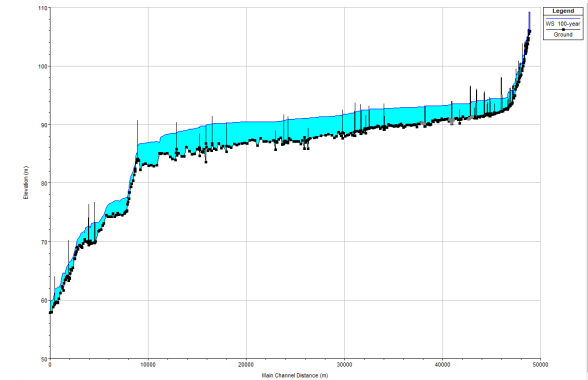
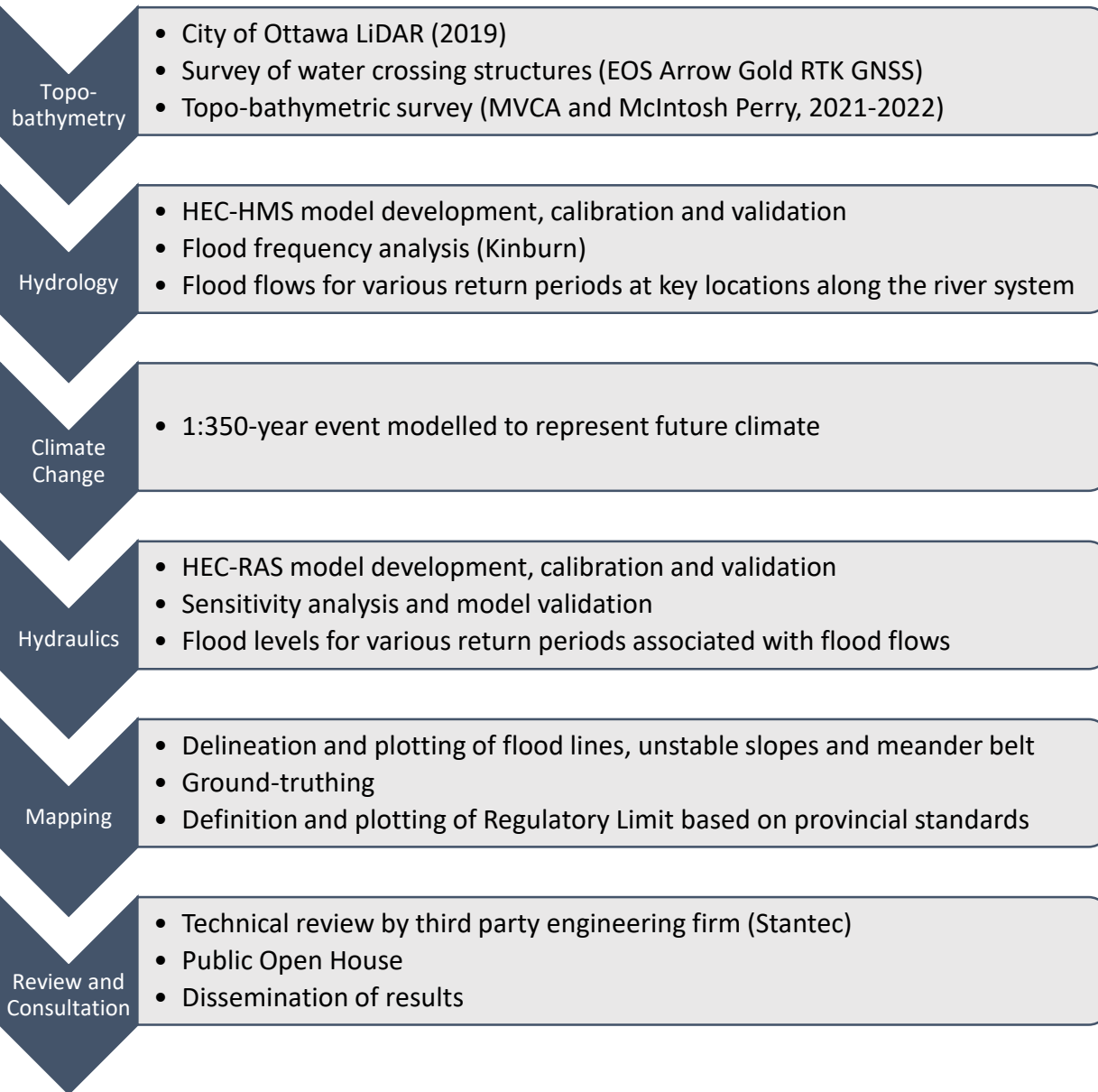
Federal Geomatics Guidelines for Flood Mapping

