

WaterSense® Pool Covers Notice of Intent (NOI) Public Meeting Summary

November 15, 2018, 1:00 to 3:00 p.m. Eastern, Webinar

Meeting Summary

Stephanie Tanner, the U.S. Environmental Protection Agency (EPA) WaterSense program's Lead Engineer, welcomed everyone to the meeting, clarified how to use the webinar software, and reviewed the meeting agenda and purpose for the audience. The purpose of the webinar was to introduce a new group of stakeholders to the WaterSense program and review the *WaterSense Notice of Intent (NOI) to Develop a Specification for Pool Covers*. The PowerPoint slides from this presentation can be reviewed on the WaterSense website at www.epa.gov/watersense/pool-covers.

After reviewing the meeting agenda, Ms. Tanner polled attendees on what types of organizations they represent to give presenters a sense of the audience. The results are shown in Figure 1. A full list of the attendees and a list of presenters are presented in Appendix A.

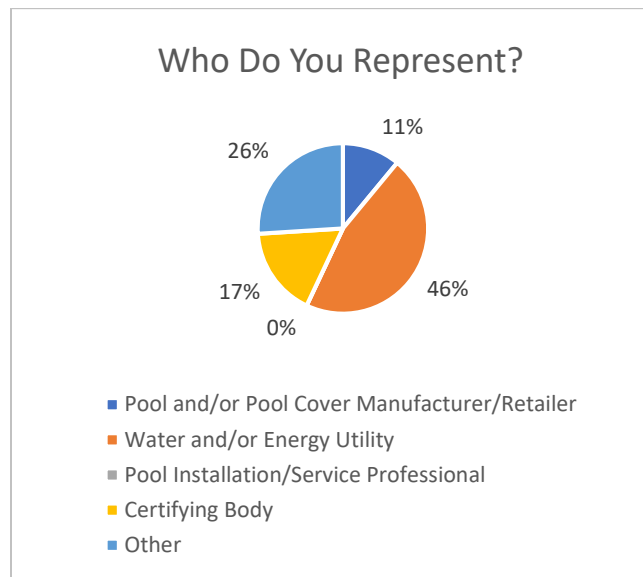


Figure 1. Poll Question #1

The presentation discussion and participant questions and comments are summarized below.

1. Introduction

Ms. Tanner provided an overview of WaterSense, a voluntary program that labels water-efficient, high-performing products, including the program's history and the typical WaterSense specification development process. WaterSense interacts with industry and other stakeholders, such as standards committees and utilities, during this process. She noted the criteria the

program uses for product evaluation and labeling. Through 2017, WaterSense has helped save 2.7 trillion gallons of water and \$63.8 billion in water and energy bills.

2. Pool Covers Background

Tessa Roscoe (Eastern Research Group, Inc. [ERG]) described the background research WaterSense has conducted on pool covers and how they can reduce water waste. She described the types of pool covers and control mechanisms presently on the market, as well as the many aspects of pool covers that influence consumer purchasing decisions. Ms. Roscoe polled the audience about which types of products the manufacturers in attendance represented. The results are shown in Figure 2.

