Energy · Quality · Controllability℠

Program Planning Working Group

Kickoff meeting
Thursday March 6, 2024

- Date

Agenda

DLC Team introductions	**5 min**
Program Planning Working Group overview & expectations	**10 min**
Participant introductions & challenges	**30 min**
TRM resources overview	**10 min**
Pathways to Connected Lighting	**5 min**

DLC Team Introductions

Karla Winter
DLC

Member Manager
& PPWG Coordinator

Dan Mellinger
Energy Futures Group

Lighting Consultant
& PPWG Facilitator

Levin Nock
DLC

NLC

Jason Jeunnette
DLC

NLC

Kasey Holland
DLC

SSL & Hort

Adrian Martin
DLC

QPL

Andrew Antares
DLC

SSL & QPL

Stuart Berjansky
DLC

Technical Director

Liesel Whitney-Schulte
DLC

Communications Director

Leora Radetsky
DLC

LUNA & Lighting Science

Program Planning Working Group

The **Program Planning Working Group** serves as a dedicated platform for DLC members (utilities and program administrators) to collaborate on planning and implementation of their energy-efficient lighting and controls programs.

This group provides a forum for facilitated discussions with peer programs:

- on challenges and opportunities,
- supports solution development,
- and provides strategic guidance for effective program execution.

Goals

Enhance Energy Efficiency Lighting programs

Share best practices and insights across DLC members organizations and strengthen the role of lighting & controls in utility programs to drive adoption and savings

Improve program effectiveness

Collaborate on adoption barriers and propose solutions, such as addressing integration challenges between HVAC and lighting systems

Develop actionable guidance

Develop actionable guidance for measure development and program implementation

Advance TRM research

Focus on lighting control measures to help members improve existing TRMs or expedite new TRM measures

Calendar

Meeting Frequency: **Bi-monthly** through December 2025

Dates:

Month	Date
March	6
April	24
June	26
September	4
October	30
December	11

- Subcommittees and additional meeting potential dates will be added as needed to support specific topics.

Working Group Structure

- **Agenda & information:** will be provided ahead of the meetings to foster collaboration
- **Perpetual chat function:**
  - Access through Teams after the first meeting
  - Collaboration in between meetings
  - Participation is encouraged
- **Guest speakers:** may be included depending on the topic. Ex: Evaluator, regulator

- Participants can invite peers depending on discussion topics
- Depending on the topic **breakout** rooms for focused discussions

