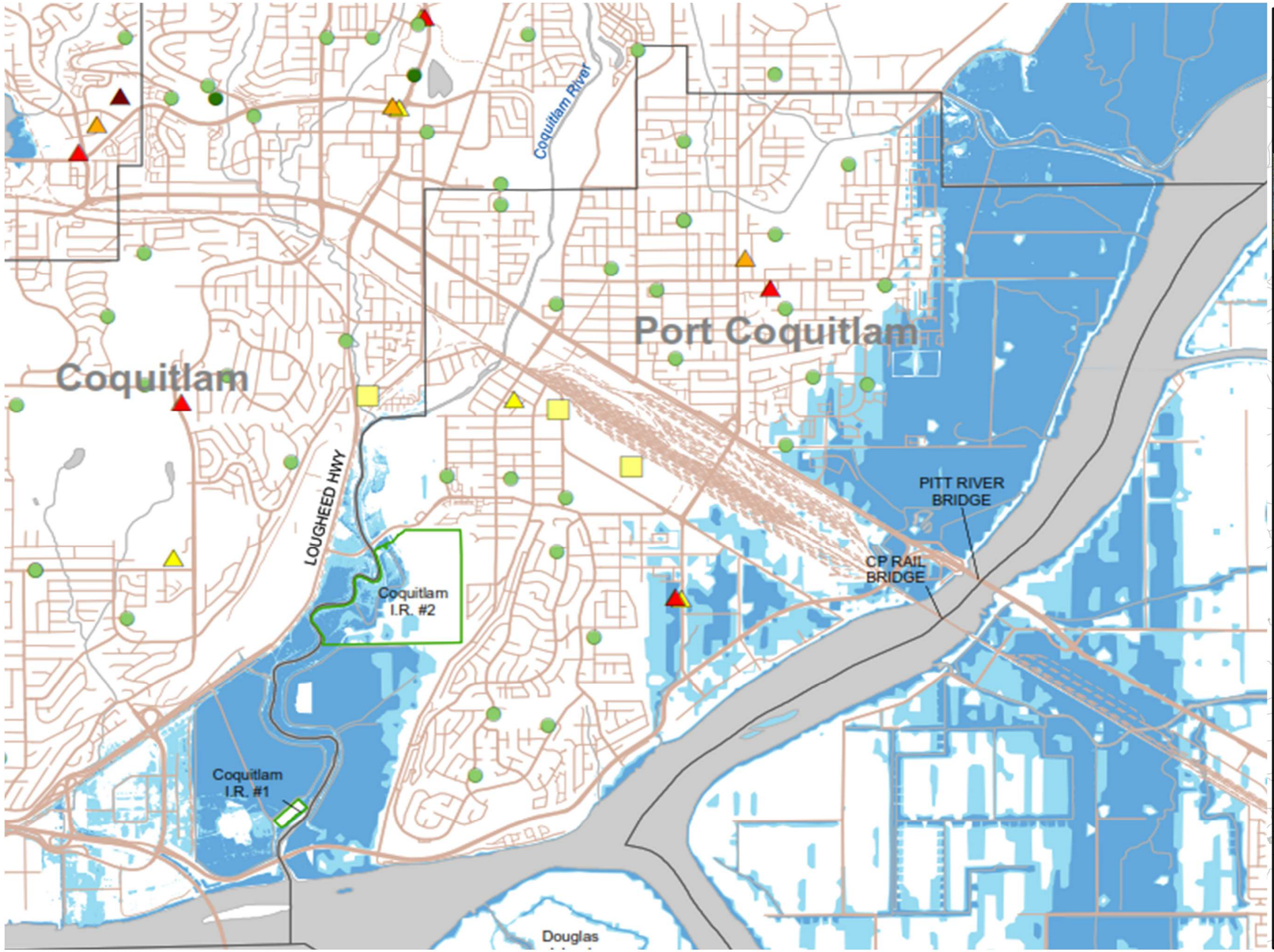


Fraser Basin Council

nhc
northwest hydraulic consultants

30 Gostick Place
North Vancouver, B.C. V7M 3G3
Canada
Office: 604.980.6011
Fax: 604.980.9264
www.nhcweb.com

Flood Extent, Scenario A (2015)
Flood Extent, Scenario B (2100)
Indian Reserves and First Nations Treaty Lands
Fire Hall
Police Station
Emergency Operations Centre
Hospital
Airport
Port Facilities
BC Hydro Substation
School
Post-secondary Institution

Notes:

1. Flood extents were developed for two coastal and two riverine flood scenarios. The coastal scenarios, incorporating a 0.6 m wave allowance, are:
   - Scenario A – 1 in 500 AEP still-water ocean state with current sea level (Flood level = 3.40 m GSC).
   - Scenario B – 1 in 500 AEP still-water ocean state with 1 m sea level rise (Flood level = 4.40 m GSC).

