

2019 Muskoka Flood in a Historical Context (a mid-flood perspective)



Muskoka R. overtopping Bracebridge Falls Dam

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University of New Hampshire
and
Muskoka Watershed Council

2019 Muskoka Stewardship Conference
Your Watershed: Connecting the Drops
Huntsville, ON
2019-04-26



Muskoka Floods 2019

Bracebridge Photos



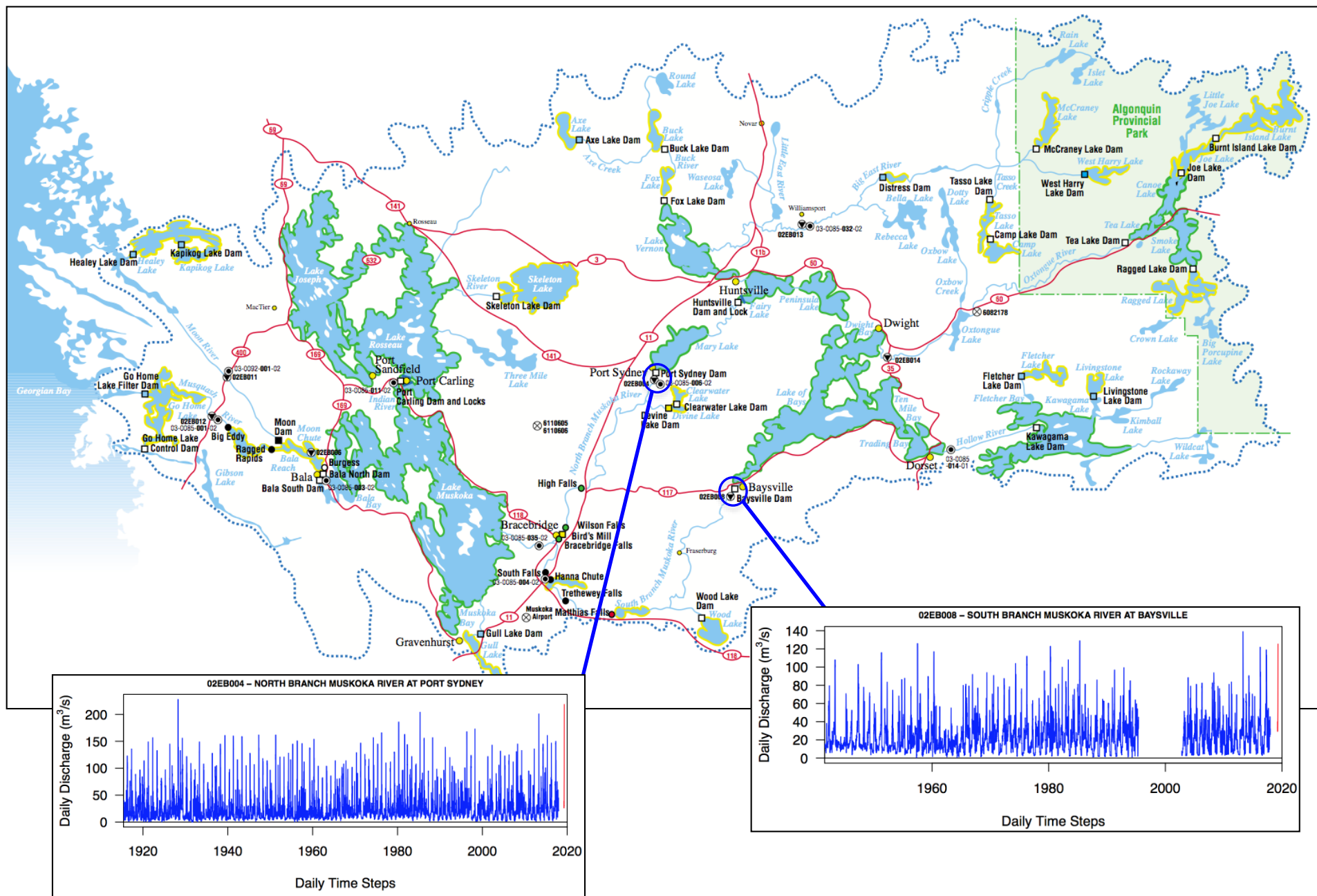
River Rd near Taylor Rd



Beaumont Dr

