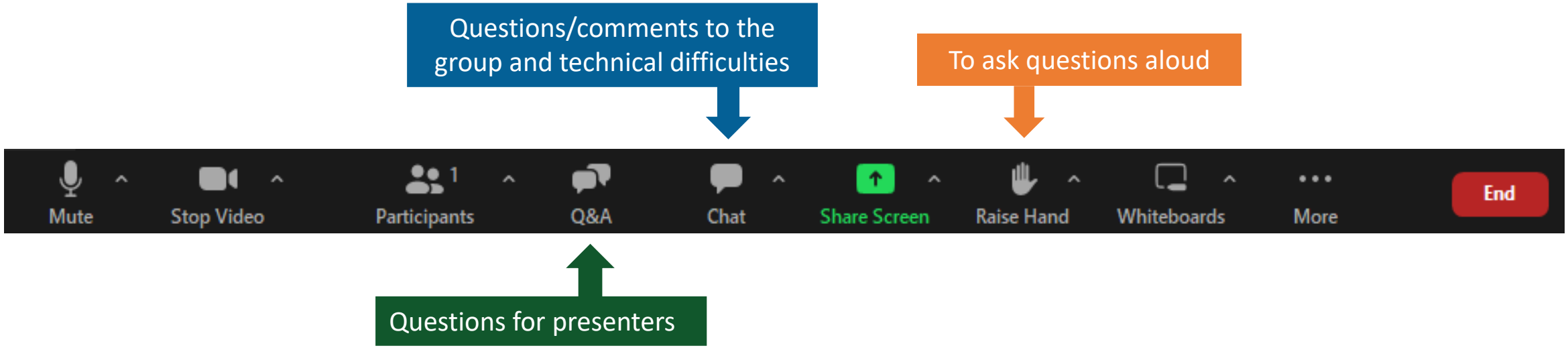
Improving Safety and Effectiveness of Battery Recycling through Collection Best Practices and Voluntary Labeling Guidelines

May 2, 2024 – Tribal Solid Waste Webinar

U.S. Environmental Protection Agency (EPA)

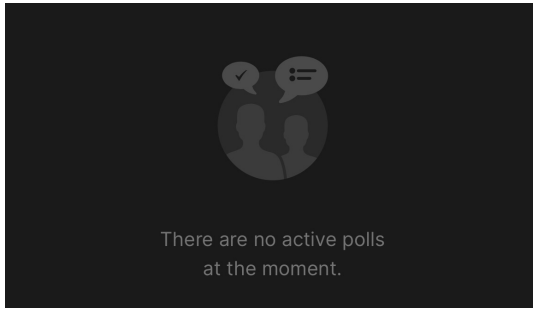
Webinar Logistics



- **Chat box:** Questions and comments for the whole group, as well as technical difficulties.
- **Q&A box:** Questions specifically for presenters.
- **Raise hand:** Questions to be asked aloud.

How to Use Slido

- Two ways to access Slido:
  - Scan the QR code or
  - Go to www.slido.com, enter code 1911 437
- Poll questions begin later in this presentation, there are no active polls now
  - The Slido screen will show this:



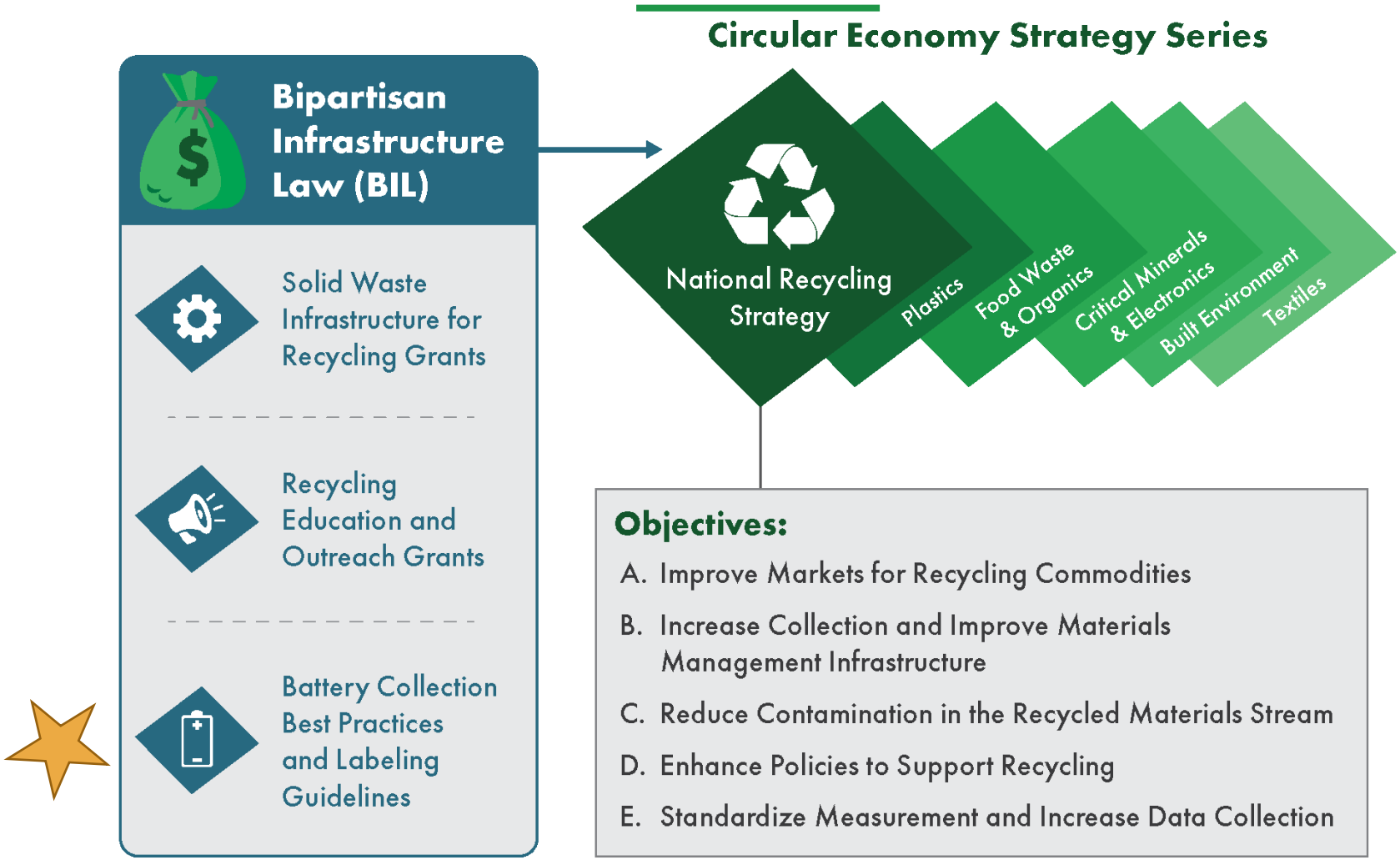
Agenda Overview

1. Project background
2. Planned activities
3. Feedback from Tribes to date
4. Additional interests and concerns
5. Resources
6. Next steps

