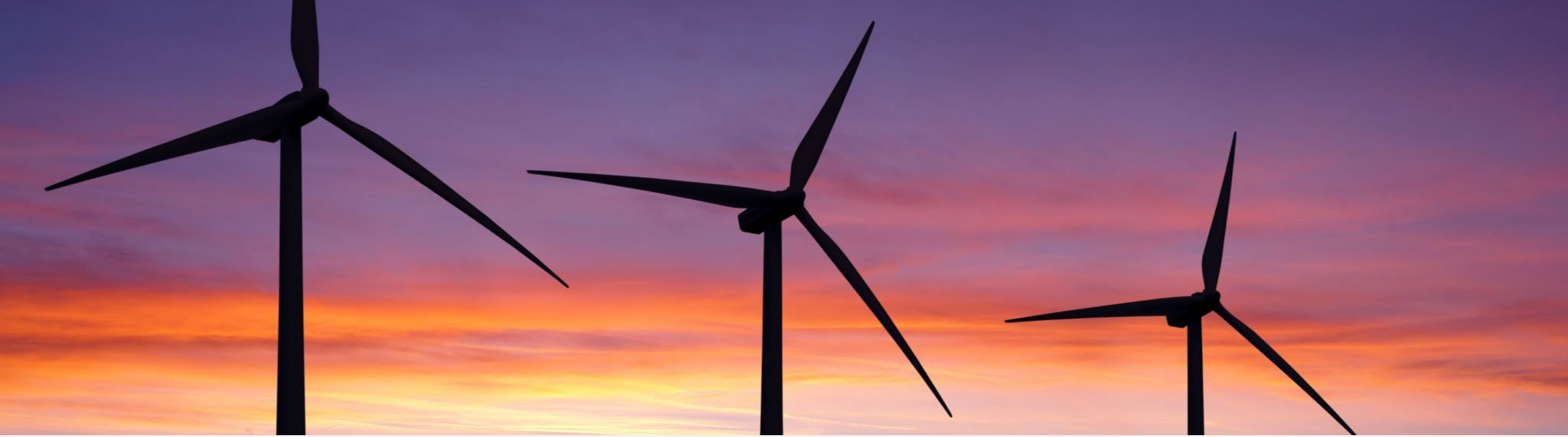


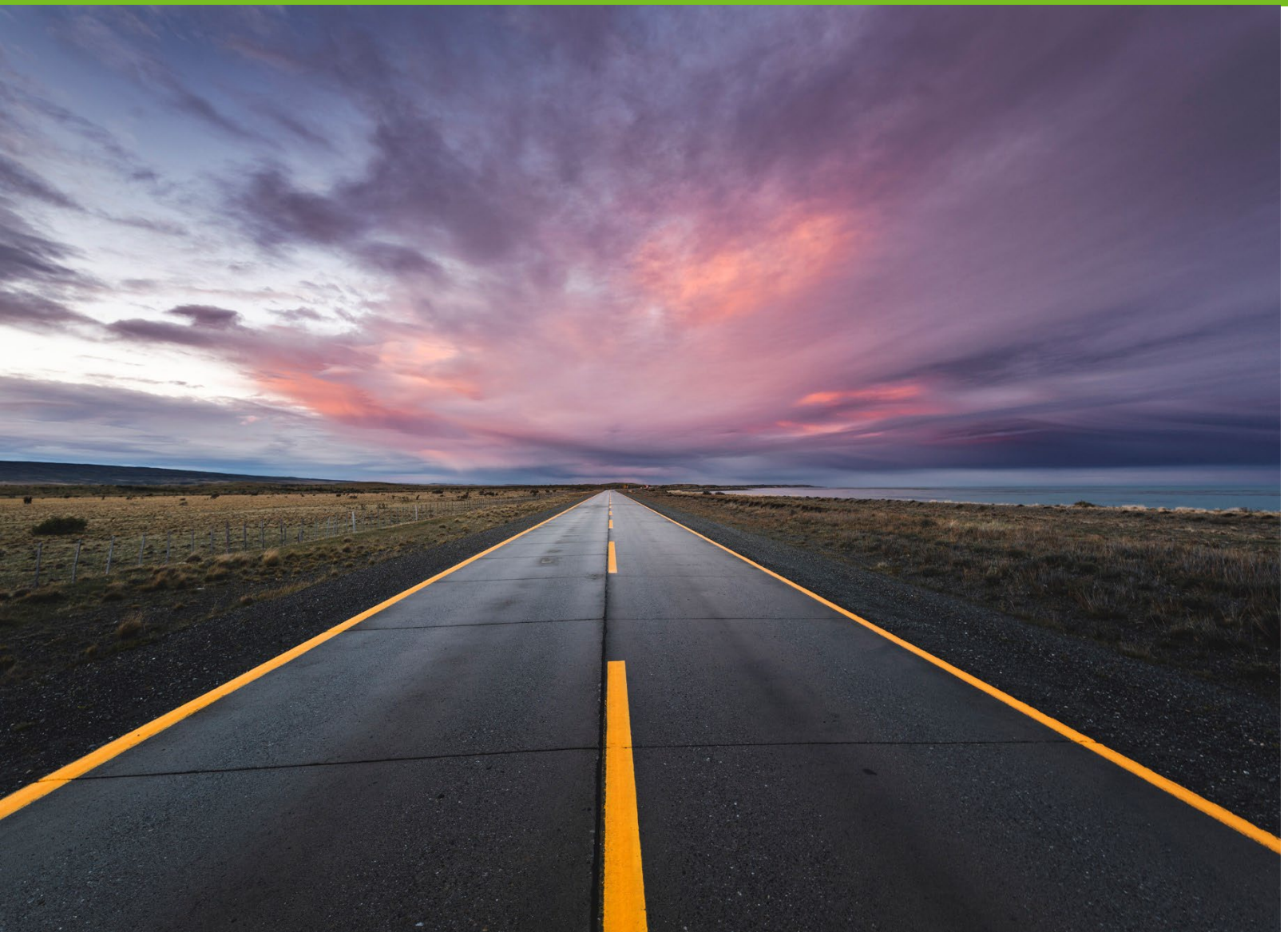
Minnesota Climate Calculator

MINNESOTA
ENVIRONMENTAL QUALITY BOARD

Steph Aho | EQB

November 6, 2025