   The riverine scenarios, excluding freeboard, are:
   - Scenario C – The Fraser River design flood (equivalent to the 1894 flood of record, with an approximate return period of 500 years) and current sea levels.
   - Scenario D – The 1 in 500 AEP Fraser River flood, incorporating a moderate climate change flow increase for year 2100 and a 1 m sea level rise.

   Note: AEP refers to the Annual Exceedance Probability. A 1 in 500 AEP, or 500-year flood, has a 0.2% chance of occurring in a given year.
2. This map delineates the two coastal flood extents, Scenarios A and B.
3. Topographic data obtained from a variety of sources was used to create a Digital Elevation Model (DEM) for the study area. The DEM horizontal resolution was five metres, except for the upstream portion of the Fraser River (from Mission-Abbotsford to Hope), where the resolution was ten metres. The maps depict flood levels based on ground conditions represented in this DEM.
4. The flood levels are based on a generalized water surface.
5. The accuracy of the floodplain boundary is limited by the resolution of the DEM and the flood level assumptions adopted for this study. The maps are for the overview level assessment of flood vulnerabilities described by NHC et al (2015). They do NOT represent floodplain mapping and should not be used as such.

Data Sources:

1. Freshwater Atlas hydrography, Digital Roads Atlas roads, municipal boundaries and First Nations boundaries, schools, fire halls, police stations, and hospitals obtained from Data BC.
2. Rail obtained from Natural Resources Canada. Light rail obtained from Translink.
3. Emergency operations centres obtained from EMBC.
4. Hillshade basemap from Province of BC.
5. Index basemap from National Geographic and Esri.

References:

1. NHC (2016). Lower Mainland Flood Management Strategy, Project 2: Regional Assessment of Flood Vulnerability (Final Report). Report prepared for the Fraser Basin Council.

Disclaimer:

N

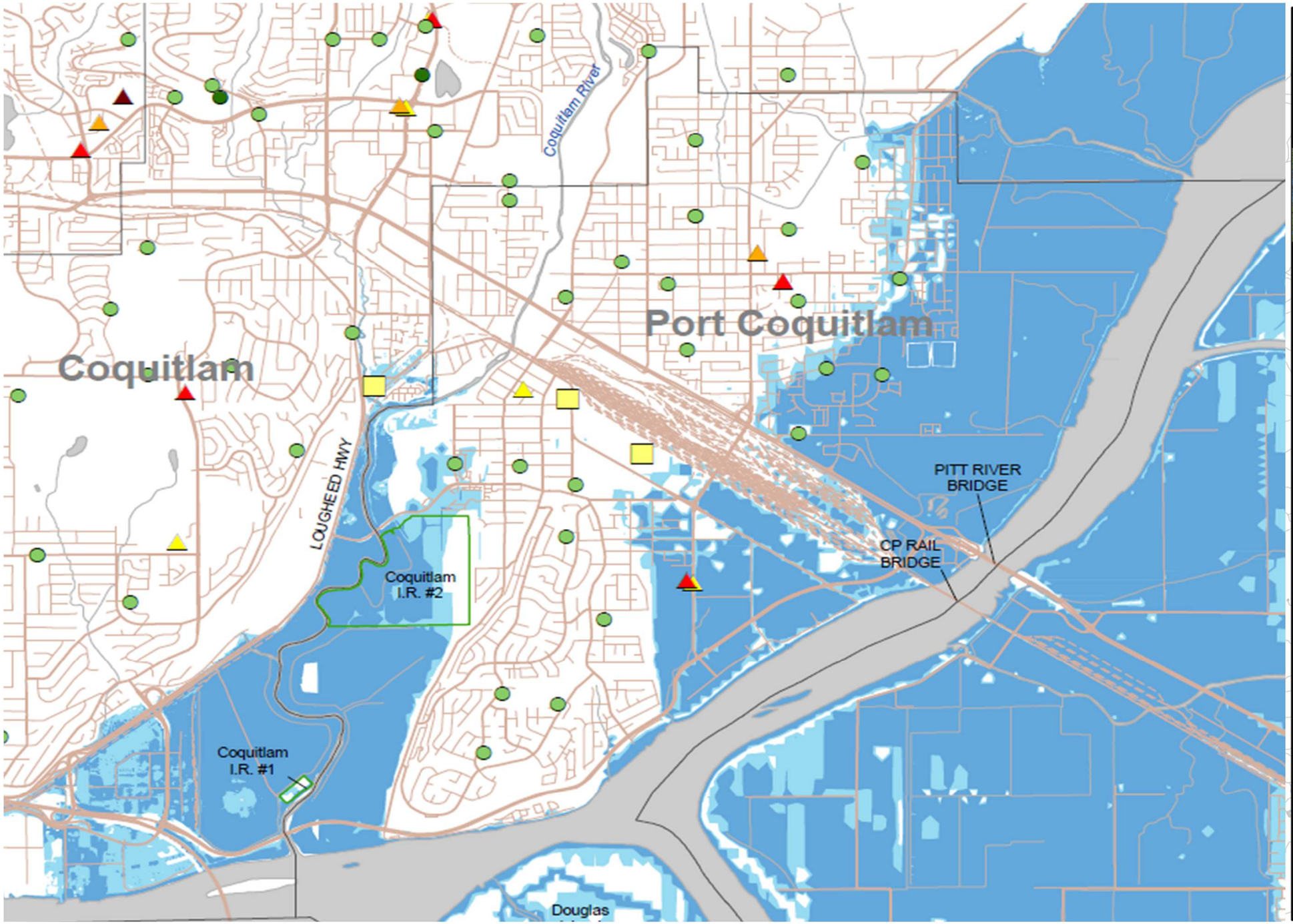
Coordinate System: NAD 1983 UTM ZONE 10N
Units: METRES