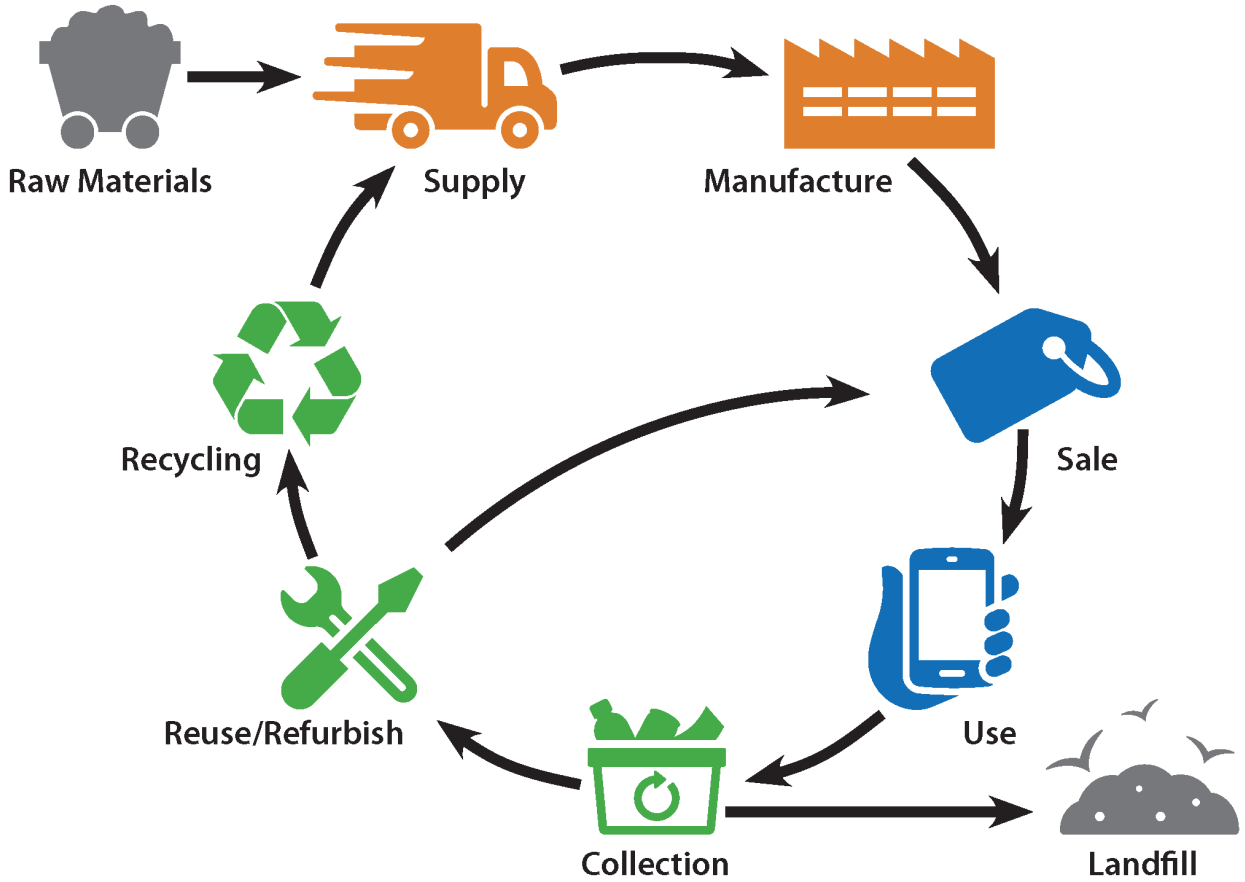
Project Background

Ellen Meyer
Batteries and Critical Minerals Senior Scientist
Resource Conservation and Sustainability Division
U.S. EPA

EPA's Circular Economy Initiatives



The Battery Life Cycle



Collection Best Practices

Best practices will focus on:

- Identifying and increasing accessibility to battery collection locations
- Promoting consumer education
- Reducing hazards from improper disposal (fires)

Best practices will be:

- Technically and economically feasible
- Environmentally sound and safe for workers
- Beneficial to increasing the recovery of critical minerals

Battery Labeling Guidelines

Labeling guidelines will be designed to improve battery collection and reduce battery waste by:

1. Identifying battery collection locations and increasing accessibility to those locations.
2. Promoting consumer education about proper battery management.
3. Reducing safety concerns relating to improper disposal of batteries.

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Which of these two products interests you the most or will be most helpful to you?

ⓘ Start presenting to display the poll results on this slide.

