
Catch
the Rain
city of
RED LODGE
MONTANA

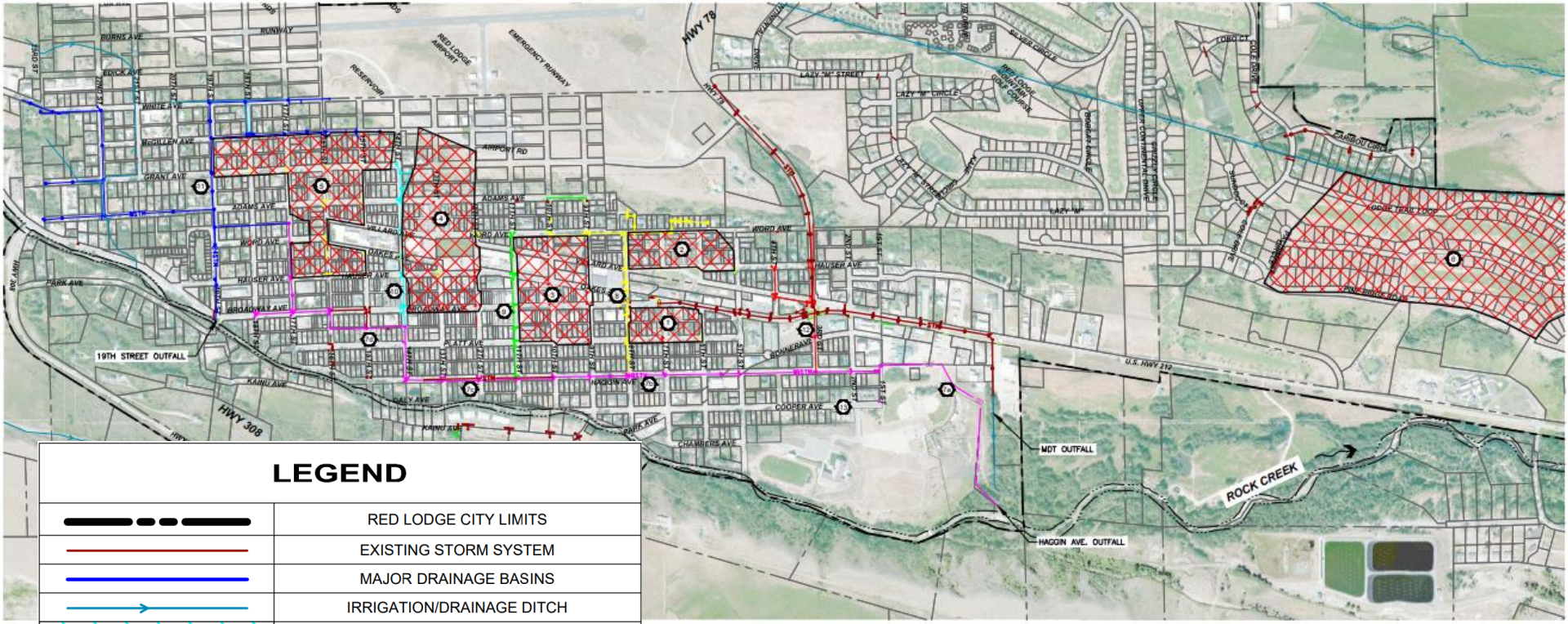
Just closed the ordering window and will deliver in the next two weeks.

The final numbers are:

51 barrels sold to 36 households.

If each barrel saves 1,300 gallons annually, that's 66,300 gallons of stormwater runoff diverted each year from the WWTP and Rock Creek.

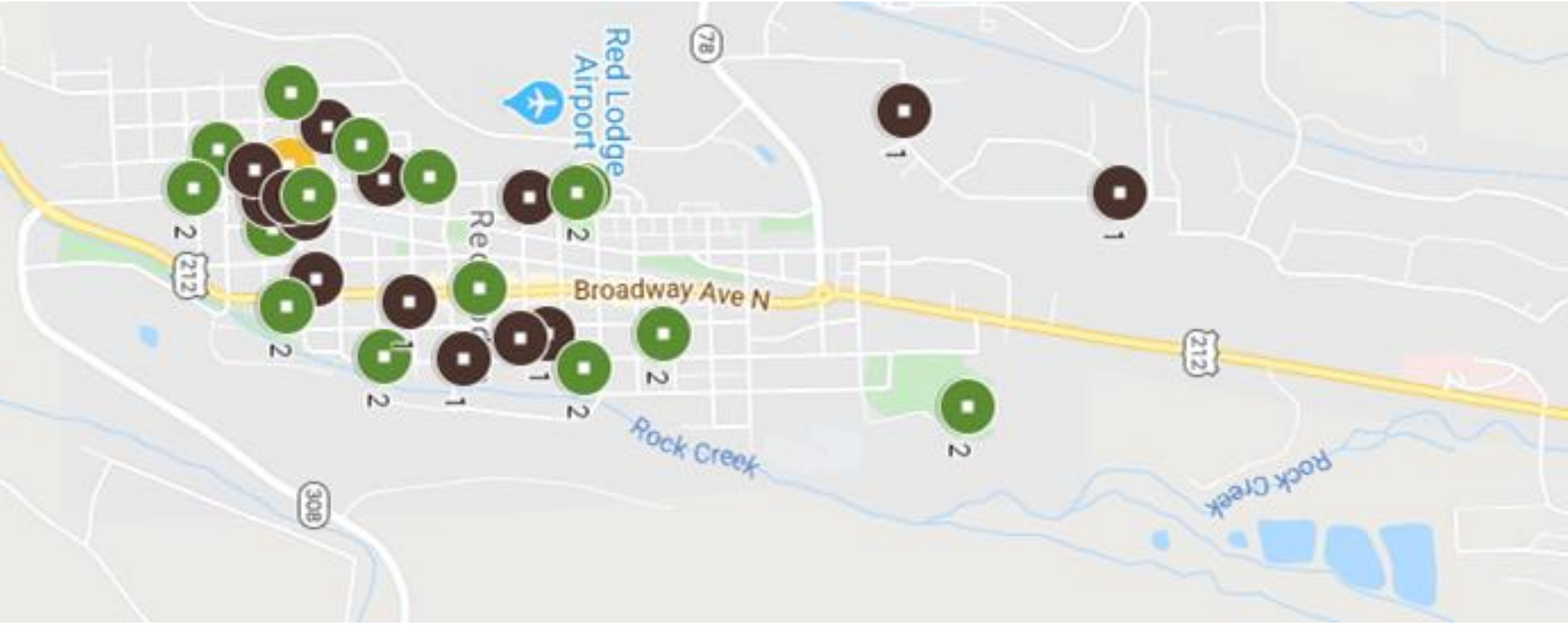
Stormwater Improvements PER: Problem Areas

