



Clean
Lighting
Coalition



ASAP | APPLIANCE STANDARDS
AWARENESS PROJECT



NSAC NATIONAL
STEWARDSHIP
ACTION COUNCIL™



ENVIRONMENT
AMERICA

Webinar

State of the Lightbulb: Saying Farewell to Fluorescents

October 4th, 2023

Webinar

State of the Lightbulb: Saying Farewell to Fluorescents

- Please submit all your questions in the Q & A feature
- Q & A will take place at the end of the webinar
- Slides, Q & A and recording will be shared after the webinar

ASAP

APPLIANCE STANDARDS
AWARENESS PROJECT

Clean Lighting

Policy Overview & State Update

www.appliance-standards.org

Quick Background – Clean Lighting

Fluorescent light bulbs still seeing significant sales, contain mercury by design.

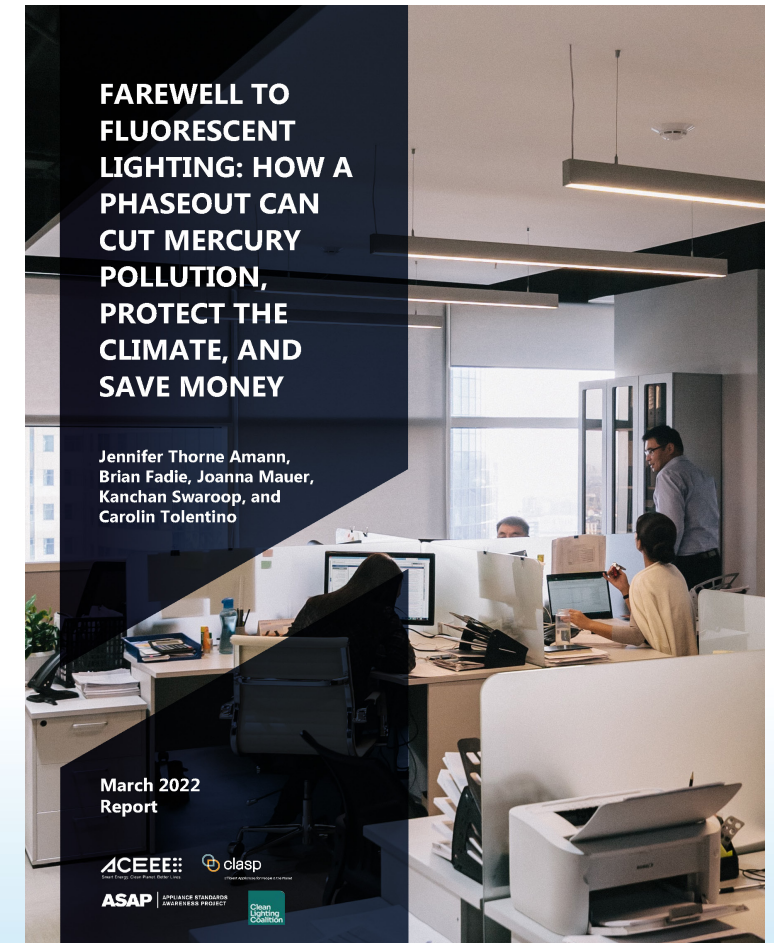
- GOAL: Phase out general-purpose fluorescent light bulbs allowing LEDs to take their place
- LEDs are 2X more energy efficient, last 2-3X longer, do not contain mercury
- Large savings on energy, emissions, utility bill, and mercury pollution by switching to LEDs



2022 ASAP/ACEEE Lighting Report

Answers Qs regarding LEDs replacing fluorescents

- Availability of replacement LEDs ✓
- Performance ability of LEDs ✓
- Life cycle cost of LEDs vs fluorescents ✓
- State savings from switch to LEDs ✓
 - Electricity, GHG, consumer savings, mercury



Manufacturer Statements



PHILIPS
LED tubes

Real pros say
**farewell to
fluorescent.**

The new Philips MASTER Value LEDtube Universal T8.
Maximum value – monumental performance.


New

PHILIPS

“The Master Value LEDtube Universal T8 is the ideal alternative to standard fluorescent tubes for all demanding lighting applications.”

