

# Non-Intrusive Inspection Equipment to Counter Illicit Drug Flows

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In policy discussions around drug trafficking and elevated overdose deaths related to [illicit opioids and other drugs](#), some observers have looked to the tools border officials have in place to help detect and stop the flow of illicit drugs into the United States. More specifically, attention has turned to the use of non-intrusive inspection (NII) equipment to scan commercial and private vehicles crossing into the country for illicit drugs and other contraband.

## Illicit Drug Flows into the United States

There are [no comprehensive data](#) on the total quantity of foreign-produced illicit drugs successfully smuggled into the United States at or between official ports of entry (POEs) because these drugs have evaded detection and seizure by border officials. In lieu of these data, certain drug seizure data shed some light on how and where drug traffickers attempt to move their product across U.S. borders. [Data from U.S. Customs and Border Protection \(CBP\)](#) indicate that, by weight, more illicit drugs are seized at POEs than between them, and most are seized along the Southwest border.

Like seizure data, law enforcement intelligence indicates that the majority of illicit drugs flowing into the United States are moved across the Southwest border, through POEs. The Drug Enforcement Administration's (DEA's) [2025 National Drug Threat Assessment](#) reports that Mexican drug trafficking organizations—namely the Sinaloa Cartel and Jalisco New Generation Cartel—are the primary groups producing the illicit drugs responsible for overdose deaths in the United States. They use privately owned vehicles, tractor trailers, and drug mules among other means to move contraband. Traffickers have been found to conceal illicit drugs such as fentanyl or methamphetamine in vehicle fuel tanks, voids in vehicle bodies, or tires.

## CBP's Use of NII

NII is one tool [CBP uses to help screen](#) vehicles, rail cars, cargo containers, luggage, packages, and mail for contraband. Small- and large-scale NII systems use X-ray and Gamma-ray imaging, among other technologies, to help detect anomalies, which may indicate where illicit drugs are concealed. At the POEs, large-scale NII equipment scans vehicles and rail cars. Vehicles are driven under fixed NII devices (or

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mobile devices are passed over vehicles), which produce detailed images of the vehicle's interior. The images are reviewed by CBP officials to help determine whether further inspection is warranted.

## Resources and Challenges

Congress has provided specific resources to enhance NII at the border. For instance, in FY2019 Congress appropriated \$570 million to CBP for NII equipment at POEs. As outlined in a June 2025 Department of Homeland Security (DHS) Office of Inspector General (OIG) report, *CBP's Detection Capabilities at U.S. Ports of Entry Risk Missing Contraband*, CBP used these funds to purchase 150 fixed large-scale NII systems and seven mobile devices. The DHS OIG found that at the end of December 2024, 50 of the 150 fixed systems had been deployed and installed. While others were in the process of being deployed or installed, 43 remained in storage. Management of already purchased NII equipment and allotment of funds for their installation have been prominent areas of criticism for CBP's NII program.

Most recently, P.L. 119-21 provided over \$6 million to CBP for a range of border security, technology, and screening purposes, including "procurement and integration of new nonintrusive inspection equipment and associated civil works, including artificial intelligence, machine learning, and other innovative technologies." In light of past delays, there may be interest in how these additional investments—including in NII—are made and how CBP may avoid previous critiques of slow installation and implementation of purchased systems.

In FY2021, Congress passed legislation (P.L. 116-299) requiring DHS to create a plan and cost analysis to implement 100% inspections of commercial and passenger vehicle traffic as well as freight rail traffic entering the United States. As of FY2024, CBP was using NII to examine "approximately 98 percent of rail cars, 15 percent of arrival commercial trucks, one percent of passenger vehicles, and two percent of sea containers." While other legislative proposals (e.g., S. 1822, 118<sup>th</sup> Congress) would have established requirements that CBP reach specific NII-facilitated scanning rates, none have been enacted. Congress may debate whether pursuing 100% inspections would be more effective or cost-efficient in reducing the flow of illicit drugs and what portion of these inspections should be facilitated by NII.

As CBP has purchased and installed more NII systems, and newer, lower-energy and multi-energy systems allow for more vehicles to be inspected per hour, more data are generated and subject to review by CBP officials. CBP has been working toward using anomaly detection algorithms, a form of artificial intelligence (AI), to help review these images for potential anomalies and prioritize those images for human review. As of this writing, this AI has not been implemented.

## Going Forward

Recent reporting indicates that drug trafficking networks are responding to pressure from border officials and may take additional steps—like wrapping drug packages in carbon paper and foil—to try and conceal drugs from basic methods of X-ray detection. This may spark deliberations on whether or how CBP and its technology providers are taking steps to enhance the NII in this cycle of detection and evasion.

Additionally, one potential piece of data that, if border officials are able to isolate it, may help evaluate CBP's NII program is the quantity of illicit drugs seized *specifically attributable* to the use of NII. There are data on drug seizures at and between POEs; some data on the use of NII at the POEs, including the portion of vehicles inspected; and case information that sometimes reveals when NII was one of several factors contributing to seizures. However, as NII is just one tool in border officials' toolkits to help detect and seize illicit drugs, current data do not delineate the portion of seizures attributable specifically to NII rather than other means, like canine detection and human intelligence. In evaluating the effectiveness of NII for countering drug trafficking, policymakers may seek further nuance in CBP data to help understand the relative value of various detection tools and technologies.

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