



1 Before the
2 FEDERAL AVIATION ADMINISTRATION, TRANSPORTATION SECURITY ADMINISTRATION,
3 AND OFFICE OF THE SECRETARY OF TRANSPORTATION
4 Washington, DC 20005

In the matter of	
Normalizing Unmanned Aircraft Systems	Docket No. FAA-2025-1908
Beyond Visual Line of Sight Operations	

5
6 COMMENTS OF THE ASSOCIATION FOR UNCREWED VEHICLE SYSTEMS INTERNATIONAL
7 October 6, 2025

8 **Executive Summary**

9 The Association for Uncrewed Vehicle Systems International (AUVSI) respectfully submits
10 these comments on the Federal Aviation Administration’s Notice of Proposed Rulemaking
11 on Beyond Visual Line of Sight (BVLOS) operations. AUVSI supports the NPRM’s
12 performance-based structure and the proposed two-path framework and offers the
13 following recommendations to ensure the final rule safely enables routine BVLOS
14 operations at scale across commercial, public safety, and civic-interest use cases.

15 AUVSI urges the FAA to:

- 16 (1) Publish clear transition timelines to allow Part 107 waivers and Part 135 approvals
17 into Part 108 with supportive operational authority (Regulatory Amendments to
18 permit continued use of BVLOS waivers under part 107)

- 1 (2) Provide for operators to add or expand operating areas on an FAA-informed basis
2 (\$108.165)
- 3 (3) Continue availability of the existing §44807 CMD process for smaller UAS to provide
4 a path for existing and new airworthiness acceptance while appropriate standards
5 are being developed and accepted. Scale durability and airworthiness obligations
6 by weight and duty cycle while recognizing fleet reliability data in lieu of test cycles
7 (\$108.305)
- 8 (4) Codify shielded operations in §108.205, preserve BVLOS waivers under Part 107,
9 and use Part 108 permits and limited certificates for scaled or higher-risk
10 operations, while crediting prior waiver experience to ensure continuity for small
11 and mid-size operators
- 12 (5) Establish a pathway for large-UAS cargo through data collection, phased
13 integration, and commercial opportunities, while ensuring smaller-UAS delivery
14 (<110 lbs) remains unburdened and distinct. (Preamble p. 273)
- 15 (6) Remove TSA vetting and security program requirements from the Final Rule and
16 address any residual security needs after coordination with UAS stakeholders
- 17 (7) Provide a pathway for the recognition of international approvals through direct
18 acceptance or through harmonization of the permitting and certificating
19 requirements
- 20 (8) Allow carriage of emergency payloads such as AEDs and naloxone via standardized
21 means of compliance (§108.440, .565, .570, or similar)
- 22 (9) Adopt risk-based command-and-control (C2) performance requirements with
23 flexibility for licensed or unlicensed spectrum if reliability is demonstrated
24 (\$108.875, .880, 146.300)

1 (10) Phase acceptance and implementation of Automated Data Service Provider (ADSP)
2 standards with change-management obligations, and narrow ADSP certification
3 scope to exclude upstream infrastructure providers not delivering complete safety
4 services

5 (11) Establish categorical exclusion from NEPA review for routine Part 108 operations

6 (12) Recognize electronic conspicuity concepts through right-of-way, with interim buffer
7 guidance (§91.113 amendments)

8 (13) Provide a path for an alternative MOC to airworthiness requirements

9 These comments reflect extensive member engagement, including AUVSI listening
10 sessions and focused discussions with operators and technology providers from small
11 innovative startups to multinational corporations. Where appropriate, we have identified
12 operational or economic data that AUVSI has used to supplement the discussion and
13 proposals.

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1 **I. Introduction**

2 AUVSI is the world’s largest nonprofit organization dedicated to advancing uncrewed
3 systems, autonomy, and robotics. Our more than 8,000 members include UAS
4 manufacturers, operators, public safety agencies, logistics providers, network and
5 software companies, and academic institutions. Members collectively operate tens of
6 thousands of aircraft across varied environments and routinely coordinate with state, local,
7 and tribal partners. This breadth of operational experience informs the recommendations
8 below.

9 AUVSI commends the FAA for proposing a rule that can be improved into a
10 performance-based framework that recognizes differences in operational risk and provides
11 multiple paths for compliance. The two-path model, emphasis on declarations, accepted
12 means of compliance, and the concept of ADSPs are sound foundations. With targeted
13 improvements described here, the final rule can enable routine BVLOS operations while
14 maintaining safety and fostering U.S. competitiveness and leadership in the next age of
15 connected aviation.

16 **II. Economic and Competitiveness Imperative**

17 Routine BVLOS operations are essential to unlock high-value use cases in energy, utilities,
18 rail, agriculture, public safety, and small-package delivery. These operations enable
19 inspections, mapping, and logistics that improve efficiency, reduce costs, and enhance
20 safety compared to traditional crewed methods. Improvements to the rulemaking text can
21 provide clarity and scalability in the final rule, catalyze investment, sustain domestic
22 manufacturing, and support high-quality jobs.

1

2 The United States risks ceding leadership to foreign jurisdictions that already allow routine
3 BVLOS at scale. The European Union has fully implemented the JARUS SORA methodology,
4 and the UK Civil Aviation Authority has authorized routine BVLOS in defined corridors since
5 2021. Without timely finalization of a workable Part 108, the U.S. will continue to lag these
6 peers. Finalizing a practical and performance-based rule, with the necessary adjustments
7 outlined here, narrows that gap while preserving the FAA’s safety mandate.

8 Domestic demand is evident in the FAA’s own data. More than 26,000 BVLOS operational
9 approvals have been issued as COAs or under Part 107 and §44807 exemptions, covering
10 missions from linear inspections to public safety deployments.¹ FAA should leverage the
11 operational data generated by these approvals to refine risk thresholds and oversight
12 mechanisms in the final rule. Waiver and exemption experience offers a proven evidence
13 base for scaling requirements, ensuring that regulatory obligations remain proportional to
14 demonstrated safety outcomes. As of September 2025, Chula Vista’s DFR program has
15 conducted over 23,000 responses with no midair collisions, arrived first on scene in
16 16,000+ incidents, and cut average response times to under two minutes.² On the
17 commercial side, Wing has surpassed 500,000 residential deliveries,³ Zipline has now

¹ DOT Office of Inspector General, “*FAA Has Made Progress in Advancing BVLOS Drone Operations but Can Do More to Achieve Program Goals*”, (June 30, 2025),

https://www.oig.dot.gov/sites/default/files/library-items/FAA%20BVLOS%20Drone%20Operations%20Final%20Report_6.30.2025.pdf, at 6

² Chula Vista Police Department, *Drone as First Responder Program Dashboard* (Power BI), data current to September 27, 2025, available at <https://app.powerbigov.us/view?r=eyJrIjoibWVl5ZTEtMzVjZi00NjNjLTkzNzgtNjg5NDQ3Yzk1NzEzliwidCI6IjU2ZmM0NjE4LWM4M2QtNDAxZS1hNTMxLWZlYTEyNGI2NDZhNyJ9>

³ Wing, “*About Wing, Takeoffs, landings, and milestones*”, Wing (2025), available at <https://wing.com/about>

1 completed over 1.7 million deliveries of commercial and medical products and flown more
2 than 115 million autonomous miles.⁴ These programs illustrate both scalability and safety,
3 and they show that operators, communities, and regulators can trust BVLOS as a
4 repeatable, risk-managed capability.

5 The economic multiplier effect is equally clear. FAA’s 2016 forecast projected \$82 billion in
6 U.S. economic impact by 2025 from drone integration;⁵ more recent studies from Deloitte
7 and ATI project tens of thousands of jobs in logistics, inspection, and agriculture tied to
8 BVLOS adoption. Utilities demonstrate some of the clearest benefits of BVLOS adoption.
9 Traditional inspections require helicopters, trucks, or rope-access crews, each of which is
10 expensive and exposes workers to risk. By contrast, drone-enabled BVLOS inspections
11 have been shown to reduce inspection costs by 30–50% and downtime by approximately
12 40%, while improving safety and reliability.⁶ Rail and pipeline operators cite millions of
13 dollars in annual savings by substituting automated patrols for manual inspections. Timely
14 adoption of Part 108 will unlock these efficiencies, provide innovative options for American
15 consumers and businesses, and direct capital investment into the U.S. market rather than
16 abroad.

⁴ Zipline, Zipline Fact Sheet / About, <https://www.zipline.com/about/zipline-fact-sheet> (accessed Sept. 28, 2025).

⁵ Federal Aviation Administration, FAA Aerospace Forecast: Fiscal Years 2016–2036 (2016), at 41, available at https://www.faa.gov/data_research/aviation/aerospace_forecasts

⁶ Askarzadeh & Bridgelall, Cost Efficiency and Effectiveness of Drone Applications in Bridge Condition Monitoring, Infrastructures (2025), <https://www.mdpi.com/2412-3811/10/3/63>; Banda et al., Optimizing Powerline Infrastructure Inspection, Monitoring and Asset Management Using UAVs and AI, ICCAUA Proceedings (2025), <https://journal.iccaua.com/jiccaua/article/download/626/555/1278>

1 Finally, Part 108 should pave the way for heavier platforms while keeping smaller-sized UAS
2 delivery distinct and unburdened. Advancing a pathway for large UAS cargo , defined as
3 aircraft above 1,320 lbs. MTOW , through a structured data plan covering operational,
4 safety, and commercial metrics will inform a future large-cargo rulemaking. This ensures
5 that the thriving smaller-UAS delivery sector continues to expand without unnecessary
6 hurdles, while larger cargo platforms follow a phased approach toward integration. Taking
7 both tracks in parallel will unlock significant societal and economic benefits and reinforce
8 U.S. global leadership.

9 **III. Part 108 , Operational Framework**

10 **A. Expanding Upon Current Approved Operations (§108.165)**

11 AUVSI recommends that Part 108 provide operators with a flexible, scalable means to add
12 or expand operating areas without awaiting case-by-case FAA approvals on uncertain
13 timelines. The rule should be modified to allow operators to inform the FAA of upcoming
14 operations, rather than require individualized approval before each deployment.

15 For example, routine missions, such as operations at or below structure height, linear
16 inspections of transmission and pipeline corridors, rural flights, and other fixed-site
17 activities, have demonstrated strong safety records under existing waiver and exemption
18 frameworks. Requiring separate approvals for each area or mission type would consume
19 FAA resources without improving safety outcomes.

20

1 Instead, AUVSI supports an FAA-informed (Notify-and-Fly) framework in which operators
2 provide digital notice of intended operations through FAA systems or designated UTM
3 service providers. This would maintain situational awareness and data transparency while
4 reducing administrative burden and operational uncertainty. Operators could retain digital
5 notification records for a defined period, and the FAA will retain discretion to require
6 advance notice for specific operations if data indicate elevated risk.

