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Federal Floodplain Mapping Guideline Series

Floodplain Mapping Knowledge Transfer Workshop
Vaughan, Ontario
March 6, 2018



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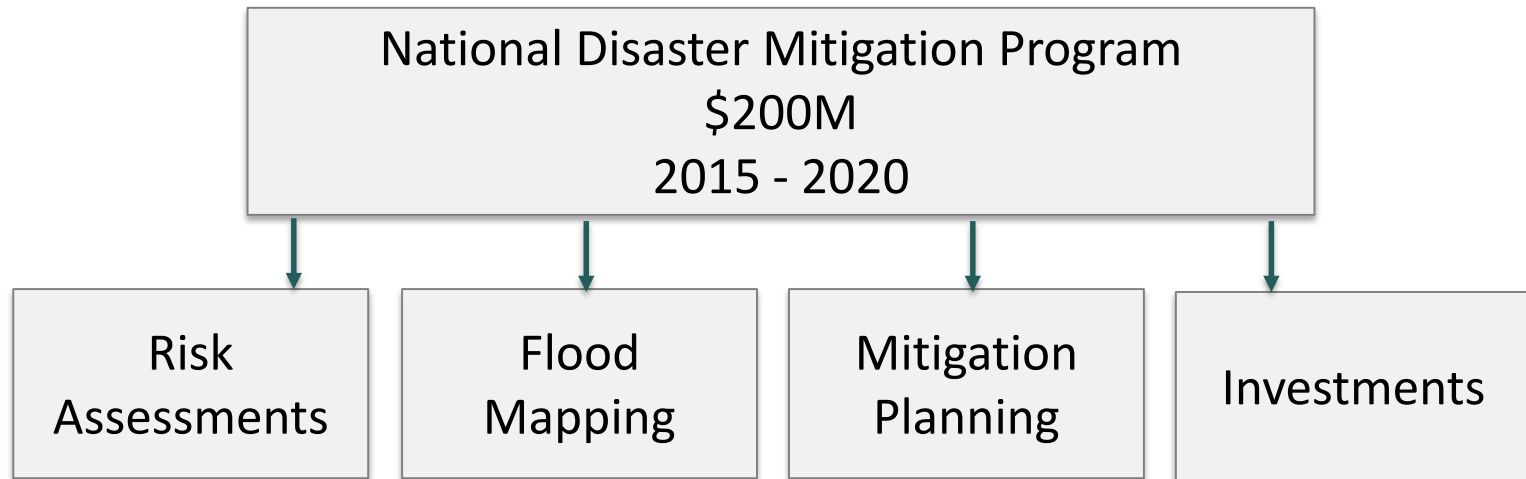


1. NRCan Activities and Role
2. Federal Floodplain Mapping Guidelines Series
3. Community Engagement
4. Flood Risk Assessment
5. Climate Change Case Studies
6. Next Steps

Introduction



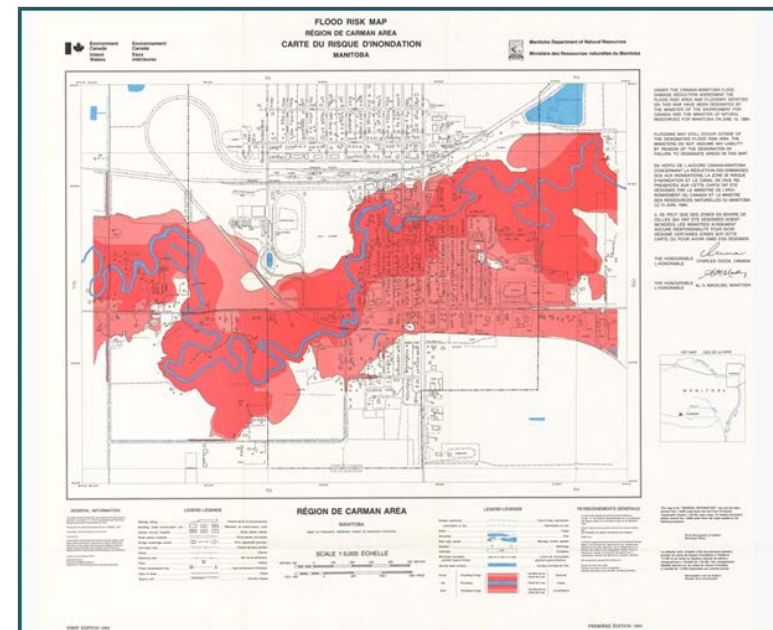
Natural Resources Canada is providing technical support and expertise to the National Disaster Mitigation Program administered by Public Safety Canada.



