

# CONSORTIA INTERIM PROGRESS REPORTS

American Nuclear Society



Office of  
NUCLEAR ENERGY



# THE AMERICAN NUCLEAR SOCIETY'S ASSET-BASED COLLABORATION PROGRAM

*Consent-based Siting Consortia – Quarterly Meeting #4  
May 22 and 23, 2024*



*Credit: NAC International*

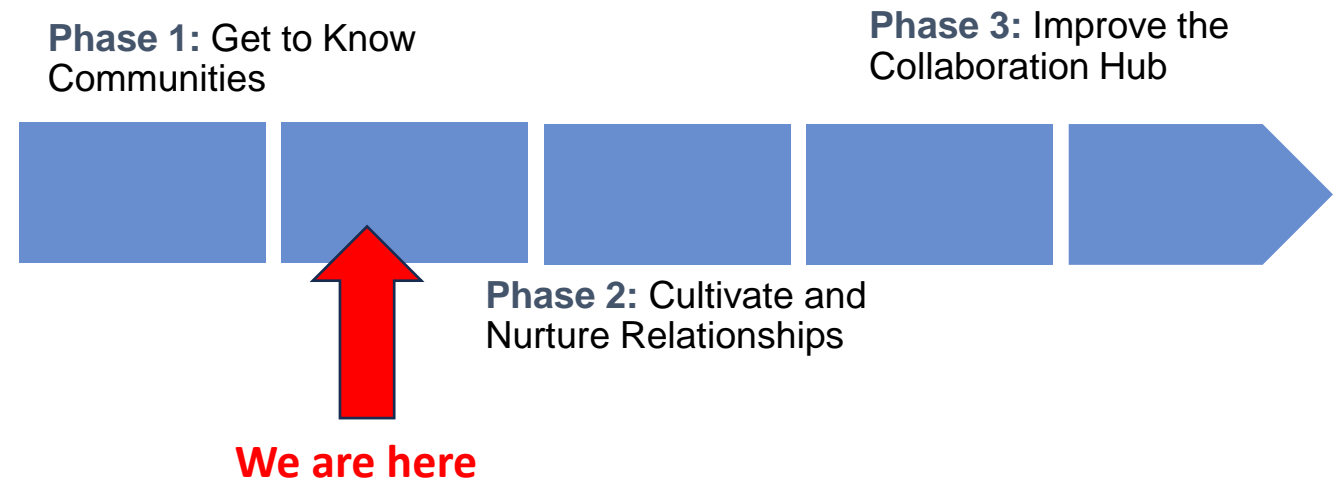


This project is being funded in part by the U.S. Department of Energy (DOE)  
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*DOE's Consent-based Siting for Interim Storage Program: DE-FOA-0002575*