7 In parallel, several AUVSI members have emphasized that § 108.165(a)'s proposed "area-
8 by-area approval" requirement would create unnecessary bottlenecks, delay innovation,
9 and prevent scalable commercial deployment. This departs from the established approach
10 for crewed aviation, where operators under Parts 121 and 135, are not required to seek
11 route-by-route domestic approvals. To ensure consistency with performance-based
12 regulation, AUVSI recommends that Part 108 operators be authorized to operate
13 nationwide under an accepted concept of operations and safety case. This would align with
14 established aviation practice, preserve scalability, and support timely service expansion
15 without compromising safety. Updating the rule to remove FAA approval of operating areas
16 would allow business and public operators to be responsive to customer and operational
17 requests and changes.

18 **B. Transition Pathways (Regulatory Amendments)**

19 Continuity of existing operations is a central safety and public-interest consideration.
20 AUVSI recommends that the FAA publish a clear transition timeline to not overly tax
21 resources during the transition as companies map current Part 107 waivers, 49 U.S.C. §
22 44807 exemptions, and Part 135 approvals to Part 108 authorizations, with interim
23 operational authority to prevent disruption while standards are developed and accepted by

1 FAA, manufacturers submit declarations of compliance, and Part 108 applications for
2 permits and certificates are processed (i.e. continued allowance for BVLOS waivers under
3 part 107 by not modifying 107.205).

- 4 1. Credit for Prior Experience: The FAA should credit waiver and § 44807 operational
5 experience toward Part 108 findings, including the use of reliability data, safety cases,
6 and prior mitigations in lieu of duplicative demonstrations.
- 7 2. CMDs as Interim Pathway: The FAA should recognize the Criteria for Making 44807
8 Determinations (CMDs) as an aircraft acceptance pathway under proposed 14 CFR §
9 108.105 so that aircraft already operating safely under that process can continue while
10 manufacturers and operators align with Subpart H.⁷⁸ It will take time for the required
11 standards to be developed and accepted after the FAA issues a final rule and for
12 manufacturers to make the necessary design changes to comply with the new
13 accepted standards. The FAA should continue to approve new CMD submissions during
14 that period, so UAS manufacturers do not have to put their business plans and product
15 roadmaps on hold.
- 16 3. DFR and Public Safety Operations: For Drone as First Responder (DFR) and other fixed-
17 site public safety operations currently conducted under Part 107 waivers or COAs, the

⁷ Federal Aviation Administration, “Special Authority for Certain Unmanned Aircraft Systems (49 U.S.C. § 44807),” https://www.faa.gov/uas/advanced_operations/certification/section_44807; Federal Aviation Administration, “49 U.S.C. § 44807 Blanket COA Template,” https://www.faa.gov/uas/advanced_operations/certification/section_44807/49-USC-44807-Blanket-COA-Template

⁸ Federal Aviation Administration, “Special Authority for Certain Unmanned Aircraft Systems (49 U.S.C. § 44807),” https://www.faa.gov/uas/advanced_operations/certification/section_44807; Federal Aviation Administration, “49 U.S.C. § 44807 Blanket COA Template,” https://www.faa.gov/uas/advanced_operations/certification/section_44807/49-USC-44807-Blanket-COA-Template

1 FAA should confirm continuity during the transition and publish guidance on how those
2 operators can seek Part 108 approvals without disrupting service.

3 4. Package Delivery Operations: For package delivery operations conducted under Part
4 135, the FAA should confirm that, existing air carrier authorizations and exemptions
5 remain valid during the transition (This should include all ancillary authorizations
6 including 1 to many; hazmat carriage; SMS, etc.). and publish guidance on how those
7 operators can seek Part 108 approvals without disrupting service.⁹ AUVSI supports the
8 FAA’s intent to ensure that commercial drone delivery operations are conducted under
9 the Certificate operation framework, which provides appropriate oversight for high-
10 frequency, repetitive flights over people and infrastructure. Operating under a
11 Certificate ensures that Safety Management Systems apply, establishes a consistent
12 safety baseline across operators, and closes potential regulatory gaps for the most
13 visible and complex use cases.

14 To maintain flexibility and enable continued innovation, FAA should also preserve a
15 limited Permit pathway for defined activities, specifically, bona fide demonstrations
16 and emergency or humanitarian relief missions. Such operations should remain
17 confined in both scope and duration to their stated purpose, ensuring that temporary
18 authorizations cannot serve as substitutes for certificate operations. Certificate
19 operators should likewise be permitted to conduct demonstration or emergency-relief
20 flights under their existing certificate, or, when appropriate, under a Permit.

⁹ Federal Aviation Administration, “Package Delivery by Drone (Part 135),”
https://www.faa.gov/uas/advanced_operations/package_delivery_drone

1 This balanced framework maintains the integrity of the Certificate standard while
2 providing targeted flexibility to support research, innovation, and essential relief
3 operations during disasters and recovery efforts.

4 5. Continuity of Documentation and Artifacts: The FAA should ensure maximum continuity
5 in documentation, safety cases, and operational or airworthiness artifacts already
6 submitted and accepted under Parts 107, 135, and § 44807 processes, so that
7 operators are not required to recreate duplicative filings when transitioning to Part 108.

8 6. Grandfathering of Waiver-Based Operations: Waiver- and § 44807-based BVLOS
9 operations that have demonstrated safety should be permitted to continue without
10 interruption during transition to the Part 108 framework. FAA should make clear that
11 such operations are eligible for grandfathering into the new system, with credit for prior
12 mitigations, data, and approvals.

13 AUVSI further recommends that the FAA publish an implementation timeline and advisory
14 material that explain transition steps, required filings, and the circumstances in which
15 existing approvals remain valid until the agency takes final action on the corresponding Part
16 108 request. This approach will protect ongoing missions, avoid unnecessary duplication,
17 and allow operators to move into the new framework in an orderly manner.

18 **C. Codifying Shielded Operations and Establishing a Risk-Based Scaling Framework**

19 AUVSI supports codifying shielded operations as operate-by-rule under § 108.205,
20 consistent with a performance-based framework that recognizes reduced air risk when UAS
21 remain proximate to terrain or man-made structures. Recent research and government
22 guidance describe shielded operations as a practical enabler for routine BVLOS when

1 paired with standard mitigations such as geofencing, altitude limits referenced to nearby
2 structures, and local airspace awareness.¹⁰

3 Evidence from U.S. test ranges and programs shows that shielded BVLOS can be flown
4 safely and repeatedly with common mitigations. NUAIR, the Northeast UAS Airspace
5 Integration Research Alliance that manages FAA-designated test ranges in New York,
6 reports daily BVLOS operations in controlled airspace and more than 6,000 flights following
7 expansion of its FAA-approved operating area, which confirms the repeatability of
8 proximity-based envelopes.¹¹ The FAA PSO Shielded Guide and the agency’s BEYOND
9 portfolio likewise document approvals for BVLOS infrastructure inspections without visual
10 observers where standardized mitigations are applied.¹²

11 Several members have raised concerns, however, with the FAA’s proposed requirement
12 that operators obtain permission from the owner of the structure. In many cases, such as
13 power lines or other distributed infrastructure, determining ownership may not be practical
14 or possible, and the volume of requests could create untenable paperwork burdens for
15 infrastructure owners, particularly where delivery operators would need frequent access
16 across vast areas. To address these concerns, members recommend revising §108.205(a)

¹⁰ ASSURE, “A45 Shielded UAS Operations: Detect and Avoid (DAA) Task 7 Final Report” (Sept. 2, 2024), https://www.assureuas.org/wp-content/uploads/2021/06/A45_Task7_Final_Report_v5_FINAL.pdf; Federal Aviation Administration, “Guide to the Public Safety Organization Shielded Ops Waiver” (Aug. 4, 2025), https://www.faa.gov/uas/public_safety_gov/public_safety_toolkit/FAADZ_Guide_to_the_PSO-Shielded_Ops_Waiver.pdf

¹¹ NUAIR, “NUAIR Increases FAA-Approved BVLOS Operating Area to 450 Square Miles” (Mar. 6, 2025), <https://www.nuair.org/post/unlocking-opportunity-nuair-increases-faa-approved-bvlos-operating-area-to-450-square-miles>; NUAIR, “NUAIR Receives FAA Letter of Acceptance for Surveillance-as-a-Service” (July 31, 2025), <https://www.nuair.org/post/nuair-receives-faa-letter-of-acceptance-for-surveillance-as-a-service-opening-a-new-era-in-drone-in>

¹² FAA PSO Shielded Guide 2025; Federal Aviation Administration, “BEYOND” program page, https://www.faa.gov/uas/programs_partnerships/beyond

1 to apply broadly to “areas within 500 feet of vessels, vehicles, or structures,” without
2 requiring infrastructure-owner permission.

3 Members also strongly object to language in the FAA’s narrative suggesting that shielded
4 operations would be prohibited in areas where crewed aircraft may be expected. Such a
5 policy would undermine the very purpose of shielded operations and result in inequitable
6 access to airspace. Shielded operations must be preserved as a clear operate-by-rule
7 category consistent with the risk-mitigating intent of this provision.

8 AUVSI recommends that the FAA finalize §108.205 as operate-by-rule for shielded flights
9 with these elements implemented through FAA-accepted Means of Compliance (MOCs)
10 rather than prescriptive design rules:

11 1. Definition and geometry. Define shielded flight as operations at or below the height
12 of the proximate structure or terrain with a conservative lateral buffer that keeps the UAS
13 within the protective envelope of that feature. The exact lateral and vertical tolerances
14 should be established in accepted MOCs and may vary by mission class and
15 environment.¹³

16 2. Standard mitigations. Require electronic geofencing tied to surveyed or validated
17 structure data, loss-of-link behaviors that keep the aircraft inside the shielded volume,
18 preflight checks for local low-altitude crewed activity, and retention of digital records of the
19 shielded geometry used for each mission for a defined period.¹⁴

¹³ ASSURE A45; NUAIR Operating Area 2025

¹⁴ ASSURE A45; FAA PSO Shielded Guide 2025

3. Notification and oversight. Allow Notify-and-Fly for shielded missions to preserve situational awareness while reserving full adjudication for higher-risk categories and retain FAA discretion to reclassify mission types if empirical data indicate elevated risk.¹⁵

4. Scaling beyond the baseline. Where operators demonstrate additional mitigations such as range integrity, detect-and-avoid support from ground-based sensors, or validated structure models, accepted MOCs should allow proportional expansion of shielded envelopes or limited transitions between shielded segments.

This approach codifies what programs have already proven in practice, aligns mitigations with the actual risk drivers of close-proximity flight, and creates a clear path for incremental scaling through MOCs without unnecessary burdens on manufacturers or operators.¹⁶

D. Carriage of Emergency Items, and Low-Risk Hazardous Materials (\$108.440, .565. .570)

For low-risk consumer items, the current Hazardous Materials Regulations (HMR) impose burdensome requirements related to shipping papers, pilot notifications, and associated packaging and marking directives that are not risk-proportionate or operationally practical for UAS operations. Because these operations occur at low altitude, for short durations, and involve only a few pounds of payload going directly to the final destination, traditional air-transport hazardous-material requirements provide no additional safety benefit.