Federal Flood Mapping Framework

**Technical
Review
Process**



Methodology



**Best data and technology
used in the study.**

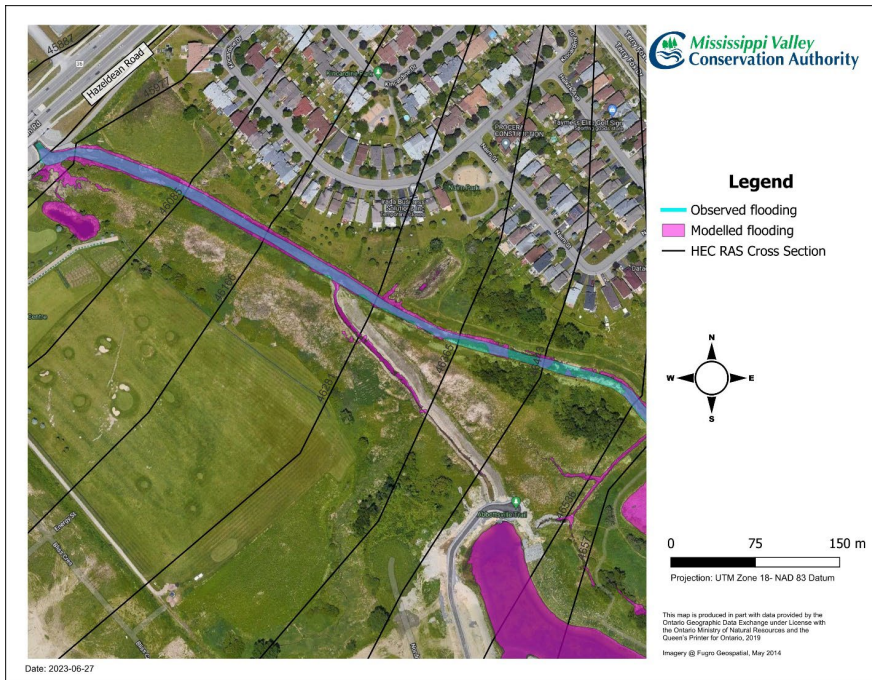
Validation

- ❑ Recent flood surveys (drone, RTK)
- ❑ WSC and MVCA streamflow data
- ❑ Historical flood marks/ observations