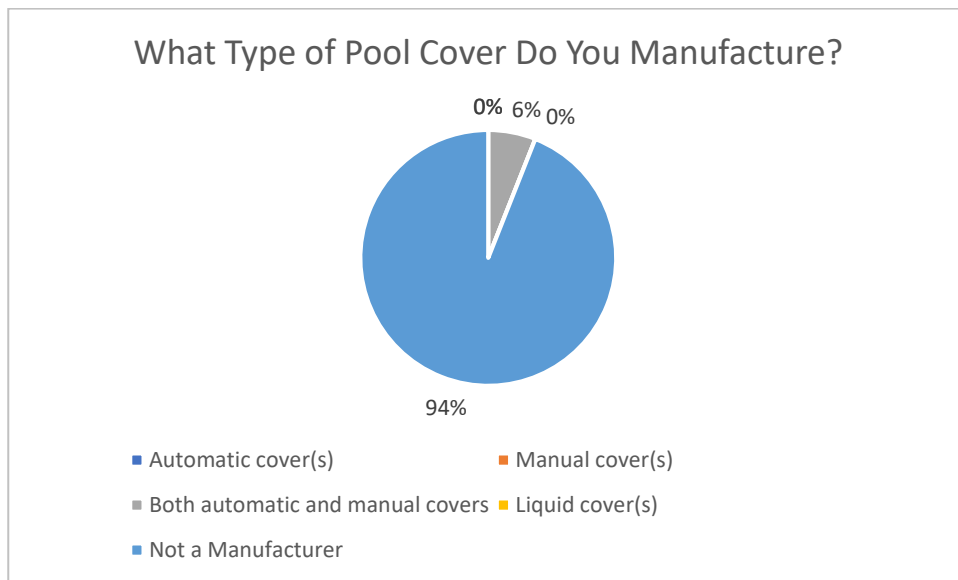


Figure 2. Poll Question #2

Ms. Roscoe reviewed the existing standards, codes, and test methodologies for pool covers that WaterSense identified, as well as the existing studies and data available describing the complex relationship between pool cover use and water savings. EPA’s initial pool cover research also included information on the product market and pool and housing construction trends.

Given the complicated nature of calculating realized water savings resulting from pool cover use, WaterSense used the available data to construct simple estimates of evaporative pool water loss from an average residential in-ground pool under two differing climate scenarios, shown in Table 2. These water losses were then converted to energy losses, representing a heated pool of the same size, shown in Table 3.

Table 2. Individual Pool Water Loss

Pool Size	Pool Size	Annual Pan Evaporation Rate	Annual Water Loss to Evaporation	Annual Cost of Water Loss ¹
Feet ²	Inches ²	Inches/year	Gallons/year	--
500	72,000	40	12,000	\$130
500	72,000	100	31,000	\$340

Table 3. Energy Costs from Individual Pool Water Loss

Pool Size	Pool Size	Annual Energy Loss	Annual Cost of Electricity Energy Loss ²	Annual Energy Loss	Annual Cost of Natural Gas Energy Loss ³
Feet ²	Inches ²	Kilowatt-Hour /year ⁴	--	Thousand Cubic Feet/year ⁵	--
500	72,000	32,000	\$4,000	110	\$1,000
500	72,000	81,000	\$10,000	270	\$2,700

Ms. Roscoe noted that there are many potential positive and negative impacts that use of a pool cover can have on a complete pool system. She reviewed the outstanding questions and data gaps included in the NOI related to the technical aspects of this product category.

Participant Questions

“Will drowning prevention and water safety characteristics of pool covers be part of the EPA WaterSense certification determination, and if so, are comments welcome from drowning prevention and water safety stakeholders?” Ms. Tanner responded that it has not yet been determined whether EPA will require ASTM safety certification as a requirement for pool cover labeling; however, WaterSense would welcome comments from any stakeholders that felt they had any safety-related comments.

“To submit comments, is there a specific process? Instructions?” Ms. Tanner noted that all comments and information can be sent to watersense-products@erg.com.

¹ Assumes \$11.02 per thousand gallons of water and wastewater, from: American Water Works Association (AWWA), and Raftelis Financial Consultants, Inc., 2017. *2016 Water and Wastewater Rate Survey*.

² Assumes \$0.13 per kilowatt-hour of energy, from: U.S. Energy Information Administration (EIA), 2016. “Short-Term Energy Outlook.” www.eia.gov/outlooks/steo/

³ Assumes \$10.06 per thousand cubic feet of energy, from: EIA 2016, *op. cit.*

⁴ EPA estimates the energy lost through evaporation and that is required to reheat pool make-up water is equal to 2.61 kilowatt-hour of electricity per gallon.

⁵ EPA estimates the energy lost through evaporation and that is required to reheat pool make-up water is equal to 0.008 thousand cubic feet of natural gas per gallon.

3. Pool Covers NOI: Scope

Ms. Roscoe reviewed the definitions and terminology available in the existing standards, codes, and test methods, which influenced the definition EPA has crafted for pool covers for the purposes of a draft specification. She noted two products that EPA is currently considering excluding from WaterSense labeling eligibility: winter pool covers and companion products, such as reels or rollers. She reviewed the first two of the outstanding questions and data gaps included in the NOI related to the scope of a draft specification, then addressed audience questions on those topics.

Participant Questions

“Does the statistic on above ground pools shown on a previous slide include storable aboveground pools?” Ms. Tanner responded that the breakdown of that statistic was presently unknown.