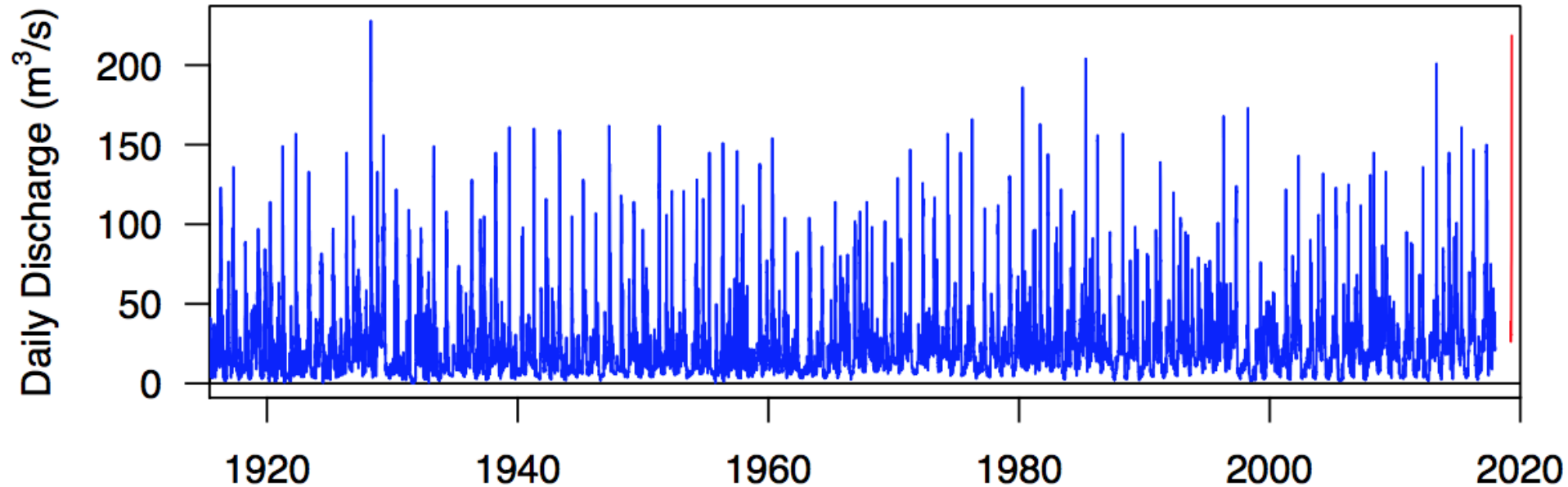


Muskoka R. from
Beaumont Dr

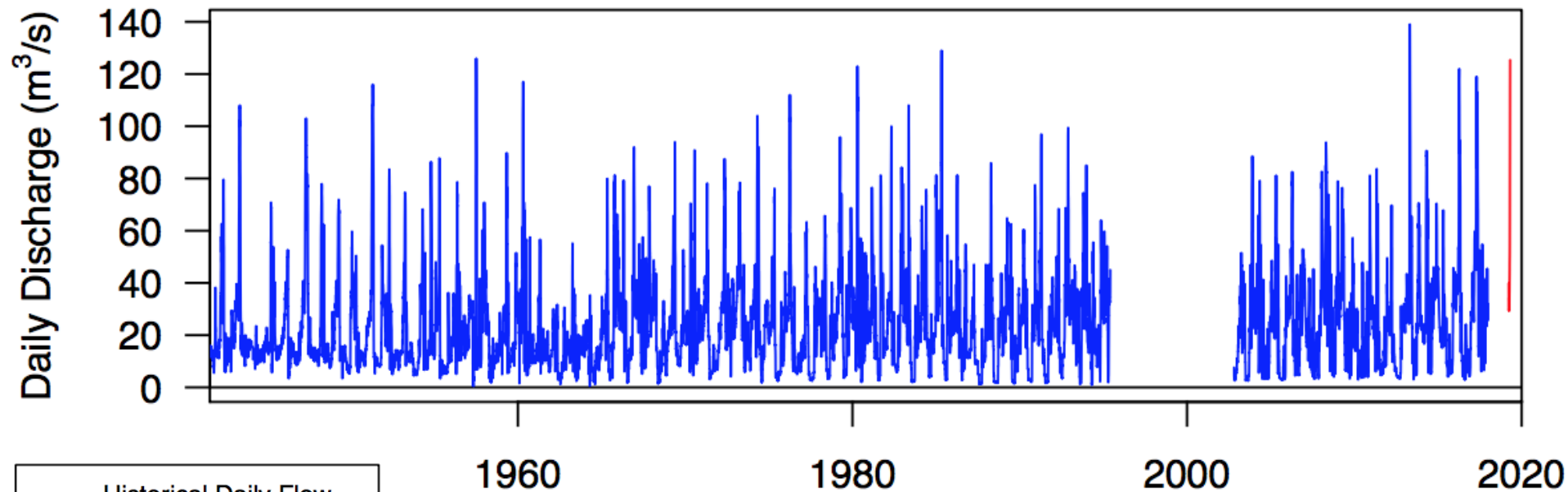


Map source: 2006 Muskoka River Watershed Plan

02EB004 – NORTH BRANCH MUSKOKA RIVER AT PORT SYDNEY

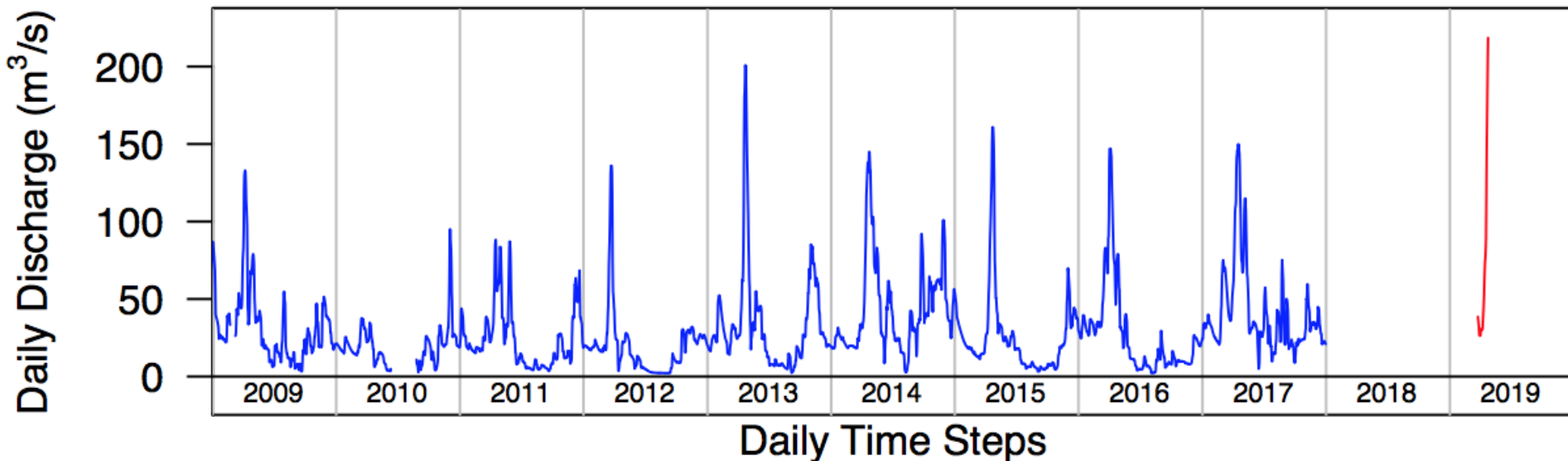


02EB008 – SOUTH BRANCH MUSKOKA RIVER AT BAYSVILLE

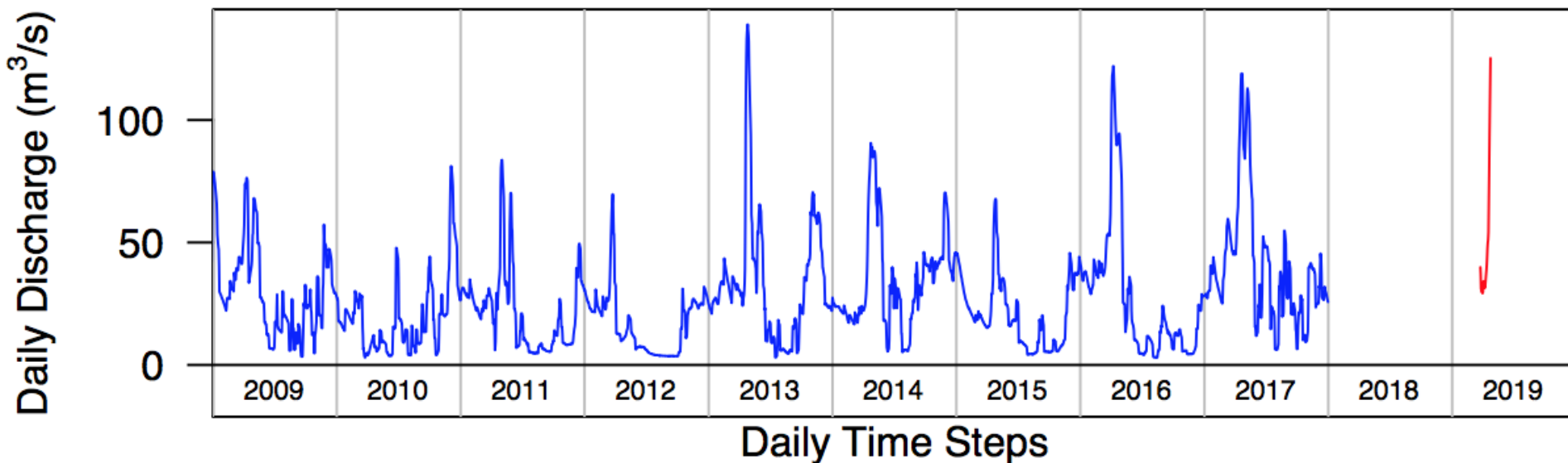


— Historical Daily Flow
— Provisional Hourly Flow

02EB004 – NORTH BRANCH MUSKOKA RIVER AT PORT SYDNEY