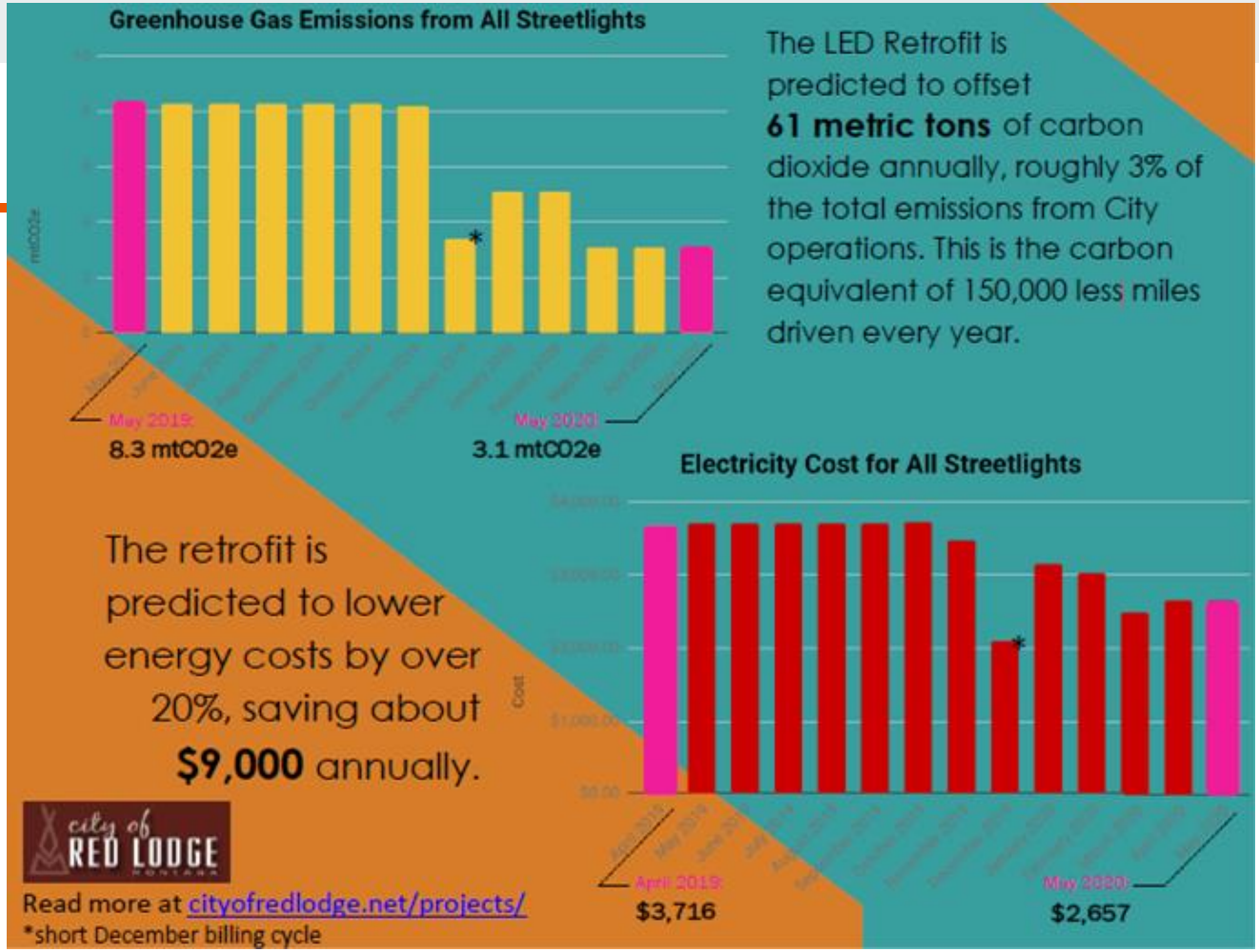


LEGEND

	RED LODGE CITY LIMITS
	EXISTING STORM SYSTEM
	MAJOR DRAINAGE BASINS
	IRRIGATION/DRAINAGE DITCH
	19TH STREET DRAINAGE BASIN
	HAGGIN AVE. DRAINAGE BASIN
	DRAINS TO SANITARY SEWER
	MDT DRAINAGE BASIN

Map of Catch the Rain Participants




Greenhouse Gas Emissions from All Streetlights
mtCO2e
*
May 2019:
8.3 mtCO2e
May 2020:
3.1 mtCO2e
The LED Retrofit is predicted to offset 61 metric tons of carbon dioxide annually, roughly 3% of the total emissions from City operations. This is the carbon equivalent of 150,000 less miles driven every year.
Electricity Cost for All Streetlights
Cost
*
April 2019:
$3,716
May 2020:
$2,657
The retrofit is predicted to lower energy costs by over 20%, saving about $9,000 annually.
city of RED LODGE MONTANA
Read more at cityofredlodge.net/projects/
*short December billing cycle

28 kW Solar Array for City Hall & Police Station

The Purpose:

- Offset 100% of the electricity costs in both buildings ($4,200)
- Reduce our emissions by 26 mtCO2e annually
- Educate the public on the benefits of solar energy

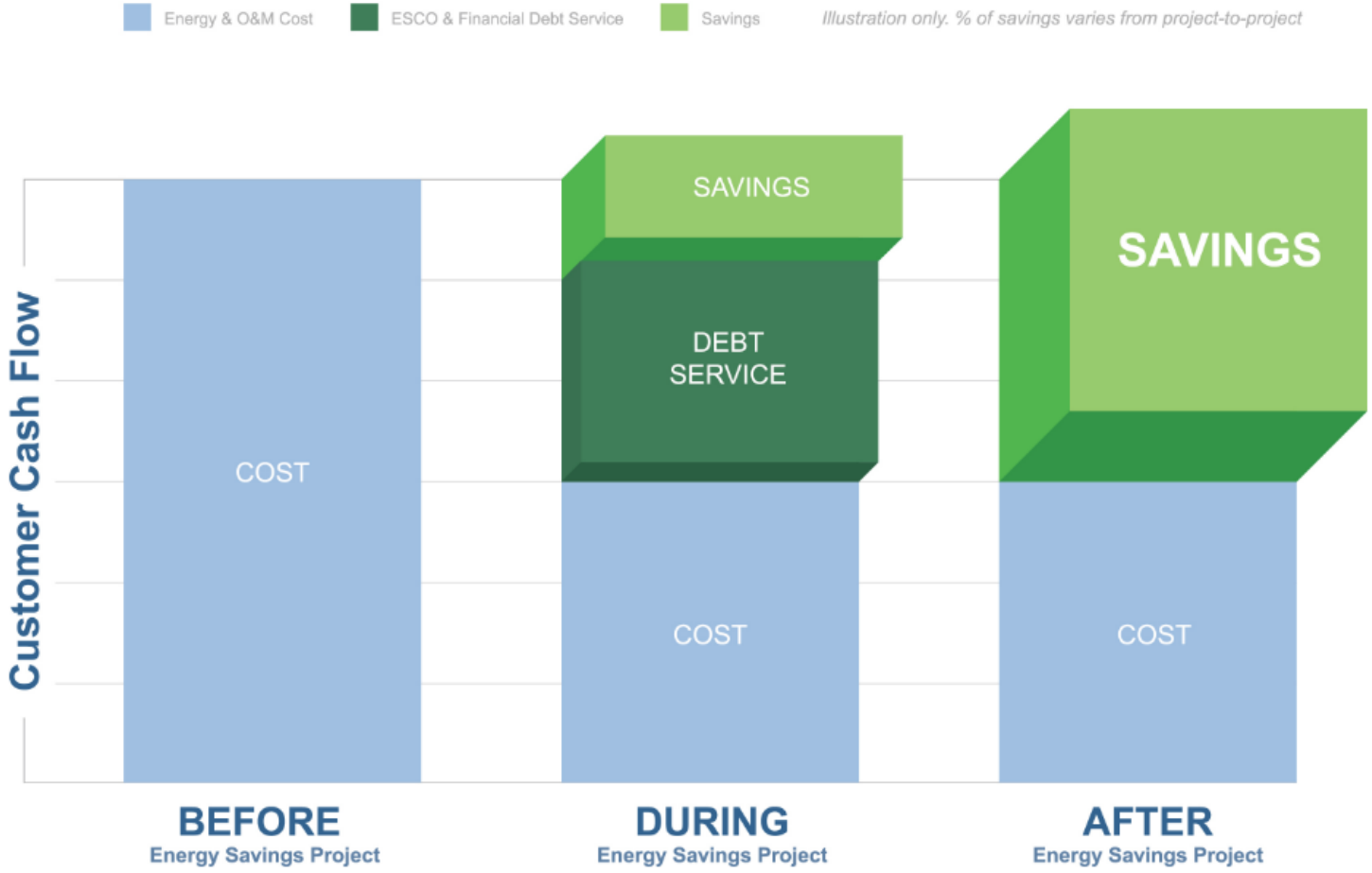
The Cost:

- $91,410.00

How to Fund:

- ‘Buy-A-Panel’ Fundraiser
- Red Lodge Area Community Foundation Pro-Cut Grant
- **NorthWestern Energy USB Grant**
- AERLP Loan
- **Energy Performance Contracting (EPC)**

Performance Contracting: A Budget-Neutral Solution



Red Lodge Community Greenhouse Gas Inventory

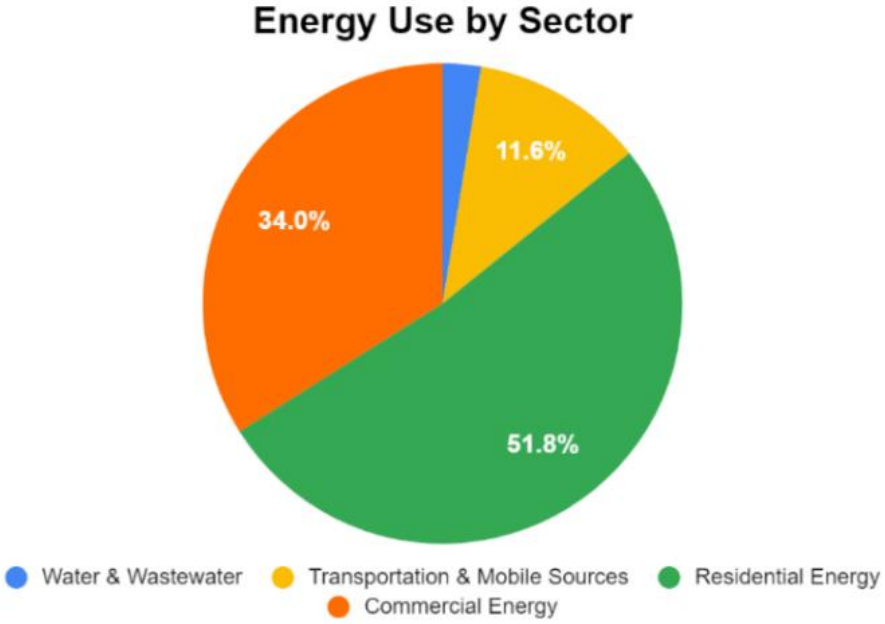
May 2020

Robin Adams

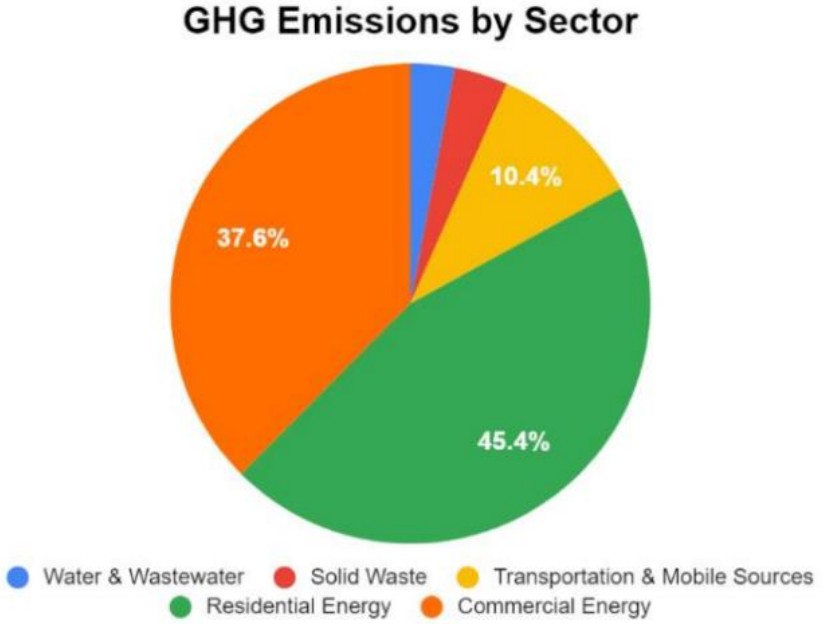
Overview

The enclosed report is a **baseline comprehensive assessment of energy use and GHG emissions for all activities within Red Lodge in the calendar year 2016**. This is a valuable tool for identifying which aspects of the community hold the greatest potential for energy and emissions reduction. It also provides a benchmark upon which to evaluate the effectiveness of any mitigation goals the Red Lodge community may make in the future.

Executive Summary

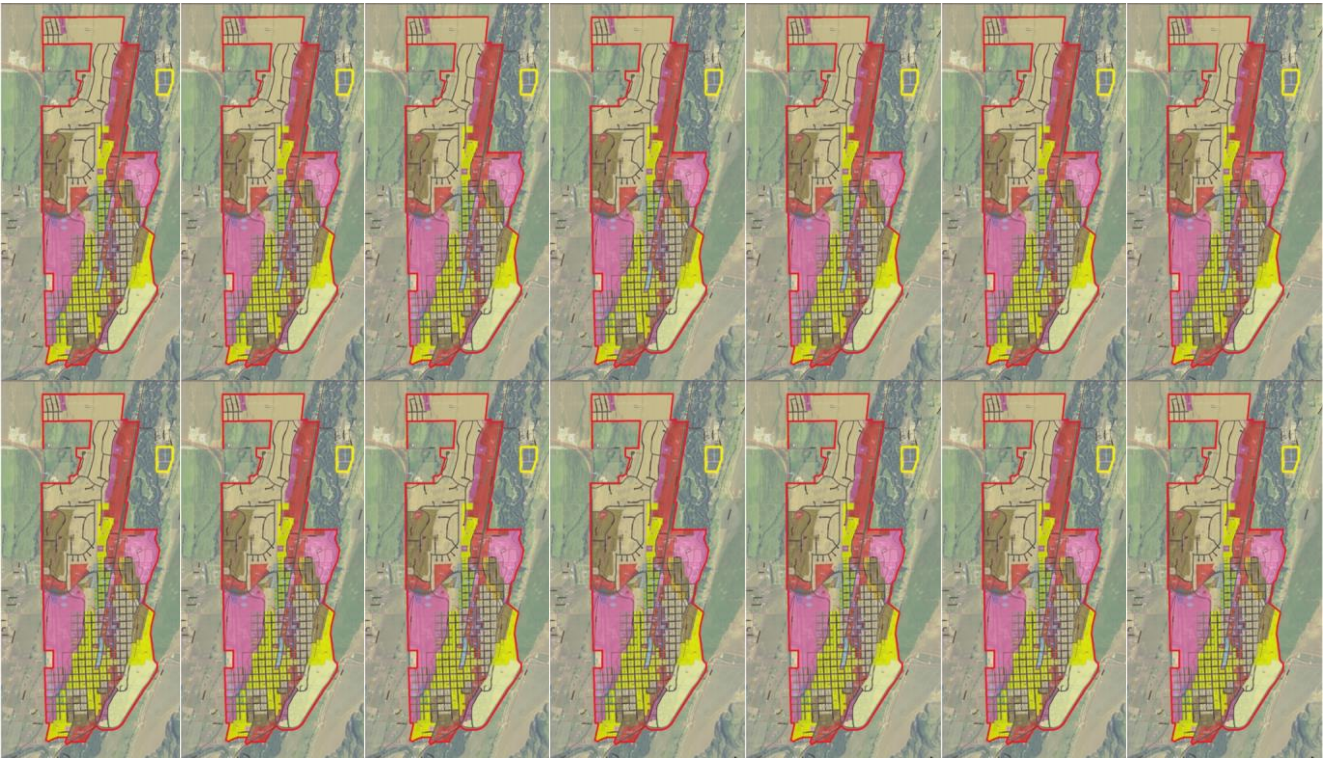


261,005 million British thermal units (MMBtu's) of energy.