State Savings + Light Bulb Economic Analysis

| State | Potential annual reductions in 2030 | | | Potential annual electricity savings in 2030 (GWh) | Potential annual electricity bill savings in 2030 (million 2020\$) |
|----------|-------------------------------------|-------------------------------------|---------------------------------------|--|--|
| | Mercury in lamps shipped (lbs) | Power plant mercury emissions (lbs) | CO ₂ emissions (thous. MT) | | |
| Michigan | 33.8 | 3.67 | 692 | 1,478 | 149 |

 **\$149M annual savings**

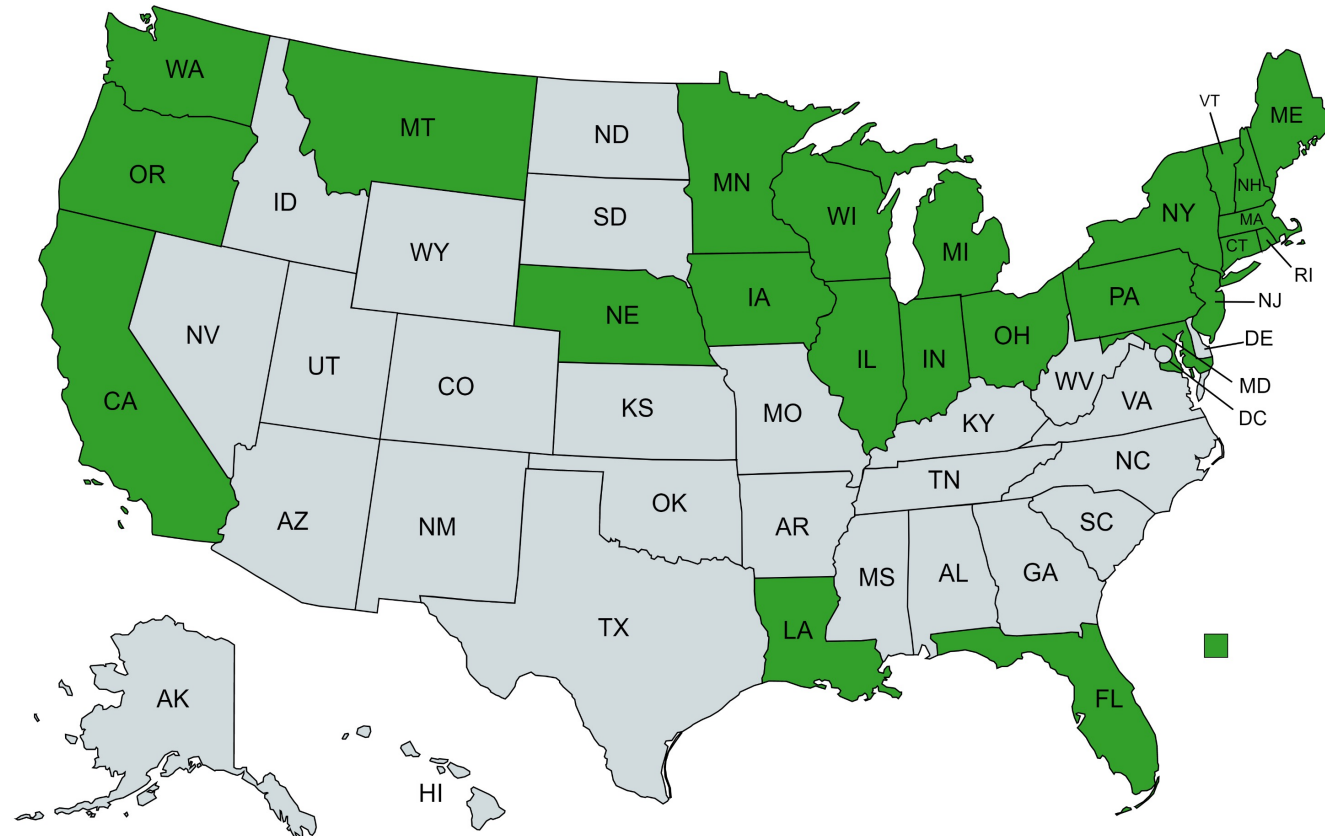
Assuming a compliance date of 2025.

