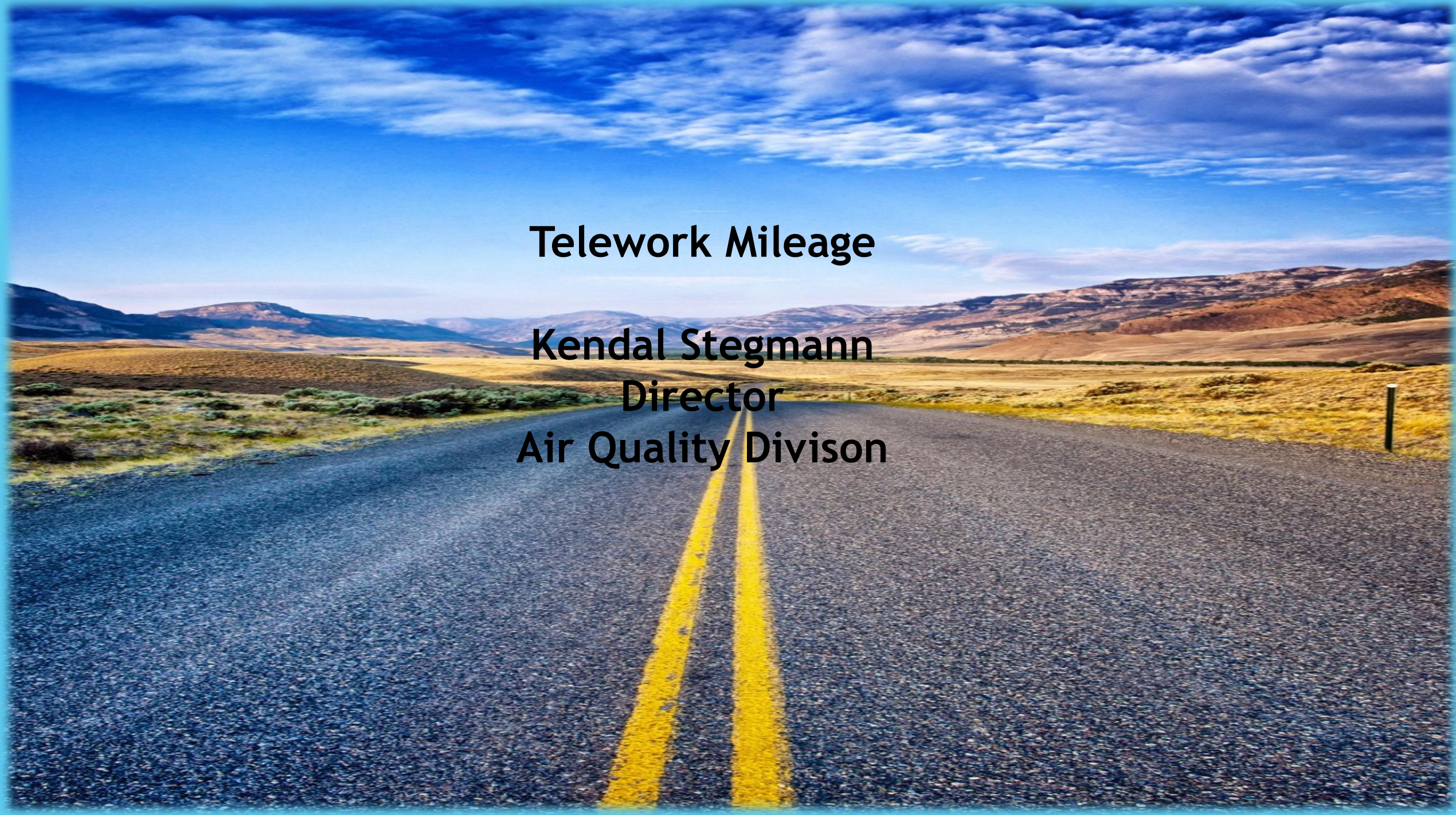

Telework Mileage
Kendal Stegmann
Director
Air Quality Divison

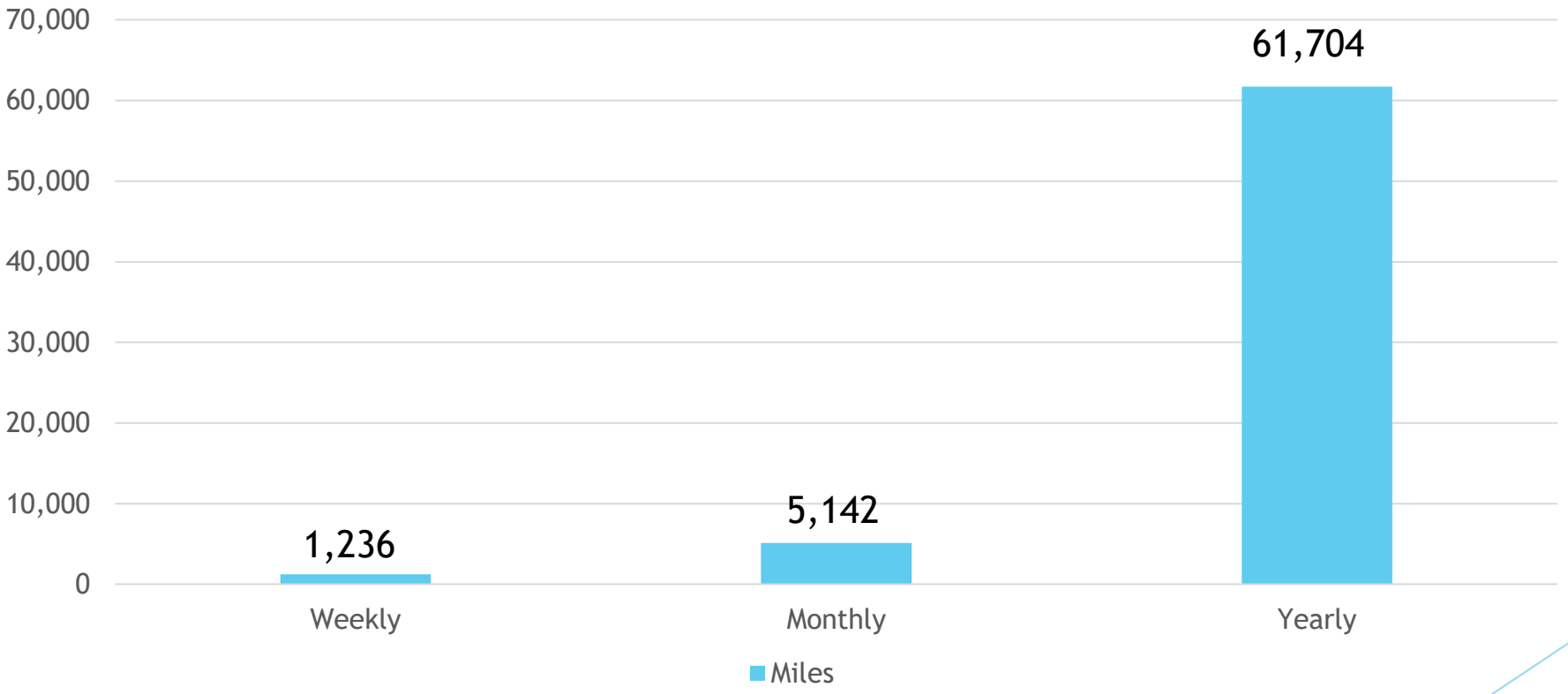
DEQ Telework Status

Division	Number of Employees	Number of Employees Teleworking
Air Quality	100	69
Administrative Services	44	13
Communication & Education	5	5
ECLS	78	45
Land Protection	76	72
Legal	17	14
State Environmental Lab	51	5
Water Quality	105	78
Total	476	301