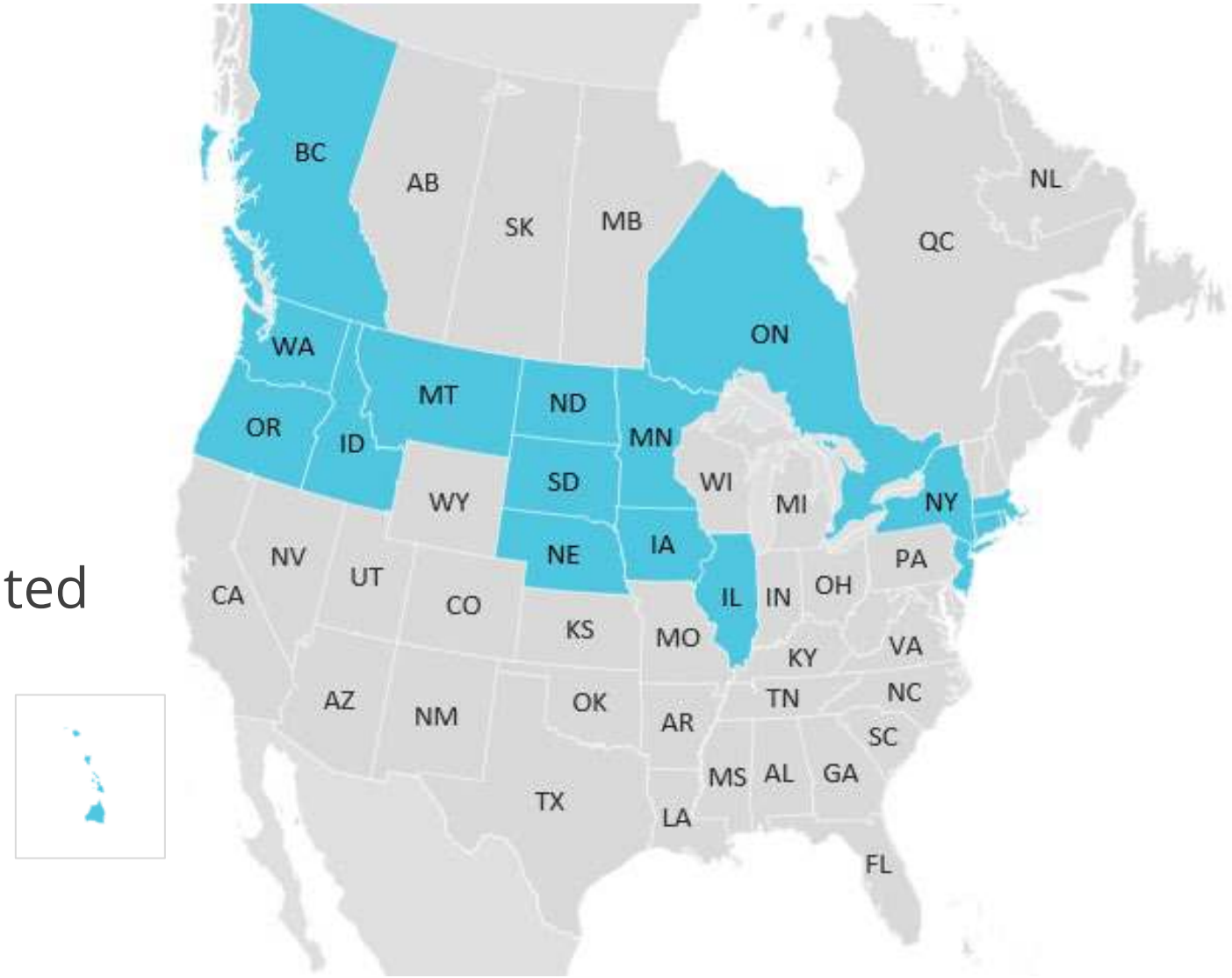
Rules of Engagement

- Active participation, be present (virtually!) and engaged.
- If possible, turn on your camera.
- We expect everyone to share and learn from each other. 2-way flow of information.
- Raise your hand on Teams when you want contribute or use the chat feature.
- Respect others' opinions, share the floor, identify any conflicts of interest, and don't discuss confidential information
- In between meetings, share information and collaborate with your peers through the chat function

Participants

Diverse group includes:

- 17 individuals
- 15 organizations
- 18 states/provinces represented
- Variety of program sizes and types



Program Planning Working Group participants

Please provide a brief introduction, including:

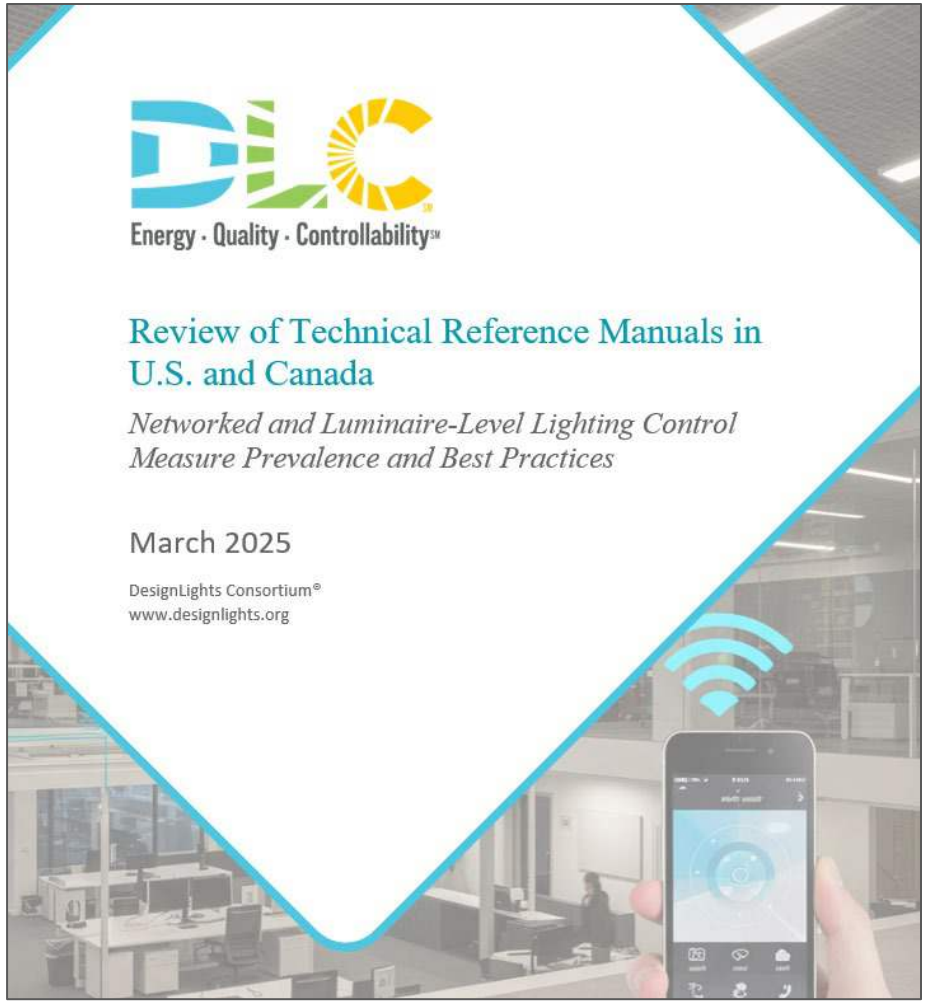
- One or two key challenges you face in implementing your lighting & controls programs
- The topics you are most interested in working on within this group

Program Name	Name	State/Province
BC Hydro	Cristian Suvagau	British Columbia
Cape Light compact	Briana Kane	Massachusetts
ETA	Ed McGlynn	Minnesota
Eversource	Ryan Esthus	Connecticut
Fortis BC	Bryce Millman	British Columbia
Hawaii Energy	Eileen Stewart	Hawaii
Idaho Power	Shelley Martin	Idaho & Oregon
IESO	Mohammed Yousif	Ontario
MidAmerican	Scott Drake	Iowa & Illinois
MidAmerican	David McCammant	Iowa & Illinois
Missouri River	Darlene Weber-Scott	Iowa, Minnesota, North Dakota, South Dakota
National Grid	Erika Miyajima	Massachusetts
National Grid	Amy Dickerson	New York
Nebraska Public Power	Cory R. Fuehrer	Nebraska
NEEA	Anne Curran	ID, MT, OR, and WA
NJ Clean Energy	Rebecca Lynskey	New Jersey
Rhode Island Energy	Travis Jenks	Rhode Island

TRM Resources Overview

Coming Soon! TRM Report and Workpaper

- EFG is nearing completion of a report on TRM research completed in 2023 (and updated in 2025)
- Member-only resource, which includes:
  - TRM intro/overview
  - Prevalence and age of TRMs across U.S. and Canada
  - The extent to which networked and luminaire-level lighting control measures are incorporated
  - Range of key assumptions across different jurisdictions
  - Best practices and recommendations
  - A TRM workpaper template



