

Checklist of Project Green House Gas Emissions & Emission Reductions



A Tradition of Stewardship
A Commitment to Service

The Napa County Climate Action Plan requires that staff calculate the GHG emissions of all discretionary projects assuming “business as usual” (BAU), and that applicants reduce those emissions by 39%. This checklist identifies the data needed to complete the required calculations and allows applicants to select the emissions reduction measures they wish to use. Applicants may retain consultants to prepare their own calculations if desired. Default calculations will be based on the URBEMIS and Bay Area Air Quality Management District’s BGM model, as well as standard factors for vegetation removal and retention/replacement.

PROJECT NAME: _____	TARGET YEAR (OF BUILD-OUT): _____
PROJECT ADDRESS: _____	
APPLICANT: _____	
CONTACT INFO: _____	

1. PROJECT DATA

1.1 Proposed Land Uses

(NOTE: to complete the required calculations, all non-residential uses will be translated into uses contained within the BGM & URBEMIS models)

		gross sq. ft.	
1. Dwelling unit (number) _____	Dwelling unit	[]	
2. Non-Residential Uses		[]	
A. Office (General Office)		[]	
B. Warehouse (Warehouse)		[]	
C. Industrial/Winery Production (General Light Industry)		[]	
D. Winery Tasting/Hospitality/Retail (Quality Restaurant)		[]	
E. Retail (Regional Shopping Center)		[]	
3. Quality Restaurant (seats) _____	Restaurant	[]	
4. High Turnover/Sit Down Restaurant (seats) _____	Restaurant	[]	
5. Lodging (Hotel) rooms _____	Lodging	[]	acres
6. Planted & Landscaped Areas		[]	[]
A. Vineyard area, including roads		[]	[]
B. Other agricultural uses (please specify)		[]	[]
C. Irrigated landscape		[]	[]
7. Other uses (explain)		[]	[]

1.2 Utilities

(NOTE: Information in this section is optional because URBEMIS and BGM will calculate default values based on the square footages provided above.)

1. Potable water use: _____ gallons per day
2. Recycled water use: _____ gallons per day
3. Please describe the sources of potable and recycled water: _____

4. Wastewater treatment volumes: _____ units
5. Will wastewater treatment occur on site? _____
6. Electricity consumption: _____ kilowatt-hours per year
7. Natural gas /propane consumption: _____ cubic feet per year
8. Will there be a diesel powered back-up generator on site? _____

1.3 Refrigerants

(NOTE: BGM will estimate emissions based on default leakage rates if the type of refrigeration or air conditioning systems are known)

		Refrigerant Charge (pounds)
1. Project Refrigeration Systems		[]
A. Centralized		[]
B. Cold Storage		[]
C. Process Cooling		[]
D. Refrigerant Condensing Units		[]
2. Project AC Systems		[]
A. Centrifugal Chiller (large)		[]
B. Centrifugal Chiller (medium)		[]
C. Packaged Chiller (medium)		[]
D. Unitary AC (small)		[]

1.4 Agriculture & Industry

(NOTE: BGM will estimate emissions from livestock, equipment, and fertilizer use, if any)

1. Mobile Equipment	Gal/year	
A. Gasoline		
B. Diesel Fuel		
C. Propane		
2. Stationary Equipment		
A. Gasoline		
B. Diesel Fuel		
C. Stationary Equipment		Kwh/year
3. Electricity Consumption	Tons/year	
4. Fertilizer Used		

1.5 Tree & Vegetation Removal

(NOTE: Standard factors from the CAP will be used to calculate sequestration rates, carbon in soil, and carbon stocks unless site specific data is provided.)

