GENERAL PLAN TRANSPORTATION ELEMENT AMENDMENT AND ENERGY AND CONSERVATION ACTION STRATEGY (ECAS) UPDATE PROJECT

September 28, 2021

Overview

- General Plan Transportation Element Amendment
- Energy Conservation Action Strategy (ECAS) Update
- Supplement to the General Plan Environmental Impact Report (SEIR)
- Analyzing Future Projects for VMT Impacts

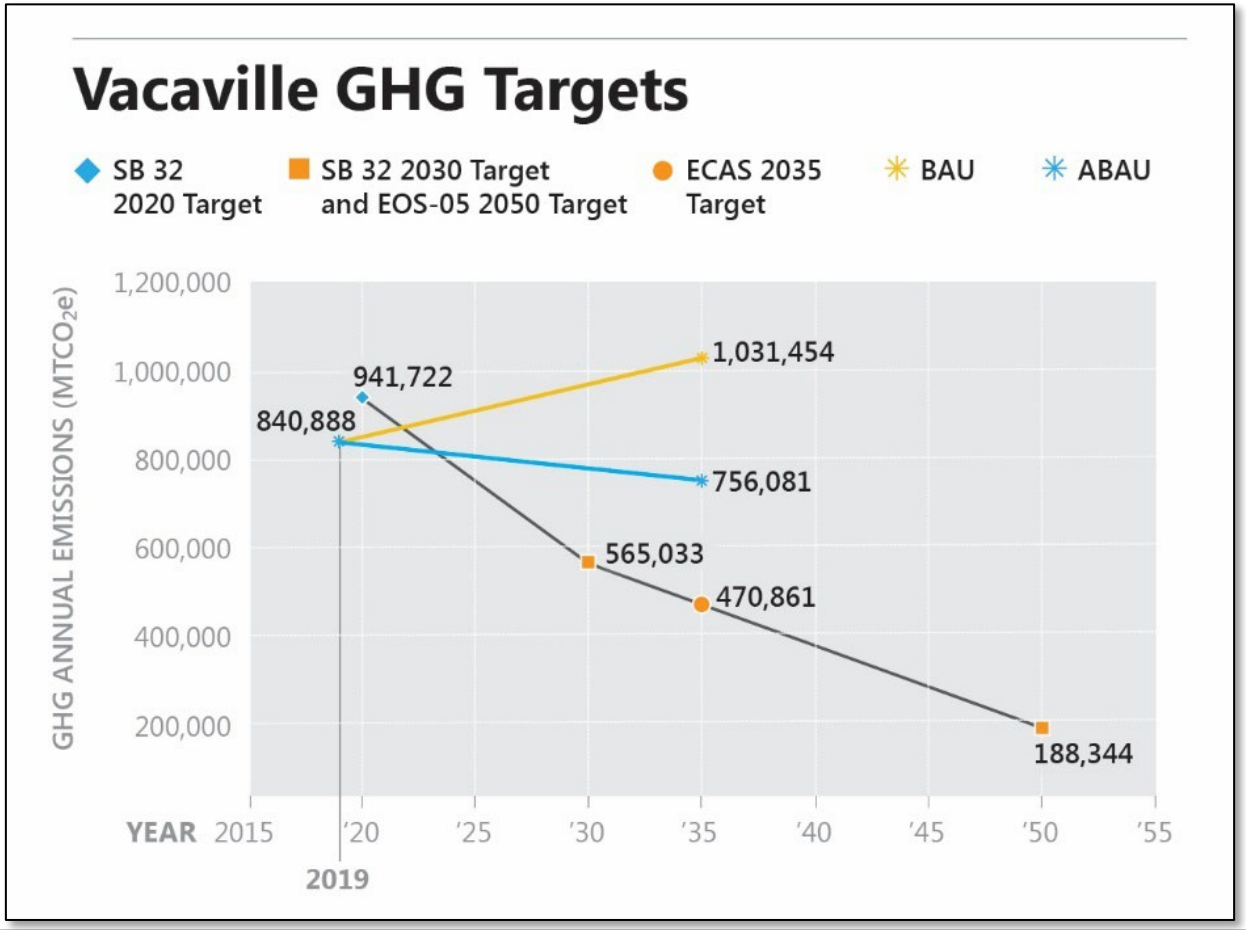
General Plan Amendment

- Amend the General Plan Transportation Element to recognize vehicle miles traveled (VMT) as the standard for evaluating the environmental effects of new development projects and roadway improvements
    - Consistent with Senate Bill (SB) 743, the 2018 CEQA Guidelines Update, and the Office of Planning and Research (OPR) Technical Advisory on Evaluating Transportation Impacts in CEQA (December 2018)
    - Level of Service (congestion) policies remain in the General Plan for evaluating traffic operations, but congestion is not considered an "impact" under CEQA
- Revise existing policies to further promote alternative transportation (bicycle, pedestrian, and transit)

ECAS Update

- The ECAS was adopted in 2015 to conserve energy and reduce greenhouse gas (GHG) emissions
  - ECAS was developed to meet the State's 2020 GHG reduction goals
  - Five-year plan
  - VMT is a major component of the GHG emissions inventory
  - Update will address 2030/2035 reduction goals and align with the 2035 VMT analysis

GHG Reduction Targets



Reduction Strategies

Estimated GHG Emissions with State and Local Measures	
Emissions Category	**2035 Emissions (MT CO_2e)**
ABAU	756,194
2035 Target	470,861
Local Gap	285,333
Reductions from Transportation and Land Use	122,627
Reductions from Residential Energy	71,837
Reductions from Non-Residential Energy	81,749
