EQB Climate Calculator

User Training Session – Calculator Overview

6/4/2025

Agenda

1. Background
2. Getting Started
3. Calculator Overview
4. User Inputs
5. Calculator Outputs
6. Mitigation and Adaptation
7. Limitations
8. Additional Resources

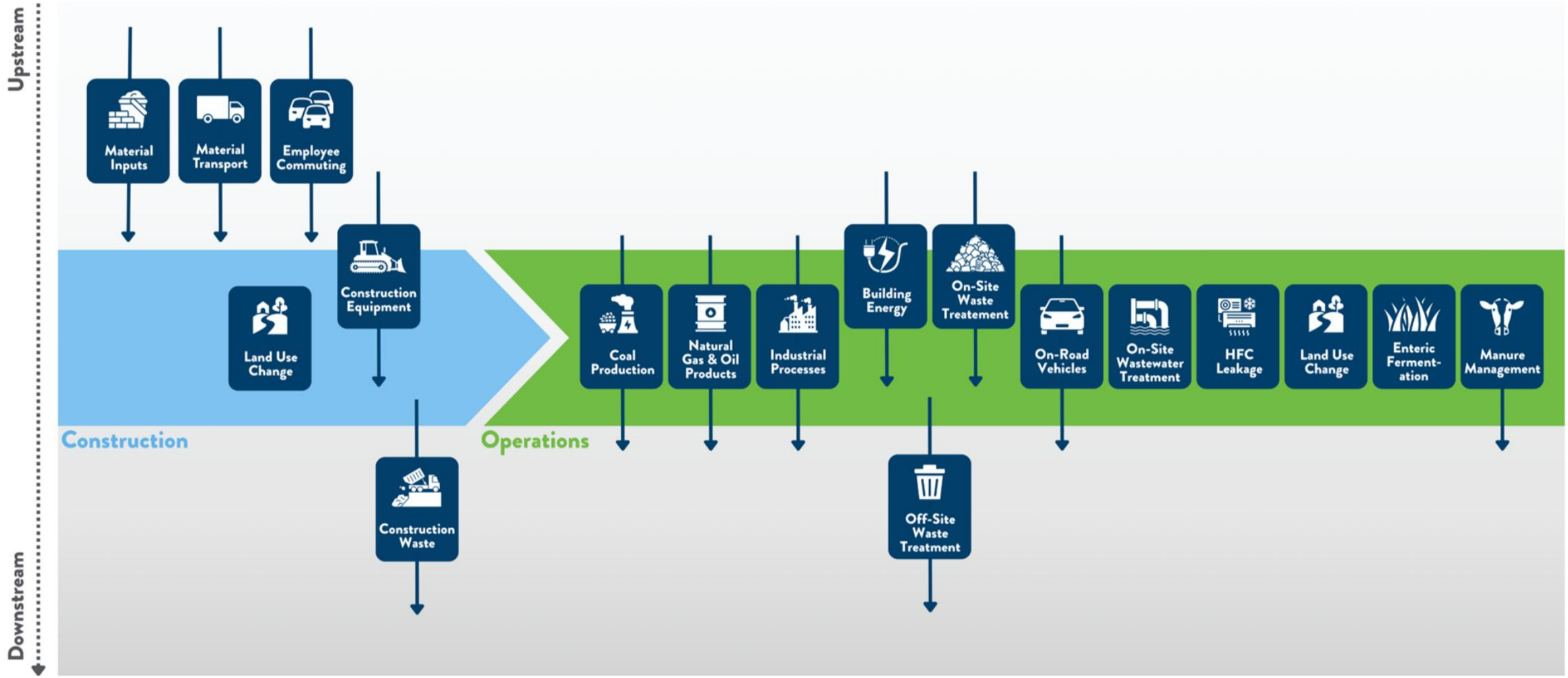
Background

Overview

- Purpose
  - Help project developers and RGUs assess the **full GHG emissions impact potential** of a project in Minnesota
  - Identify and implement **mitigation and adaptation** strategies
  - Answer **EAW items #7 and #18** **Not Required**
- Scope
  - Quantifies impact from project **construction and operation**, including **upstream and downstream** emissions
  - Assesses GHG impact from **18 potential emission sources**

Use of the Climate Calculator is not required to complete the EAW

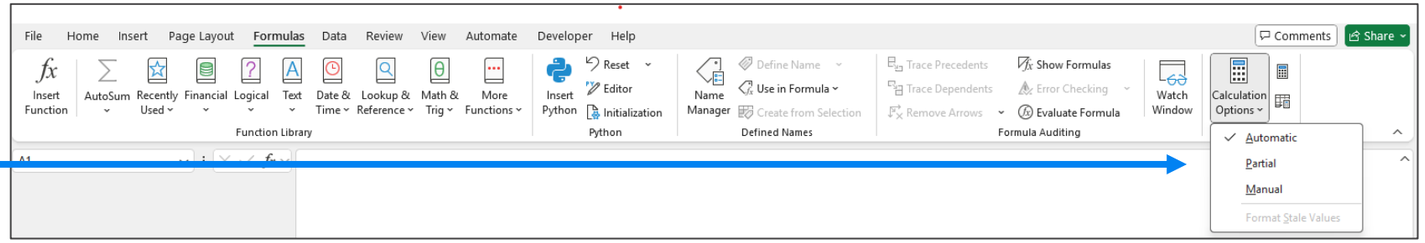
Scope

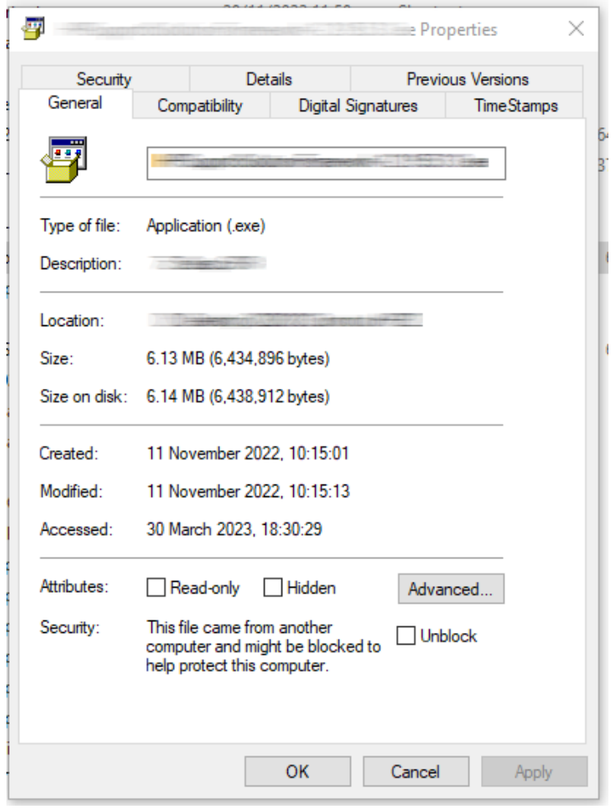

Upstream
Material Inputs
Material Transport
Employee Commuting
Land Use Change
Construction Equipment
Construction Waste
Construction
Coal Production
Natural Gas & Oil Products
Industrial Processes
Building Energy
On-Site Waste Treatement
Off-Site Waste Treatment
On-Road Vehicles
On-Site Wastewater Treatment
HFC Leakage
Land Use Change
Enteric Ferment-ation
Manure Management
Operations
Downstream

Getting Started

Calculator Settings

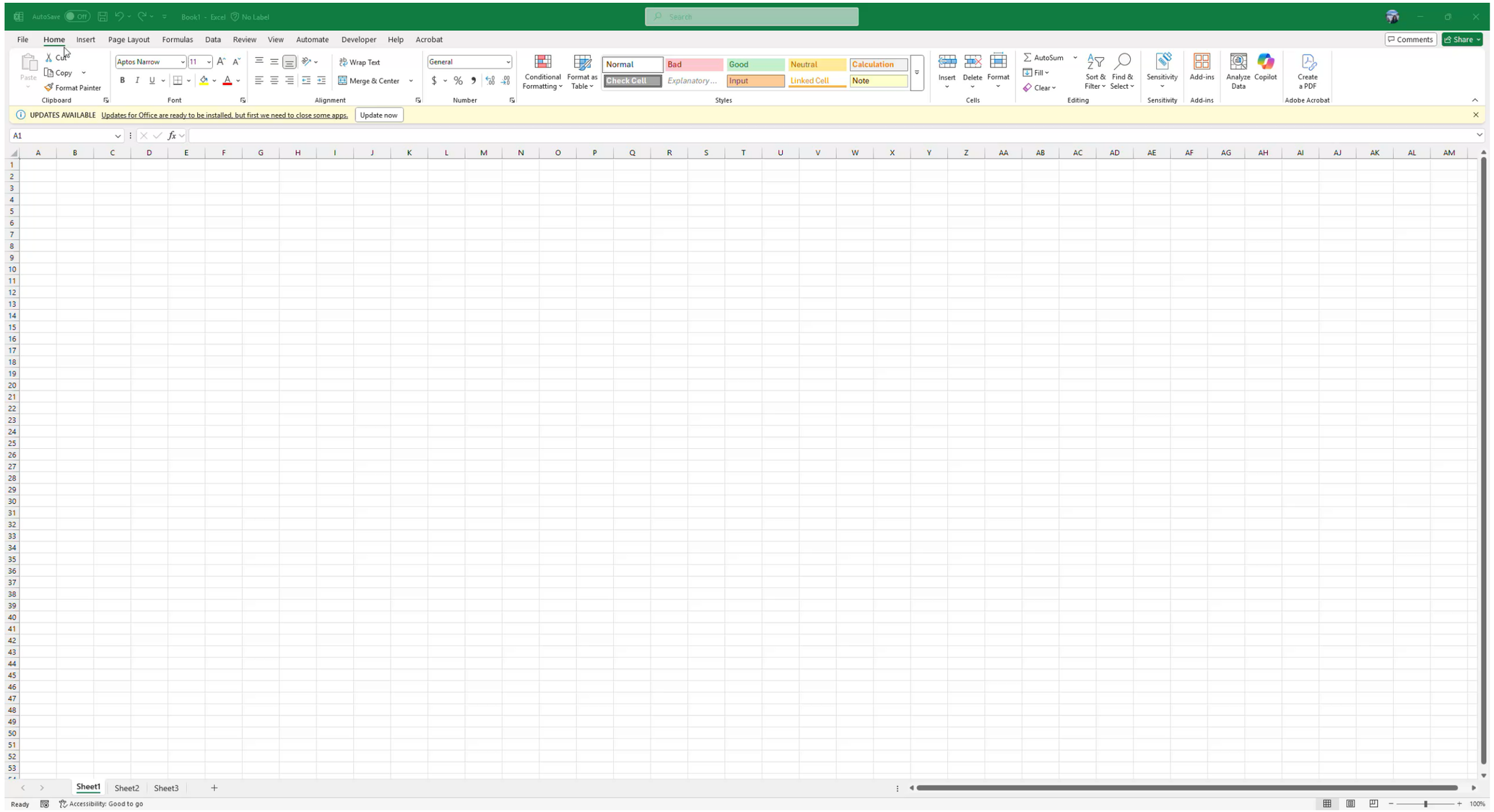
- Developed using Microsoft Excel for Microsoft 365
- Automatic calculation options
- Make a trusted file





