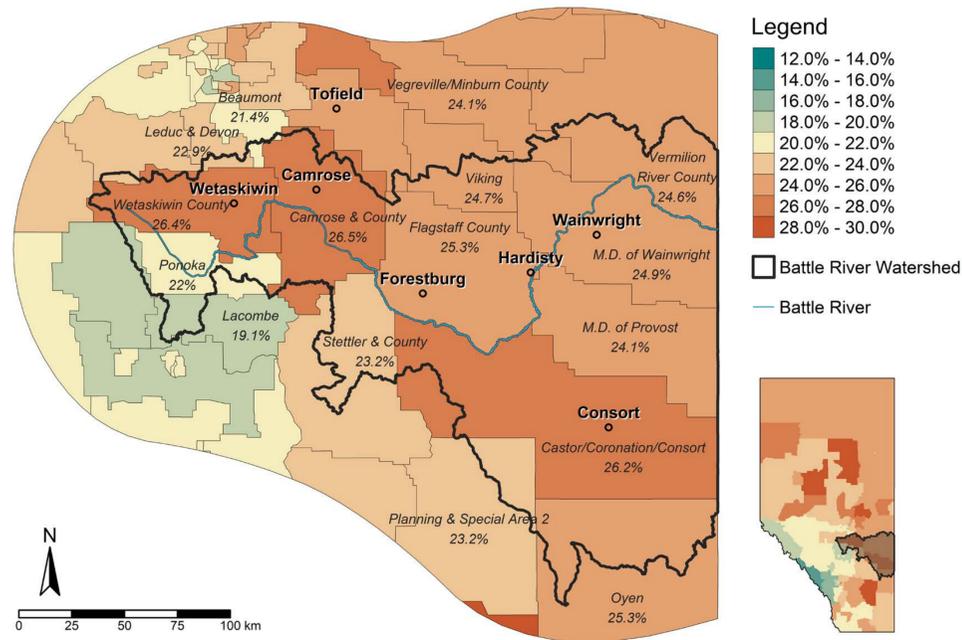
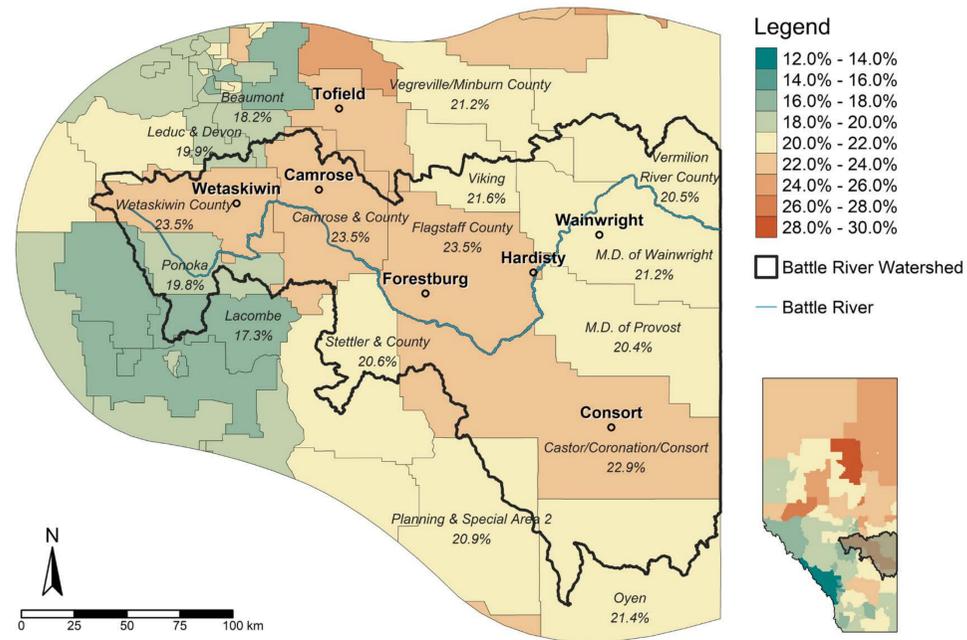


# Personal Wellbeing - Chronic Diseases

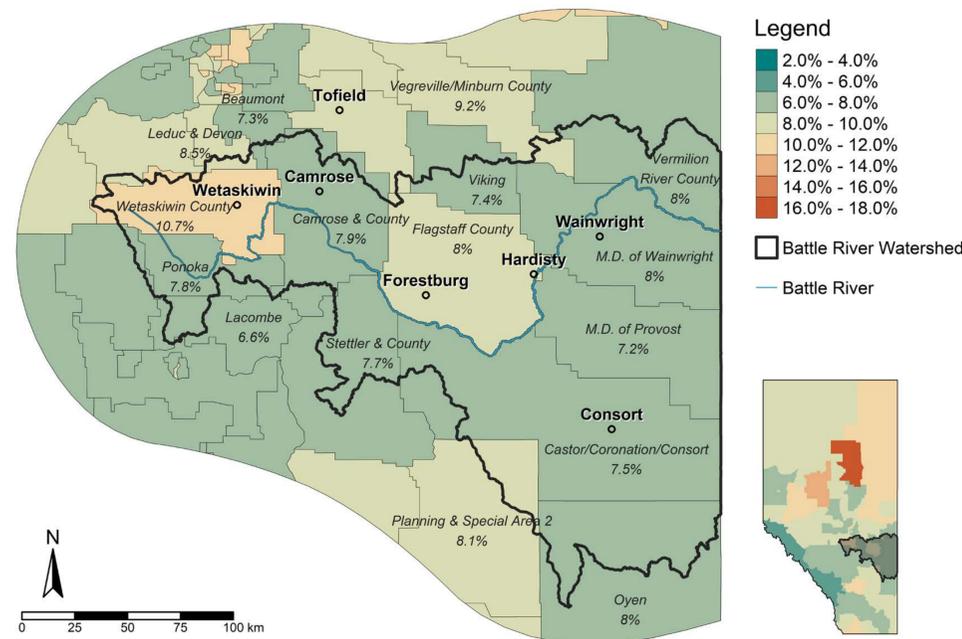
**Hypertension Prevalence (2019), Males**  
% of population with condition (age-standardized)



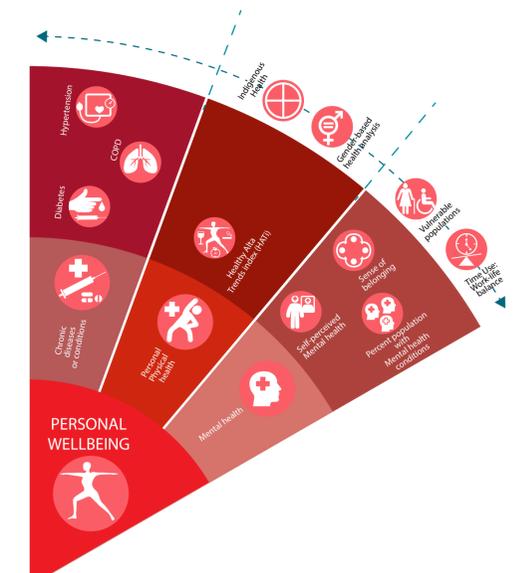
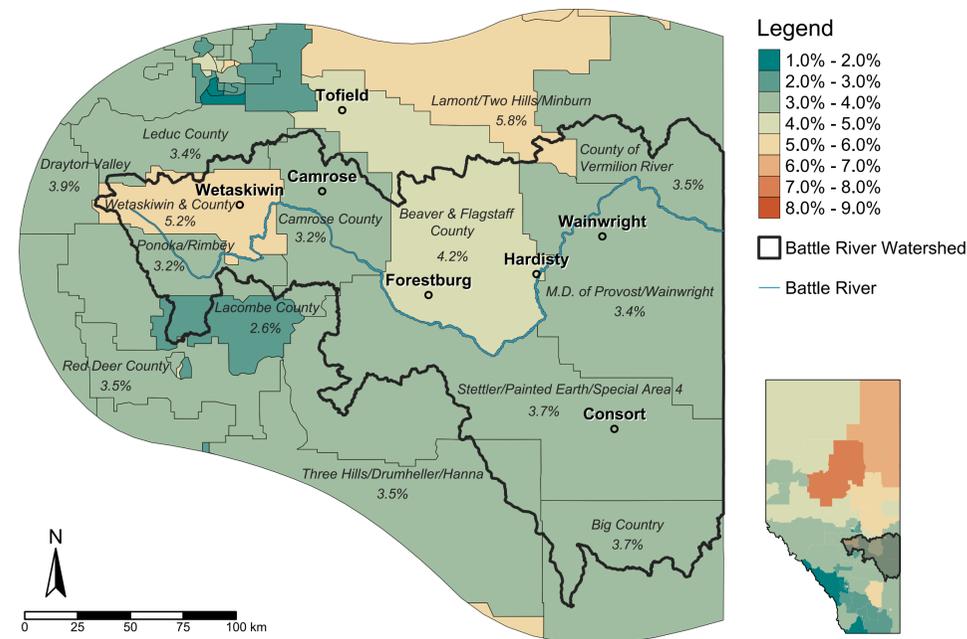
**Hypertension Prevalence (2019), Females**  
% of population with condition (age-standardized)



**Diabetes Prevalence (2019), Males and Females**  
% of population with condition (age-standardized)



**Chronic Obstructive Pulmonary Disease (COPD) Prevalence (2019)**  
% of population with condition (age-standardized)



**Sources:** Alberta Health, Analytics and Performance Reporting Branch. 2019. Interactive Health Data Application: Hypertension, Diabetes, and Obstructive Pulmonary Disease.


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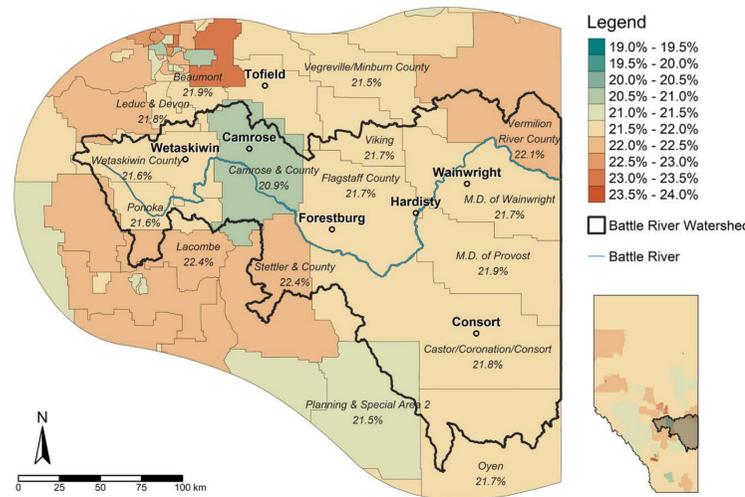

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# Personal Wellbeing

## Physical Health - Health Alberta Trends Index (HATi)

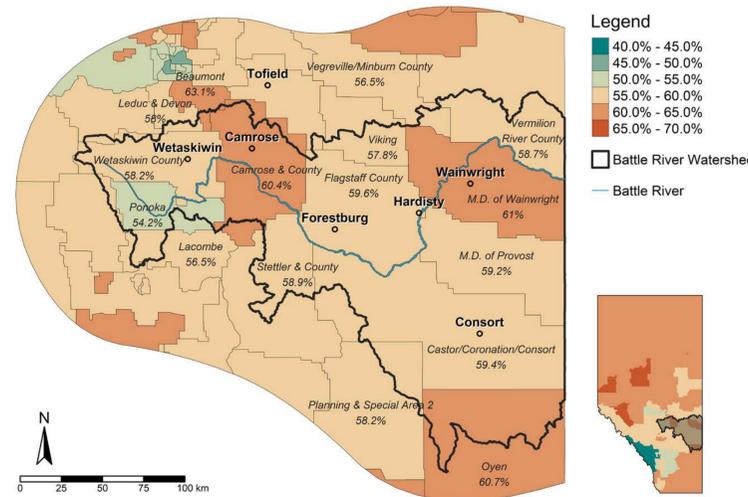
### Life Stress (2014)

% of the population that self-rated their level of life stress as 'Extremely' or 'Quite a bit' stressful



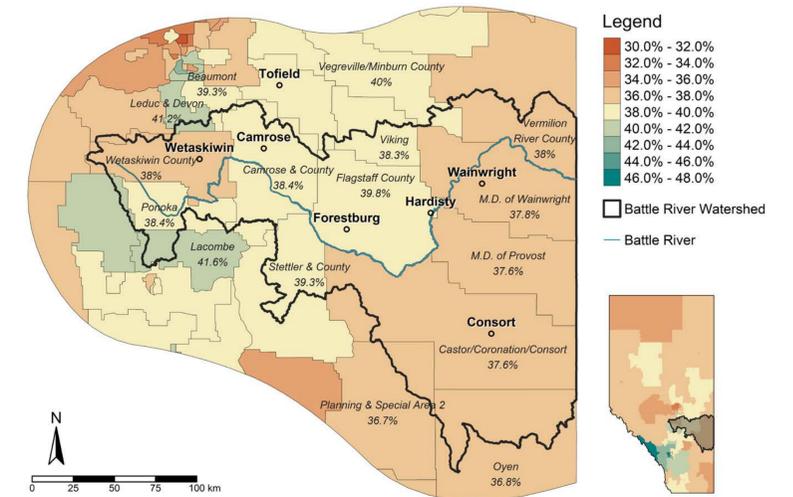
### Overweight (2014)

% of the population that is overweight as defined by having a body mass index (BMI) of 25-30



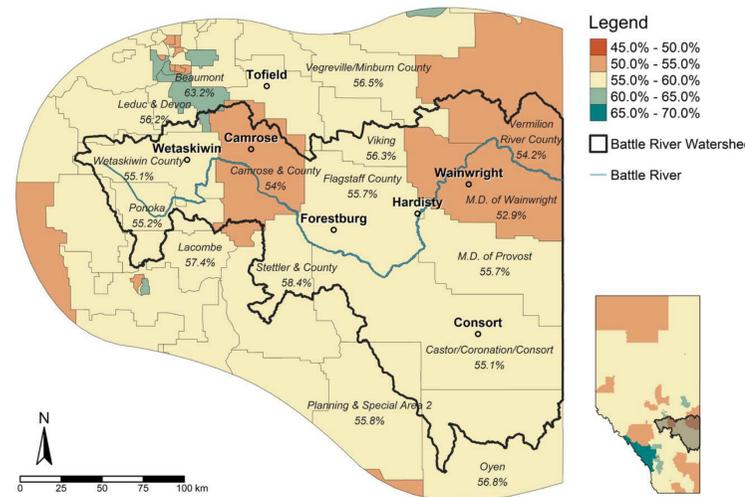
### Fruit and Veggies (2014)

% of the population that self-reported that they eat 5+ servings of fruits and vegetables per day



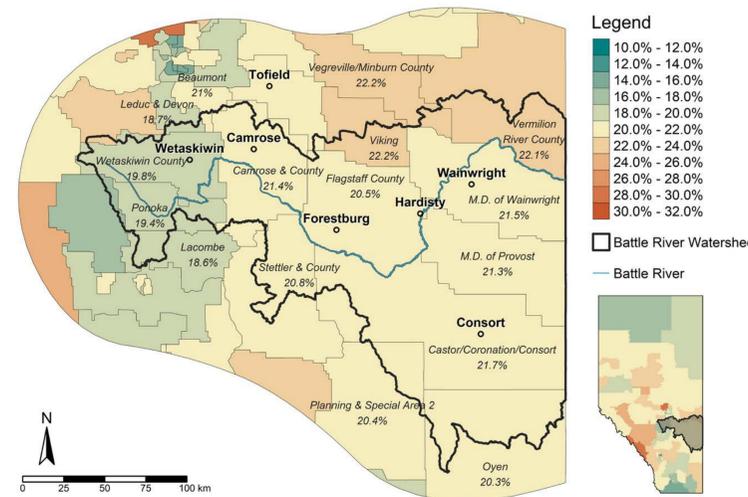
### Physical Activity (2014)

% of the population that self-rated their level of physical activity as 'Active' or 'Moderately active'



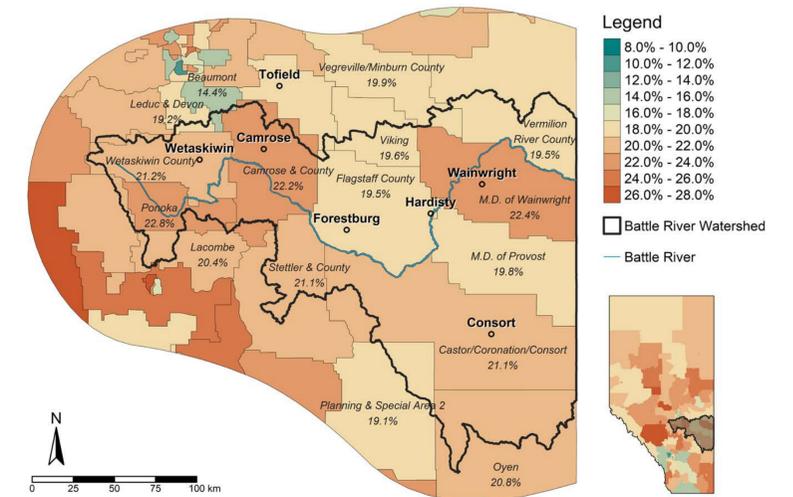
### Heavy Drinking Prevalence (2014)

% of males who reported having 5 or more drinks, or women who reported having 4 or more drinks, on one occasion, at least once a month in the past year



### Occasional or Daily Smoker (2014)

% of the population that self-reported that they smoke occasionally or daily



Sources: Statistics Canada. 2014. Canadian Community Health Survey.