Telework and Mileage Table

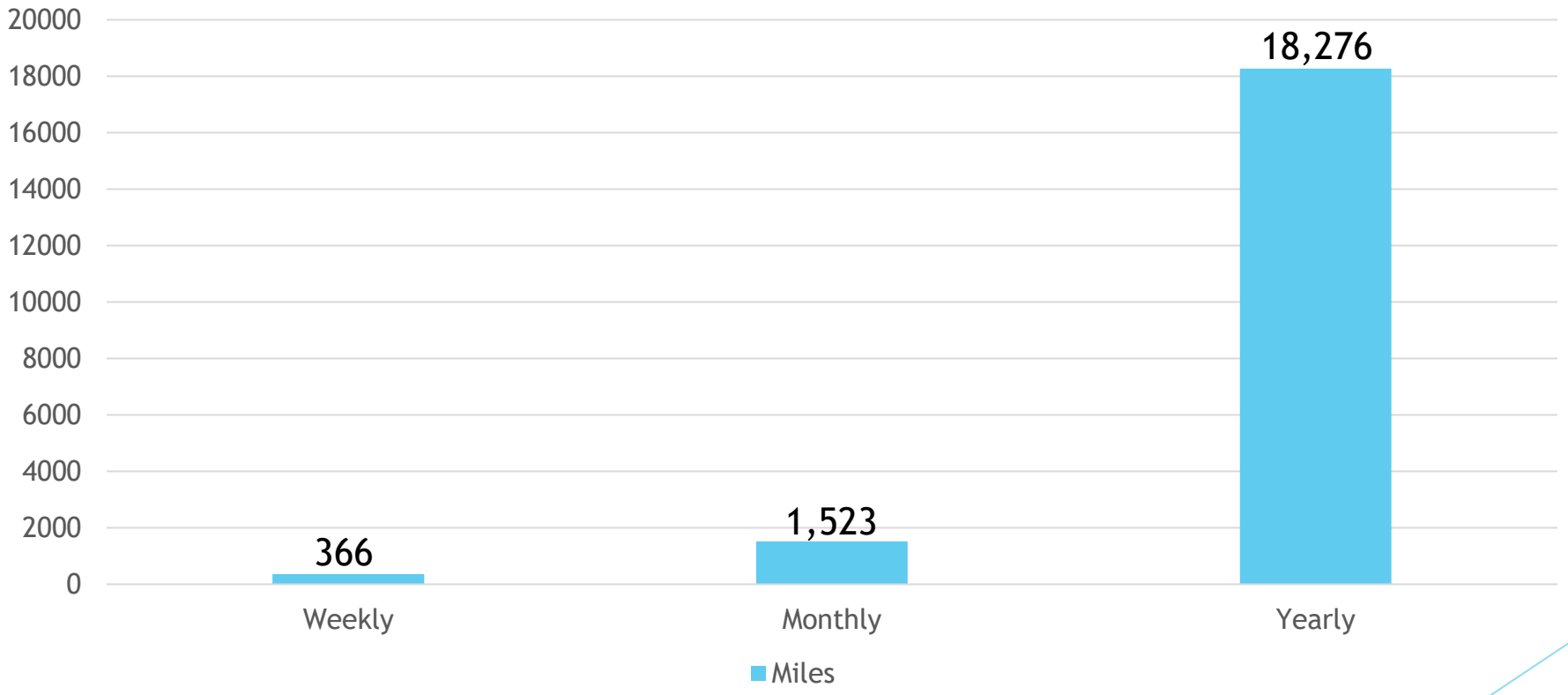
Staff	Monday	Tuesday	Wednesday	Thursday	Friday	Distance From Home	Round-Trip	Weekly
Sara	T	T				10	20	40
Joe			T			3	6	6
Chris	T		T			12	24	48