“Will there be an evaluation of whether pool covers affect the chemical breakdown of the pool and result in more chemicals that need to be added or have some other impact?” Ms. Tanner explained that EPA always attempts to include in its draft specification development process any research on the negative or unanticipated consequences of use of products. EPA would welcome information on this topic.

“As we are not sure what outside data you may already be aware of or used, should we send all data we have and can find?” Ms. Tanner noted that the NOI, available on the WaterSense webpage for pool covers (www.epa.gov/watersense/pool-covers), includes a reference section of all the studies consulted to date in EPA’s research. She noted EPA would welcome any contributions that are not already on this list.

“How long will the EPA be collecting comments from stakeholders? Is there an end date for receiving public comments?” Ms. Tanner explained that there is no hard deadline for comment submissions, but comments submitted within three months of this public meeting likely had the best chance of promptly informing EPA’s decisions on whether and how to move forward with a draft specification. However, she noted, if a crucial piece of information came in later than this date, it would certainly be considered.

“Is WaterSense planning on working with ENERGY STAR on this specification?” Ms. Tanner explained that while these two programs do collaborate, they do not currently offer joint labeling of products, and therefore a WaterSense specification for pool covers would not include ENERGY STAR certification.

“Does WaterSense consider the deterioration rates of materials used, health and safety of the chemicals and health effects of pool covers, and possible takeback by manufacturers?” Ms. Tanner responded that EPA would examine each of these items during research and explained that EPA often looks at durability of savings over time.

“What about takeback? Solid waste and end-of-life of product?” Ms. Tanner explained that a WaterSense specification is not a lifecycle specification in the sense of the product’s physical

lifecycle and impacts, but rather only examines the durability of water savings over a product's prescribed useful lifespan.

Ms. Roscoe reviewed the final outstanding question related to specification scope that EPA identified in its NOI. She polled the audience on whether the definition suggested by WaterSense ("a cover which can be placed over the water area of a swimming pool and is intended for use during the open swim season") is effective in identifying the scope of a WaterSense specification. Results of the poll are shown in Figure 3.

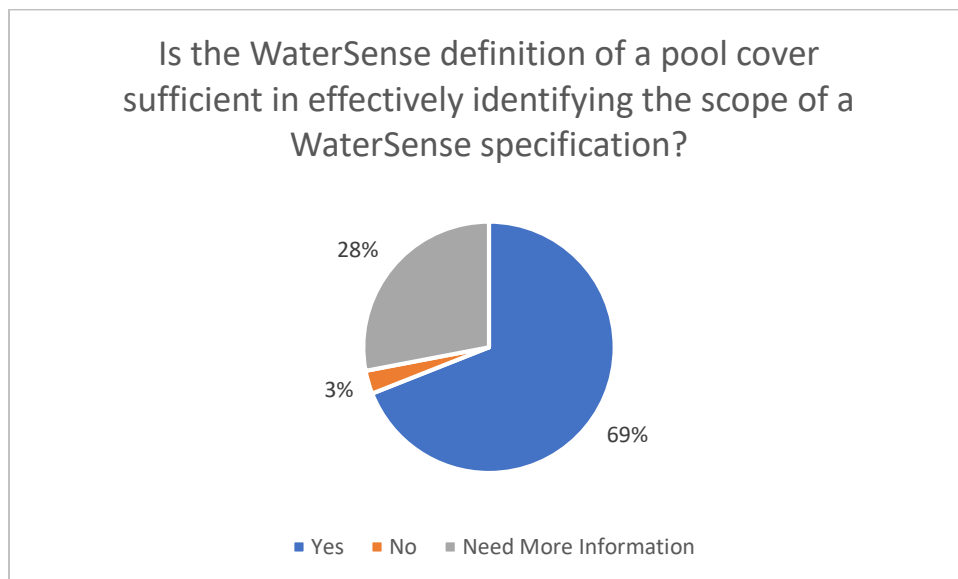


Figure 3. Poll Question #3

4. Pool Covers NOI: Water Efficiency

Ms. Roscoe described the known water efficiency test method currently used for pool covers in Australia's Smart WaterMark program. She noted that WaterSense is considering establishing water efficiency criteria that would require pool covers to reduce evaporation by at least 80 percent, in comparison to an open vessel. She reviewed the outstanding questions and data gaps EPA has included in the NOI regarding pool cover water efficiency. Ms. Roscoe then polled the audience to ask if the 80 percent efficiency criterion was reasonable for a WaterSense specification. Poll results are shown in Figure 4.