02EB008 – SOUTH BRANCH MUSKOKA RIVER AT BAYSVILLE



— Historical Daily Flow
— Provisional Hourly Flow

Port Sydney: peak flows > 200 m³/s

Daily Mean
Peak

228 m³/s

204 m³/s

201 m³/s

218 m³/s

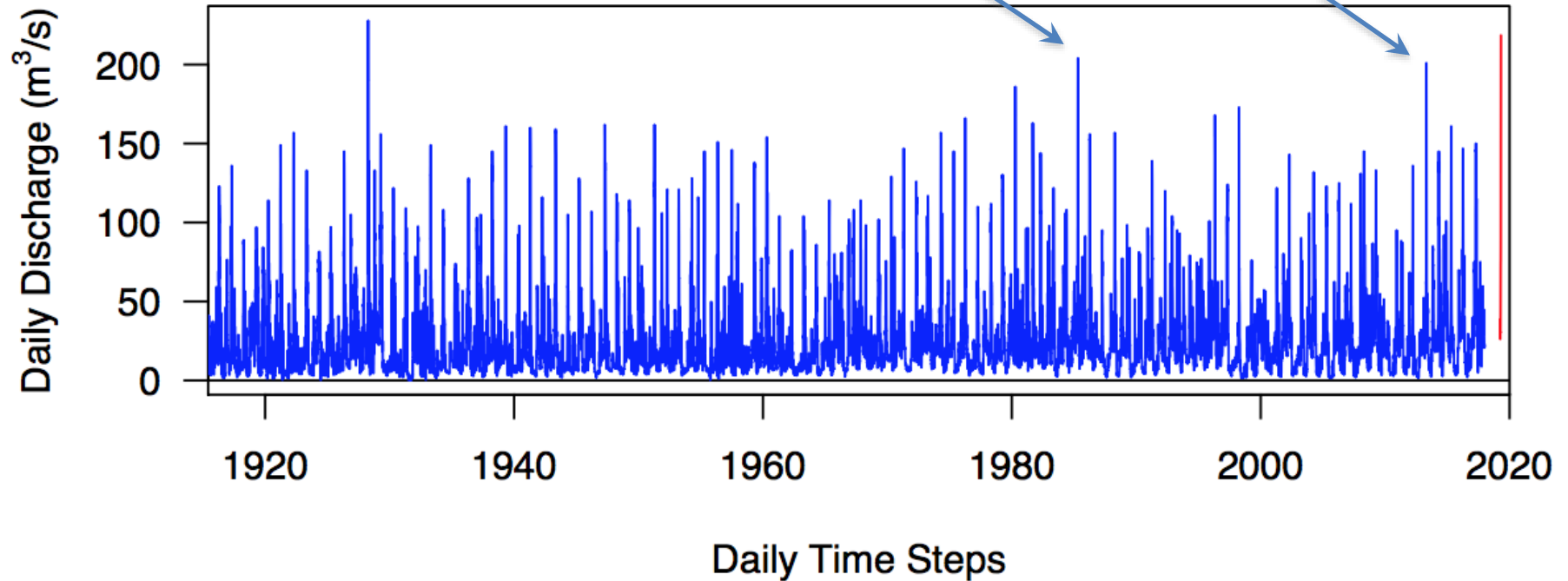
1928 April 13

1985 April 26

2013 April 23

2019 April 24

02EB004 – NORTH BRANCH MUSKOKA RIVER AT PORT SYDNEY



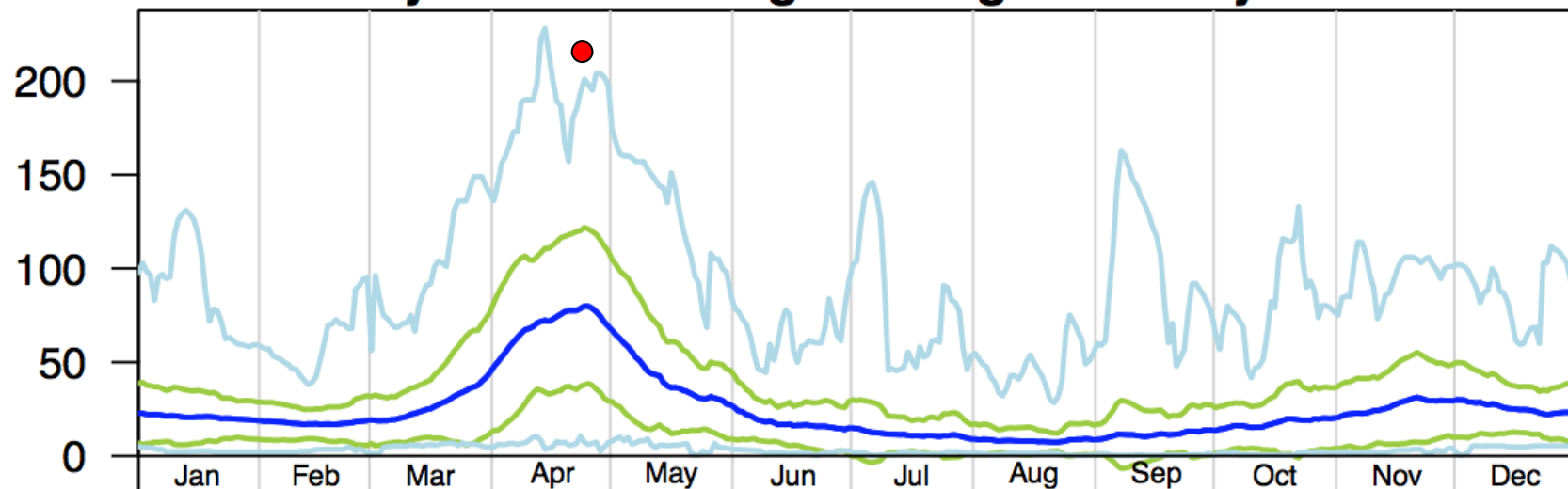
- Can we have four “100 year” floods in 100 years?