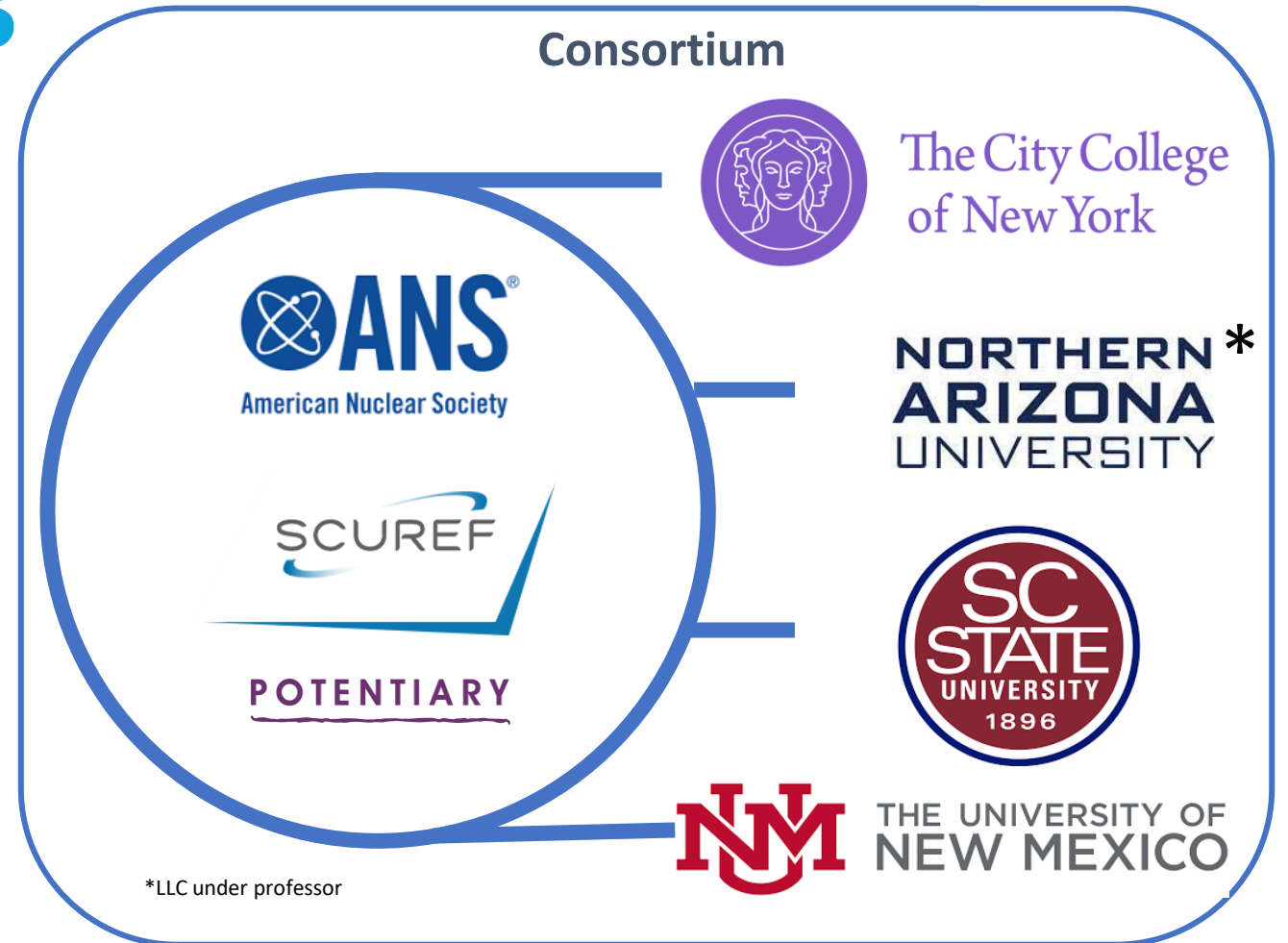
# Overall Project Progress

- **Phase One** is underway for *Asset-Based Collaboration for Effective Engagement in Consent-Based Siting*
- Monthly meetings of consortium of all partners
- Contracts signed with MSI university partners
- Student ambassadors recruited
- Commenced outreach efforts with MSI partners



# Key Developments

- Contracts signed with **MSI university partner** for Student Ambassadors
- Convened **Collaboration Council**
- Activating networks, starting with ANS Consortium **Organizational Supporters**
- Questionnaire template sent to all university participants. Awaiting feedback.
- Evaluating existing, complementary resources within ANS and network
- Finalizing internal systems, staffing, communications capacity, and reporting mechanisms (CRM, etc.)



# Key Developments

- Outreach with ANS Nuclear Waste Policy Task Force to recruit technical experts for **ANS Consolidated Interim Storage Taskforce**
- Continue to expand **network of community and student ambassadors**; with zip-code specific recruitments
- Coordinated calls with companies how consent-based siting might eventually intersect with their community benefit plans
- Recruited guest speakers for public outreach events



The American Nuclear Society (ANS) endorses interim storage of irradiated fuel from a nuclear power reactor (commonly referred to as spent or used nuclear fuel, and referred to herein by the acronym UNF) until final disposal is completed. In the United States, the Nuclear Regulatory Commission (NRC) is the licensing and regulatory authority for used fuel management.

Newly discharged UNF is stored underwater in pools at reactor sites. As these pools approach capacity limits, the UNF is transferred into robust metal or concrete and steel dry storage systems typically located on or near the reactor site in a facility commonly referred to as an Independent Spent Fuel Storage Installation (ISFSI). These relatively simple and passive dry storage systems protect against events that could result in radiological releases into the environment. The ISFSIs are monitored and secured to ensure continued protection.