Administrative Services Division Miles

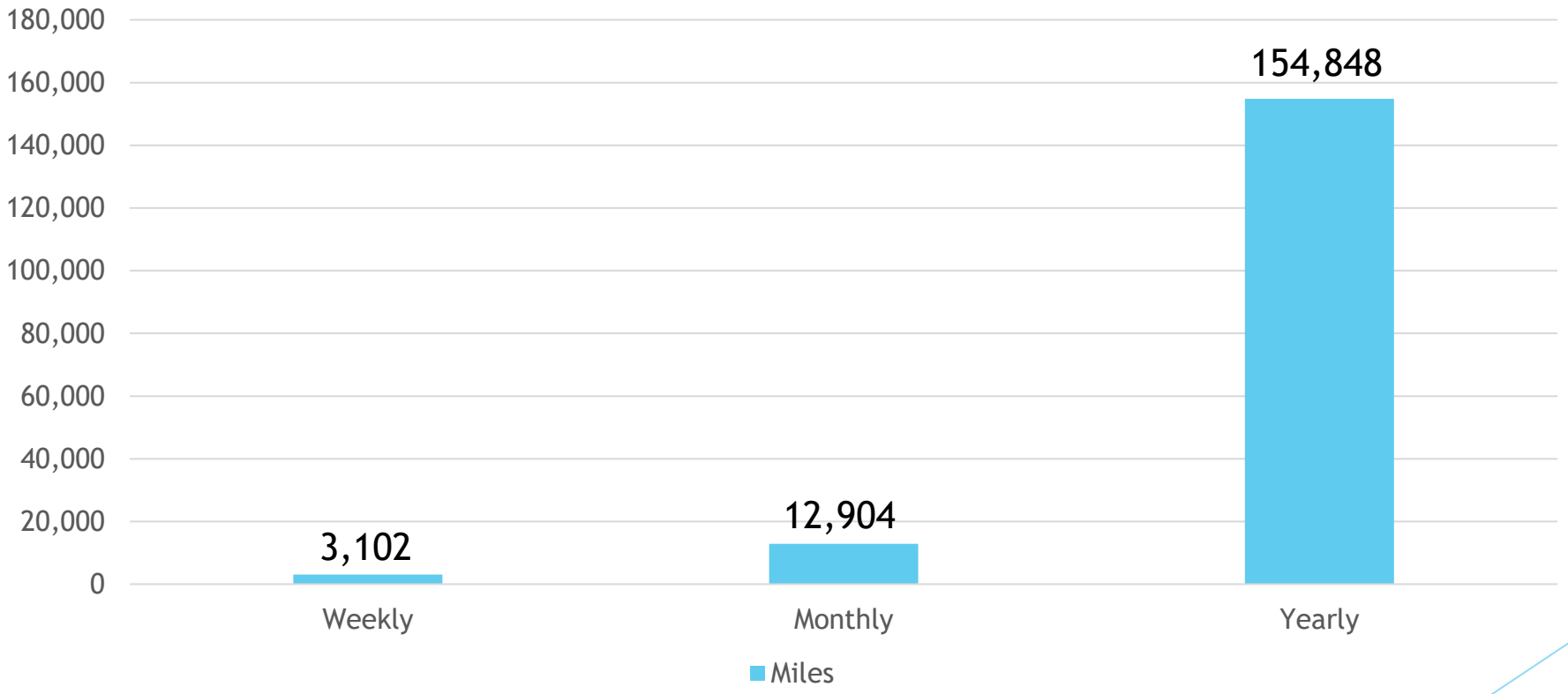


Air Quality Division Miles

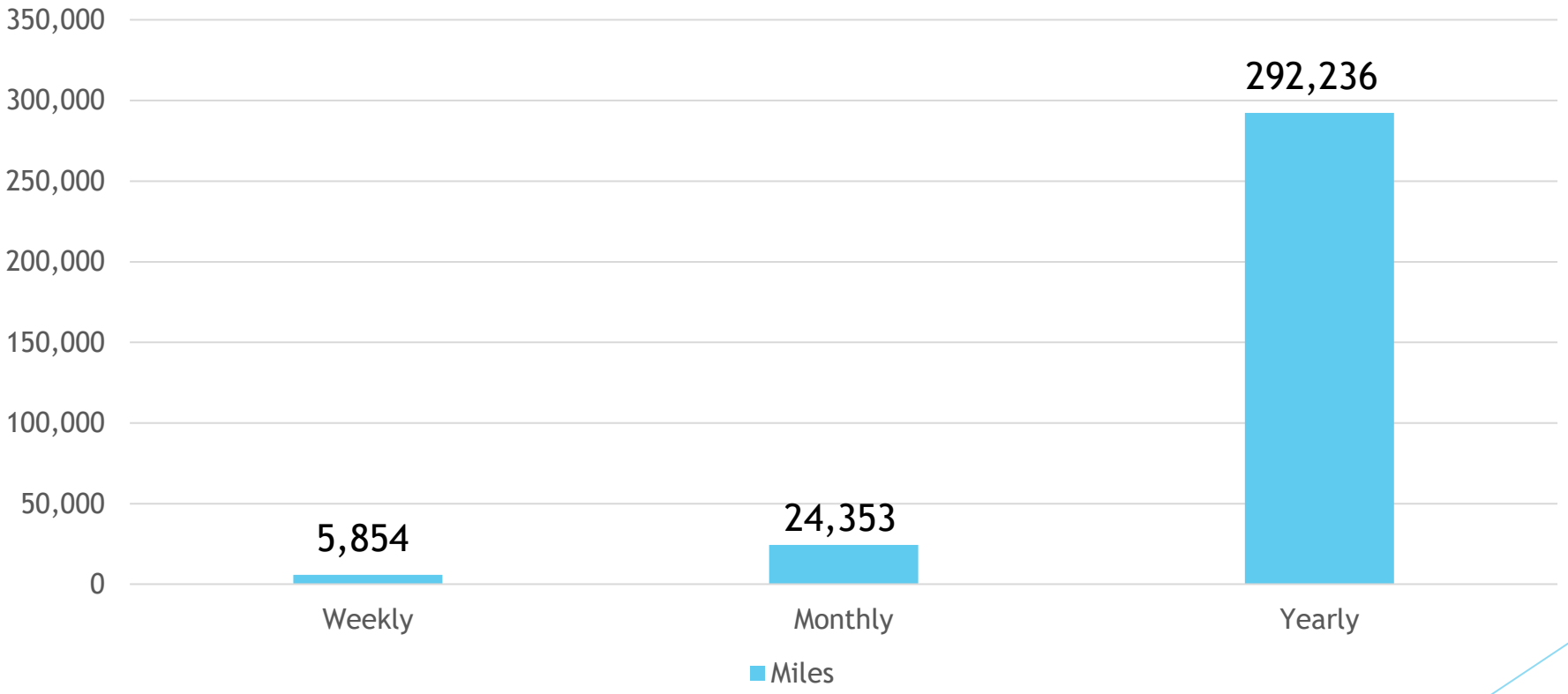