¹⁵ FAA PSO Shielded Guide 2025, FAA BEYOND page

¹⁶ ASSURE A45; FAA PSO Shielded Guide 2025; FAA BEYOND page

1 The final rule should enable standardized Means of Compliance (MOCs) tailored to the
2 needs and use cases of UAS operation, covering packaging, containment, handling, and
3 operational constraints. Examples include small lithium batteries packed in accordance
4 with PHMSA guidance and common retail products that contain small quantities of low-risk
5 hazardous materials such as cosmetics, cleaning supplies, and vanilla extract, when
6 packaged in small inner containers and limited total quantities. Compliance with the
7 manufacturer’s loading instructions, coupled with accepted MOCs, should be considered a
8 sufficient, risk-based means of protecting the public while enabling scalable, low-risk UAS
9 delivery.

10 AUVSI recommends authorizing the carriage of emergency payloads, including AEDs,
11 naloxone, blood products, and firefighting capsules, through streamlined approvals
12 coordinated with PHMSA. Current Part 107 rules prohibit the carriage of hazardous
13 materials, so emergency items that fall under that definition require an alternative approval
14 pathway. Civic-interest and public-safety operators should not be subject to package-
15 delivery operator requirements simply because they deliver emergency payloads as part of
16 their mission. The FAA and PHMSA should provide a simple, parallel path, relying on special
17 permits and, where applicable, drawing from the new authority Congress established for
18 commercial package-delivery UAS, to ensure that both civic-interest and commercial
19 missions have appropriate, non-duplicative pathways and that public-interest missions are
20 not delayed.¹⁷ FAA should also accept operator-specific dangerous goods programs

¹⁷ Pipeline and Hazardous Materials Safety Administration, “Hazmat Special Permits Overview,” May 30, 2025, <https://www.phmsa.dot.gov/hazmat/special-permits/special-permits-overview>; H.R. 3935, FAA Reauthorization Act of 2024, § 933, “Special authority for transport of hazardous materials by commercial package delivery unmanned aircraft systems,” <https://www.congress.gov/bill/118th-congress/house-bill/3935/text>

1 previously approved under Part 135 without requiring re-submission under Part 108,
2 provided the scope and mitigation approach remain unchanged.

3 **E. Command-and-Control (C2) Reliability and Spectrum (§108.875, .880. 146.300)**

4 AUVSI recommends that C2 performance, when required, be expressed through risk-based
5 reliability metrics rather than any prescriptive frequency mandate. The FCC has now
6 established Part 88 rules providing dedicated access to the 5030–5091 MHz band for non-
7 networked command-and-control (CNPC) links, using license-by-rule under Dynamic
8 Frequency Management System (DFMS) coordination and technical parameters consistent
9 with RTCA DO-362A. This framework creates a rigorous, risk-mitigated option for operators
10 where dedicated spectrum is necessary for risk mitigation. At the same time, network-
11 supported C2 using 3GPP-based cellular, should remain permissible so operators can
12 match link solutions to mission risk and environment.¹⁸

13 Unlicensed and mixed approaches should remain available where the operator
14 demonstrates acceptable reliability for the operation and link criticality. This preserves
15 technology neutrality while aligning the highest-assurance options with the highest RF
16 congestion.

¹⁸ Federal Communications Commission, Spectrum Rules and Policies for the Operation of Unmanned Aircraft Systems, Report and Order (Jan. 8, 2025) (adopting Part 88; enabling 5030–5091 MHz non-networked CNPC under DFMS; incorporating RTCA DO-362A by reference), available at the Federal Register: <https://www.federalregister.gov/documents/2025/01/08/2024-29967/spectrum-rules-and-policies-for-the-operation-of-unmanned-aircraft-systems>.

1 FAA should anchor acceptance on measurable, risk-correlated link-level and operational
2 metrics, while considering that the automation level of systems may reduce link criticality
3 due to onboard system capabilities.

4 Spectrum flexibility should be explicit; While spectrum choice remains optional;
5 compliance is judged on measured performance in the intended operating environment
6 using FAA-accepted MOCs.

7 **F. Optional Supplemental Layers for Conflict Management (§108.190)**

8 AUVSI recommends a layered conflict-management framework that aligns mitigations to
9 risk. The baseline should emphasize strategic deconfliction, while FAA promotes voluntary
10 use of supplemental tactical services. As the FAA further considers the benefits of
11 commercial wireless networks, it should consider the potential of interoperable off-
12 network tactical deconfliction technologies, in addition to the strategic deconfliction
13 solution discussed as the primary solution in the NPRM, as optional additional safety
14 mitigations.

15 **Strategic deconfliction.** Operators should plan routes, volumes, and timing to avoid
16 known hazards and other operations, and share flight intent through interoperable services
17 consistent with ongoing operational deployments, the FAA's UTM Concept of Operations
18 and the ASTM USS interoperability standard.¹⁹

¹⁹ Federal Aviation Administration, UTM Concept of Operations v2.0 (2020; hosted 2022),
https://www.faa.gov/sites/faa.gov/files/2022-08/UTM_ConOps_v2.pdf; ASTM F3548-21, Standard
Specification for UTM USS Interoperability, <https://www.astm.org/f3548-21.html>.

1 **Conformance Monitoring for Situation Awareness (CMSA).** AUVSI urges the FAA to
2 remove or defer the proposed requirement for CMSA in controlled airspace. The FAA’s
3 stated intent is to use CMSA to improve situational awareness and manage residual
4 collision risk between UAS and manned aircraft. However, UAS operating under Part 108
5 would already be equipped with cooperative Detect-and-Avoid (DAA) capabilities sufficient
6 to mitigate that risk. CMSA, by contrast, was designed to manage strategic deconfliction
7 between unmanned systems, not to prevent encounters with non-cooperative aircraft, and
8 has never been validated for that purpose.

9 Further, FAA’s draft guidance in *AC 146-1* provides no clarity on how CMSA data would be
10 shared, processed, or used by air traffic personnel. There has been no engagement with the
11 Air Traffic Organization or the National Air Traffic Controllers Association to determine how
12 such data would fit into existing workflows. Mandating deployment of an interoperable
13 CMSA capability that does not yet exist, and has undergone only limited testing, would
14 effectively halt UAS operations in controlled airspace that are currently being conducted
15 safely under waivers and COAs.

16 Before finalizing any rulemaking, FAA should work with industry to establish a clear safety
17 case, define technical and data requirements, and validate CMSA functionality through
18 iterative testing. AUVSI recommends that FAA convene a UTM Collaborative Decision-
19 Making (CDM) working group, modeled on the successful frameworks used in commercial
20 space and air traffic flow management. This approach would allow industry and FAA to
21 jointly develop, test, and refine CMSA capabilities without blocking safe, ongoing
22 operations or imposing premature, costly, and unproven requirements on operators and
23 service suppliers.

1 **Right-of-way and air-risk.** The rule should reiterate the existing duty for UAS operating
2 under Part 107 to yield to other equipped aircraft.²⁰

3 **Optional tactical services.** Tactical aids such as ground-based sensors, network-assisted
4 detection, V2V, or cooperative surveillance receivers may be used when chosen by the
5 operator and accepted via MOCs. They should not be a precondition for Part 108 operation.

6 **Outcomes and data.** Acceptance should be tied to measurable performance such as
7 deconflicted plan rates, alert timeliness, conformance alert resolution, and post-flight
8 conformance statistics, with methods informed by UTM field trials.²¹

9 Where higher-risk operations seek to use supplemental aids, those tools should remain
10 optional and accepted via FAA-accepted MOCs, rather than required as a condition of
11 authorization.

12 Harmonization is essential to ensure clear and consistent right-of-way expectations
13 without imposing onboard DAA mandates.

14 **G. Durability, Continued Operational Safety, and Manufacturer Requirements**
15 **(§108.700–108.925, Preamble p. 83)**

16 AUVSI supports an acceptance-based, self-declarative framework that focuses on
17 performance outcomes rather than prescriptive design rules. FAA should express

²⁰ 14 CFR § 107.37, Operation near aircraft; right-of-way rules, <https://www.ecfr.gov/current/title-14/chapter-I/subchapter-F/part-107/subpart-B/section-107.37>

²¹ AA, UTM Field Test (UFT) Final Report v1.0 (Nov. 6, 2023), https://www.faa.gov/uas/advanced_operations/traffic_management/UFT-Final-Report.pdf; FAA, UTM Pilot Program (UPP) Phase 2 Final Report (July 29, 2021), https://www.faa.gov/sites/faa.gov/files/uas/research_development/traffic_management/utm_pilot_program/FY20_UPP2_Final_Report.pdf

1 requirements in terms of performance outcomes and accept Means of Compliance
2 (MOCs) via Notices of Availability, similar to other performance-based reforms that rely on
3 consensus standards and to the Remote ID program’s MOC acceptance model.²²
4 Consistent with the Part 23 reform model, FAA should publish minimum performance
5 requirements under § 108.705 and accept MOCs from any qualified submitter, not only
6 consensus-standards bodies, recognizing standards as “one but not the only” pathway.²³
7 The numerous prescriptive requirements in Subparts G and H appear inconsistent with the
8 direction set by Congress in the FAA Reauthorization Act of 2024, which requires a
9 performance-based BVLOS rule with acceptance processes that may rely on manufacturer
10 declarations to FAA-accepted MOCs, and with Executive Order 14192, “Unleashing
11 Prosperity Through Deregulation,” which directs agencies to offset new regulatory burdens
12 and reduce overall regulatory costs.²⁴
13 The final rule should scale durability and test obligations by risk, weight, and duty cycle and
14 should allow fleet reliability and in-service data to substitute for duplicative lab cycles

²² FAA, Part 23 performance-based reform (Final Rule “Amdt. 23-64”), stating performance-based standards with FAA-accepted consensus standards as MOCs, https://www.faa.gov/sites/faa.gov/files/2022-12/Amd_23-64.pdf; Accepted Means of Compliance , Remote Identification of Unmanned Aircraft (Aug. 11, 2022) and correction (Nov. 14, 2023), acknowledging ASTM F3586-22 as an accepted MOC and noting it is not the only means, <https://www.federalregister.gov/documents/2022/08/11/2022-16997/accepted-means-of-compliance-remote-identification-of-unmanned-aircraft>; <https://www.federalregister.gov/documents/2023/11/14/2023-23058/accepted-means-of-compliance-remote-identification-of-unmanned-aircraft-correction>.

²³ See AUVSI Design and Manufacturing Appendix at §108.705 discussion

²⁴ 49 U.S.C. § 44811 (Beyond visual line of sight operations), <https://www.law.cornell.edu/uscode/text/49/44811>; Exec. Order No. 14192, Unleashing Prosperity Through Deregulation, 90 Fed. Reg. 9065 (Feb. 6, 2025), <https://www.federalregister.gov/documents/2025/02/06/2025-02345/unleashing-prosperity-through-deregulation>; White House release, <https://www.whitehouse.gov/presidential-actions/2025/01/unleashing-prosperity-through-deregulation/>

1 where appropriate. Continued-operational-safety programs should leverage fleet reliability
2 and operational evidence as acceptable proof of compliance, scaling requirements to risk.

3 For performance-based requirements throughout the rule, FAA should encourage industry
4 to develop, and should accept, MOC that appropriately apply the Safety Continuum²⁵
5 concept across the range of UA sizes and risks that are covered by the rule.