As of 2016 the U.S. nuclear industry had loaded and placed into service over 2300 dry storage systems at 68 locations in 33 states since 1986<sup>1</sup>. Plant workers, the public, and the environment have been effectively protected in every case.

Current operational and decommissioned nuclear power plants in the U.S. were licensed with the expectation that the UNF would be stored at the nuclear power plant site for a short period of time until shipment to a recycling plant or geologic disposal facility for high-level radioactive waste. However, no facility capable of receiving UNF is operating in the U.S. and it is uncertain when one might become available. Therefore, utilities have been forced to store UNF at nuclear power plant sites in greater quantity and for longer time periods than originally envisioned.

ANS believes that the successful operating experience to date demonstrates that UNF storage at nuclear power plant sites has been, and can continue to be, achieved in a safe and environmentally sound manner.

As longer periods of storage become inevitable, the nuclear industry and NRC have placed an increased emphasis on assuring the long-term integrity of storage systems. This is being accomplished through aging management programs similar in scope to those that have been successfully deployed at more than 80% of the U.S. commercial nuclear reactor fleet (extending operations from 40 to 60 years, with periods of up to 80 years under consideration).

ANS believes that aging management programs for UNF storage will be as effective as those already applied to reactors. NRC's recent determination that the environmental impacts of continued storage of UNF are small supports this conclusion – as, in reaching this conclusion, the NRC examined storage periods of as long as 100 years without any repackaging of the UNF.

Nevertheless, interim storage of UNF is a partial and temporary answer to managing the UNF produced by nuclear power reactors. ANS supports the ultimate development of recycling (see *Position Statement 45, Nuclear Fuel Recycling*) and geologic disposal (see *Position Statement 80, Licensing of Yucca Mountain as a Geologic Repository for Used Nuclear Fuel and High-Level Radioactive Waste*).

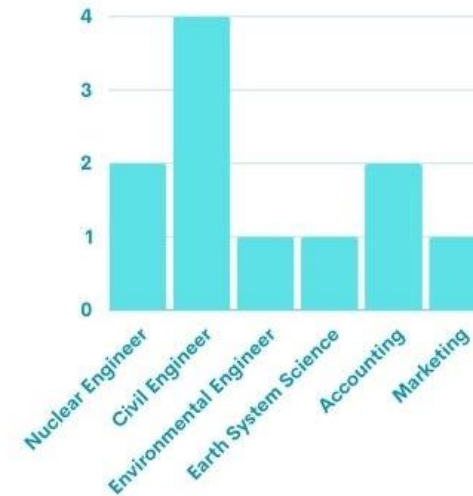
Until recycling and/or geologic disposal can be accomplished, ANS also supports the development of consolidated away from reactor

# Key Developments

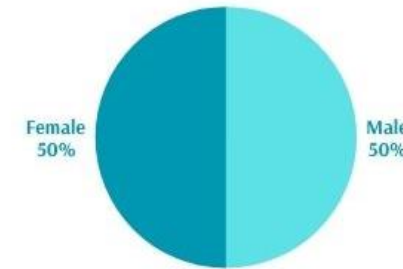
- Ten **student ambassadors** recruited so far from three of four MSIs
  - Gender balance ratio
  - Diverse
  - Varying educational backgrounds
- MSI university partners have initiated community outreach of organizations
- Recruited guest speakers for public outreach events
- In process of dispersing first community grant for initial outreach