Communication and Education Miles



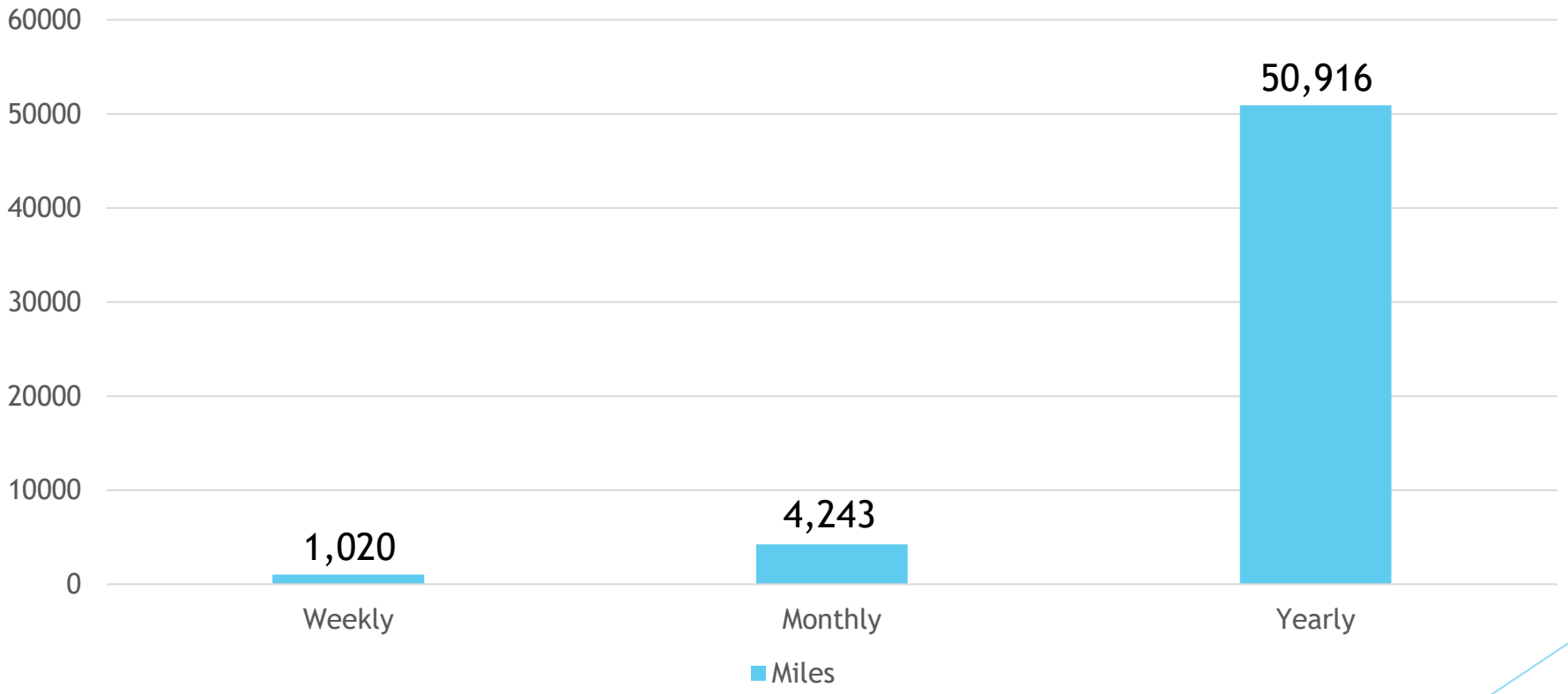
Environmental Complaints & Local Services Miles