20,814 metric tons of carbon dioxide equivalents (mtCO2e) of GHG emissions.

What does 20,814 mtCO2e mean?

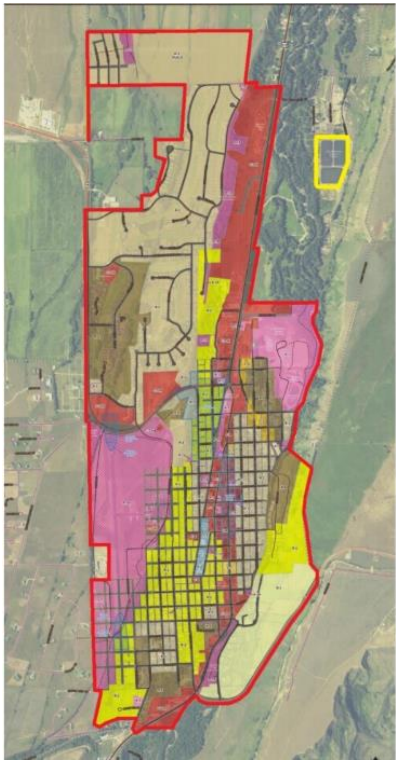


This is the same amount of carbon dioxide that would be sequestered by 27,182 acres of pine tree forest in one year - roughly **14 Red Lodges** filled with pine trees.

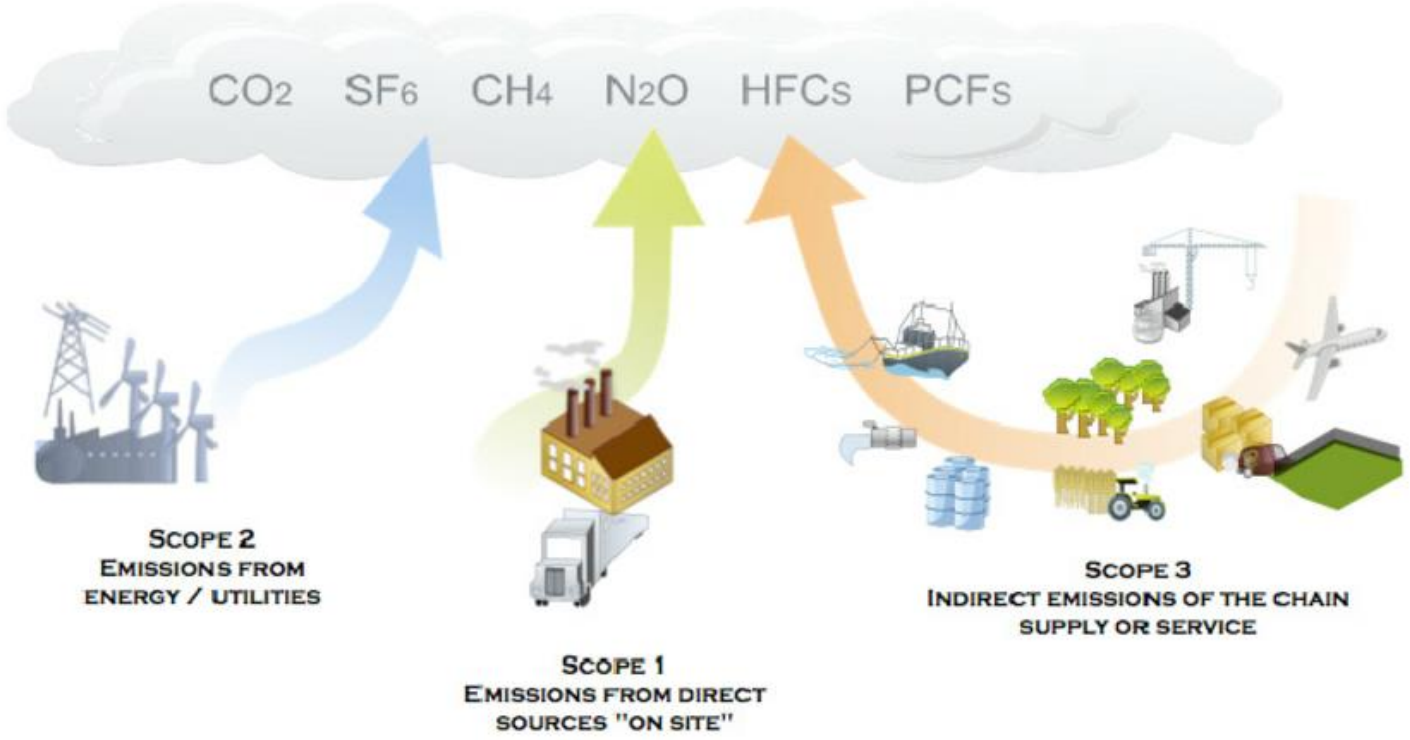
Methodology

GREENHOUSE GAS PROTOCOL

- All data collected from calendar year 2016 from activities and buildings within the City limits.
- All data was analyzed using ClearPath, a software system provided by ICLEI, or Local Governments for Sustainability.
- Multiple scopes of emissions included in analysis.