## Student Ambassadors

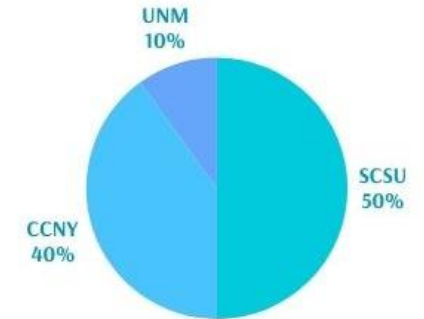
01. College Major



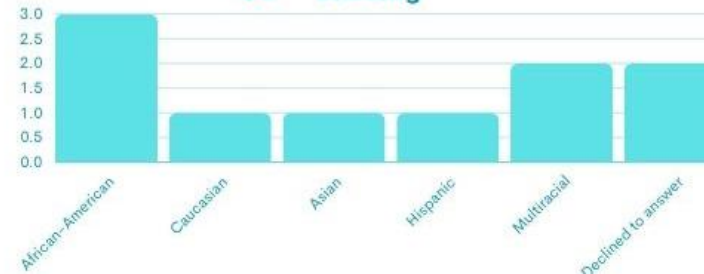
02. Gender



03. Participating MSI



04. Ethnicity

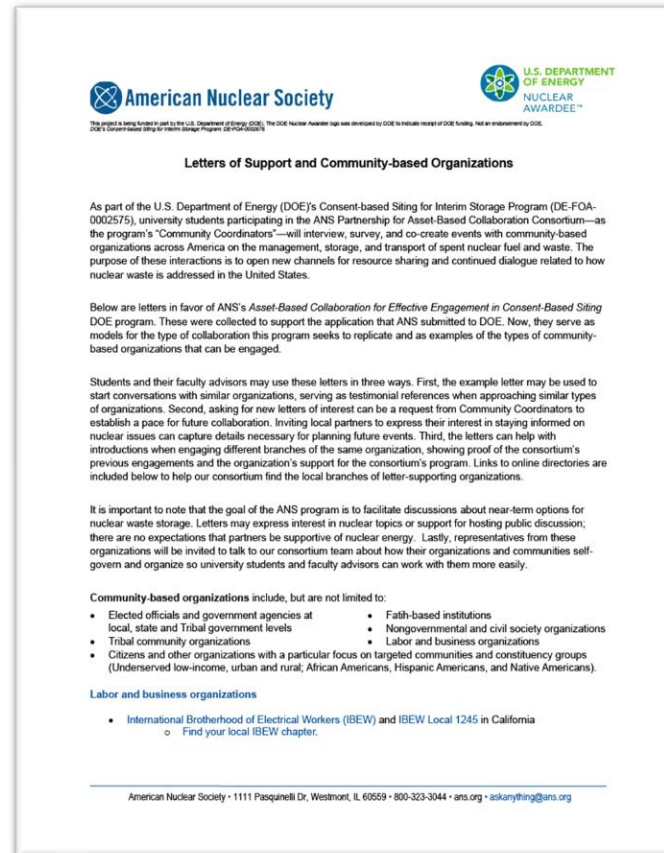


05. Overall there is a diverse selection of students with varying educational backgrounds.

Total Students **10**

# Key Developments

- Prepared educational resources and more for MSIs (faculty advisers and students) to:
  - better understand interim storage topics
  - assist with introductions with community-based organizations
  - characterize the types of organizations to engage with
- Shared DOE's "[Integrated Waste Management \(IWM\) StoryMap: Consent-Based Siting for Consolidated Interim Storage](#)"



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**Letters of Support and Community-based Organizations**

As part of the U.S. Department of Energy (DOE)'s Consent-based Siting for Interim Storage Program (DE-FOA-0002575), university students participating in the ANS Partnership for Asset-Based Collaboration Consortium—as the program's "Community Coordinators"—will interview, survey, and co-create events with community-based organizations across America on the management, storage, and transport of spent nuclear fuel and waste. The purpose of these interactions is to open new channels for resource sharing and continued dialogue related to how nuclear waste is addressed in the United States.

Below are letters in favor of ANS's *Asset-Based Collaboration for Effective Engagement in Consent-Based Siting* DOE program. These were collected to support the application that ANS submitted to DOE. Now, they serve as models for the type of collaboration this program seeks to replicate and as examples of the types of community-based organizations that can be engaged.

Students and their faculty advisors may use these letters in three ways. First, the example letter may be used to start conversations with similar organizations, serving as testimonial references when approaching similar types of organizations. Second, asking for new letters of interest can be a request from Community Coordinators to establish a pace for future collaboration. Inviting local partners to express their interest in staying informed on nuclear issues can capture details necessary for planning future events. Third, the letters can help with introductions when engaging different branches of the same organization, showing proof of the consortium's previous engagements and the organization's support for the consortium's program. Links to online directories are included below to help our consortium find the local branches of letter-supporting organizations.