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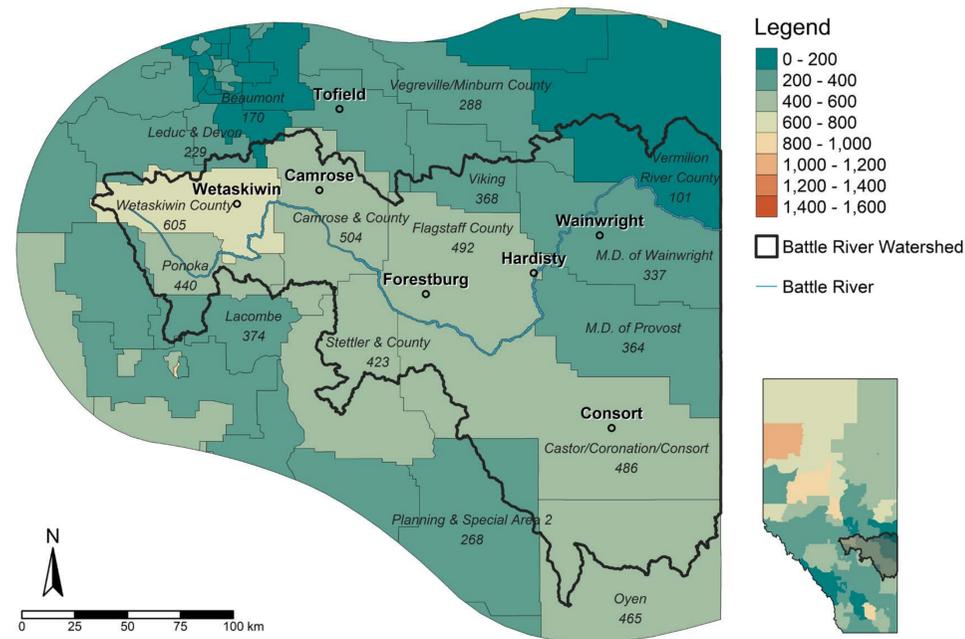


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# Personal Wellbeing - Mental Health

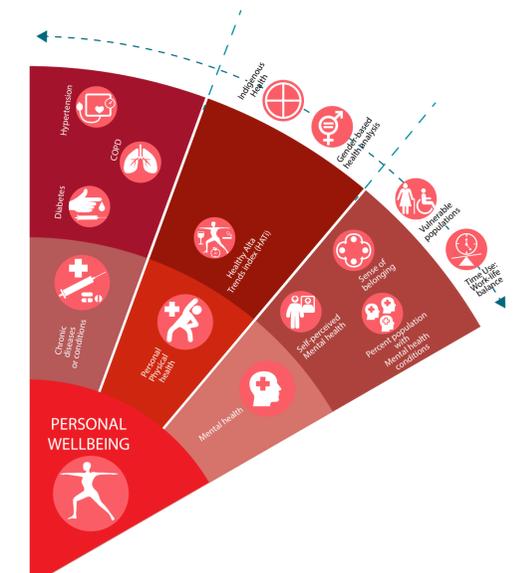
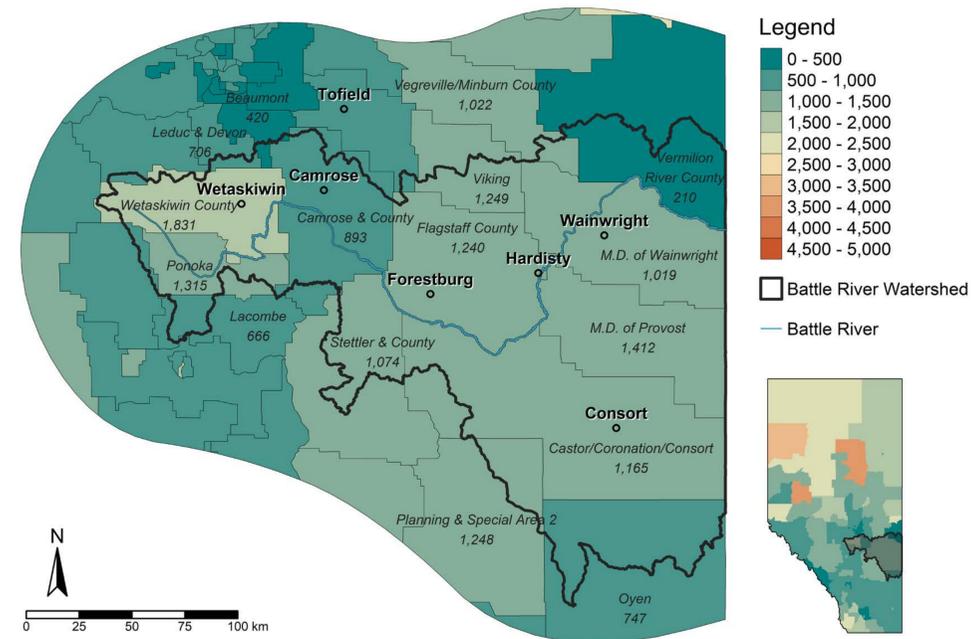
## Depressive Disorders (2019), Males and Females

# of emergency department visits per 100,000 population (age-standardized)



## Neurotic, Stress-related and Somatoform Disorders (2019), Males and Females

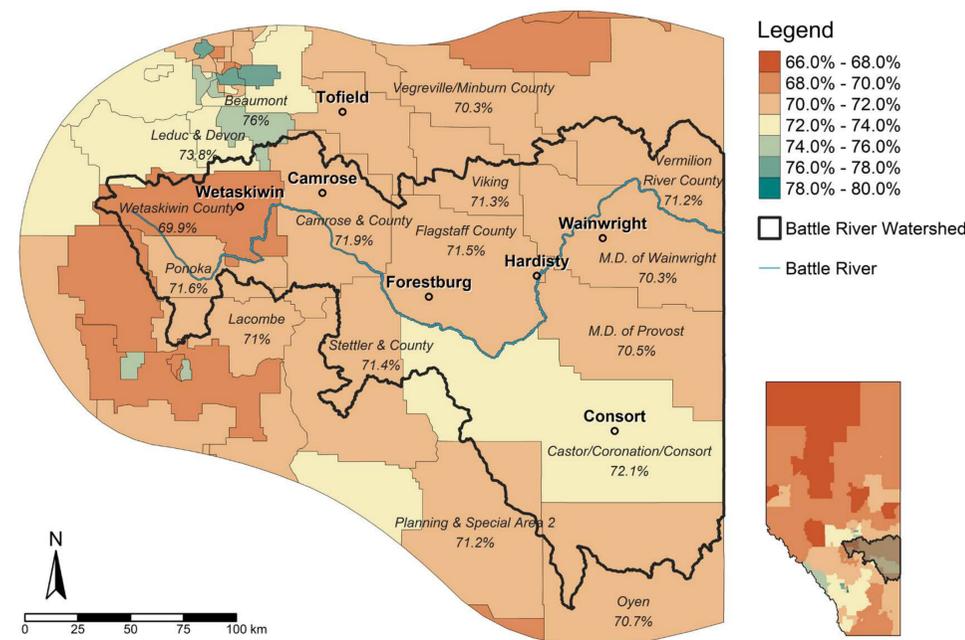
# of emergency department visits per 100,000 population



**Sources:**  
**Top:** Alberta Health, Analytics and Performance Reporting Branch. 2019. Interactive Health Data Application: Addictions and Mental Health – Emergency Visits  
**Bottom:** Statistics Canada. 2014. Canadian Community Health Survey

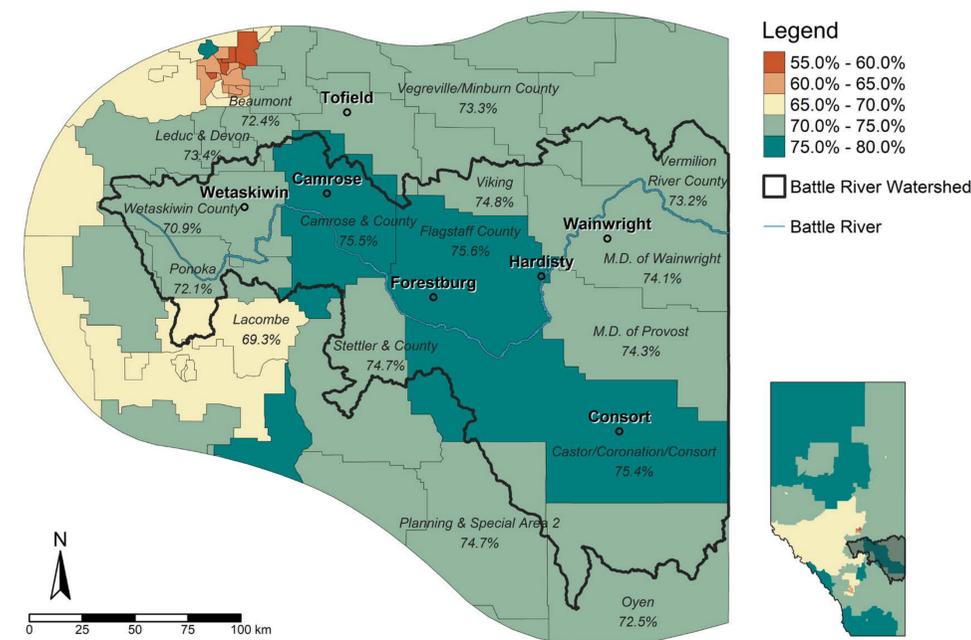
## Self-Perceived Mental Health (2014)

% of the population that self-rated their mental health as 'Excellent' or 'Very good'



## Sense of Belonging (2014)

% of the population that self-rated their sense of belonging as 'Very strong' or 'Strong'



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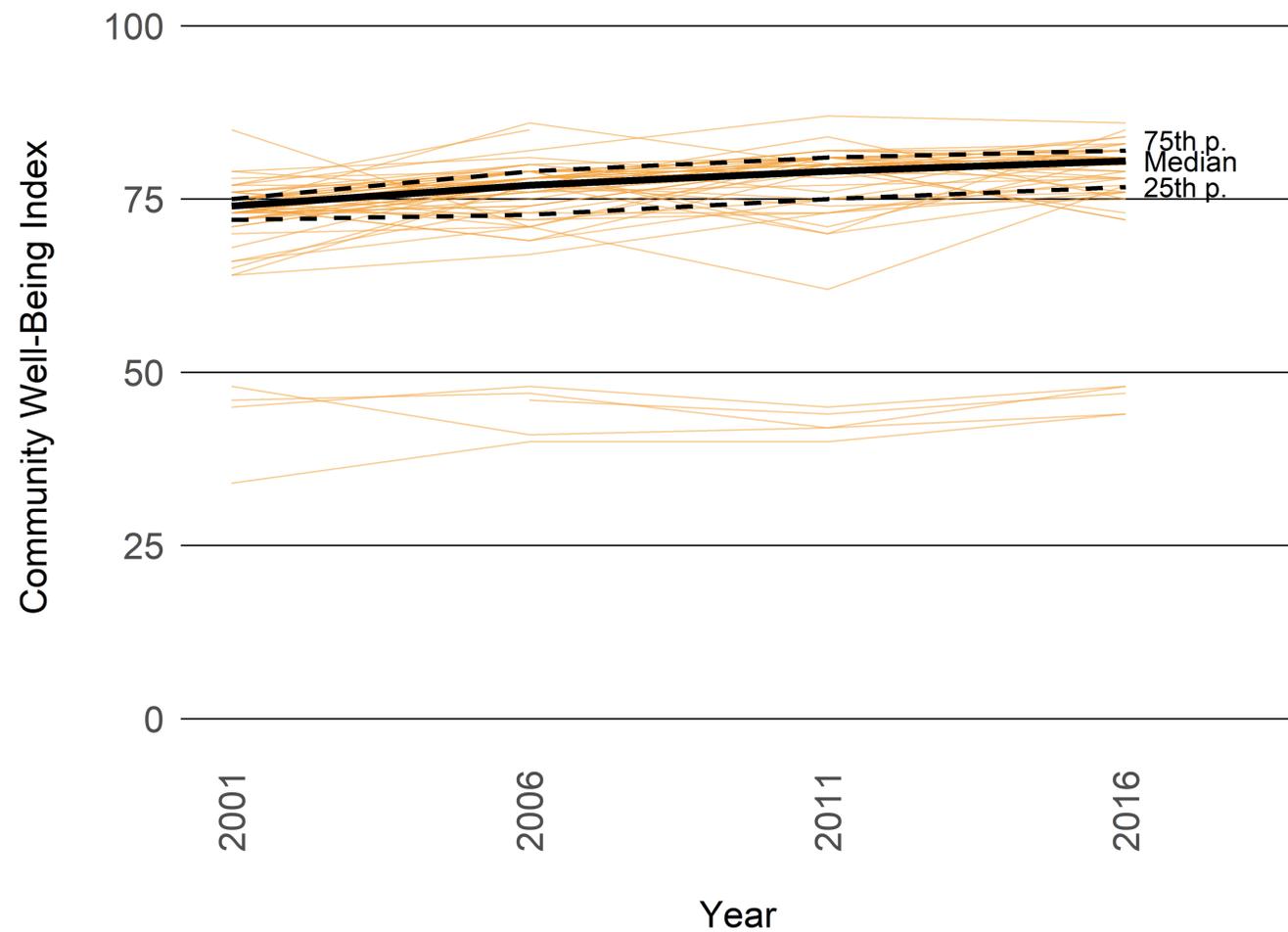
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# People & Community - Community Wellbeing

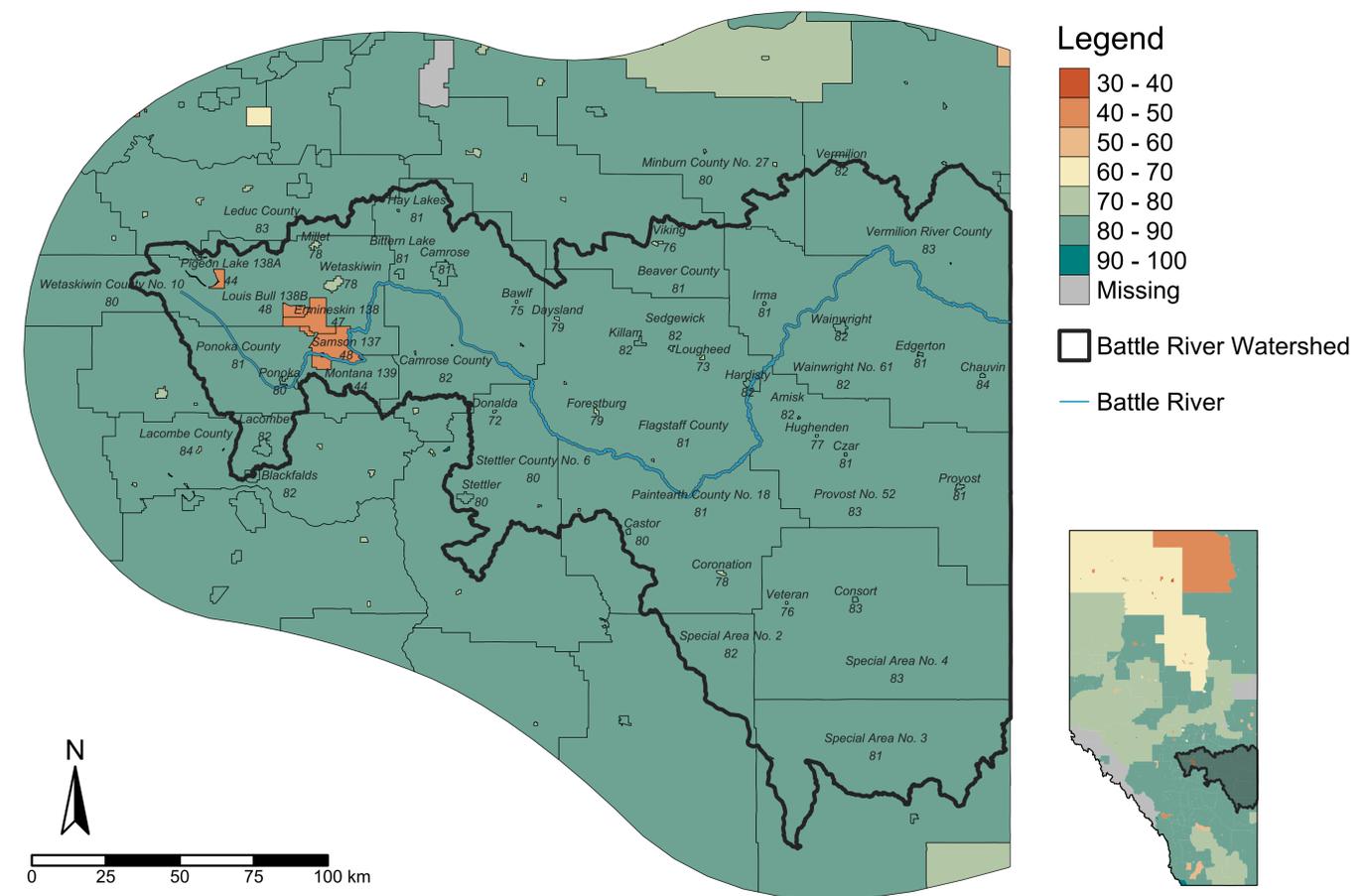
## Community Wellbeing Index by Community (2001-2016)