Calculator Settings

- Enable Macros



Calculator Overview

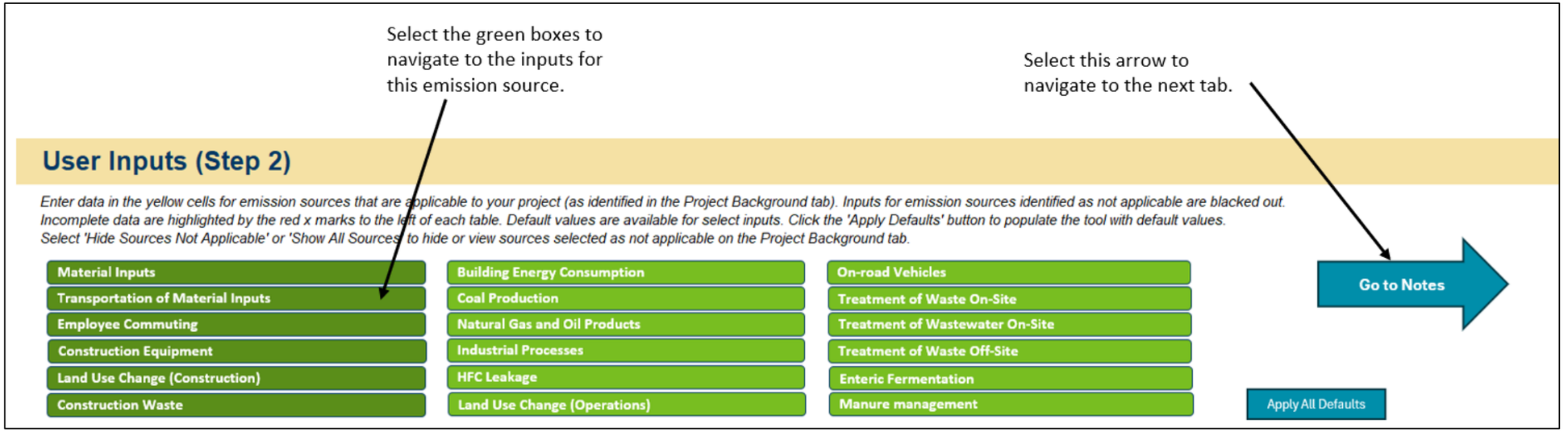
Calculator Structure

Introduction	*Provides background on the purpose, scope, and limitations of the tool.*
User Guide	*Provides instructions on using the calculator, a legend, and a table of contents.*
Project Background	*Users enter project background information and select applicable emissions sources.*
User Inputs	*Users enter data for emission sources that are applicable to their project.*
Notes	*Users enter assumptions and notes that are specific to their project.*
Construction	*Calculates emissions that occur during the construction phase of the project by emissions source.*
Operation	*Calculates emissions that occur during the operational phase of the project by emissions source.*
Results	*Summarizes cumulative and annualized GHG emissions by emissions source.*
Charts	*Graphically summarizes cumulative and annualized GHG emissions by emissions source.*
Mitigation	*Identifies potential mitigation measures to reduce GHG emissions from the proposed project.*
Adaptation	*Identifies potential adaptation strategies by climate trend and project characteristic.*
Assumptions	*Assumptions used to calculated construction and operation GHG emissions for each source.*
Constants	*Constants and conversion factors used in calculations.*

**White tabs at the end of the calculator document raw data inputs and interim calculations used to derive the assumptions.

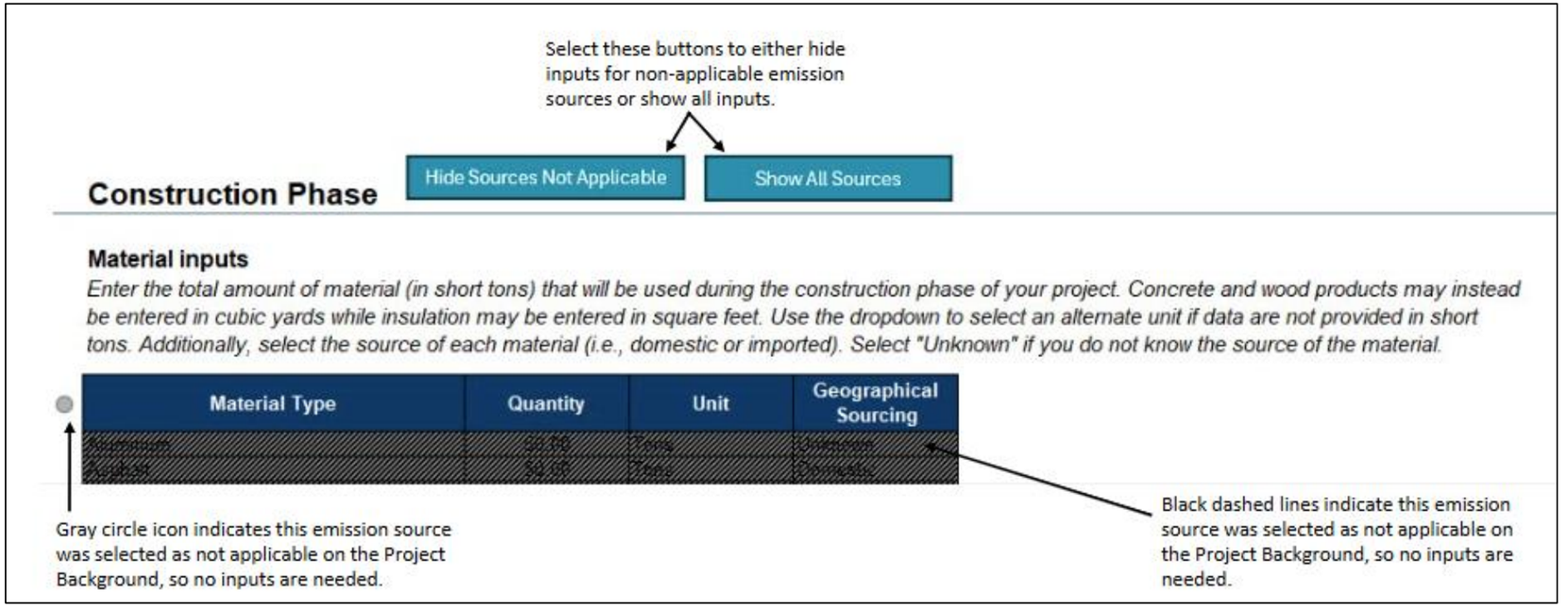
Navigation

- Use the **navigation arrows** or **tabs** to navigate throughout the calculator
- Select the **green boxes** at the top to navigate to specific sections of a tab
- Select the **Return to Top** buttons at the bottom of tabs to navigate to the top of the tab



Formatting

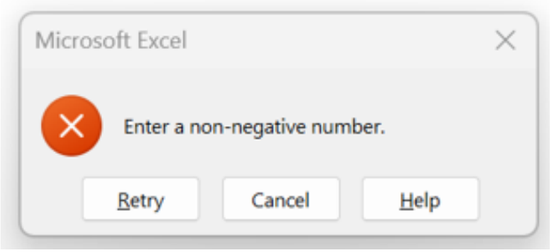
- **Shading** is used to indicate:
  1) where to enter data and
  2) what the data represent
- Users may hide rows of not applicable sources by selecting the **Hide Sources Not Applicable** button



Legend	Criteria
	Yellow cells are **data input fields.**
	Blue cells are **headings** and are **not editable.**
	White cells are **lists or constants** and are **not editable.**
	Green cells are **calculated fields** and are **not editable.**
	Light green cells are **calculated fields** for interim calculations and are **not editable**.
	Gray cells are **assumptions** and are **not editable**.
	Black cells are for **emissions sources that are not applicable** and are not calculated.

Data Quality and Completeness

- **Data Validations** are built into user input fields
  - Examples include value ranges, drop-down lists, and formatting restrictions
- If you try to enter a nonvalid value, a **pop-up message** will appear
- **Checker icons** indicate if a field or table is correctly populated
  - ⚪ = emission source is excluded from the calculations
  - ❌ = emission source is applicable but required data inputs are missing
  - ✅ = emission source is applicable and all required inputs are provided
- **Red text** will display if inputs are entered incorrectly



❌

Waste Treatment Practice	Percent of Waste	Default
Recycled		0%
Composted		0%
Landfilled	99%	44%
Combusted		56%
Total:	**99%**	