6 To preserve continuity and avoid unnecessary re-testing of proven aircraft, for a period of
7 not less than two years following final rule release, FAA should extend the existing § 44807
8 CMD pathway as an aircraft acceptance option, so aircraft already operating safely under
9 CMD can continue and new acceptances can be issued while industry-consensus
10 standards are developed and accepted. As detailed in AUVSI's Design and Manufacturing
11 Appendix, CMDs serve as a data-driven acceptance bridge consistent with performance-
12 based regulation, allowing FAA to preserve safety authority while avoiding unnecessary
13 redesign of proven aircraft and maintaining investment continuity.

14 FAA should also ensure consistency between Subpart H and the MOSAIC final rule .
15 Tailored Means of Compliance should align with MOSAIC's Safety Continuum framework so
16 that requirements are risk-scaled and not duplicative. Per the Part 108 preamble, BVLOS
17 UAS operations are lower on the safety continuum than Light Sport Aircraft (LSAs) and
18 therefore performance requirements should be at or below the level required for LSAs.

²⁵ Per the MOSAIC Rulemaking, the FAA explains the Safety Continuum as the framework by which
“the rigor of certification requirements and operational limitations is based on public exposure to
risk for each aircraft and operation. As risk increases with greater operating privileges and aircraft
capability, so do the requirements and corresponding rigor of oversight.” See: Federal Aviation
Administration. (2023). *Modernization of special airworthiness certification; Notice of proposed
rulemaking*. Federal Register, 88(142), 47650–47743. <https://www.federalregister.gov/d/2023-14425>

1 Further tailoring of Subpart H requirements based on UA characteristics and operational
2 parameters will support innovative and safe designs across the full range of Part 108
3 applicability. For quality assurance, production, and continued operational safety (COS),
4 FAA should require manufacturers to maintain a QA system, a production system, and a
5 COS program that achieve defined outcomes rather than prescribing specific processes,
6 with the details of sufficiency established through risk-tiered standards and accepted
7 means of compliance.

8 FAA should accept multiple MOCs for these obligations, including consensus standards
9 and manufacturer-developed methods that are appropriately tailored, provided they meet
10 FAA-defined performance criteria.²⁶ Software revisions and iterative design improvements
11 should be recognized as a distinct category of design change eligible for streamlined
12 approval when they demonstrably reduce risk or improve performance, rather than
13 triggering full recertification.

14 Cybersecurity requirements should align with established cybersecurity best practices to
15 avoid duplicative, bespoke obligations. The FAA should recognize multiple cybersecurity
16 risk management standards and frameworks, or tailored processes that have
17 demonstrated their effectiveness in industry. The FAA should allow operators and
18 manufacturers to satisfy those outcomes through accepted MOCs proportionate to risk.²⁷
19 This approach is consistent with the broader performance-based philosophy of Subparts G
20 and H, which must remain innovation-friendly and scalable to future aircraft capabilities.

²⁶ Part 23 reform; Remote ID MOC

²⁷ NIST Cybersecurity Framework 2.0 (Feb. 26, 2024), official publication,
<https://nvlpubs.nist.gov/nistpubs/CSWP/NIST.CSWP.29.pdf>; companion CSRC notice,
<https://csrc.nist.gov/news/2024/the-nist-csf-20-is-here>.

1 Additionally, The FAA should recognize operators and manufacturers who already meet
2 FAA-accepted standards, or met the FAA requirements through the CMD process, as
3 compliant with FAA cybersecurity requirements.

4 Due to the current immature state of industry standards, constant innovation and novel
5 designs, and unique use cases for UAS, it is imperative that there be an allowance for
6 alternative means of compliance (AMOCs) submissions for Subparts G and H.

7 Furthermore, embedding prescriptive design features inside Subpart H will add cost
8 without clear safety benefit and will reduce flexibility compared with a performance-based
9 approach that references accepted standards or their equivalent AMOC.²⁸ Standards
10 bodies should have the latitude to determine whether prescriptive requirements are
11 appropriate and necessary to the scope and purpose of the standards being developed.
12 FAA should also clarify that crashworthiness requirements may vary across the spectrum of
13 aircraft covered by Part 108 and should permit safe-degradation designs as compliant
14 where appropriate based on aircraft characteristics.

15 In keeping with this performance-based approach, the final rule should avoid
16 disproportionate measures such as Part 36 noise standards. Identification and marking
17 requirements should be harmonized across Parts 45, 48, and 89.

18 **Implementation notes.** To preserve flexibility and reduce unnecessary burden, AUVSI
19 recommends that the FAA: publish minimum performance requirements under § 108.705
20 and accept MOCs from any qualified submitter; recognize proportional alternative MOCs
21 for software and hardware assurance suitable for UAS; permit statistical sampling and end-

²⁸ Part 23 reform; Remote ID MOC

1 of-line tests in production where risk is low and COS data are strong; and limit
2 catastrophic-hazard prevention language to safety-critical systems, not payloads or
3 ancillary functions.²⁹ These recommendations are expanded in AUVSI's Design and
4 Manufacturing Appendix, which provides section-by-section rationale for aligning Subparts
5 G and H with a performance-based and innovation-friendly framework.³⁰ Collectively, these
6 recommendations ensure that Subparts G and H remain proportional to risk, consistent
7 with congressional intent, and practical for rapid industry adoption.

8 **H. Environmental Review (NEPA)**

9 AUVSI supports a programmatic approach to environmental review for the final Part 108
10 rule. The FAA should prepare a Programmatic Environmental Assessment (PEA) for the rule
11 and tier subsequent reviews to that document, improving efficiency and consistency while
12 preserving project-level analysis where appropriate. This approach is consistent with CEQ's
13 NEPA regulations on programmatic review and tiering.³¹

14
15 AUVSI recommends that the FAA clarify in the final rule that issuance of a Part 108
16 operating certificate or permit constitutes the relevant Federal action for purposes of the
17 National Environmental Policy Act (NEPA). Subsequent operational expansions or new

²⁹ *Id.*

³⁰ See Manufacturing Appendix for full regulatory text suggestions.

³¹ Council on Environmental Quality, National Environmental Policy Act Implementing Regulations Revisions, Phase 2 (Final Rule), 89 Fed. Reg. 35438 (May 1, 2024), <https://www.federalregister.gov/documents/2024/05/01/2024-08792/national-environmental-policy-act-implementing-regulations-revisions-phase-2>; CEQ, Bipartisan Permitting Reform Implementation Rule (final rule PDF), <https://www.energy.gov/sites/default/files/2024-05/ceq-reg-2024-05-01-nofr.pdf.pdf>

1 service areas conducted under the same authorization should not trigger additional
2 environmental review, provided they remain within the parameters analyzed in the FAA's
3 programmatic nationwide EA. FAA should also confirm that, as long as an unmanned
4 aircraft's noise characteristics fall within the limits described in that programmatic
5 assessment, additional project-level or site-specific NEPA documentation will not be
6 required.

7 For individual authorizations and acceptance actions, the FAA should apply Order 1050.1F
8 categorical exclusions and the extraordinary-circumstances framework. Where proposed
9 operate-by-rule categories and associated Means of Compliance keep impacts below
10 significance thresholds, FAA should rely on the appropriate categorical exclusions and
11 document the extraordinary-circumstances review, with additional analysis only when a
12 specific factor is present.³²

13 There is clear precedent that small-UAS delivery and fixed-route operations can be
14 approved with no significant impact when bounded by defined operating limits and
15 mitigations. FAA Environmental Assessments and Findings of No Significant Impact for
16 Wing Aviation and UPS Flight Forward demonstrate standardized conditions addressing
17 noise, wildlife, and overflight of sensitive areas.³³³⁴ FAA has also used written re-

³² Federal Aviation Administration, Order 1050.1F, Environmental Impacts: Policies and Procedures (July 16, 2015), https://www.faa.gov/documentlibrary/media/order/faq_order_1050_1f.pdf

³³ FONSI/ROD , Wing Aviation, Christiansburg, VA (EA and decision), https://www.faa.gov/sites/faq.gov/files/uas/advanced_operations/nepa_and_drones/Wing_Christiansburg-record_of_decision.pdf; FONSI/ROD and Final EA , UPS Flight Forward, The Villages, FL (Nov. 8, 2021), https://www.faa.gov/sites/faq.gov/files/uas/advanced_operations/nepa_and_drones/EA_UPSFF_LS_L_Route_Villages_FL_Final_FONSI_ROD.pdf

³⁴ FAA, Public Involvement and Environmental Review for Drone Package Delivery (NEPA page summarizing UAS EAs and FONSI/RODs), https://www.faa.gov/uas/advanced_operations/nepa_and_drones; Final Environmental Assessment

evaluations to confirm that, earlier findings remain valid as operating details evolve within the same impact envelope.³⁵

Implementation notes. To avoid duplicative paperwork and accelerate reviews, FAA should publish a concise NEPA UAS Addendum that includes:

1. a standardized screening checklist keyed to Order 1050.1F extraordinary-circumstances factors
2. a short noise worksheet suitable for small aircraft with limited operations
3. a wildlife and land-use screen for routing and launch or recovery sites; and
4. boilerplate mitigation language operators can incorporate in Means of Compliance and operations manuals.

Clarifying that operations conducted within previously analyzed parameters do not require new NEPA documentation will reduce administrative burden, promote regulatory certainty, and preserve environmental protections. Streamlining this process will also reduce unnecessary resource expenditure and enable more effective community engagement by aligning outreach with actual service availability rather than long-lead NEPA timelines.³⁶

I. Administrative Burden and Registration (for example, §108.165)

and FONSI/ROD , Zipline, Salt Lake City (Dec. 23, 2022),
https://www.faa.gov/sites/faa.gov/files/Final_EA_FONSI_ROD_Zipline_Salt_Lake%20City_12-23-22.pdf

³⁵ Written Re-evaluation , Zipline, Salt Lake City (Nov. 22, 2023), confirming the 2022 EA/FONSI remains valid within the same impact envelope,
https://www.faa.gov/uas/advanced_operations/nepa_and_drones/Written%20Re-evaluation%20Zipline%20Utah_Final%20Signed%20DH.pdf

³⁶ FAA Order 1050.1F (extraordinary circumstances and categorical exclusions)

1 AUVSI supports minimizing administrative burden by relying on existing FAA digital systems
2 and avoiding duplicative filings. For registration, small UAS should continue to register
3 under Part 48 with updates made through FAA’s online portal, rather than shifting fleet
4 registration into paper-based processes.³⁷

5 Remote ID data should be leveraged to reduce repetitive entry. FAA should align any Part
6 108 recordkeeping or acceptance filings with Part 89 and § 47.14 serial requirements so
7 that RID serials or UA serials already associated with registration can be referenced rather
8 than re-entered.³⁸

9 Consistent with the Paperwork Reduction Act, the final rule and related guidance should
10 use electronic collection, batch tools, and standardized templates to minimize time and
11 cost. This includes allowing bulk uploads for registration updates, fleet-level metadata
12 updates for routine changes, and organization-level accounts with delegated roles in FAA’s
13 portal.³⁹

14 **Recommended implementation details.**

³⁷ 14 CFR Part 48, Registration and Marking Requirements for Small Unmanned Aircraft (eCFR, Subparts A–B, including § 48.100–48.125), <https://www.ecfr.gov/current/title-14/chapter-I/subchapter-C/part-48>; FAA, How to Register Your Drone (DroneZone overview), https://www.faa.gov/uas/getting_started/register_drone.