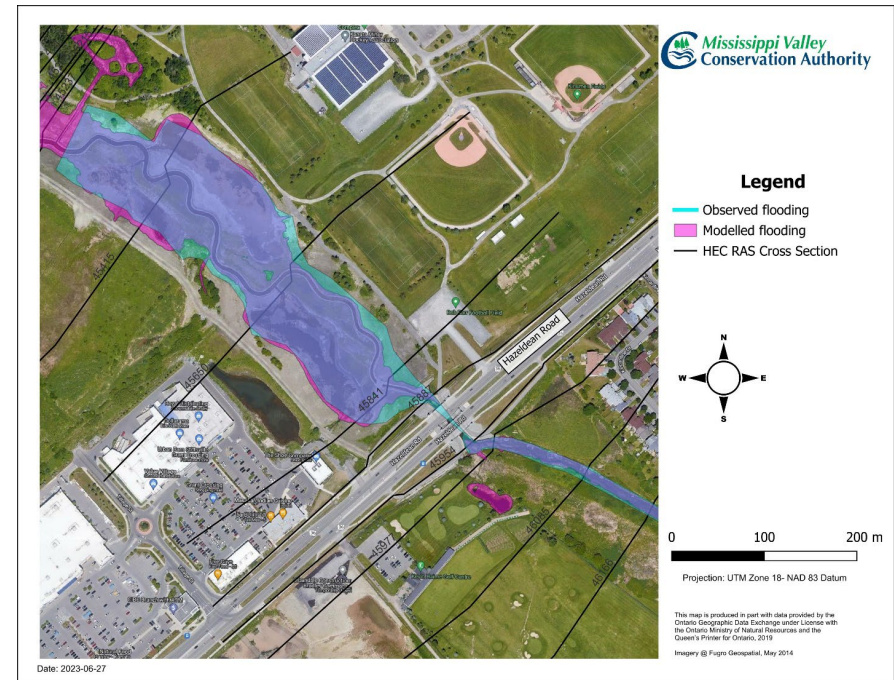


Validation

- Good agreement between modelled and observed flood extents and elevations



2023 April 11 – Kevin Haimes Golf Centre, Kanata



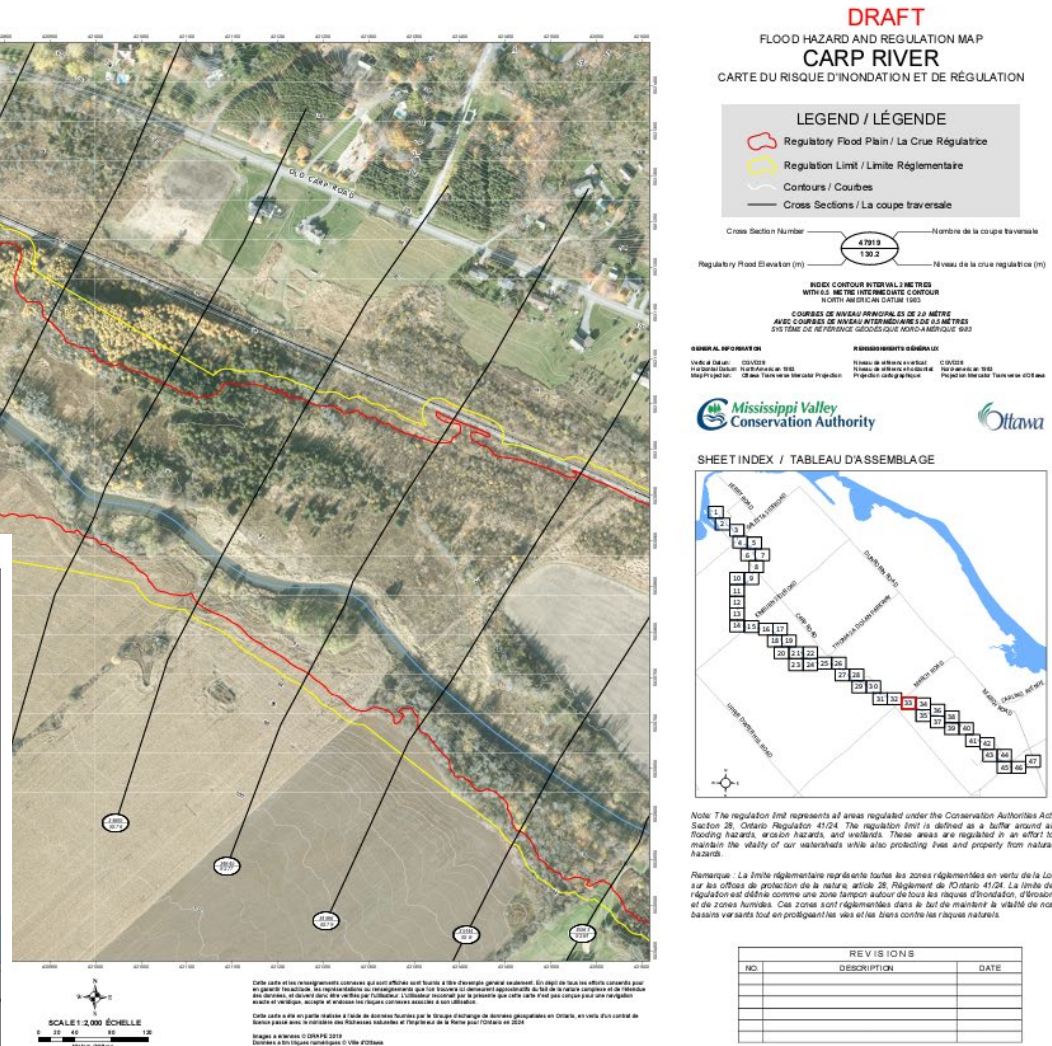
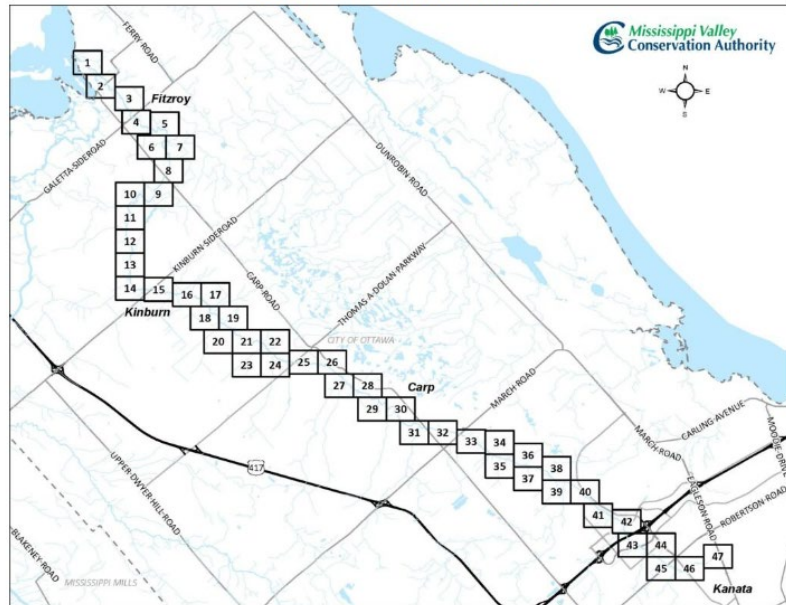
2023 May 1 – CRRA near Hazeldean

