ORAL ARGUMENT NOT YET SCHEDULED

Nos. 16-1297 & 16-1302

IN THE UNITED STATES COURT OF APPEALS
DISTRICT OF COLUMBIA CIRCUIT

ELECTRONIC PRIVACY INFORMATION CENTER
Petitioner,

v.

The FEDERAL AVIATION ADMINISTRATION, MICHAEL P. HUERTA, in his official capacity as Administrator of the Federal Aviation Administration, and ELAINE L. CHAO, in her official capacity as United States Secretary of Transportation,
Respondents.

On Petition for Review of an Order of the
Federal Aviation Administration

AMENDED BRIEF FOR PETITIONER

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CERTIFICATE AS TO PARTIES, RULINGS AND RELATED CASES

CORPORATE DISCLOSURE STATEMENT

Pursuant to Fed. R. App. P. 26.1 and D.C. Cir. Rules 27(a)(4) and 28(a)(1)(A), Petitioner certifies as follows:

I. Parties and Amici

The principal parties in this case are Petitioner Electronic Privacy Information Center ("EPIC") and Respondents the Federal Aviation Administration ("FAA"), Michael P. Huerta, and Elaine L. Chao. EPIC is a 501(c)(3) non-profit corporation. EPIC is a public interest research center in Washington, D.C., established in 1994 to focus public attention on emerging civil liberties issues and to protect privacy, the First Amendment, and other Constitutional values. The FAA is a subcomponent of the U.S. Department of Transportation. Michael P. Huerta is the Administrator of the FAA. Elaine L. Chao is the U.S. Secretary of Transportation. Additionally, John A. Taylor, whose case (16-302) was consolidated with 16-297, is a party to the case as a *pro se* petitioner.

II. Ruling Under Review

Petitioner seeks review of the FAA Order issued on June 28, 2016, by the United States Secretary of Transportation through the Administrator of the FAA in Operation and Certification of Small Unmanned Aircraft Systems, 81 Fed. Reg. 42,063 (June 28, 2016) (codified at 14 C.F.R. pts. 21, 43, 61, 91, 101, 107, 119,

133, and 183) ("FAA Order"). The FAA Order is reproduced in the Joint Appendix at JA 000001–152.

III. Related Cases

This case was consolidated with *John A. Taylor v. Federal Aviation Administration*, No. 16-1302 (D.C. Cir. Filed Aug. 29, 2016). Petitioner is not aware of any other pending challenge to the Order.

IV. Corporate Disclosure Statement

EPIC is a 501(c)(3) non-profit corporation. EPIC has no parent, subsidiary, or affiliate. EPIC has never issued shares or debt securities to the public.

/s/ Marc Rotenberg
MARC ROTENBERG

Dated: March 2, 2017

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TABLE OF AUTHORITIES[1]

Cases

[1] Authorities upon which we chiefly rely are marked with asterisks.

Statutes

Other Authorities

GLOSSARY

ANPRM	Advanced Notice of Proposed Rulemaking
APA	Administrative Procedure Act
ARAC	Aviation Rulemaking Advisory Committee
FAA	Federal Aviation Administration
EPIC	Electronic Privacy Information Center
NPRM	Notice of Proposed Rulemaking
NAS	National Airspace System
UAS	Unmanned Aircraft Systems

JURISDICTIONAL STATEMENT

Any person with "a substantial interest in an order . . . of the Administrator of the Federal Aviation Administration . . . may apply for review of the order . . . in the United States Court of Appeals for the District of Columbia Circuit." 49 U.S.C. § 46110(a). The United States Court of Appeals for the District of Columbia Circuit has "jurisdiction to affirm, amend, modify, or set aside any part of the order and may order the . . . Administrator to conduct further proceedings." 49 U.S.C. § 46110(c).

The FAA issued a final order on June 28, 2016, in 81 Fed. Reg. 42,063. JA 000001. EPIC filed a timely Petition for Review on August 22, 2016. JA 000153; 29 U.S.C. § 46110 (providing sixty days to file a petition).

STATEMENT OF ISSUE FOR REVIEW

1. Whether the *Order*, which fails to address drone privacy issues, as requested by Petitioner and mandated by Congress, is arbitrary, capricious, or an abuse of discretion within the meaning of the Administrative Procedure Act;
2. Whether the *Order*, which fails to address drone privacy issues, as requested by Petitioner and mandated by Congress, is otherwise contrary to law.

PERTINENT STATUTORY PROVISIONS

The full text of the pertinent federal statutes is reproduced in the addendum to this brief.

STATEMENT OF THE CASE

On February 14, 2012 the FAA Modernization and Reform Act of 2012 was enacted directing the FAA to establish drone regulations. Pub. L. 112-95, 126 Stat. 11 (codified in scattered sections of 49 U.S.C.) [hereinafter "FAA Modernization Act" or "the Act"]. Within ten days of enactment, EPIC along with over 100 organizations, legal scholars, and technology experts petitioned the FAA to establish drone privacy rules. JA 000153. More than two and a half years later, the FAA denied EPIC's petition for a separate rulemaking, stating instead that the agency would consider EPIC's comments as part of a forthcoming drone rulemaking. JA 000257.

When the FAA eventually issued a Notice of Proposed Rulemaking ("NPRM") on February 23, 2015 concerning certain small drones operations, the agency stated that privacy issues were "beyond the scope of this rulemaking." JA 000273. EPIC then petitioned this Court for review of the FAA's denial of EPIC's petition and the agency's decision to exclude privacy safeguards from the drone NPRM as contrary to the language in the Act. EPIC Petition for Review, *EPIC v. FAA*, 821 F.3d 39 (D.C. Cir. 2016). EPIC also filed comments in response to the drone NPRM. JA 000274.

This Court held that EPIC's challenge to the rulemaking petition denial was time barred, and that EPIC's challenge to the FAA's drone rulemaking was premature. *EPIC*, 821 F.3d 39.

The FAA released the final rule under review on June 28, 2016. JA 000001. EPIC filed a timely Petition for Review on August 22, 2016. EPIC now challenges that Order.

* * *

At issue in this case is the FAA Order concerning the operation of small unmanned aircraft systems ("drones") in the National Airspace System ("Airspace"). The integration of drones into the Airspace will affect millions of Americans. Reports of drones threatening the safety of aircraft, civilians, first responders, and law enforcement officers—as well as reports of surveillance by drones on private property and even "drone stalking"—are increasing. *See, e.g.*, Alan Levin, *Drone-Plane Near Misses, Other Incidents Surge 46% in U.S.*, Bloomberg (Feb. 23, 2017) ;[2] Steve Miletich, *Pilot of Drone That Struck Woman at Pride Parade Gets 30 Days in Jail*, The Seattle Times (Feb. 24, 2017);[3] Nick Bilton, *When Your Neighbor's Drone Pays an Unwelcome Visit*, N.Y. Times (Jan.

[2] https://www.bloomberg.com/news/articles/2017-02-23/drone-plane-near-misses-other-incidents-surged-46-in-u-s.
[3] http://www.seattletimes.com/seattle-news/crime/pilot-of-drone-that-struck-woman-at-pride-parade-sentenced-to-30-days-in-jail/.

27, 2016);[4] Macy Jenkins, *Mysterious Drone Spotted Flying Above Carmichael Home*, CBS Sacramento (July 5, 2016);[5] Mary Papenfuss, *Utah Couple Arrested Over 'Peeping Tom' Drone*, Huffington Post (Feb. 17, 2017);[6] *An Update on Drone Privacy Concerns*, Law360 (Oct. 5, 2016) ("[D]rones are invading someone's privacy on almost a daily basis, with little to deter them.");[7] Conor Friedersdorf, *The Rapid Rise of Federal Surveillance Drones Over America*, The Atlantic, (Mar. 10, 2016).[8]

The FAA recently stated that "[r]eports of possible drone sightings to FAA air traffic facilities continued to increase during FY 2016." FAA, *FAA Releases Updated Drone Sighting Reports* (Feb. 23, 2017).[9] Yet the FAA is facilitating the rapid deployment of these devices in the Airspace without first establishing adequate safeguards.

Congress enacted the FAA Modernization and Reform Act, and commanded the FAA to establish a "comprehensive plan" prior to the deployment of drones. Yet the FAA, to date, has refused to promulgate comprehensive drone rules. The

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[4] https://www.nytimes.com/2016/01/28/style/neighbors-drones-invade-privacy.html.
[5] http://sacramento.cbslocal.com/2016/07/05/mysterious-drone-spotted-flying-above-carmichael-home/.
[6] http://www.huffingtonpost.com/entry/peeping-tom-drone_us_58a6847fe4b045cd34c03e56.
[7] https://www.law360.com/articles/848165/an-update-on-drone-privacy-concerns.
[8] https://www.theatlantic.com/politics/archive/2016/03/the-rapid-rise-of-federal-surveillance-drones-over-america/473136/.
[9] https://www.faa.gov/news/updates/?newsId=87565.

agency tasked with establishing standards for drone operation and ensuring the safety of all Americans has also refused to address privacy in the small drone rulemaking under review, the only drone rulemaking that the FAA has conducted to date.