It is important to note that the goal of the ANS program is to facilitate discussions about near-term options for nuclear waste storage. Letters may express interest in nuclear topics or support for hosting public discussion; there are no expectations that partners be supportive of nuclear energy. Lastly, representatives from these organizations will be invited to talk to our consortium team about how their organizations and communities self-govern and organize so university students and faculty advisors can work with them more easily.

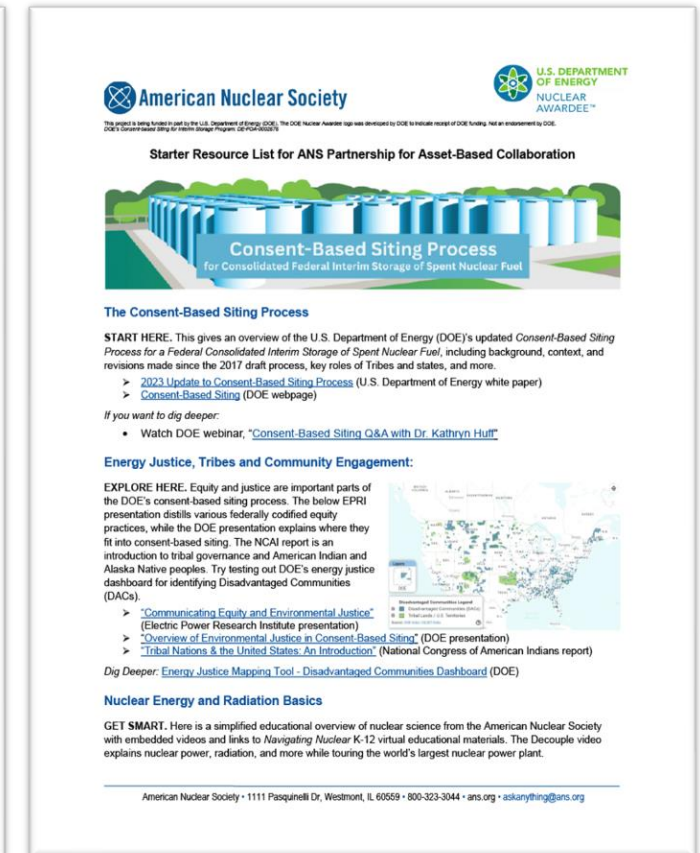
**Community-based organizations include, but are not limited to:**

- Elected officials and government agencies at local, state and Tribal government levels
- Tribal community organizations
- Citizens and other organizations with a particular focus on targeted communities and constituency groups (Underserved low-income, urban and rural, African Americans, Hispanic Americans, and Native Americans).
- Faith-based institutions
- Nongovernmental and civil society organizations
- Labor and business organizations

**Labor and business organizations**

- International Brotherhood of Electrical Workers (IBEW) and IBEW Local 1245 in California
  - Find your local IBEW chapter.

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**Starter Resource List for ANS Partnership for Asset-Based Collaboration**

**Consent-Based Siting Process**  
for Consolidated Federal Interim Storage of Spent Nuclear Fuel

**The Consent-Based Siting Process**

**START HERE.** This gives an overview of the U.S. Department of Energy (DOE)'s updated *Consent-Based Siting Process for a Federal Consolidated Interim Storage of Spent Nuclear Fuel*, including background, context, and revisions made since the 2017 draft process, key roles of Tribes and states, and more.

- > [2023 Update to Consent-Based Siting Process](#) (U.S. Department of Energy white paper)
- > [Consent-Based Siting](#) (DOE webpage)

*If you want to dig deeper:*

- Watch DOE webinar, "[Consent-Based Siting Q&A with Dr. Kathryn Hull](#)"

**Energy Justice, Tribes and Community Engagement:**

**EXPLORE HERE.** Equity and justice are important parts of the DOE's consent-based siting process. The below EPRI presentation distills various federally codified equity practices, while the DOE presentation explains where they fit into consent-based siting. The NCAI report is an introduction to tribal governance and American Indian and Alaska Native peoples. Try testing out DOE's energy justice dashboard for identifying Disadvantaged Communities (DACs).