Community Well-Being Index for each census subdivision (CSD) within the BRW from 2001 to 2016; median, 25th percentile, and 75th percentile illustrate overall trends in the watershed



## Community Wellbeing Index

Measure based on four indicators: education, labour force activity, income, and housing



Sources: Crown-Indigenous Relations and Northern Affairs Canada, 2016. Community Well-Being Index



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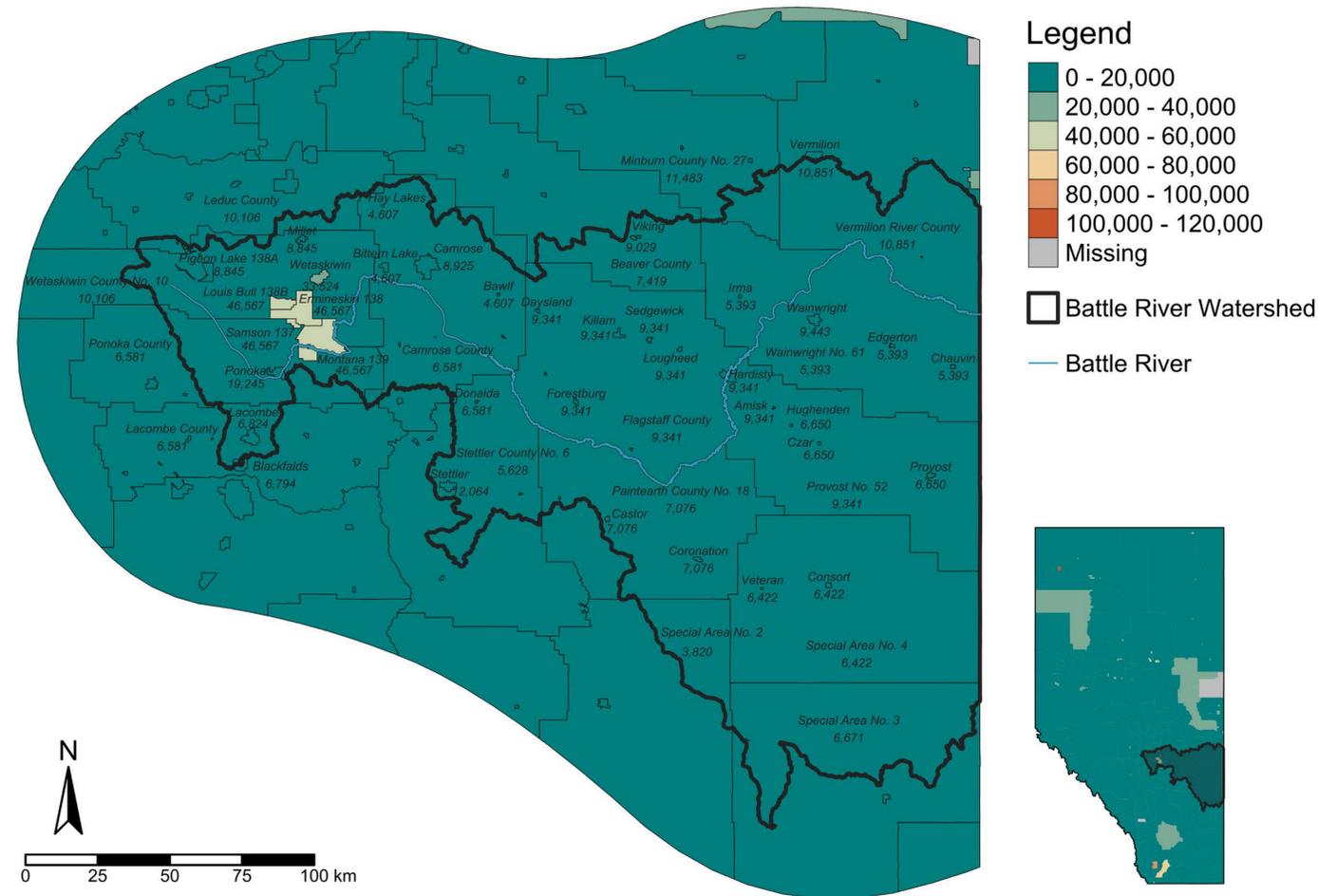


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# People and Community - Stability and Security

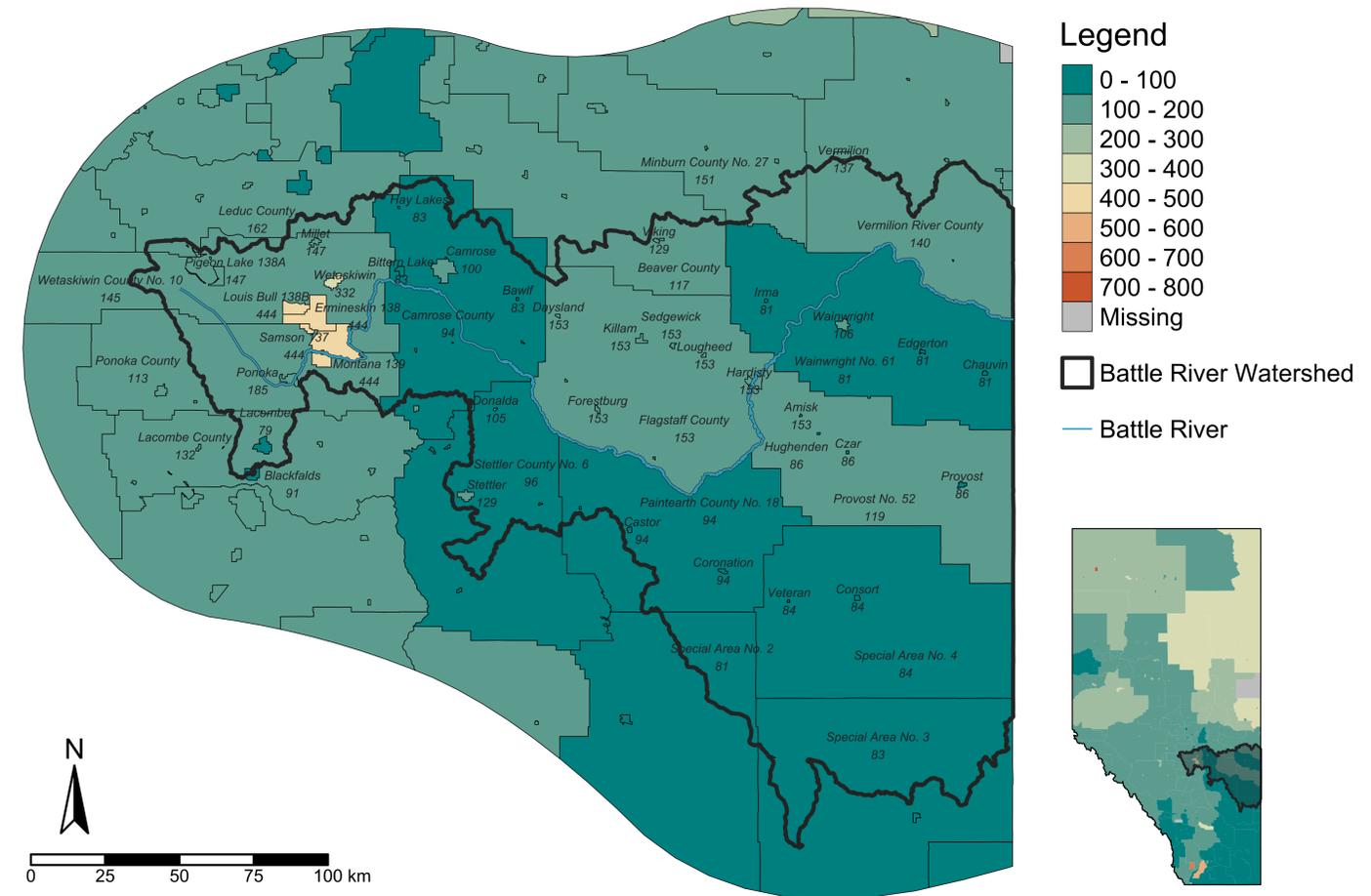
## Crime Rate (2019)

# of violations per 100,000 population



## Crime Severity Index (2019)

Measure of the severity level of police-reported crime; higher values indicate greater number and/or seriousness of crimes



**Sources:**

**Left:** Statistics Canada. 2019. Table 35-10-0183-01 Incident-based crime statistics, by detailed violations, police services in Alberta;  
**Right:** Statistics Canada. 2019. Table 35-10-0190-01 Crime severity index and weighted clearance rates, police services in Alberta



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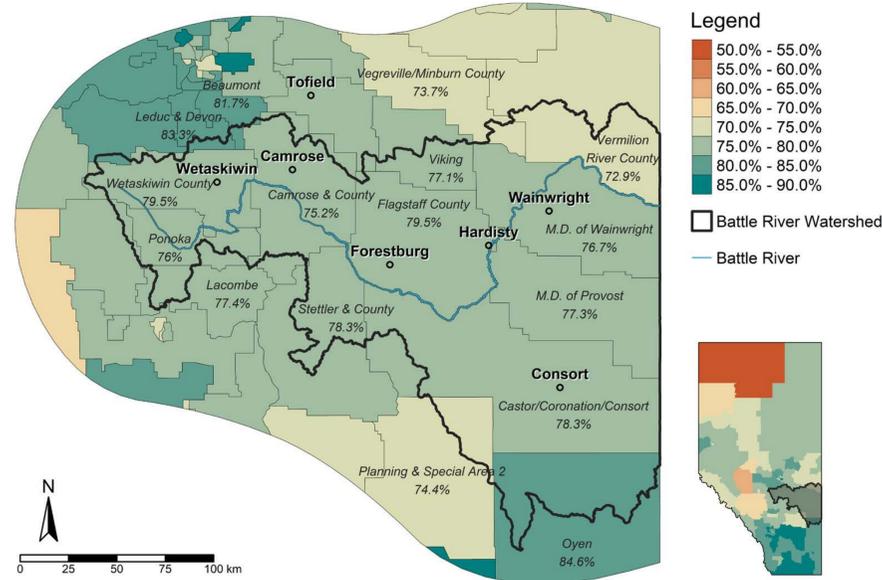


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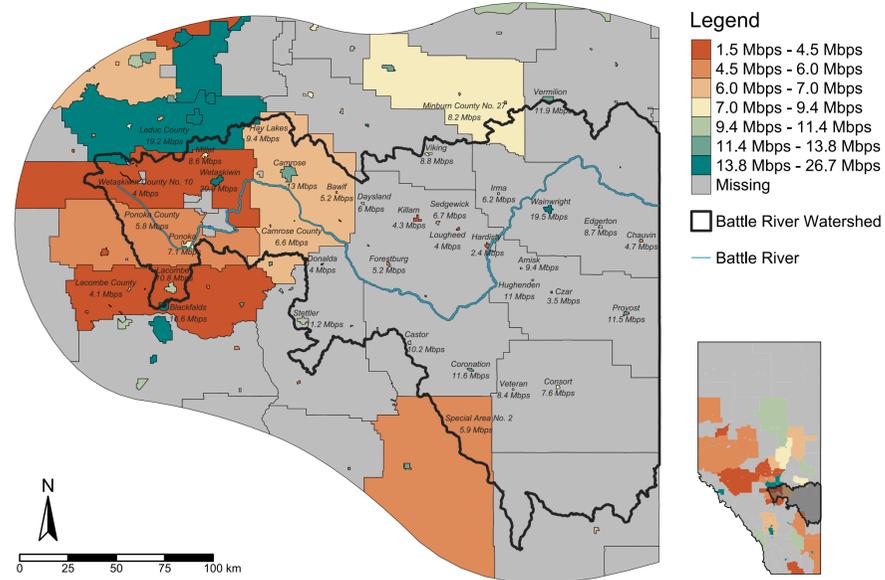
# People and Community

## Community Services and Engagement

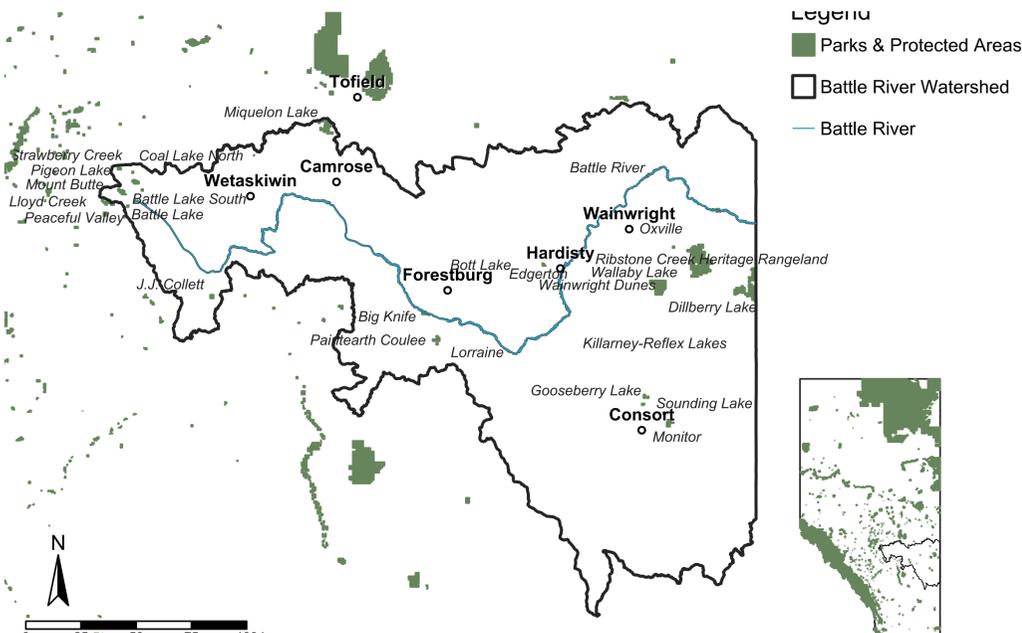
**Access to Family Doctor (2014)**  
% of the population who have a regular family doctor



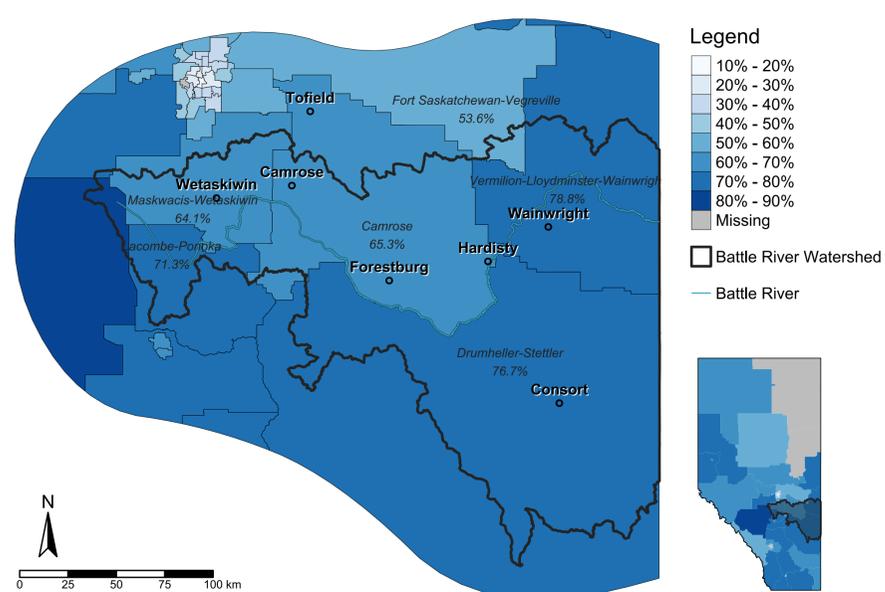
**Median Download Speed (2016-2020)**  
Download speed in megabits per second (Mbps)



