

Greenhouse Gas Inventory 2021

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Overview

- What is a Greenhouse Gas Inventory?
- Purpose and Context for GHG Inventory and Update
- Methodology
- Local Government Operations
- Community-wide Emissions
 - Highlights – Community-wide Emissions:
 - Residential Energy
 - Transportation & Mobile Sources
- Next Steps & Key Findings

CITY OF MCCALL, IDAHO

2021 Inventory of Community Greenhouse Gas Emissions



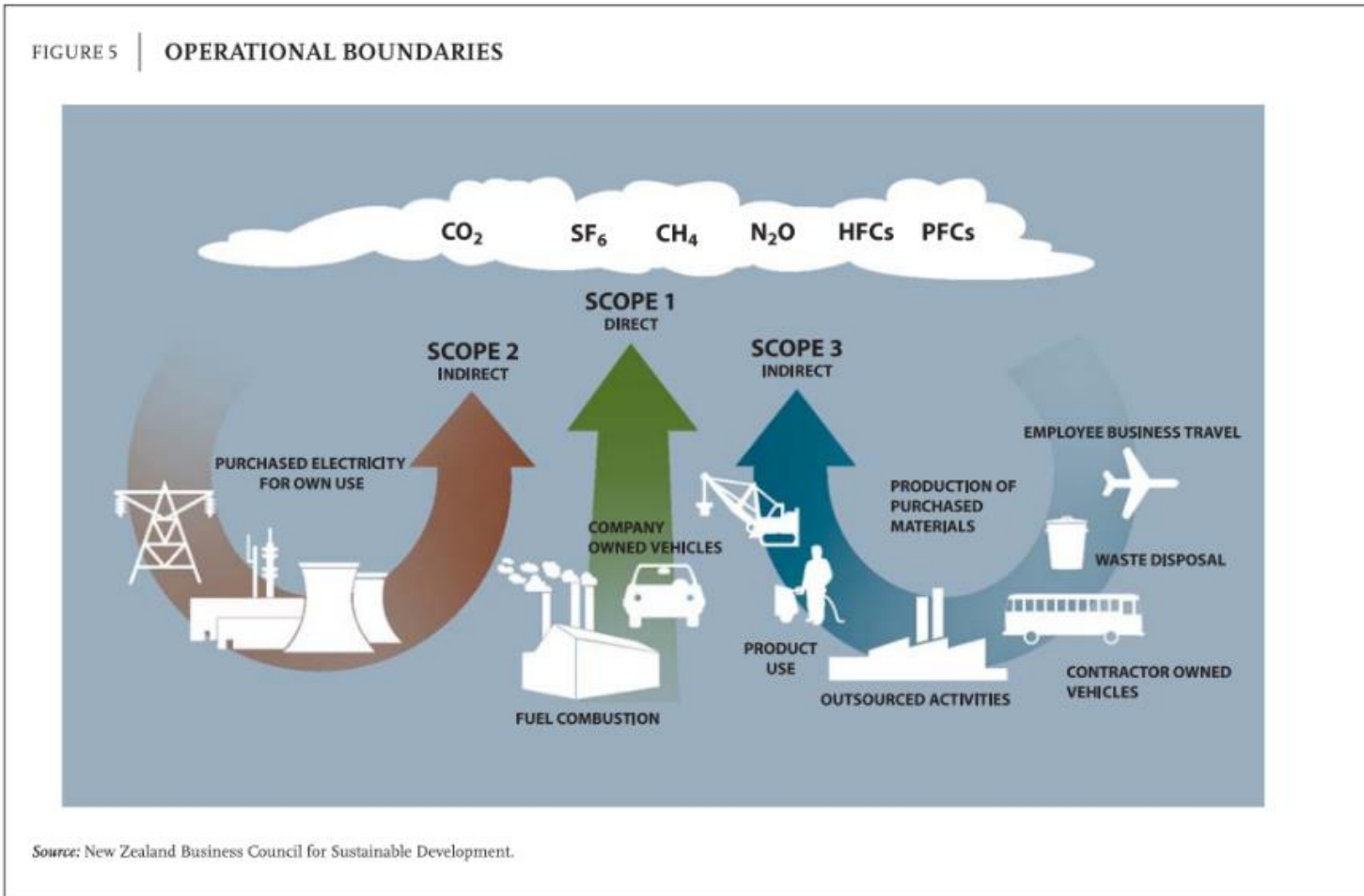
Prepared For:

City of McCall,
Idaho

Produced By:

ICLEI – Local Governments
for Sustainability USA
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What is a Greenhouse Gas Inventory?