— Historical Daily Flow
— Provisional Hourly Flow

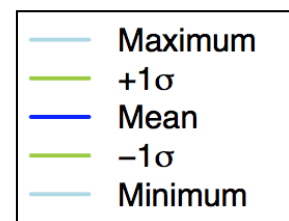
North Branch Muskoka R. at Port Sydney

Daily River Discharge – Long term daily mean

Long Term Mean Daily Discharge (m^3/s)



Day of Year

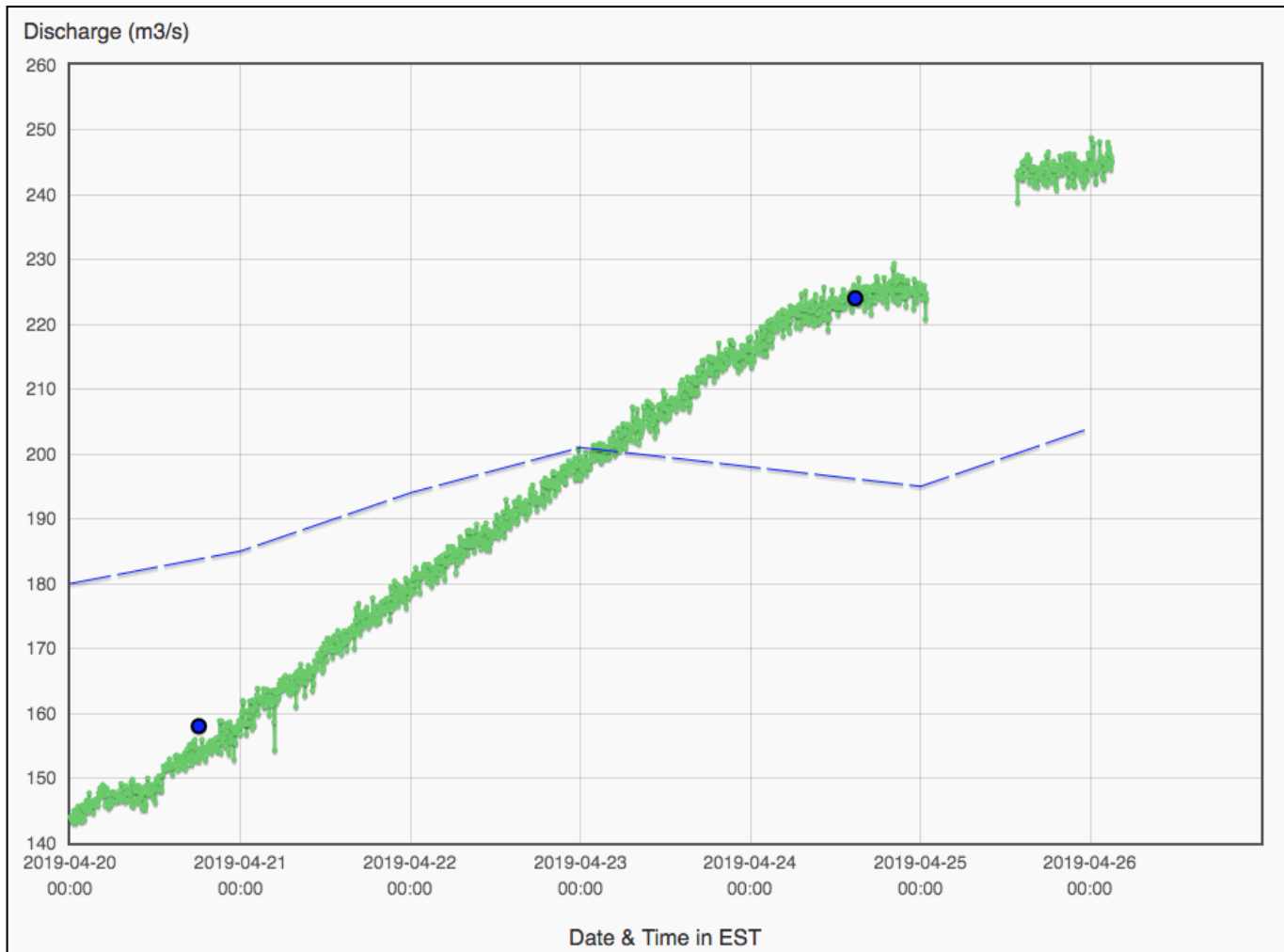


● 218 m^3/s

North Branch Muskoka River at Port Sydney

Graph from Environment Canada web site

Friday 26 April 06:30



Discharge provisional

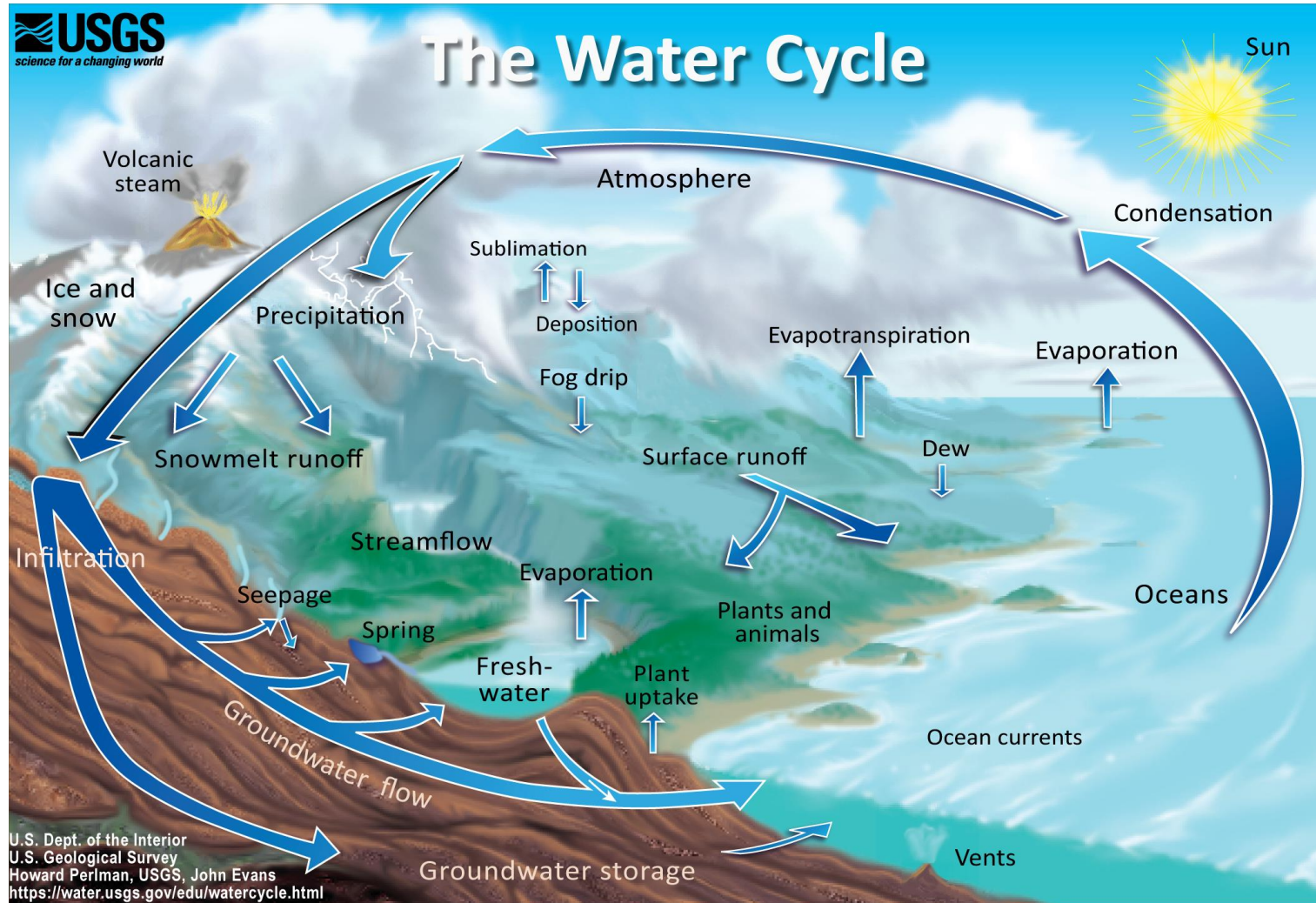