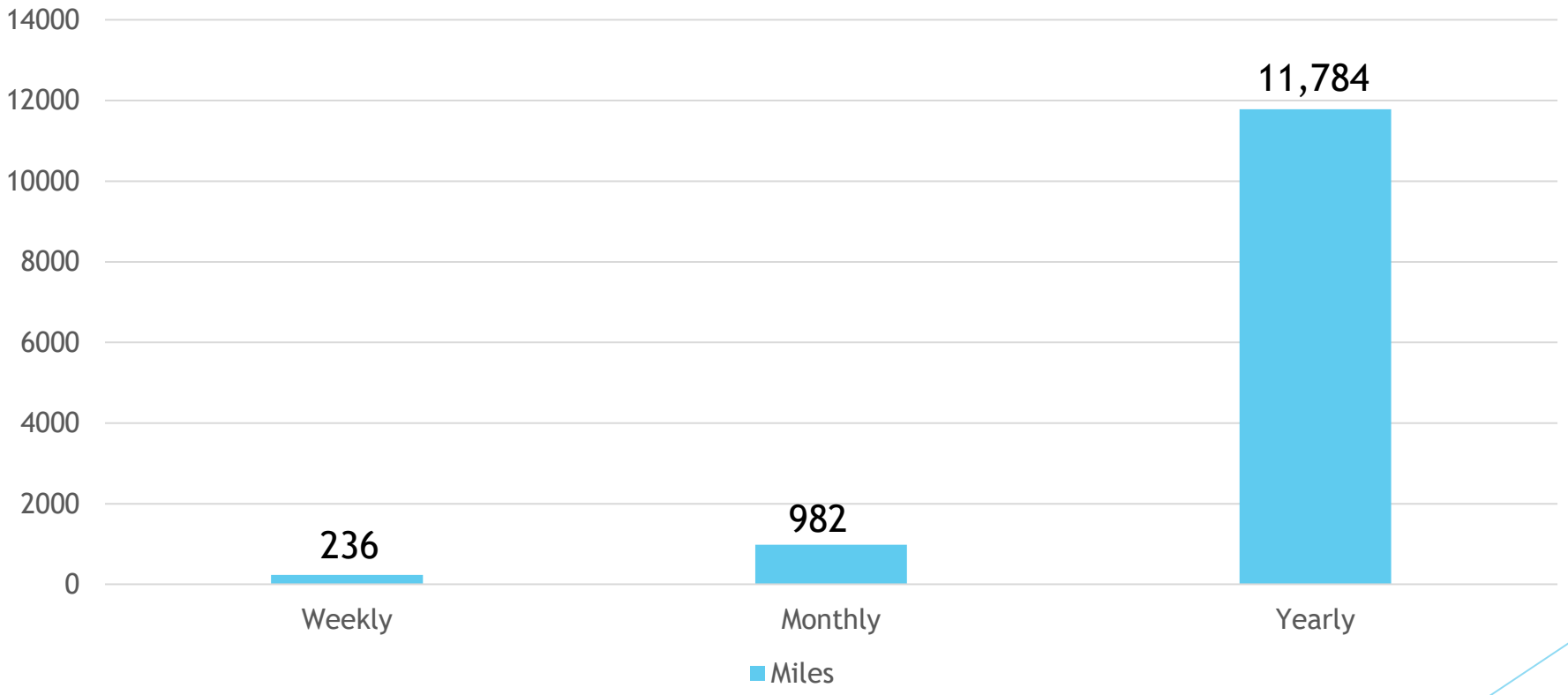
Land Protection Division Miles



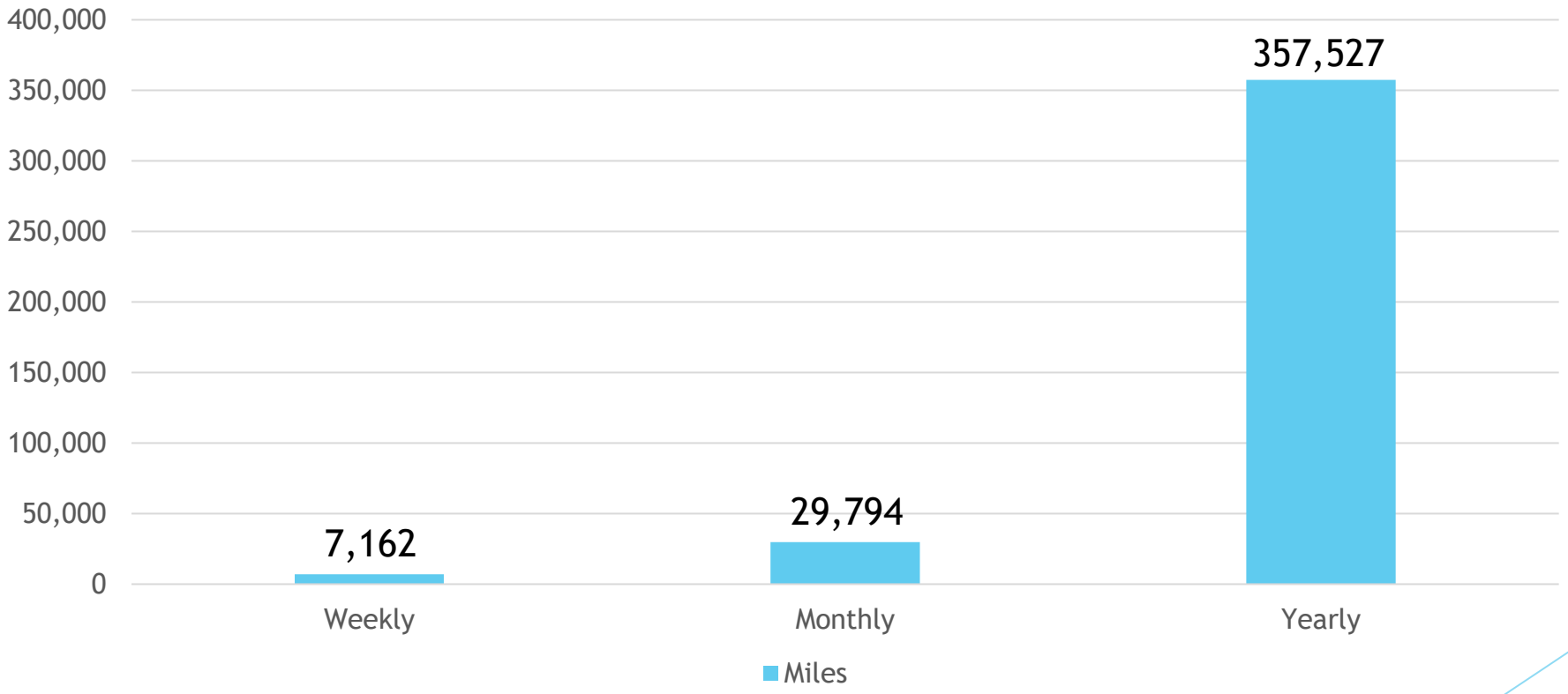
Legal Services Miles



State Environmental Lab Miles



Water Quality Division Miles



DEQ Total Miles Saved

Weekly	Monthly	Yearly
23,238	96,671	1,160,051

Yearly Amount Saved In Gas Money

Division	Yearly Amount
Air Quality	$24,441
Administrative Services	$7,434
Communication & Education	$2,202
ECLS	$18,657
Land Protection	$35,208
Legal	$6,135
State Environmental Lab	$1,419
Water Quality	$43,077
Total	$138,573

*Average Miles per gallon is 24.9 provided by AAA
*Average price per gallon is $3.00 provided by Business Insider

Emissions Summary

Vehicle Emission Types
(in grams per mile)

	CH_4*	N_2O*	HCs	CO	NOx	PM2.5	CO_2
Light-duty automobiles (35%)†	0.00520	0.00160	0.280	4.152	0.192	0.008	N/A
Light-duty trucks (65%)†	0.00810	0.00150	0.339	5.422	0.376	0.011	N/A
Weighted Average	**0.00709**	**0.00154**	**0.318**	**4.978**	**0.312**	**0.010**	**404**

*Data for all pollutants are from 2020 except for CH_4 and N_20, which are from 2018. This chart assumes gasoline-only personal vehicles are gasoline-only, though there may be a few exceptions.