Apply Defaults

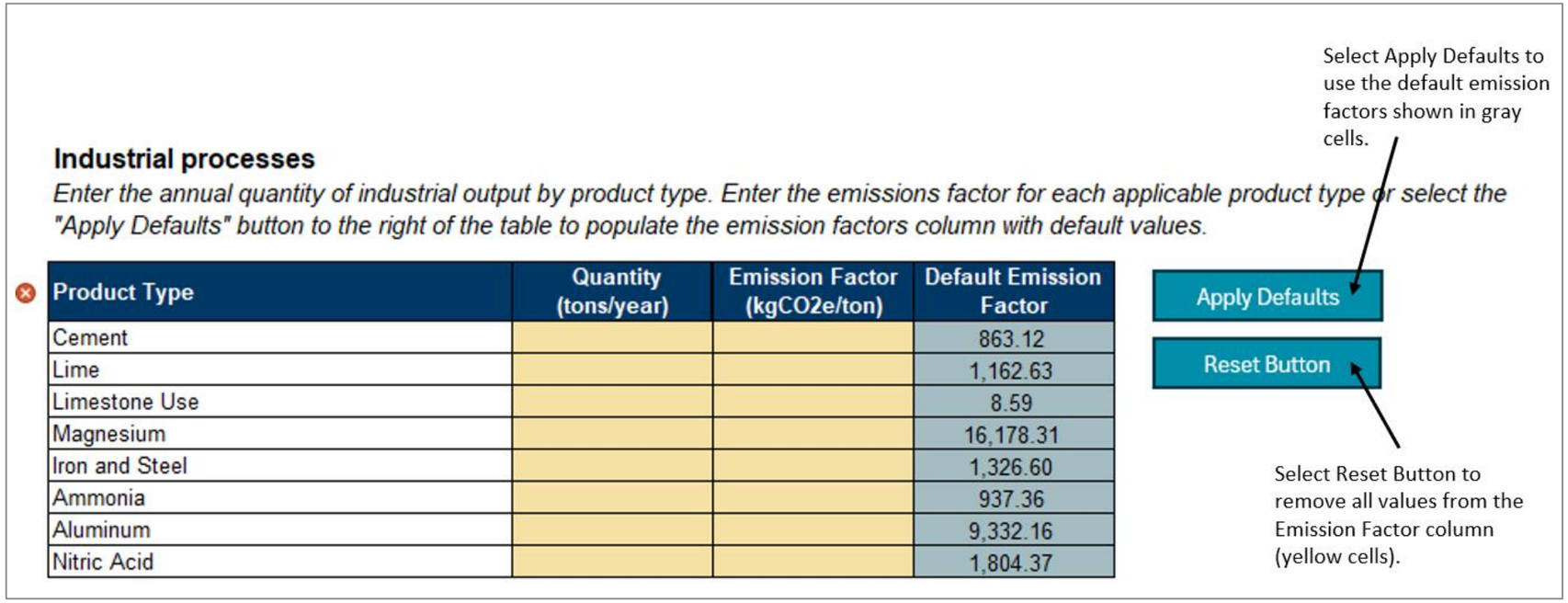
Reset Button

Values do not sum to 100%. Update to ensure values sum to 100%.

Applying Defaults

- **Default assumptions** are available for select user inputs
  - Displayed in gray cells
  - Linked to values on the Assumptions tab

- Select the **Apply Defaults** button to populate user input fields with default values
- The **Reset Button** clears the values from the fields where defaults can be applied



Process Overview

1. Fill out **project background** information and select applicable emission sources.

2. **Enter data** or select defaults for emission sources applicable to their project

3. **Document assumptions** and notes that are specific to the project and user inputs.

4. Review the **calculations and results**. If desired, generate a PDF summary report.

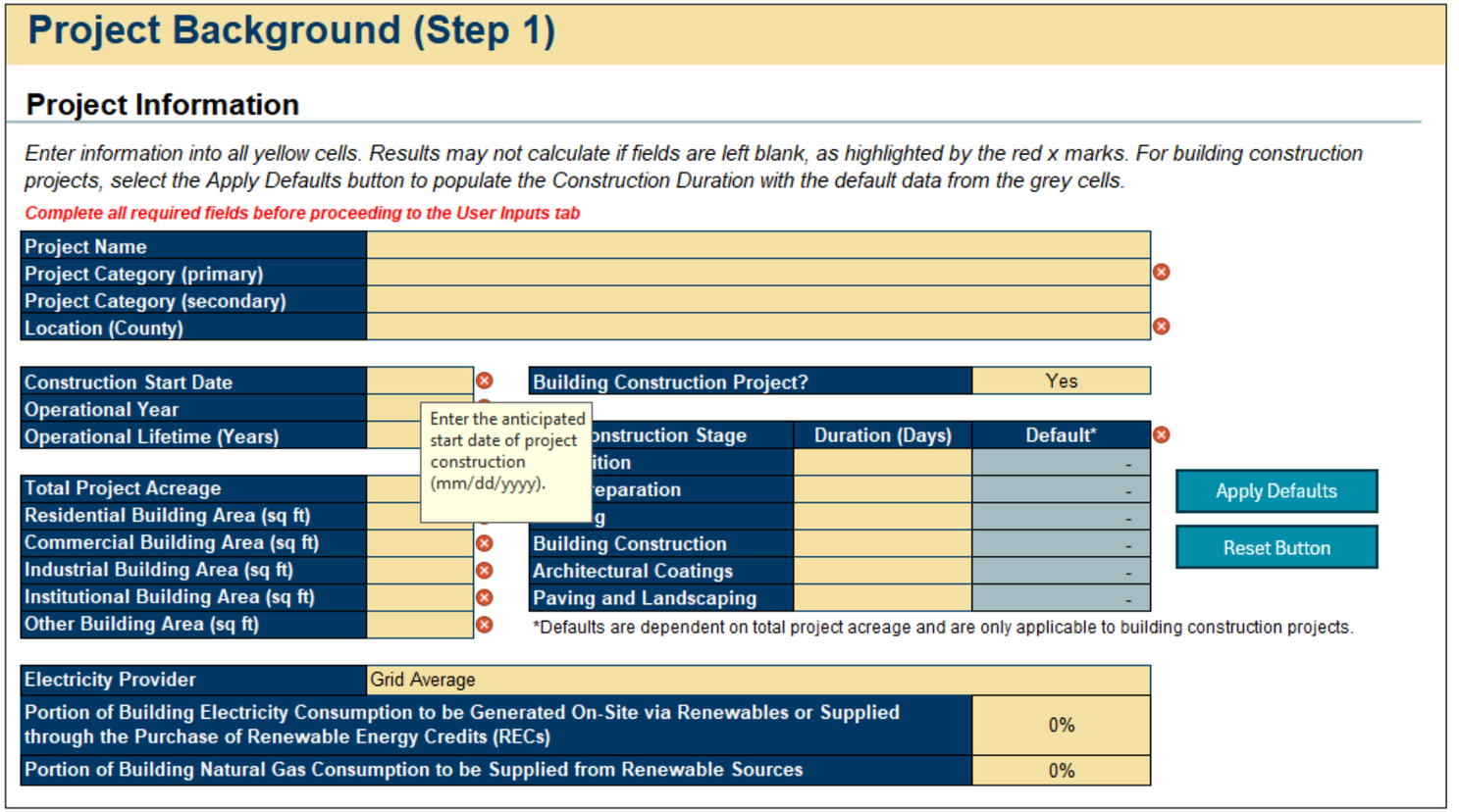
5. Identify **mitigation measures** to reduce GHG emissions from the proposed project.

6. Select **adaptation strategies** that are relevant to applicable climate trends and project characteristics.

User Inputs

Project Information

- User input cells are **shaded yellow**
- Inputs are required to calculate results and may impact more than one emissions source
- Select information is already required in the EAW
- Select cells for additional popup instructions
- Refer to the **User Guide** for additional guidance



Project Background (Step 1)

Project Information

Enter information into all yellow cells. Results may not calculate if fields are left blank, as highlighted by the red x marks. For building construction projects, select the Apply Defaults button to populate the Construction Duration with the default data from the grey cells.

Complete all required fields before proceeding to the User Inputs tab

Project Name	
Project Category (primary)	
Project Category (secondary)	
Location (County)	

Construction Start Date	
Operational Year	
Operational Lifetime (Years)	

Enter the anticipated start date of project construction (mm/dd/yyyy).

Total Project Acreage	
Residential Building Area (sq ft)	
Commercial Building Area (sq ft)	
Industrial Building Area (sq ft)	
Institutional Building Area (sq ft)	
Other Building Area (sq ft)	

Building Construction Project?	Yes

onstruction Stage	Duration (Days)	Default*
ition		-
eparation		-
g		-
Building Construction		-
Architectural Coatings		-
Paving and Landscaping		-

Apply Defaults

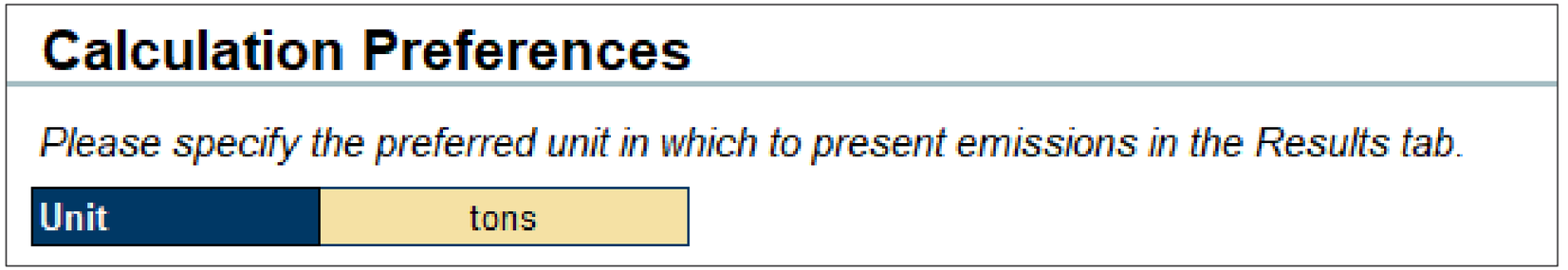
Reset Button

*Defaults are dependent on total project acreage and are only applicable to building construction projects.