- > [Communicating Equity and Environmental Justice](#) (Electric Power Research Institute presentation)
- > [Overview of Environmental Justice in Consent-Based Siting](#) (DOE presentation)
- > [Tribal Nations & the United States: An Introduction](#) (National Congress of American Indians report)

*Dig Deeper:* [Energy Justice Mapping Tool - Disadvantaged Communities Dashboard](#) (DOE)

**Nuclear Energy and Radiation Basics**

**GET SMART.** Here is a simplified educational overview of nuclear science from the American Nuclear Society with embedded videos and links to *Navigating Nuclear K-12* virtual educational materials. The Decouple video explains nuclear power, radiation, and more while touring the world's largest nuclear power plant.

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# Key Observations

- Partners, communities and respondents need time to decide what they want out of their participation in this program.
- STEM topics are proving to be a shared interest where we can start conversations.
- Local communities want to adapt survey methods to reflect their own decision-making processes.
- Historical and cultural nuances are emerging that will influence participation.
- ANS is working with partners on strategies to overcome hurdles of legacy issues and to improve the potential for participation by certain communities.

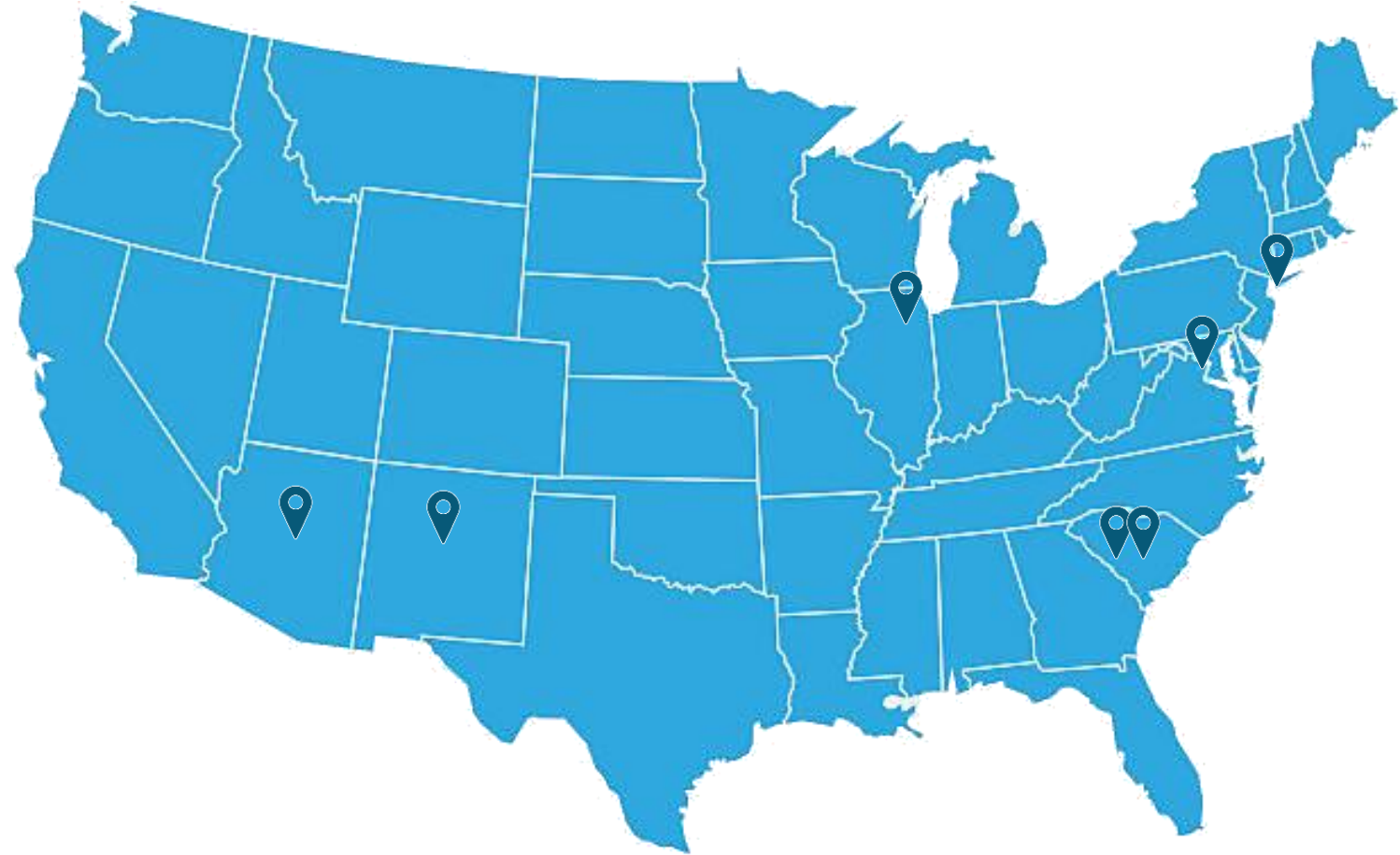




# Engagement

Our consortium has initiated **Round One outreach with:**

- ANS Consortium Organizational Supporters
- Community organizations identified by MSI university partners
- Grove School of Engineering's (NY) experimental integrative engineering course



# Engagement Details

What is the engagement?	Date	Location	Brief description (if not in previous slides)	# of Participants
<i>“How do we talk about the Back End” communications panel session at 2023 ANS Winter Conference</i>	<i>Nov. 15, 2023</i>	<i>Washington, DC</i>	<i>Focused on public communications of SNF storage and transport, moderated by Andrew Smith (ANS) with panelists Patrick O’Brien (Holtec) and Paul Dickman (Special advisor to Japan’s Fukushima decommissioning agency). CBS process discussed; broad intro of storage issues.</i>	<i>40 in-person attendees</i>