³⁸ 14 CFR Part 89, Remote Identification of Unmanned Aircraft (eCFR), Subpart D message elements and requirements, <https://www.ecfr.gov/current/title-14/chapter-I/subchapter-F/part-89/subpart-D>; 14 CFR § 47.14, Serial numbers for unmanned aircraft (linking registration and RID serials), <https://www.ecfr.gov/current/title-14/chapter-I/subchapter-C/part-47/subpart-A/section-47.14>.

³⁹ Paperwork Reduction Act of 1995, Pub. L. 104-13, <https://www.congress.gov/104/plaws/publ13/PLAW-104publ13.pdf>; FAA Paperwork Reduction Act Burden Statement (agency guidance), https://www.faa.gov/about/office_org/headquarters_offices/avs/offices/aam/drug_alcohol/forms_and_policies/burden_statement.

- 1 1. Keep registration for small UAS under Part 48, with updates through FAA’s online portal,
2 and recognize those records when evaluating Part 108 applications.⁴⁰
- 3 2. Reference RID and serial fields already required by Part 89 and § 47.14 in Part 108 forms
4 so operators do not have to re-key the same identifiers.⁴¹
- 5 3. Provide batch upload formats and API-based submissions consistent with PRA
6 principles to reduce manual entry.⁴²

7 **IV. Part 146 , Automated Data Service Providers**

8 AUVSI supports a risk-based certification framework for automated data service providers
9 (ADSPs) that is interoperable, scalable, and optional for operate-by-rule mission classes in
10 areas where services are not needed to manage risk. Acceptance should rely on FAA-
11 accepted Means of Compliance (MOCs) tied to consensus standards, with multiple
12 pathways rather than a single prescribed standard. Use of ADSP services is not a condition
13 of operate-by-rule authorization. Operators may self-provide equivalent functionality
14 without obtaining a Part 146 certificate when such services are used solely for their own
15 operations.⁴³⁴⁴

⁴⁰ Part 48; FAA Register Drone page

⁴¹ Part 89 Subpart D; § 47.14.

⁴² PRA 1995; FAA PRA statement.

⁴³ FAA, Drone Integration: Concept of Operations (May 2025), describing Part 146 as the framework for automated data services in the UTM ecosystem supporting Part 108, https://www.faa.gov/uas/resources/policy_library/Drone-Integration-Concept-of-Operations-May-2025.pdf; FAA, BVLOS Fact Sheet (Aug. 2025) summarizing proposed Parts 108 and 146 roles, https://www.faa.gov/newsroom/fact_sheets/Fact_Sheet_BVLOS.pdf.

⁴⁴ Regulations.gov docket summary for FAA-2025-1908, noting a defined approval pathway for third-party services including UTM suppliers, <https://www.regulations.gov/docket/FAA-2025-1908/unified-agenda>.

1 **Scope and purpose.** Part 146 should focus on services that directly reduce operational
2 risk, improve airspace efficiency, or aid an operator in their operations, such as strategic
3 deconfliction, while preserving operator choice within the UTM ecosystem that supports
4 Part 108 and other automated and uncrewed aircraft operations.⁴⁵

5 **Scope clarity.** Part 146 certification should apply only to entities that intend to serve as
6 automated data service providers, or third-party vendors directly supporting certificated
7 providers. FAA should clarify that companies offering technology components or limited
8 solutions that are incorporated into other providers' services are not considered ADSPs and
9 are not subject to certification. This ensures that Part 146 oversight remains focused on
10 primary service providers, avoids redundant regulation, and reduces administrative burden
11 while still fostering innovation in upstream technologies such as commercial
12 telecommunications/internet infrastructure or cloud service providers.

13 **Service levels and authorization.** AUVSI supports a scaled approach in which certification
14 and authorization obligations increase with the residual risk the service introduces. The
15 FAA docket materials describe three service levels, a two-step approval that includes a
16 provider certificate and a separate service authorization, and the expectation that
17 authorized services meet minimum performance requirements documented against a
18 published industry consensus standard.⁴⁶

⁴⁵ Drone Integration ConOps 2025; FAA BVLOS Fact Sheet

⁴⁶ FAA Supporting Statement (Part 146 information collection) describing three service levels, provider certification requirements (§ 146.105), service authorization content and consensus-standard basis (§ 146.205), and the two-step approval structure, https://downloads.regulations.gov/FAA-2025-1908-0006/attachment_1.pdf.

1 **Interoperability.** Interoperability should rely on open interfaces, so operators are not
2 locked into a single provider. FAA should reference accepted interoperability standards
3 through MOCs and allow equivalent alternatives that demonstrate the same performance.

4 **Expansion of Part 146 Applicability.** While AUVSI supports the FAA’s intent to establish
5 Part 146 as a framework for ADSPs supporting operations under Part 108, several
6 members, have noted that its scope should not be limited to smaller-UAS BVLOS
7 operations. The same approval pathway could provide significant value for companies
8 conducting larger UAS operations under Parts 91, 121, or 135 in controlled airspace.
9 Expanding Part 146 to encompass all automated data services would promote consistency
10 across UAS categories and encourage technology-neutral oversight of data-driven safety
11 services.

12 **Data governance and transparency.** Part 146 should require quality management, change
13 management, and user notices for software updates, with service-level metrics, outage
14 notifications that include expected restoration times, and post-incident summaries
15 available to affected users such as those described in the GUTMA operator to usp service
16 level agreement template.⁴⁷ Routine retention should be limited to the shortest interval
17 necessary for safety assurance and oversight, with longer retention only when required by
18 an active investigation or legal hold.⁴⁸

⁴⁷ GUTMA Operator To Usp Service Level Agreement Template, [https://gutma.org/gutma-operator-to-
usp-service-level-agreement-template/](https://gutma.org/gutma-operator-to-usp-service-level-agreement-template/)

⁴⁸ FAA Supporting Statement details on quality management, record retention including exchanged-
data retention and software change notices (§ 146.310, 146.330, 146.405),
https://downloads.regulations.gov/FAA-2025-1908-0006/attachment_1.pdf.

1 **Reciprocity and scaling.** Where an ADSP holds a comparable authorization from a
2 bilateral partner, FAA should be able to recognize that qualification with targeted
3 verification.⁴⁹

4 **Voluntary use in higher-risk contexts.** When operators elect to use services, acceptance
5 should be based on measured performance in the intended operating environment and
6 documented through FAA-accepted MOCs. Use of internal tools that do not offer services
7 to third parties should remain outside the scope of Part 146 certification, with acceptance
8 documented in the operator’s Part 108 safety case.⁵⁰⁵¹

9 **V. TSA Vetting (§108.305, .310, .335; §108.440(i); §108.565(f); TSA**

10 **Preamble)**

11 AUVSI strongly opposes the proposed Security Threat Assessment (STA) and Limited
12 Security Program requirements under Subpart C and related provisions. As drafted, these
13 measures are costly, duplicative, and disproportionate to the potential risks associated
14 with UAS operations. The BVLOS rulemaking is intended to enable safe, compliant
15 commercial operations, not to prevent criminal misuse by actors who will ignore
16 regulations regardless. Imposing broad, airport-derived security frameworks on the UAS
17 industry would divert resources away from technologies and procedures that genuinely
18 enhance safety and security.

⁴⁹ FAA Supporting Statement note on reciprocal qualification for providers with comparable foreign authorization (§ 146.115(e)), https://downloads.regulations.gov/FAA-2025-1908-0006/attachment_1.pdf.

⁵⁰ Drone Integration ConOps 2025; FAA BVLOS Fact Sheet

⁵¹ Part 146 Supporting Statement

1 **Personnel Vetting (§108.335)**

2 The proposal to require up to a Level 3 STA for all “covered persons” is impractical,
3 unsupported by data, and inconsistent with TSA’s risk-based framework for other modes of
4 transportation. As written, the definition of “covered persons” could include not only
5 operational personnel but also retail, warehouse, or delivery staff with incidental contact
6 with UAS cargo. This creates a universe of covered persons that is effectively limitless, with
7 costs nearly impossible to calculate. Neither the preamble nor the Regulatory Impact
8 Analysis provides a threat assessment or quantitative estimate to justify this scope.

9 TSA requires only a Level 2 STA for security-sensitive employees in rail and transit
10 operations, where the risk profile is far higher due to hazardous materials and passenger
11 volumes. Even within commercial aviation, most airport workers with unescorted access to
12 secure areas do not undergo Level 3 vetting. By contrast, the proposal would apply the
13 most stringent vetting level to personnel handling small, frangible UAS carrying lightweight
14 consumer goods, a mismatch of risk and regulatory response.

15 To reduce unnecessary strain on TSA resources and avoid duplicative burdens, personnel
16 who already hold an airman or remote pilot certificate, a federal security clearance, or are
17 vetted government or public safety employees should be excluded from additional STA
18 requirements. Ten years of incident-free UAS operations demonstrate that existing TSA
19 vetting practices for these operators are sufficient.

20 The UAS industry has already adopted a layered, holistic approach to security that
21 eliminates single points of failure. Personnel with access to cargo or launch sites cannot
22 control aircraft, alter flight paths, or access sensitive systems. Imposing additional vetting

1 requirements on these individuals would not improve outcomes but would create barriers
2 to scale and undermine Congress’s directive to normalize BVLOS operations.

3 **Limited Security Program (§108.440(i); §108.565(f))**

4 The proposed requirement for package delivery operators to implement a Limited TSA
5 Security Program reflects an airport-centric framework that does not align with the realities
6 of UAS operations. The rule lacks a data-driven risk assessment, provides no clarity on the
7 expected program content, and risks duplicating existing safety and security processes
8 already embedded in UAS operations, including Safety Management Systems (SMS),
9 hazardous materials transport requirements, and company-specific access control and
10 cyber protections.

11 Security is already a business imperative for commercial operators, and the industry has
12 demonstrated a decade of safe, secure, and transparent operations. The FAA’s proposed
13 security provisions, including §108.150(c) (secure locations), §108.45(e) (security
14 occurrence reporting), and §108.535 (cybersecurity plans aligned with the NIST
15 Cybersecurity Framework 2.0), provide a more appropriate baseline for addressing risk
16 without overreach.

17 AUVSI urges TSA and FAA to withdraw the Level 3 STA and Limited Security Program
18 requirements from the final rule and instead collaborate with industry to establish a risk-
19 based security framework that builds on existing, proven practices. TSA’s engagement with
20 the General Aviation community offers a model for effective, voluntary security
21 collaboration. A similar approach would strengthen security by tailoring measures to the
22 operational realities of UAS while avoiding unnecessary cost, confusion, and regulatory
23 bottlenecks.

U.S. leadership in safe and secure UAS integration depends on enabling, not burdening, innovation. Security is essential, but it must reflect the true risk environment of small UAS operations. TSA’s proposed approach is unworkable and unjustified. A coordinated, proportionate framework will better advance both safety and national security objectives.