Electricity Provider	Grid Average
Portion of Building Electricity Consumption to be Generated On-Site via Renewables or Supplied through the Purchase of Renewable Energy Credits (RECs)	0%
Portion of Building Natural Gas Consumption to be Supplied from Renewable Sources	0%

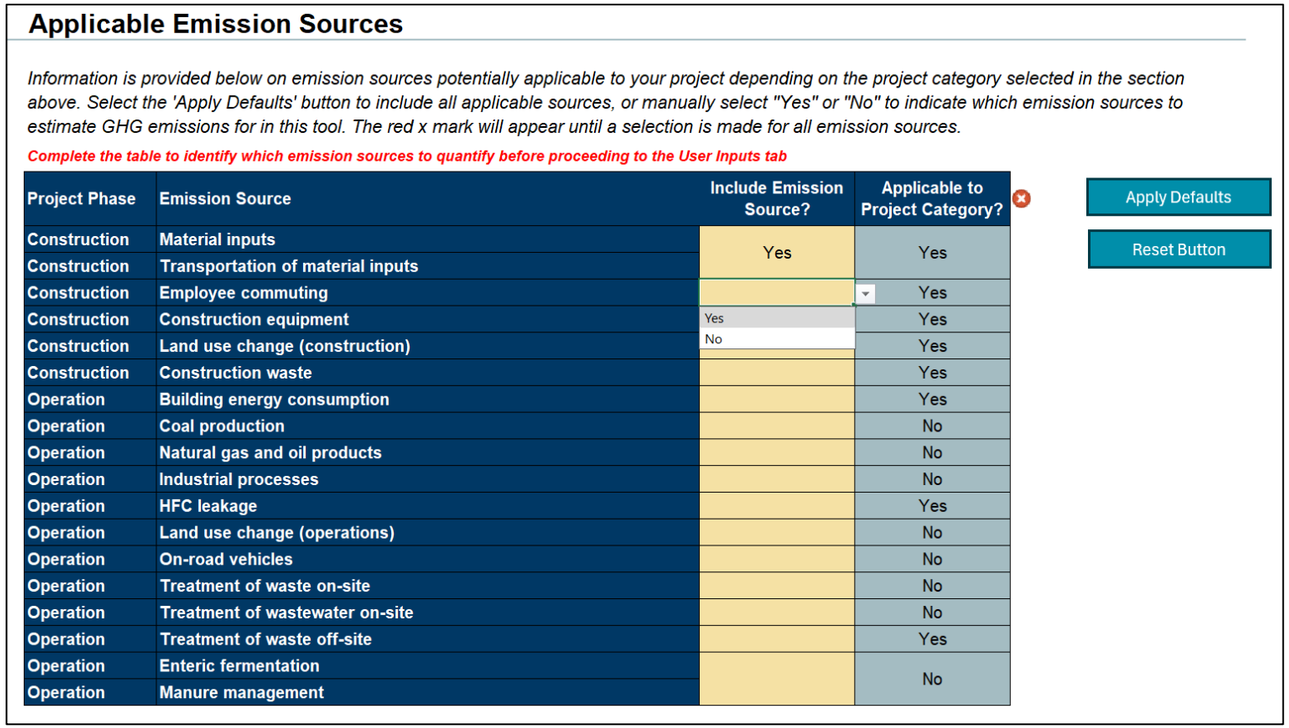
Calculator Preferences

- Users can specify their preferred **unit** in which to present emissions in the **Results tab**
  - Tons (short tons)
  - MT (metric tons)
  - Kg (kilograms)



Applicable Emission Sources

- Potentially applicable emission sources are identified based on the **primary and secondary project category** selected in the Project Information section
- Select **Apply Defaults** button to populate yellow fields or select each individually using the **drop-down menus**
  - Defaults may be changed after they are applied
- A **selection is required** for each emissions source
- For **excluded emissions sources**, fields will be shaded gray with black dashed lines and/or hidden in subsequent tabs of the calculator



Applicable Emission Sources

Information is provided below on emission sources potentially applicable to your project depending on the project category selected in the section above. Select the 'Apply Defaults' button to include all applicable sources, or manually select "Yes" or "No" to indicate which emission sources to estimate GHG emissions for in this tool. The red x mark will appear until a selection is made for all emission sources.

Complete the table to identify which emission sources to quantify before proceeding to the User Inputs tab

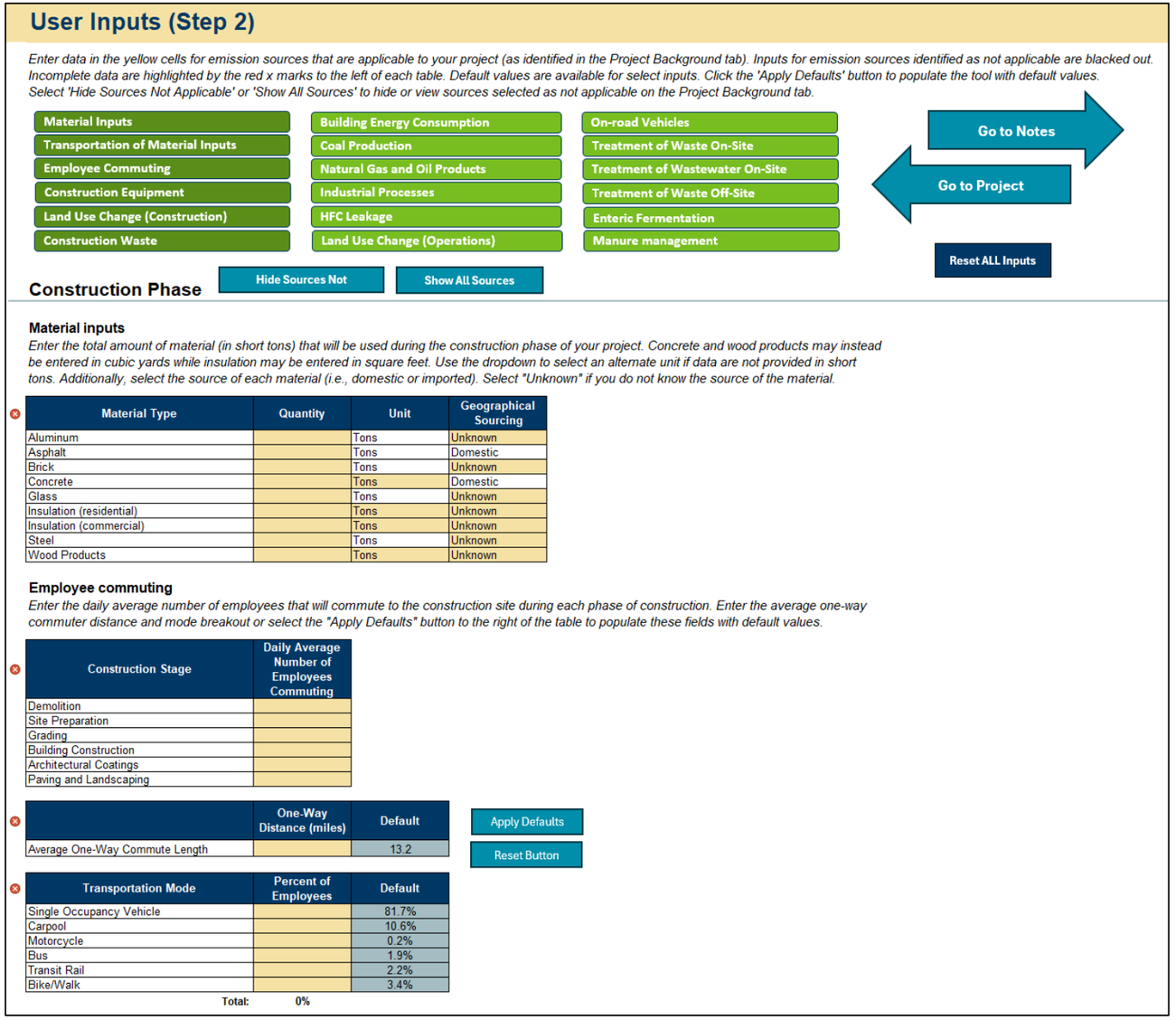
Project Phase	Emission Source	Include Emission Source?	Applicable to Project Category?
Construction	Material inputs	Yes	Yes
Construction	Transportation of material inputs		
Construction	Employee commuting		Yes
Construction	Construction equipment	Yes	Yes
Construction	Land use change (construction)	No	Yes
Construction	Construction waste		Yes
Operation	Building energy consumption		Yes
Operation	Coal production		No
Operation	Natural gas and oil products		No
Operation	Industrial processes		No
Operation	HFC leakage		Yes
Operation	Land use change (operations)		No
Operation	On-road vehicles		No
Operation	Treatment of waste on-site		No
Operation	Treatment of wastewater on-site		No
Operation	Treatment of waste off-site		Yes
Operation	Enteric fermentation		No
Operation	Manure management		

Apply Defaults

Reset Button

User Inputs

- User input cells are **shaded yellow**
  - Not applicable fields are shaded gray with black dashed lines
- Populate using **best available data or assumptions**
- **Default assumptions** are provided in gray cells
  - Accessed using buttons or dropdowns
- Refer to the **User Guide** for additional guidance
- Input values can be reset at the top of the tab or for individual sources by **selecting reset buttons**



User Inputs (Step 2)

Enter data in the yellow cells for emission sources that are applicable to your project (as identified in the Project Background tab). Inputs for emission sources identified as not applicable are blacked out. Incomplete data are highlighted by the red x marks to the left of each table. Default values are available for select inputs. Click the 'Apply Defaults' button to populate the tool with default values. Select 'Hide Sources Not Applicable' or 'Show All Sources' to hide or view sources selected as not applicable on the Project Background tab.

Material Inputs | Transportation of Material Inputs | Employee Commuting | Construction Equipment | Land Use Change (Construction) | Construction Waste

Building Energy Consumption | Coal Production | Natural Gas and Oil Products | Industrial Processes | HFC Leakage | Land Use Change (Operations)

On-road Vehicles | Treatment of Waste On-Site | Treatment of Wastewater On-Site | Treatment of Waste Off-Site | Enteric Fermentation | Manure management

Go to Notes | Go to Project | Reset ALL Inputs

Construction Phase — Hide Sources Not | Show All Sources

Material inputs

Enter the total amount of material (in short tons) that will be used during the construction phase of your project. Concrete and wood products may instead be entered in cubic yards while insulation may be entered in square feet. Use the dropdown to select an alternate unit if data are not provided in short tons. Additionally, select the source of each material (i.e., domestic or imported). Select "Unknown" if you do not know the source of the material.

Material Type	Quantity	Unit	Geographical Sourcing
Aluminum		Tons	Unknown
Asphalt		Tons	Domestic
Brick		Tons	Unknown
Concrete		Tons	Domestic
Glass		Tons	Unknown
Insulation (residential)		Tons	Unknown
Insulation (commercial)		Tons	Unknown
Steel		Tons	Unknown
Wood Products		Tons	Unknown

Employee commuting

Enter the daily average number of employees that will commute to the construction site during each phase of construction. Enter the average one-way commuter distance and mode breakout or select the "Apply Defaults" button to the right of the table to populate these fields with default values.