<i>Meeting with ANS Nuclear Waste Policy Task Force</i>	<i>April 19, 2024</i>	<i>Virtual (Zoom)</i>	<i>Introduced ANS consortium and Asset-Based Collaboration to ANS expert group, recruited experts for consortium’s technical advisors.</i>	<i>15 experts</i>
<i>ECA Forum: Building Nuclear Partnerships &amp; Projects</i>	<i>May 7-10, 2024</i>	<i>Tri-Cities and Richland, WA</i>	<i>Attended Energy Communities Alliance forum that brings together DOE, federal, state, local and tribal governments and policymakers with developers, utilities, regulators, industry, and academia.</i>	<i>Met with 10 different reps (local officials and labor unions) from across the U.S., including from areas with cleanup sites.</i>

# Engagement Details

What is the engagement?	Date	Location	Brief description (if not in previous slides)	# of Participants
<i>“Nuclear Waste: The Changing Opportunity” panel session at 2024 ANS Annual Conference</i>	<i>June 17, 2024</i>	<i>Las Vegas, NV</i>	<i>Andrew Smith (ANS) as panelist on CBS focused panel, featuring three consortiums (ANS, Boise State &amp; NCSU), Nuclear Waste Strategy Coalition and Paul Dickman on CBS and its challenges.</i>	<i>TBD</i>
<i>High School Initiative in Remote Sensing of the Earth Systems Engineering and Sciences (HIRES) program</i>	<i>July 2024</i>	<i>New York, NY</i>	<p><i>Supply nuclear experts as guest speakers for 7-week summer school HIRES within City University of New York Remote Sensing Earth System (CUNY CREST) Institute; part of CCNY outreach and identifying community organizations in CT and NJ.</i></p> <p><i>Over 16 ANS members responded to request for guest speakers to give talks on specific topics.</i></p>	<i>TBD</i>

# Next Steps

- Design and convene consent-based siting feedback sessions
- Provide materials for MSIs and interested parties, such as “leave-behind” nuclear fact sheets
- Finalize scripts for student outreach
- Scale up engagement of communities and organizations – and track in CRM
- Launch consortium website





For questions or comments related to this consortium, please contact

Name: Andrew Smith  
Email: [asmith@ans.org](mailto:asmith@ans.org)  
Phone: (202) 996-0474

For more information, visit us at [energy.gov/consentbasedsiting](https://energy.gov/consentbasedsiting)