**Parks and Protected Areas**  
Land cover of provincial and federal protected areas



**Provincial Election Results (2019), UCP Vote**  
% of all votes that were cast for the provincial United Conservative Party candidate



**Sources:**  
**Top Left:** Statistics Canada. 2014. Canadian Community Health Survey;  
**Top Right:** Government of Alberta, Alberta Regional Dashboard. 2020. Median Download Speed. Compiled from M-Lab Network Diagnostic Tool (NDT) data;  
**Bottom Left:** Government of Alberta, Environment and Parks. 2022. Parks and Protected Areas in Alberta;  
**Bottom Right:** Elections Alberta. 2019. Provincial General Election Results

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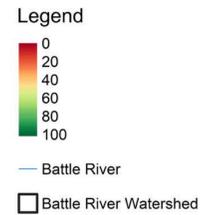
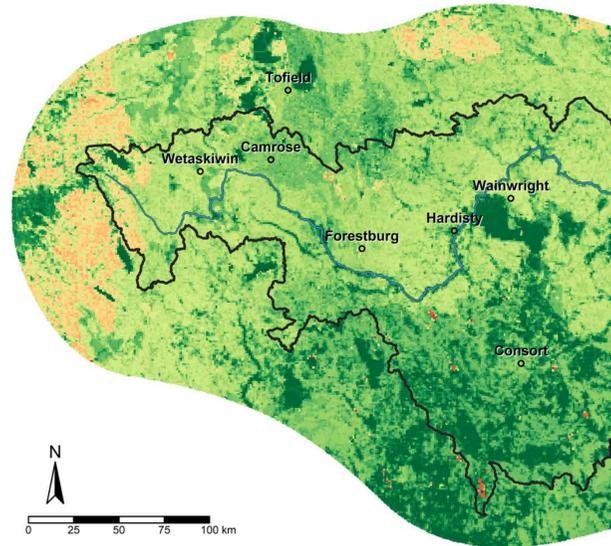
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# Ecosystems and Biodiversity - Species Intactness

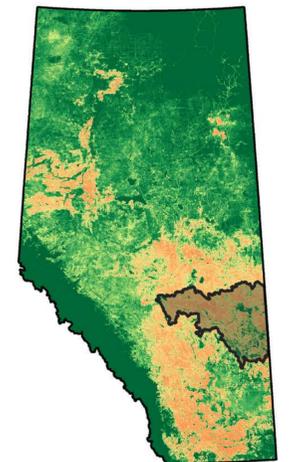
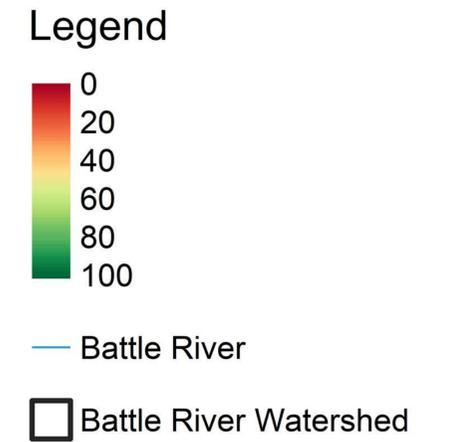
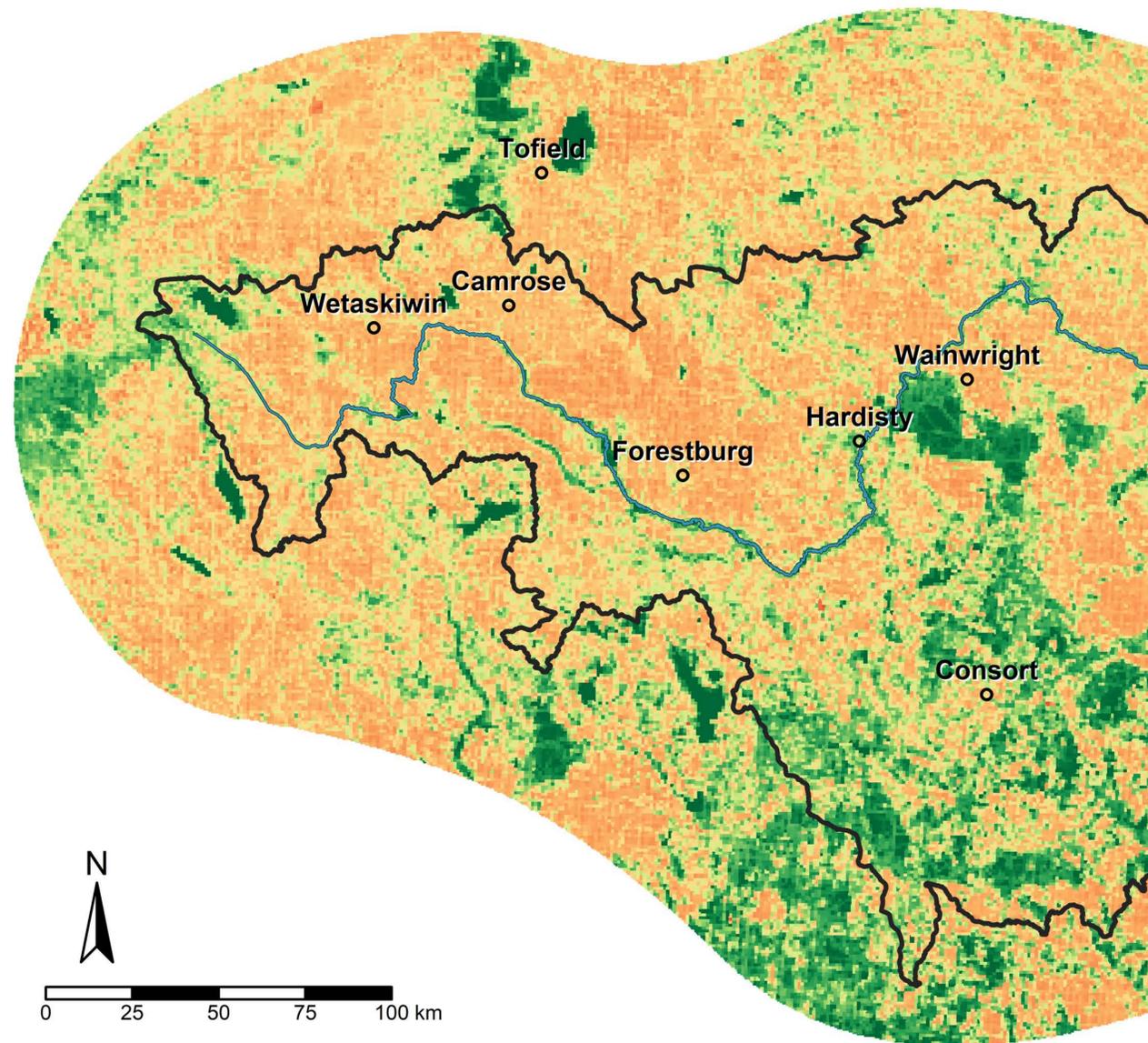
## Mammal Species Intactness (2018)

Relative intactness of mammal species, with values closer to 100 representing complete intactness (i.e., no disturbance)



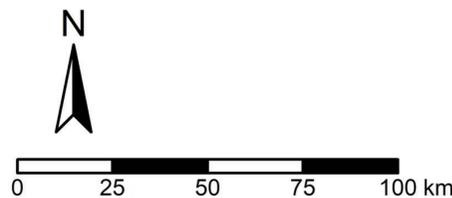
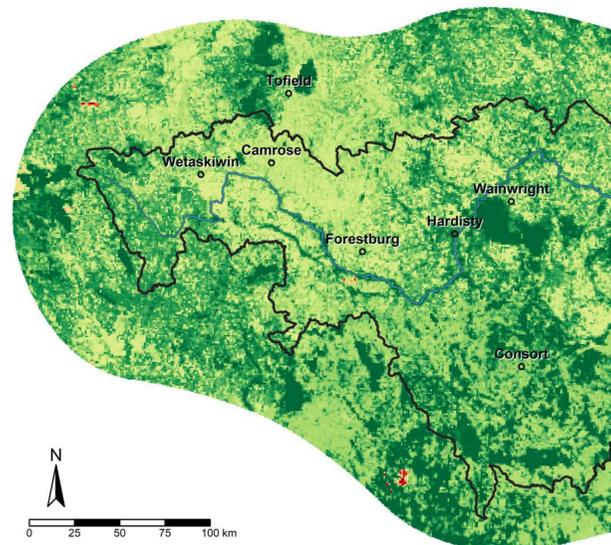
## Native Plant Species Intactness (2018)

Relative intactness of native plant species, with values closer to 100 representing complete intactness (i.e., no disturbance)



## Bird Species Intactness (2018)

Relative intactness of bird species, with values closer to 100 representing complete intactness (i.e., no disturbance)



Sources: Alberta Biodiversity Monitoring Institute. 2014. Manual for Species Modeling and Intactness, Version 2014-09-25. Alberta Biodiversity Monitoring Institute, Alberta, Canada. Report available at: abmi.ca



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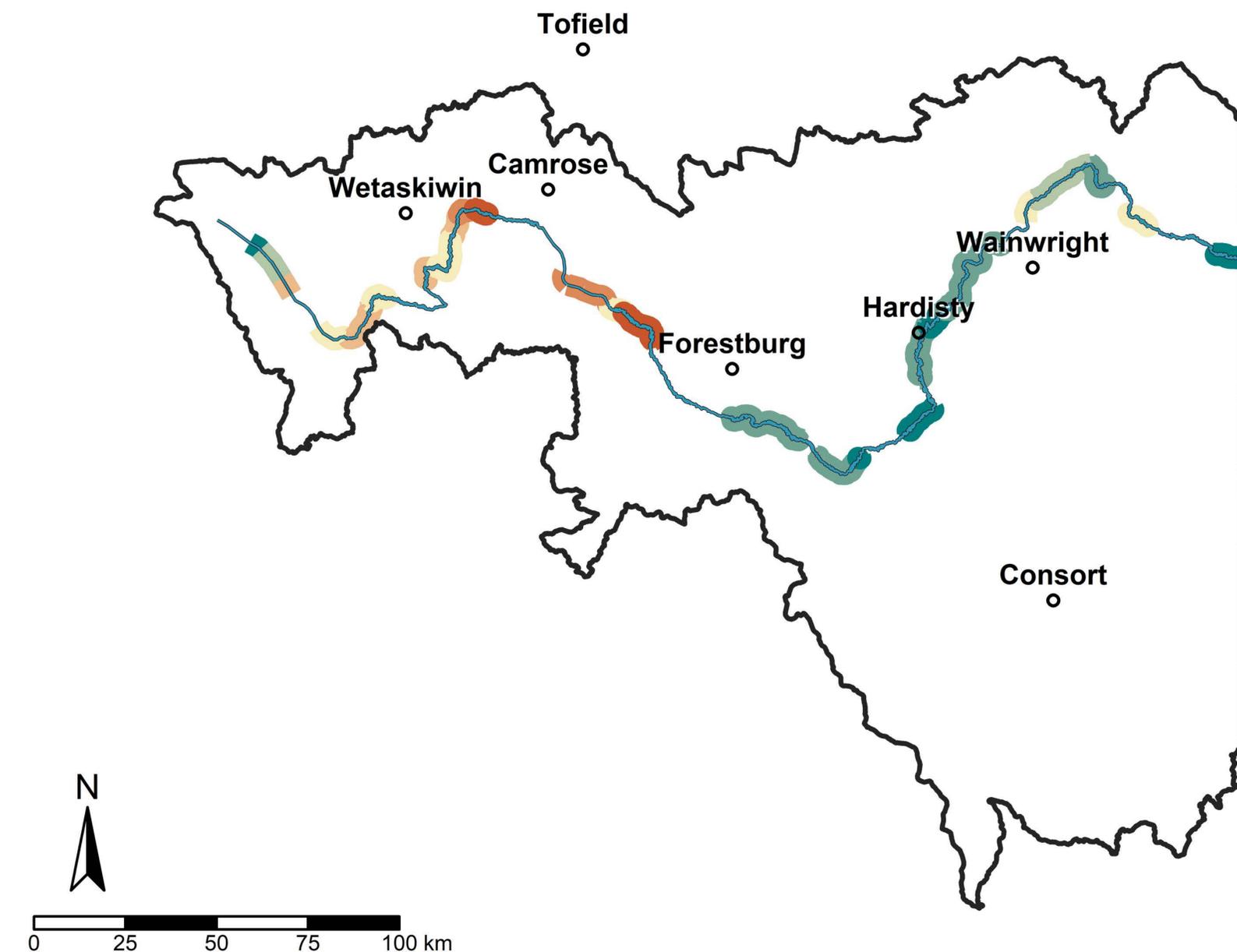
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# Ecosystems and Biodiversity

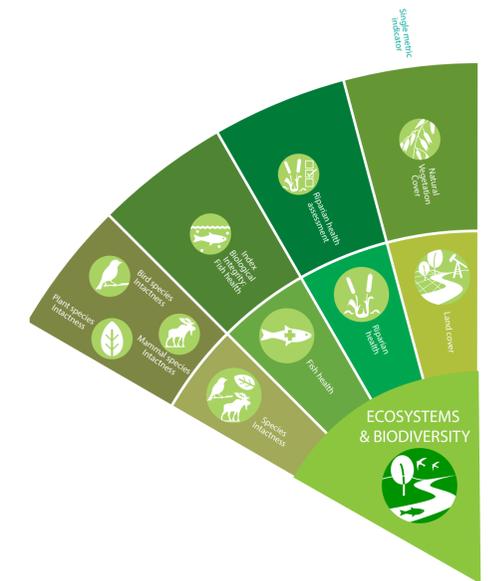
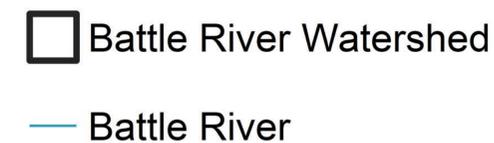
## Fish-based Index of Biological Integrity

### Fish-based Index of Biological Integrity (2008)

Measure of the relative abundance of fish species;  
higher values indicate greater fish health



### Legend



**Sources:** Stevens, C., and T. Council. 2008. A fish-based index of biological integrity for assessing river condition in central Alberta. Technical Report, T-2008-001, produced by the Alberta Conservation Association, Sherwood Park and Lethbridge, Alberta, Canada. 29 pp. + App



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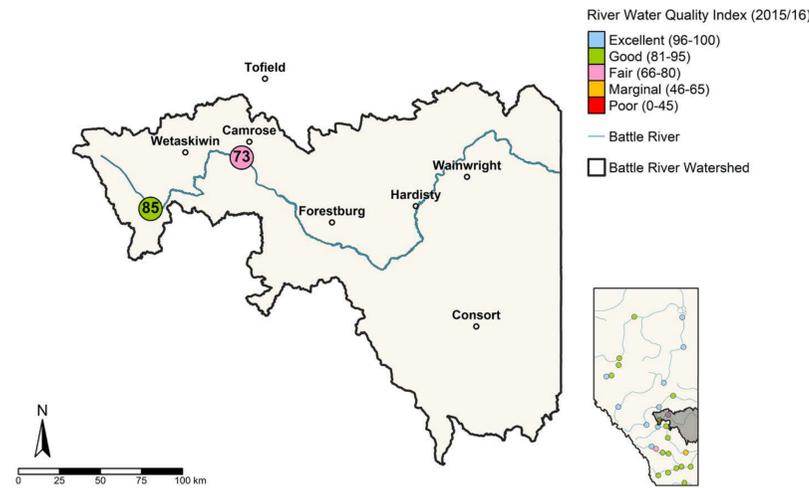
# Water Quality - River Water Quality Index



