

During Senate Homeland Security Hearing, FBI Director Christopher Wray Discloses Domestic ‘Homemade IED’ Drone Attempts Investigations

C/O Futures Terrorism Research Note Series

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Christopher Wray, August 2, 2017 – Present, The Eighth Director of the FBI. Testimony Provided to the Senate Homeland Security Hearing on National Security Threats, 17 November 2022.

Source: FBI & WION (YouTube)[1]

On 17 November 2022, FBI Director Christopher Wray testified to a Senate Homeland Security Hearing on National Security Threats. During that session, he verbally provided previously unknown (and formerly sensitive) information pertaining to ongoing FBI investigations concerning “several instances within the US attempts to weaponize drones with homemade IEDs.”[2] This new and significant disclosure follows on from an earlier July 2020 incident (not reported on by media outlets until early November 2021) involving an attempted attack (using a DJI Mavic 2 drone with copper wire on a tether) targeting a Pennsylvania power substation in order to short circuit its transformers/electrical distribution lines.[3]

Key Information: “FBI probing cases of bomb-laden drones in US.” *RFI*. 17 November 2022, <https://www.rfi.fr/en/business-and-tech/20221117-fbi-probing-cases-of-bomb-laden-drones-in-us>:

Washington (AFP): **FBI Director Christopher Wray said Thursday the agency is investigating several cases in which people sought to fly drones equipped with home-made bombs within the United States.**

“We are investigating, even as we speak, several instances within the US of attempts to weaponize drones with homemade IEDs,” Wray told a Senate hearing, referring to improvised explosive devices.

Wray said the threat of widely available drones has risen quickly with rapid technological advances “in terms of their visibility, the speed with which they can move, the distance with which they can move, and also the loads that they can carry.”

... Wray, speaking in a hearing on domestic threats by the Senate Homeland Security Committee, did not provide any detail on the armed drone cases.

Key Information: Jillian Smith, “FBI receives reports about drones being weaponized with homemade IEDs.” *ABC 4 News*. 18 November 2022, <https://abcnews4.com/news/nation-world/fbi-receives-reports-about-drones-being-weaponized-with-homemade-ieds-federal-bureau-of-investigation-director-christopher-wray-technology-improvised-explosive-devices-illegal-weapons>:

WASHINGTON (TND) — Drones are becoming increasingly popular as they’re easy to buy and find out how to use online. Now, U.S. officials are investigating cases of people attempting to fly drones carrying homemade bombs.

“We are investigating, even as we speak, several instances within the U.S. of attempts to weaponize drones with homemade IEDs,” Federal Bureau of Investigation Director Christopher Wray [said in a Thursday Senate hearing](#).

Experts say they’re not surprised by the announcement and some believe that if nothing is done, they could pose a “domestic terrorism threat.”

“You can get those drones from the market right and you just need the explosive material,” said Dr. Mostafa Hassanalian, a drone expert with the New Mexico Institute of Mining and Technology.

Key Information: Senate Homeland Security Hearing on National Security Threats. *CSPAN*. 17 November 2022, <https://www.c-span.org/video/?524139-1/senate-homeland-security-hearing-national-security-threats>:



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Christopher Wray

WE ARE DEEPLY CONCERNED. IT IS IMPORTANT FOR AMERICANS TO UNDERSTAND IF THAT AUTHORITY IS NOT REAUTHORIZED NEXT MONTH THAT PUBLIC GATHERINGS LIKE THE SUPER BOWL IN ARIZONA, LIKE NEW YEAR'S EVE IN TIMES SQUARE, LIKE FORMULA ONE IN LAS VEGAS, NONE OF THOSE THINGS WILL HAVE PROTECTION FROM THIS THREAT. AND ALL THE TIMES WE HAVE DEPLOYED, WE LOCATED HUNDREDS OF DRONES THAT HAVE BEEN ACTING IN VIOLATION OF FEDERAL LAW. AS THE THREAT CONTINUES TO GROW, WE ARE INVESTIGATING EVEN AS WE SPEAK SEVERAL INCIDENTS WITHIN THE UNITED STATES ATTEMPTS TO WEAPONIZE DRONES WITH HOMEMADE IED'S.

^ Show Less Text

See 2:47:40 Hour Video (& Uncorrected Closed Caption Text)

Key Information: "FBI probing several cases of bomb-laden drones in US." *Alarabiya News*. 17 November 2022, <https://english.alarabiya.net/News/world/2022/11/17/FBI-probing-several-cases-of-bomb-laden-drones-in-US>:

Wray, speaking in a hearing on domestic threats by the Senate Homeland Security Committee, did not provide any detail on the armed drone cases.