Discharge measurements



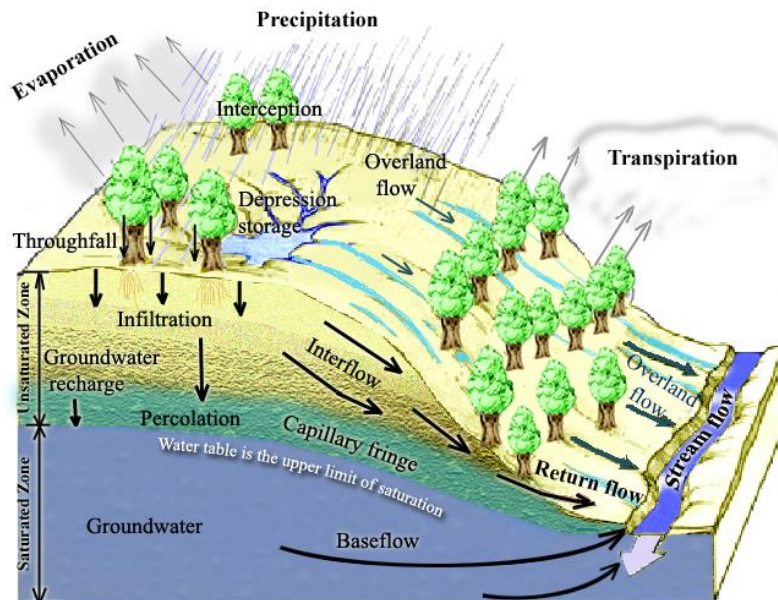
Discharge maximum

Themes



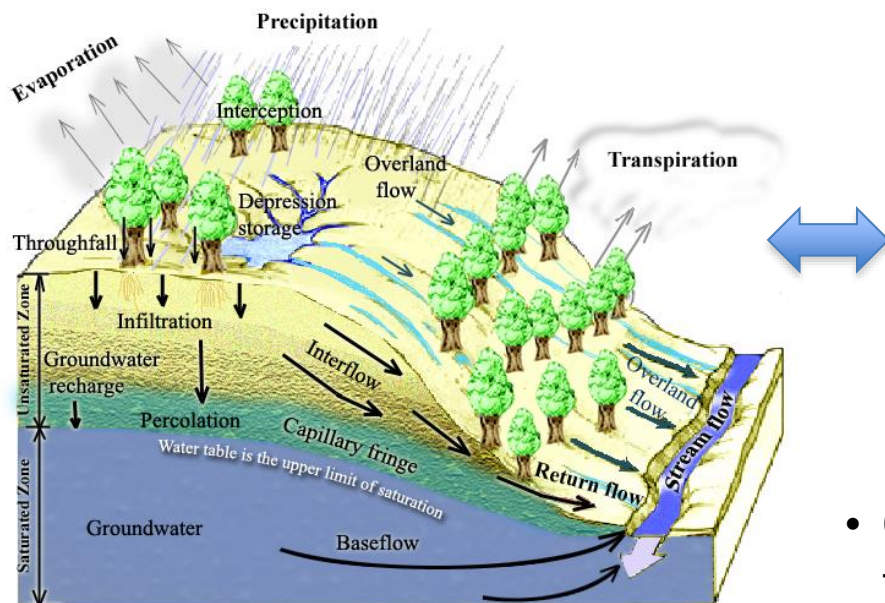
The watershed is not just about the rivers and lakes

- Forests and Fields
- Wildlife
- Wetlands
- Groundwater
- Glacial History

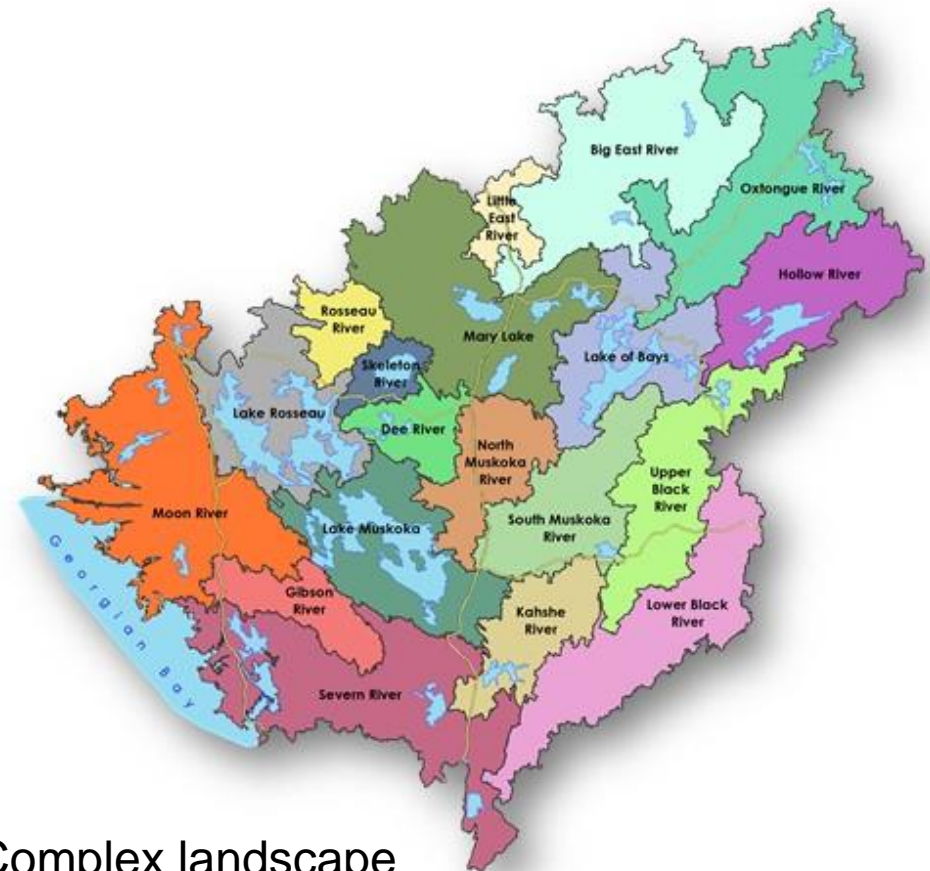


Source: <http://hydrology.usu.edu/RRP>

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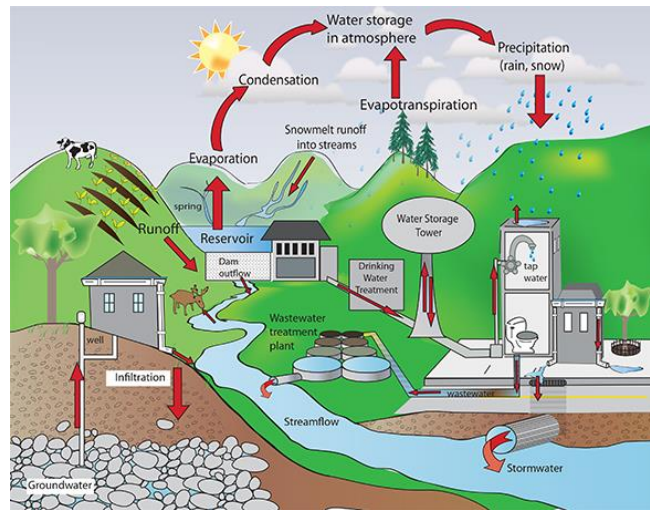