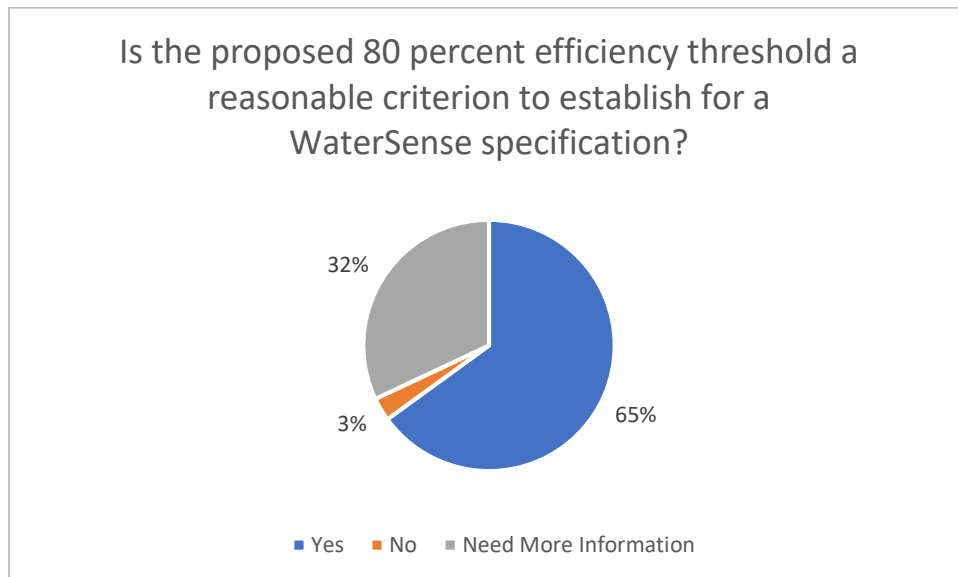


Figure 4. Poll Question #4

5. Pool Covers NOI: Performance and Product Testing

Ms. Roscoe discussed ASTM F1346 safety standard for pool covers, as well as lifecycle testing as a potential component of a draft specification. Most notably, lifecycle testing would require the definition of a pool cover lifespan. She also reviewed the outstanding questions and data gaps EPA has regarding pool cover performance and testing.

6. Pool Covers NOI: Product Marking, Documentation, and Marketing

Ms. Roscoe described the current codes and standards stipulating pool cover labeling and marking requirements and noted that no codes or standard currently require labeling or marking for water efficiency or water savings associated with pool covers. She also reviewed EPA's outstanding question regarding pool cover marking, documentation, and marketing.

7. Pool Covers NOI: Stakeholder Engagement

Ms. Roscoe described EPA's stakeholder input process during the development of a specification and noted that many utilities across the United States offer rebates related to pools and pool covers. She reviewed EPA's outstanding question on how to engage stakeholders in this new product category.

Participant Questions

"Any idea what the evapotranspiration (ET) rate is for pools?" Ms. Roscoe noted that the evaporation rate is what is more pertinent for pools, and that it would vary based on the location of the individual pool.

“It seems you will need standards for each climate area. Pan evaporation and length of season vary widely. Is this practical?” Ms. Tanner explained that EPA would attempt to determine one (or more) climates representative of the areas where pools are most densely located to help pool owners determine what water savings use of a pool cover could expect for their pool. She noted that EPA does not intend to make product testing onerous on the part of manufacturers.

“One of the big issues I have encountered firsthand is the pool maintenance staff seem to believe that pool covers are detrimental to maintaining the pool. Will there be outreach to the pool maintenance professionals? I’m in Northern California, but I suspect this is an issue elsewhere as well.” Ms. Tanner explained that EPA typically engages an entire industry on water efficiency issues related to the product, as they are the subject experts. She also noted that this subject will be addressed in the later sections of this presentation, but briefly described the different products that EPA has produced for its systems approach to water savings (e.g., design guides, service professionals’ certification).

“How can an industry representative volunteer for the standards development committee?” Ms. Tanner explained that these committees have their own membership requirements and procedures but are generally open to industry stakeholders. More information may be available later in the specification development process, once EPA has identified standard organizations with which to engage on developing or modifying test methods.