But the rapid increase in the use of armed unmanned aerial vehicles in the Ukraine war, including cheap hobbyist drones jury-rigged with grenades and mortar shells, has demonstrated how easy they are to make and deploy.

“That is the future that is here now,” Wray said, urging legislation to expand the powers of the FBI and other authorities to counter the security threat of private drones.

Key Information: “US FBI chief urges expansion of counter drone laws in testimony to homeland security committee.” *Unmanned Airspace*. 21 November 2022, <https://www.unmannedairspace.info/emerging-regulations/us-fbi-chief-urges-expansion-of-counter-drone-laws-in-testimony-to-homeland-security-committee/>:

A report by *DroneDJ* cites Federal Bureau of Investigations (FBI) Director Christopher Wray urges tightening of laws to support the Drone Act of 2022 expansion of counter drone capabilities in the US.

“FBI director Christopher Wray made the disclosure during testimony before the Senate Homeland Security Committee Thursday, adding ballast to calls by a variety of actors to muscle up counter drone laws to match the threats that the rising number of UAVs in use pose,” [says](#) *DroneDJ*.

...“Wray added that weaponization of UAVs was far from the only dangerous drone deployment the FBI was investigating. Topping the list, he said are “hundreds of drones that have been acting in violation of federal law” by flying in prohibited airspaces, including areas surrounding airports and major outdoor events. Given the numbers of craft involved – and injury to people by even an accidental crash over a crowd – Wray urged his Congressional audience to again extend existing counter drone measures that were prolonged to December 16 when its original October expiration date loomed. “It’s important for Americans to understand if that authority is not reauthorized next month, that public gatherings like the Super Bowl in Arizona, like New Year’s Eve in Times Square, like Formula One in Las Vegas, and I could go on, none of those things will have protection from this threat,” Wray said.

The Department of Homeland Security and Department of Justice are currently responsible for counter drone measures under the Homeland Security Act of 2002, and its 2018 enlargement. The White House [called](#) for expansion of these powers in April 2022, with legislation currently “stalled” in Congress.

Who: FBI Director Christopher Wray testifying during a Senate Homeland Security Hearing on National Security Threats.

What: The disclosure of ongoing FBI investigations concerning “several instances within the United States attempts to weaponize drones with homemade IEDs” and “That is the future that is here now.”[4]

When: 17 November 2022.

Where: SD-342, Dirksen Senate Office Building, Washington, District of Columbia, United States.

Why: Governmental counter-terrorism officials are mandated to provide testimony to elected legislative Senate/House bodies related to national (homeland) security matters. The FBI Director, however, likely verbally disclosed the ongoing investigations for multiple policy and national security reasons. Such reasons may include (a) influencing policy to further strengthen the Drone Act of 2022 (for domestic C-UAS purposes)[5] (b), publicly broadcasting (once again) that domestic weaponized drones attacks are now inevitable, and (c) securing the FBI's future funding for C-UAS training and countermeasures requirements. Note—no mention of these investigations was contained in the written statement provided to the U.S. Senate Committee on Homeland Security and Governmental Affairs by Christopher Wray.[6]

C/O Futures Analysis

Since taking over the FBI Directorship in early August 2017, Christopher Wray has publicly stated multiple times that weaponized drones are becoming a domestic (homeland) security threat. On September 2017, while testifying to the Senate Homeland Security & Governmental Affairs Committee, he stated:

“I think we do know that terrorist organizations have an interest in using drones.”

“We’ve seen that overseas already with growing frequency. I think the expectation is that it’s coming here imminently.”

“I think they are relatively easy to acquire, relatively easy to operate, and quite difficult to disrupt and monitor.”[7]

Additionally, on 10 October 2018 while once again testifying to the Senate Homeland Security & Governmental Affairs Committee, he stated that related to this “steadily escalating” threat:

“The FBI assesses that, given their retail availability, lack of verified identification requirement to procure, general ease of use, and prior use overseas, UAS will be used to facilitate an attack in the United States against a vulnerable target, such as a mass gathering.”