As the FAA has refused to issue any privacy-related rules and refused to conduct a comprehensive rulemaking, contrary to the FAA Modernization Act and to EPIC's Rulemaking Petition, the Court must now order the agency to do so.

I. Drone use is rapidly increasing in the United States.

In 2008, the U.S. Government Accountability Office lamented that "[b]ecause data on [drone] operations in the national airspace system are scarce and routine operations are many years away, the impact of routine access on the system and the environment remains generally speculative." U.S. Gov't Accountability Office, GAO-08-511, *Unmanned Aircraft Systems: Federal Actions Needed to Ensure Safety and Expand Their Potential Uses within the National Airspace System* 5 (2008). But the landscape has changed markedly in the intervening years. According to industry sources, the use of drones in the United States has increased significantly in just the past couple of years. *See* Sally French, *Drone Sales In the U.S. More Than Doubled in the Past Year*, MarketWatch (May

28, 2016) (noting that "drone sales grew 224% from April 2015 to April 2016.").[10] This growth will only continue. The FAA estimates that 2.5 million drones were sold in 2016 with the expectation that drone sales will rise to 7 million by 2020. FAA, *FAA Aerospace Forecast: Fiscal Years 2016-2036* (2016).[11]

The FAA is now granting commercial drone operators routine access to the Airspace and has streamlined the process because of high demand by "issuing 'blanket' Certificates of Waiver." FAA, *It's (a) Grand! FAA Passes 1,000 UAS Section 333 Exemptions* (Aug. 4, 2015).[12] As of September 28, 2016, the agency has granted 5,551 Section 333 authorizations. FAA, *Section 333* (last modified Feb. 10, 2017).[13] Under the blanket authorization certificates, the operators can fly drones "anywhere in the country at or below 200 feet except in restricted airspace." *Id*. The agency has already granted authorizations for "aerial filming for uses such as motion picture production, precision agriculture, and real estate photography." *Id*. And the agency has further expedited these authorizations by issuing "summary grants for operations similar to those that it has already approved." *Id*.

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[10] http://www.marketwatch.com/story/drone-sales-in-the-us-more-than-doubled-in-the-past-year-2016-05-27.
[11] https://www.faa.gov/data_research/aviation/aerospace_forecasts/media/FY2016-36_FAA_Aerospace_Forecast.pdf.
[12] http://www.faa.gov/news/updates/?newsId=83395.
[13] https://www.faa.gov/uas/beyond_the_basics/section_333/.

The agency has granted these exemptions at an increasing rate while failing to issue baseline regulations to protect the public, as mandated by Congress in the FAA Modernization Act and sought by Petitioner EPIC.

II. Drone operations create new and unique threats to privacy.

A drone is an "aerial vehicle designed to fly without a human pilot." JA 000154. Drones are routinely equipped with high definition cameras that "greatly increase the capacity for domestic surveillance." JA 000155; *see also* Univ. of Wash. Tech. and Pub. Policy Clinic, *Domestic Drones: Technical and Policy Issues* 12 (2013) ("[W]ith the advancement of technology, drones will be equipped with high powered cameras, thermal imaging, and the capacity to see through walls.").[14] Drones carry sophisticated recording devices, and "by virtue of their design, their size, and how they can fly, [drones] can operate undetected in urban and rural environments." JA 000156; *see also* A. Michael Froomkin & Zak Colangelo, *Self-defense Against Robots and Drones*, 48 Conn. L. Rev. 1, 34–35 (2015). As of 2012, the year the FAA Modernization Act was enacted, the "[g]igapixel cameras used to outfit drones [were] among the highest definition camera available," providing "real-time video streams at a rate of 10 frames a second." JA 000155. With these advanced capabilities, drones can be used to track "up to 65 different targets across a distance of 65 square miles" and to gather

[14] https://www.law.washington.edu/clinics/technology/reports/droneslawanpolicy.pdf.

sensitive, personal information using infrared cameras, heat sensors, GPS, automated license plate readers, facial recognition devices, and other sensors. JA 000155–56; *see also* Ciara Bracken-Roche et al., Surveillance Studies Centre, *Surveillance Drones: Privacy Implications of the Spread of Unmanned Aerial Vehicles (UAVs) in Canada* 46 (Apr. 30, 2014) ("Mass data collection afforded through the persistent data capture capabilities of UAVs can . . . collect a wealth of 'ambient' information across a wide range of terrestrial environments, including the people, objects, and behaviours that are occurring within them.").[15]

In the years since EPIC and more than 100 organizations, legal scholars, and technology experts, first petitioned the FAA to establish drone privacy rules, the risks to public safety and personal privacy have only increased. The technology has become more widespread, and use by individuals and corporations has become commonplace. *See* Ashley Halsey III, *Drone Sales Soaring This Christmas, Capping a Record Year for the Industry*, Wash. Post (Dec. 23, 2016);[16] Jeff Desjardines, *The Emergence of Commercial Drones*, Visual Capitalist (Dec. 14, 2016).[17] According to a special report for *Law 360*, "drones are invading

[15] http://www.sscqueens.org/sites/default/files/Surveillance_Drones_Report.pdf.
[16] https://www.washingtonpost.com/local/trafficandcommuting/drone-sales-soaring-this-christmas-capping-a-record-year-for-the-industry/2016/12/22/09d81c94-c862-11e6-85b5-76616a33048d_story.html.
[17] http://www.visualcapitalist.com/emergence-commercial-drones/.

someone's privacy on almost a daily basis, with little to deter them." *An Update on Drone Privacy Concerns*, *supra*.[18]

Drones are also used to conduct surreptitious surveillance. *See, e.g.*, Mary Papenfuss, *Utah Couple Arrested Over 'Peeping Tom' Drone*, Huffington Post (Feb. 17, 2017); Friedersdorf, *supra*; *An Update on Drone Privacy Concerns*, *supra*; Mark Brunswick, *Spies in the sky signal new age of surveillance*, Star Tribune (Dec. 30, 2013).[19] Drones facilitate harassing and stalking of unsuspecting victims, capturing images in homes, places of work, and in public. JA 000156; *see also* Alissa M. Dolan & Richard M. Thompson II, Cong. Research Serv., R42940, *Integration of Drones into Domestic Airspace: Selected Legal Issues* 29 (2013) ("Traditional crimes such as stalking, harassment, voyeurism, and wiretapping may all be committed through the operation of a drone.").[20] The advanced surveillance capabilities of drones make them the perfect tools for paparazzi, private detectives, stalkers, and criminals. Froomkin & Colangelo, *supra*, at 32–33. This is particularly problematic because drones are small, mobile, and can easily be flown over private property. Drones can even be used to facilitate facial recognition, thermal imaging, or behavioral analysis and tracking. JA 000155–56.

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[18] https://www.law360.com/articles/848165/an-update-on-drone-privacy-concerns.
[19] http://www.huffingtonpost.com/entry/peeping-tom-drone_us_58a6847fe4b045cd34c03e56.
[20] https://fas.org/sgp/crs/natsec/R42940.pdf.

In addition to the extraordinary privacy risks of increased drone deployment in the United States, the devices also create unique security risks. Drones are equipped with onboard computers enabling remote control through a communication channel; the same remote control features that make drones easy to operate also make them susceptible to cyberattacks. Kacey Deamer, *How Can Drones Be Hacked? Let Us Count the Ways*, Live Science (June 10, 2016).[21] Hackers can exploit weaknesses in drone software to gain control of a drone's navigation and other features, including cameras, microphones, and other sensors. *You Can Hijack Nearly Any Drone Mid-flight Using This Tiny Gadget*, The Hacker News (Oct. 27, 2016) ("The loophole relies on the fact that DSMx protocol does not encrypt the 'secret' key that pairs a controller and hobbyist device. So, it is possible for an attacker to steal this secret key by launching several brute-force attacks . . . ");[22] Phil Sneiderman, *Here's how easy it is to hack a drone and crash it*, Futurity (June 8, 2016) ("Johns Hopkins University engineering graduate students and their professor discovered three different ways to send rogue commands from a computer laptop and interfere with an airborne hobbyist drone's normal operation. The hacks either force the machine to land or send it plummeting.")[23]

[21] http://www.livescience.com/55046-how-can-drones-be-hacked.html.
[22] http://thehackernews.com/2016/10/how-to-hack-drone.html.
[23] http://www.futurity.org/drones-hackers-security-1179402-2/.

The integration of drones into the Airspace poses unique threats to privacy and security which the FAA has failed to address in the Order. These insecure, airborne video recording systems are already flying over homes and streets without any clear guidelines, despite the well-documented risks.