8. Opportunities Within the WaterSense Systems Approach

Ms. Tanner gave an overview of the history of EPA’s WaterSense system approach, and how it builds upon WaterSense’s traditional product-centered approach. She used EPA’s WaterSense activities in the landscape and irrigation industry as an example of a systems approach to product labeling, how influencers can impact water use within a product category, and noted the typical strategies EPA uses to improve water efficiency through a multi-pronged approach.

She described the influencers EPA has identified for pool systems, particularly pool covers, other pool equipment, and design and maintenance professionals. She listed the potential technical resources and programming EPA could initiate to bolster pool system water efficiency. Ms. Tanner summarized outstanding questions and data gaps EPA has regarding the development of these resources. She then polled the audience to gauge interest in alternative resources to support water efficiency in pools. Results of the poll are shown in Figure 5.

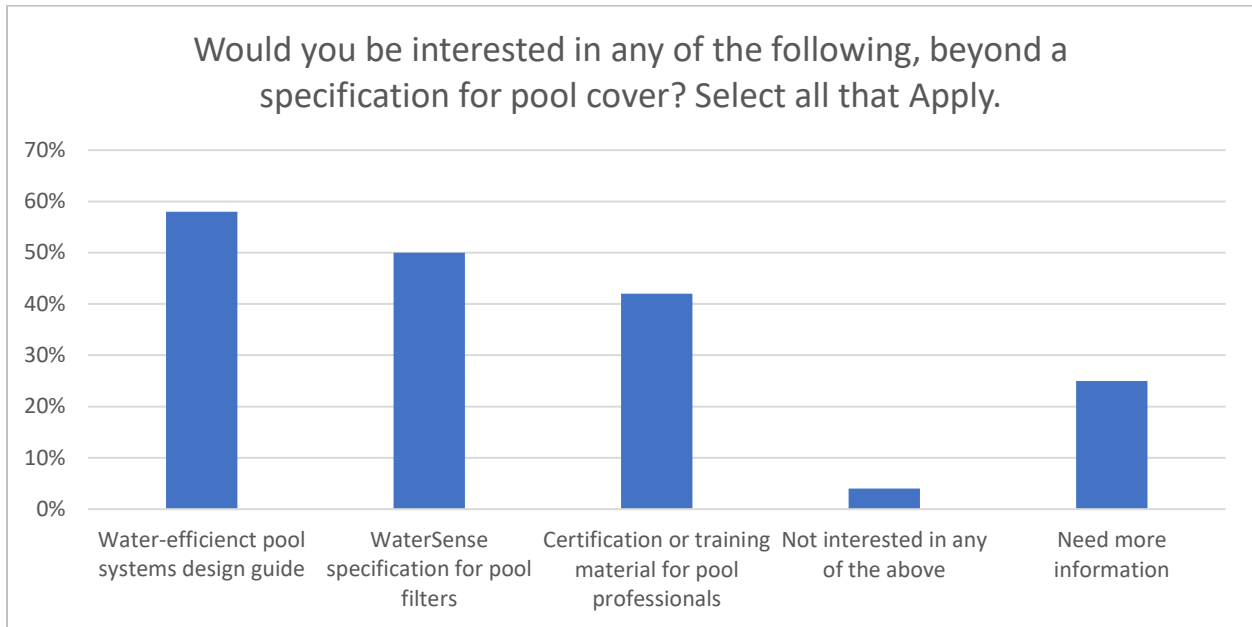


Figure 5. Poll Question #5

9. Next Steps

Ms. Tanner directed the audience to the *WaterSense NOI to Develop a Specification for Pool Covers* on the WaterSense webpage for pool covers (www.epa.gov/watersense/pool-covers) and noted that background materials for all WaterSense labeled products, including NOIs, comment-response documents, and draft specification materials, are available on the WaterSense website for reference or for new stakeholders to gain a better understanding of the specification development process. She requested that those attending the webinar submit their comments, both positive and negative, or any additional pertinent information to watersense-products@erq.com. Other questions regarding the WaterSense program can be directed via email to the WaterSense Helpline (watersense@epa.gov) or by calling (866) WTR-SENS (987-7367). Ms. Tanner announced that WaterSense intends to make the comments received on the NOI for pool covers public.