“Terrorist groups could easily export their battlefield experiences to use weaponized (unmanned aircraft systems) outside the conflict zone.” [8]

During that same testimony, Christopher Wray also noted that “the U.S. has yet to face a drone attack by terrorists.”[9] The FBI Director’s public statements and testimony appears to then take a hiatus from highlighting the domestic weaponized drone threat. This was probably the result of the demise of the territorial Islamic State in Iraq and Syria (which eventually lost its capacity for terrorist projection and cell coordination in Europe and the United States) and the COVID-19 Pandemic along with the resurgence of the far right (neo-Nazis and white nationalists) culminating

in the 6 January 2021 insurrection at the U.S. Capitol Building which necessitated the FBI to shift its attentions.

During this quiet period, on 16 July 2020 a DJI Mavic 2 drone with copper wire on a tether was recovered from a Pennsylvania power substation. This attack—which failed in shorting out the electrical components being targeted—signified that the domestic weaponized drone threat had not fully subsided. The incident was kept out of public knowledge until *ABC News* released on 3 November 2021 a Joint Intelligence Bulletin (U//LES) published on 28 October 2021 (about a week after its release).[10] Given the right-wing extremist interest in power/electrical plant attacks—derived from its patterning and TTPs—this type of group may be tied to this attack but the possibility presently remains unsubstantiated. The FBI has had over two years to investigate the incident, but no arrests have as yet have been made.

The threat of weaponized domestic drones has, given Christopher Wray’s November 2022 testimony, once again been publicly elevated by the FBI Director. What is different now is that ongoing multiple FBI investigations are being actively conducted related to weaponized drones with ‘homemade IED’ payloads. It could be argued that a ‘firebreak’ has finally been crossed with capability development being undertaken by individuals/groups with the intent to utilize such devices for terrorism purposes.[11]

In a recent *Homeland Security Today* article on domestic terrorism concerns related to weaponized aerial drones, it was mentioned that differing views exist related to these devices representing a “new attack capability looking for a willing perpetrator” vs “as an inevitable ‘no-brainer’” concerning their use.[12] The FBI Director’s disclosure that “We are investigating even as we speak, several instances within the United States attempts to weaponize drones with homemade IEDs”[13] pretty much suggests a shift with the ‘no-brainer’ view as now dominant. The question that remains unanswered, related to that *HST* article, is which of the four terrorism group clusters (*Jihadi, Left Fringe, Right Fringe, and Wild Card Threats*)—or affinity individuals related to them[14]—is involved in the current ‘homemade IED’ drone weaponization attempts. Such information, currently considered sensitive given ongoing investigations, has as of yet, not been released by FBI Director Christopher Wray.

Keywords: Counter Unmanned Aerial System (C-UAS), Federal Bureau of Investigation (FBI), Homeland Security, Improvised Explosive Device (IED), Weaponized Drones

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Jillian Smith, “FBI receives reports about drones being weaponized with homemade IEDs.” *ABC 4 News*. 18 November 2022, <https://abcnews4.com/news/nation-world/fbi-receives-reports-about-drones-being-weaponized-with-homemade-ieds-federal-bureau-of-investigation-director-christopher-wray-technology-improvised-explosive-devices-illegal-weapons>.

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“US FBI chief urges expansion of counter drone laws in testimony to homeland security committee.” *Unmanned Airspace*. 21 November 2022, <https://www.unmannedairspace.info/emerging-regulations/us-fbi-chief-urges-expansion-of-counter-drone-laws-in-testimony-to-homeland-security-committee/>.

Endnotes

[1] See “Christopher Wray, August 2, 2017 – Present.” FBI: History. Accessed 19 January 2023, <https://www.fbi.gov/history/directors/christopher-wray> and “Gravitas: FBI Director says bomb-laden drones are circulating in America.” WION. 18 November 2022, <https://www.youtube.com/watch?v=5uGIF-fDR6M>.

[2] Senate Homeland Security Hearing on National Security Threats. *CSPAN*. 17 November 2022, <https://www.c-span.org/video/?524139-1/senate-homeland-security-hearing-national-security-threats>.

[3] “Intelligence bulletin reveals potential plot to disrupt US electrical grid.” *ABC News*. 3 November 2021, <https://abcnews.go.com/WNT/video/intelligence-bulletin-reveals-potential-plot-disrupt-us-electrical-80961140>.

[4] Senate Homeland Security Hearing on National Security Threats. *CSPAN*. 17 November 2022, <https://www.c-span.org/video/?524139-1/senate-homeland-security-hearing-national-security-threats>.