Construction Stage	Daily Average Number of Employees Commuting
Demolition	
Site Preparation	
Grading	
Building Construction	
Architectural Coatings	
Paving and Landscaping	

	One-Way Distance (miles)	Default
Average One-Way Commute Length		13.2

Apply Defaults | Reset Button

Transportation Mode	Percent of Employees	Default
Single Occupancy Vehicle		81.7%
Carpool		10.6%
Motorcycle		0.2%
Bus		1.9%
Transit Rail		2.2%
Bike/Walk		3.4%
Total:	0%	

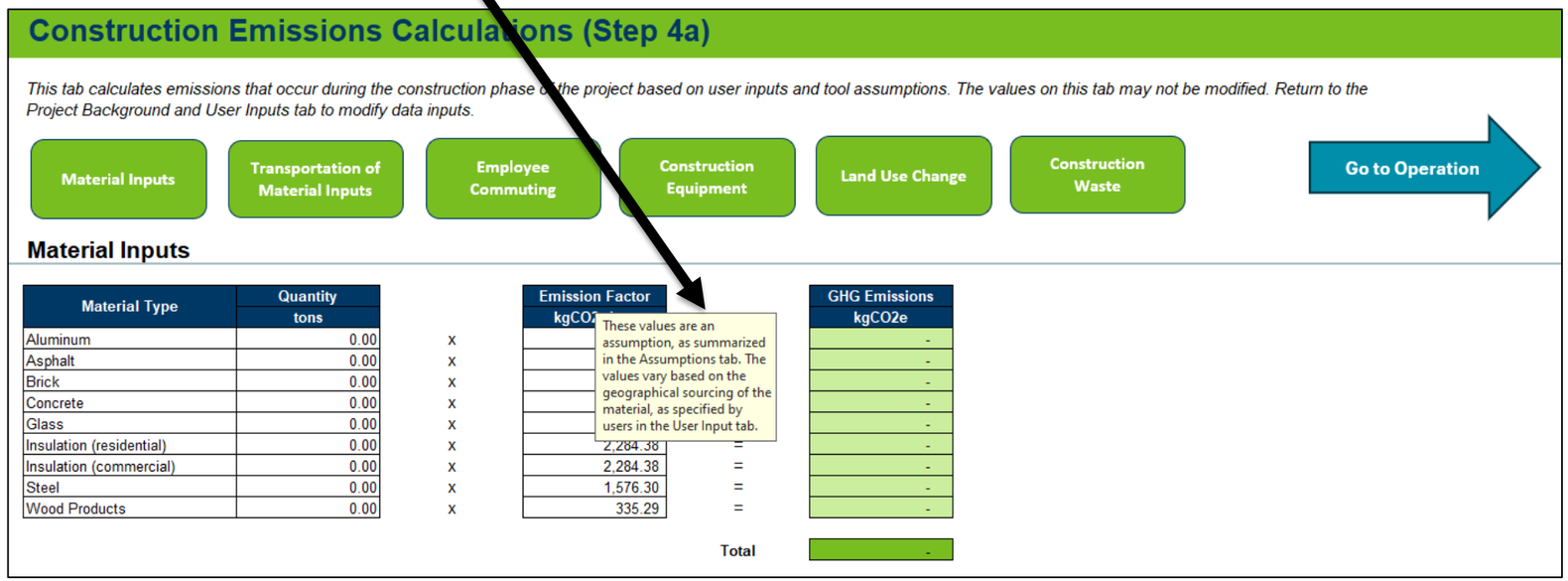
Notes

- Use of this tab is optional
- Can document assumptions, data sources, notes for reviewers, special circumstances, or other helpful information specific to your project
- Included in the generated summary report

Calculator Outputs

Interim Calculations

- Shows detailed calculations by emissions source
- Draws on user inputs, assumptions, constants, and emission factors
- Fields are not editable
- Select headers for information on the source of the data
- Results are shown in $kgCO_2e$



Construction Emissions Calculations (Step 4a)

This tab calculates emissions that occur during the construction phase of the project based on user inputs and tool assumptions. The values on this tab may not be modified. Return to the Project Background and User Inputs tab to modify data inputs.

Material Inputs | Transportation of Material Inputs | Employee Commuting | Construction Equipment | Land Use Change | Construction Waste | Go to Operation

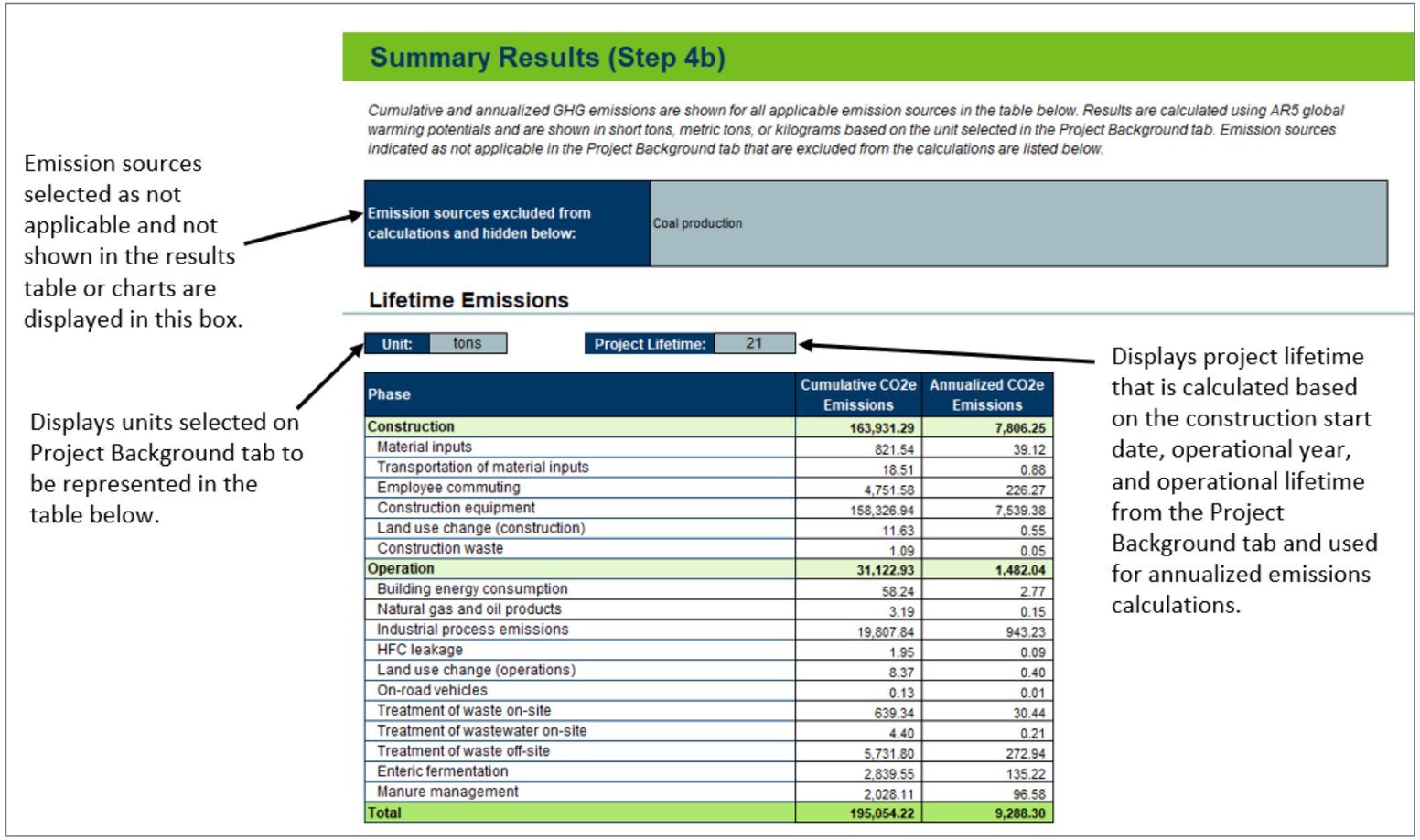
Material Inputs

Material Type	Quantity (tons)		Emission Factor (kgCO2)		GHG Emissions (kgCO2e)
Aluminum	0.00	x			-
Asphalt	0.00	x			-
Brick	0.00	x			-
Concrete	0.00	x			-
Glass	0.00	x			-
Insulation (residential)	0.00	x	2,284.38	=	-
Insulation (commercial)	0.00	x	2,284.38	=	-
Steel	0.00	x	1,576.30	=	-
Wood Products	0.00	x	335.29	=	-
				Total	-

These values are an assumption, as summarized in the Assumptions tab. The values vary based on the geographical sourcing of the material, as specified by users in the User Input tab.

Results

- **Cumulative emissions** = the sum of construction and operational emissions across operational lifespan of the project
- **Annualized emissions** = cumulative emissions divided by the project lifetime
- **Project lifetime**, which includes both construction and operation, is derived based on the construction start date, operational year, and operational lifetime



Phase	Cumulative CO2e Emissions	Annualized CO2e Emissions
Construction	**163,931.29**	**7,806.25**
Material inputs	821.54	39.12
Transportation of material inputs	18.51	0.88
Employee commuting	4,751.58	226.27
Construction equipment	158,326.94	7,539.38
Land use change (construction)	11.63	0.55
Construction waste	1.09	0.05
Operation	**31,122.93**	**1,482.04**
Building energy consumption	58.24	2.77
Natural gas and oil products	3.19	0.15
Industrial process emissions	19,807.84	943.23
HFC leakage	1.95	0.09
Land use change (operations)	8.37	0.40
On-road vehicles	0.13	0.01
Treatment of waste on-site	639.34	30.44
Treatment of wastewater on-site	4.40	0.21
Treatment of waste off-site	5,731.80	272.94
Enteric fermentation	2,839.55	135.22
Manure management	2,028.11	96.58
Total	**195,054.22**	**9,288.30**

Emissions Equivalencies

- Equivalencies are summarized at the bottom of the Results tab for cumulative and annualized results
- Results are derived using equivalency factors from EPA's Greenhouse Gas Equivalency Calculator

Emissions Equivalencies

To contextualize emissions, input emissions data into the EPA GHG Equivalencies Calculator (using corresponding units) to convert emissions into equivalent measures for communication purposes. Below are some example equivalencies for both cumulative and annualized emissions.