| Baseline LED lamp type | Incremental cost (2020\$) | First-year electricity bill savings (2020\$) | Lifecycle cost savings (2020\$) | Payback period (years) |
|------------------------|---------------------------|--|---------------------------------|------------------------|
| 4-foot T8 | 0.54 | 4.14 | 27 | 0.1 |

 **Most common lamp**

States Can Phase Out Fluorescents Using Mercury Laws

States with Existing Mercury Laws (24)



Clean Lighting Model Bill

A starting point for state policies

- Contains all technical language
- States may customize to fit any existing mercury laws

2023 State Clean Lighting Policy – Recommended Language

The following recommended clean lighting policy language is based on laws enacted in California ([AB 2208](#)) and Vermont ([H.500](#)). For questions, please contact Brian Fadie of Appliance Standards Awareness Project at bfadie@standardsasap.org.

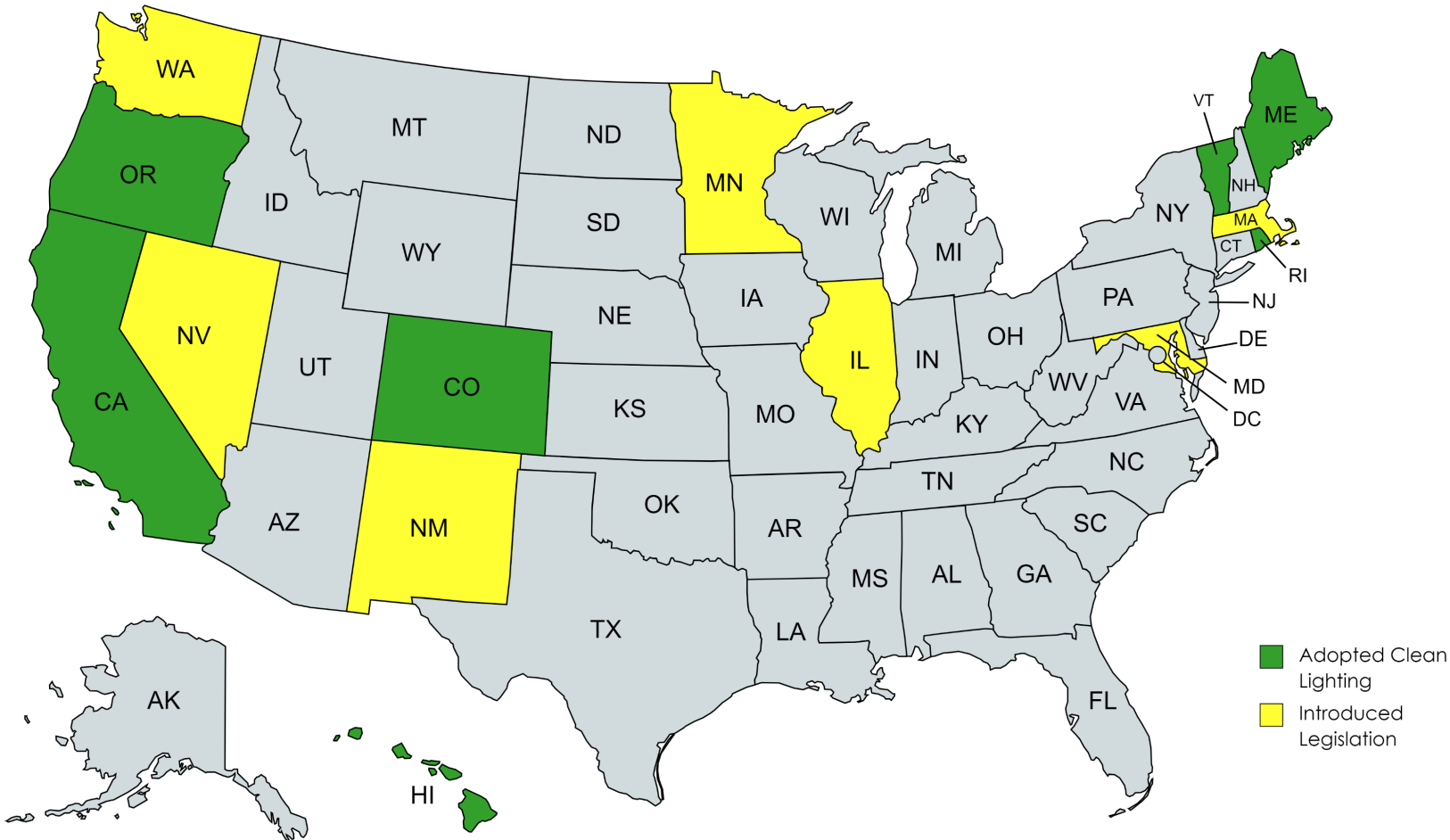
Section 1. Findings

The legislature finds that:

- (a) Mercury is a persistent and toxic pollutant that bioaccumulates in the environment and poses a serious threat to humans, particularly young children, and wildlife.
- (b) Human exposure to mercury can result in nervous system, kidney, and liver damage and impaired childhood development.
- (c) All fluorescent lamps contain mercury and can create an immediate public health and environmental hazard when they accidentally break during installation, use, transportation, storage, recycling, or disposal.
- (d) Light-emitting diode (LED) replacements for fluorescent lamps do not contain mercury.
- (e) LED replacements for fluorescent lamps are widely available for the range of fluorescent lamps used to light businesses and homes and last two to three times longer.

2023 Clean Lighting Model Bill

2022 & 2023 Clean Lighting State Activity



- 7 states adopted (green)
- 7 more introduced (yellow)
- First implementation date approaching
 - Jan 1, 2024 screw-base CFLs

State of the Lightbulb: Saying Farewell to Fluorescents



Representative Nicole Lowen
State of Hawaii



Sarah Nichols
Natural Resources Council of Maine



Assemblymember Ash Kalra
State of California



Heidi Sanborn
National Stewardship Action Council



Brian Fadie
Appliance Standards Awareness Project



Susanne Passantino
Republic Services



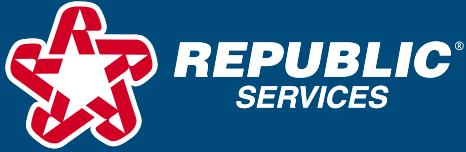