[5] Bruce Crumley, “FBI cites bomb-toting UAV inquiries in urging counter-drone action.” *Drone DJ*. 18 November 2022, <https://dronedj.com/2022/11/18/fbi-cites-bomb-toting-uav-inquiries-in-urging-counter-drone-action/>.

[6] STATEMENT OF CHRISTOPHER A. WRAY DIRECTOR FEDERAL BUREAU OF INVESTIGATION BEFORE THE COMMITTEE ON HOMELAND SECURITY AND GOVERNMENTAL AFFAIRS UNITED STATES SENATE AT A HEARING ENTITLED “THREATS TO THE HOMELAND” PRESENTED NOVEMBER 17, 2022. Washington, DC: Department of Justice, <https://www.hsgac.senate.gov/imo/media/doc/Testimony-Wray-2022-11-17.pdf>.

[7] Tammy Waitt, “FBI Warns of Imminent Terror Drone Attacks on US Soil (Multi-Video).” *American Security Today*. 29 September 2017, <https://americansecuritytoday.com/fbi-warns-imminent-terror-drone-attacks-us-soil-multi-video/>. See also “Homeland Security Threats.” CSPAN. 27 September 2017, <https://www.c-span.org/video/?434411-1/senior-officials-testify-homeland-security-threats>.

[8] Rich Schapiro and Tony Capra, “Terrorists likely to attack U.S. with drones, says FBI director.” *NBC News*. 10 October 2018, <https://www.nbcnews.com/politics/national-security/terrorists-likely-attack-u-s-drones-says-fbi-director-n918586>.

[9] Ibid. However, a number of domestic terrorist plots did take place some years earlier. For some of these incidents, see Robert J. Bunker, *Terrorist and Insurgent Unmanned Aerial Vehicles: Use, Potentials, and Military Implications*. Carlisle, PA: USAWC SSI, August 2015, https://scholarship.claremont.edu/cgu_facbooks/50/.

[10] “Intelligence bulletin reveals potential plot to disrupt US electrical grid.” *ABC News*. 3 November 2021, <https://abcnews.go.com/WNT/video/intelligence-bulletin-reveals-potential-plot-disrupt-us-electrical-80961140>.

[11] Such drones would be of the kamikaze (single use) type which are representative of early drone weaponization experimentation as opposed to more advanced drone weaponization which utilizes standoff (aerial bombardment) capability. The IED—based on non-militarized components—would be directly attached to the drone itself (typically underneath it but also possibly on top) with the expectation that rotors drones (such as DJIs) would be more likely utilized as the platform rather than fixed wing airframes. Regardless of the configuration (and explosives and detonation methods utilized), such drones can be utilized for point and area attacks and to cause panic in large gatherings for stampede/crowd crush purposes.

[12] Robert J. Bunker, “Weaponized Aerial Drones and the Homeland: Increasing Domestic Terrorism Concerns.” *Homeland Security Today*. 29 December 2022, <https://www.hstoday.us/featured/weaponized-aerial-drones-and-the-homeland-increasing-domestic-terrorism-concerns/>.

[13] Senate Homeland Security Hearing on National Security Threats. *CSPAN*. 17 November 2022, <https://www.c-span.org/video/?524139-1/senate-homeland-security-hearing-national-security-threats>.

[14] Ibid.

Additional Reading

Robert J. Bunker, “Weaponized Aerial Drones and the Homeland: Increasing Domestic Terrorism Concerns.” *Homeland Security Today*. 29 December 2022, <https://www.hstoday.us/featured/weaponized-aerial-drones-and-the-homeland-increasing-domestic-terrorism-concerns/>.

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Biography

Dr. Robert J. Bunker is the director of research and analysis and a managing partner at C/O Futures, LLC. An international security and counterterrorism professional, he was Futurist in Residence at the Behavioral Science Unit (BSU) at the Federal Bureau of Investigation (FBI) Academy in Quantico, VA, and Minerva Chair at the Strategic Studies Institute (SSI) of the U.S. Army War College, Carlisle, PA. He can be reached at docbunker@cofutures.net.

Matt Begert is the director of counter-terrorism training and red teaming for C/O Futures, LLC. He was a career military officer with the United States Marine Corps, honorably retiring at the rank of lieutenant colonel. He was also an operations analyst with the National Law Enforcement and Corrections Technology Center (NLECTC)—West and was formerly with The Aerospace Corporation. He has subject matter expertise in counterterrorism training (including Mirror Image immersion), red teaming, less lethal and unconventional weapons, and technology (weaponry) related project management. He can be reached at mbegert@cofutures.net.

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