VI. Cross-Part Airspace and Right-of-Way (§91.113 Amendments)

AUVSI supports modernizing § 91.113 so that UAS operating under Part 108 have predictable, risk-based right-of-way relative to crewed aircraft. As contemplated, below 500 feet, UAS should have right-of-way over unequipped crewed aircraft, subject to the condition that crewed aircraft that choose to equip retain right-of-way. Mandating and incentivizing electronic conspicuity (EC) for crewed aircraft operating below 500 ft will, when such aircraft are actually so equipped, establish a shared visibility baseline and reduce the disproportionate burden on UAS to detect and avoid noncooperative traffic.

The NPRM’s proposed population-based right-of-way reversals (e.g., over “Category 5” areas) are operationally unworkable. Crewed pilots have no practical way to determine population categories in flight, those zones are not charted, shift dynamically, and can traverse in seconds at typical speeds. Expecting pilots to identify and adhere to frequent reversals would undermine cockpit workload management. Further, there is no empirical evidence of a correlation between ground population density and collision risk or manned-aircraft activity. Right-of-way should not be tied to population categories.

Compounding this, § 91.119(b) prohibits most manned aircraft from flying below 1,000 ft over populated areas, while Part 108 limits UAS to below 400 ft AGL. The overlap of most unequipped manned aircraft and Part-108 UAS in the same airspace volume may be

1 therefore extremely limited, suggesting that residual collision risk is minimal and does not
2 justify subordinating UAS in high-population areas. UAS often coordinate, and will continue
3 to do so, with low-altitude vertical lift aircraft, like helicopters. Although this is not the case
4 today, other currently unequipped aircraft like weight shift control aircraft, balloons, and
5 powered parachutes, should gain access to and equip with low-cost EC and help to
6 modernize our skies and improve safety for all users of the NAS.

7 Accordingly, AUVSI strongly recommends eliminating the noncooperative DAA requirement
8 in § 108.185's population-based clauses and the corresponding right-of-way provision in §
9 91.113(h)(1). The better policy is to codify a clear, equipage-based right-of-way framework:
10 UAS under Part 108 yield to crewed aircraft only when those aircraft broadcast cooperative
11 signals; unequipped crewed aircraft yield to UAS, except during airport approach or
12 departure phases. This aligns with § 108.195's cooperative-conspicuity vision, making right-
13 of-way rule both technically enforceable and operationally predictable.

14 AUVSI endorses the FAA's proposed authorization of affordable EC devices for manned
15 aircraft (e.g., noncertified ADS-B Out alternatives). The FAA must require all crewed aircraft
16 in low-altitude airspace to have and use ADS-B (or FAA-approved alternatives) and must
17 phase out low-altitude ADS-B exemptions to advance safety and enable scale in the
18 promising drone industry as well as increasing safety for all users of the NAS. Exempting
19 aircraft from EC at low altitudes increases the risk of undetected encounters, particularly
20 where UAS operate under cooperative surveillance assumptions.

21 In controlled airspace, UAS operators should continue to use UASFM grids evidenced in
22 LAANC for access. Part 108 flight intent and constraints should be shared via interoperable

1 data services so that strategic deconfliction and conformance monitoring operate
2 consistently across both operate-by-rule and authorization missions.

3 The FAA should reinforce see-and-avoid responsibilities for crewed pilots and yield
4 responsibilities for UAS via consistent guidance and reference materials such as *AC 90-48E*
5 on collision avoidance. Right-of-way and see-and-avoid responsibilities remain as stated in
6 the NPRM's § 91.113 amendments and should not impose new equipage burdens on UAS.

7 This framework modernizes § 91.113 in light of current technology and risk metrics, making
8 right-of-way rules consistent, clear, and aligned with safe integration of crewed and
9 uncrewed operations.

10 **VII. Large UAS Cargo (Preamble pp. 27)**

11 AUVSI supports establishing a clear pathway for unmanned cargo aircraft between 110 and
12 1320 lbs (and potentially even above 1,320 lbs) MTOW through data collection, phased
13 integration, and targeted commercial approvals. This pathway should be tied to a
14 structured data plan (operational, safety, and commercial metrics) to inform a future large
15 cargo-specific rulemaking or amendment, while enabling vetted operations in the interim.

16 AUVSI recognizes that the primary path for large UAS cargo operations is through existing
17 Part 21 certification and operational approval under Parts 91 or 135. The intent of this
18 section is not to suggest that these operations should fall under Part 108, but to highlight
19 the importance of FAA dedicating policy attention and resources to enable this sector.

20 Importantly, the development of a large-UAS cargo framework must remain distinct from
21 package delivery operations as described and current Part 108 finalization to ensure that

package delivery with UA less than 110 lbs and logistics operations continue unburdened. Advancing a pathway for heavier cargo platforms alongside the thriving small-UAS sector will unlock significant societal and economic benefits and reinforce U.S. global leadership.

VIII. International Harmonization

AUVSI supports an approach that recognizes equivalent safety and reduces duplication for operators and manufacturers who work across borders. FAA should accept foreign approvals or data through existing bilateral frameworks and, where appropriate, by direct acceptance of Means of Compliance (MOCs) that demonstrate an equivalent level of safety. Recognition should occur through MOCs that map foreign evidence to Part 108 outcomes, with any U.S.-specific deltas identified up front.⁵²

Bilateral pathways. FAA should use established BASA/IPA mechanisms to recognize findings from partner authorities where the scope and system are comparable, while reserving targeted verification for U.S. operational differences. Acceptance should be based on documented equivalency and a targeted delta analysis, not automatic adoption of foreign requirements.⁵³

Risk assessment alignment. FAA should allow *JARUS SORA* as an optional MOC input for Part 108 safety cases, accepting evidence packages generated under SORA-based approvals from trusted authorities, provided they are mapped to Part 108 outcomes. Use of SORA is optional and should not be a precondition for operate-by-rule missions.

⁵² FAA, Aviation Safety , International Agreements (BASA/IPA listings), https://www.faa.gov/aircraft/air_cert/international/bilateral_agreements/baa_basa_listing; EASA, EU-USA Bilateral Agreement and Technical Implementation Procedures overview, <https://www.easa.europa.eu/en/document-library/bilateral-agreements/eu-usa>.

⁵³ FAA BASA/IPA; EU-USA BASA

1 References to EU materials are for mapping only and do not impose EU-specific equipage
2 or service mandates.⁵⁴

3 **Canadian crosswalks.** FAA should accept *Transport Canada* SFOC evidence where
4 appropriate and define a short checklist that maps AC 903-001 artifacts to Part 108
5 outcomes, with any U.S.-specific supplements identified up front.⁵⁵

6 **Implementation notes.** Publish a short policy describing when foreign approvals or data
7 are eligible for acceptance, a public list of bilateral instruments and scopes relevant to
8 Parts 108 and 146, and a template that shows how SORA-based or Canadian SFOC
9 packages can be mapped to Part 108 MOCs and U.S. recordkeeping needs. Where foreign
10 data are submitted, FAA should allow redaction of personal identifiers and accept data
11 summaries where needed to satisfy U.S. privacy requirements.

12 **IX. Economic Analysis and FAA Resourcing**

13 AUVSI urges the FAA to update the economic assumptions for the final rule to reflect real-
14 world operator compliance costs and FAA administrative resource needs tied to Parts 108
15 and 146. The analysis should distinguish initial versus recurring costs, scale them by
16 aircraft class and mission type, and account for operate-by-rule efficiencies that reduce

⁵⁴ JARUS SORA v2.5, Main Body (May 13, 2024), https://jarus-rpas.org/wp-content/uploads/2024/06/SORA-v2.5-Main-Body-Release-JAR_doc_25.pdf; EASA AMC/GM to Regulation (EU) 2019/947 (Issue 1, Amendment 2), <https://www.easa.europa.eu/en/document-library/acceptable-means-of-compliance-and-guidance-materials/group/amc-gm-to-commission-implementing-regulation-eu-2019947>.

⁵⁵ Transport Canada, Advisory Circular AC 903-001 (June 7, 2024), <https://tc.canada.ca/en/aviation/reference-centre/advisory-circulars/advisory-circular-ac-no-903-001>; Transport Canada, SFOC for higher-risk environments (Apr. 1, 2025), <https://tc.canada.ca/en/aviation/drone-safety/drone-pilot-licensing/get-permission-special-drone-operations/higher-risk-environments>.

1 per-operation submissions.⁵⁶ We also urge the FAA to review the safety benefits of
2 elements this NPRM entertains, but does not propose to require, or would require only in
3 limited circumstances including mandatory EC for crewed aircraft operating in low-
4 altitude.

5 The analysis should also model FAA staffing and process capacity explicitly, including
6 workload drivers such as MOC acceptances, service authorizations under Part 146, and
7 any Notify-and-Fly or equivalent filings, with cycle-time and service-level targets published
8 for each queue. This will help the agency administer the framework without creating
9 avoidable backlogs and will give industry predictable timelines for planning.⁵⁷

10 For transparency and continuous improvement, FAA should commit to reporting post-
11 implementation metrics for Parts 108 and 146, including average days to
12 acceptance/authorization, queue volumes, and aging profiles by queue, and to using those
13 data to adjust staffing and processes over time.⁵⁸

14 Failure to account for these burdens risks delaying capital investment, limiting small-entity
15 participation, and slowing the public safety missions that depend on timely adjudication. A
16 data-driven, performance-based rule paired with transparent service levels will lower
17 transaction costs for both the FAA and operators and improve measurement of realized
18 benefits.⁵⁹

⁵⁶ DOT OIG BVLOS 2025

⁵⁷ *Id.*

⁵⁸ *Id.*

⁵⁹ *Id.*

X. Recognition of Existing BVLOS Operations

Many small- and mid-size operators perform safe, routine BVLOS missions today under Part 107 waivers, COAs, and exemptions granted under 49 U.S.C. §44807. These approvals cover a wide range of use cases, including construction surveys, mapping, infrastructure inspection, closed-site operations, and public safety deployments. The FAA should explicitly recognize the safety value of these waiver-based operations. Years of data from approved BVLOS waivers demonstrate proven mitigations, and the rule should credit that body of operational experience as evidence of risk-managed, scalable operations. They may rely on human-in-the-loop procedures and site-specific mitigations that FAA has repeatedly reviewed and accepted. Preserving these authorities is critical to ensure continuity for operators who have invested in safety cases, training, and operational procedures, and whose work delivers measurable safety, economic, and community benefits.

As the FAA implements Part 108, these waiver- and exemption-based operations should remain legally valid. Doing so avoids unnecessary disruption for operators who do not require broader authority, while ensuring that manual and semi-automated BVLOS operations remain available alongside more automated systems. At the same time, the FAA should explicitly credit waiver and §44807 experience for those operators who choose to transition into permits under Subpart D or certificated approvals under Subpart E and Subpart H. Building on proven performance will provide predictability, reduce redundancy, and accelerate integration into the broader BVLOS framework.