Ground Truthing

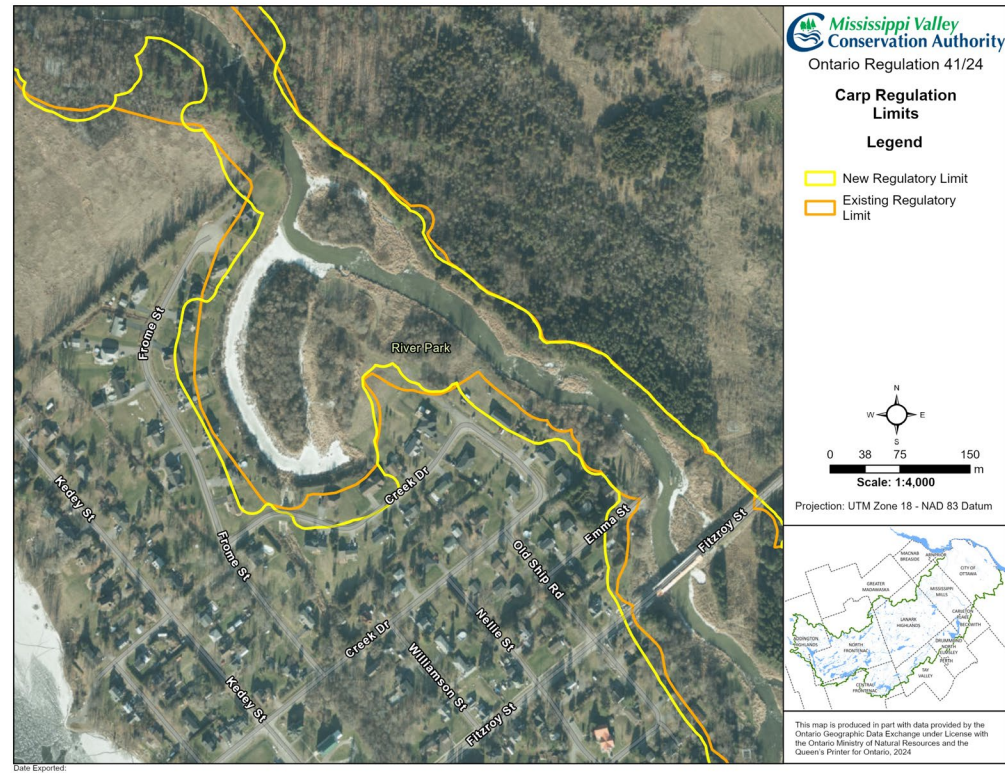


Floodplain Maps

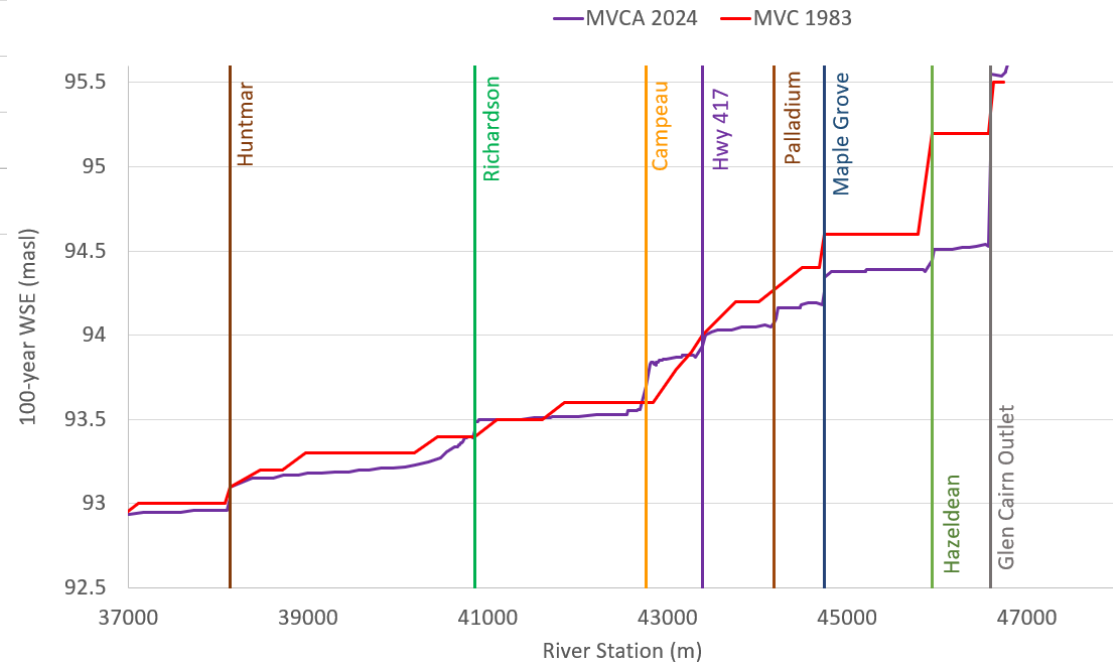
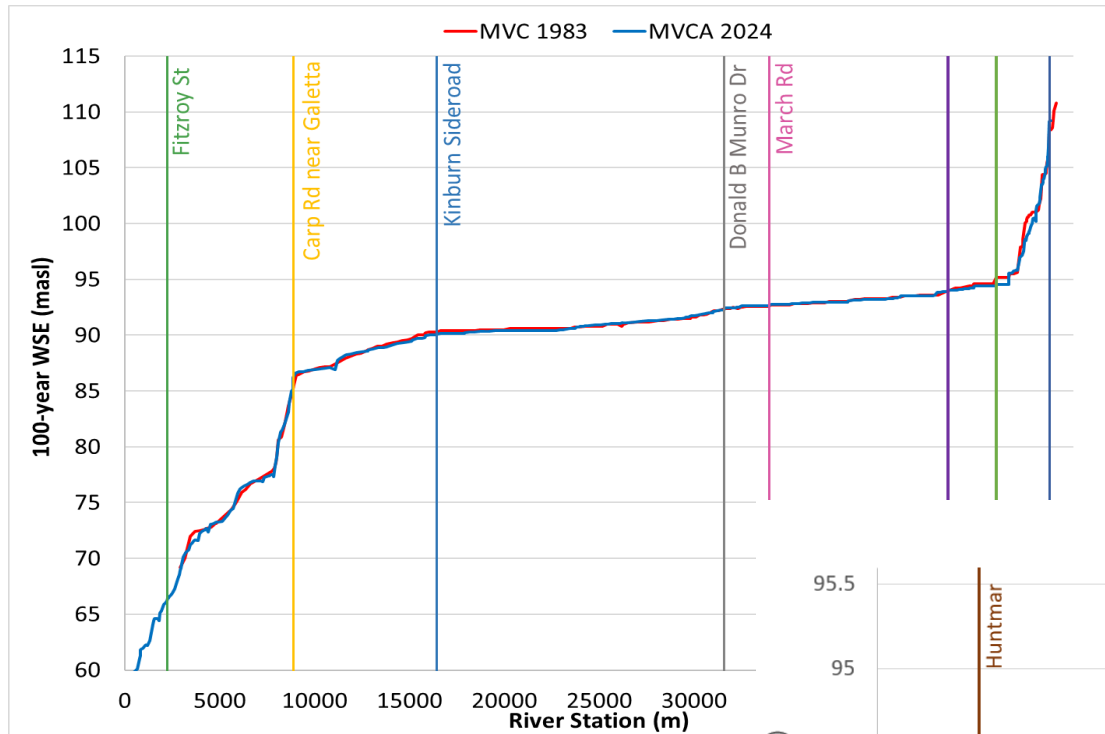
Carp River Floodplain Index