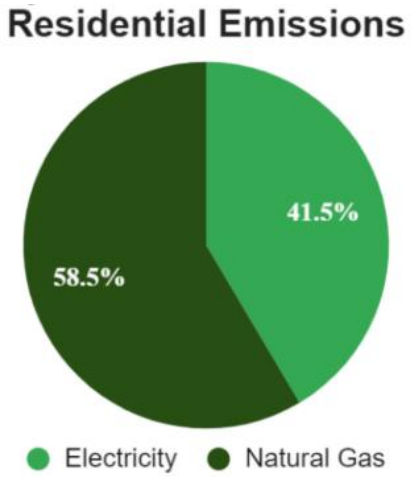
Scope Explanation

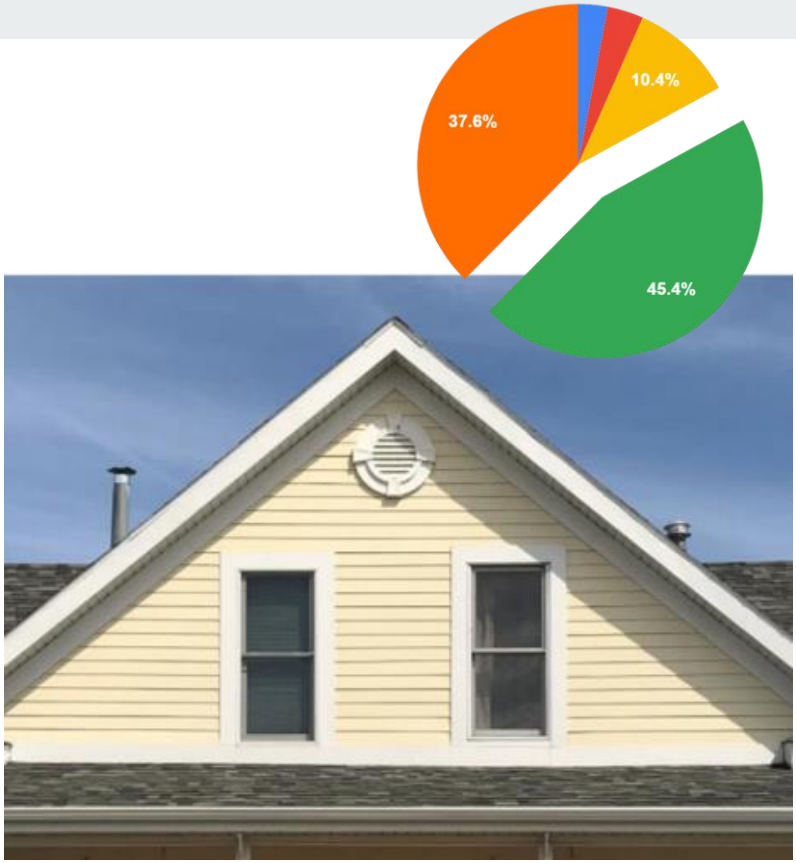


Residential Energy

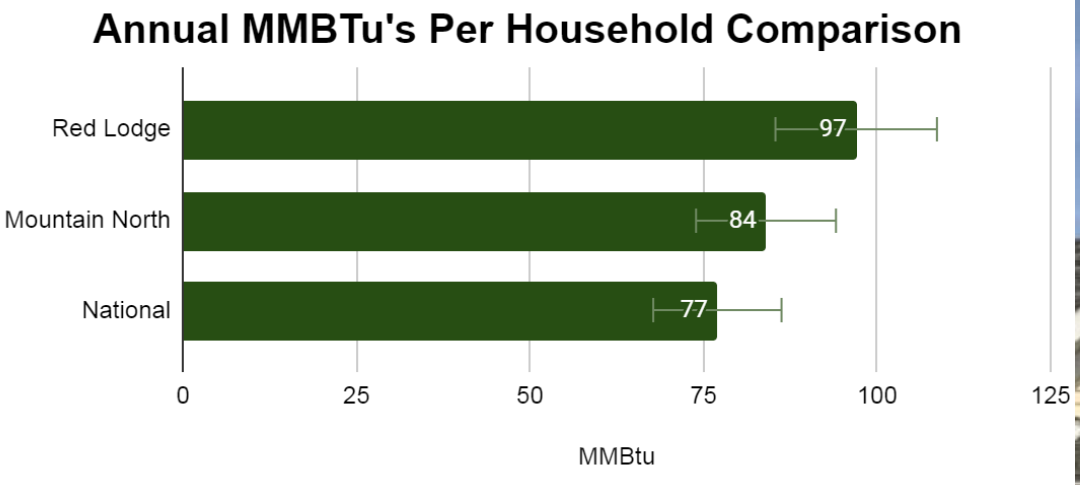
135,270 MMBtu

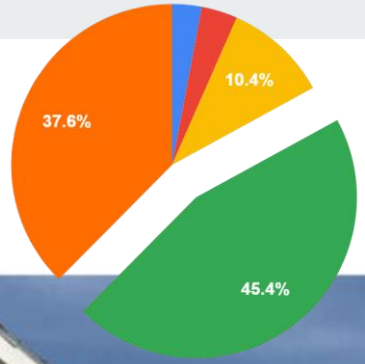
9,448 mtCO2e

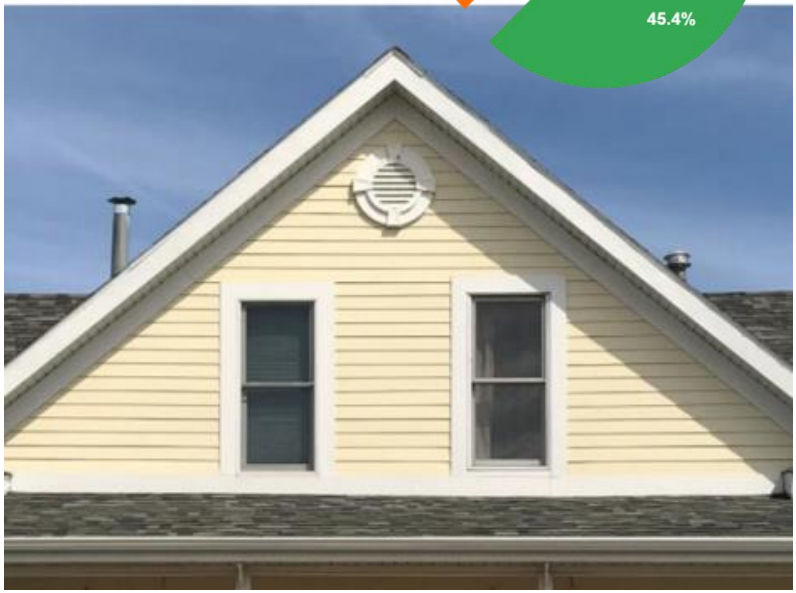




Residential Energy



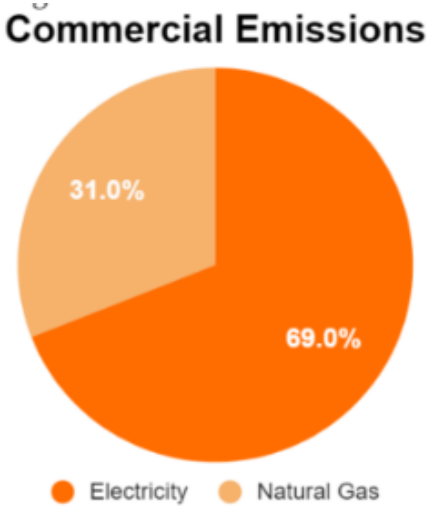


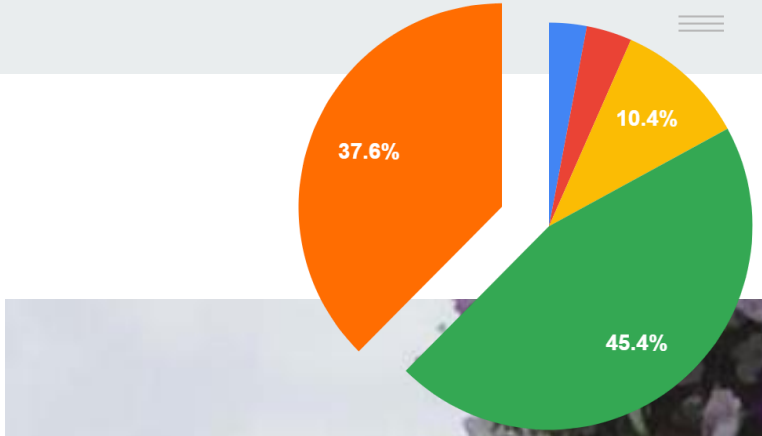


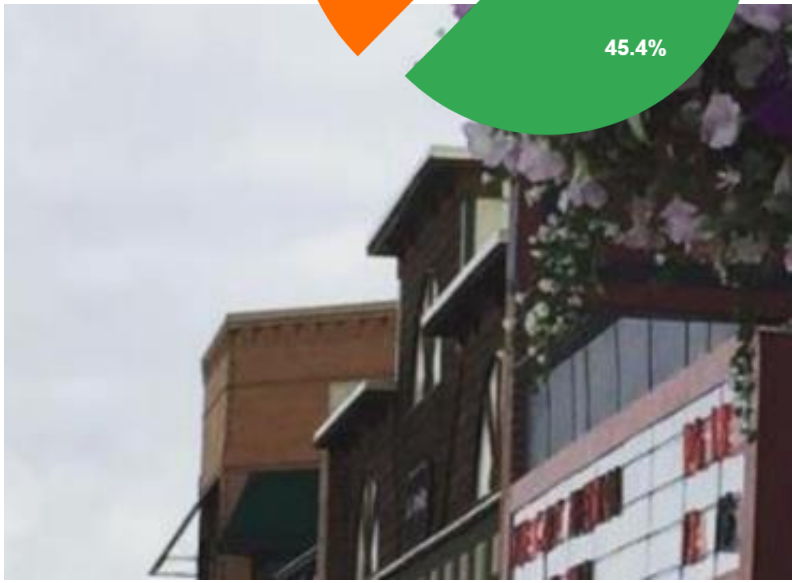
Commercial Energy

88,623 MMBtu's

7,818 mtCO2e



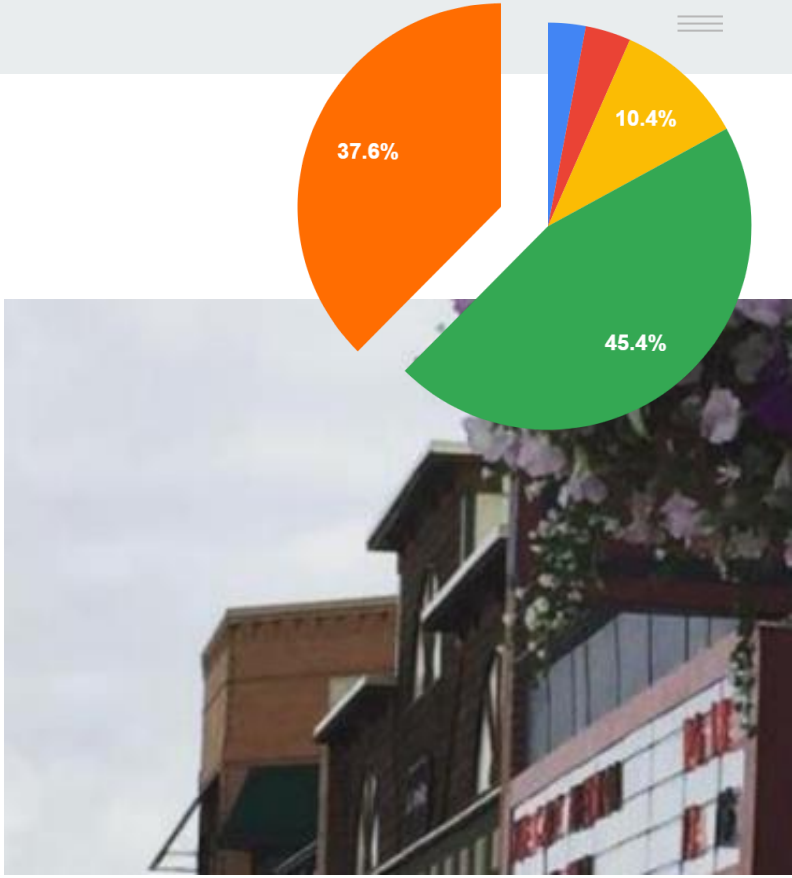




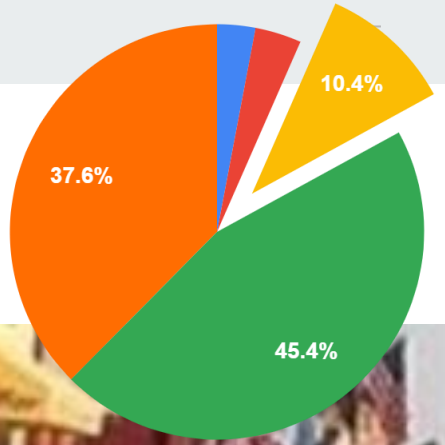