Assemblymember Ash Kalra

State of California



Representative Nicole Lowen

State of Hawaii



Clean Lighting National Webinar

Waste & Recycling Service Provider Priorities





- Second largest provider of waste, recycling & environmental services in U.S.
- Fully integrated collection & post-collection processing (recycling, organics and disposal)
- Recent entrant into hazardous & universal waste service sector (U.S. Ecology and regional acquisitions)
- Leader within sector on climate initiatives such as EV fleet conversion, use of RNG for renewable power, full cycle plastics recovery, corporate accountability
- Leading advocate within industry for single use packaging legislation and pivot toward responsible product manufacturing
- Company places employee and community safety/well being as the top priority for it's leadership team



Health Impacts of Legacy Manufacturing Processes



- Waste and recycling service employees have a multitude of opportunities to encounter fluorescent lamps
- Non-automated collection, material recovery facilities, organics pre-processing, household hazardous waste collection & landfills are primary locations
- Legacy products are fragile and release of contaminants (mercury) is highly probable within operations that are manual and mechanical in nature
- Pathways are topical, respiratory or even vascular if shell of lighting component is compromised
- Mercury exposure can lead to health issues (respiratory, fatigue, headaches and neurological symptoms)
- Safe work environments lead to greater job satisfaction and higher level of employee retention



Environmental Impacts of Legacy Manufacturing Processes

- Improper management of fluorescent lights can cause introduction of mercury into the surrounding environment
- Pathways include soil, airborne, surface and groundwater contamination, landfill leachate delivered to POTW with subsequent surface water discharge containing trace amounts
- Mercury contamination can persist for decades and cycle it's way through the ecosystem continuously
- Wildlife depending upon aquatic ecosystems for their food source are particularly susceptible
- Inadvertent crushing of fluorescent bulbs can lead to release of mercury into the atmosphere
- Airborne emissions containing mercury become primary means of transmission to the ecosystem