- Complex landscape forming the watershed

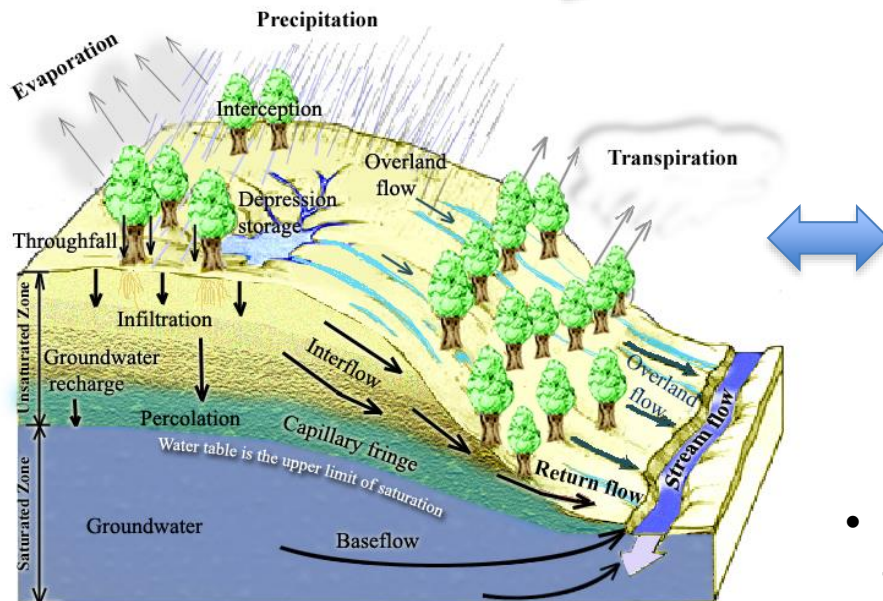
Human component (local scale):

- Changing the land
- Impounding rivers
- Urbanization
- Pollutants

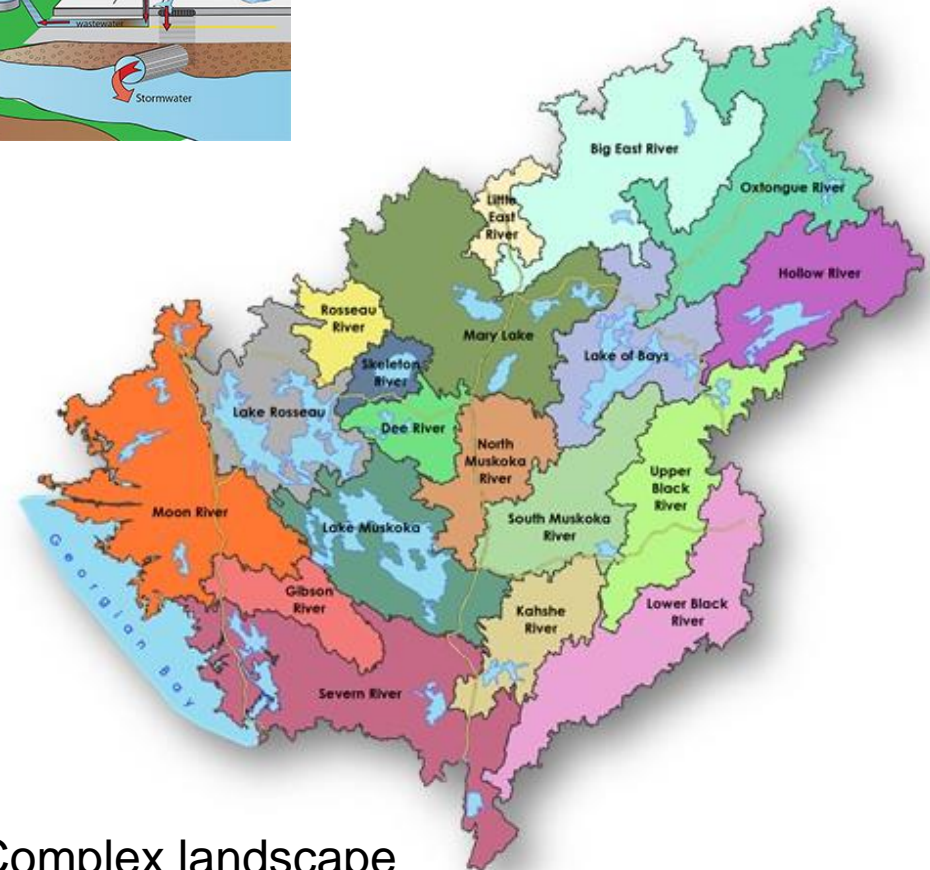
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Source: socratic.org



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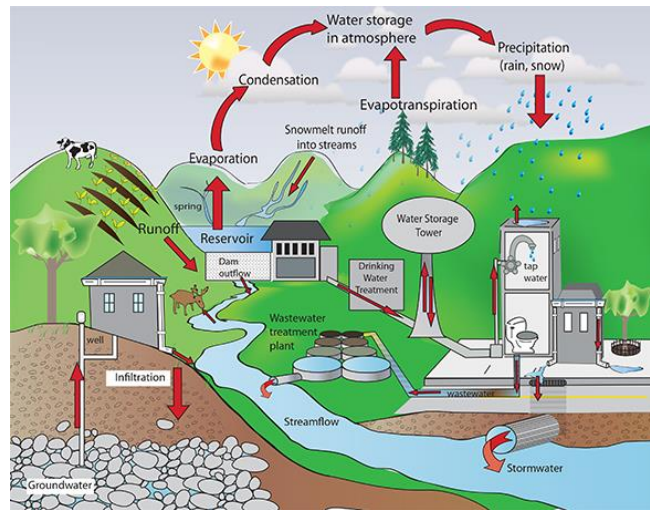