Commercial Energy

This sector includes all non-residential buildings such businesses, 501(c)(3) nonprofits, schools, a hospital, and municipal buildings.

Per capita emissions are 15 mtCO2e, compared to 7 mtCO2e per residential household.

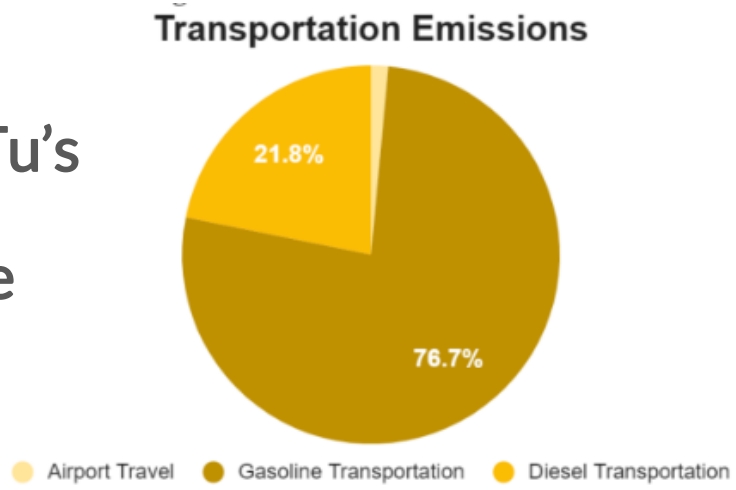


Transportation

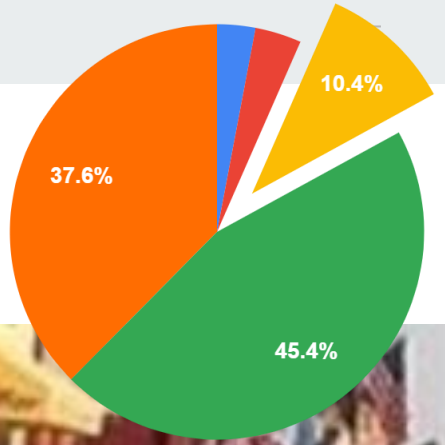


30,366 MMBTu's

2,175 mtCO2e



Transportation



4.8 million miles

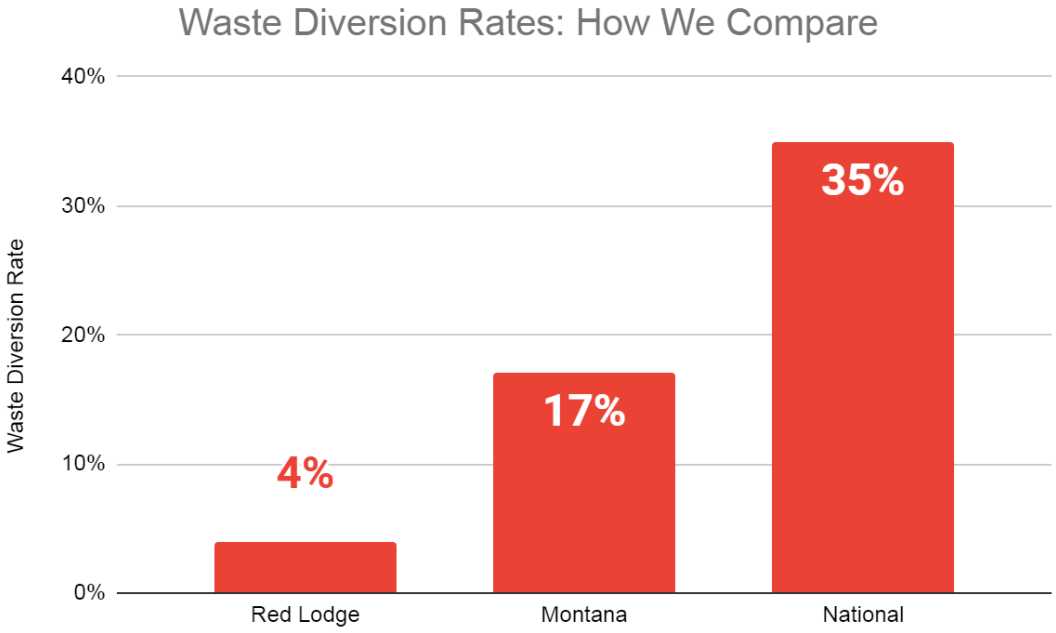
These are the average annual vehicle miles traveled. This includes all local, employee, and visitor traffic.