Purpose & Context for GHG Inventory Update



Objectives:

- Investigate impact of Covid-19 Pandemic and associated “boom” on local GHG Emissions
- Provide an updated and complete* Baseline of data to inform:
 - Emissions Reduction Goals
 - Development of Climate Action Plan

Local Context:

- 2018 was a *weak El Nino*;
- 2021 was a *moderate La Nina*
- Increased & sustained level of Land Use & Building Activity
- More consistent tourism as opposed to heavy shoulder & peak seasons
- Increased & sustained demand for public services, infrastructure, utilities

Methodology

- Calculation-based methodologies calculate emissions using *activity data* and *emission factors*.
 - To calculate emissions accordingly, the basic equation below is used:

$$\text{Emission Factor} \times \text{Activity Data} = \text{Emissions}$$



Community Electricity Use



Wastewater Treatment



Equipment Fuel



Off-road transportation



On-road vehicle travel



Industrial Process



Carbon sequestration



Utility Energy Use



Upstream activities



Solid Waste



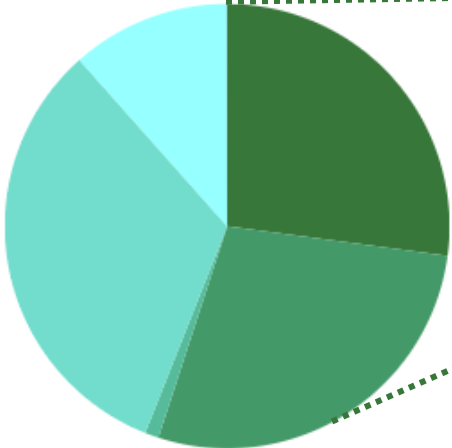
Municipal Fleet

Local Government Operations 2021

GOVERNMENT OPERATIONS EMISSIONS AT A GLANCE



- 1** Vehicle Fleet & Equipment
32.4%
- 2** Water & Wastewater
27.9%
- 3** Buildings & Facilities
27.1%



- Vehicle Fleet & Equipment (32.4 %)
- Water & Wastewater (27.9%)
- Buildings & Facilities (27.1%)
- Employee Commute (11.5%)
- Streetlights & Traffic Signals (1%)
- Solid Waste <1%

- The largest contributor is the Municipal Fleet and Equipment Fuel (Snowplowing) with 32.4% of emissions.
- The next largest contributors are Water & Wastewater (27.9%) and Buildings & Facilities (27.1%).
- Emissions from municipal government operations contribute to 1.6% of McCall’s community-wide emissions.