TRM Report Sneak Peek

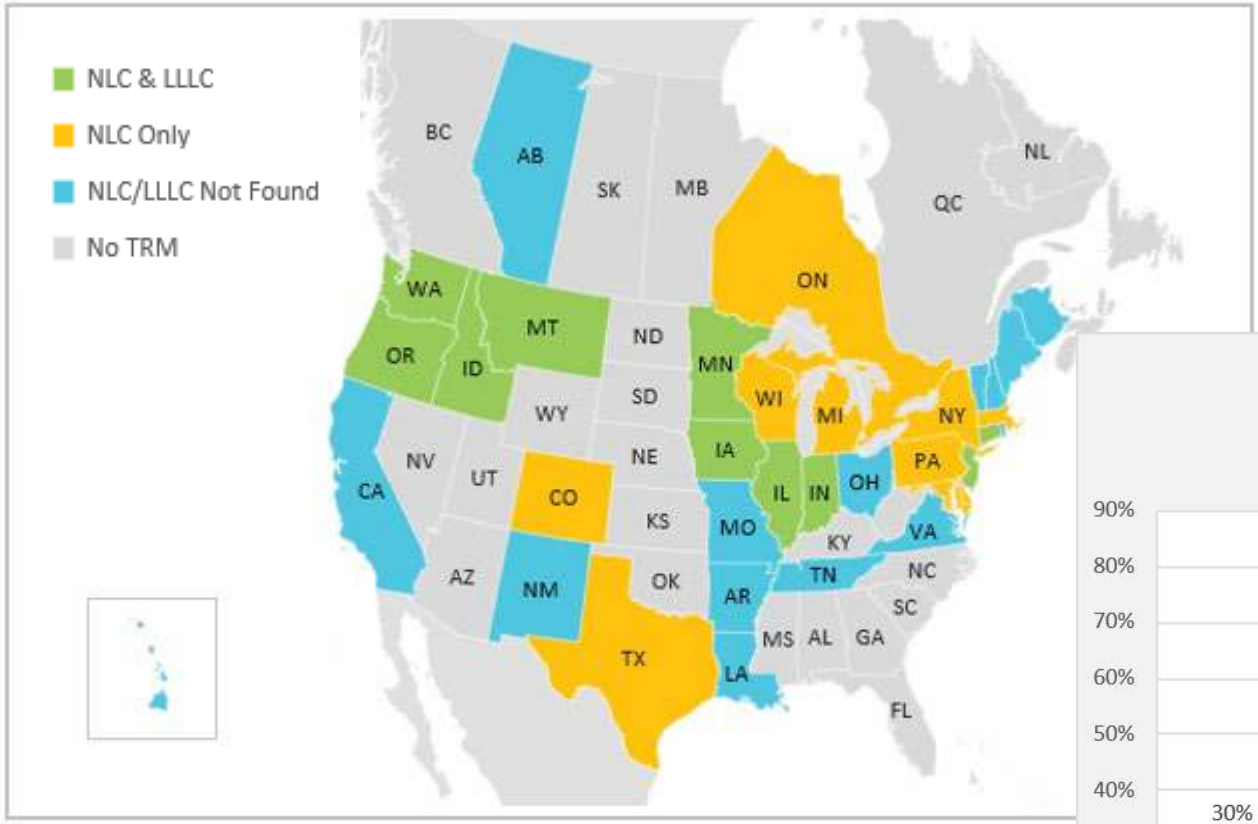
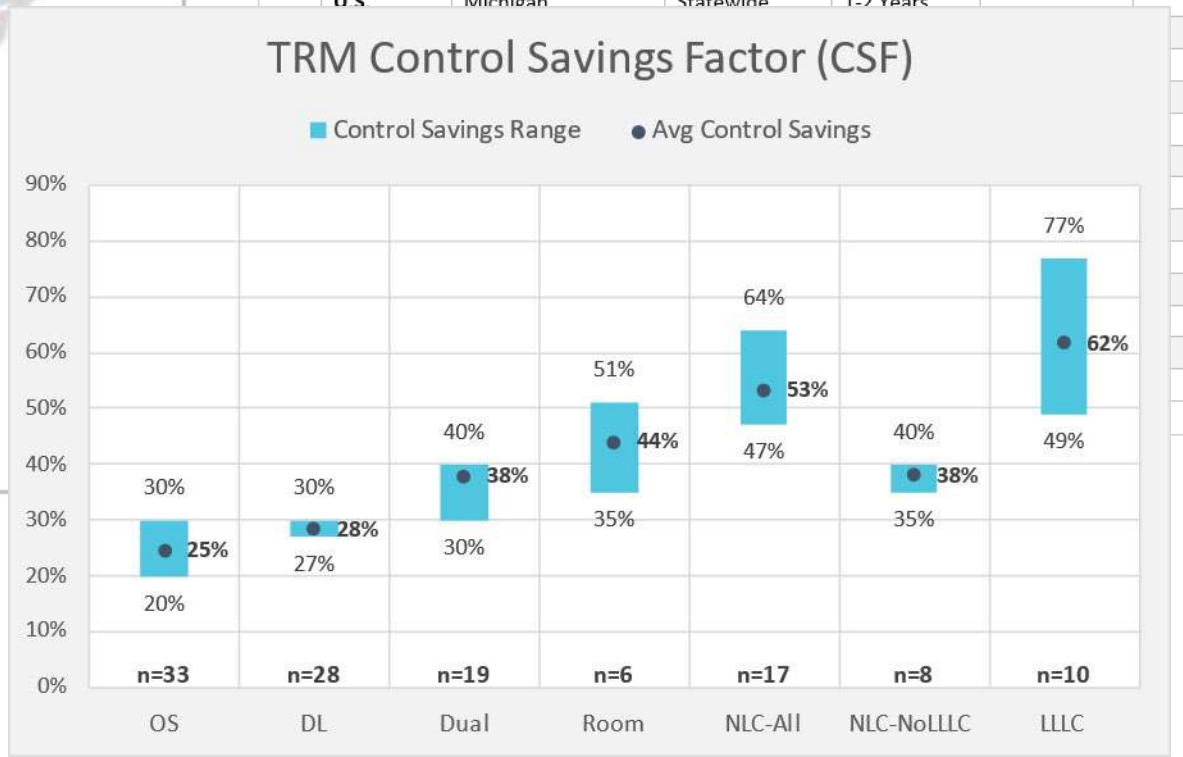