III. The FAA is responsible for regulating drone operations.

The FAA was formed by the Federal Aviation Act of 1958 as the Federal Aviation Agency, with the stated goal "to provide for the regulation and promotion of civil aviation in such manner as to best foster its development and safety, and to provide for the safe and efficient use of the airspace by both civil and military aircraft." Pub. L. No. 85-726, Preamble, 72 Stat. 731, 731. The FAA's continuing mission is to provide "the safest, most efficient aerospace system in the world." FAA, *Our Mission* (Apr. 23, 2010).[24]

In the FAA Modernization and Reform Act of 2012, Congress ordered the FAA to develop rules governing the integration of drones into the Airspace. FAA Modernization Act §§ 331–36. Specifically, Section 332 of the Act requires the FAA to develop and implement a "comprehensive plan" to integrate civilian drones into the Airspace; Section 333 requires the FAA to expedite the operation of certain types of drones; Section 334 governs the integration of public drones;

[24] http://www.faa.gov/about/mission/.

Section 336 concerns the operation of model drones; and Section 335 outlines the necessary safety studies that the FAA must conduct.[25]

In Section 332, Congress ordered the FAA to, within 270 days, "develop a comprehensive plan to safely accelerate the integration of civil unmanned aircraft systems into the national airspace system." FAA Modernization Act § 332(a)(1). Congress required that the comprehensive plan include, "at a minimum," specific recommendations that would be subsequently implemented in a rulemaking. *Id*. In particular, Congress instructed the FAA to articulate "how the rulemaking will define the acceptable standards for operation and certification of civil unmanned aircraft systems." *Id*. § 332(a)(2)(A)(i). Congress also mandated that the comprehensive plan outline "the best methods to enhance the technologies and subsystems necessary to achieve the safe and routine operation of civil unmanned aircraft systems in the national airspace system." *Id*. § 332(a)(2)(B). Under Section 332, the FAA was required to submit the comprehensive plan to Congress by February 2013. *Id*. § 332(a)(4).

Congress ordered the FAA—"not later than 18 months after" submission of the Comprehensive Plan—to publish "(1) a *final rule* on small unmanned aircraft systems" and "(2) a notice of proposed rulemaking to *implement* the recommendations of the [comprehensive] plan required under subsection (a)(1),

[25] Section 331 provides definitions.

with a finale rule to be published not later than 16 months after the date of publication of the notice." *Id*. § 332(b) (emphasis added). Yet, despite this clear congressional command, the FAA has not issued a NPRM to implement the Comprehensive Plan. The only rulemaking notices submitted by the agency regarding drones have been test site notices in 2013, JA 000162–63, and the small drone rulemaking notice, JA 000264–73, neither of which were explicitly required under the FAA Modernization Act. The FAA has utterly failed to act on the Comprehensive Plan or to establish rules for the safe operation of drones in the Airspace.

The FAA was also required to "approve and make available" a "roadmap for the introduction of civil unmanned aircraft systems into the national airspace system," to be updated annually. FAA Modernization Act § 332(a)(5). Since 2012, the FAA has only released one annual roadmap. *See* JA 000207–51.

IV. The agency included privacy in the Comprehensive Plan, yet excluded privacy safeguards from the Small Drone Rulemaking and the Order.

At the outset, the FAA announced a "Comprehensive Plan" for drone integration in September 2013. *See* JA 000177. In the original Comprehensive Plan, the agency made clear that privacy issues need to "be taken into consideration as [drones] are integrated into the NAS." JA 000180. The agency acknowledged that "concerns" about how drone operations impact privacy will "grow stronger" as "demand for [drones] increases." JA 000181. The FAA

specifically identified the work on drone test sites rules to "inform future *rulemaking* activities and other policy decisions related to safety, *privacy*, and economic growth." JA 000191 (emphasis added). The agency proposed that the "lessons learned and best practices established at the test sites may be applied more generally to protect privacy in [drone] operations throughout the NAS." JA 000183.

On November 7, 2013, the FAA released its Roadmap for integration of drones into the NAS. JA 000207. In the Roadmap, the agency explained that

> [t]he FAA's chief mission is to ensure the safety and efficiency of the entire aviation system. This includes manned and unmanned aircraft operations. While the expanded use of [drones] presents great opportunities, it also raises questions as to how to accomplish [drone] integration in a manner that is *consistent with privacy and civil liberties considerations*.

JA 000219 (emphasis added). The agency also stressed that

> [t]he FAA is responsible for developing plans and policy for the safe and efficient use of the United States' navigable airspace. This responsibility includes coordinating efforts with national security and *privacy policies* so that the integration of [drones] into the NAS is done in a manner that supports and maintains the United States Government's ability to secure the airspace and *addresses privacy concerns*.

JA 000217 (emphasis added). Indeed, the FAA introduced the Roadmap with a statement that "[i]ntegration of [drones] into the NAS will require: review of current policies, regulations, environmental impact, *privacy considerations*, standards, and procedures." JA 000215 (emphasis added).

The FAA continues to identify privacy as one of the key "challenges posed by [drone] technology" that the agency "will successfully meet." FAA, *Fact Sheet—Unmanned Aircraft Systems (UAS)* (Feb. 15, 2015); FAA, *Fact Sheet—Unmanned Aircraft Systems* (UAS) (Jan. 6, 2014).

Despite the FAA's own conclusions in the Comprehensive Plan that there is a "need to address privacy concerns of the public at large while safely integrating [drones] in the NAS," JA 000183, the agency failed to consider privacy in the context of the Small Drone Rulemaking or include privacy as an element in the Order. *See* JA 000001–152, 000264–73. Instead, the FAA stated that privacy was "beyond the scope of this rulemaking" and concluded that the agency had no jurisdiction to regulate drone privacy. JA 000128, 000273.

SUMMARY OF THE ARGUMENT

The Federal Aviation Administration, the agency charged with regulating the national airspace, has refused to establish privacy rules governing the deployment of drones—unmanned aerial vehicles with sophisticated surveillance cameras—in the United States. The agency's failure to act threatens fundamental privacy rights, is arbitrary and capricious, and is contrary to law.

The FAA's decision in the Order to take an "incremental approach" to drone rulemaking is contrary to the FAA Modernization Act. The FAA has also unlawfully withheld the Comprehensive Plan rulemaking notice in a direct violation of Congress' command. The agency's failure to comply with the FAA Modernization Act constitutes a plain error of law. The FAA's refusal to address privacy in the Order contravenes the agency's prior determination that addressing privacy issues is key to safely integrating drones into the National Airspace.

The FAA has also failed to give a reasoned explanation for its failure to address privacy in the Order. The FAA did not explain the agency's divergence from the Comprehensive Plan and Roadmap it promulgated. The FAA failed to consider privacy risks relevant to the integration of drones, and failed to justify the sudden reversal after years of identifying privacy as a critical consideration in drone integration. As the FAA did not offer a reasoned explanation for excluding privacy from the Order and acted contrary to law, the Order must be overturned.

STANDING

EPIC, an organization established to focus public attention on emerging privacy and civil liberties issues, has both organizational and associational standing to challenge the FAA Rule.

The agency's failure to address privacy issues related to drone deployment has caused a "concrete and demonstrable injury to" EPIC's "organizational activities" that constitutes a "programmatic injury". *Havens Realty Corp. v. Coleman*, 455 U.S. 363, 379 (1982). *See also People for the Ethical Treatment of Animals v. USDA*, 797 F.3d 1087 (D.C. Cir. 2015) (holding that a non-profit animal protection organization had standing under *Havens* to challenge the USDA's failure to promulgate bird-specific animal welfare regulations); *Abigail All. for Better Access to Developmental Drugs v. Eschenbach*, 469 F.3d 129 (D.C. Cir. 2006) (finding that a health advocacy organization had organizational standing under *Havens* to challenge an FDA regulation).

Specifically, the FAA's failure to conduct notice-and-comment rulemaking regarding the privacy impact of drone deployment in the United States directly damages EPIC's mission and activities, which are promoting the establishment of privacy safeguards and "protect[ing] privacy, free expression, democratic values, and [promoting] the Public Voice" regarding the impact of new technologies. *See*

EPIC, *About EPIC* (2015)[26]. The FAA's failure to address the privacy issues presented by drone deployment has injured EPIC as an organization because it has made EPIC's "activities more difficult" and creates a "direct conflict between the [FAA's] conduct and [EPIC's] mission." *Nat'l Treasury Empls. Union v. United States*, 101 F.3d 1423, 1430 (D.C. Cir. 1996). The failure to develop privacy rules while permitting the deployment of drones is directly contrary to EPIC's mission of *promoting* privacy safeguards for new technologies. The FAA's refusal to provide the public with a comprehensive rulemaking that addresses this urgent privacy issue has also made EPIC's work more difficult. Without a federal venue for establishing privacy rules, EPIC has had to expend additional resources to develop new advocacy strategies, including drafting model state drone privacy legislation and tracking disparate protections across different jurisdictions. Like the plaintiffs in *PETA v. USDA*, EPIC has had to expend organizational resources "in response to, and to counteract, the effects of defendants' alleged [unlawful conduct]." *PETA*, 797 F.3d at 1097.