1. Coniferous Forest (acres)	acres	
2. Oak Woodland (acres)		
3. Shrub (acres)		
4. Grassland (acres)		
5. Wetland (acres)		
6. Vineyard (acres)		
7. Other vegetated area (explain)		
8. Number of trees >6" diameter proposed for removal _____		

1.6 Other Construction Activities

(NOTE: URBEMIS will calculate construction emissions if data is provided)

1. Total duration of construction: _____			
2. Maximum number of employees on site: _____			
3. Describe phasing & equipment used for each phase:	number	months	hours per day
A. Bulldozer @ horsepower _____			
B. Graders @ horsepower _____			
C. Other @ horsepower _____			

1.7 Proposed Project Operations

(NOTE: BGM & URBEMIS will calculate transportation emissions based on square footage unless specific data is provided regarding employees & vehicle miles travelled)

1. Maximum number of employees on site (daily): _____
2. Maximum number of visitors on site (daily): _____
3. Estimate of Vehicle Miles Travelled (VMT) from a traffic study prepared for the project: _____

Information provided in Section 1 will be used to estimate the proposed project's GHG emissions under "business as usual" (BAU). Calculations will be based on generic factors derived from relevant literature unless project applicants/consultants provide site-specific information. Any emission reduction strategies (e.g. energy conservation, alternative energy generation, habitat restoration, etc.) proposed as part of the project will be factored into the emission reductions in Section 2.

FOR STAFF USE ONLY: BAU Emissions

SECTOR	EMISSIONS PER BGM	ADJUSTMENTS*	BAU EMISSIONS
	(MT CO2e)	(MT CO2e)	(MT CO2e)
Buildings (Annual)			
Transportation (Annual)			
Agricultural Operations (Annual)			
	Land Use (Annual Sequestration)		
	Land Use (One-time stock loss)		
	Construction (One-time emissions)		(NOTE: Per BAAQMD, Construction emissions are addressed via best practices & not quantitative reductions)
	Annual	One-Time	
TOTAL PROJECT EMISSIONS			
REDUCTIONS NEEDED TO MEET 39% GOAL			

*Emissions from vegetation loss and construction must be added to BGM results manually. Transportation adjustments back-out the State measures assumed in the BGM (Pavely & the Low Carbon Fuels Rule). See Table 2 & 3 of BAAQMD's User Manual, April 29, 2010. These measures and implementation of the CalGreen building code were not included in the CAP baseline and may be used as reductions in Section 2.

2. EMISSION REDUCTIONS (CHECK ALL THAT APPLY)

Applicants will be credited with GHG reductions for the CalGreen Building Code, State transportation measures, and any of the other measures selected below that can be quantified. The number of measures quantified will change based on the amount of project-specific data provided and the outcome of ongoing scientific research.