Floodplain Maps

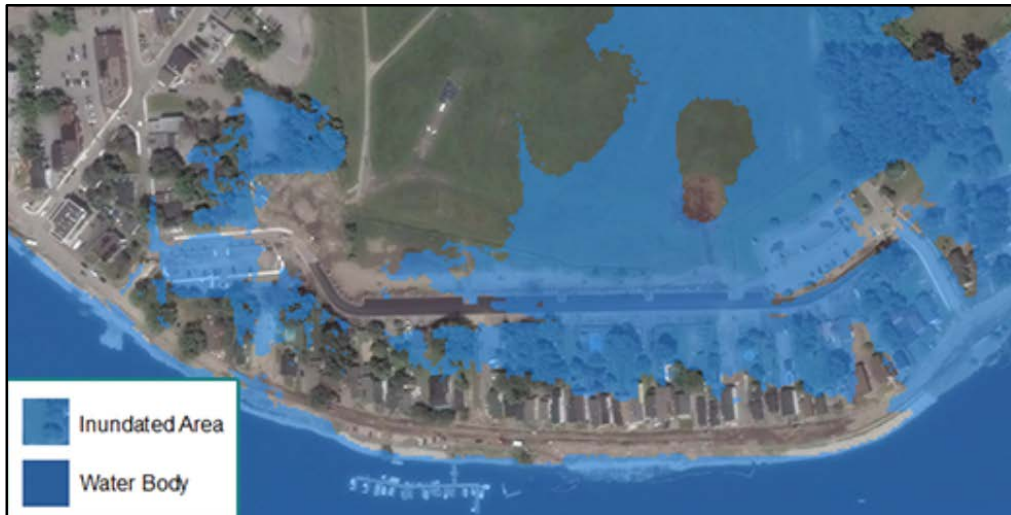


- Promote information on flood hazards
- Enable community preparedness and disaster mitigation planning
- Empower citizens and property owners
- Inform emergency management practices
- General public awareness
- Land use planning
- **Necessary condition to enable insurance**
- **Investments in infrastructure**
- **Used in emergency management cycle**





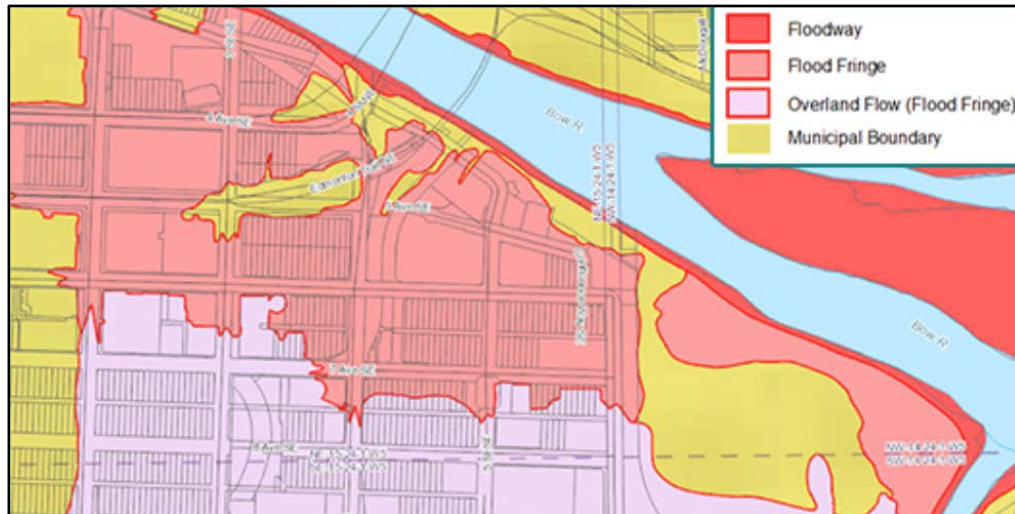
Inundation Maps



- Show floodwater extents
- Used for emergency management and other rapid-production uses



