OPPORTUNITIES
Events current at time of publication. Have a virtual resource or event to share? Email us!

- May 11–12 – SMR and Advanced Reactor 2026
- July 19–23 – Pacific NorthWest Economic Region 2026 Annual Summit
- August 10–13 – National Homeland Security Conference
- August 12–14 – Fire-Rescue International 2026
- October 24–27 – International Association of Chiefs of Police Annual Conference and Exposition
- November 3–5 – Critical Minerals and Materials Science Summit

CONTACT
Want to know more? Visit us at pnnl.gov/projects/nwrtc. Contact the NWRTC with questions and comments at nwrtc@pnnl.gov.

AROUND THE REGION IN HOMELAND SECURITY

The Northwest Regional Technology Center (NWRTC) is a virtual resource center, operated by Pacific Northwest National Laboratory (PNNL), that supports regional preparedness, resilience, response, and recovery. The center enables homeland security solutions for emergency responder communities and federal, state, and local stakeholders in the Northwest.

FENTANYL VAPOR DETECTION TECHNOLOGY WINS FLC AWARD

VaporID was one of two technologies from PNNL to win 2026 Federal Laboratory Consortium Awards, which recognize federal laboratories and industry partners for pushing scientific discoveries toward real-world applications quickly and efficiently.

VaporID is a technology that detects drugs, explosives, and other chemical threats and fits the operational needs of ports of entry, airports, and beyond. While materials like fentanyl are challenging to detect because they have low vapor pressures, VaporID overcomes this challenge by using an atmospheric flow tube (developed at PNNL) paired with a mass spectrometer to sense molecules in the ambient air.

The award celebrates an industry collaboration that resulted in VaporID being transformed into a portable, more field-friendly footprint. PNNL partnered with BaySpec Inc., which later licensed the technology and developed a more portable unit the size of a microwave weighing approximately 50 pounds. Although the smaller version isn't quite as sensitive, it can still detect faint wisps of fentanyl and other chemicals within seconds. In 2025, the PNNL-BaySpec collaboration made national headlines after the successful demonstration of contactless, real-time fentanyl detection at the Nogales Port of Entry in Arizona, one of the nation's busiest border crossings.

To learn more, see the PNNL press release and watch the video.

WILDFIRE MITIGATION PLAN DATABASE NOW INCLUDES AI

Last year, PNNL released the Wildfire Mitigation Plan Database with more than 400 wildfire mitigation plans from 170 utilities across 19 states. The database was recently updated with a custom AI research assistant that allows users to ask questions and get answers with source references from hundreds of plans. Users can also filter AI answers by state or utility type, for example, to view plans for co-op utilities in Oregon or Washington.

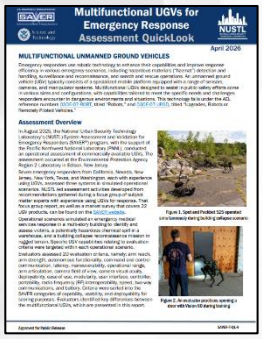
PNNL also compiled a library of analytical resources, which highlights key statistics and insights of mitigation plans, distribution patterns, and trends from the database in an accessible and citable format.

PNNL's Wildfire Risk and Resilience team is hosting *Burn Rate*, a three-part webinar series exploring the impact of wildfires on electricity costs. Visit the events page to learn more and register for each session.

See the PNNL feature story to learn more and subscribe to the Wildfire Risk and Resilience newsletter to receive periodic wildfire research updates, news, and events.

ASSESSMENT HIGHLIGHTS UNMANNED GROUND VEHICLES

A new QuickLook published by the Department of Homeland Security (DHS) Science and Technology Directorate (S&T) provides a high-level summary of an operational assessment of commercially available unmanned ground vehicles used for hazardous materials response, surveillance, reconnaissance, search and rescue, and payload transport. The assessment, conducted by the National Urban Security Technology Laboratory and PNNL on behalf of the DHS S&T System Assessment and Validation for Emergency Responders (SAVER) program, focused on three systems in simulated operational scenarios.



The QuickLook highlights the products assessed, overall results, and key takeaways. Detailed information on the assessment activities, evaluation feedback, and all comparative results will be published in a final report on the SAVER website.

AI ON THE FRONT LINES OF CYBER PROTECTION

A research effort to explore how AI can offer an advantage to cyber defenders has made the leap into computing operations at PNNL. The new approach takes advantage of a blizzard of data available to defenders, all of it updated regularly:

- The National Vulnerability Database contains information on more than 330,000 specific entry points for a cyberattack.
- The Common Weakness Enumeration database sorts and classifies those bugs into about 1,000 categories with detailed descriptions and prevention techniques.
- The Common Attack Pattern Enumeration and Classification database draws on both of those resources to spell out how bugs and weaknesses might be exploited and includes more than 500 entries of specific attack patterns.
- The MITRE ATT&CK database of "adversarial tactics, techniques, and common knowledge" contains more than 250 likely attack patterns based on real-world observations.

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