Cumulative emissions are equivalent to…

Emissions from	18,896,049	miles driven by an average gasoline-powered passenger vehicle
Emissions from	835,619	gallons of gasoline consumed
Emissions avoided by	2,624	tons of waste recycled instead of landfilled

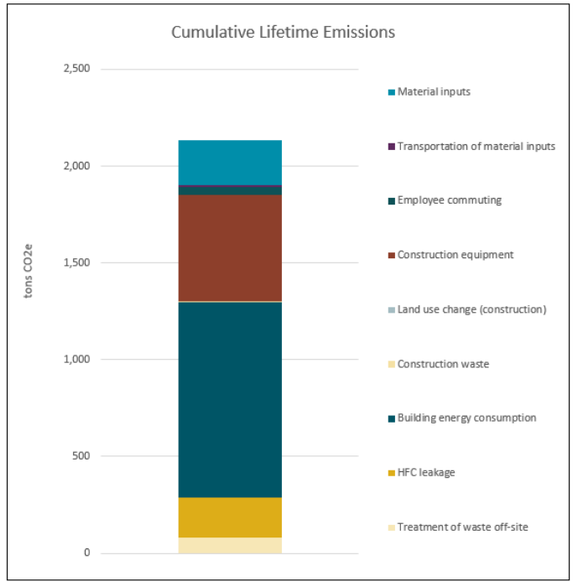
Annualized emissions are equivalent to…

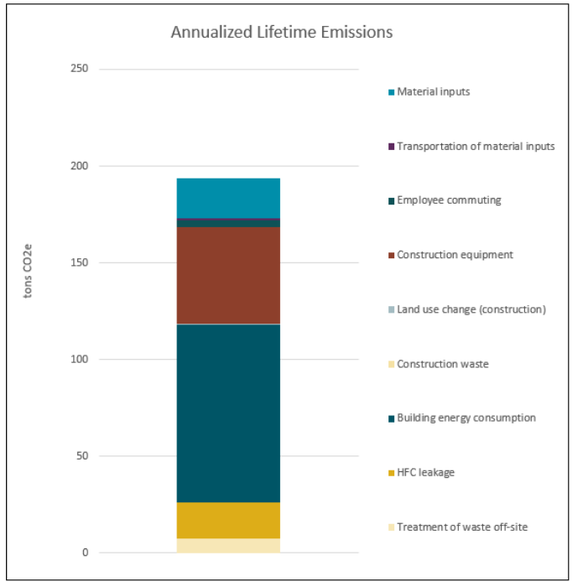
Emissions from	157	gasoline-powered passenger vehicles driven for one year
Emissions from	91	homes' energy use for one year
Carbon sequestered by	675	acres of U.S. forests in one year

Charts

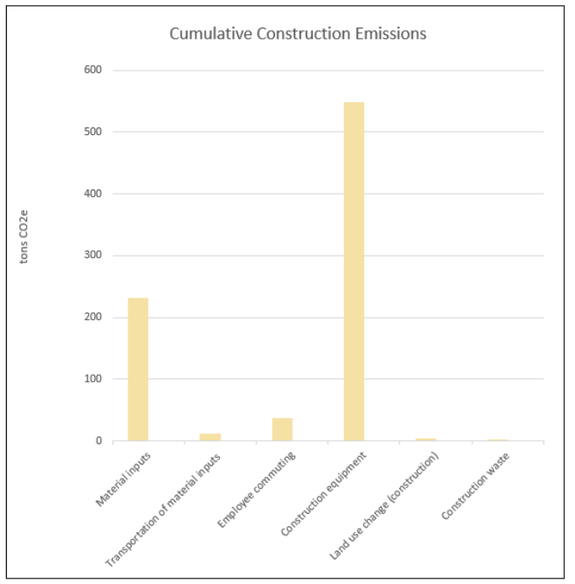
- Results are also displayed graphically on the **Charts tab**
  - Lifetime emissions are represented as stacked bar charts
  - Emissions by project phase are represented as clustered column charts
- Non-applicable emission sources are automatically hidden

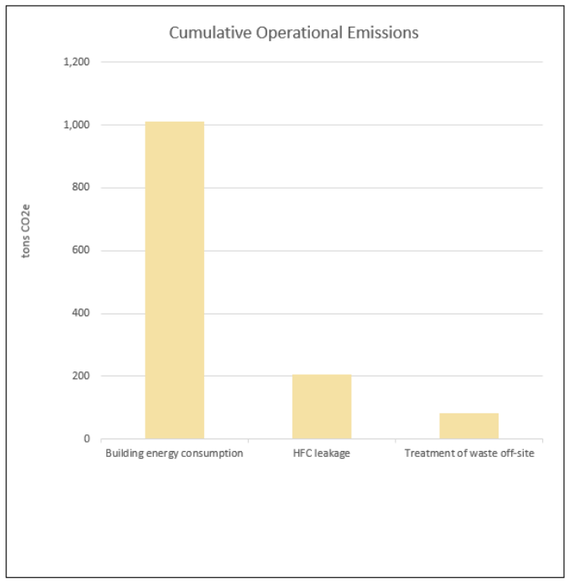
Lifetime Emissions





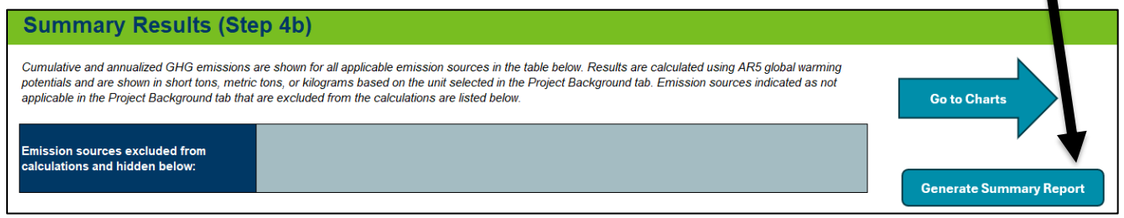
Emissions by Project Phase

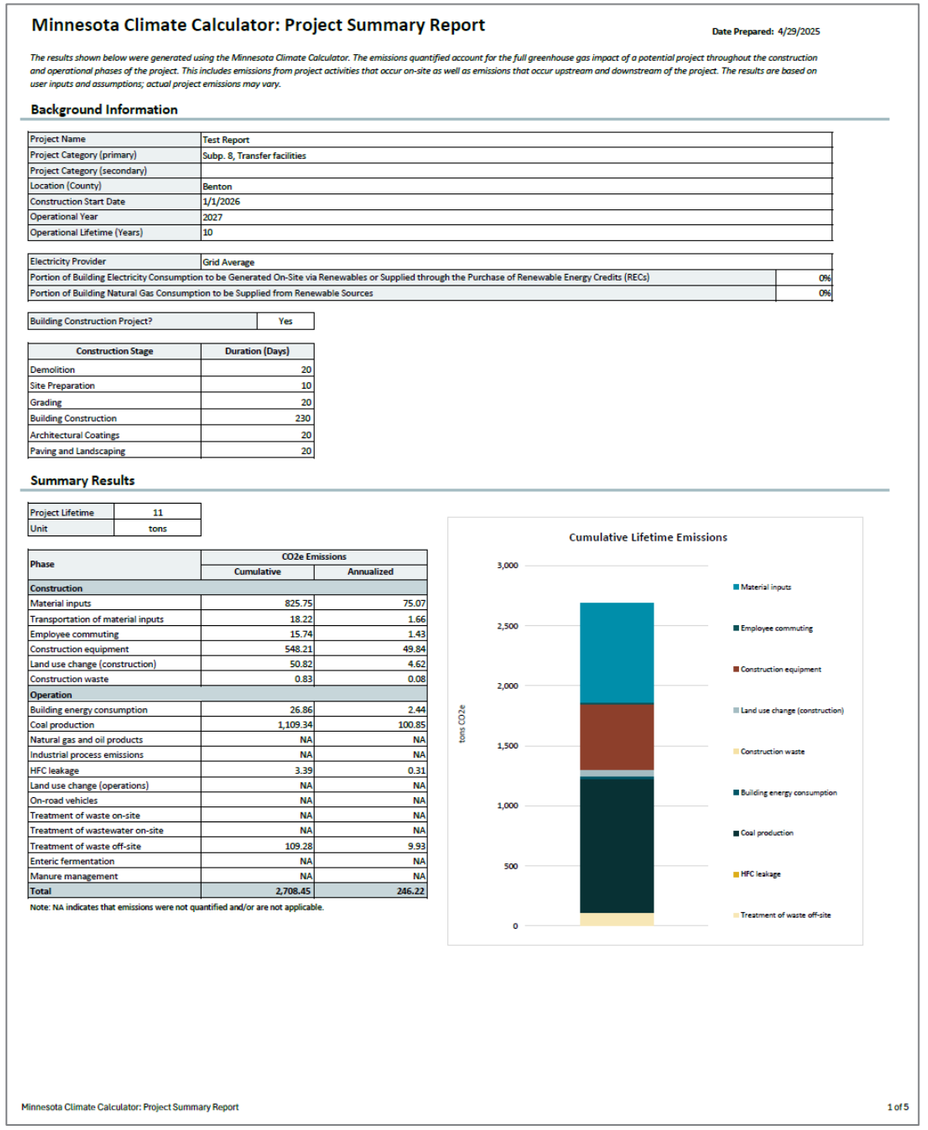




Summary Report

- Includes background information, cumulative and annualized emissions by source and phase, user inputs for each emissions source, and any user-provided notes entered on the Notes tab
- To generate a report, select **Generate Summary Report** on Results tab
- Generating a report is not required to complete the EAW





Minnesota Climate Calculator: Project Summary Report

Date Prepared: 4/29/2025

The results shown below were generated using the Minnesota Climate Calculator. The emissions quantified account for the full greenhouse gas impact of a potential project throughout the construction and operational phases of the project. This includes emissions from project activities that occur on-site as well as emissions that occur upstream and downstream of the project. The results are based on user inputs and assumptions; actual project emissions may vary.