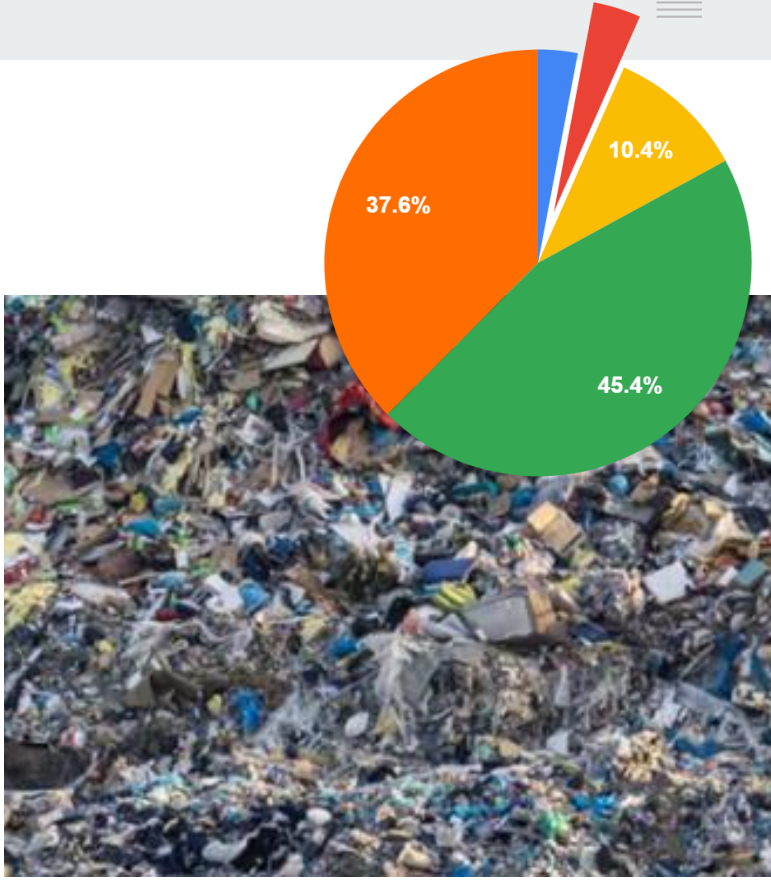
Solid Waste

3,151 tons of waste

751 mtCO2e

Solid Waste

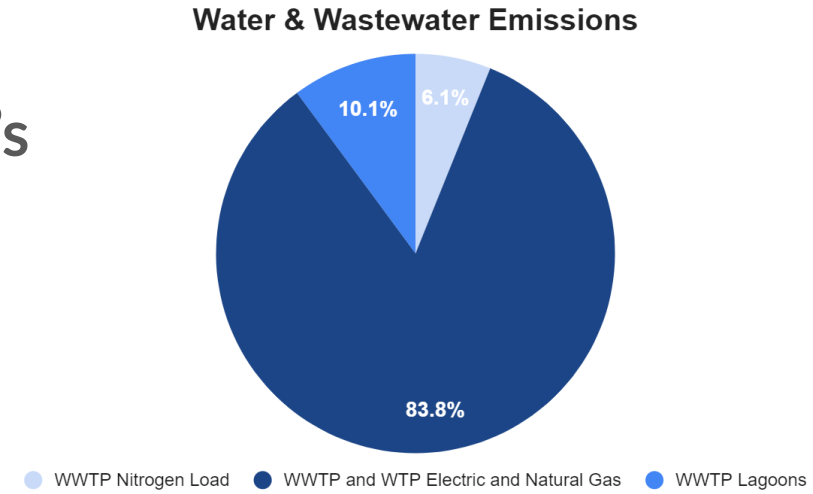

Waste Diversion Rates: How We Compare
Waste Diversion Rate
40%
30%
20%
10%
0%
4%
17%
35%
Red Lodge
Montana
National