New and Existing Regulatory Flood Lines



New and Existing Regulatory Flood Elevations



Affected Properties and Infrastructure

Type of Affected Property	Count
Total affected properties	637
Newly affected properties	29
Properties no longer affected	266
Dwellings within regulation limit	205
Dwellings in floodplain	1
Dwellings without safe access	4
Public roads in floodplain	3
Public roads without safe access	1
Bridges in floodplain	9
Bridges without safe access	9
Public places within regulation limit	15
Public places in floodplain	6
Public places without safe access	0
Businesses within regulation limit	15
Businesses in floodplain	1
Businesses without safe access	0
Emergency services within regulation limit	2
Retirement homes within regulation limit	2
Schools within regulation limit	2

**Three of these residences are outside of the Carp River FPM Regulation Limit*



Public Consultation



Notice published in: Community Voice (Kanata South and North),
West Carleton Online, Ottawa Sun, Ottawa Citizen, MVCA website,
Social Media, Friends of the Carp
Letters mailed to all affected landowners
Draft maps posted on MVCA website for review and comment



Meetings with City Councilors
Meeting with City Planning Managers
Notified Office of City Manager
Consulted developers, offered 1:1 meetings
Discussed with active permit applicants



Public Open House held on May 2nd, 2024
(Kanata Beaverbrook Community Centre)