Sarah Nichols

Natural Resources Council of Maine



Heidi Sanborn

National Stewardship Action Council



**NATIONAL
STEWARDSHIP
ACTION COUNCILSM**

ADVOCATING FOR AN EQUITABLE, CIRCULAR ECONOMY

Strategies & Tactics to Pass Clean Lighting Legislation

State of the Lightbulb: Saying Farewell to Fluorescents Webinar
10/4/2023

NSAC'S VISION: The United States attains an equitable, circular economy.

Who is NSAC & SAF?



The National Stewardship Action Council (NSAC) is a 501(c)4 non-profit organization. NSAC is a network of committed proponents comprised of governments, non-government organizations, businesses, and consumers who advocate that **producers fairly share responsibility in an equitable, circular economy.**



Affiliated 501(c)3 for **education and outreach** initiatives that aligns with NSAC's advocacy work

Vision: The United States attains an equitable, circular economy.

Mission: Collaborate with public, private, and non-profit stakeholders to achieve an equitable, circular economy.

Thank you to our sponsors!



WEST COUNTY
WASTEWATER



Merlin Plastics



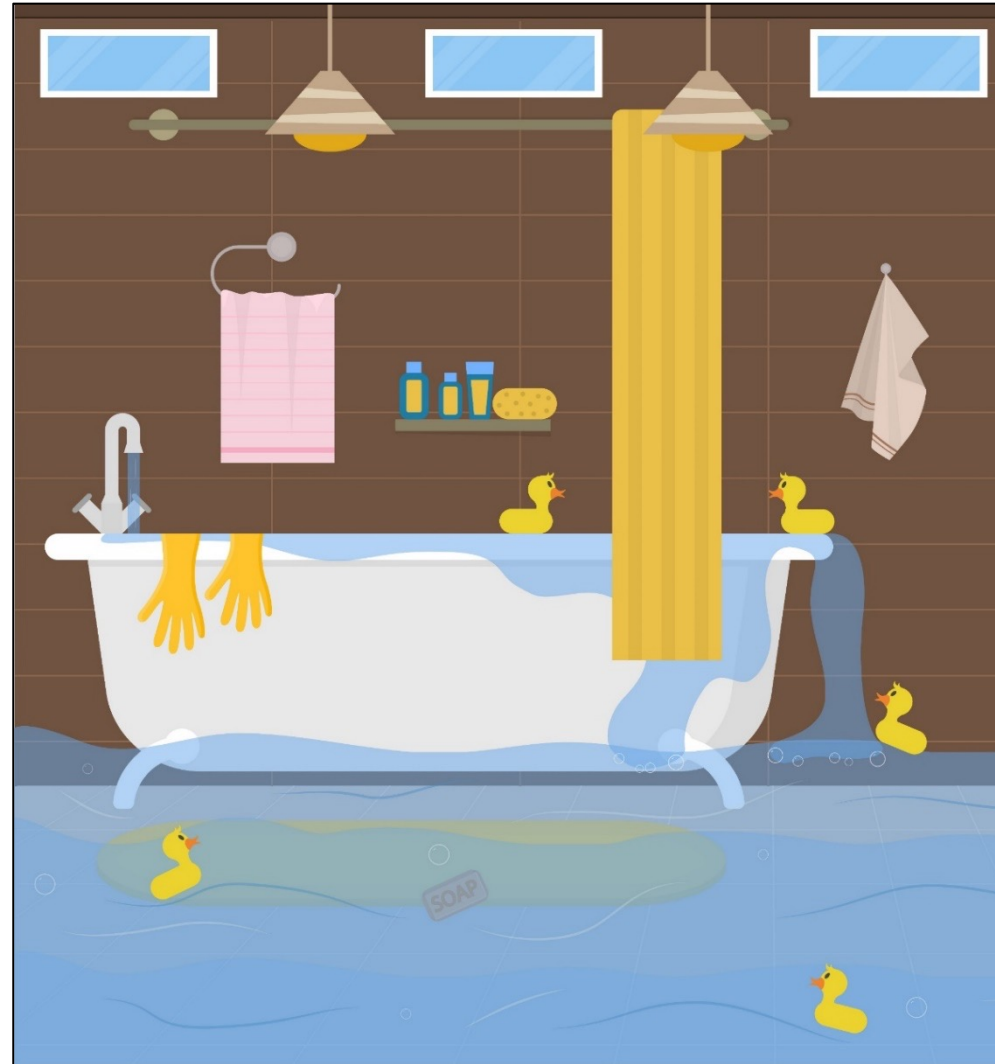
CEAR



NATIONAL STEWARDSHIP ACTION COUNCIL

The bathtub is overflowing, what do you do FIRST?!

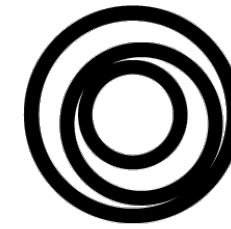
Second?



What is a Circular Economy?

It is based on three principles:

1. **Design out waste and pollution**
2. **Keep products and materials in use**
3. **Regenerate natural systems**



ELLEN
MACARTHUR
FOUNDATION

Decouples economic activity from the consumption of finite resources.



Strategies & Tactics

- Recommendation from the Statewide Recycling Commission!
- Opposition to neutral
 - Exemptions for academia & research, disinfection, suntanning, pharmaceutical product manufacturing or quality control, etc.
 - NEMA: pin-base CFL phase-out extension to 2025



“Twenty years from now, our hope is that nothing goes onto market that has no end-of-life management program in place.”

HEIDI SANBORN



Heidi Sanborn

Executive Director
Cell: (916) 217-1109
Heidi@nsaction.us

www.nsaction.us

www.stewardship-foundation.org

Join & Follow Us!



Clean Lighting Advocacy Toolkit

Found on ASAP website: [appliance-standards.org/clean-lighting](https://www.appliance-standards.org/clean-lighting)