Outline



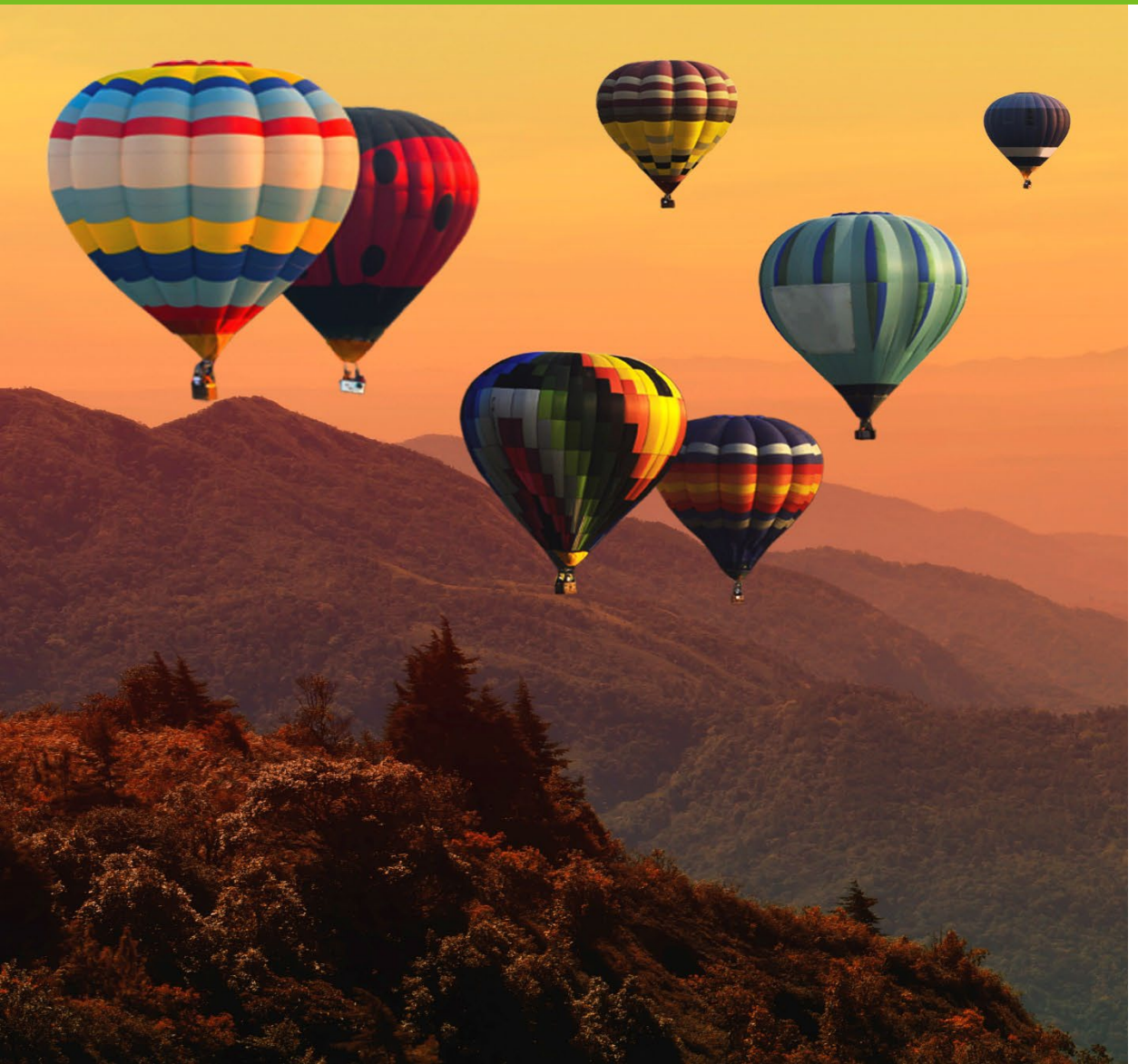
1. Motivation
2. Scope
3. Calculator Team
4. Calculator Overview
5. Calculator Demo
6. Resources
7. Training
8. Roll-out