LGO Emissions Inventory Comparison: 2018 & 2021

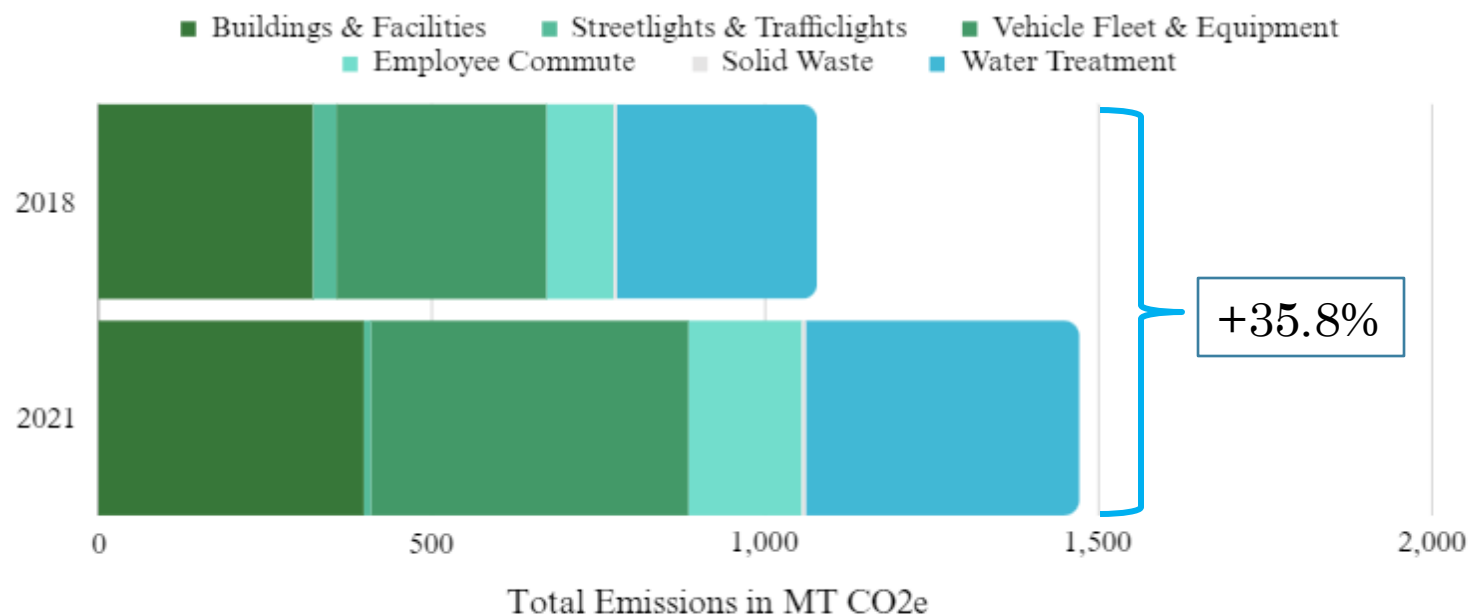


Figure 11: Comparison of City of McCall Government Operational Emissions by Sector and Year (2018 & 2021)

- Since 2018, the community has seen:
 - ~ 200 new household units and increased demand for water resources.
 - A new Parks Building
 - Improvement of HVAC and energy-efficiency in multiple municipal facilities;
 - A greater snow removal year than 2018.
- Increased demand for services and facilities through the municipal government has also exacerbated challenges to workforce retention and recruitment
 - average commuting radius of City employees increasing over the last 3 years, and increase in # of employees
- We can see the nuanced impacts of this growth in key indicators within the 2021 LGO Inventory such as:
 - Vehicle Fleet, Employee Commute, and demand for Water Treatment.

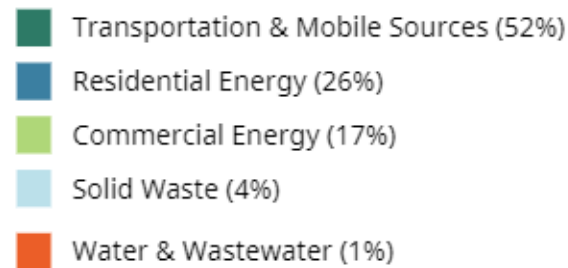
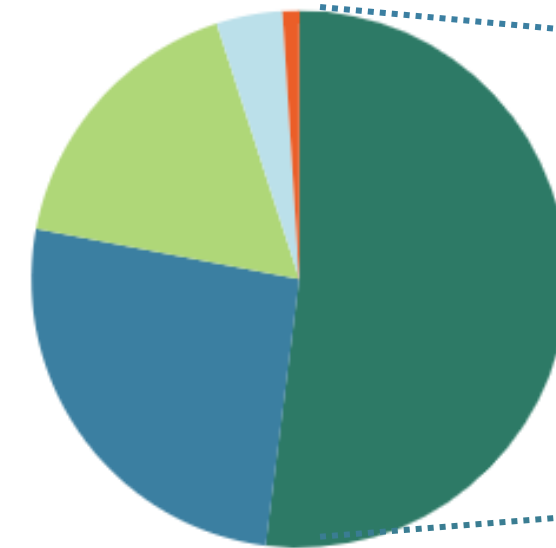
McCall Community-wide GHG Inventory 2021