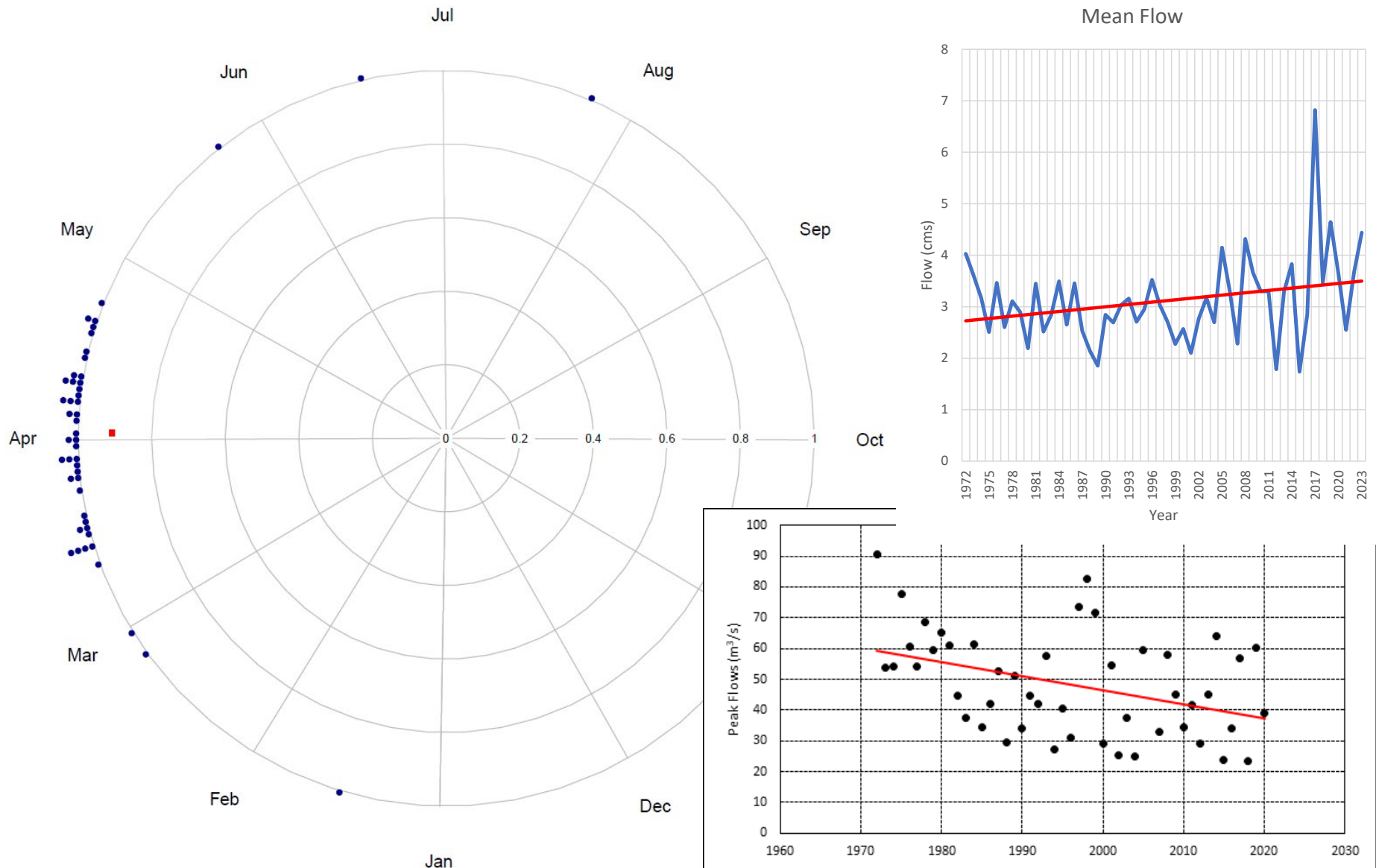
Public Open House

- ❑ 58 people attended Public Open House
- ❑ Support from City staff and Board members
- ❑ All comments received during POH and commenting period tracked and addressed



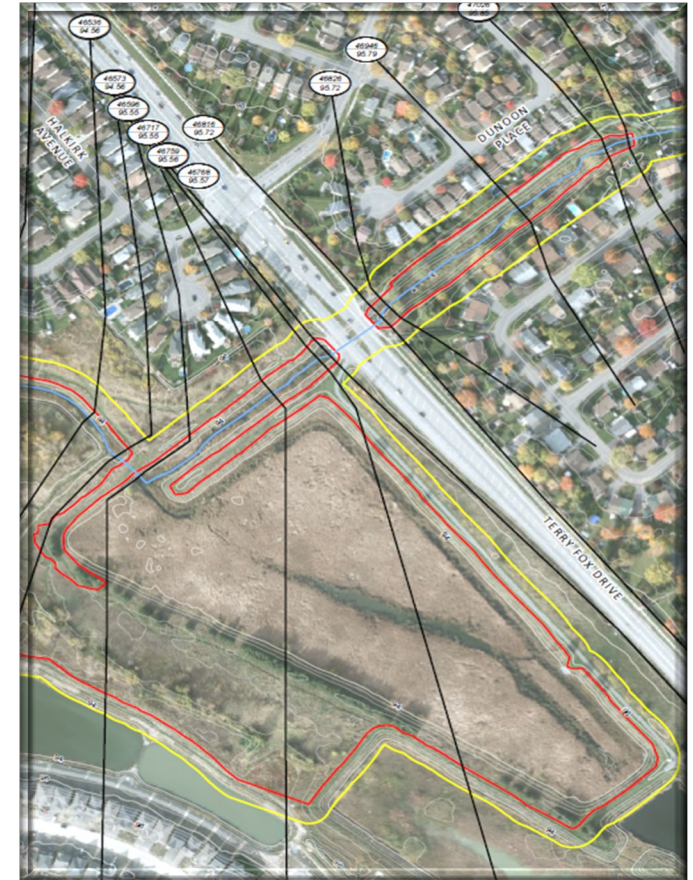
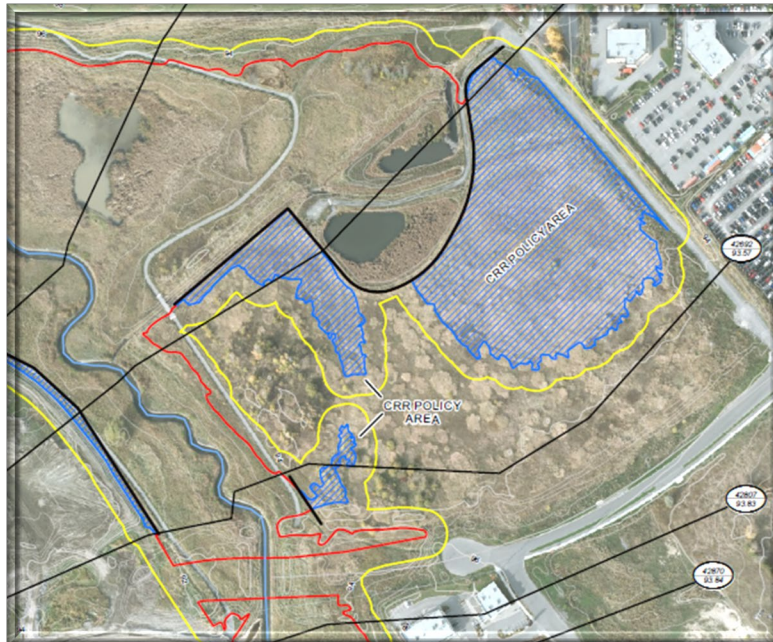
Public Comments/Inquiries Type	Amount
General inquiry questions	5
Concerns regarding changes to floodplain	4
Questions regarding development and permitting	33