In addition to the organizational injuries outlined above, EPIC can also assert associational standing on behalf of members whose privacy is threatened by small drone operations authorized under the FAA rule. Decl. of Addison M. Fischer; Decl. of Bruce Schneier. The authorization of small drone operations

[26] https://epic.org/about.

without any privacy rules or restrictions will result in the invasion of privacy and collection of sensitive personal information. *Id*. The promulgation of baseline privacy rules by the FAA, including collection and retention limitations imposed on drone operators, would have provided protection against the privacy hazards created by small drone operations.

The ongoing deployment of small drones without any applicable privacy rules adversely affects EPIC members' use and enjoyment of their property and ability to live and move free from constant monitoring. Decl. of Addison M. Fischer; Decl. of Bruce Schneier. This is precisely the type of "demonstrated risk" and "demonstrated increase in an existing risk, of injury to the particularized interests of the plaintiff" that this Court recently recognized as sufficient in *Sierra Club v. FERC*, 827 F.3d 59, 65 (D.C. Cir. 2016) (finding that the potential increase in tanker traffic permitted by agency ruling was sufficient to satisfy the injury-in-fact requirement where it might have diminished Sierra Club member's use and enjoyment of nearby waterways). This injury is caused by the FAA's approval of small drone operations without addressing the privacy hazards that these operations necessarily create. *See WildEarth Guardians v. Jewell*, 738 F.3d 298, 306–7 (D.C. Cir. 2013) (finding causation sufficient where the agency failed to follow a procedure that "was connected to the substantive result). "Where, as here, a party alleges deprivation of its procedural rights, courts relax the normal

standards of redressability and imminence." *Sierra Club*, 827 F.3d at 65. The purpose of the FAA Modernization Act is to ensure that the agency develop and execute a "comprehensive plan" to address all safety risks and hazards created by drone operations. FAA Modernization Act §§ 332, 333. This Court consequently has jurisdiction to decide this case under Article III.

ARGUMENT

Under the Administrative Procedure Act ("APA"), agency actions are reviewable under Section 5 U.S.C. § 704 when "the action . . . mark[s] the consummation of the agency's decisionmaking process" and "the action [is] one by which rights or obligations have been determined, or from which legal consequences will flow." *U.S. Army Corps. Of Engineers v. Hawkes Co., Inc.*, 136 S. Ct. 1807, 1813 (2016). The definition of "'agency action' includes the whole or a part of an agency rule, order, license, sanction, relief, or the equivalent or denial thereof, or failure to act." 5 U.S.C. § 551(13).

The APA requires the court to "hold unlawful and set aside agency action, findings, and conclusions found to be . . . arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 5 U.S.C. § 706(2)(A). Similarly, APA requires the court to "compel agency action unlawfully withheld or unreasonably delayed." *Id*. § 706(1).

The court's task under the APA "is to determine whether the agency's decision was made 'without observance of procedure required by law,' or whether it was 'arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.'" *Union Neighbors United, Inc. v. Jewell*, 831 F.3d 564, 574 (D.C. Cir. 2016) (citation omitted). "[A]n agency acts arbitrarily or capriciously if it 'has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.'" *Id.* (citing *Am. Wildlands v. Kempthorne,* 530 F.3d 991, 997-98 (D.C. Cir. 2008)).

The Supreme Court has made clear that "*Chevron* deference is not warranted where the regulation is 'procedurally defective'—that is, where the agency errs by failing to follow the correct procedures in issuing the regulation." *Encino Motorcars, LLC v. Navarro*, 136 S. Ct. 2117, 2125 (2016); *see also Chevron U.S.A., Inc. v. Natural Resources Defense Council, Inc*., 467 U.S. 837 (1984). "One of the basic procedural requirements of administrative rulemaking is that an agency must give adequate reasons for its decisions." *Id*. "But where the agency has failed to provide even that minimal level of analysis, its action is arbitrary and capricious and so cannot carry the force of law."

I. The FAA's refusal to consider privacy hazards in the drone rulemaking is unlawful.

Where, as in this case, the FAA has promulgated a regulation based on an interpretation of a statutory provision that the agency administers, this Court applies the familiar two-step *Chevron* test to determine first "whether Congress has directly spoken to the precise question at issue" and, second, if "the statute is silent or ambiguous with respect to the specific issue . . . whether the agency's answer is based on a permissible construction of the statute." *Independent Pilots Ass'n v. FAA*, 638 Fed. App'x 6, 6 (D.C. Cir. 2016) (per curiam). If the intent of Congress is clear, that is the end of the matter." *Id*.

The FAA acknowledges in the Order that they "received about 180 comments on the NPRM raising concerns about the potential impacts of small UAS operations on privacy." JA 000128. Yet despite these comments in response to the NPRM, EPIC's petition to the agency, the FAA's prior acknowledgement that privacy safeguards are critical, the agency's privacy rules for the drone test sites, and Congress' clear command that the FAA shall address all potential "hazards to . . . the public" created by drone operations, the agency refused to address privacy in the drone rulemaking. That the agency failed, with this record, to establish a privacy rule is extraordinary.

The Order excluding privacy issues from the drone rulemaking should be vacated for three reasons. First, the FAA failed to determine, as required under §

333(b)(1) of the FAA Modernization Act, whether the proposed small drone operations would "create a hazard . . . to the public" by enabling invasions of privacy and property. Second, the FAA excluded privacy issues from the rulemaking based on an impermissibly narrow interpretation of the term "hazard." Third, the FAA's decision to exclude privacy from the rulemaking is contrary to the agency's prior interpretations of the rulemaking obligations imposed by the Act.

In evaluating an agency's statutory interpretation, a court must first ask "whether the Congress 'has directly spoken to the precise question at issue'; if it has, [the court] 'must give effect to [its] unambiguously expressed intent.'" *U.S. Sugar Corp. v. EPA*, 830 F.3d 579, 606 (D.C. Cir. 2016). The court evaluates Congress' intent based on the Act's "text, structure, purpose, and legislative history." *Id*. If the court finds that "the statute is 'silent or ambiguous with respect to the specific issue,'" then the court will defer to the agency interpretation "so long as it is 'based on a permissible construction of the statute.'" *Id*.

A. The FAA's refusal to address privacy hazards in the Order is contrary to the FAA Modernization Act mandate.

The FAA states in the *Order* that "this rulemaking is being conducted under 49 U.S.C. 40103(b), 44701(a)(5), and Public Law 112–95, section 333." JA 000130. The first two provisions cover the agency's general authority to create policies and regulations to "ensure the safety of aircraft and the efficient use of

airspace," 49 U.S.C. § 40103(b), and to "promote safe flight" by prescribing "regulations and minimum standards . . . necessary for safety in air commerce and national security," § 44701(a)(5)). But the specific provision at issue in this case is Section 333 of the FAA Modernization Act, which requires in pertinent part that the agency "determine if certain unmanned aircraft systems may operate safely in the national airspace system," § 333(a), and to determine, "at a minimum, [w]hich types of unmanned aircraft systems . . . do not create a hazard to users of the national airspace system or the public or pose a threat to national security," § 333(b). The FAA Modernization Act also requires the FAA to determine whether operations under the drone rule require an "airworthiness certification" or other certificate, § 333(b)(2), which the agency acknowledges is a separate and distinct safety requirement. JA 000117.

Congress' intent in the FAA Modernization Act was clear: the Secretary of Transportation (through the FAA) must evaluate whether small drone operations create any hazard to users of the Airspace or the public before approving operations under Section 333. Yet, the FAA found that "operations subject to and compliant with part 107 pose no hazard to the public and the [Airspace]," JA 000118, without ever evaluating or addressing the privacy hazards created by drone operations and outlined in submissions by 180 commentators.

Statutory interpretation "start[s] with the plain meaning of the text, looking to the language itself, the specific context in which that language is used, and the broader context of the statute as a whole." *Sherley v. Sebelius*, 644 F.3d 388 (D.C. Cir. 2011). "Hazard" means a "potential source of danger." *Hazard*, New Oxford American Dictionary (3d ed. 2010). This term is both clear and broad; hazard encompasses all source of danger, not just traditional safety risks associated with manned aircraft. Indeed, the FAA concedes as much when it addresses other unique risks posed by drone operations, such as the use of drones to deliver packages ("External Load and Dropping Objects"), JA 000077, 000080, and the entirely hypothetical risk of drones carrying "hazardous materials," JA 000014.

Clearly the range of potential "hazards" created by small drone operations is vast. But the Order focuses primarily on a narrow subset of hazards, finding that "the two primary safety concerns associated with small UAS operations—the ability to 'see and avoid' other aircraft with no pilot on board and the operator losing positive control of the small unmanned aircraft—would be mitigated by the other provisions of the proposed rule." JA 000118. Congress did not order the FAA to limit consideration of potential hazards to these two safety concerns, and the FAA did not limit itself to those two considerations in the final rule. The FAA itself recognized that safety and airworthiness concerns were separate and apart from the broader public hazard concerns that Congress ordered the agency to

consider in Section 333. JA 000117. But the FAA did explicitly exclude privacy risks from consideration under the rule.