COMMUNITY EMISSIONS AT A GLANCE

1 Transportation
52%

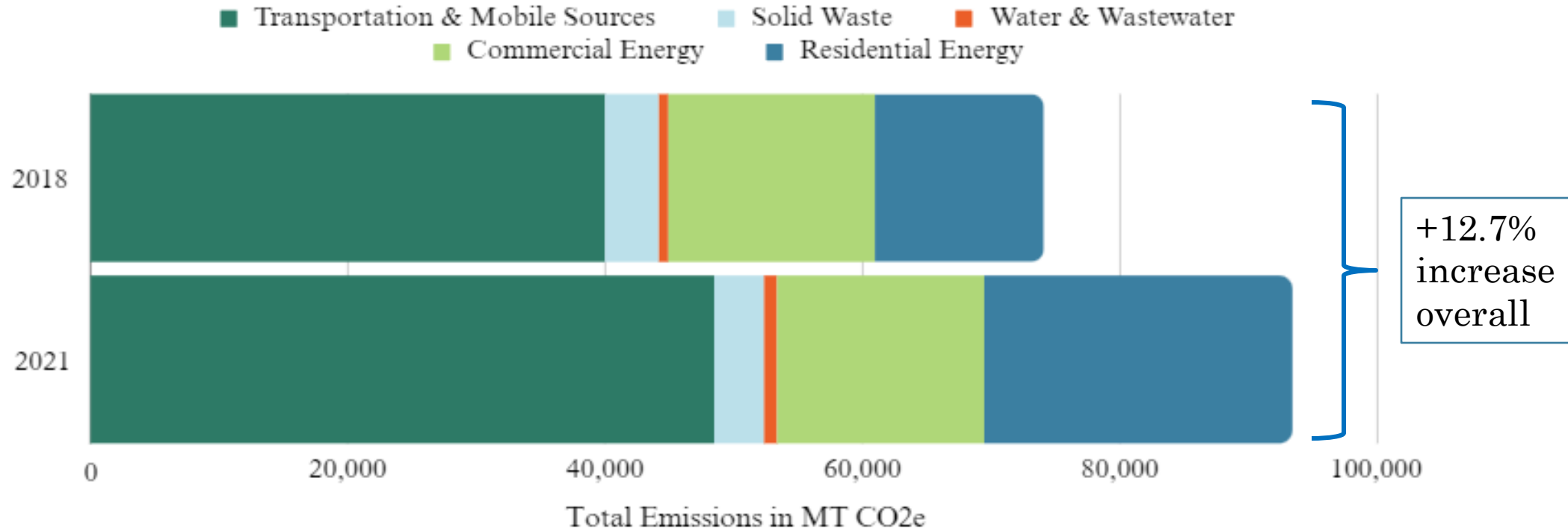
2 Residential Energy
26%

3 Commercial Energy
17%



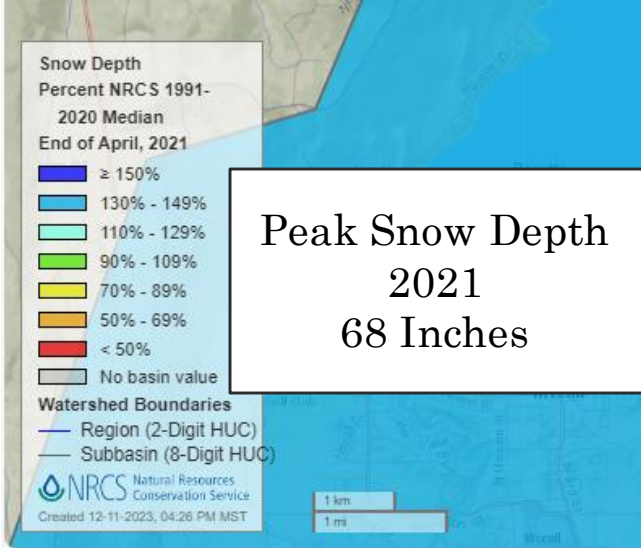
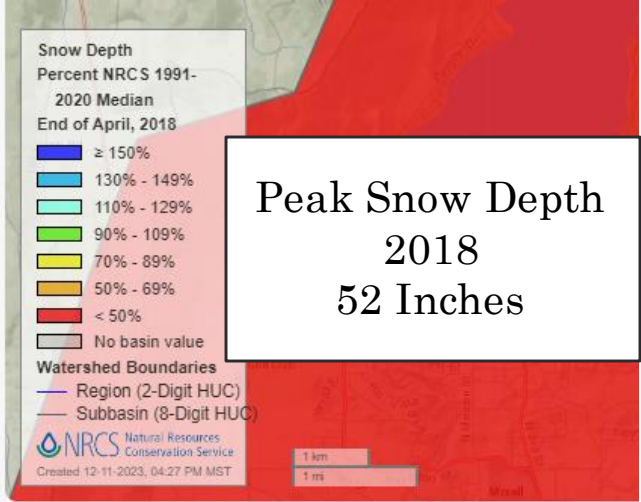
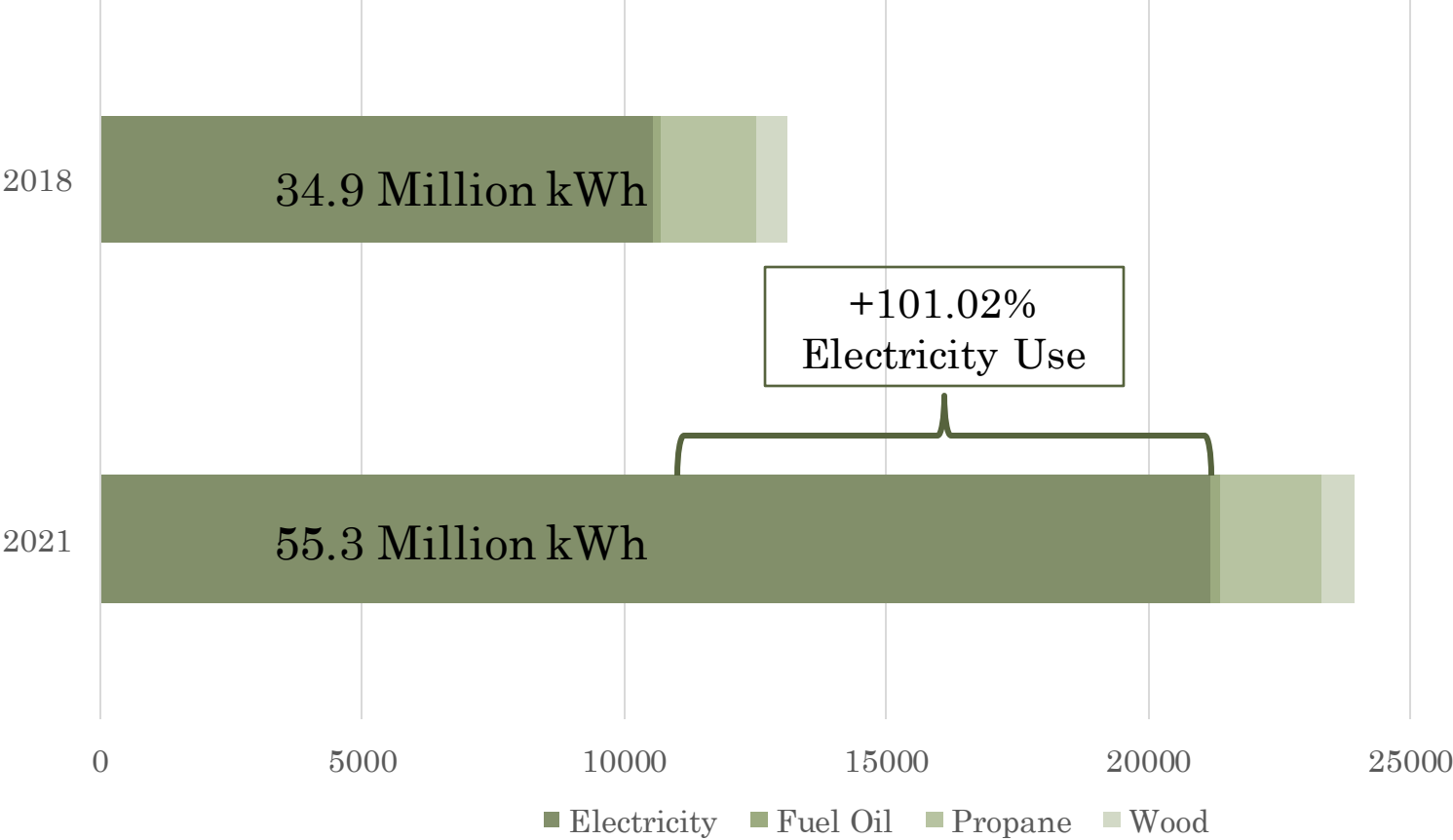
- The largest GHG contributor at the Community level is Transportation with 52% of emissions.
- The next largest contributors are Residential Energy (26%) and Commercial Energy (17%).
- Actions to reduce emissions in all of these sectors will be a key part of a climate action plan.