Table 1. States and Provinces with Opportunities to Improve NLC and LLLC TRM Measures

Country	State/Province	Applicability	TRM Age	Add NLC	Add LLLC
Canada	Alberta	Statewide	> 4 Years	●	●
Canada	New Brunswick	Statewide	1-2 Years	●	●
Canada	Ontario	Statewide	> 4 Years		●
U.S.	Arkansas	Statewide	3-4 Years	●	●
U.S.	California	Statewide	< 1 Year	●	●
U.S.	Colorado	Utility Specific	1-2 Years		●
U.S.	Delaware	Statewide	1-2 Years		●
U.S.	District of Columbia	Regional	> 4 Years		●
U.S.	Hawaii	Statewide	1-2 Years	●	●
U.S.	Louisiana	Utility Specific	1-2 Years	●	●
U.S.	Maine	Statewide	< 1 Year	●	●
U.S.	Maryland	Regional	> 4 Years		●
U.S.	Massachusetts	Statewide	< 1 Year		●
U.S.	Michigan	Statewide	1-2 Years		●



Energy · Quality · Controllability℠

TRM Workpaper Sneak Peek

NLC-NoLLLC

Based on our review, there are currently eight states or provinces where the TRMs provide a CSF for NLC and specify that the CSF is for NLC without the inclusion of LLLC (also referred to as '***NLC-NoLLLC***'). Table 2 provides a summary of the CSF values from the eight TRMs that include a NLC-NoLLLC measure. As shown, there is a tight range of CSFs – the mean CSF is 0.38 and the median is 0.40. Four states – Idaho, Montana, Oregon, and Washington – all use the Northwest Power and Conservation Council's Regional Technical Forum (RTF) as the foundation for their savings calculations.

Table 2. Summary of NLC-NoLLLC CSF Values

	NLC-NoLLLC CSF Values	States or Provinces Covered
n	*8*	ID, IL, IN, IA, MN, MT, OR, WA
Min	0.35	
Max	0.40	
Mean	0.38	
Median	0.40	

Two TRMs, covering a total of five states, include CSFs for different building types. In these instances, the 'Office' building type is used in the results presented in Table 2.

LLLC

Our research identified 10 states or provinces where the current TRMs include LLLC as a measure with distinct savings assumptions. Table 3 presents a summary of the range of values currently used for LLLC CSF. As shown, the range of CSF values used for LLLC ranges from 0.49 to 0.77, with an average of 0.62 and a median of 0.63.