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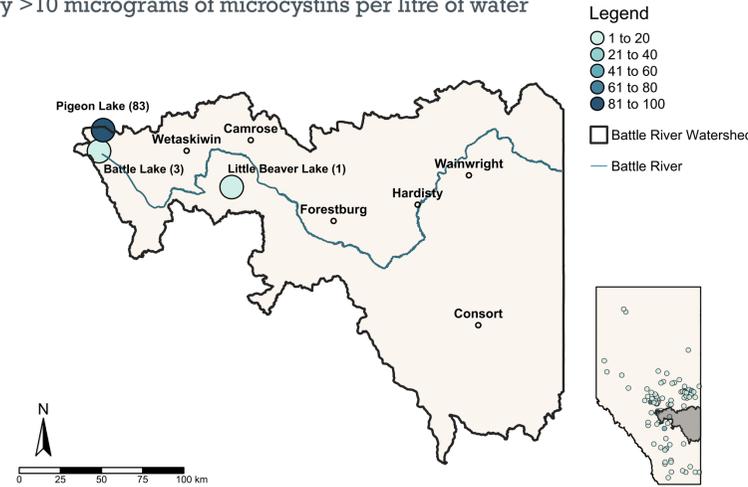
## River Water Quality Index (2015/16)

A general measure of river water quality which includes various metals, pesticides, bacteria, and nutrients



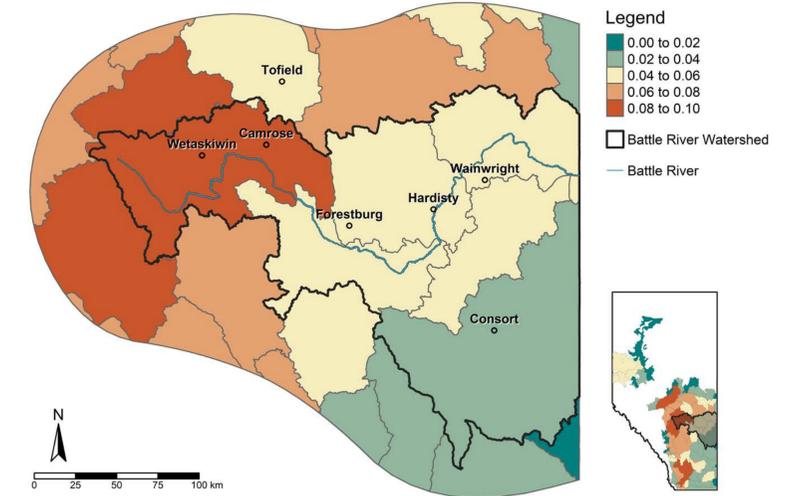
## Blue-Green Algae (Cyanobacteria) Guideline Exceedances

# of cyanotoxin guideline exceedances from 2012-2021, indicated by >10 micrograms of microcystins per litre of water



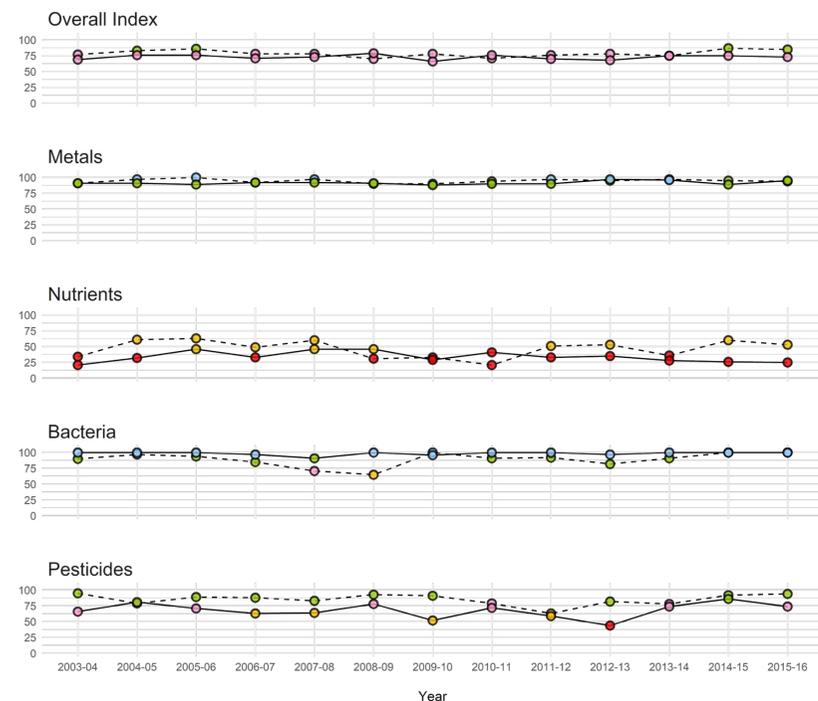
## Risk of Water Contamination by Coliforms from Agriculture

Relative risk of surface water contamination by pathogens from manure such as viruses, bacteria and protozoa



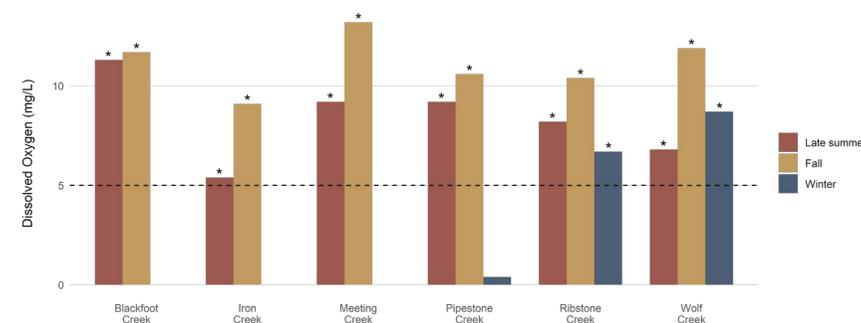
## River Water Quality Index (2003-2016)

River Water Quality Index (RWQI) and sub-index scores for the two water monitoring sites in the BRW from 2003/04 to 2015/16



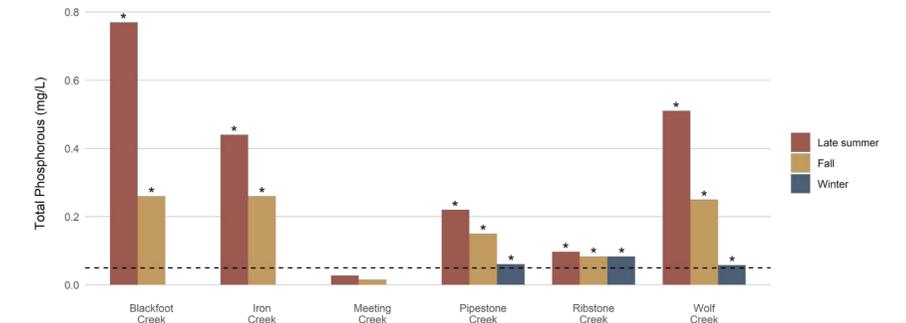
## Tributary Stream Dissolved Oxygen

Dissolved oxygen levels (mg/L) by season in tributary streams within each subwatershed of the BRW in 2014. \*Denotes exceedance of Canada water quality guidelines, shown with a dashed line



## Tributary Stream Total Phosphorus

Total phosphorus levels (mg/L) by season in tributary streams within each subwatershed of the BRW in 2014. \*Denotes exceedance of Canada water quality guidelines, shown with a dashed line



### Sources:

**Top Left:** Government of Alberta. 2016. Alberta River Water Quality Index Results (2015-2016)

**Bottom Left:** Alberta Health. 2021. Cyanobacterial blooms in Alberta recreational waters

**Top Center:** Agriculture and Agri-food Canada. 2011. Agri-Environmental Indicator (AEI) - Risk of Water Contamination by Coliforms (IROWC-Coliforms) (ENV\_AEI\_WTR\_CNTMN\_RSK)

**Bottom Center & Bottom Right:** Hutchinson Environmental Services Ltd., 2014

**Top Right:** Battle River Watershed Alliance, 2021. Battle River Watershed Alliance. 2021. Battle River Water Quality Data: Water Quality Index Scores & Surface Water Quality Compliance. [https://www.battleriverwatershed.ca/wp-content/uploads/2021/05/Battle-River-Water-Quality-Data\\_Branded-2021.pdf](https://www.battleriverwatershed.ca/wp-content/uploads/2021/05/Battle-River-Water-Quality-Data_Branded-2021.pdf)



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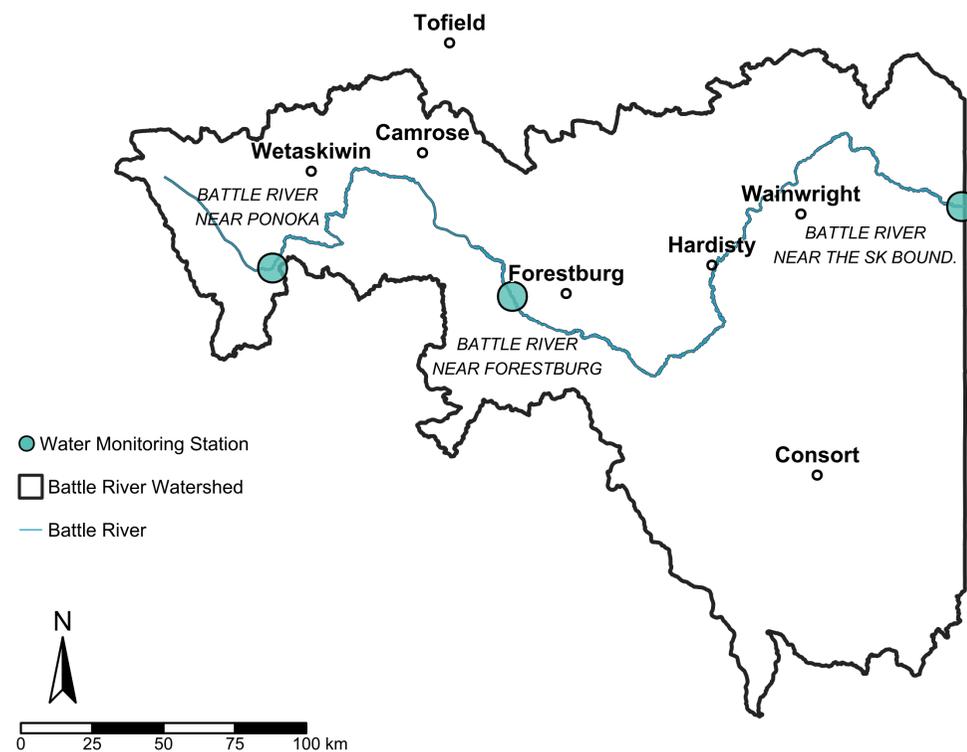






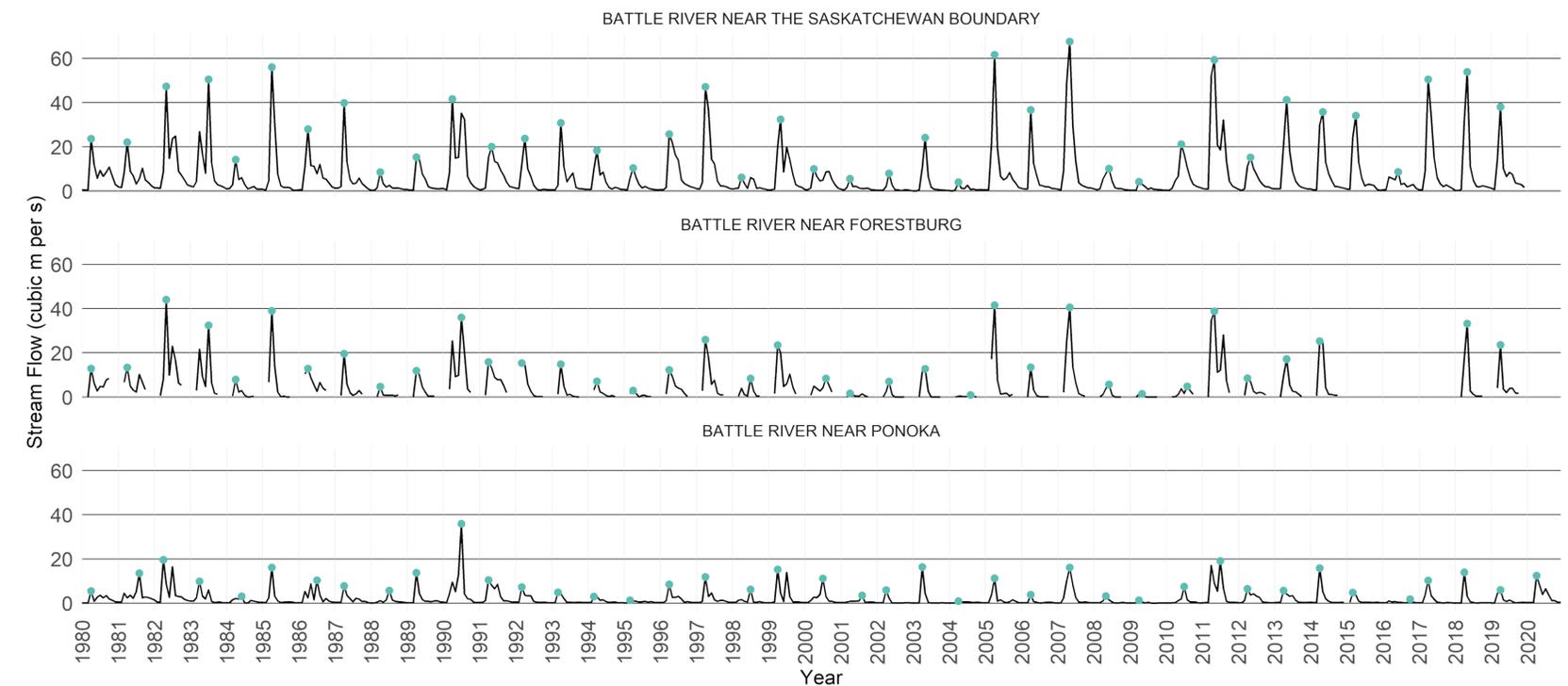
# Water Quantity - Stream Flow in the Battle River

## Water Level and Flow Monitoring Stations



## Stream Flow (m<sup>3</sup> /s) in the Battle River (1980-2021)

Stream flow (m<sup>3</sup>/s) at three stations in the Battle River from 1980 to 2021 with peak water flow for each year denoted with a blue dot



**Sources:**  
**Left:** Government of Canada. Historical Hydrometric Data  
**Right:** Extracted from the Environment and Climate Change Canada Real-time Hydrometric Data web site [https://wateroffice.ec.gc.ca/mainmenu/real\\_time\\_data\\_index\\_e.html](https://wateroffice.ec.gc.ca/mainmenu/real_time_data_index_e.html)



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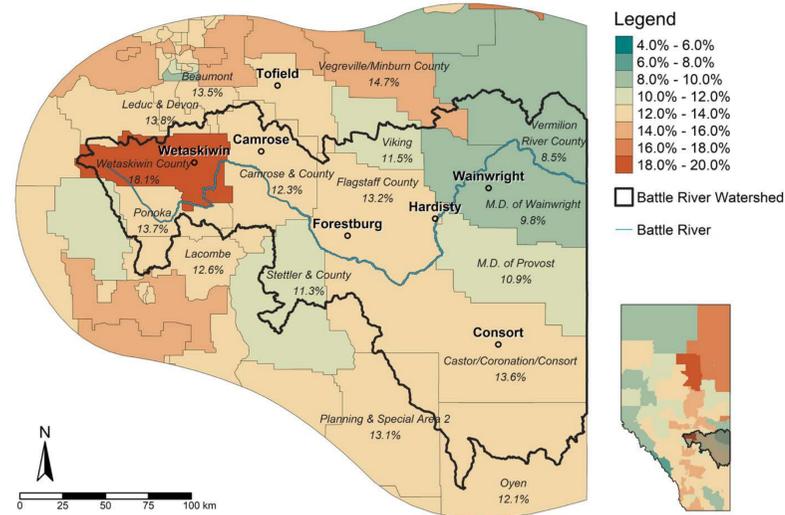


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# Weather and Climate - Climate Related Health Impacts

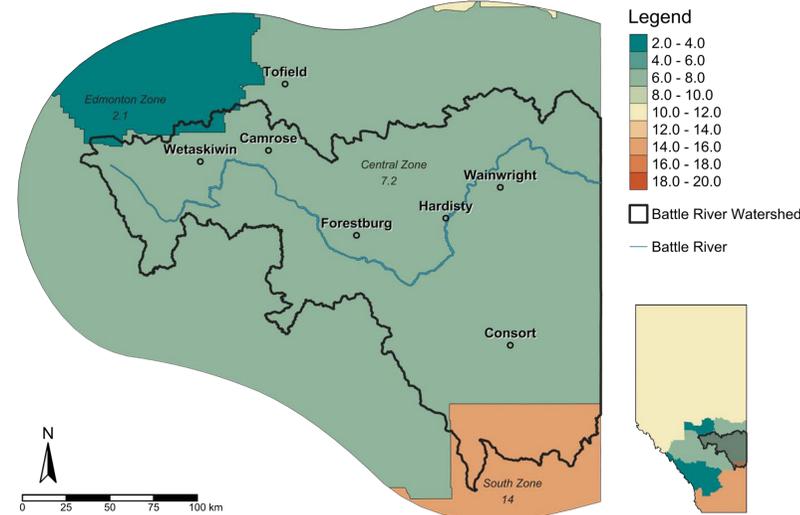
## Asthma Prevalence (2019), Females

% of population with condition (age-standardized)