Carp River Flood Flows



Carp River Flood Levels

- Expected to be different...
 - Watershed changes
 - Data
 - Methodology



Floodplain Mapping

☐ Flood hazard identification and mapping:

- ☒ protect people and property from flooding
- ☒ direct new development away from high-risk areas
- ☒ identify areas where flood-proofing or other measures may be required to manage risks to communities



- ☒ Establish new policies (flood levels, projects, etc.)
- ☒ Review/design infrastructure
- ☒ Channel restoration
- ☒ Identify floodplain storage alternatives (cuts/fills)
- ☒ Capital projects (infrastructure maintenance/ownership)

Recommendations

That the Board of Directors:

1. Adopt the report Carp River Floodplain Mapping Update, dated June 2024, and the associated GIS-based Regulation Limit lines and floodplain maps as the delineation of areas along the Carp River that are susceptible to flooding during the Regional flood standard as defined in Schedule 1 of Ontario Regulation 41/24, and
2. Direct that the report, maps and Regulation Limit be used in the implementation of Ontario Regulation 41/24.



Properties Without Safe Access

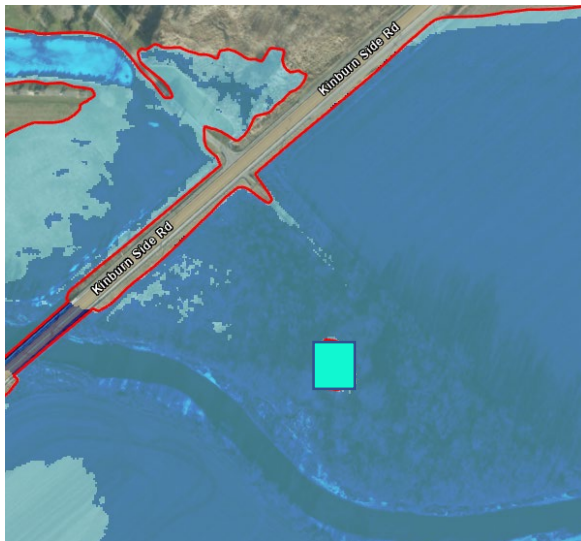
3679 Carp Road



3680 John Shaw Road



2976 Kinburn Sideroad



3956 Loggers Way

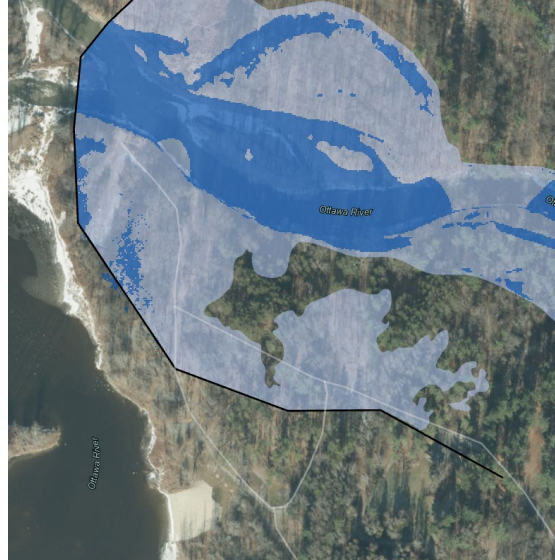


Public Roads Without Safe Access

Fitzroy Provincial Park



Pine Grove Campground Loop –
does not have safe access



Two Rivers Campground Loop –
has safe access



Limestone Road –
has safe access

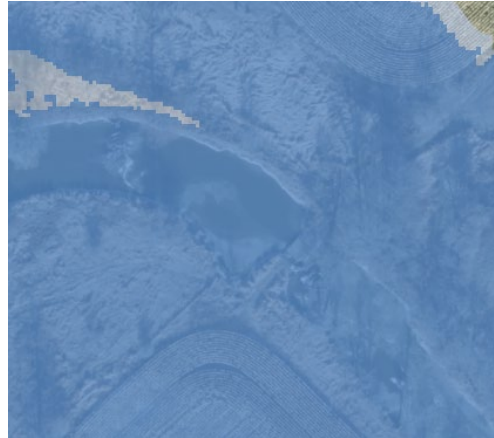
Overtopped Bridges (no safe access)



Pedestrian Bridge U/S Maple Grove

Representative of several other pedestrian bridges along the Carp River