Reductions from Waste	15,665
Reduction from Wastewater and Water	2,713
Reductions from Off-Road Equipment	2,754
Reductions from Carbon Sequestration	4,802
Total ECAS Reduction	**302,147**
2035 Emission Projections	*454,047*

SEIR

- A supplement updates only the necessary sections of a prior EIR – in this case the 2015 General Plan EIR
  - Transportation Analysis
  - GHG Analysis
  - All other impact analyses in the 2015 General Plan EIR remain in effect
- CEQA provides for projects consistent with a General Plan, for which an EIR has been certified, to streamline CEQA review by considering only those effects which are unique to the project or the project site
  - Analysis of citywide issues, including VMT and GHG emissions, can rely upon the findings and mitigation measures of the GP EIR

VMT

Key Findings

Evaluating Future Projects

DSEIR Key VMT Findings

- Impact TRA-1: VMT per DU and per KSF of non-residential would exceed applicable standard.

  Mitigation Measure: *Implement TDM strategies to reduce VMT.*

- Impact TRA-2: City roadway improvements would induce more travel and result in increased VMT.

  Mitigation Measure: *Implement TDM strategies to reduce VMT.*

VMT Analyses Moving Forward

- Land use projects consistent with the General Plan do not require VMT analysis but may be subject to certain feasible TDM strategies to reduce their VMT.
  - *Avoids expensive, time-consuming EIRs that are only needed because of VMT impacts*
- Proposed rezones would require VMT analysis to determine significance of VMT impacts.
- Roadway improvements in the City can tier off GP to avoid requiring an EIR only because of induced VMT.
  - *Issue many agencies are currently facing when analyzing VMT-inducing roadway projects*