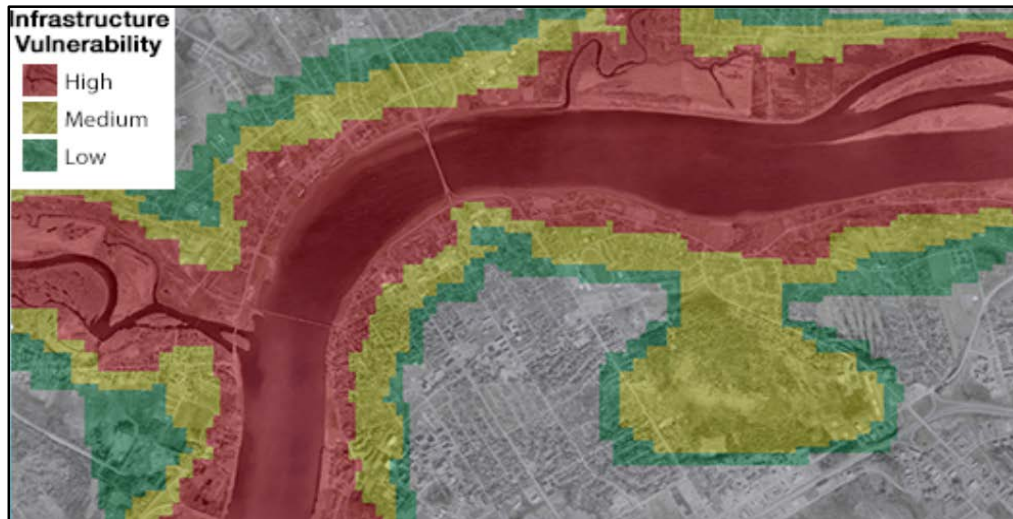
Hazard Maps



- Engineering Maps showing extents of different floods
- Can include depths and velocities



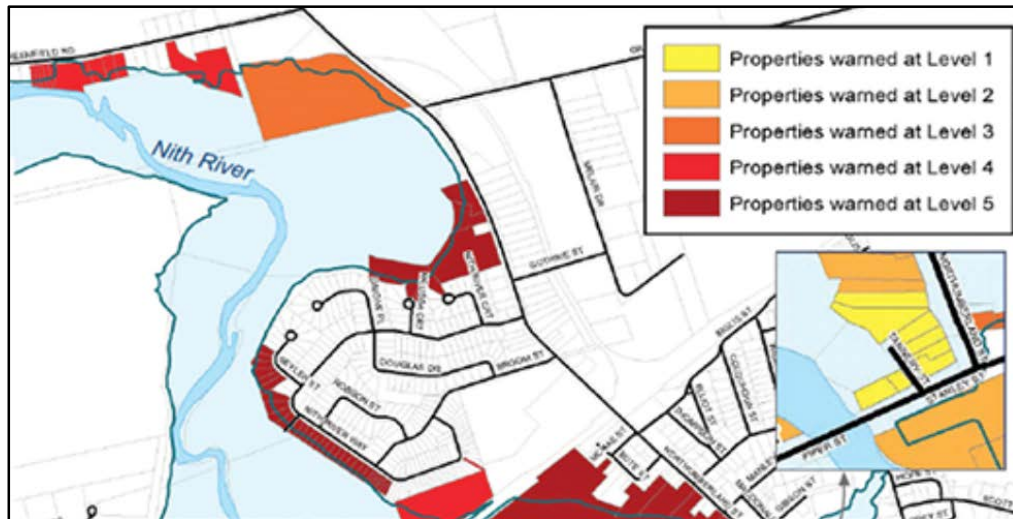
Risk Maps



- Show risks of flood hazard to socio-economic values
- Used to identify consequences of flooding



Awareness Maps



- Communicate flood information to public
- Can include historical information and advice



The ***Federal Floodplain Mapping Guidelines Series*** documents are being published to inform consistent practices for floodplain mapping in Canada.