The FAA's decision to exclude privacy risks was not based on a finding that the privacy concerns raised by the 180 commentators failed to indicate a potential "hazard . . . to the public" created by small drone operations. Instead, the FAA claimed that their mission "does not include regulating privacy" and that the agency has not previously "extended its administrative reach" to regulate the use of items "extraneous to the airworthiness or safe operation of aircraft in order to protect individual privacy." JA 000128. But contrary to the FAA's claim that the FAA Modernization Act "neither mandates nor permits the FAA to issue and enforce regulations specifically aimed at protecting privacy," the statute explicitly requires the agency to evaluate all potential hazards created by small drone operations. § 333(b)(1).

The FAA's decision to exclude consideration of privacy hazards from the drone rulemaking is contrary to Congress' clear mandate in the FAA Modernization Act, and the Order should be vacated.

B. Even if the term 'hazard' is ambiguous, the FAA's refusal to consider privacy risks is based on an impermissibly narrow construction of the term.

To the extent that the term "hazard" is ambiguous in the FAA Modernization Act, the Court must decide whether the agency's interpretation "is a permissible

construction of the statute." *Mako Commc'ns, Inc. v. FCC*, 835 F.3d 146, 150 (D.C. Cir. 2016). "A 'reasonable' explanation of how an agency's interpretation serves the statute's objectives is the stuff of which a 'permissible' construction is made." *Id*. The FAA's unduly narrow interpretation of "hazard" in the Order, which excludes any privacy risks to the public created by small drone operations, is unreasonable and inconsistent with the agency's own prior statements.

This Court has previously scrutinized the FAA's evaluation of potential hazards to air navigation in wind turbine site locations and held that, even in that narrow context, the agency's determinations must be consistent with prior interpretations and evidence on the record. *See Town of Barnstable v. FAA*, 740 F.3d 681 (D.C. Cir. 2014) (finding that the FAA's "no hazard" determination regarding certain wind turbines was based on a permissible interpretation of the agency's prior guidelines); *Clark Cty. v. FAA*, 522 F.3d 437 (D.C. Cir. 2008) (finding that the agency failed to reasonably explain why certain turbines would not cause hazardous interference with radar systems).

This Court in *Clark* rejected the FAA's determination that no hazards existed where the agency could not provide a "coherent explanation countering the concerns" raised by the petitioners about the potential radar interference caused by proposed wind turbines near a Nevada airport. *Clark Cty.*, 522 F.3d at 443. In contrast, this Court recently upheld the FAA's "no hazard" determination

concerning proposed wind turbines near an airport in Massachusetts where the FAA's analysis was consistent with the agency's prior guidelines and statements. *Town of Barnstable*, 740 F.3d at 689.

Unlike *Town of Barnstable*, the FAA's refusal to consider privacy risks in the Order is not consistent with the agency's prior statements or with the intent and purpose of the FAA Modernization Act. Not only does the Act impose a broad obligation on the agency to promulgate "comprehensive" drone regulations, but the FAA itself has repeatedly recognized that privacy is a key consideration in a plan to safely and efficiently integrate drones into the Airspace.

In the FAA Modernization Act, Congress ordered the FAA to "develop" and "implement" "a comprehensive plan to safely accelerate the integration of civil unmanned aircraft systems into the national airspace system." FAA Modernization Act § 332(a)(1). Interpreting the word "comprehensive," the FAA's Comprehensive Plan provides "the overarching, interagency goals, objectives, and approach to integrating [drones] into the NAS," including public and civil usage, research and development, small drones, and test sites. JA 000179–80. Although the FAA properly identified privacy as a critical component of the Comprehensive Plan, the agency subsequently sidestepped its statutory obligation to issue privacy-related rules. By failing to address privacy, the agency has failed to comply with the mandate to develop and implement the Comprehensive Plan.

"Comprehensive" means "complete; including all or nearly all elements or aspects of something." *Comprehensive*, New Oxford American Dictionary (3d ed. 2010) [hereinafter "*Comprehensive*, NOAD"]. In the entire 145-page FAA Modernization Act, Congress inserted the term "comprehensive" only six times, and only once in the section addressing drones. FAA Modernization Act § 320(a)(2) ("comprehensive sampling program" of air toxins in aircraft cabins); *id.* § 332(a) ("comprehensive plan" to integrate civil drones into the Airspace); *id.* § 344(b)(1) ("comprehensive solutions" to violations of certain FAA regulations); *id.* § 344(d)(2)(A) ("comprehensive reviews" of voluntary disclosure reports); *id.* § 609(b) ("comprehensive review and evaluation" of facility training); *id.* § 908(a)(4) ("comprehensive assessment" of certain technician certification processes). Congress understood the breadth and depth required by any agency activity modified with the adjective "comprehensive," and chose to use it sparingly. Only when Congress wanted the agency to undertake far-reaching, wide-ranging, across-the-board, all-inclusive activity—to "include all or nearly all elements or aspects of something"—did it add the heightened "comprehensive" requirement. *Comprehensive*, NOAD.

As EPIC has previously emphasized in the petition and comments, increased drone operations in the United States pose substantial threats to privacy. JA 000155–57. Widespread drone operations greatly increase governmental and

private capacities for surveillance due to the sophisticated imaging and recording technologies drones can carry. *Id.*; EPIC, *Spotlight on Surveillance: DRONES: Eyes in the Sky* (Oct. 2014) (detailing various forms of invasive drone surveillance technology).[27] Moreover, many drones enable their operators to surreptitiously observe, record, or otherwise collect information from individuals without their knowledge or consent, even through walls or from thousands of feet in the air. *See* JA 000155–57. The potential for widespread surveillance and data collection threatens individuals' autonomy, public anonymity, and right to control the collection and use of their personal information. Richard M. Thompson II, Cong. Research Serv., R43965, *Domestic Drones and Privacy: A Primer* 6–8 (2015). The subsequent aggregation, retention, and use of personal data collected via drones further risks undermining the right to privacy. *Id.* at 8–11.

Congress, the President, and an increasing number of states have all recognized the need for substantial privacy protections to accompany increased drone usage. *See, e.g.*, *Ensuring Aviation Safety in the Era of Unmanned Aircraft Systems: Hearing Before the Subcomm. On Aviation of the H. Comm. on Transportation and Infrastructure*, 114th (2015); *Unmanned Aircraft Systems: Key Considerations Regarding, Safety, Innovation, Economic Impact, and Privacy: Hearing Before the Subcomm. on Aviation Operations, Safety, and Security of the*

[27] https://epic.org/privacy/surveillance/spotlight/1014/drones.html.

S. Comm. on Commerce, Science, & Transportation, 114th (2015); *The Future of Drones in America: Law Enforcement and Privacy Considerations: Hearing Before the S. Comm. on the Judiciary*, 113th Cong. (2013); *Eyes in the Sky: The Domestic Use of Unmanned Aerial Systems: Hearing Before the Subcomm. on Crime, Terrorism, Homeland Sec., and Investigations of the H. Comm. on the Judiciary*, 113th Cong. (2013); Drone Aircraft Privacy and Transparency Act of 2013, S. 1639, 113th Cong. (2013), H.R. 2868, 113th Cong. (2013); Preserving Freedom from Unwarranted Surveillance Act of 2013, H.R. 972, 113th Cong. (2013), S. 3287, 112th Cong. (2012); Preserving American Privacy Act of 2013, H.R. 637, 113th Cong. (2013); JA 000133–37 (Presidential Memorandum: Promoting Economic Competitiveness While Safeguarding Privacy, Civil Rights, and Civil Liberties in Domestic Use of Unmanned Aircraft Systems (Feb. 15, 2015)); Nat. Conf. of State Legislators, *Current Unmanned Aircraft State Law Landscape* (Sept. 23, 2015).[28]

Indeed, soon after the Act was passed Reps. Edward Markey and Joe Barton sent a letter to the FAA to "express [their] concerns about the law's potential privacy implications and to request information about how the FAA is addressing these important matters." Letter from Rep. Edward J. Markey (D-MA) and Rep. Joe Barton (R-TX) to FAA Acting Administrator Michael P. Huerta (Apr. 19,

[28] http://www.ncsl.org/research/transportation/current-unmanned-aircraft-state-law-landscape.aspx#1.

2012). The letter was explicit about the need to address drone privacy and the expectation that the FAA would do so:

> Now that the FAA has initiated the rulemaking process for implementing the FAA Modernization and Reform Act, the agency has the opportunity and responsibility to ensure that the privacy of individuals is protected and that the public is fully informed about who is using drones in public airspace and why.