†According to the US Federal Highway Administration, Oklahoma's total passenger vehicle count is comprised of 35% automobiles and 65% trucks. The weighted average above is based upon this calculation.

Administrative Services Emissions Saved Per Year

- 54,843 lbs. of CO_2
- 676 lbs. of CO
- 43.16 lbs. of Hydrocarbons
- 42.35 lbs. of NOx
- 0.96 lbs. of CH_4
- 0.20 lbs. of N_2O
- 1.35 lbs. of PM2.5

Air Quality Emissions Saved Per Year

- 178,542 lbs. of CO_2
- 2,200 lbs. of CO
- 140.53 lbs. of Hydrocarbons
- 137.88 lbs. of NOx
- 3.13 lbs. CH_4
- 0.68 lbs. of N_2O
- 4.41 lbs. of PM2.5

Communication & Education Emissions Saved Per Year

- 16,244 lbs. of CO_2
- 200 lbs. of CO
- 12.78 lbs. of Hydrocarbons
- 12.54 lbs. of NOx
- 0.28 lbs. of CH_4
- 0.06 lbs. of N_2O
- 0.04 lbs. of PM2.5

Environmental Complaints & Local Services Emissions Saved per Year

- 137,629 lbs. of CO_2
- 1,696 lbs. of CO
- 108.33 lbs. of Hydrocarbons
- 106.28 lbs. of NOx
- 2.41 lbs. of CH_4
- 0.52 lbs. of N_2O
- 3.4 lbs. of PM2.5

Land Protection Emissions Saved Yearly

- 259,739 lbs. of CO_2
- 3,200 lbs. of CO
- 204.44 lbs. of Hydrocarbons
- 200.59 lbs. of NOx
- 4.55 lbs. of CH_4
- 0.99 lbs. of N_2O
- 6.42 lbs. of PM2.5

Legal Emissions Saved Yearly

- 45,254 lbs. of CO_2
- 558 lbs. of CO
- 35.62 lbs. of Hydrocarbons
- 34.94 lbs. of NOx
- 0.79 lbs. of CH_4
- 0.17 lbs. of N_2O
- 1.12 lbs. of PM2.5

State Environmental Lab Emissions Saved Yearly

- 10,474 lbs. of CO_2
- 129 lbs. of CO
- 8.24 lbs. of Hydrocarbons
- 8.08 lbs. of NOx
- 0.18 lbs. of CH_4
- 0.03 lbs. of N_2O
- 0.25 lbs. of PM2.5

Water Quality Emissions Saved Yearly

- 317,770 lbs. of CO_2
- 3,915lbs. of CO
- 250.12lbs. of Hydrocarbons
- 245.4 lbs. of NOx
- 5.57 lbs. of CH_4
- 1.99 lbs. of N_2O
- 7.86 lbs. of PM2.5

DEQ Total Emissions Saved

CO_2

1,020,495 lbs

CO

12,574 lbs

Hydrocarbons

803.22 lbs

N_2O

4.64 lbs

Nox

788.06 lbs

PM2.5

25.21 lbs

CH_4

17.87 lbs

Overall Benefits

- Credits in ozone advanced plan
- Employee Morale
- Reduced Emissions equals better health
- Less Paper usage

Sources

1) 2019 Highway Stats (Motor Vehicle Registration Numbers)

https://www.fhwa.dot.gov/policyinformation/statistics/2019/mv1.cfm

2) Greenhouse Gas Emissions for a Typical Passenger Vehicle

https://www.epa.gov/greenvehicles/greenhouse-gas-emissions-typical-passenger-vehicle

3) Example of per mile calculations

https://labs.ece.uw.edu/community/EnvironmentalImpacts/ElectricVehicleCalculations/

4) Emission Factors for Greenhouse Gas Inventories (source for CH_4/N_2O factors)

https://www.epa.gov/sites/production/files/2021-04/documents/emission-factors_apr2021.pdf

5) Estimated US Average Vehicle Emissions Rates by Vehicle Type

https://www.bts.gov/content/estimated-national-average-vehicle-emissions-rates-vehicle-vehicle-type-using-gasoline-and