This continuity also supports the FAA’s proposal language recognizing the importance of secure, American-made platforms in the future of BVLOS operations. Broader federal

1 policy trends, including NDAA §1709, the Department of Commerce’s Section 232 supply
2 chain review, recent Executive Orders on UAS security and industrial competitiveness, and
3 bilateral aviation safety agreements, reinforce the need for a stable pathway that enables
4 operators to continue proven missions today while positioning the industry to adopt secure
5 domestic and allied systems as they expand.

6 Finally, AUVSI recommends that the FAA remove the words “or available” from proposed
7 §108.810(a). This revision will prevent ambiguity in the declaration of compliance process
8 and avoid unnecessary burdens on operators and manufacturers, ensuring that
9 compliance is based on standards that are formally recognized by the FAA. The FAA should
10 include the drone system, not just the drone, in paragraph (b) of this section. The entire
11 system, not just the drone, must be designed to resist or prevent operation outside of the
12 flight design envelope.

13 By maintaining waiver and exemption pathways under Part 107 and §44807, while providing
14 a clear path into Part 108 for those seeking scale, the FAA can both protect existing
15 missions and facilitate a smooth transition to the platforms and practices that will define
16 the next era of BVLOS integration. This balanced approach ensures continuity, supports
17 U.S. policy priorities, and strengthens America’s global leadership in uncrewed aviation.

18 While AUVSI’s primary recommendation is to continue recognizing waiver-proven and
19 §44807 operations, we also note that some members have proposed that if FAA does not
20 preserve these authorities, certain low-risk BVLOS use cases such as closed-site
21 operations should be explicitly exempted from the certification requirements in §108.185.
22 This position is supported by operational data from member companies like DroneDeploy.
23 DroneDeploy has aided customers in performing 2,000 monthly automated "drone-in-a-

1 box" operations and has aided commercial customers in successfully completing over
2 5,000 flights under BVLOS waivers. This data underscores the argument that a significant
3 volume of safe, proven operations is already providing economic value and could be halted
4 by overly broad or restrictive new regulations. AUVSI believes these concerns further
5 reinforce the need to avoid unnecessary disruption to proven, low-risk operations.

6 **XI. Conclusion**

7 AUVSI appreciates the FAA's leadership in advancing a performance-based BVLOS
8 framework. With the adjustments recommended here, including expanded operate-by-rule
9 with Notify-and-Fly, clear transition guidance and interim authority, calibrated C2 and
10 durability requirements, categorical NEPA exclusions, proportional ADSP obligations,
11 international harmonization, removal of TSA vetting, and targeted right-of-way and buffer
12 guidance, the agency can deliver a final rule that safely enables routine BVLOS at scale and
13 strengthens U.S. leadership in advanced aviation.

14 *Table 1: Key Asks Summary*

Topic	Reference	Ask
Continuation of Proven BVLOS Ops	Part 107; 49 U.S.C. §44807	Preserve BVLOS waivers, COAs, and 44807 exemptions for proven use cases (DFR, inspections, public safety, tethered, demo/educational); do not sunset into Part 108
Operate-by-rule codification	§108.205	Codify proven BVLOS ops (DFR, inspections, shielded ops) as operate-by-rule
Hazmat/emergency payloads	§108.715	Provide FAA-accepted low-risk carriage pathway with PHMSA alignment
Durability/airworthiness	§108.700, Subpart H	Reject prescriptive design & Part 36 noise, scale by risk/fleet reliability
Manufacturer requirements	Subpart H	Use performance-based standards, leverage §108.705 NOAs, avoid type-cert creep, allow manufacturers to submit AMOCs

Airworthiness Approvals	§108.105	Extend CMD process as an option for operational acceptance and approval, allow manufacturers to submit AMOCs
Registration	§108.115	Aircraft registration under Part 48 instead of Part 47.
ADSP implementation	Part 146	Phased timelines, clarify scope, proportional oversight, practical conformance monitoring
Right-of-way & OAA	§91.113	Support UAS ROW over unequipped; replace OAA ban with risk-tiered buffers
TSA vetting	§108.305, .310, .335	Remove from rule; handle via separate TSA-led risk-based process
§108.810 Simplified user interaction	Preserve manual controls	Clarify that compliance can be shown through software-based solutions and outcome-focused methods; strike “or available” from (a) to ensure manual controls remain permissible.
International harmonization	Section VIII	Align with JARUS SORA, ICAO, pursue bilateral recognition for reciprocity
Economic analysis	Economic section	Update cost assumptions, model staffing needs, avoid backlogs
Existing §107.31 BVLOS operations	New Section X	Recognize waiver-proven BVLOS missions (manual and semi-automated) as operate-by-rule or through an enhanced Part 107 endorsement to preserve continuity for small and medium-sized operators

1

2 AUVSI and its members stand ready to support the FAA with data, implementation
3 guidance, and standards development to ensure successful execution.

4 Respectfully Submitted,

5 

5

6 Scott Shtofman
7 AVP & Counsel, Regulatory Affairs
8 AUVSI

9

1 **Design and Manufacturing Appendix**

2 The following comments highlight concepts and discussions for the final rule and initial
3 MOC acceptance. We recognize that the rule text itself may not address specific
4 guidelines, performance levels, or requirements that would be found in standards and
5 MOCs. AUVSI supports a performance-based, acceptance-focused framework that allows
6 multiple means of compliance, preserves the Criteria for Making Determinations (CMD) as
7 an interim bridge, and avoids prescriptive rules that are not scaled to risk. FAA should retain
8 final authority over safety determinations, accept compliance pathways from qualified
9 submitters, and avoid delegating control exclusively to voluntary consensus standards
10 bodies. Subpart G and Subpart H should focus on safety outcomes while preserving
11 flexibility for manufacturers and operators. FAA should also ensure that aircraft which have
12 been safely and reliably deployed under waiver-based BVLOS operations are not forced into
13 unnecessary redesign. Proven platforms with demonstrated safety records should be
14 eligible for streamlined acceptance, avoiding duplicative requirements or prescriptive
15 redesign mandates.

16 **Subpart G: Procedures for Unmanned Aircraft Airworthiness Acceptance**

17 §108.700 Airworthiness acceptance - Support the acceptance model but clarify bilateral
18 pathways, eligibility, documentation, and obligations. FAA should maintain a public list of
19 qualifying agreements and provide case-by-case transition options. Replace third-party
20 quality assurance staff certification mandates with a requirement that manufacturers
21 maintain a quality assurance system, production system, and continued operational safety
22 program that allows self-certification of personnel competencies.

1 §108.705 Means of compliance - FAA should publish minimum performance requirements
2 and accept compliance submissions from any qualified source, modeled on Remote ID,
3 rather than limiting submissions to consensus standards bodies.

4 Means of Compliance, are essential components of the Part 23 and Part 22 airworthiness
5 and continue operational safety requirements as well. By issuing Notices of Availability that
6 accept industry standards as “one but not the only” means of compliance for a given
7 regulatory requirement, the FAA provides both clarity and flexibility for individual applicants
8 to propose appropriate MoC for consideration and acceptance.

9 §108.710 Compliance with DTPNA requirements - Remove the requirement to comply with
10 Part 36 noise standards in this section. Noise standards are premature and should not be
11 embedded in DTPNA compliance.

12 §108.715 Declaration of compliance - Permit manufacturer-developed means of
13 compliance for FAA acceptance. Remove the requirement to list aircraft by serial number
14 and instead allow model, series, and manufacture date for traceability. Clarify any noise-
15 related references.

16 §108.720 Documents - Allow manufacturer-developed compliance documentation. FAA
17 should provide clarity on form and manner requirements to ensure consistency.

18 §108.725 Flight data - Define acceptable formats and clarify that raw, decrypted data is not
19 required if aggregated or filtered data suffices. Avoid duplicative pipelines and unnecessary
20 exposure of proprietary decryption tools.

1 §108.730 Quality assurance system - Set clear, performance-based criteria for QA systems
2 and permit manufacturer-developed compliance methods that demonstrate equivalent
3 results.

4 §108.735 Production system - Do not require first-flight testing of every aircraft. Permit
5 statistical sampling, automation-supported processes, and end-of-line testing appropriate
6 to the risk category.

7 §108.740 Continued operational safety - Define hazard-related terms and allow fleet
8 reliability data and operational evidence to substitute for duplicative lab testing where
9 appropriate. Requirements should be scaled to the size, weight, and risk of UAS, avoiding
10 the imposition of legacy crewed aviation maintenance regimes. The framework should
11 reflect the modularity and scalability of small UAS fleets while ensuring practicable, risk-
12 based oversight.

13 §108.745 Inspections and audits - Remove provisions allowing audits by standards-body
14 representatives. Retain FAA as the sole oversight authority.

15 §108.750 Design changes - FAA should allow tailored design changes rather than forcing all
16 updates through a tiered approval structure. Partial or targeted updates should be
17 permitted and scaled to system risk. FAA should explicitly clarify that modular system
18 designs and incremental upgrades, such as component replacements or autonomy
19 software updates, are eligible for streamlined acceptance. Flexibility for modularity and
20 iterative improvements will allow operators to integrate safety enhancements without
21 triggering unnecessary full-system recertification. FAA should recognize software revisions
22 as a distinct category warranting streamlined treatment. As aircraft become increasingly
23 automated, software updates are essential to incorporate lessons learned from unforeseen

1 operational situations. Streamlined approval of such revisions ensures safety
2 improvements can be deployed quickly, reinforcing the principle that while software may
3 make a mistake, unlike a human it should only make it once.

4 **Subpart H: Durability, Airworthiness, and Manufacturer Requirements**

5 §108.800 General - Support the general requirement but clarify applicability by aircraft
6 class. Recognize alternative means of compliance to be submitted by non-consensus
7 standards bodies, i.e. manufacturers, research facilities, etc., to preserve flexibility.

8 §108.805 Size, weight, speed - Avoid hard limits and maintain performance-based criteria
9 that can accommodate different aircraft designs. We also support the FAA's decision to
10 provide manufacturers the opportunity to seek relief from any of proposed sections under
11 proposed Subpart H, provided that the FAA sets a targeted level of safety and the requester
12 meets it.

13 §108.810 Simplified user interaction – Clarify that software-based compliance solutions are
14 acceptable and that requirements remain outcome-focused, not prescriptive. Strike “or
15 available” from (a) so that aircraft must be capable of operating safely without manual
16 input, but designs with manual controls remain permissible. This prevents unnecessary
17 constraints on system architecture while ensuring automation is scaled to risk. The FAA
18 should include the drone system, not just the drone, in paragraph (b) of this section. The
19 entire system, not just the drone, must be designed to resist or prevent operation outside of
20 the flight design envelope.

1 §108.815 Signal monitoring and transmission - Measure outcomes for continuity,
2 monitoring, and fault detection. Avoid rigid link timeout prescriptions and allow resilient,
3 redundant architectures without mandating a single solution.

4 §108.820 Positioning, navigation, and timing - Recognize multiple PNT sources and allow
5 alternative or fused solutions when reliability is demonstrated. Rather than rely exclusively
6 on industry consensus standards, the manufacturer should be able to define the required
7 accuracy of the drone’s “position, navigation, and timing” (PNT) solution based on the
8 intended operation and associated risk of the operation.