Background Information

Project Name	Test Report
Project Category (primary)	Subp. 8, Transfer facilities
Project Category (secondary)	
Location (County)	Benton
Construction Start Date	1/1/2026
Operational Year	2027
Operational Lifetime (Years)	10

Electricity Provider	Grid Average
Portion of Building Electricity Consumption to be Generated On-Site via Renewables or Supplied through the Purchase of Renewable Energy Credits (RECs)	0%
Portion of Building Natural Gas Consumption to be Supplied from Renewable Sources	0%

Building Construction Project?	Yes

Construction Stage	Duration (Days)
Demolition	20
Site Preparation	10
Grading	20
Building Construction	230
Architectural Coatings	20
Paving and Landscaping	20

Summary Results

Project Lifetime	11
Unit	tons

Phase	CO2e Emissions	
	Cumulative	Annualized
Construction		
Material inputs	825.75	75.07
Transportation of material inputs	18.22	1.66
Employee commuting	15.74	1.43
Construction equipment	548.21	49.84
Land use change (construction)	50.82	4.62
Construction waste	0.83	0.08
Operation		
Building energy consumption	26.86	2.44
Coal production	1,109.34	100.85
Natural gas and oil products	NA	NA
Industrial process emissions	NA	NA
HFC leakage	3.39	0.31
Land use change (operations)	NA	NA
On-road vehicles	NA	NA
Treatment of waste on-site	NA	NA
Treatment of wastewater on-site	NA	NA
Treatment of waste off-site	109.28	9.93
Enteric fermentation	NA	NA
Manure management	NA	NA
Total	2,708.45	246.22

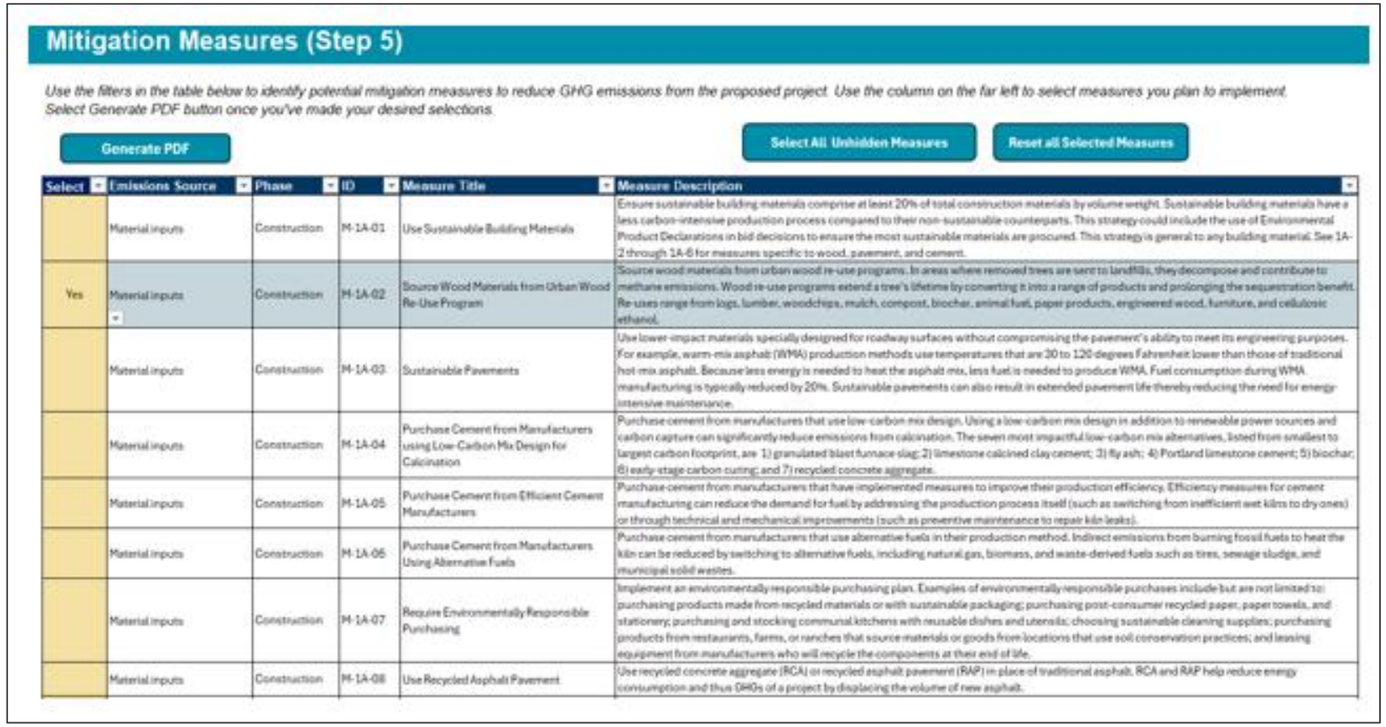
Note: NA indicates that emissions were not quantified and/or are not applicable.

Minnesota Climate Calculator: Project Summary Report 1 of 5

Mitigation and Adaptation

Mitigation Measures

- Identifies potential **mitigation measures**, categorized by the expected source of emission reductions
- Use **filters** to narrow the list of measures
- Use the **drop-down menu** to select measures you intend to implement
- Use **Select All Unhidden Measures** button to select "Yes" for all visible measures
- Rows are **shaded gray** when a measured is selected
- Select the **Generate PDF** button to print filtered list



Mitigation Measures (Step 5)

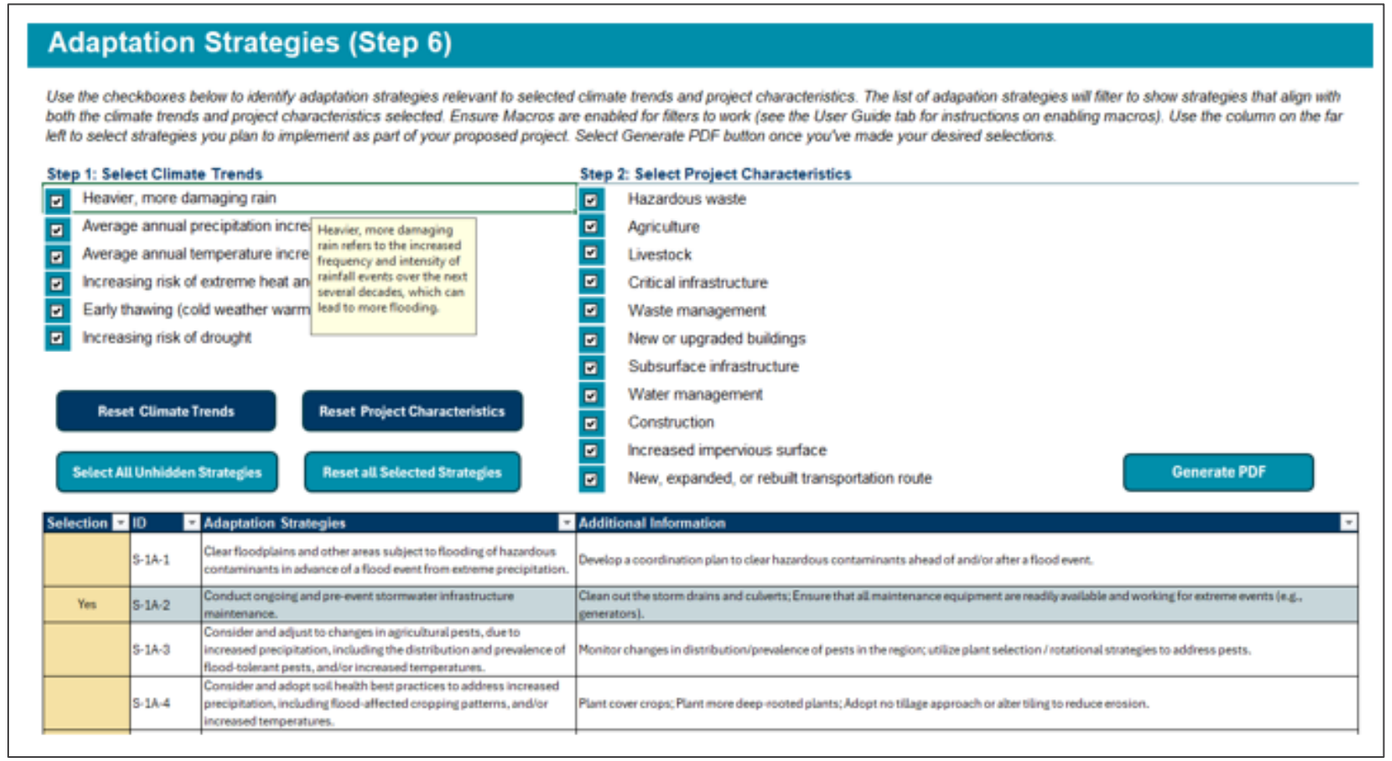
Use the filters in the table below to identify potential mitigation measures to reduce GHG emissions from the proposed project. Use the column on the far left to select measures you plan to implement. Select Generate PDF button once you've made your desired selections.