- Complex landscape forming the watershed

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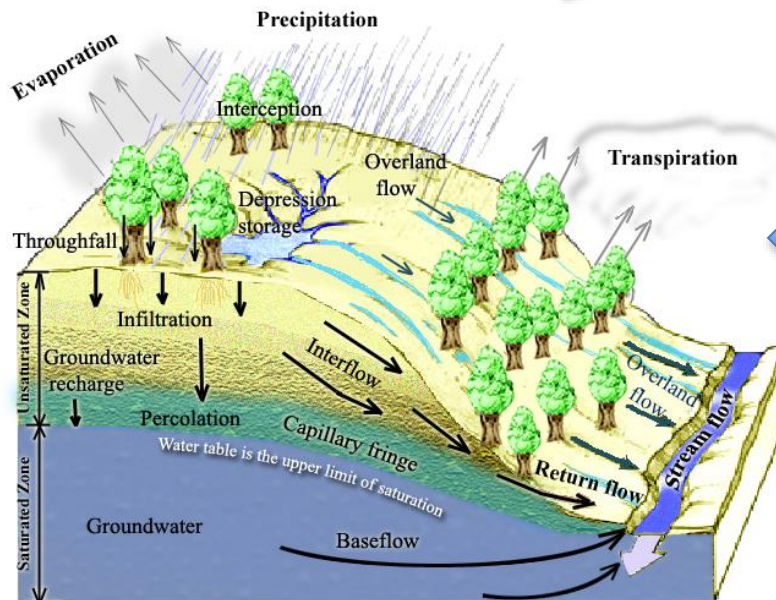
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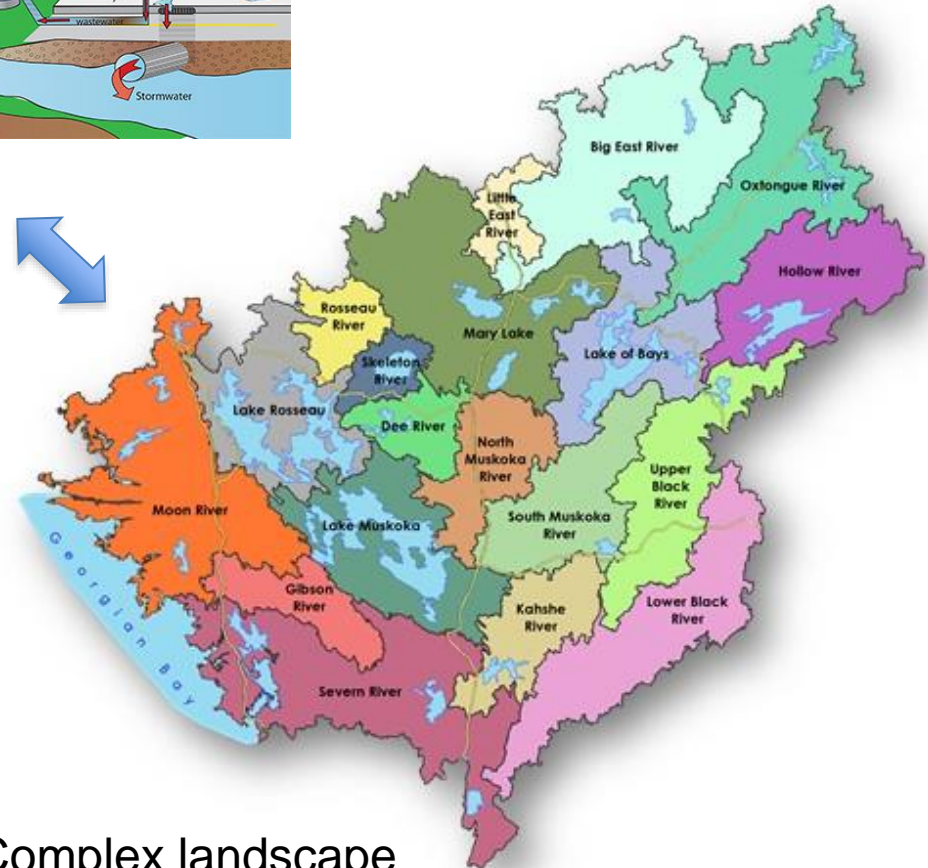
Source: socratic.org

Human component (large scale):