Table 3. Summary of LLLC CSF Values

	LLLC CSF Values	States or Provinces Covered
n	*10*	CT, IA, ID, IL, IN, MN, MT, NJ, OR, WA
Min	0.49	
Max	0.77	
Mean	0.62	
Median	0.63	

Electric Energy and Demand Savings

Energy Savings

$$\Delta kWh = kW_{Controlled} \times Hours \times (CSF_{EE} - CSF_{Base}) \times IF_e$$

Where:

- $kW_{Controlled}$ is the number of kilowatts (kW) controlled by the NLC or LLLC system.
  - Source and values: This information should be collected from the customer and documented as part of the program implementation process. The values will be variable as they should be customized for each project. We recommend that midstream LLLC programs rely on the reported wattage on the DLC QPL for the luminaire(s) associated with the LLLC.
- $Hours$ are the annual operating hours associated with the control system.
  - Source and values: Table 10 and current TRM assumptions for annual operating hours associated with other C&I lighting measures.

Table 10. Annual Operating Hours for NLC-NoLLLC and LLLC Measures[C]

General Building Type	Annual Hours of Use
Education	4,231
Manufacturing	5,365
Office	4,453
Retail	6,936
Warehouse	5,116
All Other	Use local operating hour assumptions associated with different building types for other C&I lighting measures

- CSF_{EE} is the Control Savings Factor (CSF) for the NLC-NoLLLC or LLLC measure.
  - Source and values: See Table 11

Table 11. CSF Values for NLC-NoLLLC and LLLC[D]

Control Type	CSF
NLC-NoLLLC	0.35
LLLC	0.63

TRM Report Peer Review

- We would like to invite the Program Planning Working Group to peer review the draft report and workpaper, before being published in April
  - Report is 15 pages (including 9 figures and 2 tables)
  - Workpaper is 17 pages (including 11 tables)
- Timeframe for review is Wednesday 3/12 – Wednesday 3/26 (2 weeks)
- Review is optional; can also refer to others in your organization
- Please keep the draft version confidential
- In parallel, we are having the resources peer reviewed by a handful of TRM developers

Pathways to Connected Lighting Playbook

Pathways to Connected Lighting

1 Background information about this project

2 How to navigate and use this guide

3 Findings from the project survey and interviews

4 Evaluating and assessing your program

5 Understanding your goals and objectives

6 Selecting and calling your play(s)

7 Advanced strategies to accelerate your program

8 Additional resources to help execute your play(s)

Program Strategy	TIER 1	TIER 2	TIER 3	TIER 4
1. Custom Delivery Path	Prescriptive standalone controls **only**	NLC / LLLC projects require custom path	Lighting projects rarely require custom path	
2. Deemed NLC	NA	Prescriptive incentives for NLC		Prescriptive bonus incentives for commissioning or energy monitoring
3. Deemed LLLC	NA	NA	Prescriptive incentives for LLLC	Prescriptive bonus incentives to commission LLLC
4. Trade Ally Network	- **Identify active trade allies** **Proactive email outreach re: program updates**	- **Host at least one annual training event** **Expands network to include design allies**	- **Sponsors multiple workshops annually** **Offers on-demand 101 level training for lighting & controls**	- **Recognizes Trade Ally Network contributions** **Host tech-symposium for end-users to build demand** **Recognizes and targets top tier performers**
5. Financial Incentives	NA	- Temporary incentive bonus Raise incentive cap	- Project Design/Development Incentive Incentive for Systems Integration Demand response enabled	
6. Midstream Delivery Path	NA	Midstream programs for TLEDs & select commodity products	Midstream delivery for multiple lighting measures including standalone controls	Midstream delivery for LLLC only (no standalone)

Next Steps

Keep the discussion going in Teams chat!

WG participants will be receiving a brief poll about future topics.

Dan will be distributing the TRM materials for review on Wed 3/12.

Thank you for your participation !

We appreciate your time & contributions. We look forward to continued collaboration!

Next meeting: Thursday, April, 24

Stay connected: Teams group chat or

Contact: Karla Winter