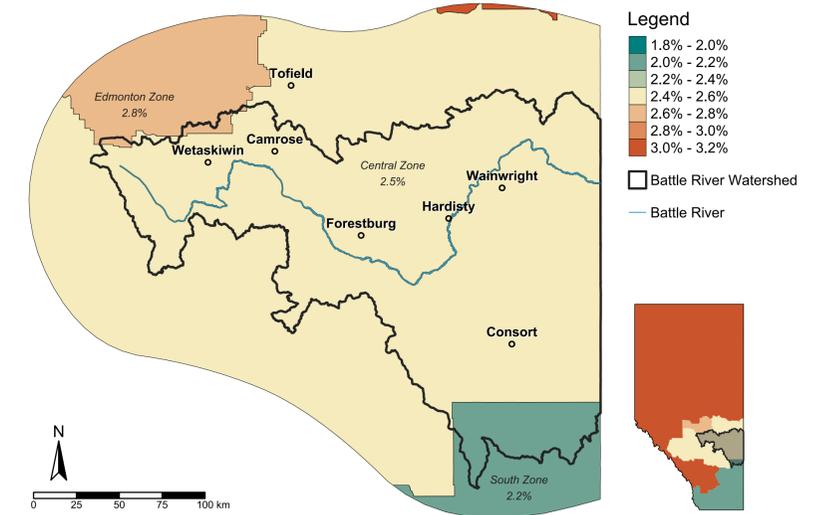
## Excessive Heat-weather Injuries (2019), Females

# of emergency department visits per 100,000 population (age-standardized)



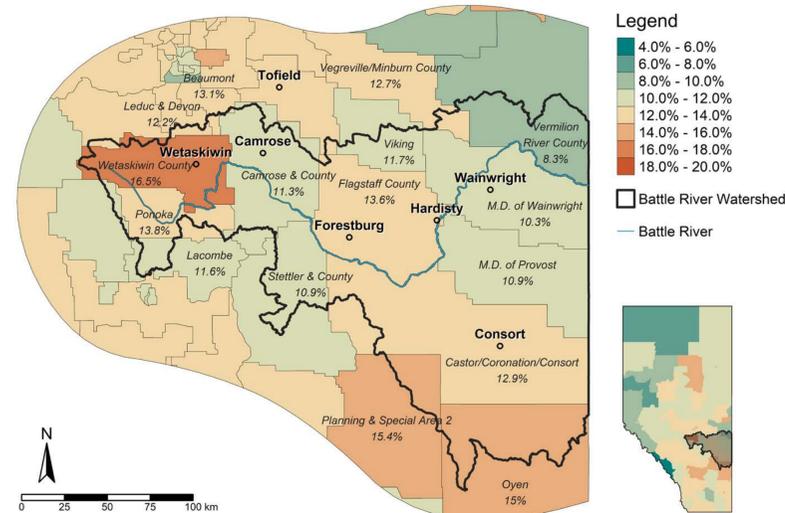
## Allergies and Recurrent Sinusitis (2017), Female

% of population diagnosed with condition (age/sex-standardized)



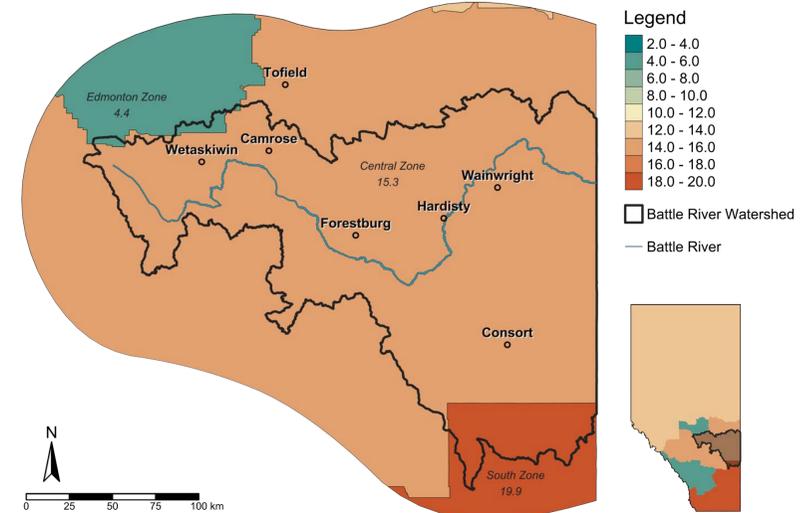
## Asthma Prevalence (2019), Males

% of population with condition (age-standardized)



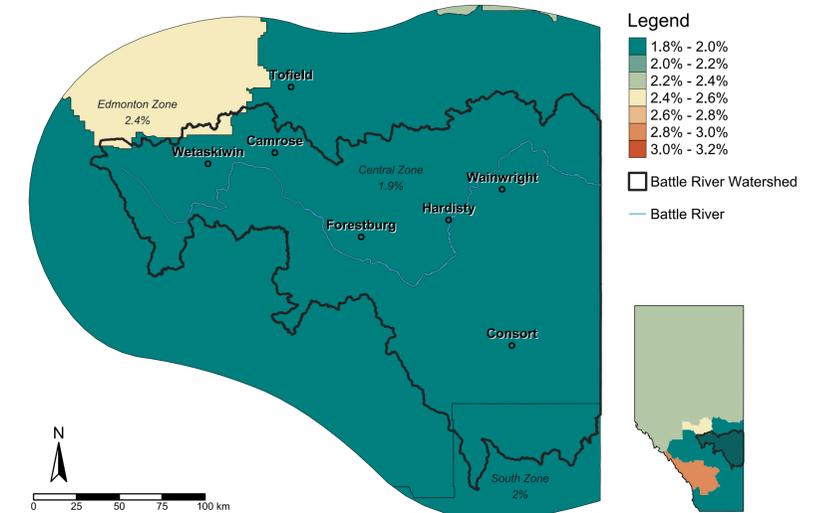
## Excessive Heat-weather Injuries (2019), Males

# of emergency department visits per 100,000 population (age-standardized)



## Allergies and Recurrent Sinusitis (2017), Male

% of population diagnosed with condition (age/sex-standardized)



### Sources:

Left & Center: Alberta Health, Analytics and Performance Reporting Branch. 2019. Interactive Health Data Application: Asthma, Injury.

Right: Alberta Health Services, Analytics. 2017.

Diagnosis Prevalence by Age, Sex, Zone



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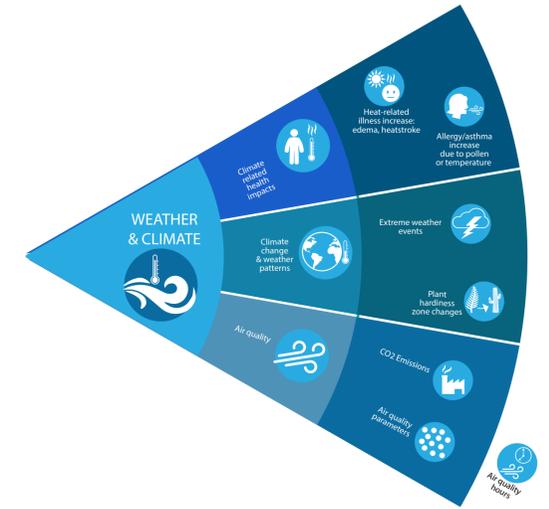
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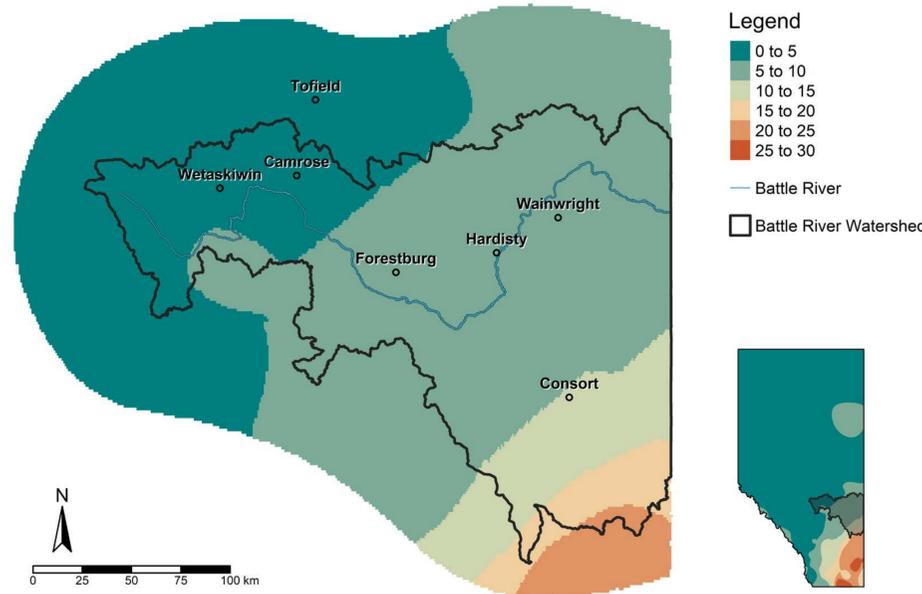
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# Weather and Climate

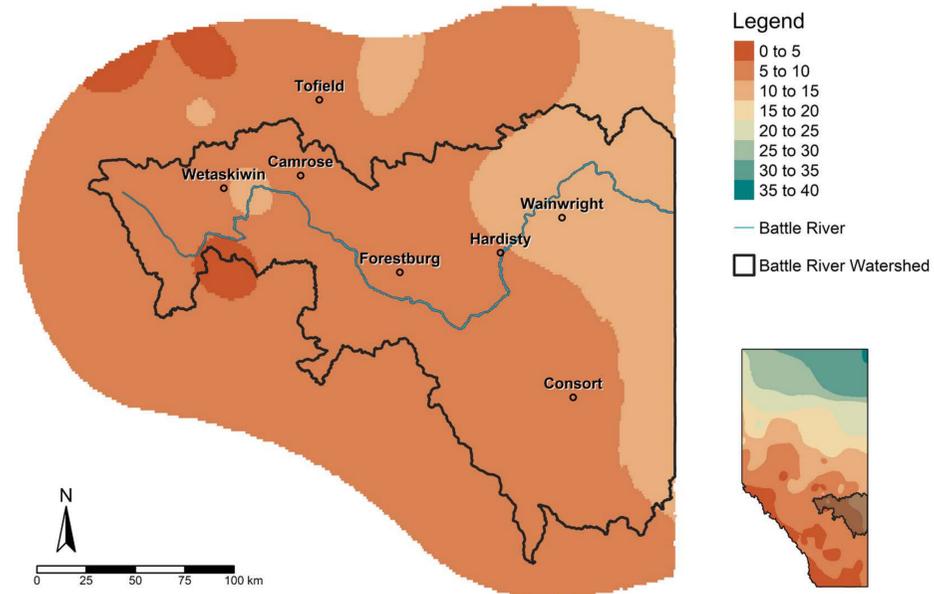
## Climate Change and Weather Patterns



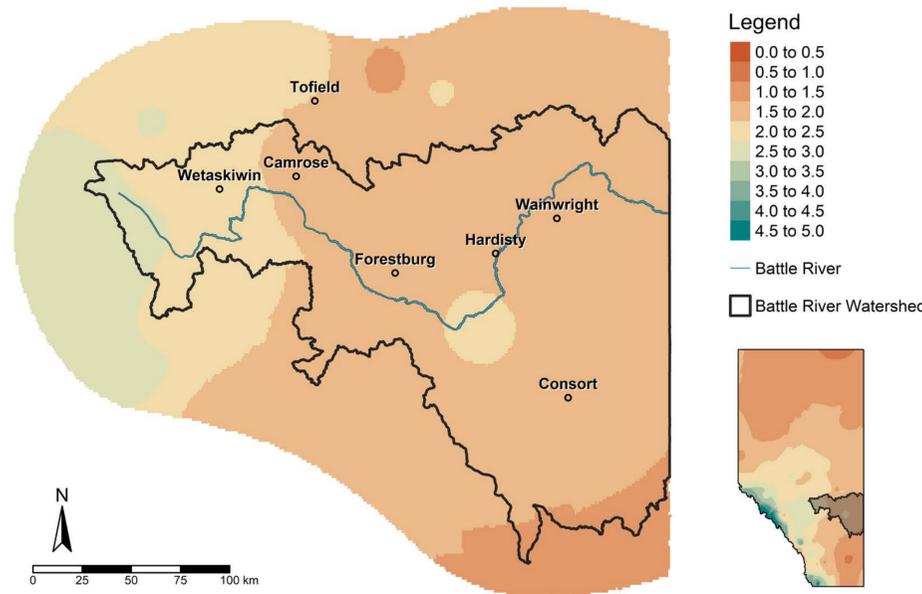
**Extreme Heat Events (1981-2010)**  
# of days above 30 degrees Celsius per year



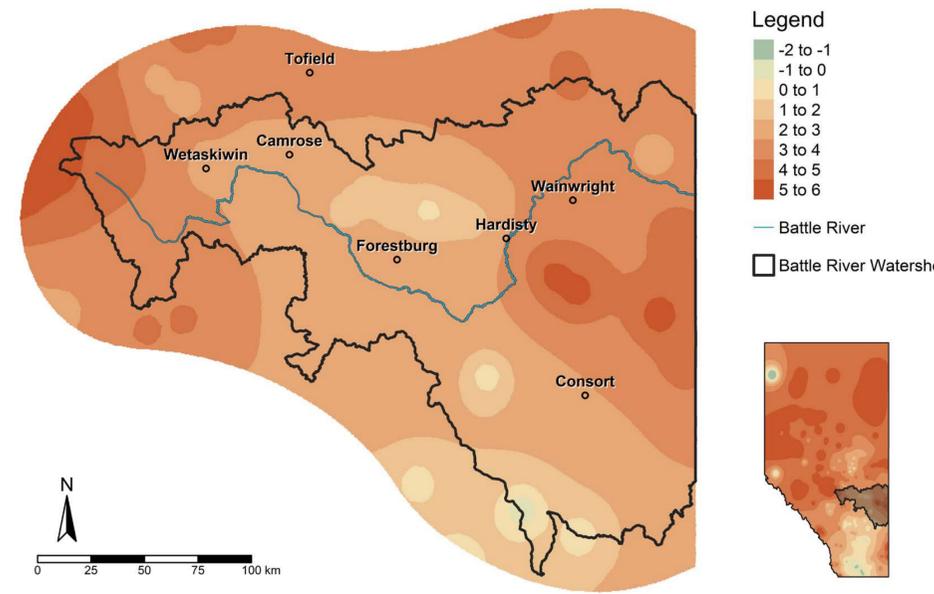
**Extreme Cold Events (1981-2010)**  
# of days below -30 degrees Celsius per year



**Extreme Precipitation Events (1981-2010)**  
# of days above 25 mm of precipitation per year



**Change in Plant Hardiness Index**  
Difference in plant hardiness index from the 1961-1990 period to the 1981-2010 period; increases in plant hardiness index indicate greater probability of plant survival



**Sources:**  
**Top & Bottom Left:** Government of Canada, Environment and Climate Change Canada. 2010. Climate Normals.  
**Bottom Right:** Government of Canada, Natural Resources Canada. 2010. Plant Hardiness Zone by Municipality.