- Changing climate
- Economy
- Management
- Education



Source: <http://hydrology.usu.edu/RRP>

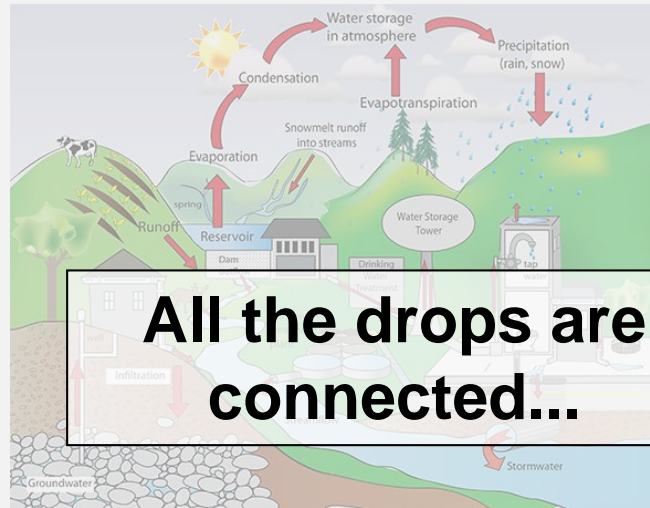


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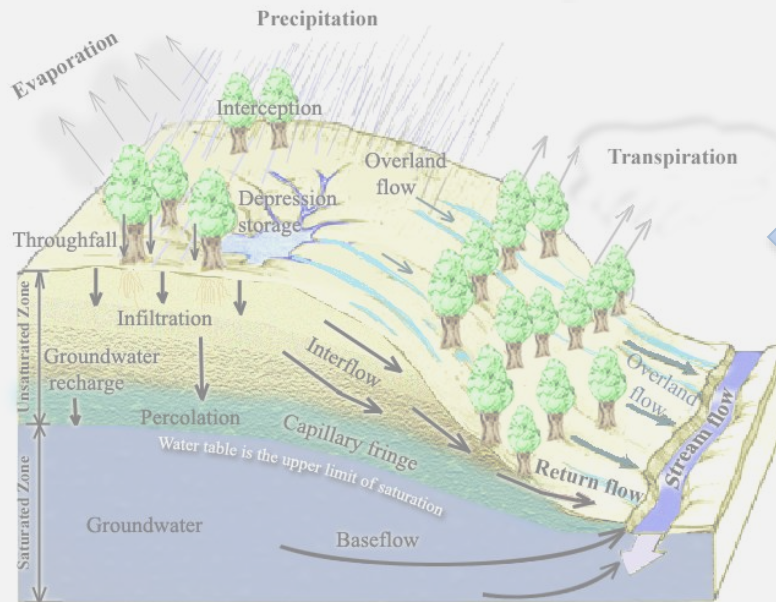
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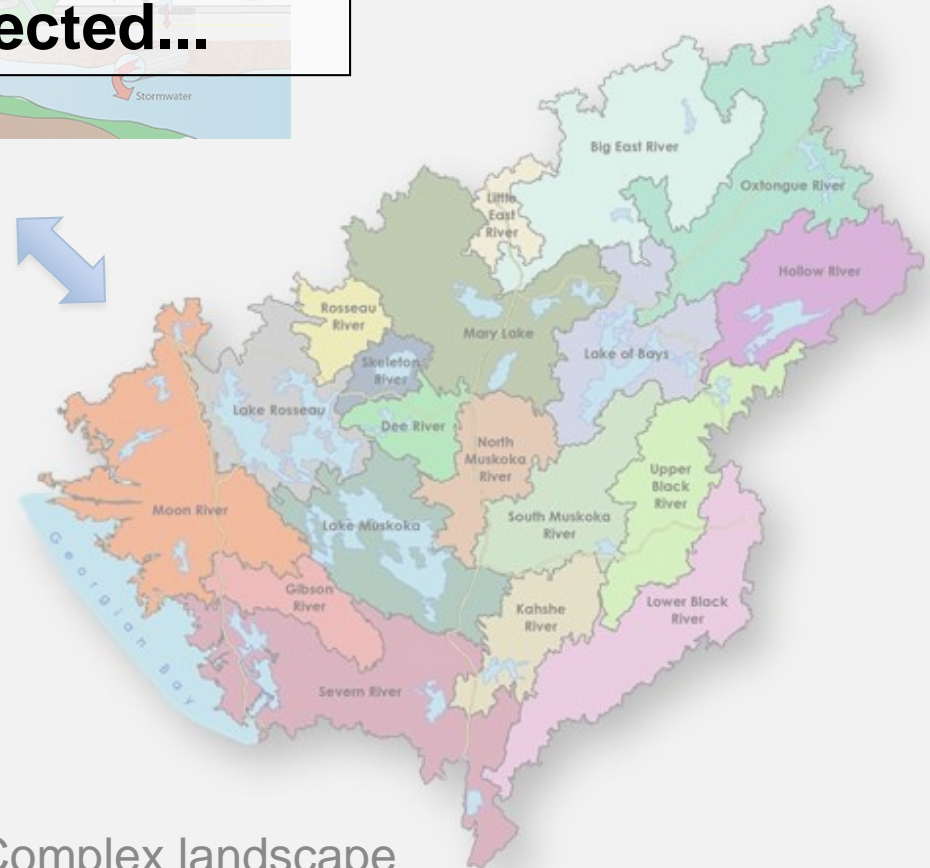
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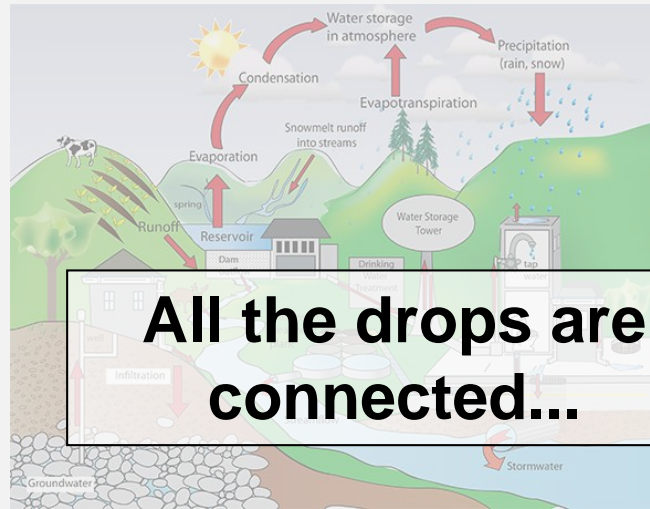


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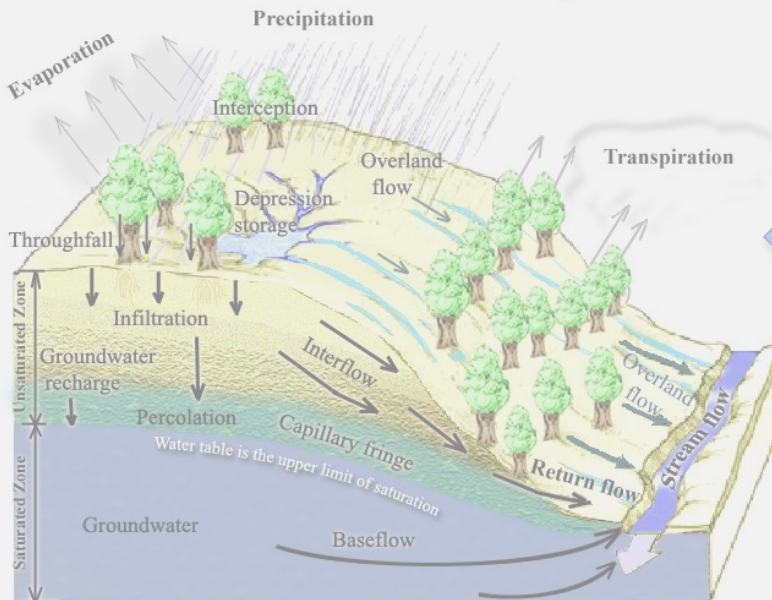
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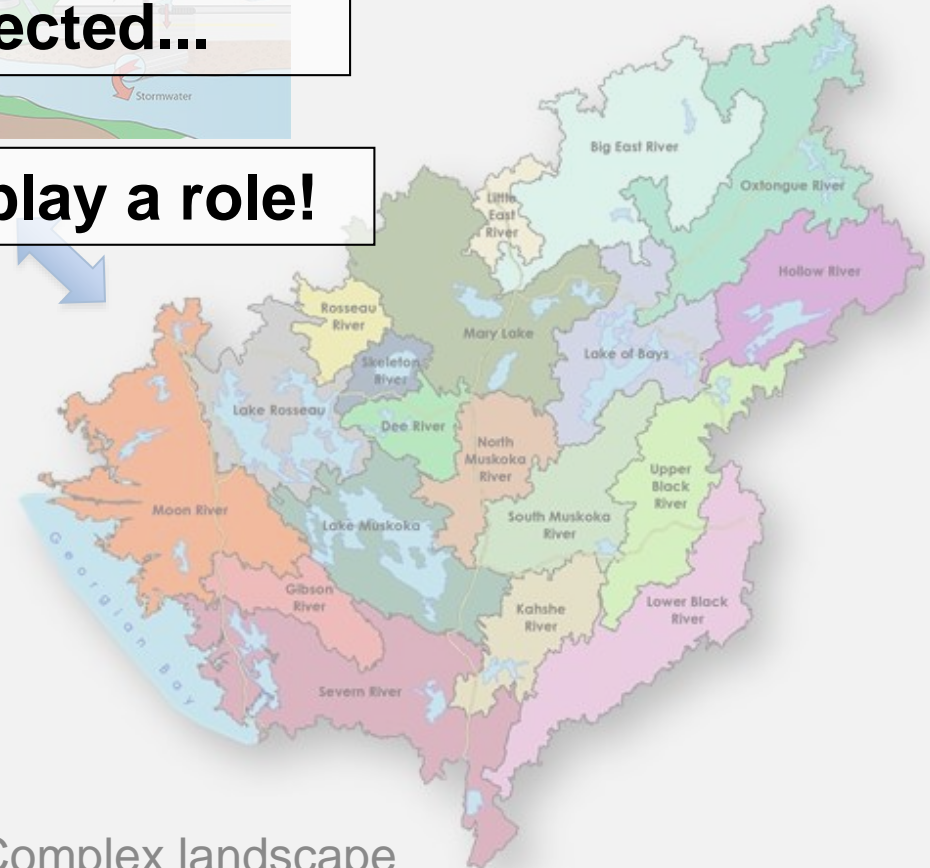
You can play a role!

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- Complex landscape forming the watershed