Motivation: Environmental Assessment Worksheet (EAW)

- Item 7:
  - Qualitative climate adaptation
- Item 18:
  - Quantitative GHG emissions
  - Quantitative GHG mitigation

- ❖ Climate items were added to the EAW in December 2022
- ❖ RGUs asked for help filling out the items consistently, effectively, and efficiently
- ❖ The Climate Calculator is a vetted, free option to address the EAW climate items

Calculator Scope



- Covers most project types
- Accounts for the construction and operation phases of a project's lifetime
- Includes direct and indirect emissions
- Includes adjustable project inputs for project specific results
- Provides mitigation options
- Provides information for climate resiliency and adaptation

Climate Calculator Team

Environmental Quality Board/Staff

- Contract with ICF/Approve Deliverables
- Lead Calculator User Group

ICF – Contractor

- Create Calculator and Report
- Lead Technical Advisory Team

Technical Advisory Team

- Advise on General Approach
- Provide Data/Identify Gap & Issues

Calculator User Group

- Advise on User Experience
- Ensure Calculator is Meeting Needs

Calculator Flow

User Inputs

Known Information About a Project (Construction & Operation)

Calculator

Built in Default, Data-Based Assumptions

Equations to Convert Inputs and Assumptions into Emissions

Output

GHG project emissions

Mitigation opportunities

Climate adaptation strategies

User Input vs Default Assumptions

- Some default assumptions can be overridden by the user.
- Some default assumptions have variations.

Calculator Navigation

Legend

- 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.

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.*
Mitigation	*Identifies potential mitigation measures to reduce GHG emissions from the proposed project.*
Adaptation	*Identifies potential adaptation strategies by climate risk and project characteristic.*
Assumptions	*Assumptions used to calculated construction and operation GHG emissions for each source.*
Constants	*Constants and conversion factors used in calculations.*

Improvement Options

Introduction | User Guide | Project Background | User Inputs | Notes | Construction | Operation | Results | Mitigation | Adaptation | Assumptions | Constants | ...