VMT Analyses Moving Forward

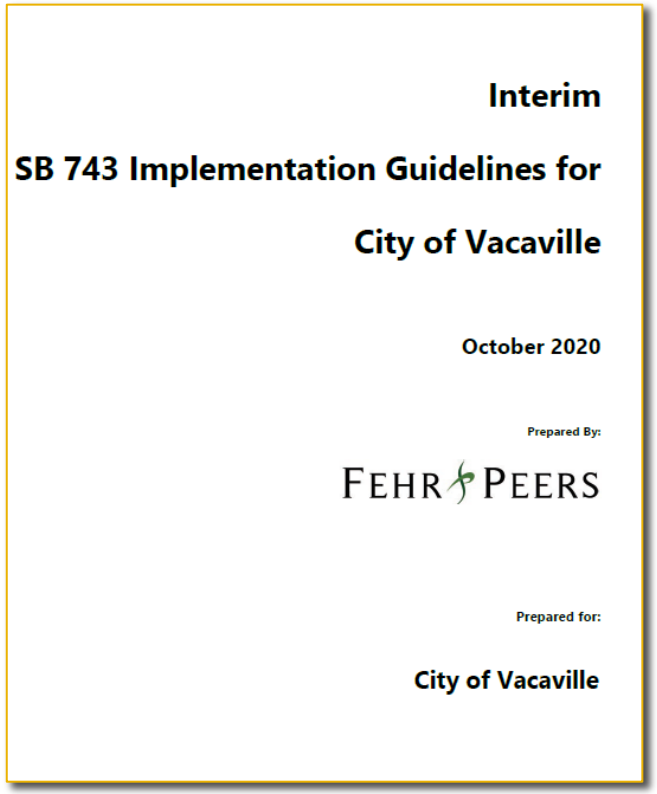
- Exemptions and screening are available for projects not consistent with the General Plan.

  Exemptions (i.e., VMT impacts less-than-significant)

  - Small Projects: up to 11 single-family units or 10,000 sq. ft. office
  - Projects near High-Quality Transit
  - Affordable Housing
  - Redevelopment Projects: project results in a net decrease in VMT.
  - Local-Serving Retail: Projects of 50,000 sq. ft retail space or less.

Project Screening

- Projects that are situated in "low VMT generating" areas of the City are less-than-significant



Is Level of Service (LOS) Still Relevant?

- LOS will continue to be a metric of interest to decisionmakers and the public. However, it will not be found in EIRs.
- Focused LOS analysis still conducted (outside CEQA) to determine if improvements may be required for land use proposals.
- VMT is now the primary metric used to evaluate project impacts on the transportation system under CEQA.
- Project effects on other modes of travel, emergency response, and hazardous conditions will also be evaluated.
- Policies in City's Transportation Element have been updated to reconcile changing roles of LOS and VMT.

Recommended Actions

- Certify the Supplement to the General Plan EIR (SEIR)
- Adopt the Amendment to the General Plan Circulation Element
- Adopt the Update to the Energy Conservation Action Strategy (ECAS)

Q&A

Discussion

Options to Analyze Vehicle Miles Traveled (VMT)

1) Use Focused Travel Demand Model
   - *Typical approach when city-maintained model is available*
2) Use Regional Travel Demand Model
   - *Typical approach when city-maintained model is not available*
   - *City located in metropolitan area and influenced by other agencies*
3) Use "Big Data"
   - *Built-out city or city/county with limited growth expected*

Many Other Considerations:

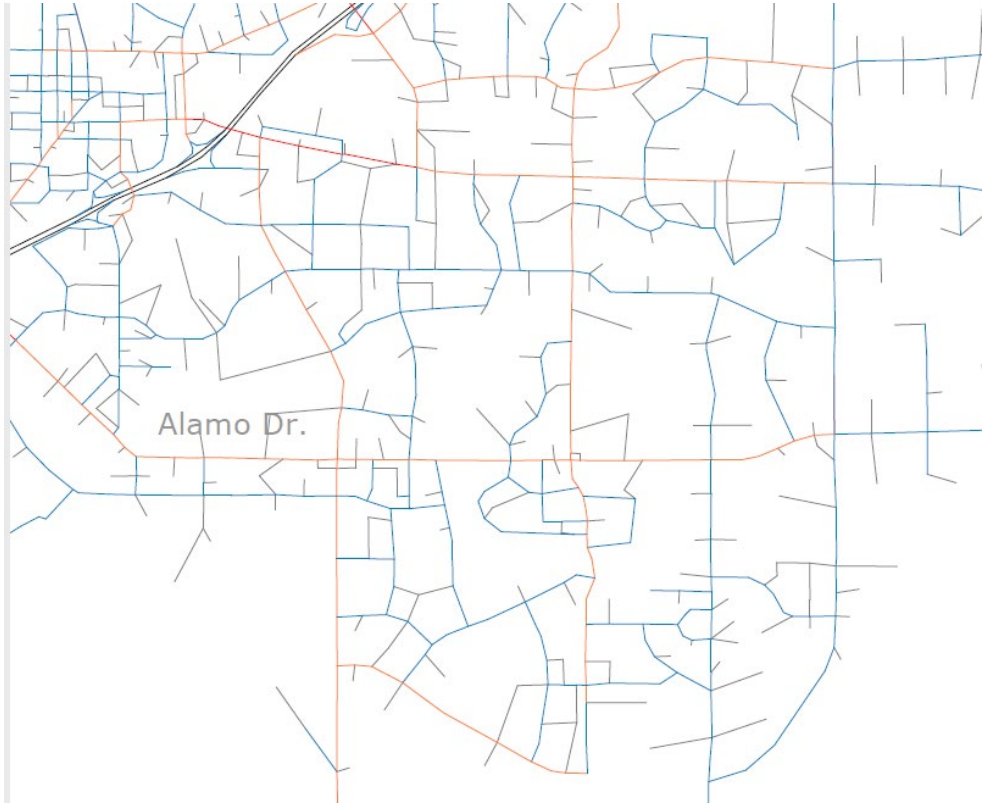
- *Defensibility of approach?.....Reasonableness of results?*
- *Streamlining advantages?.....On-going model maintenance costs?*
- *Use of model for subsequent VMT analyses? cost, time, expertise required.*

Local Trip-Based vs. Regional Activity-Based Models

Criteria	Local Trip-Based Model	Activity-Based Model
Level of Detail Within a Community	High	Low
Ease of Inputting Land Uses	Land uses are entered into a spreadsheet	Lengthy process of creating a "synthetic population" with demo/socio inputs is required
Model Run Time	< 3 hours	Overnight (or multiple days)
Level of Consultant Knowledge Required to Apply	Entry-level staff can use	Only experienced/trained users can apply
Consultant cost and schedule to analyze proposed land use for VMT	$5k and three weeks	$20k and six weeks