Id. Similarly, in the 2014 Appropriations Act Congress was explicit about the need for the FAA to address drone privacy and commanded the agency to conduct a drone privacy report prior to developing final regulations for drones stating, "[w]ithout adequate safeguards, expanded use of [drones] and their integration into the national airspace raise a host of concerns with respect to the privacy of individuals." 160 Cong. Rec. 1186 (2014). Congress specifically required the FAA to "recommend next steps for how the FAA can address the impact of widespread use of [drones] on individual privacy as it prepares to facilitate the integration of [drones] into the national airspace." *Id.*

Therefore, any "comprehensive plan" for the regulation of drones in the United States must necessarily address privacy issues. The FAA has previously conceded the need to address privacy issues in relation to drone deployment. JA 000180. The FAA stated in the Roadmap that the agency's responsibility extends to coordinating efforts with privacy policies so that drone integration "addresses privacy concerns." JA 000217. The FAA has even imposed privacy requirements

for the drone test sites, JA 000252, as part of an "incremental approach" to privacy, JA 000183, and anticipated that "[t]he lessons learned and best practices established at the test sites may be applied more generally to protect privacy in [drone] operations throughout the NAS." *Id.*

Despite the agency's recognition of the key role privacy protection must play in the integration of drones, the FAA has attempted to cabin its statutory mandate to exclude the implementation of privacy safeguards. Despite requiring test sites to establish privacy policies, the agency has claimed that its "mission does not include developing or enforcing policies pertaining to privacy or civil liberties," JA 000219. Despite repeatedly acknowledging that privacy must be "taken into consideration as [drones] are integrated into the NAS," the FAA has refused to make any regulatory proposal to address those issues. *See, e.g.*, JA 000193 ("The [Joint Planning and Development Office] will continue to convene partner agency teams to address such issues as security, privacy, civil rights, and civil liberties as the opportunity is presented, enabling integration across several key policy areas of interest.").

Considering Section 332 of the FAA Modernization Act, the FAA's prior statements in the Comprehensive Plan and Roadmap, and the agency's adoption of privacy policies for the drone test sites, the FAA's interpretation of potential "hazards" in the Order is impermissibly narrow. The agency acknowledges that

many commentators, including EPIC, highlighted the privacy risks posed by small drone operations. The FAA is also well aware that EPIC petitioned the agency to establish baseline privacy protections *prior to* the deployment of drones in the Airspace. Yet despite this and Congress' command that the agency develop and execute a comprehensive plan to integrate drones, the FAA refused to consider privacy risks within the category of potential "hazards" created by small drone deployment. The agency's interpretation is impermissibly narrow and must be vacated.

C. The FAA's refusal to address privacy hazards in the Order is arbitrary and capricious

A "fundamental requirement of administrative law is that an agency set forth its reasons for decision; an agency's failure to do so constitutes arbitrary and capricious agency action" and warrants reversal. *Olivares v. TSA*, 819 F.3d 454, 463 (D.C. Cir.), *cert. denied*, 137 S. Ct. 282 (2016) (internal quotation marks omitted) (citing *Tourus Records, Inc. v. DEA*, 259 F.3d 731, 737 (D.C. Cir. 2001)).

1. The FAA fails to explain why the agency did not evaluate the privacy hazards outlined by EPIC and other commentators.

Though the FAA spends more than 2,600 words justifying its refusal to regulate drone privacy, JA 000128–30, the agency offers no meaningful response to the privacy-related safety threats that EPIC highlighted in its comments. Given

this fatal failure, the FAA Order "must be set aside" as "arbitrary [and] capricious." *Citizens to Preserve Overton Park v. Volpe*, 401 U.S. 402, 414 (1971).

A regulation will only survive arbitrary and capricious review if it is "the product of reasoned decisionmaking." *U.S. Postal Serv. v. Postal Regulatory Comm'n*, 785 F.3d 740, 753 (D.C. Cir. 2015)). Although this standard of review is "fundamentally deferential," *Fox v. Clinton*, 684 F.3d 67, 75 (D.C. Cir. 2012), the court must "insist that an agency 'examine the relevant data and articulate a satisfactory explanation for its action.'" *FCC v. Fox Television Stations, Inc.*, 556 U.S. 502, 513 (2009) (quoting *Motor Vehicle Mfrs. Assn. of United States, Inc. v. State Farm Mut. Automobile Ins. Co.*, 463 U.S. 29, 43 (1983)). This entails a "thorough, probing, in-depth review of the agency's asserted basis for decision, ensuring that the agency . . . [has] examine[d] the relevant data and [has] articulate[d] a satisfactory explanation for its action including a rational connection between the facts found and the choices made." *Midtec Paper Corp. v. United States*, 857 F.2d 1487, 1498 (D.C. Cir. 1988) (internal quotation marks omitted).

In particular, a rule is deemed arbitrary and capricious where the agency fails "to respond meaningfully to the evidence." *Petro Star Inc. v. Fed. Energy Regulatory Comm'n*, No. 15-1009, 2016 WL 4525273, at *4 (D.C. Cir. Aug. 30, 2016); *see also Butte Cty. v. Hogen*, 613 F.3d 190, 194 (D.C. Cir. 2010) ("[A]n agency's refusal to consider evidence bearing on the issue before it constitutes

arbitrary agency action[.]"). If an agency does not "answer[] objections that on their face appear legitimate, its decision can hardly be said to be reasoned." *Petro Star Inc.*, No. 15-1009, 2016 WL 4525273, at *4.

By abruptly brushing aside the privacy-related safety risks posed by drone deployment, the Order fails to reflect the "reasoned decisionmaking" that the APA demands. *U.S. Postal Serv.*, 785 F.3d at 753. In comments on the proposed rule, EPIC explained in extensive detail how drone technology would threaten public safety absent privacy safeguards. On at least three occasions, the FAA flatly ignores that evidence. First, EPIC highlighted the dangers of surveillance by drone:

> Drones carry increasingly sophisticated recording devices and "by virtue of their design, their size, and how they can fly, can operate undetected in urban and rural environments." These advanced surveillance capabilities greatly surpass those previously available to paparazzi, private detectives, stalkers, and criminals. Drones can even be used to facilitate facial recognition, thermal imaging, or behavioral analysis and tracking.

JA 000280–81. Yet the FAA refuses to meaningfully address these threats in the Order:

> Although the FAA regulates the safe and efficient operation of all aircraft within the NAS, the FAA has never extended its administrative reach to regulate the use of cameras and other sensors extraneous to the airworthiness or safe operation of the aircraft in order to protect individual privacy. Moreover, there is substantial, ongoing debate among policymakers, industry, advocacy groups and members of the public regarding the extent to which UAS operations pose novel privacy issues, whether those issues are addressed by existing legal frameworks, and the means by which privacy risks should be further mitigated.

JA 000130.

Neither past agency practice nor "ongoing debate" constitute an actual response to the problems that EPIC identified. If the FAA does not believe that drones pose surveillance-related safety risks, the agency must provide a reason for reaching that conclusion. If the FAA *does* accept that drones pose such risks, then the agency is obligated to address those risks as part of a comprehensive rulemaking. The agency cannot arbitrarily ignore a category of threats simply because they are novel or because the agency has mentioned them in some other forum. The APA demands that an agency "examine the relevant data and articulate a satisfactory explanation for its action," which the FAA has failed to do in the Order. *State Farm*, 463 U.S. at 43.

Next, EPIC noted that "self-help" techniques such as 'geo-fencing,' *i.e.* disabling drones mid-flight, will imperil public safety:

> [A]s a result of non-existent privacy regulations, geo-fencing will thwart the FAA's ability to ensure "safe integration" of drones into the NAS. One popular drone manufacture's geo-fencing software removes the operator's control of elevation when flying in a restricted area and forces the drone to immediately land. These types of forced landings pose grave safety risks that the FAA completely disregarded in the current rulemaking.

JA 000285; *see also* JA 000286 ("When individuals and drone manufactures are left with no option other than to defend their privacy interests, they will create technologies and react in ways that make operating drones less safe."). Again,

however, the FAA's Order fails to meaningfully address this risk. The agency writes:

> [T]here could be many different motivations (not just privacy concerns) for an individual to engage in unsafe conduct. That is why the regulations of this rule require that a small UAS be safely operated. If a person engages in conduct that creates an unsafe small UAS operation, then that person will be in violation of this rule regardless of the specific motivation for that conduct.
>
> The FAA also notes that, with regard to EPIC's example of geo-fencing as potentially dangerous self-help, a number of commenters on this rule specifically requested the FAA to mandate geo-fencing, asserting that this would increase the safety of a small UAS operation. As discussed in section III.E.3.b.vii.1 of this preamble, while this rule will not require geo-fencing equipage, the FAA may consider such equipage as a positive safety mitigation in evaluating waiver requests for individual operations.

JA 000130.

At no point does the FAA answer the problem that EPIC identified: the risk to public safety attributable to a lack of privacy safeguards from the agency with sole authority to regulate the national airspace. The FAA merely notes the existence of EPIC's objection, observes that other factors can contribute to the unsafe operation of drones, and concludes that the agency will not mandate geo-fencing. *Id.* Meanwhile, the FAA fails to even acknowledge—let alone rebut—EPIC's evidence of an ongoing, privacy-related threat to public safety. JA 000283–86. Far from "reasoned decisionmaking," this duck-and-cover style of regulation is

exactly what arbitrary and capricious review seeks to prevent. *U.S. Postal Serv.*, 785 F.3d at 753.