9 §108.825 Collision avoidance - Tie compliance to performance standards and permit
10 service-based or ground-based solutions. Do not mandate specific sensor configurations.

11 §108.830 Anti-collision lighting - Scale requirements to nighttime and higher-risk
12 operations. Do not apply them universally to all UAS.

13 §108.835 Position lighting - Exempt small UAS in daylight to avoid unnecessary weight and
14 power burdens.

15 §108.840 Power systems - Use performance-based reliability standards and accept fleet
16 data. Avoid prescriptive “no single point of failure” language where safe degradation modes
17 exist.

18 §108.845 Propulsion - Scale requirements based on the safety-risk, considering energy
19 overall safety of the aircraft design, its intended operation, its potential safety-risk.. Define
20 terms such as loss of power and loss of control to ensure clarity.

21 §108.850 Fuel system - Streamline for electric UAS and avoid requiring compliance with
22 fuel system standards that do not apply.

1 §108.855 Fire protection - Scale requirements to the risk. Permit passive containment
2 strategies where appropriate.

3 §108.860 Software - Accept equivalence with proportional objectives based on risk levels.
4 Avoid unnecessary import of type certification standards.

5 §108.865 Electronic hardware - Accept equivalence or commercial attestations where
6 justified.

7 §108.870 Systems and equipment - Limit catastrophic hazard prevention language to
8 safety-critical systems. Do not apply primary-system standards to payloads.

9 §108.875 Cybersecurity - Align with existing federal cybersecurity frameworks. Avoid
10 duplicating requirements already covered by NIST or CISA. Accept industry standards as
11 means to comply with the proposed cybersecurity requirements.

12 §108.880 Associated elements - Permit modular attestations from suppliers for
13 subassemblies and components to reduce duplicative testing. The FAA must clarify the
14 terms “hazard,” “accident,” and “incident,” as they apply to Part 108 operations to enable
15 more robust comments and compliance.

16 §108.885 Durability of materials - Allow statistical sampling and fleet data in place of
17 destructive testing across all units.

18 §108.890 Operating environment - Scale testing requirements to risk and the expected
19 operating environment.

20 §108.895 Lightning protection - Apply only where operational exposure is credible. Do not
21 apply universally to all UAS. A pathway should exist whereby an operational hazard

1 assessment can be used to permit flight in conditions in which lightning is possible but not
2 probable and consequences of lightning strike to third parties is acceptably mitigated.

3 §108.900 Flight data recorder - Require recorders only for heavier (>110 lbs.) or higher-risk
4 aircraft. For small UAS, ADS-B or equivalent data should suffice.

5 §108.905 Flight data analysis - Permit the use of service provider logs and SMS programs to
6 avoid duplicative data pipelines.

7 §108.910 Noise - Defer prescriptive noise requirements until sufficient operational data and
8 community experience are available. Allow modeling and measured data where
9 appropriate. Consensus standards, once mature, can provide valuable benchmarks, but
10 they should not be the exclusive pathway. FAA should also accept entity-developed means
11 of compliance that demonstrate achievement of noise performance objectives, preserving
12 flexibility while standards evolve.

13 §108.915 Placards - Permit digital placards or QR codes for small UAS.

14 §108.920 Identification and marking - FAA should avoid duplicative marking requirements
15 under Part 108 and instead harmonize with existing provisions in Parts 45 and 48, as well as
16 Part 89 (Remote ID). UAS should not be required to display multiple, overlapping
17 identification plates. Instead, a single, harmonized marking or digital identifier should be
18 sufficient to meet the intent of §108.920.

19 §108.925 Additional requirements - Clarify scope with concrete triggers.

20 §108.930 Developmental testing - Remove prescriptive requirements that prohibit safe
21 degradation. Aircraft designed to land safely when encountering anomalies should be
22 considered compliant.

1 **Conclusion**

2 Subpart G and Subpart H should remain performance-based, risk-scaled, and innovation-
3 friendly. FAA should preserve CMD as a valid interim path, recognize fleet data and
4 alternative means of compliance, and ensure that final authority for determinations of
5 acceptable level of risk rests with the agency rather than being delegated exclusively to
6 third-party standards bodies. By adopting these recommendations, FAA can maintain
7 safety while supporting flexibility for both established and emerging manufacturers.

1 **Public Safety Appendix**

2 This appendix provides explanatory context and proposes regulatory text establishing a
3 dedicated framework for public safety operations under Part 108. It reflects the practical
4 experience of agencies operating under Part 91 waivers, integrating proven safety practices
5 while enabling Drone as First Responder and other civic interest missions.

6 § 108.900 Applicability

7 Public safety operations under Part 108 should follow a Certificate of Waiver or
8 Authorization model, consistent with existing practice under Part 91.113 CoW/As. Eligibility
9 should remain limited to Public Aircraft Operators (PAOs) and Public Safety Organizations
10 (PSOs), preventing commercial misuse while providing agencies a clear pathway into Part
11 108 without imposing population density or ground-based surveillance constraints
12 unworkable for daily emergency operations.

13 (a) This subpart applies to operations conducted by Public Aircraft Operators (PAOs) that
14 also qualify as Public Safety Organizations (PSOs), as defined in 49 U.S.C. § 40102(a)(41)
15 and 44806(e).

16

17 (b) Operations conducted under this subpart are considered Civic Interest operations and
18 are authorized by a Certificate of Waiver or Authorization (CoW/A) issued under this part.

19

20 (c) Operations under this subpart shall be deemed compliant with § 108.120 through
21 108.210 unless otherwise specified in the CoW/A.

22 § 108.905 Certificates of Waiver for Public Safety Operations

1 This section codifies current FAA practice of issuing public safety BVLOS CoW/As under
2 Part 91.113. By expressly listing the sections waived, the rule text mirrors existing CoW/As
3 issued to agencies. The addition of a modified grid map option ensures that public safety
4 agencies can tailor operations to the unique characteristics of their jurisdiction while
5 maintaining FAA oversight and flexibility.

6 (a) The Administrator may issue a Certificate of Waiver or Authorization (CoW/A) permitting
7 a PAO/PSO to conduct unmanned aircraft operations beyond visual line of sight, including:
8

9 (1) Operations at or below 400 feet AGL, or within 100 feet of a structure or object in Class G
10 airspace;
11

12 (2) Operations at or below published UAS Facility Map altitudes in Class B, C, D, or E
13 (surface area) airspace;
14

15 (3) Operations over people and moving vehicles, provided the aircraft is operated in
16 accordance with the special provisions of the waiver;
17

18 (4) Operations within a modified grid map submitted by the applicant and approved by the
19 Administrator, which may establish altitude, airspace, and operational limitations tailored
20 to the jurisdictional needs of the public safety agency;
21

22 (b) A CoW/A issued under this section constitutes an alternate means of compliance with §
23 91.113, 91.119, 91.126, 91.127, 91.129, 91.130, 91.131, and 91.155 for the purposes of
24 public safety unmanned aircraft operations.

1

2 (c) Each CoW/A shall prescribe:

3 (1) The jurisdictional or geographic area of operation;

4 (2) Altitude and airspace limitations;

5 (3) Required mitigations, including lost link procedures, pilot training, and operational
6 manuals;

7 (4) Any additional conditions determined by the Administrator necessary to maintain an
8 equivalent level of safety.

9 § 108.906 Operational Flexibility for Civic Interest

10 Public safety agencies cannot feasibly implement population density restrictions or
11 ground-based surveillance infrastructure in daily operations. This provision codifies the
12 existing practice under Part 91 waivers that already allow these missions safely, ensuring
13 that lifesaving operations remain rapid and flexible under Part 108.

14 (a) Public safety and civic interest operations will be afforded certain exemptions to the
15 requirements set forth in, but limited to §108.165, §108.170, §108.175, §108.180, §108.185,
16 and §108.190 as mentioned throughout Part 108 as approved by the administrator.

17

18 (b) Public safety operations under this subpart shall be deemed authorized for the purpose
19 of lifesaving response, emergency management, disaster relief, law enforcement,
20 firefighting, and other public safety functions as approved by the Administrator.

21 § 108.907 Actively Tethered Operations

1 This section recognizes that actively tethered UAS present materially lower risk than free-
2 flight BVLOS operations, given their fixed spatial envelope, physical connection, and
3 constrained range. The rule provides operational flexibility for use in public safety
4 applications such as temporary overwatch, incident command, and communications relay.
5 Codifying tethered operations ensures agencies and manufacturers can deploy these
6 systems without ambiguity under the new Part 108 structure.

7

8 (a) Actively tethered unmanned aircraft systems (UAS) operated by or on behalf of Public
9 Aircraft Operators (PAOs) and Public Safety Organizations (PSOs) under this subpart are
10 considered within visual line of sight when the aircraft remains physically connected to a
11 fixed ground station by a continuous, powered tether providing command, control, or
12 energy.

13

14 (b) Actively tethered operations are authorized under a Certificate of Waiver or
15 Authorization (CoW/A) issued pursuant to § 108.905, provided the operator

16 (1) Ensures continuous tether integrity consistent with manufacturer specifications

17 (2) Ensures safe landing or automatic power-cut upon tether severance or loss of power
18 continuity

19 (3) Performs tether inspection and maintenance per manufacturer instructions.

20

(c) Actively tethered operations under this section are deemed compliant with § 108.120, 108.175, and 108.180 provided the aircraft remains within 150 feet of the operator and does not exceed 400 feet AGL.

§ 108.915 Responsibilities of the Operator

This section incorporates the common provisions found in FAA-issued CoW/As. It places responsibility for training and oversight on the operator agency, consistent with FAA treatment of PAO/PSO status, and ensures accountability through record availability rather than continuous reporting.

(a) The holder of a CoW/A is directly responsible to the Administrator for the safe conduct of operations.

(b) Prior to conducting operations under a CoW/A, the operator shall:

(1) Ensure that each Remote Pilot in Command, manipulator of the controls, and visual observer has been trained and certified by the operating agency as qualified to conduct operations under this subpart;

(2) Ensure that all operational personnel are informed of the terms and provisions of the CoW/A and of relevant Part 91 and Part 108 requirements;

(3) Maintain documentation of such training and certification, available for inspection upon request.

§ 108.920 Duration and Cancellation

1 This section mirrors existing FAA provisions on duration and cancellation of waivers,
2 ensuring continuity while preserving the Administrator’s discretion to revoke or amend
3 authority when safety requires.

4 (a) Certificates of Waiver or Authorization issued under this subpart are effective for the
5 period stated in the certificate, not to exceed four years, unless sooner canceled by the
6 Administrator.

7

8 (b) The Administrator may cancel a CoW/A at any time when it is no longer required, when
9 its provisions are abused, or when unforeseen safety factors develop.

10 § 108.925 Relation to Other Parts

11 This section clarifies the relationship between the new Civic Interest provisions, Part 91,
12 and other federal and local requirements. It affirms the dual legal foundation (Part 91 + Part
13 108) of the CoW/A model and maintains FAA’s longstanding position that state and local
14 laws remain applicable.

15 Operations under this subpart are conducted pursuant to Part 108 and Part 91. In the event
16 of conflict, the provisions of the CoW/A control.

17 Nothing in this subpart waives or preempts applicable State or local laws.

18