- Model bill
- State savings reports
- Example advocacy material (fact sheet, sign-on letter, press release, etc)
- Supporting information (reports, webinars, and more)

Clean Lighting Advocacy Toolkit

appliance-standards.org/clean-lighting

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Clean Lighting

Flipping the Switch to Clean Lighting

Seven states have phased out the sale of most fluorescent light bulbs in favor of LED lighting, saving energy, reducing carbon dioxide, and utility bill savings while avoiding a source of mercury pollution. Interested in learning more? Check out the resources below for resources!

Fluorescent lights are a common sight in offices, garages, and basements—but they're also a source of mercury pollution. LED lighting is a cleaner, more energy-efficient alternative. Seven states have phased out the sale of most fluorescent light bulbs in favor of LED lighting, saving energy, reducing carbon dioxide, and utility bill savings while avoiding a source of mercury pollution. Interested in learning more? Check out the resources below for resources!

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Clean Lighting Advocacy Toolkit

- Informational Resources
- Advocacy Example Material
- Bill Status 2022 and 2023

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Clean Lighting Advocacy Toolkit

Informational Resources

| | |
|------------------------------------|--|
| If you'd like information about... | Go to... |
| Savings for your state | Potential state savings from 2023 clean lighting policies |
| 2023 clean lighting model bill | 2023 clean lighting model bill (Word document) |
| The lighting market | "Farewell to Fluorescent Lighting: How a Phaseout Can Cut Mercury Pollution, Protect the Climate, and Save Money." |

Q & A



Thank you!



Representative Nicole Lowen
State of Hawaii
replowen@capitol.hawaii.gov



Sarah Nichols
Natural Resources Council of Maine
snichols@nrcm.org



Assemblymember Ash Kalra
State of California
maria.parra@asm.ca.gov



Heidi Sanborn
National Stewardship Action Council
heidi@nsaction.us



Brian Fadie
Appliance Standards Awareness Project
bfadie@standardsasap.org



Susanne Passantino
Republic Services
spassantino@republicservices.com