Finally, EPIC explained that robust cybersecurity measures are needed to prevent drones from being hacked:

> Experts have warned that the "exploitable weaknesses of the current civilian GPS system present a clear danger for UAS operators and the public living beneath their wings." They have called on the FAA to address these issues in a way that implements "precautionary measures" prior to the full integration of drones into to the NAS. And this is only one example of the insecure nature of current drone control systems.

EPIC Drone Comments, at 15. Once again, the FAA's offers an utterly insufficient response to the safety threat that EPIC identifies. Though the FAA notes that drone hacking may violate other statutes and regulations, JA 000119, the agency offers no explanation for its failure to implement the "precautionary measures" urged by EPIC. If the FAA believes that "minimum security standards" are unnecessary "to prevent the loss of positive control and the unauthorized access to the drone's surveillance capabilities or data collected by the drone," it must explain why. JA 000289. If the agency disagrees that "[u]se and data retention limitations should apply to commercial drone operators," or that "[d]ata collected via drone surveillance should not be used for purposes beyond the original reason for collection," it must offer some justification for that view. *Id.* at 15. Yet the FAA has failed entirely to do so.

Because the FAA has "refused to articulate a satisfactory explanation for its action" in at least three respects, *Midtec Paper Corp.*, 857 F.2d at 1498), the agency's Order must be invalidated under the APA as arbitrary and capricious

2. The FAA fails to consider the importance of privacy to small drone integration.

In addition, the FAA's refusal to consider privacy issues in the *Order* is arbitrary and capricious because the FAA has "entirely failed to consider an important aspect of the problem." *State Farm*, 463 U.S. at 43. The text of the FAA Modernization Act requires the FAA to develop and implement a "*comprehensive plan*" to integrate drones into the national airspace. FAA Modernization Act § 332(a)(1).

By definition, a comprehensive plan must address "all or nearly all elements or aspects" of drone integration. *Comprehensive*, NOAD. In the Small Drone Rulemaking Notice, the FAA announced that the Small Drone Rulemaking would "integrate small [drone] operations posing the least amount of risk" to "people, property, and other aircraft." JA 000022–23. By contrast, the agency stated that future FAA rulemakings would only "work[] on integrating [drone] operations that pose greater amounts of risk." *Id*. By the agency's own admission, the Small Drone Rulemaking will be the *only* rulemaking addressing small, low-risk drone operations. *Id.* Therefore, to "comprehensive[ly]" integrate drones into the NAS as mandated by Congress in the FAA Modernization Act, the FAA must address "all

or nearly all elements or aspects" of small, low-risk drones, *Comprehensive*, NOAD.

The FAA has recognized that small drones will represent a significant percentage, perhaps the largest, of all drones operating in the national airspace. *See* JA 000181 ("For example, according to the Teal Group, the market for government and commercial use of [drones] is expected to grow, with small [drones] having the greatest growth potential."). Moreover, these small drones pose even greater threats to privacy given their small size and low flight path. In other words, small drones are not only likely to be the most prevalent type of drones, but also the most likely to facilitate surveillance and other privacy invasions. Thus, the FAA's determination that privacy issues are "beyond the scope" of the Small Drone Rulemaking is entirely backward and, as a matter of law, arbitrary and capricious because it "fail[s] to consider an important aspect of the problem." *State Farm*, 463 U.S. at 43.

3. The FAA fails to explain why privacy is now not relevant to drone operations, even though the agency previously underscored the need to address privacy issues.

The FAA's decision is also unreasoned because the agency has failed to explain or acknowledge the divergence from its prior position recognizing the importance of privacy safeguards in the drone integration scheme. "Agencies are free to change course as their expertise and experience may suggest or require, but

when they do so they must provide a reasoned analysis indicating that prior policies and standards are being deliberately changed, not casually ignored." *See Ramaprakash v. FAA*, 346 F.3d 1121, 1124–25 (D.C. Cir. 2003) (internal citation omitted).

Prior to the Small Drone Rulemaking Notice, the FAA repeatedly and consistently recognized the need to address privacy issues. In a November 2012 letter to Representative Howard P. McKeon, FAA Administrator Huerta acknowledged that "the increasing use of [drones] in our airspace also raises *privacy issues*." JA 000025 (emphasis added). He assured the Congressman that "[t]he FAA will complete its statutory obligations to integrate [drones] into the NAS as quickly and efficiently as possible," but cautioned that the agency "must fulfill these obligations in a thoughtful, prudent manner that ensures safety, *addresses privacy issues*, and promotes economic growth." *Id.* (emphasis added).

Privacy was of such a concern to the FAA that, in February 2013, the agency deemed it necessary to receive public comment on proposed privacy requirements for drone test sites. JA 000162–63. In its rule detailing the final privacy requirements for the test sites, which apply with equal effect to all drones operating at each site regardless of their size, the FAA explained the program's objectives as follows:

> The FAA will require the Test Site operators to comply with the Final Privacy Requirements. Congress mandated that the FAA establish the

> Test Sites to further [drone] integration into the national airspace system. The Final Privacy Requirements advance this purpose by helping inform the dialogue among policymakers, privacy advocates, and industry regarding the impact of [drone] technologies on privacy.

JA 000253. The FAA has further acknowledged that the drone test site operations and associated privacy policies are intended to guide future rulemaking. JA 000183. Though the FAA attempts to distinguish these test site privacy requirements as merely an exercise of the agency's contracting authority, JA 000129, the fact remains that the FAA acknowledged the importance of privacy safeguards in "further[ing] [drone] integration into the national airspace system." JA 000253.

The FAA's Comprehensive Plan, prepared in September 2013, also states that "[i]mportant non-safety related issues, such as *privacy* and national security, need to be taken into consideration as [drones] are integrated into the NAS." JA 000180 (emphasis added). In the Plan, the agency stated that "as the demand for [drones] increases, concerns regarding how [drones] will impact existing aviation grow stronger, especially in terms of safety, *privacy*, frequency crowding, and airspace congestion." JA 000181 (emphasis added).

In the drone integration Roadmap, prepared in November 2013, the FAA affirmed that the agency is:

> responsible for developing plans and policy for the safe and efficient use of the United States' navigable airspace. This responsibility includes coordinating efforts with national security and privacy

> policies so that the integration of [drones] into the NAS is done in a manner that supports and maintains the United States Government's ability to secure the airspace and *addresses privacy concerns*.

JA 000217 (emphasis added). The FAA also stated that "[i]ntegration of [drones] into the NAS will require: review of current policies, regulations, environmental impact, *privacy considerations*, standards, and procedures." JA 000215 (emphasis added). The FAA Roadmap further notes that "[w]hile the expanded use of [drones] presents great opportunities, it also raises questions as to how to accomplish [drone] integration in a manner that is consistent with *privacy and civil liberties considerations*." JA 000219 (emphasis added).

Finally, the FAA has acknowledged the importance of addressing privacy in its published materials made available to the public. "Unmanned Aircraft System" fact sheets prepared by the agency on January 6, 2014 and February 15, 2015—just eight days before the FAA published the Small Drone Rulemaking Notice—inform the public that the FAA will "successfully meet the challenges posed by [drone] technology in a thoughtful, careful manner that ensures safety and *addresses privacy issues* while promoting economic growth." FAA, *Fact Sheet—Unmanned Aircraft Systems (UAS)* (Feb. 15, 2015); FAA, *Fact Sheet—Unmanned Aircraft Systems* (UAS) (Jan. 6, 2014).

Despite this extended history of emphasizing the importance of privacy safeguards in drone integration, the FAA's small drone rulemaking determined that

privacy issues "are beyond the scope of this rulemaking." JA 000273. The agency's determination fails to explain why the FAA abdicated its responsibility to address drone privacy.

The FAA's failure to explain its reversal on drone privacy safeguards is similar to the decision that this Court found arbitrary and capricious in *Fox Television Stations, Inc. v. FCC*. 280 F.3d 1027 (D.C. Cir. 2002), *opinion modified on reh'g on other grounds*, 293 F.3d 537 (D.C. Cir. 2002). In *Fox*, the Court considered an FCC's decision not to repeal or modify the national television station ownership rule, despite having determined in a 1984 report that the rule should be repealed. *Id*. at 1044. The Court held that the FCC's decision was arbitrary and capricious because it was contrary to the agency's prior position, and the agency provided no explanation for the change.

> The Commission's failure to address its *1984 Report* in the course of its contrary *1998 Report* is yet another way in which the decision to retain the NTSO Rule was arbitrary and capricious. Recall that in the *1984 Report* the Commission concluded the NTSO Rule should be repealed because it focuses upon national rather than local markets and because even then any need for the Rule had been undermined by competition . . . . To retain the cap in 1998 without explanation of the change in the Commission's view is, therefore, to all appearances, simply arbitrary. The Commission may, of course, change its mind, but it must explain why it is reasonable to do so.