Participant Questions

As follow up to a previous question regarding the ET rate for pools, it was noted that local ordinances in his area requires landscape professionals to calculate the ET number for water features within a landscape. The Model Water Efficient Landscape Ordinance (MWELO) in California generally requires water features (such as pools) to be characterized with a high ET value (0.7 to 1.0). Ms. Tanner noted that EPA makes a concerted effort to harmonize its specifications with national codes and standards and advocates for the adoption of its test methods in national, regional, and local codes and standards. EPA works collaboratively with codes and standards committees to achieve this goal.

“Did you mention if this webinar will be available online? I'd like to access some of your data that way.” Ms. Tanner explained that the presentation slides and a meeting summary will be



posted on the WaterSense website. Comments received will also be batch posted to the website over time.

Ms. Tanner adjourned the meeting by encouraging those with outstanding question to contact the WaterSense Helpline at watersense@epa.gov or (866) WTR-SENS (987-7367).

Appendix A: Meeting Participants

Attendee	Organization
Jacob Adili	UL LLC
Chadarut Anan	The Regional Municipality of York (Ontario, Canada)
Theresa Bellish	NSF International
Veronica Blette	U.S. Environmental Protection Agency (EPA)
Tom Bohner	Solar Safe Pool Covers, LLC
Doug Brune	U.S. EPA, Region 7
Greg Bundesen	Sacramento Suburban Water District (California)
Adam Carpenter	American Water Works Association (AWWA)
Christina Chicoraske	City of Oklahoma City Utilities (Oklahoma)
Carl Chidlow	Winning Strategies Washington
Cheryl Coltes	Southern Nevada Water Authority (SNWA)
Stephanie Cote	City of Guelph (Ontario, Canada)
Tom Dankel	Aquamatic Pool Covers, Inc.
Shirley Dewi	IAPMO R&T
LaMont Drechsel	CoverPools, of Zodiac Pool Solutions
Jeff Farlow	Pentair Aquatic Systems
Angela Fasano	Coachella Valley Water District (California)
Sean Golden	James River Design, LLC
William Granger	City of Sacramento (California)
Bruce Grogg	TLT Consulting on behalf of Latham Pool Products
Rhonda Gutierrez	Carpinteria Valley Water District (California)
Chavon Halushka	Santa Clarita Valley Water Agency (California)
Jeremy Harris	Region of Peel (Ontario, Canada)
Scott Harris	Las Virgenes Municipal Water District (California)
Morgan Hopkins-Crawley	Aurora Water (Colorado)
Jeff Knopp	Behnke Landscape Architecture
Alan Korn	Abbey's Hope Charitable Foundation
Fred Larsen	Irrigation Association
Laurel Loftin	Athens-Clarke County Water Conservation Office (Georgia)
Patrick J. Martin	Miami Dade Water and Sewer Department (Florida)
Peter Mayer	WaterDM
Heather Macnab	The Regional Municipality of York (Ontario, Canada)
Cary McElhinney	U.S. EPA, Region 5
Sean McNeil	City of Santa Rosa (California)
Qiaoli Meng	ICC Evaluation Service, LLC
David Nance	NSF International
Jennifer Nations	City of College Station (Texas)
Robyn Navarra	Zone 7 Water Agency (California)
Lisa Ohlund	East Orange County Water District (California)
Ed Oquendo	Rucoil, LLC
Cathie Pare	City of Santa Barbara (California)
Regan Ratliff	The Association of Pool and Spa Professionals (APSP)
Cooper Reaves	Contra Costa Water District (California)



Attendee	Organization
Felipe Reyes	Reyes Landscape Construction
Doug Roberts	Sweetwater Authority (California)
Karina Sandique	City of Santa Monica (California)
David Searcy	Medford Water Commission (Oregon)
Michael Shebek	Automatic Pool Covers, Inc.
Jacob Shiba	Elsinore Valley Municipal Water District (California)
Jennifer Shimmin	Coachella Valley Water District (California)
Gary Tilkian	Metropolitan Water District (California)
Jon Vann	IAPMO R&T
Rebecca Winters	Region of Peel (Ontario, Canada)
Ron Wolfarth	Rain Bird Corporation
Jessica Woods	City of Round Rock (Texas)

Presenter	Organization
Stephanie Tanner	U.S. EPA
Tessa Roscoe	Eastern Research Group, Inc. (ERG)
Amanda Forsey	ERG