Geomorphologist	GIS	Reviewer
CXM	MSN	MCM

Job Number	Date
3000149	14-APR-2016

LOWER MAINLAND REGIONAL FLOOD VULNERABILITY ASSESSMENT

FLOOD EXTENTS SCENARIOS A & B



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nhc
northwest hydraulic consultants
30 Gostick Place
North Vancouver, B.C. V7M 3G3
Canada
Office: 604.980.6011
Fax: 604.980.9264
www.nhcweb.com

Flood Extent, Scenario C (2015)
Flood Extent, Scenario D (2100)
Indian Reserves and First Nations Treaty Lands

Fire Hall
Police Station
Emergency Operations Centre
Hospital
Airport
Port Facilities
BC Hydro Substation
School
Post-secondary Institution

Notes:

1. Flood extents were developed for two coastal and two riverine flood scenarios. The coastal scenarios, incorporating a 0.6 m wave allowance, are:
   - Scenario A – 1 in 500 AEP still-water ocean state with current sea level (Flood level = 3.40 m GSC).
   - Scenario B – 1 in 500 AEP still-water ocean state with 1 m sea level rise (Flood level = 4.40 m GSC).

   The riverine scenarios, excluding freeboard, are:
   - Scenario C – The Fraser River design flood (equivalent to the 1894 flood of record, with an approximate return period of 500 years) and current sea levels.
   - Scenario D – The 1 in 500 AEP Fraser River flood, incorporating a moderate climate change flow increase for year 2100 and a 1 m sea level rise.

   Note: AEP refers to the Annual Exceedance Probability. A 1 in 500 AEP, or 500-year flood, has a 0.2% chance of occurring in a given year.
2. This map delineates the two riverine flood extents, Scenarios C and D.
3. Topographic data obtained from a variety of sources was used to create a Digital Elevation Model (DEM) for the study area. The DEM horizontal resolution was five metres, except for the upstream portion of the Fraser River (from Mission-Abbotsford to Hope), where the resolution was ten metres. The maps depict flood levels based on ground conditions represented in this DEM.
4. The flood levels are based on a generalized water surface.
5. The accuracy of the floodplain boundary is limited by the resolution of the DEM and the flood level assumptions adopted for this study. The maps are for the overview level assessment of flood vulnerabilities described by NHC et al (2015). They do NOT represent floodplain mapping and should not be used as such.

Data Sources:

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References:

1. NHC (2016). Lower Mainland Flood Management Strategy; Project 2: Regional Assessment of Flood Vulnerability (Final Report). Report prepared for the Fraser Basin Council.

Disclaimer:

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Coordinate System: NAD 1983 UTM ZONE 10N
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Geomorphologist	GIS	Reviewer
CXM	MSN	MCM

Job Number	Date
3000149	14-APR-2016

LOWER MAINLAND REGIONAL FLOOD VULNERABILITY ASSESSMENT

FLOOD EXTENTS SCENARIOS C & D