- Footbridge U/S Old Colony
- Footbridge D/S Maple Grove
- Footbridge D/S Hwy 417
- Footbridge U/S Richardson
- Footbridge U/S Donald B Munro



Farm Crossing U/S Thomas A Dolan Pkwy



Farm Crossing D/S Diamondview Rd



Private Road off of Loggers Way

Affected Parks / Recreation

Appaloosa Park



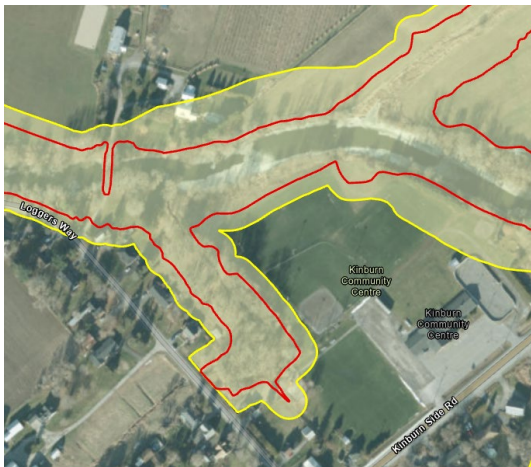
Ravine Park



Rickey Place Park



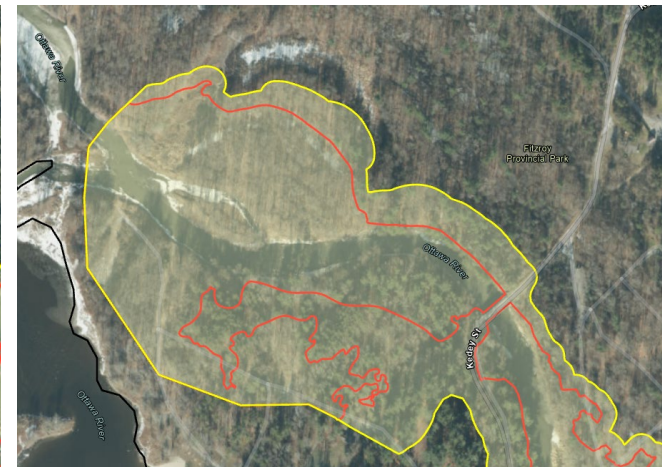
Kinburn Community Centre



River Park



Fitzroy Provincial Park



Affected Businesses

Kevin Haimes Golf Centre has golf courses within the 1:100 year floodplain. However no company buildings are in the floodplain and the property has safe access



Businesses within (or partially within) the regulation limit, but not the regulatory floodplain:

Name	Address
Bell Sensplex	1565 MAPLE GROVE RD
Business Park	501 PALLADIUM DR
Quality Automotive	1625 MAPLE GROVE RD
Business Park	50 FRANK NIGHBOR PL
Business Park	700 - 770 PALLADIUM DR
Kanata Commons	8231 CAMPEAU DR
Carp Chiropractic Clinic	435 DONALD B MUNRO DR
Carp Pizza	439 DONALD B MUNRO DR
Star Fashion Cleaners	449 DONALD B MUNRO DR
Carp Plaza	461 DONALD B MUNRO DR
McNeely's Outdoor Power Equipment Ltd	469 DONALD B MUNRO DR
CSS Industrial Group / Canadian Centre for Experimental Radio	2336 CRAIG'S SIDE RD
KIN Vineyards	2225 CRAIG'S SIDE RD
Irish Hills Gold and Country Club	3248 CARP RD

Affected Emergency Services / Retirement Homes

None of these properties are within the Regulatory Floodline



Fire Station 41
380 Eagleson Rd



Fire Station 64
475 Donald B Munro Dr



Shepherds of Good Hope
145 Castlefrank



The West Carleton
518 Donald B Munro Dr

Affected Schools



St. Martin de Porres Catholic School



A.Y. Jackson Secondary School