Informational

Input Tabs

Output Tabs

Background

Resources

Calculator

- Excel spreadsheet tool
- A basic user guide is provided within the calculator

Report

- Comprehensive overview of approach and sources
- Limitations of the calculator

User Manual

- Detailed information about calculator use
- Will provide instruction and background for all calculations

Training

- Informational opportunities open to the public
- Calculator demonstration, Q&A

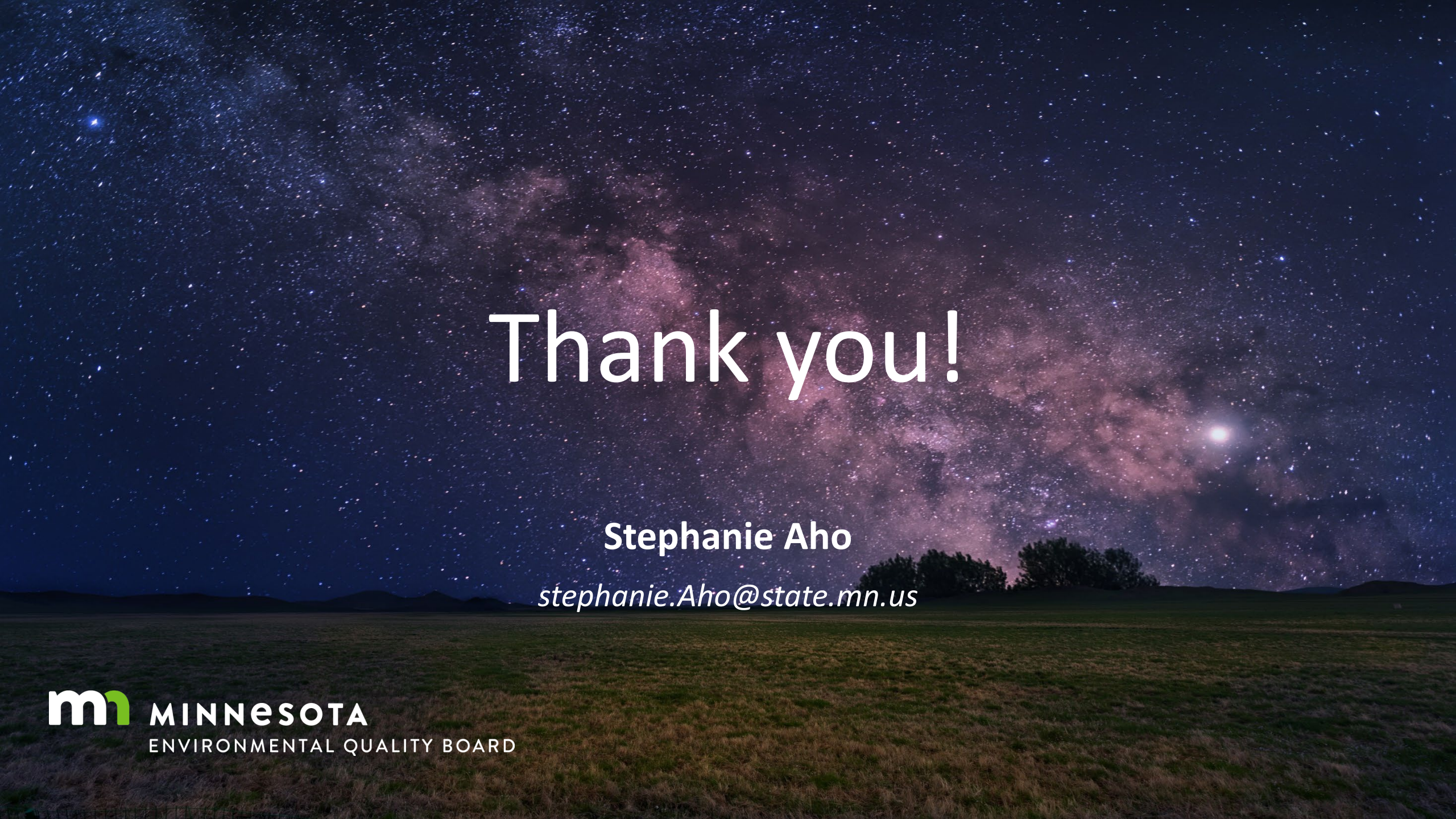
Roll Out

- On July 1st, the Climate Calculator and the user manual were released EQB's website
- EQB will assess the effectiveness of the Climate Calculator through continuous user engagement
- EQB staff will provide ongoing support, trainings, and demonstrations.

Calculator Demo

To see a live demonstration of the Climate Calculator:

- Email Steph Aho at stephanie.aho@state.mn.us
- View the recorded trainings at
  www.eqb.state.mn.us/environmental-review/climate-assessments


Thank you!
Stephanie Aho
stephanie.Aho@state.mn.us
MINNESOTA
ENVIRONMENTAL QUALITY BOARD