Comparison of Roadway Network Details

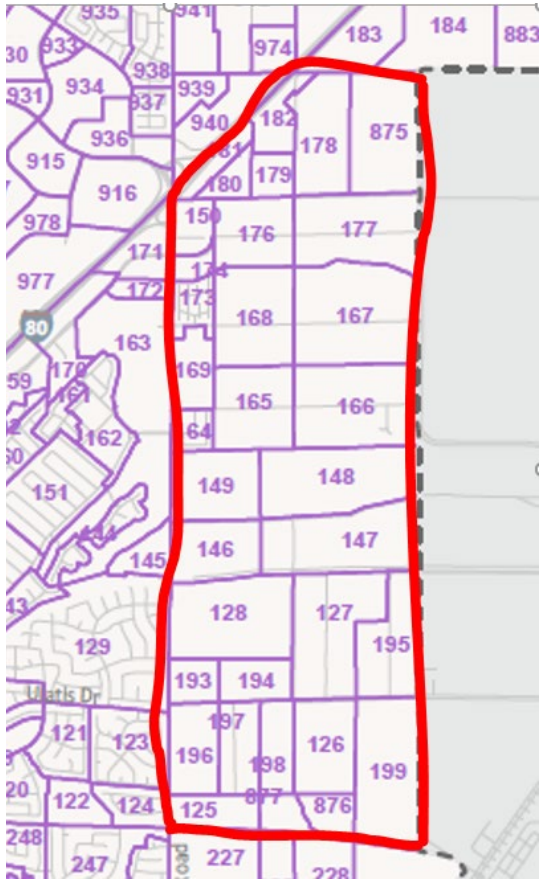
Vacaville TDF Model



SNABM

Comparison of Land Use Disaggregation Details

Vacaville TDF Model

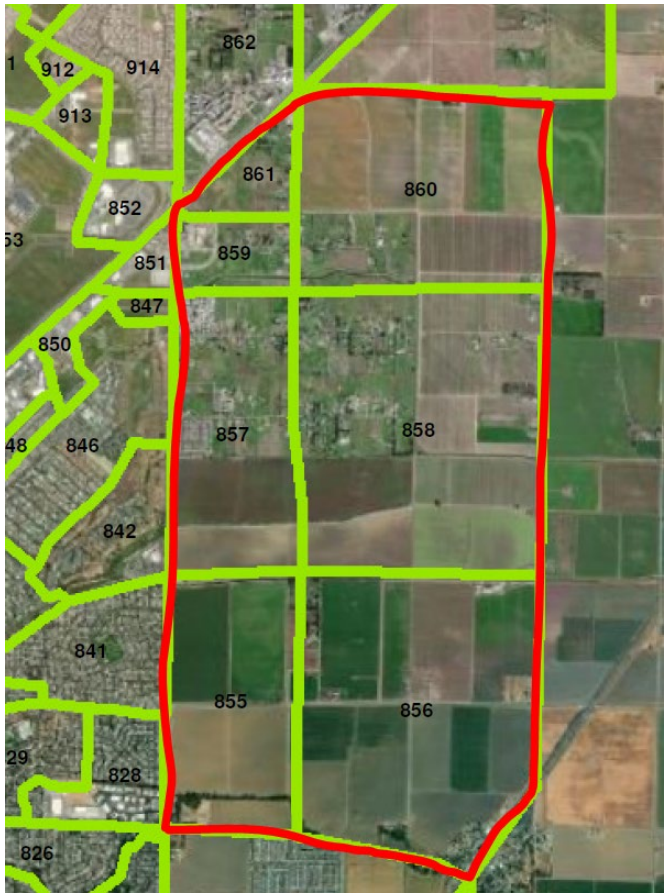


34 TAZs vs. 7 TAZs

Cumulative Land Uses

3,125 DUs vs. 1,076 DUs

SNABM

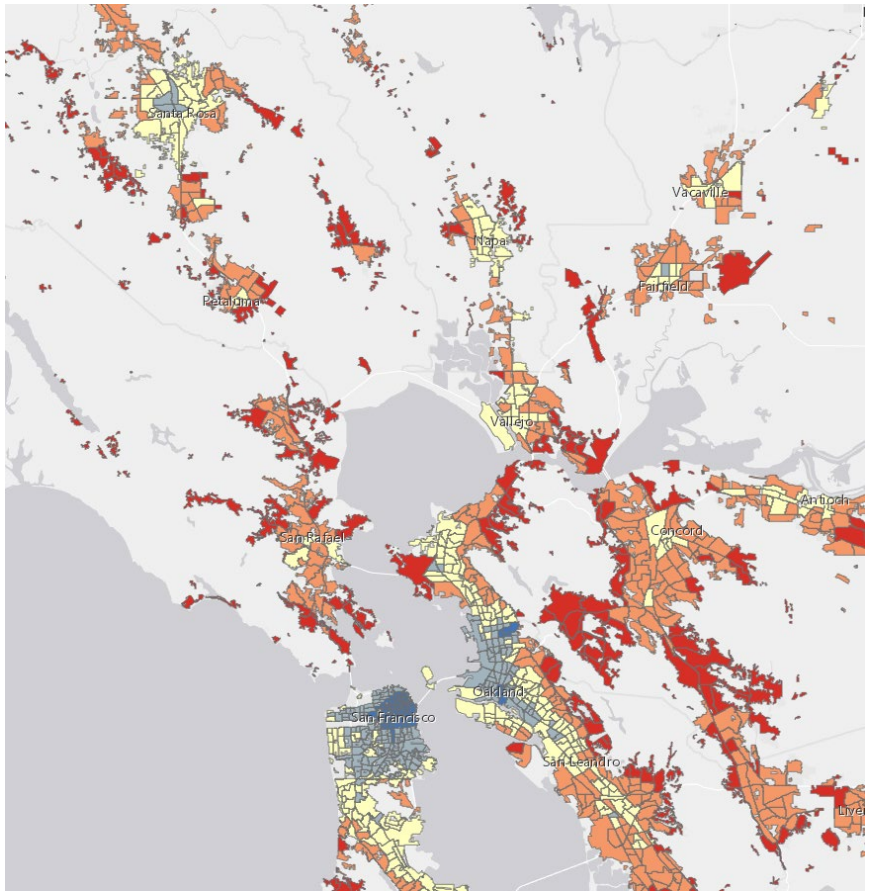


Would Vacaville have fared better if compared to “Regional” averages?