McCall Community-wide Emissions Comparison 2018 & 2021



- Transportation: increased 3.4% ** measuring Automobiles, Aviation, and OHVs.
- Residential Energy Use: increased 45.1%

Residential Energy Sector

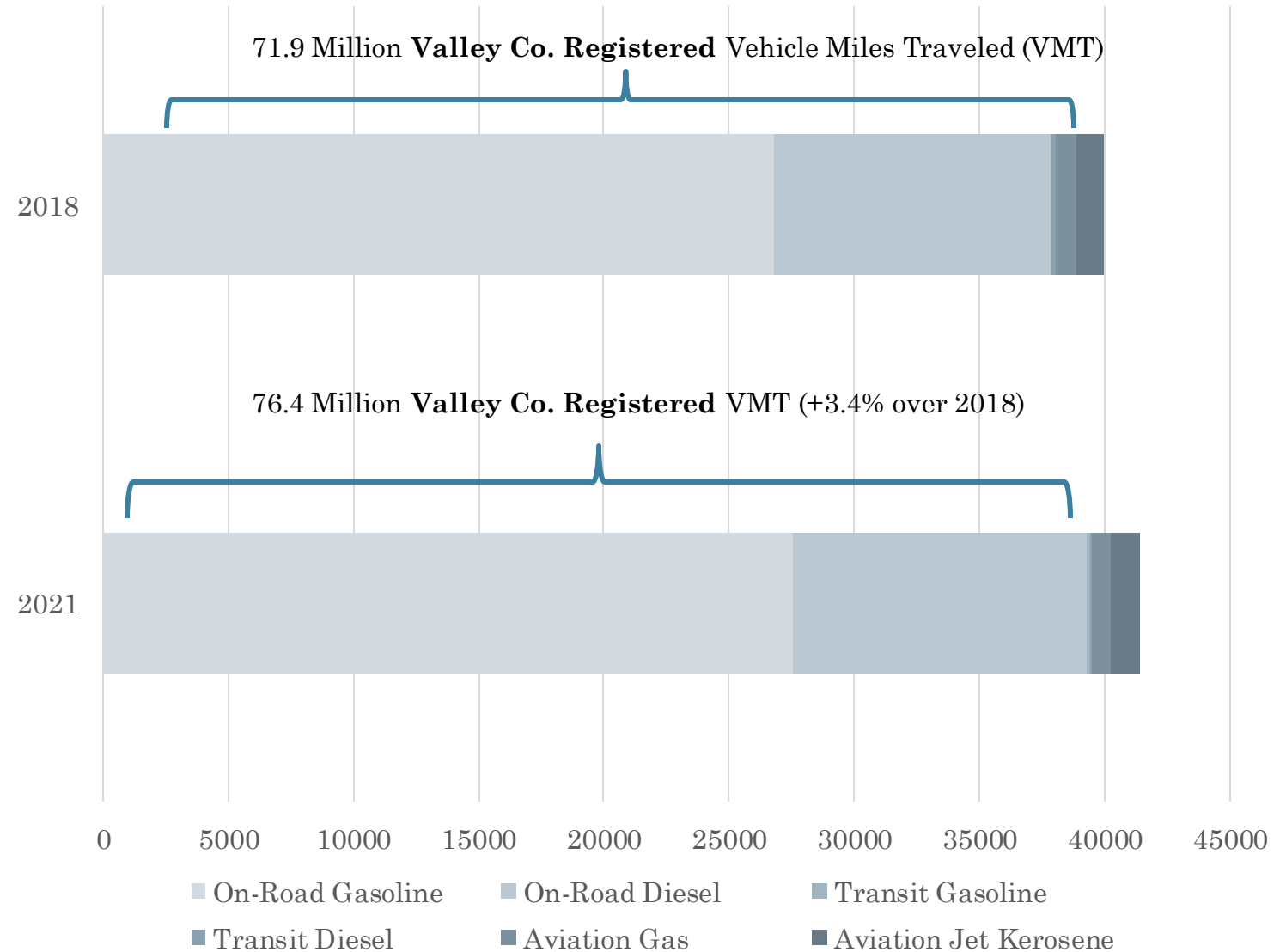


Emissions in MT CO₂e from Residential Energy Use in 2018 & 2021

Transportation Sector

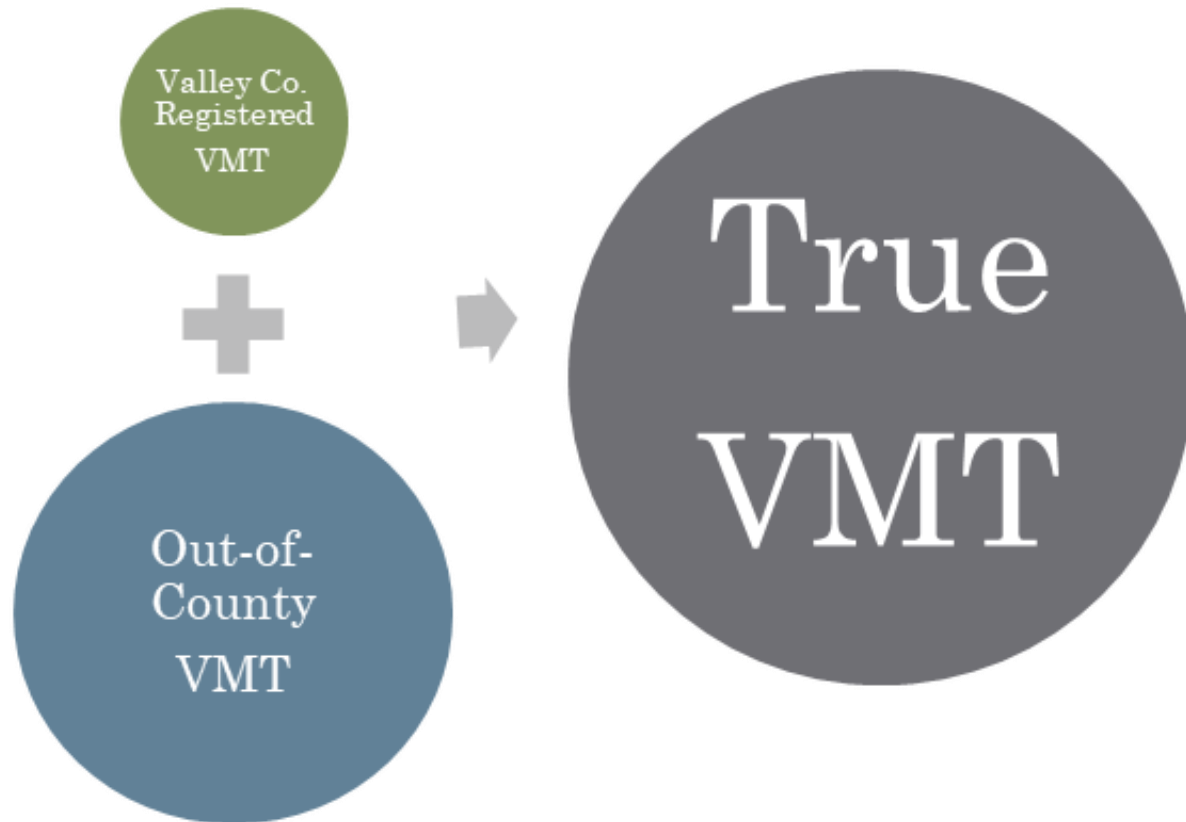
Vehicle Miles Traveled:

“refers to the total number of miles traveled by a motor vehicle in a region over a certain period of time, usually over a year. When officials measure the VMT of an area such as a neighborhood, city or state, they are measuring the total amount of miles traveled by all vehicles.”



Emissions in MT CO₂e from Transportation in 2018 & 2021

Transportation Sector – Data Gap



The emissions calculated from the transportation sector in McCall likely leaves a large gap un-measured, given the data does not include Vehicle Miles Travelled of Out-of-County Vehicles which utilize the local road network.

How big is this gap, and what are we missing beyond Greenhouse Gas Emissions and Air Quality information?

Possible scale of this data gap:

The annual amount of LOT Revenue collected in 2021 (Calendar Year, not FY) was

43.2% higher
than 2018

Traffic Count Data saw an increased number of vehicles at most points of between

4% and 29% higher
than in 2014, 2016 counts.

Key Findings & Recommendations

Emissions activities and sources
have changed since before the Covid-19 Pandemic

Emissions overall continue to increase each year with some weather-related-influence

The greatest opportunities for impact through Climate Action Planning & Implementation will be in:

- Transportation & Mobile Fuels
- Residential Energy
- Commercial Energy

- Adopt the City of McCall Inventory of Community Greenhouse Gas Emissions for 2021 as a guiding planning document



Next Steps

Up Next:

EV Infrastructure
Readiness in McCall

Tomorrow:

The Transportation Sector
& Traffic in McCall

2024:

Development of McCall
Climate Action Plan