Generate PDF | Select All Unhidden Measures | Reset all Selected Measures

Select	Emissions Source	Phase	ID	Measure Title	Measure Description
	Material Inputs	Construction	M-1A-01	Use Sustainable Building Materials	Ensure sustainable building materials comprise at least 20% of total construction materials by volume weight. Sustainable building materials have a less carbon-intensive production process compared to their non-sustainable counterparts. This strategy could include the use of Environmental Product Declarations in bid decisions to ensure the most sustainable materials are procured. This strategy is general to any building material. See 1A-2 through 1A-6 for measures specific to wood, pavement, and cement.
Yes	Material Inputs	Construction	M-1A-02	Source Wood Materials from Urban Wood Re-Use Program	Source wood materials from urban wood re-use programs. In areas where removed trees are sent to landfills, they decompose and contribute to methane emissions. Wood re-use programs extend a tree's lifetime by converting it into a range of products and prolonging the sequestration benefit. Re-uses range from logs, lumber, woodchips, mulch, compost, biochar, animal fuel, paper products, engineered wood, furniture, and cellulosic ethanol.
	Material Inputs	Construction	M-1A-03	Sustainable Pavements	Use lower-impact materials specially designed for roadway surfaces without compromising the pavement's ability to meet its engineering purposes. For example, warm-mix asphalt (WMA) production methods use temperatures that are 30 to 120 degrees Fahrenheit lower than those of traditional hot-mix asphalt. Because less energy is needed to heat the asphalt mix, less fuel is needed to produce WMA. Fuel consumption during WMA manufacturing is typically reduced by 20%. Sustainable pavements can also result in extended pavement life thereby reducing the need for energy-intensive maintenance.
	Material Inputs	Construction	M-1A-04	Purchase Cement from Manufacturers using Low-Carbon Mix Design for Calcination	Purchase cement from manufactures that use low-carbon mix design. Using a low-carbon mix design in addition to renewable power sources and carbon capture can significantly reduce emissions from calcination. The seven most impactful low-carbon mix alternatives, listed from smallest to largest carbon footprint, are 1) granulated blast furnace slag; 2) limestone calcined clay cement; 3) fly ash; 4) Portland limestone cement; 5) biochar; 6) early-stage carbon curing; and 7) recycled concrete aggregate.
	Material Inputs	Construction	M-1A-05	Purchase Cement from Efficient Cement Manufacturers	Purchase cement from manufacturers that have implemented measures to improve their production efficiency. Efficiency measures for cement manufacturing can reduce the demand for fuel by addressing the production process itself (such as switching from inefficient wet kilns to dry ones) or through technical and mechanical improvements (such as preventive maintenance to repair kiln leaks).
	Material Inputs	Construction	M-1A-06	Purchase Cement from Manufacturers Using Alternative Fuels	Purchase cement from manufacturers that use alternative fuels in their production method. Indirect emissions from burning fossil fuels to heat the kiln can be reduced by switching to alternative fuels, including natural gas, biomass, and waste-derived fuels such as tires, sewage sludge, and municipal solid wastes.
	Material Inputs	Construction	M-1A-07	Require Environmentally Responsible Purchasing	Implement an environmentally responsible purchasing plan. Examples of environmentally responsible purchases include but are not limited to: purchasing products made from recycled materials or with sustainable packaging; purchasing post-consumer recycled paper, paper towels, and stationery; purchasing and stocking communal kitchens with reusable dishes and utensils; choosing sustainable cleaning supplies; purchasing products from restaurants, farms, or ranches that source materials or goods from locations that use soil conservation practices; and leasing equipment from manufacturers who will recycle the components at their end of life.
	Material Inputs	Construction	M-1A-08	Use Recycled Asphalt Pavement	Use recycled concrete aggregate (RCA) or recycled asphalt pavement (RAP) in place of traditional asphalt. RCA and RAP help reduce energy consumption and thus GHGs of a project by displacing the volume of new asphalt.

Adaptation Strategies

- Identifies potential **adaptation strategies**, which are mapped to a defined list of **climate trends** and **project characteristics**
- Select **check boxes** or use **filters** to narrow the list of strategies
- Use the **drop-down menu** to select strategies you intend to implement
- Use **Select All Unhidden Measures** button to select "Yes" for all visible measures
- Rows are **shaded gray** when a strategy is selected
- Select the **Generate PDF** button to print filtered list



Limitations

Limitations

- **Emission Source Exclusions:** Users should assess emissions from sources not covered by the calculator.
- **Highway Projects:** This tool is not intended to estimate emissions for projects falling under Minn. Rule 4410.4300 subpart 22 (Highway projects). Emissions from highway projects should be estimated using the MICE Tool.
- **Feedlot Projects:** Mostly aligns with the Animal Feedlot GHG Calculator. Key differences:
  - This calculator quantifies emissions from manure on pasture and indirect nitrous oxide emissions.
  - This calculator allows users to specify the portion of manure applied to land as a fertilizer.
  - This calculator does not quantify avoided emissions from alfalfa.
  - This calculator quantifies cumulative and annualized lifetime emissions rather than emissions for a single year.
- **Double Counting:** The inclusion of upstream and downstream impacts can lead to double counting of emissions (e.g., industrial process emission factors may account for emissions from building energy consumption), depending on the project and emission sources.
- **Offsets:** Refers to emissions that are avoided due to project activities (e.g., if landfill gas is collected and sold to replace natural gas). Offsets are not currently included as part of the quantification methodologies.
- **Mitigation Quantification:** The tool does not quantify potential GHG reductions achieved by user-selected measures. Users may quantify the impact of mitigation measures by using the calculator to run multiple scenarios and/or by using external resources.

Additional Resources

Resources

- Visit EQB's Engagement Website: https://engage.eqb.state.mn.us/ghgcalculator
  - Climate Calculator
  - Factsheet
- Climate Calculator Report and User Guide (*coming soon*)
- EAW Process: https://www.eqb.state.mn.us/environmental-review/about/environmental-assessment-worksheet-eaw-process

ENVIRONMENTAL REVIEW PROGRAM

CLIMATE CALCULATOR

MINNESOTA ENVIRONMENTAL QUALITY BOARD

Background

Minnesota's Environmental Review Program provides decision makers and the public with an understanding of the impact a proposed project will have on the environment. Recognizing that climate change is an important environmental issue, the Environmental Quality Board (EQB) added two climate-related questions to the environmental assessment worksheet (EAW) form in 2022.

Local governments, businesses, and the public are seeking reliable tools to evaluate how climate change affects their communities, economies, and ways of life. In 2023, the EQB received legislative funding to develop a climate calculator tool to support implementation of the climate-focused revisions to the EAW form. That work is now being completed, and the climate calculator will be available July 1, 2025.

Goal

The goal of developing a climate calculator was to make climate assessment consistent, effective, and efficient. The tool is designed to ensure accuracy and consistency of the climate information provided on the EAW form while reducing the time and cost for project proposers to provide information and state and local government agencies to assess applicable climate information.

A reliable method for estimating a project's potential greenhouse gas (GHG) emissions is key to successfully filling out an EAW. EQB received broad input that responsible governmental units (RGUs) want a well-vetted tool that uses Minnesota-and sector-specific data for completing EAWs.

The climate calculator tool is now available to facilitate the gathering of climate information within the EAW. The calculator provides additional accuracy, transparency, and consistency in answering EAW items 7 and 18 while reducing the time, cost, and uncertainty for government units and project proposers.

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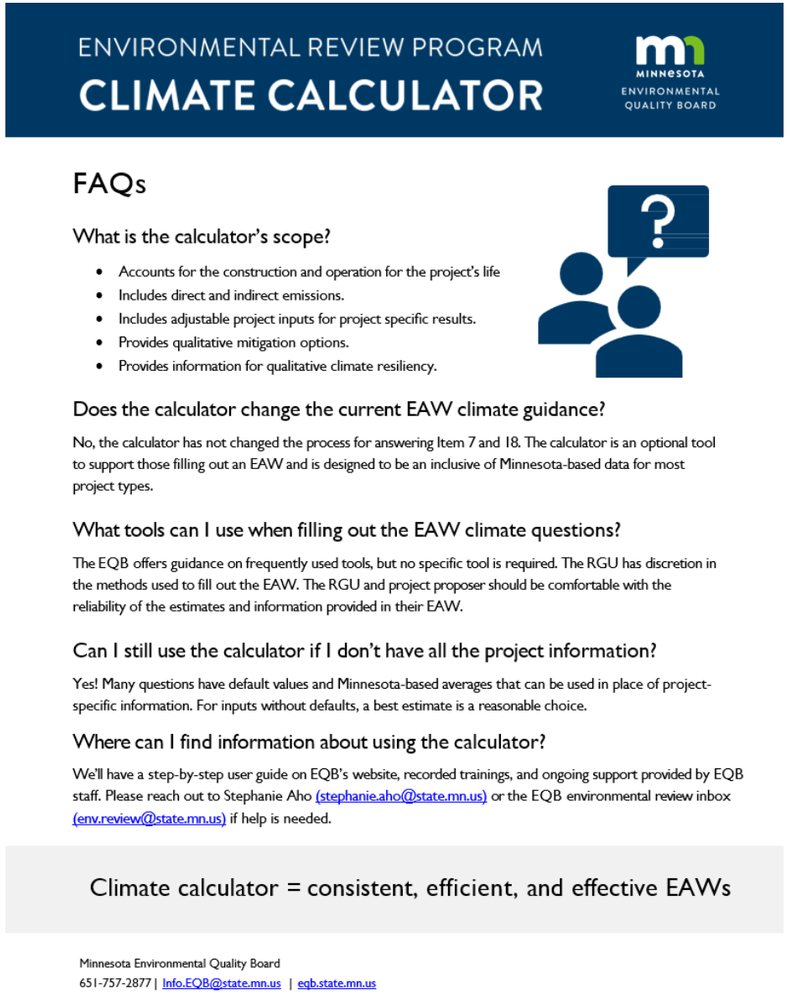
What does it do?

- ✓ Estimates the GHG emissions for a project's lifetime. Actual emissions will vary.
- ✓ Helps users answer the EAW climate questions (items 7 and 18).
- ✓ Uses Minnesota-focused data.
- ✓ Estimates GHG mitigation and climate adaptation.
- ✓ Allows users to adjust to fit their individual project needs.

Using the calculator is not a requirement when filling out an EAW and is not a change for EAW expectations.

Who can use it?

Government decision makers	Project proposers	Members of the public



ENVIRONMENTAL REVIEW PROGRAM

CLIMATE CALCULATOR

MINNESOTA ENVIRONMENTAL QUALITY BOARD

FAQs

What is the calculator's scope?

- Accounts for the construction and operation for the project's life
- Includes direct and indirect emissions.
- Includes adjustable project inputs for project specific results.
- Provides qualitative mitigation options.
- Provides information for qualitative climate resiliency.

Does the calculator change the current EAW climate guidance?

No, the calculator has not changed the process for answering Item 7 and 18. The calculator is an optional tool to support those filling out an EAW and is designed to be an inclusive of Minnesota-based data for most project types.

What tools can I use when filling out the EAW climate questions?

The EQB offers guidance on frequently used tools, but no specific tool is required. The RGU has discretion in the methods used to fill out the EAW. The RGU and project proposer should be comfortable with the reliability of the estimates and information provided in their EAW.

Can I still use the calculator if I don't have all the project information?

Yes! Many questions have default values and Minnesota-based averages that can be used in place of project-specific information. For inputs without defaults, a best estimate is a reasonable choice.

Where can I find information about using the calculator?

We'll have a step-by-step user guide on EQB's website, recorded trainings, and ongoing support provided by EQB staff. Please reach out to Stephanie Aho (stephanie.aho@state.mn.us) or the EQB environmental review inbox (env.review@state.mn.us) if help is needed.

Climate calculator = consistent, efficient, and effective EAWs

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Upcoming Trainings

- Wednesday, June 11 @ 1pm Central - Will include Q&A and Calculator Demonstration
- Thursday, June 12 @ 12pm Central – Will include Q&A and Calculator Demonstration

Visit the engagement website for meeting details: https://engage.eqb.state.mn.us/ghgcalculator

Questions? Please reach out!

Stephanie Aho
Stephanie.Aho@state.mn.us

Thank you!