Scope of Batteries

Category	Small format consumer electric and portable batteries		Mid-format batteries	Large format vehicle and motive equipment batteries	Large format stationary storage batteries
Type	Single use (Primary)	Rechargeable (Secondary)	Rechargeable	Rechargeable	Rechargeable
Use	Removable or embedded in electronics and electric devices, such as watches, hearing aids, cameras, key fobs, toys, portable radios, flashlights.	Removable or embedded in electronics and electric devices, such as phones, computers, appliances, small uninterruptable power supplies (UPS), power tools, power banks.	E-mobility including e-bikes, e-scooters. Outdoor power equipment. Portable power stations.	All scales of automotive starting and motive vehicle batteries. Materials handling equipment (forklift, crane, etc.) Recreational (golf carts, marine equipment, recreational vehicles, etc.)	Residential, including power wall, backup generators. Grid, including utility, solar, wind. Off grid and microgrid. Commercial, including building systems, data centers, server rooms, medical and hospital equipment, retail backup power.

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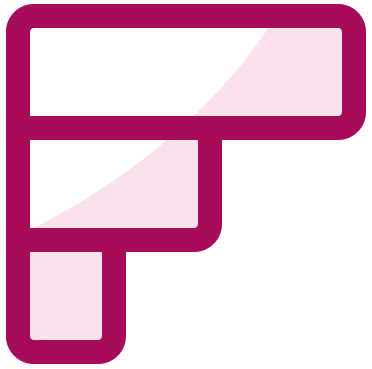
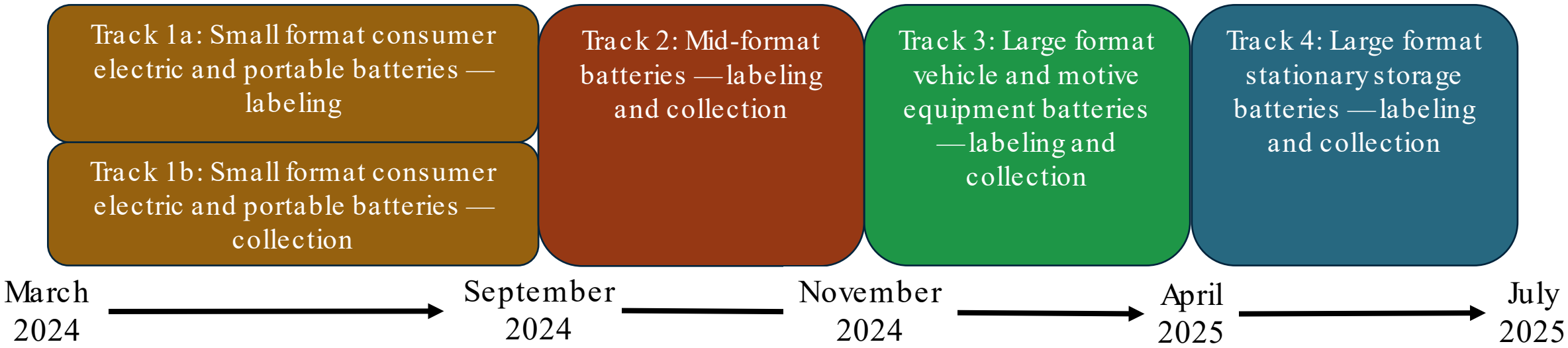


What are the three types of batteries that concern you the most?

ⓘ Start presenting to display the poll results on this slide.

Planned Conversation Timeline

- A sequenced approach to conversations
- Small format labeling and collection conversations will proceed concurrently
- Leveraging existing, in-person meetings to test ideas and share updates



Upcoming Small Format Consumer Electric and Portable Batteries Working Sessions

Meeting Focus	Meeting Topic	Meeting Date	Meeting Time	Format
Labeling and Collection	Kickoff: Current Landscape and Engagement Overview	March 19, 2024	2:00-3:30 PM EDT	Virtual
Collection	Collection Systems and Locations	April 11, 2024	2:00-4:30 PM EDT	Virtual
Labeling and Collection	Tribal Waste Management Webinar	May 2, 2024	1:00-3:00 PM EDT	Virtual
Collection	Safe Collection, Storage, and Transport	May 14, 2024	2:00-4:00 PM EDT	Virtual
Labeling	In-Person Meeting Participant Prep Call (placeholder)	June 6, 2024 (TBD)	TBD	Virtual
Labeling	In-person Intensive Session: Label Contents	June 12-14, 2024	9:00 AM-4:00 PM EDT	In-Person
Collection	Education and Outreach	June 20, 2024	2:00-4:30 PM EDT	Virtual
Labeling	Report Out from In-Person Intensive and Additional Input	July 16, 2024	2:00-4:00 PM EDT	Virtual