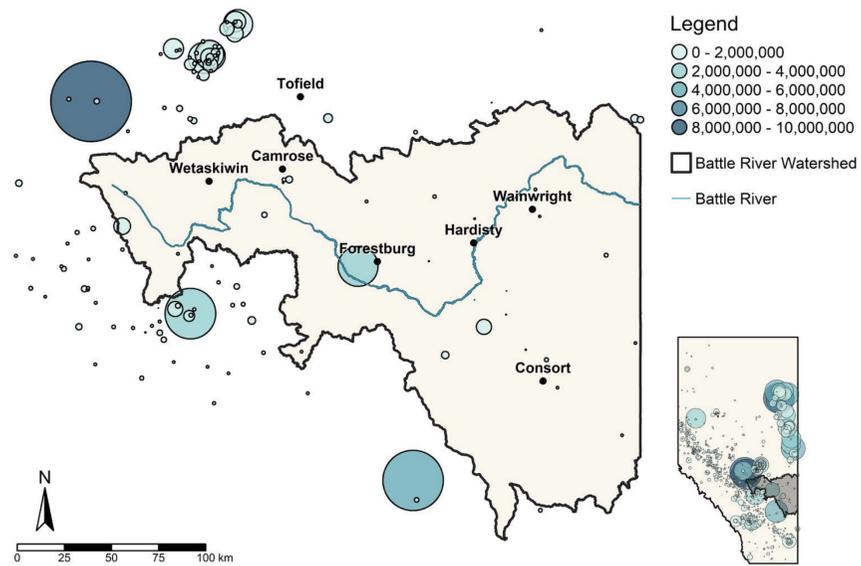


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# Weather and Climate - Air Quality

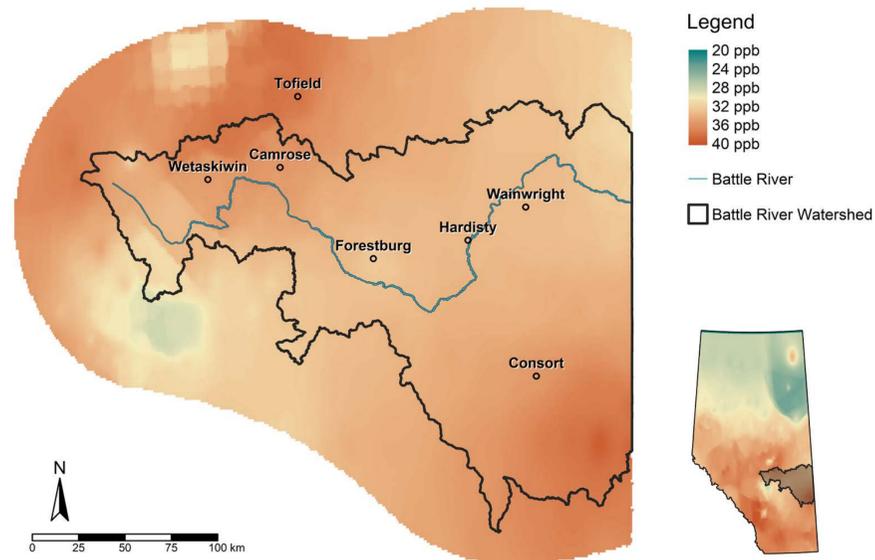
## Greenhouse Gas Emissions from Facilities (2018)

Total annual emissions of greenhouse gases from facilities, expressed as tonnes of carbon dioxide equivalent



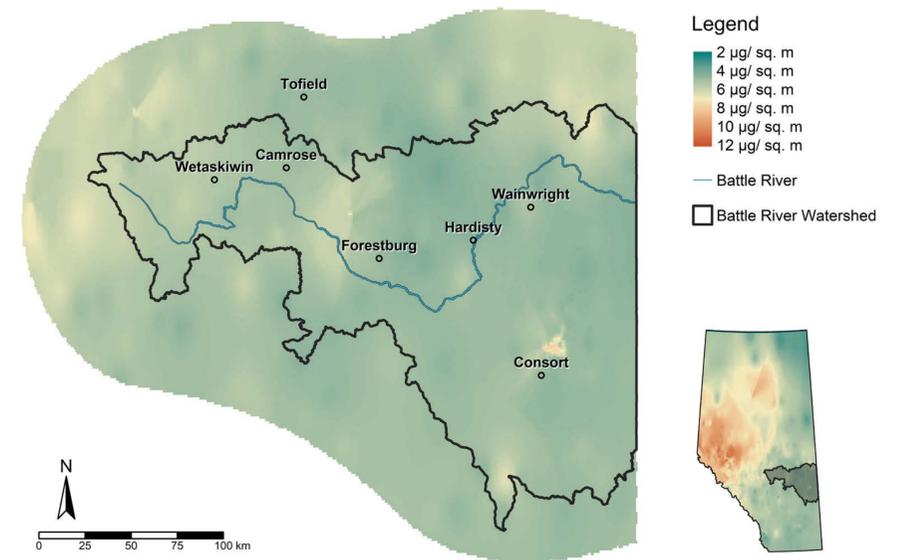
## Ozone Concentration (2015)

Estimated concentration in parts per billion (ppb) of ozone in the air



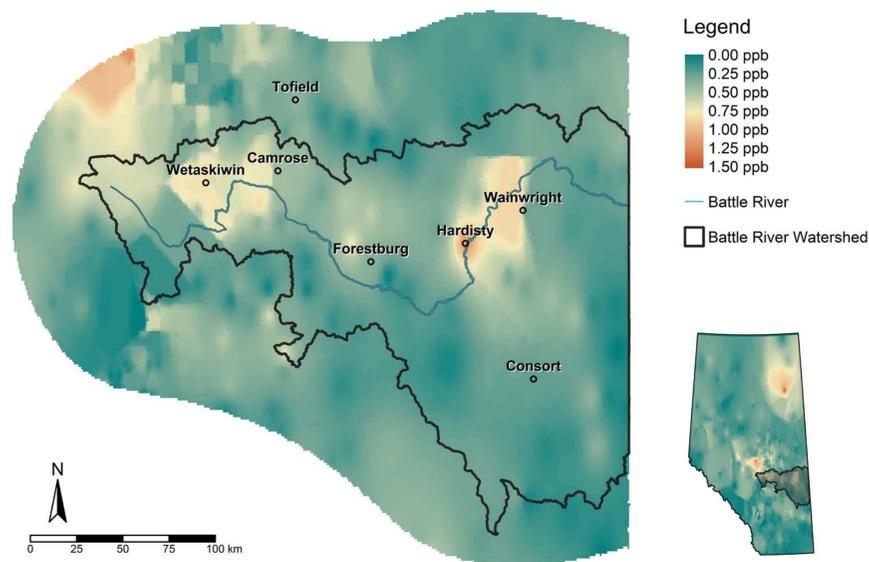
## Fine Particulate Matter Concentration (2018)

Concentration in parts per billion (ppb) of fine particulate matter in the air, defined as particles less than 2.5 micrometers



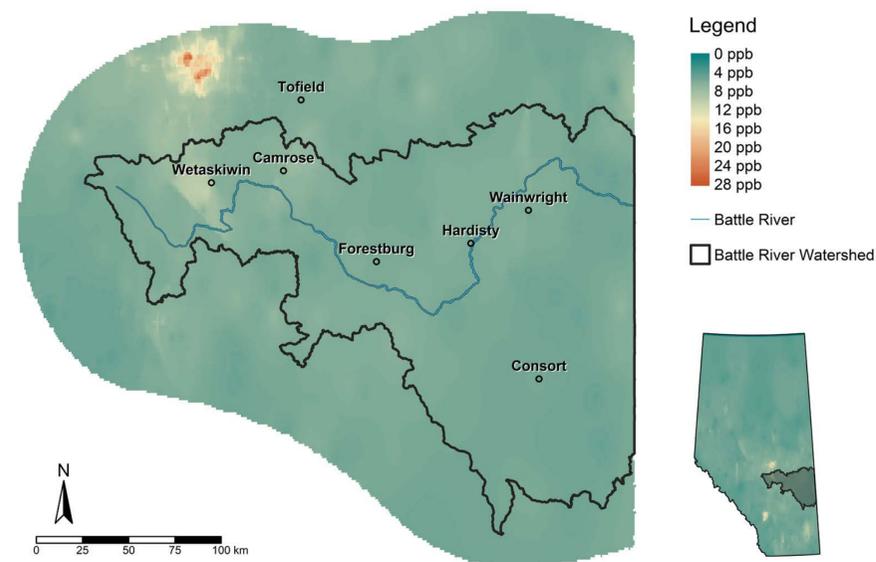
## SO2 Concentration (2015)

Estimated concentration in micrograms per cubic meter (µg/ cubic m) of sulfur dioxide in the air



## NO2 Concentration (2016)

Estimated concentration in parts per billion (ppb) of nitrogen dioxide in the air



Sources: See back of board



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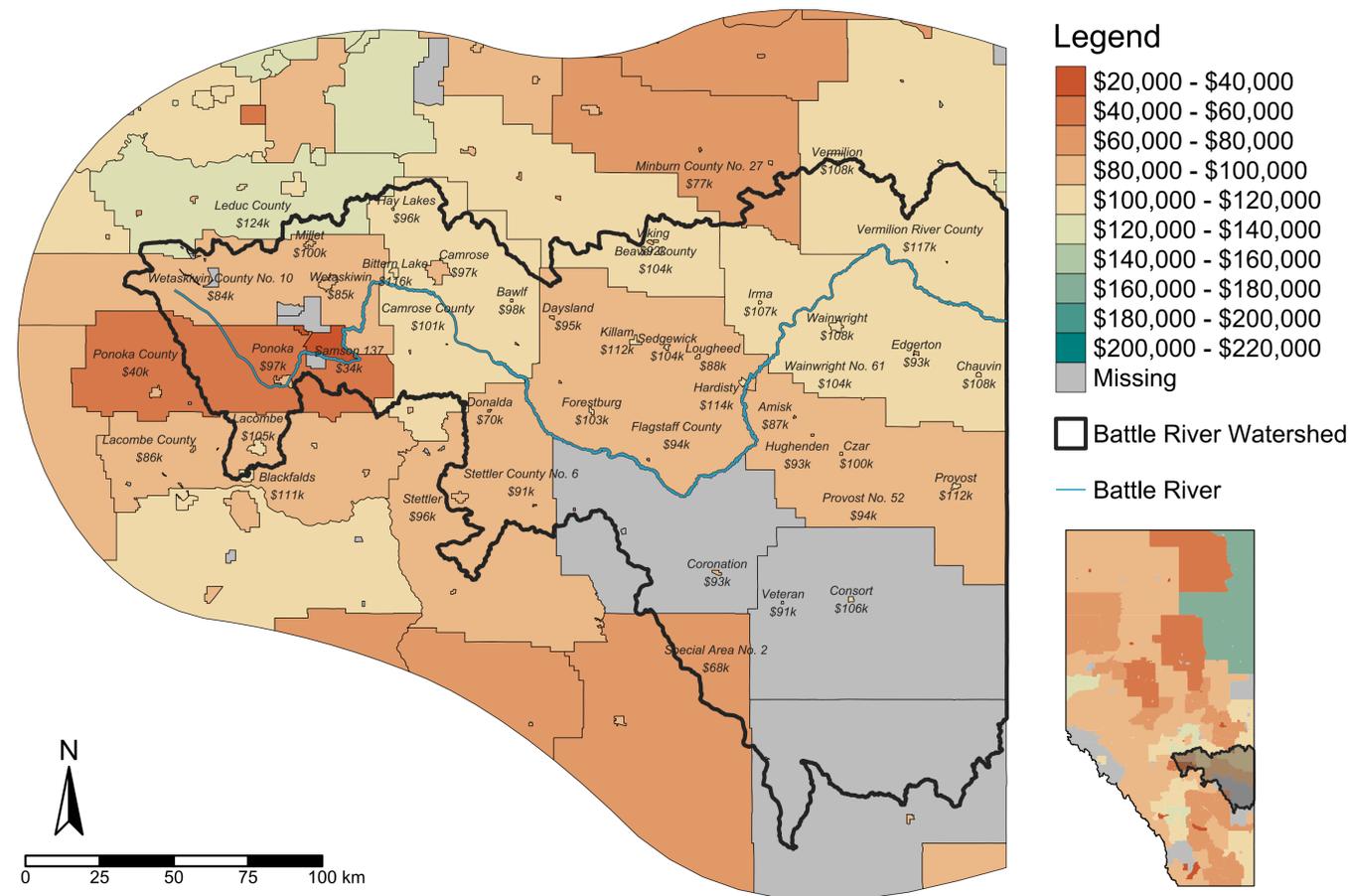
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# Economy and Land Management

## Income and Labour Force Participation

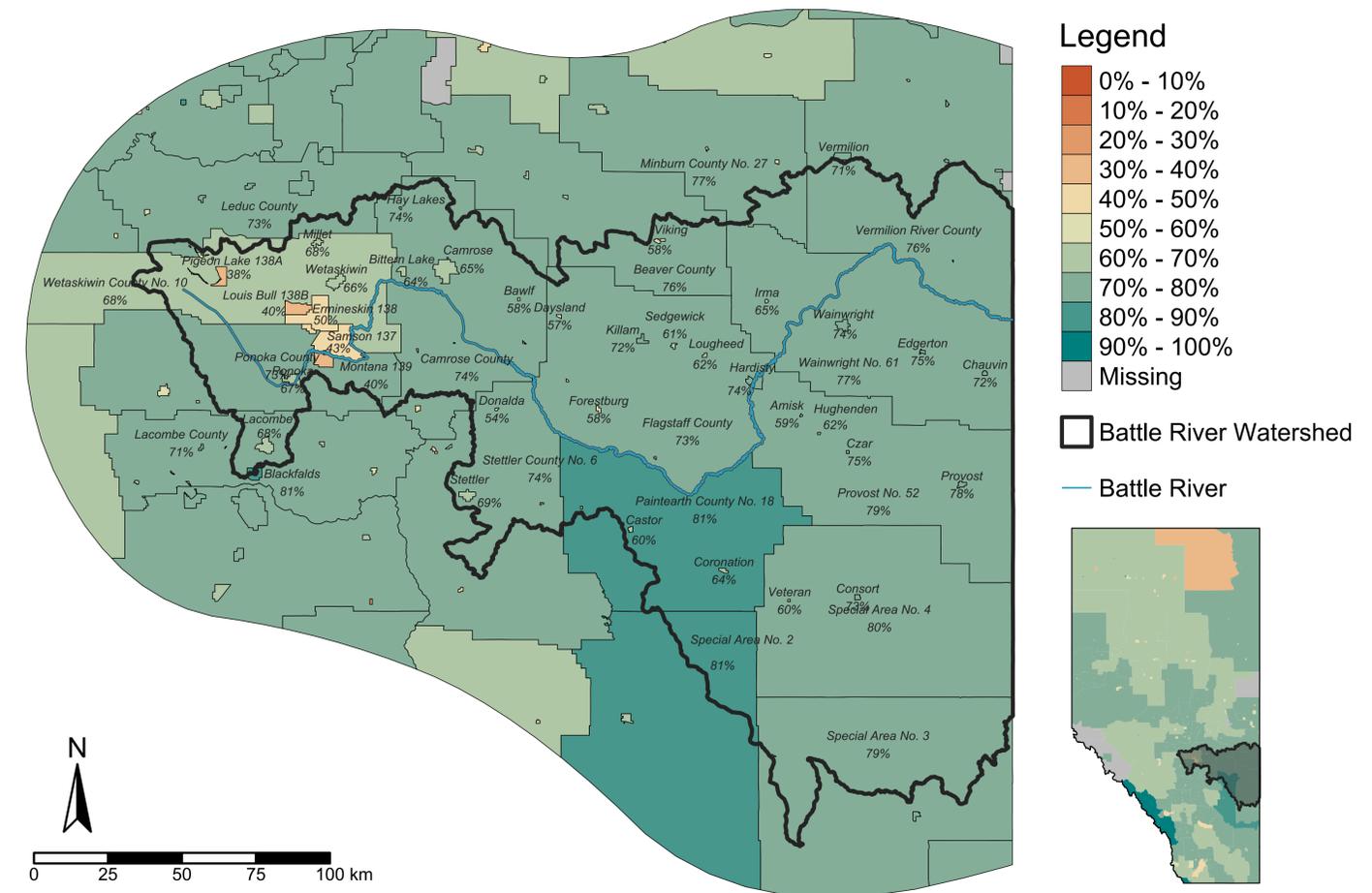
### Median Family Income (2016)

Annual family income, after-tax



### Labour Force Participation Rate (2016)

Males and Females % of population 15 years of age and over that is working or looking for work



Sources: Government of Alberta, Economic Development and Trade. 2016. Median Income by Municipality & Census Employment by Municipality.