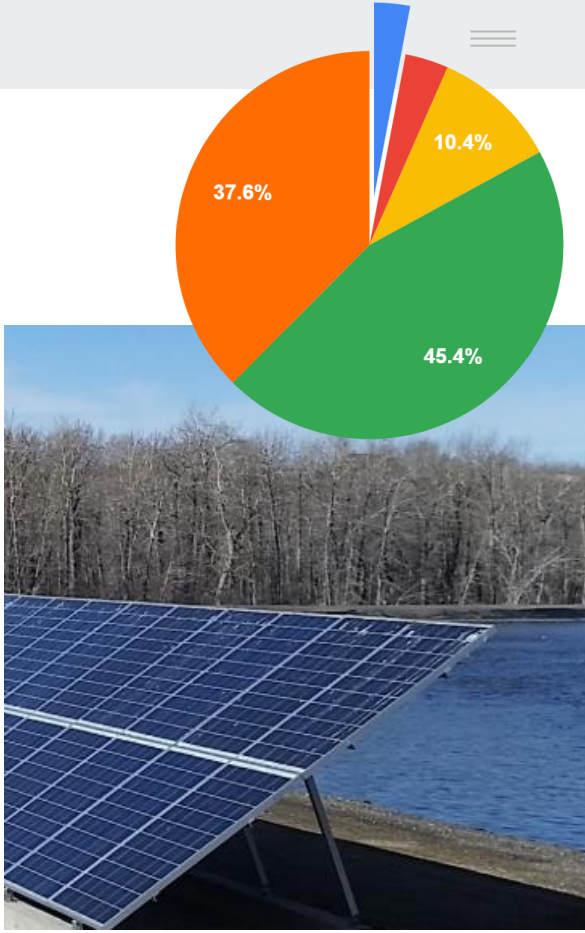

37.6%
10.4%
45.4%

Water & Wastewater

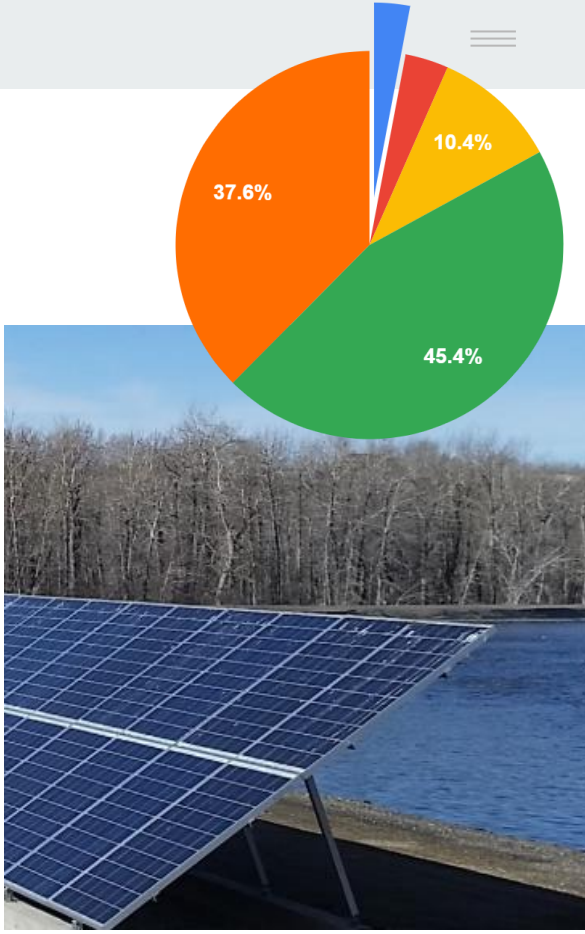
6,745 MMBtu's

622 mtCO2e





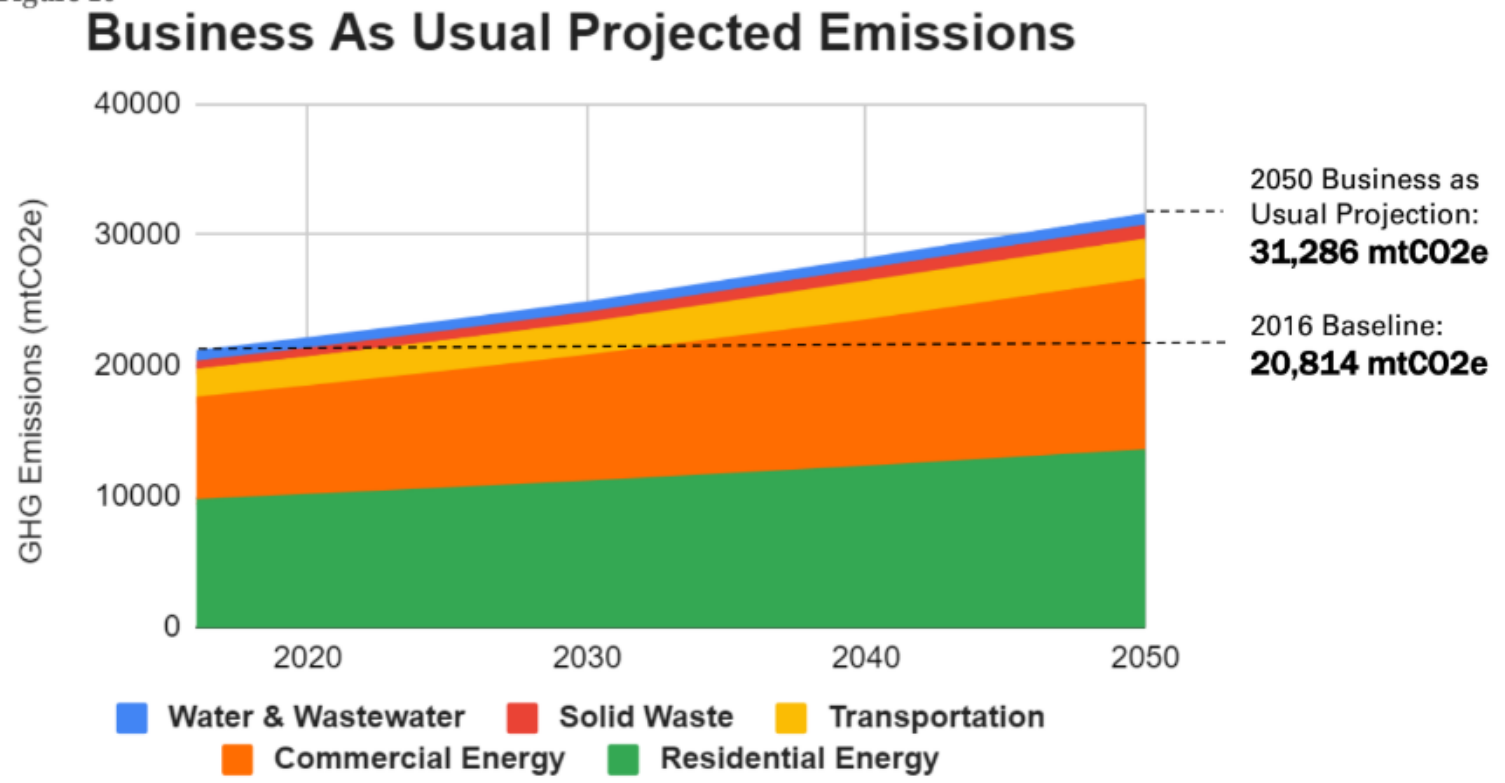
Water & Wastewater

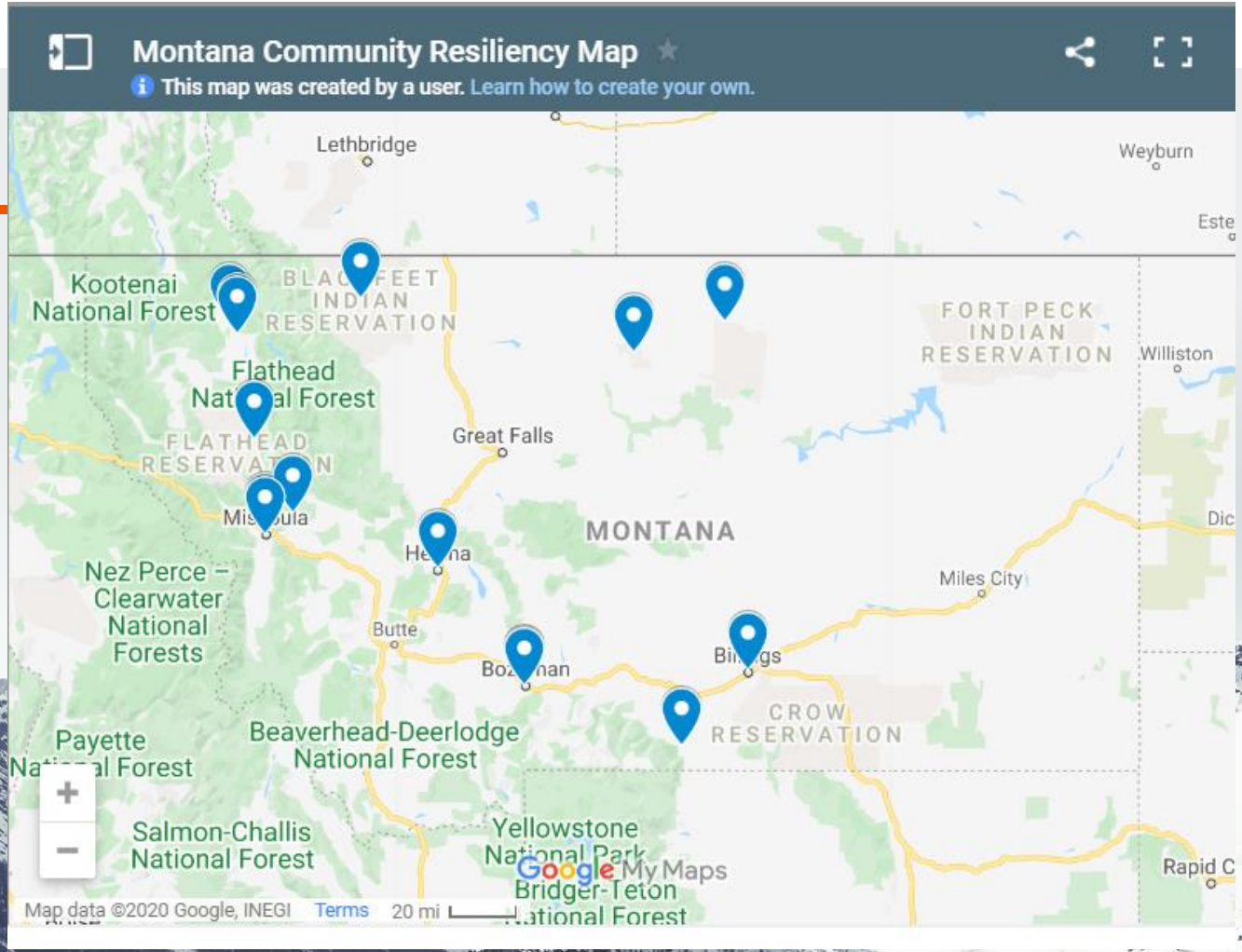


45% of the water that enters our Wastewater Treatment Plant during the spring runoff months comes from snow melt and rain.

40% of the treated fresh water in Red Lodge is lost on its way to the intended home or business.

Figure 10


Business As Usual Projected Emissions
GHG Emissions (mtCO2e)
40000
30000
20000
10000
0
2020
2030
2040
2050
2050 Business as Usual Projection:
31,286 mtCO2e
2016 Baseline:
20,814 mtCO2e
Water & Wastewater
Solid Waste
Transportation
Commercial Energy
Residential Energy


Montana Community Resiliency Map
This map was created by a user. Learn how to create your own.
Lethbridge
Weyburn
Kootenai National Forest
BLACKFEET INDIAN RESERVATION
FORT PECK INDIAN RESERVATION
Williston
Flathead National Forest
FLATHEAD RESERVATION
Great Falls
MONTANA
Miles City
Nez Perce – Clearwater National Forests
Butte
Beaverhead-Deerlodge National Forest
CROW RESERVATION
Payette National Forest
Salmon-Challis National Forest
Yellowstone National Park
Bridger-Teton National Forest
Google My Maps
Map data ©2020 Google, INEGI
Terms
20 mi