	Yes	No	Comment
2.1 Construction			
1. Will the contractor use alternative fueled (e.g. biodiesel, electric) construction vehicles or equipment for at least 15% of the fleet?			BAAQMD recommend.
2. Will the project use at least 10% local building materials?			BAAQMD recommend.
3. Will the contractor recycle or re-use more than 50% of construction waste and demolition materials?			BAAQMD recommend.
4. Will the contractor minimize idling time of diesel powered construction equipment to two minutes?			BAAQMD recommend.
5. Will the project include other construction-related emission reductions (explain)?			BAAQMD recommend.
2.2 Site Design & Energy Conservation			
1. Will the project comply with Title 24 and the CalGreen Building Code			Required by law
2. Will the project plant trees to shade structures?			Required by the CAP
3. Will the project be designed to take advantage of natural cooling and passive solar aspects?			Required by the CAP
4. Will the project include a "cool" (lightly colored or reflective) or permeable/living roof?			Quantified in BGM
5. Will the project install a solar water heater?			Quantified in BGM
6. Will the project install Energy Star (EPA rated) appliances?			
7. Will the project increase energy efficiency beyond Title 24?			Quantified in BGM
8. Will the project comply with CalGreen Tier 1 or Tier 2?			
9. Will the project be LEED certified?			
2.2 Energy Production			
1. Will the project include on-site energy generation & if so, how much will be generated? Please explain.			Quantified in BGM
2. Will the project include off-site energy generation & if so, how much will be generated? Please explain.			Quantified in BGM
2.3 Transportation			
1. Is there access to public transportation?			
2. Is pedestrian and bicycle access provided for?			
3. Will bicycle parking be provided?			
4. Will there be preferential parking for carpools and alternative fuel vehicles?			
5. Will the operator develop and implement a transportation demand management program?			
6. Will the owner/operator offer employee trip-reduction incentives including transit passes if the site is accessible by transit?			
7. Will the owner/operator offer or coordinate worker vanpools or carpools?			
8. Will there be traffic calming measures implemented as part of the project?			
2.4 Water Conservation			
1. Will the project include drought tolerant landscaping?			Quantified in BGM
2. Will the project be subject to the County's Water Efficient Landscape Ordinance (projects with ≥2,500 sf of landscaping)?			
3. Will the project include high-efficiency drip irrigation?			
4. Will the project use water for frost protection?			
5. Will the project install low flow toilets?			Quantified in BGM
6. Will the project install a tankless water heater?			Quantified in BGM
7. Will the project include ultra efficient fixtures and appliances?			
2.5 Solid Waste & Material Recycling (Also see farming & business practices, below)			
1. Will the project include or facilitate composting of food waste?			
2. Will the project achieve solid waste reductions by maximizing recycling? (Estimate % reduction if possible: _____)			Quantified in BGM
3. Will the project use vegetation that is removed from the site for fuel, for other wood products, or for mulch? (Please explain)			
2.6 Natural Resources			
1. Will the project include the restoration of degraded habitat on site? If so, please explain. Include the type of habitat, location, and acreage.			
2. Will the project replace trees that are removed on site at ≥ 2:1 ratio?			Quantified in BGM
3. Will the project use wood that is sustainably harvested or rapidly renewable (e.g. bamboo)?			

		Yes	No	Comment
2.7	Farming & Business Practices			
1.	Will the operator use alternatively fueled (e.g. biodiesel, electric) vehicles/equipment for at least 15% of the fleet?			
2.	Will there be a 70-80% cover crop?			
3.	Will the project use reduced or no-tillage?			
4.	Will the project reduce its use of nitrogen fertilizers?			
5.	Will the project retain biomass that is removed via pruning and thinning by chipping the material and using it in the vineyard?			
6.	Will refrigeration use ammonia instead of CFCs or HCFCs?			Quantified in BGM
7.	Will the project be enrolled in a third party certification program (e.g. Napa Green Winery, Napa Green Land or Fish Friendly Farming)?			

FOR STAFF USE ONLY (Emission Reductions):

<p>Reductions attributable to State transportation measures (on road): _____</p> <p>Reductions attributable to State transportation measures (off road): _____</p> <p>Reductions attributable to State measures related to building energy use: _____</p> <p>Reductions attributable to measures selected above: _____</p>
<p>Emissions Offsets Required: _____</p>

3. EMISSION OFFSETS		Yes	No	Comment
3.1	Natural Resources Will the project include the restoration of degraded habitat off site? If so, please explain. Include the type of habitat, location, and acreage.			
3.2	Avoided Deforestation Will the project permanently protect land that is suitable for vineyard development either on or off site? If so, please explain. Include the type of habitat, location, acreage, and proposed easement holder.			
3.3	Purchase of Offsets from a Valid Source Will the project purchase emission offsets that are real, surplus, permanent, quantifiable, and enforceable? (Please specify.)			Local source preferred

4. ADDITIONAL INFORMATION

- 4.1** Please use the space below or attach supplemental sheets to amplify on the information provided above & describe sustainable project features that may not have been captured:

- 4.2** Any comments, suggestions, or questions regarding the County's efforts to reduce GHG Emissions?

(Please attach supplemental sheets with supporting information & calculations as needed.)