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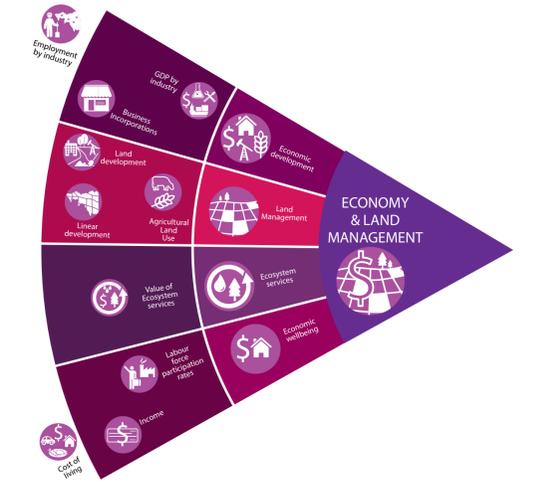
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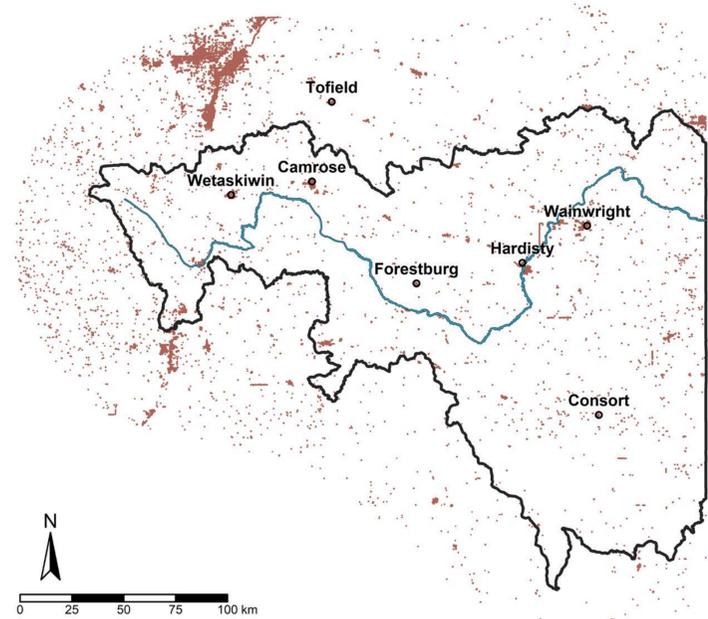
# Economy and Land Management

## Human Footprint - Industry



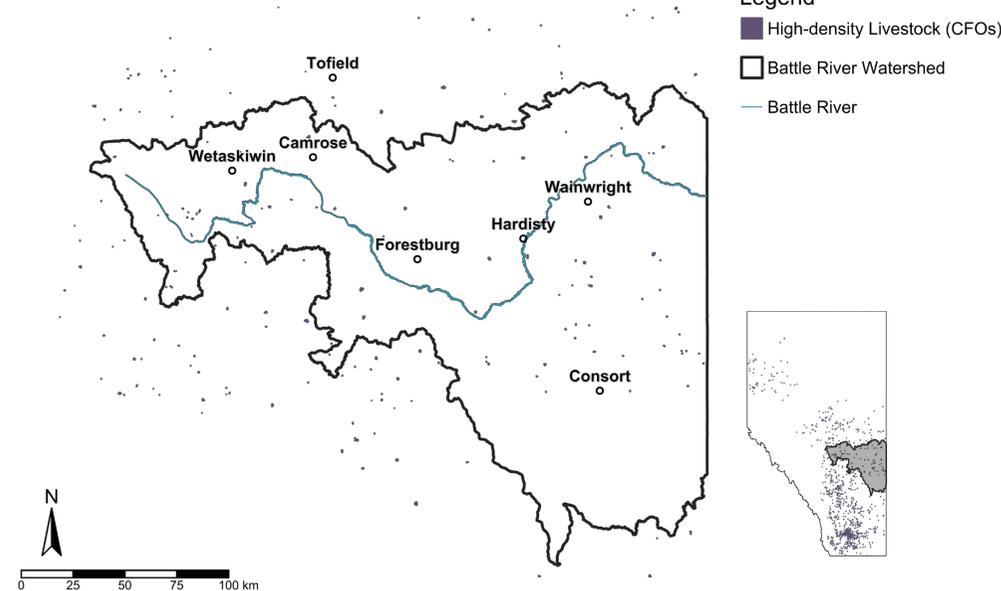
### Industrial Facility Land Cover (2018)

Land cover by development type



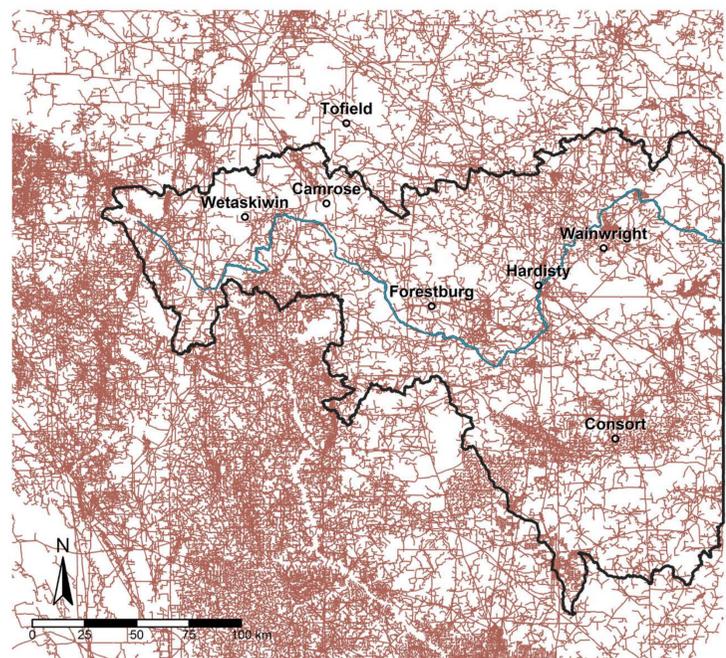
### High-density Livestock/ Concentrated Feeding Operations Land Cover (2018)

Land cover by development type



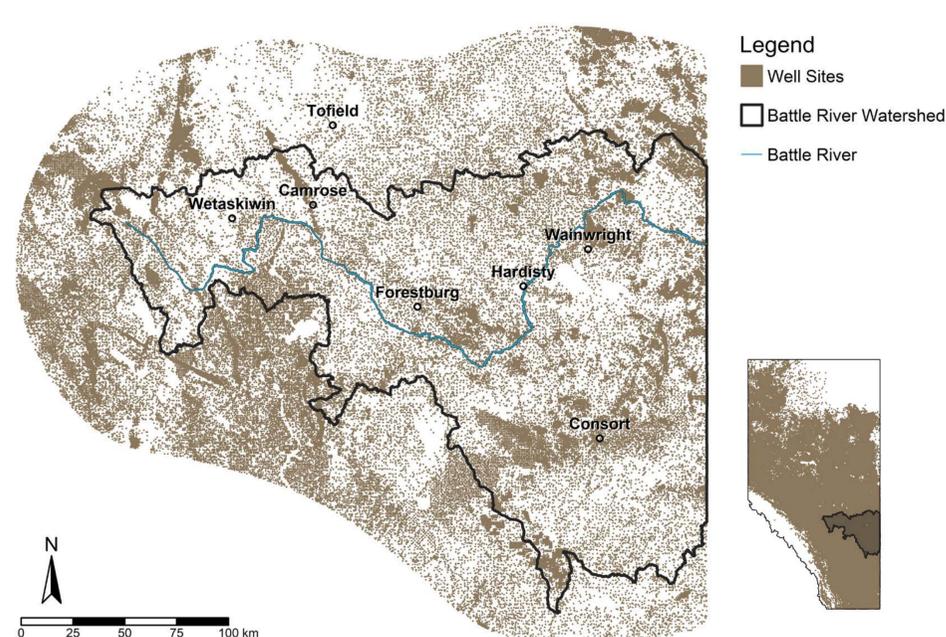
### Linear Development of Pipelines (2018)

Linear development



### Well Sites Land Cover (2018)

Land cover by development type



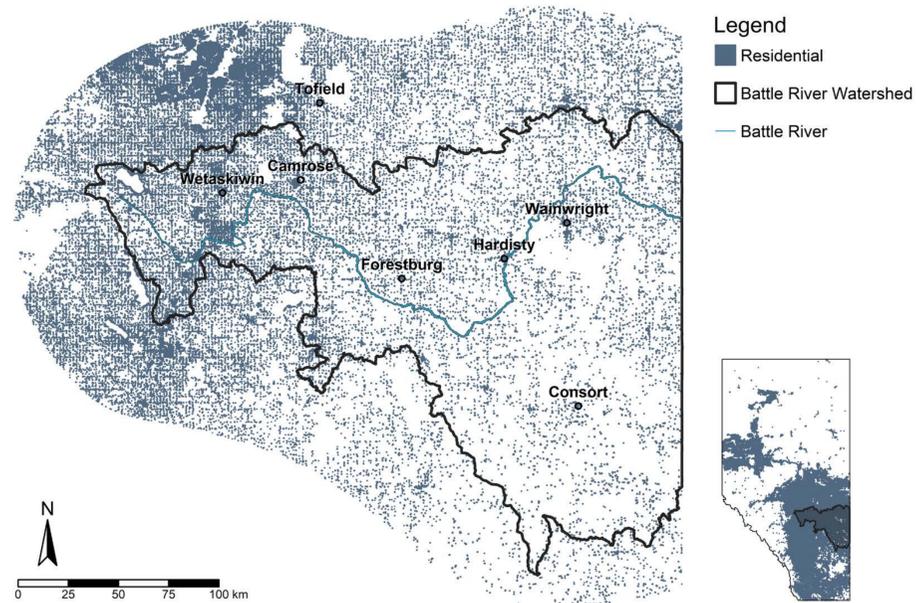
**Sources:** Wall-to-Wall Human Footprint Inventory. 2018. Edmonton, AB: Alberta Biodiversity Monitoring Institute and Alberta Human Footprint Monitoring Program, March 2020



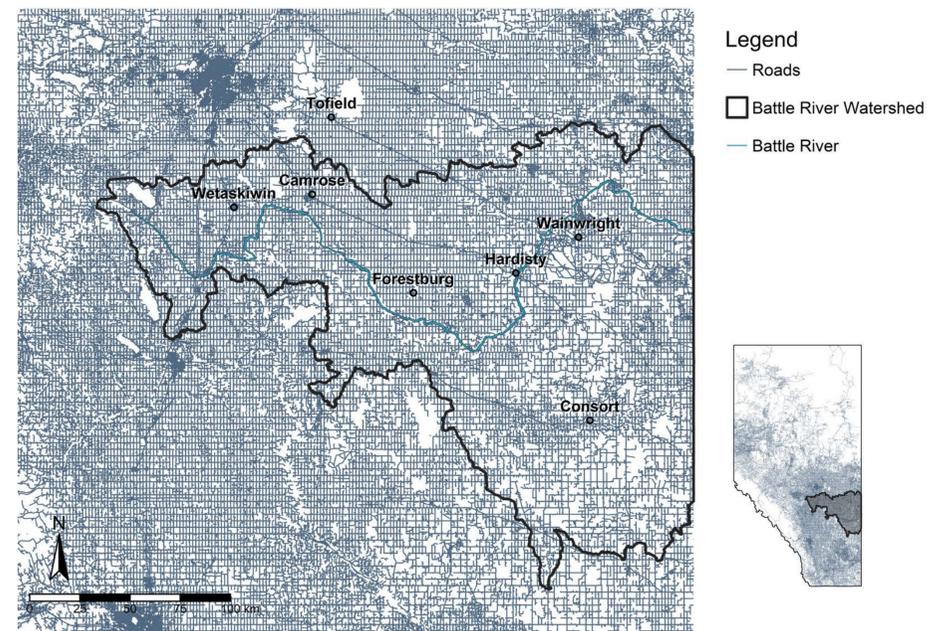
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# Economy and Land Management Human Footprint

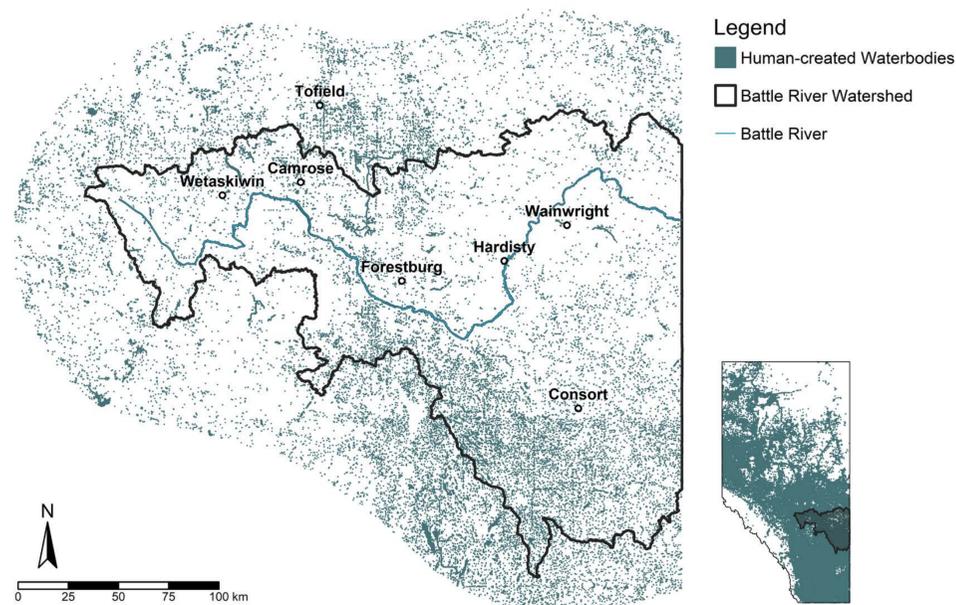
**Residential Land Cover (2018)**  
Land cover by development type



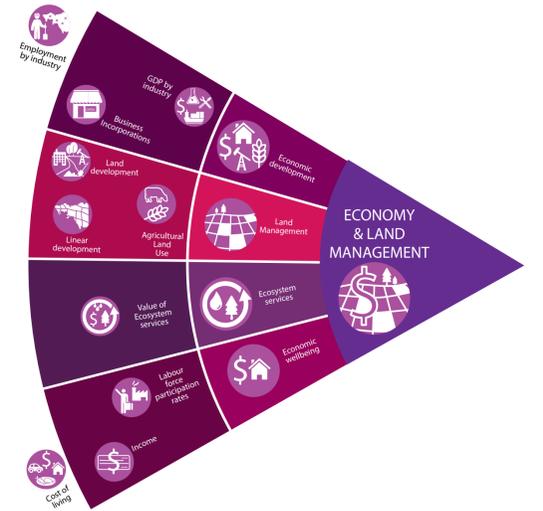
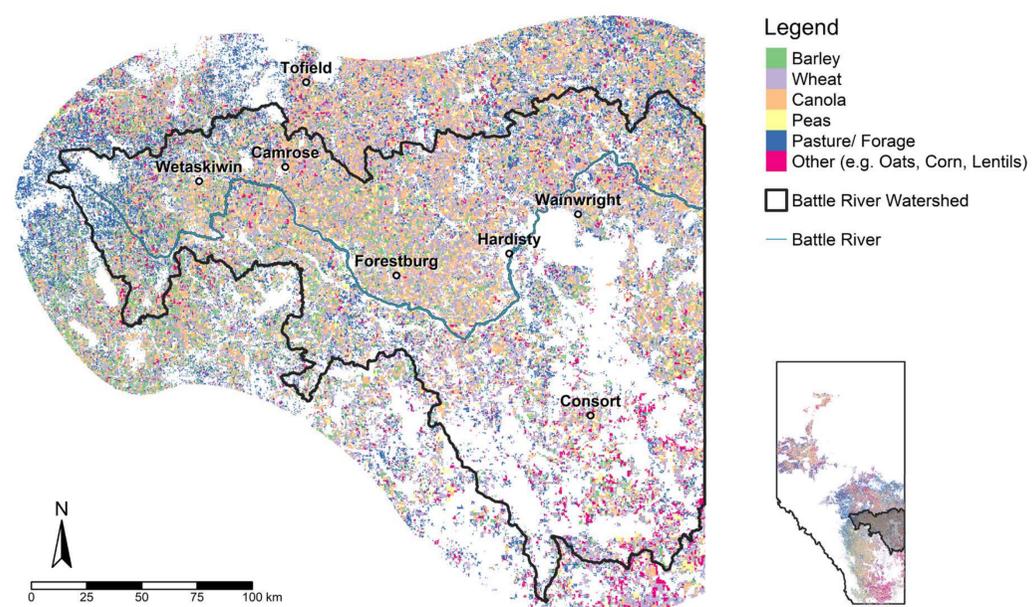
**Linear Development of Roads (2018)**  
Linear development



**Human-created Waterbodies (2018)**  
Land cover by development type



**Crop Inventory (2020)**  
Land cover by crop type



**Sources:**  
**Top & Bottom Left:** Wall-to-Wall Human Footprint Inventory. 2018. Edmonton, AB: Alberta Biodiversity Monitoring Institute and Alberta Human Footprint Monitoring Program, March 2020  
**Bottom Right:** Agriculture and Agri-Food Canada, 2019, "Annual Space-Based Crop Inventory for Canada, 2020", Agroclimate, Geomatics and Earth Observation Division, Science and Technology Branch.



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