Collaborative

Interoperable

Local

Adaptable

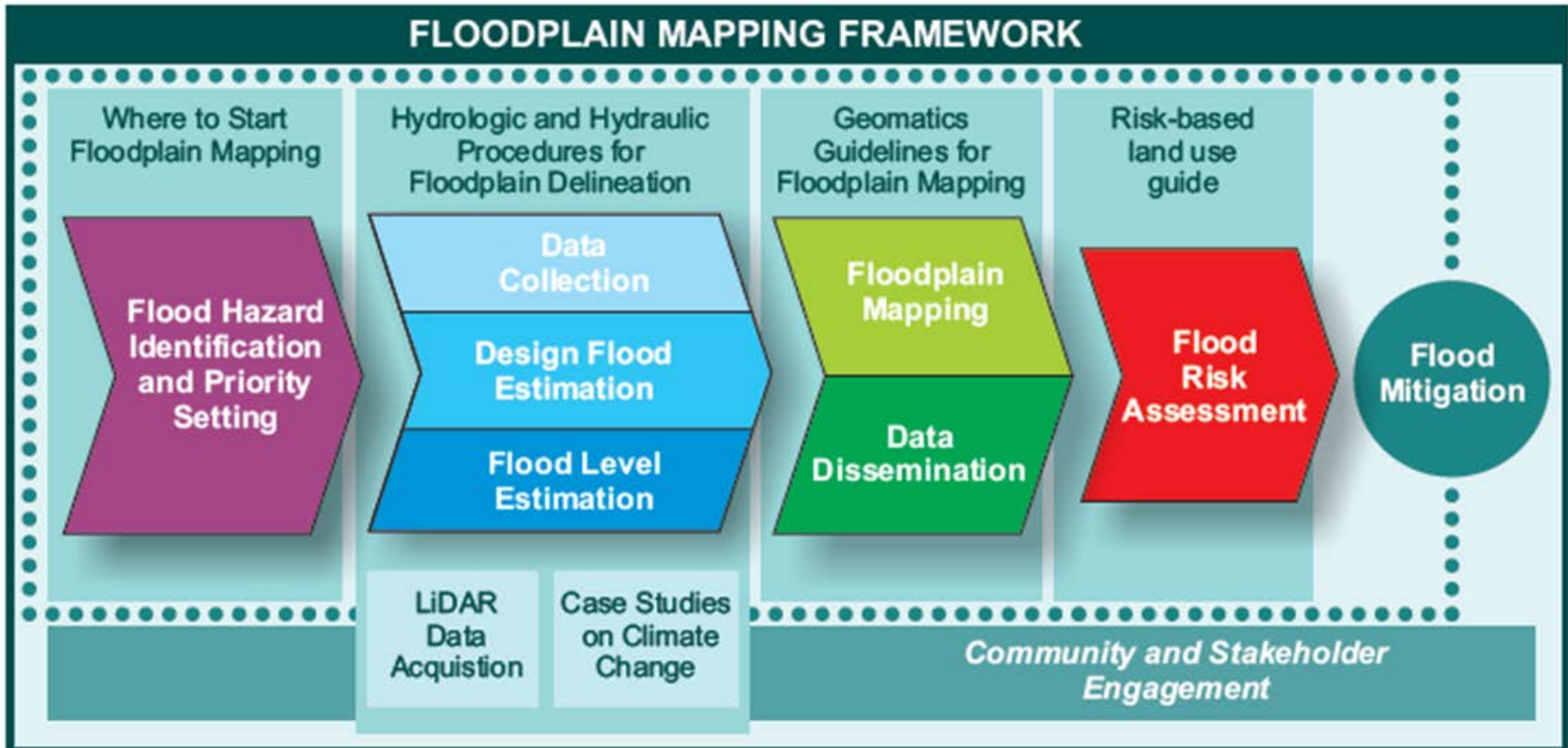
Evergreen

Accessible

Voluntary



- Recognize provincial / territorial roles and responsibilities for flood mitigation
- Provide basis for further specification by provinces & territories
- Inclusive and take regional considerations into account
- Encourage sharing and dissemination of flood hazard information
- Serve all floodplain mapping practitioners and stakeholders
- The Guidelines are not *standards* – they are *recommended common practices*.



Guidelines Series



Federal Floodplain Mapping Guidelines Series Document	Status
Federal Floodplain Mapping Framework	Published
Flood Hazard Identification and Priority Setting	In Progress
Federal Hydrologic and Hydraulic Procedures for Floodplain Delineation	Nearly Complete
Federal Airborne LiDAR Data Acquisition Guideline	Published
Case Studies on Climate Change in Floodplain Mapping	Final Review
Federal Geomatics Guidelines for Floodplain Mapping	Nearly Complete
Flood Risk Assessment	In Progress
Risk-Based Land Use Guide	Published
Bibliography of Best Practices and References for Flood Mitigation	Published



Stakeholder Engagement

- Ongoing engagement since 2015
- Workshops, consultation meetings, teleconferences/webinars, conferences, and contracts

Technical Working Group

- 160 members across Canada representing all levels of government, academia, industry, consulting, and other stakeholders
- Ongoing consultation

Federal Flood Mapping Committee

- Representatives from NRCAN, PS, ECCC, DND, DRDC, NRC, INAC, and INFCAN

Studies and reports

- Research and private consultants

Stakeholder Engagement



National Roundtable on Flood Risk, Regina November 2017

- Hosted by the Minister of Public Safety and Emergency Preparedness
- 55 Participants including NRCan
- Key Engagement Outcomes:
 1. Short Term: Explore mechanisms for sharing up-to-date flood data and flood maps to better understand the risks and predict future risks.
 2. Long Term: Collaborate with stakeholders to leverage and coordinate existing flood risk public awareness strategies to ensure a common approach to public awareness, education, and citizen engagement.