Initial Outreach (June-July 2022)

Request for Information

EPA issued a request for information to collect information on the current state of battery collection and labeling for batteries of all sizes and chemistries. EPA received 59 RFI responses from both people and organizations.

Virtual Feedback Sessions

EPA hosted two large-scale virtual feedback sessions open to all stakeholders involved in the battery life cycle to inform battery collection and labeling effort. Over 780 unique participants attended these feedback sessions.

Tribal Webinar

EPA held one feedback session for Tribal partners to provide background information on the BIL and circular economy activities, introduce the battery collection best practices and voluntary labeling guideline initiatives, and gather targeted feedback from Tribal communities.

Initial Feedback from Tribes

- Lack of access to battery recycling
  - High costs for collection, storage, and transportation
  - Lack of education on proper sorting, storage, and transport
  - Battery recycling programs difficult to fund through GAP funding
  - May not have convenient access to retail collection locations
- Lead-acid car battery recycling is often not available in Tribal communities, let alone systems for other battery types
- Growing concern about safety issues associated with EV batteries

Backhaul Alaska Example

- The Backhaul Alaska program coordinates safe hazardous waste hauling out of rural Alaskan communities and runs a lead-acid battery collection initiative.
- Managed by the Alaska Department of Environmental Conservation; the Alaska Native Tribal Health Consortium; Kawerak, Inc.; and the nonprofit Zender Environmental Health.
- Backhaul Alaska successfully collected and recycled approximately 100,000 pounds of lead-acid batteries across more than three dozen remote Alaska communities.
- The Responsible Battery Coalition supported this effort by providing packing, shipping, and training materials; transportation support; and recycling services, all at no cost.

CHAT QUESTION

- What other barriers are you facing when it comes to battery collection?

CHAT QUESTION

- Does anyone currently have a battery collection system in place? If so, what type of batteries do you collect?
  - Feel free to raise your hand to share your experience.

CHAT QUESTION

- Do you have or have you seen any good battery-related education and outreach materials that have been used in tribal communities?
  - Please tell us about it!

CHAT QUESTION

- What types of products would be most helpful for you?
  - Templates for outreach
  - Case studies
  - Training resources

- What else would be helpful?

CHAT QUESTION

- Is there a tribal technical organization that could be helpful in addressing some of these issues or assisting Tribes with implementation? If so, which one?

Resources

Funding Opportunities

- EPA Clean Heavy-Duty Vehicles Grant Program
  - $932 million for Class 6 and 7 zero emission vehicles
- DOE Funding to Establish Battery Collection Programs
  - State and Local Programs for Consumer Electronics Battery Collection
  - Cost share – 50%
  - Funded $7.2M to date
- EPA Solid Waste Recycling Infrastructure Funding
  - For states, Tribes, and municipal governments
  - No cost share
  - Previous round funded 59 Tribes at more than $60M
  - Sign up to stay connected to our listserv as future rounds of funding are developed: https://www.epa.gov/circulareconomy/forms/stay-connected

Next Steps

Next Steps

- Register for the May 14 collection systems and locations meeting: https://www.zoomgov.com/webinar/register/WN_jrKQv6MRSC226W56prH5WQ
- Fill out the interest form for the June in-person meeting: https://forms.gle/sTVdnFgK2QtzFUwE6
- Email batteries@epa.gov if you have an interesting story to tell about education/outreach; collection systems; or safe storage, transport, and recycling.

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Questions?

- Email batteries@epa.gov