Id. at 1044–45.

Similarly, the FAA abruptly decided that privacy concerns are "beyond the scope" of the Small Drone Rulemaking, despite the FAA's long history of

identifying privacy as a critical consideration. But the agency barely mentioned the numerous prior statements on the importance of privacy and failed to present a justification or reasoned explanation for its position. The agency's decision is therefore arbitrary and capricious. The FAA failed to provide any indication that its prior statements are being "deliberately changed, not casually ignored." *Ramaprakash v. FAA,* 346 F.3d 1121, 1124 (D.C. Cir. 2003).

II. The FAA's refusal to conduct comprehensive drone rulemaking as required under the FAA Modernization Act is unlawful.

The FAA has failed to follow Congress' clear command to implement a rulemaking for the required Comprehensive Plan within a certain timeframe. Instead, the FAA has decided to take an incremental approach to the Comprehensive Plan rulemaking. FAA's failure to implement the Comprehensive Plan rulemaking is unlawful and the agency's decision to take an incremental approach to implementing drone regulations violates the plain text of the FAA Modernization Act.

A. The FAA's proposed 'incremental approach' to drone regulation violates the plain text of the FAA Modernization Act.

By eschewing a comprehensive regulatory approach to drones in favor of a piecemeal one, the FAA has shirked its statutory obligations. In the FAA Modernization Act, Congress ordered the agency to (1) "develop" and (2) "implement" via rulemaking a "*comprehensive* plan to safely accelerate the

integration of civil unmanned aircraft systems into the national airspace system." § 332(a)–(b) (emphasis added). The FAA satisfied the first of these two Congressional commands, developing a Plan that sets out "the overarching, interagency goals, objectives, and approach to integrating [drones] into the NAS" JA 000179–80. Yet the agency openly ignored the second. The FAA declares in the Final Rule that it will "proceed *incrementally*" with future drone regulations and spread out the work of "integrating UAS posing a higher risk" across "separate regulatory actions." JA 000009; *see also* JA 000035 ("[T]he FAA will utilize the incremental approach discussed earlier in this preamble, under which the FAA will issue a rule for the lowest risk UAS activities while pursuing future rulemaking to expand their use.").

This piecemeal approach is simply not what Congress ordered. Section 332 instructs the FAA to conduct one—and only one—notice and comment rulemaking: the rulemaking "to implement the recommendations of the [comprehensive] plan." § 332(b). The FAA, of course, has failed to complete the rulemaking by the statutory deadline, and the agency has yet to even *suggest* a rule. Part II.B, *infra*. But untimeliness aside, the FAA cannot override the "unambiguously expressed intent of Congress" as to how the agency must craft drone regulations. *Mako Communications, LLC v. FCC*, 835 F.3d 146, 150 (D.C. Cir. 2016) (quoting *Chevron*, 467 U.S. at 842–43)). Congress, faced with the many

and immediate risks that drones pose, determined that a thoroughgoing regulatory approach was best. The agency must abide by that decision.

Not only does the FAA's rejection of a comprehensive approach exceed the "bounds of its statutory authority," *City of Arlington, v. FCC*, 133 S. Ct. 1863, 1868 (2013); it also ensures weaker and less effective regulations. For example, a timely implementation of the agency's Comprehensive Plan would have yielded drone privacy regulations by now. Instead, the FAA has kicked the can down the road, relegating the issue of privacy to "ongoing debate" and ill-defined "partner[ships] with other Federal agencies." JA 000128. Absent further regulation, drones will continue to pose a significant threat to individual autonomy, public anonymity, and the right to control the collection of one's personal information. Richard M. Thompson II, Cong. Research Serv., R43965, Domestic Drones and Privacy: A Primer 6–8 (2015). This is precisely the type of regulatory procrastination that the comprehensive rulemaking, required by Congress, would prevent.

Because Congress has "spoken directly to the question at issue," the FAA's piecemeal approach to drone regulation is wrong as matter of law. *Eagle Broad. Group, Ltd. v. FCC*, 563 F.3d 543, 552 (D.C. Cir. 2009) (citing *Chevron*, 467 U.S. at 842–43)).

B. The FAA's refusal to conduct the comprehensive drone rulemaking is unlawful.

Under the APA "[t]he reviewing court shall compel agency action unlawfully withheld or unreasonably delayed." 5 U.S.C. § 706(1). "Agency action" includes a "failure to act." 5 U.S.C. § 551(13). A "failure to act . . . properly understood" is "a failure to take one of the agency actions (including their equivalents) . . . defined in § 551(13)." *See Norton v. Southern Utah Wilderness Alliance*, 542 U.S. 55, 62 (2004). As this Court has noted, "[a]ction is 'legally required' if the statute provides a 'specific unequivocal command' to an agency or 'a precise definite act . . . about which [an official has] no discretion whatever. *Public Citizen v. Federal Energy Regulatory Commission*, 839 F.3d 1165, 1172 (D.C. Cir. 2016).

Congress unequivocally commanded the FAA to perform a notice-and-comment rulemaking to implement the Comprehensive Plan, and to do so within a specific timeframe. The timing of the comprehensive drone rulemaking depended on the completion of the Comprehensive Plan, but that too was not only required by Congress but given a specific timeframe for completion: "Not later than 1 year after the date of enactment of this Act, the Secretary shall submit to Congress a copy of the [comprehensive] plan required under paragraph (1)." § 332(a)(4). Congress' command regarding the comprehensive drone rulemaking was equally clear: "Not later than 18 months after the date on which the [comprehensive] plan

required under subsection (a)(1) is submitted to Congress . . . the Secretary shall publish in the Federal Register a notice of proposed rulemaking to implement the recommendations of the [comprehensive] plan required under subsection (a)(1), with the final rule to be published not later than 16 months after the date of publication of the notice." § 333(b)(2)

The FAA has failed to take the action required by Congress. The FAA Modernization and Reform Act was enacted on February 14, 2012. The Comprehensive Plan was due February 14, 2013. The Comprehensive Plan was submitted to Congress on November 6, 2013—nearly 9 months later than Congress required. JA 000203. The same letter acknowledges that "[a]s required by Section 332(a) of the FAA Modernization and Reform Act of 2012, I am pleased to provide you with the U.S. Department of Transportation's Unmanned Aircraft Systems (UAS) Comprehensive Plan." *Id*.

Even allowing for this 9-month delay in the submission of the Comprehensive Plan to Congress, the FAA has still failed to meet the timeframe to perform a notice-and-comment rulemaking to implement the Comprehensive Plan. Using the date the Comprehensive Plan was submitted to Congress, November 6, 2013, the notice of proposed rulemaking would have been due in May 2015 (18 months later). Thus, the final rule for the Comprehensive Plan drone rulemaking would have been due in September 2016 (16 months later). The timeframe set by

Congress would have required the final rule for the Comprehensive Plan drone rulemaking to be published in December 2015. *See* § 332.

More than 60 months since the passage of FAA Modernization Act, the FAA has not taken the specific and discrete action required by Congress—an action of the kind the Court has identified as one the judiciary can compel. In *Norton* the Court in describing the type of action a court can compel an agency to act upon offered the following:

> For example, 47 U.S.C. § 251(d)(1), which required the Federal Communications Commission "to establish regulations to implement" interconnection requirements "[w]ithin 6 months" of the date of enactment of the Telecommunications Act of 1996, would have supported a judicial decree under the APA requiring the prompt issuance of regulations . . . .

Norton, 542 U.S. at 65. Similar to the example given by the Court in *Norton*, the FAA was required to perform a specific task within a certain timeframe—to implement a drone rulemaking based on the required Comprehensive Plan within 46 months. *See* § 332. The FAA has "failed to take a *discrete* agency action that it is *required to take.*" *Norton*, 542 U.S. at 64 (emphasis in original). Per 5 U.S.C. § 706(1) , this Court should compel the FAA to act upon what was required by Congress and implement the Comprehensive Plan through a notice and comment rulemaking.

CONCLUSION

For the foregoing reasons, this Court should grant the Petition for Review, and remand for further proceedings consistent with the FAA Modernization Act and with the Comprehensive Plan, as required by Congress.

Respectfully submitted,

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CERTIFICATE OF COMPLIANCE

I hereby certify that the foregoing brief complies with the typeface requirements of Fed. R. App. P. 32(a)(5) and the type-style requirements of Fed. R. App. P. 32(a)(6). The brief is composed in a 14-point proportional typeface, Times New Roman, and complies with the word limit of Fed. R. App. P. 32(a)(7)(B)(iii) and D.C. Circuit Rule 32(e), because it contains 11,519 words, excluding parts of the brief exempted under Fed. R. App. P. 32(a)(7)(B)(iii).

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CERTIFICATE OF SERVICE

The undersigned counsel certifies that on this 2nd day of March, 2017 he caused the foregoing brief to be served by ECF and two hard copies by first-class mail, postage prepaid, on the following:

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