Indigenous Engagement in the Development of the Federal Floodplain mapping Guidelines Series

- GeoConnections Indigenous Inclusion Initiative
- Objective: Obtain requirements of Indigenous communities as it relates to floodplain mapping and the integration of their needs within the Federal Floodplain Mapping Guidelines Series
- Key benefits:
 1. addressing the gap in knowledge of floodplain mapping practices within northern, remote and Indigenous regions of the country;
 2. tailoring a portion of the guidelines to the specific needs of Indigenous communities.



Partners for Action Reports, January 2018

- Using Flood Maps for Community Flood Risk Communication,
 - Public flood maps differ from maps used by subject-matter experts.
 - Publicly sharing flood maps online and through traditional media will aid in sustaining public interest and support in flood risk management.
 - Maps are one component of a national strategy for public risk awareness and engagement.
- Engaging Community Members in the Floodplain Mapping Process
 - Listen to the needs and wants of each community.
 - Engagement tools are most effective when they are interactive.
 - Utilize multiple tools and platforms to optimize engagement efforts.
 - Good facilitation is key for conducting effective community engagement.
 - Make project information, resources, and deliverables available to the public online.



Risk Assessment Documents:

1. Flood Risk Assessment

- Guidelines Series document
- In progress

2. Guidelines and Database of Flood Vulnerability Functions

- Annex to Flood Risk Assessment document
- In progress

3. Risk Based Land Use Guide

- Published by NRCan (2015)
- Addresses flooding and other hazards

Climate Change and Floodplain Mapping



- Case Studies to be Published March, 2018
 1. Fraser Basin Council, British Columbia
 2. City of Surrey, British Columbia
 3. Waterford, Newfoundland
- Workshop on Climate Change and Floodplain Mapping, Edmonton, March 2018

Federal Floodplain Mapping Guidelines Series



Case Studies on Climate Change in Floodplain Mapping

Volume 1.0

2018

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Public Safety Canada

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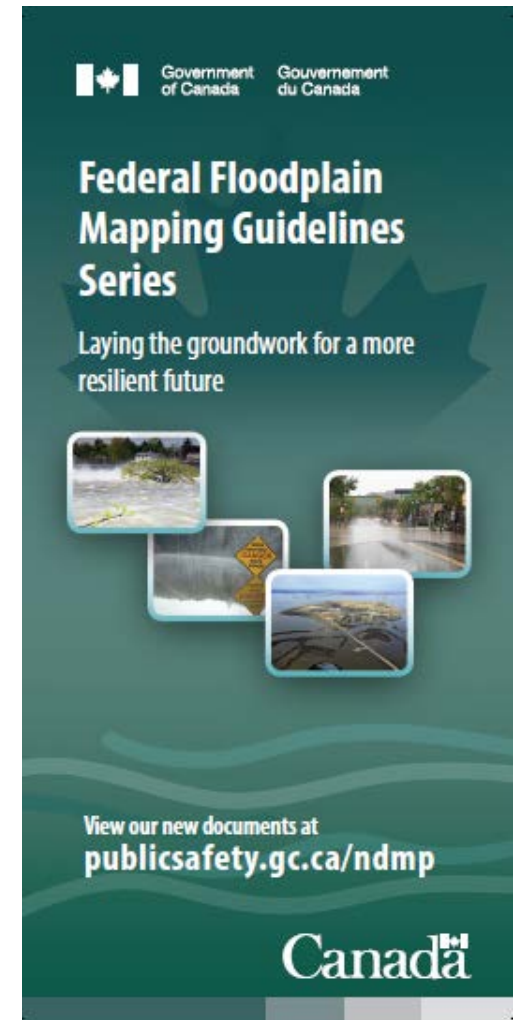
Consultation on the Federal Floodplain Mapping Guidelines is ongoing:

- March 2018 Flood Risk Assessment Workshop;
- March 2018 Floodplain Mapping and Climate Change;
- CWRA National Conference, Victoria 2018
- Contracts with consultants;
- Consultations with Provinces / Territories; and,
- Engaging Indigenous communities.

Conclusion



The Federal Floodplain Mapping Guidelines Series is laying the groundwork for a more resilient future by promoting common approaches to floodplain mapping across Canada.





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Questions?

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