SNABM (2018)

		Home VMT			
Geography	Type	Home Persons	Total Home VMT	Home VMT Per Person	
Solano	County	407,803	11,745,345	28.8	97%
Benicia	City	26,742	901,294	33.7	Vs. So Co
Dixon	City	18,351	875,290	47.7	
Fairfield	City	112,591	2,849,063	25.3	
Rio Vista	City	7,735	353,743	45.7	
Suisun City	City	25,702	673,300	26.2	Vs. N+S
Vacaville	City	87,179	2,434,140	27.9	99%
Vallejo	City	117,792	3,057,511	26.0	
Unincorporated	City	11,711	601,003	51.3	
Napa	County	132,548	3,475,213	26.2	
American Canyon	City	19,112	423,965	22.2	
Calistoga	City	5,134	158,125	30.8	
Napa	City	80,643	1,863,065	23.1	
St. Helena	City	5,749	153,568	26.7	
Yountville	City	1,977	76,128	38.5	
Unincorporated	City	19,933	800,362	40.2	
Napa + Solano Total		540,351	15,220,558	28.2	

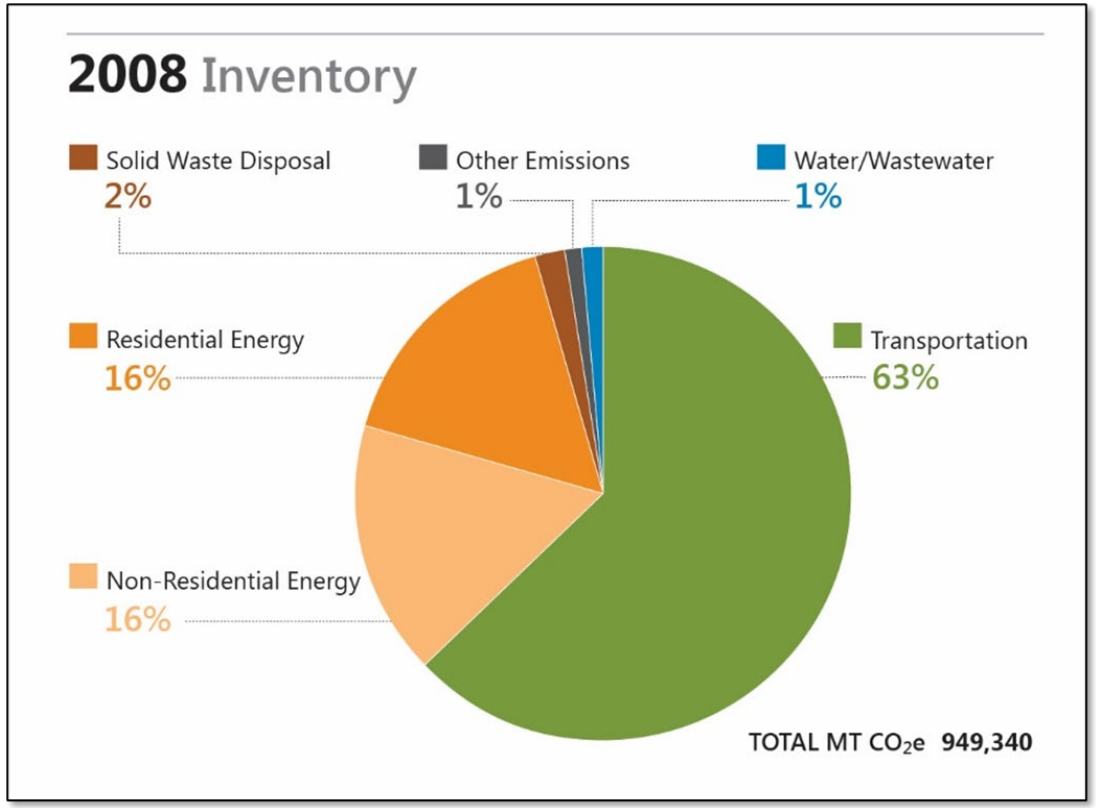
MTC VMT Maps

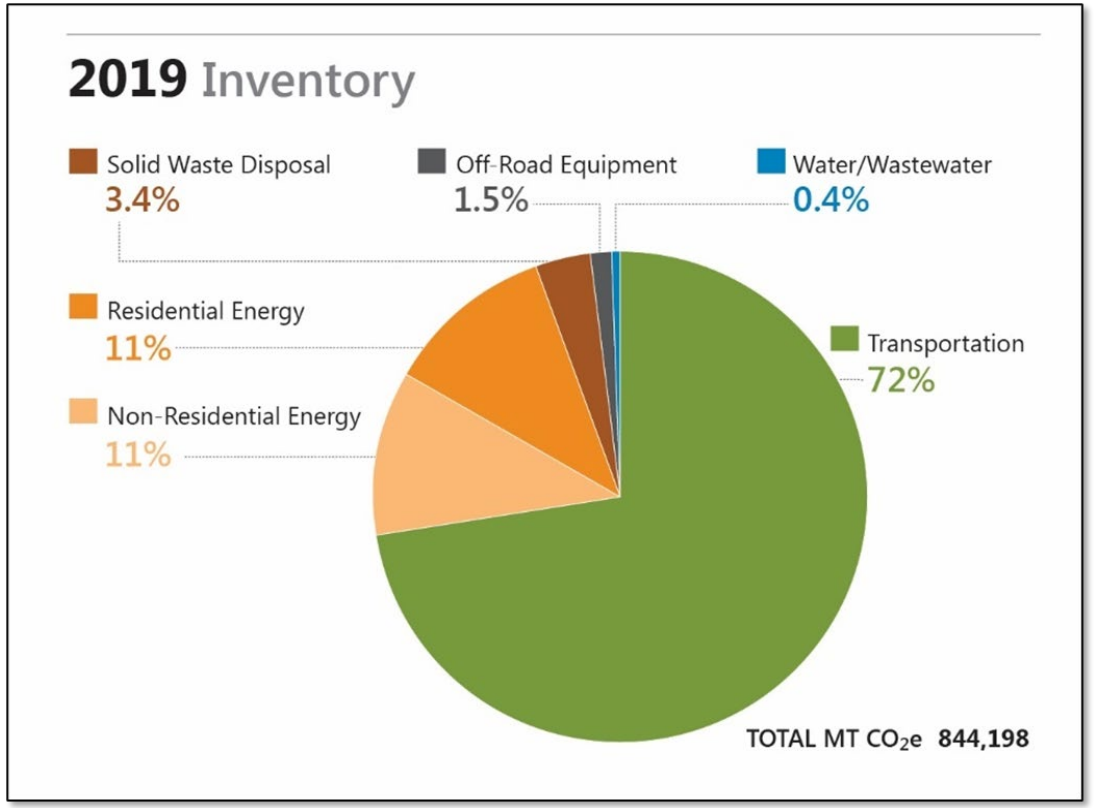


Conclusions

- Use of SNABM would have significantly extended GP Update schedule and costs due to time required to improve model (i.e., add roadway/ land use details, update land use growth, validate VMT).
- Use of SNABM would have not provided any additional streamlining over GP SDEIR approach.
- City of Vacaville travel demand model VMT estimates are validated using American Community Survey data.
- City's General Plan adds more jobs, resulting in more efficient travel patterns (i.e., VMT per single-family home decreases by 11.5%).

GHG Inventory





GHG Projections