



Drones and Insurance— Many Moving Parts in the U.S.

by Laura Allison, Jill Tumney and Ridge Muhly, Gen Re
with contribution from Andrew Spiegel, USAIG

The insurance needs and challenges surrounding unmanned aircraft (UAs), or drones in common parlance, have generated many discussions in our business. In both commercial and personal lines, customers increasingly ask insurers for coverage—and insurers are considering the many options.

Drone sales grew 224% from April 2015 to April 2016, and retailers expect stronger sales as the holiday season nears. More photographers will use them; more kids will fly them.

In this publication, we examine drones and insurance from several standpoints, including:

- > New federal rules for commercial and recreational use
- > Drone underwriting and product Q&A with Andrew Spiegel of USAIG
- > Insurance coverage options from ISO, including new Homeowners filing

- > Gen Re insights on drone risks and solutions

We often discuss drones in our blogs and at industry conferences. If you have any questions about the insurance landscape for unmanned aircraft or seek assistance with underwriting guidelines or policy forms, let us know. There are many moving parts, in the skies and in the insurance marketplace.

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About This Newsletter

Casualty Matters reviews new liability developments affecting General Liability, Commercial Umbrella and Personal Umbrella business. Our underwriters provide perspectives on the developments mean to insurers and specific types of insureds.



Highlights of Drone Developments

Commercial Drone Use— New Federal Rules

As of August 29, 2016, new FAA regulations—known as Part 107—offer a new pathway for the use of commercial drones. Prior to Part 107, operators could enter the airspace through two means: filing for a Section 333 grant of exemption or obtaining an airworthiness certificate for the aircraft. In recognition of the increasing use of drones by all types of businesses, the FAA offers Part 107. This is where many non-aviation businesses—photography, real estate, construction, utility/infrastructure, agriculture and media—will turn for authority.

The most significant change is a new registration process for drone use that does not require a waiver or airworthiness certificate. The FAA expects that this pathway will be used by most small businesses with incidental drone operations.

The summary highlights of the new rules mean that businesses can fly drones legally when complying with the following:

- > Registered drone marked with registration number
- > Under 55 lbs (including cargo)
- > No higher than 400 feet or faster than 100 mph
- > Visual line of sight
- > Daylight operations only
- > Three miles visibility
- > No operations over other people
- > Preflight inspection
- > Cargo only if secured and will not affect flight characteristics or controls
- > Operator with remote pilot certificate or under direct supervision of such person
- > Testing/education/vetting/age requirements for remote pilot certificate

Note: The FAA has indicated that more drone rules could be coming in 2016, but the political climate makes any action unlikely.

Personal Drone Use—New Federal Rules

Hobby flyers also face new regulatory requirements, albeit tailored to recreational usage. Standards do not exist for pilot certification or education. A teenager can fly a drone, subject to few operational and registration requirements. If the drone weighs under .55 lbs, the requirements do not apply. Requirements for hobby flyers include:

- > Registration (online process available)
- > Drones under 55 lbs and over .55 lbs (including cargo)
- > Pilot at least 13 years old
- > No higher than 400 feet or faster than 100 mph
- > Visual line of sight maintained
- > Outside five-mile radius of airport
- > Existing safety guidelines still apply, e.g., don't fly over unprotected people or moving vehicles
- > Testing/education

All Drone Use—U.S. State Laws

At least half the states have enacted some restrictions on drone use since the first bills were introduced in 2013. Many laws focus on drone use for criminal law enforcement and public safety; some impose restrictions on operations and operators. A handful of laws address personal privacy. For example, California law prohibits capturing images of private individuals and activities without express permission from those individuals. To view the wide variety of state requirements, go to: www.ncsl.org/research/transportation/current-unmanned-aircraft-state-lawlandscape.

Federal Rule Details

For a more in-depth review of the federal regulations, see article “New Regulation for Small Unmanned Aircraft—Part 107,” *Insights* by Regina Pettus,

Genesis Insurance, available at www.genesisinsurance.com/assets/pdfs/In%20the%20News/InsightsPart1071608.pdf.



Drones, Insurance Products and Markets

Q&A with Andrew Spiegel, USAIG

Senior Vice President and Regional Underwriting Manager—Western Territory,
United States Aircraft Insurance Group



Andrew Spiegel shares his knowledge on drones as a manager and underwriter of commercial drone risks. He spoke to a Gen Re Treaty audience, and we thought you would value the insights of an industry professional working with drone policies every day.

Q What risk factors do you think are most important for underwriting commercial drone operators? Are there any “red flags”?

The most important factor with respect to Unmanned Aircraft System (UAS) operators is whether they are licensed aircraft pilots operating under a previously issued 333 exemption or a licensed remote pilot-in-command operating under Part 107. Those operators who have successfully passed the required FAA knowledge exam, and who have acquired their license prior to UAS operations, show a level of safety and willingness to comply with the new rules set forth by the FAA. Operations conducted by pilots who are not licensed, or who may be flying above 400 feet or beyond line of sight without a waiver, could be a red flag to aviation insurers.

Q What type of insurance products are available for the many small commercial risks (farms, photographers, real estate agents, etc.) who use drones in their operations but are not in the aviation business?

We sell a specific standalone Unmanned Aircraft Systems (UAS) policy that provides liability coverage for bodily injury and property damage while using an owned UAS. First-party physical damage to the UAS itself can be purchased for higher-valued aircraft but many decide to self-insure since owners and operators can easily repair most machines at little cost.

Ancillary coverage such as personal injury (inclusive of invasion of privacy), non-owned UAS liability, payload, and additional equipment can be endorsed to the policy for additional premium. It is important to understand that different uses may require different types of coverage and therefore aviation insurers have developed expansive policy forms in order to accommodate each operator individually.

Q If offering property and liability coverage for commercial drones, what considerations should an insurer contemplate when developing and defining risk appetite? Where do you see the line between standard and specialty markets?

The difficulty with becoming an insurer of unmanned aircraft is the lack of statistical or actuarial data to support pricing models. Aviation-specific markets have at least full-size aircraft data and pricing to benchmark historically but a number of unknowns still remain. Now that many specialty insurers have been in the game for a couple of years and loss ratios are starting to develop, insureds will start to see pricing stabilization and consistency in the marketplace.

Most drone operators prefer to use an aviation specialty insurer as they can better cater to specific operations. Take, for example, a commercial photographer who purchases a UAS and wants to film apartment buildings for real estate clients. While doing so, he crashes his drone into the side of the building where it falls from the sky and hits a pedestrian in the head, causing severe bodily injury. The FAA has jurisdiction over the accident since it resulted from an aircraft flying in the National Airspace System (NAS). Aviation-specific insurers have had decades of dealing with the FAA and NTSB and simply know how to handle these types of claims whereas a standard GL carrier may not.

Q Is there risk to commercial businesses that hire a drone company? How can agents educate their clients to do a better job at risk management?

The answer is Yes to both questions! We have seen many commercial businesses hire unmanned aircraft operators in order to acquire data or photographs; they simply don't want the hassle of purchasing an unmanned aircraft and going through the legal process to operate it. Therefore, they hire a third party to do the work for them, and a contract or work order is typically signed between the UAS operator and the insured.

Within the agreement, it is important to highlight minimum insurance requirements purchased by the UAS operator and to ensure that adequate limits are put into place by the operator. Typically, we guide our clients to acquire a certificate of insurance with additional insured status for at least \$1 million of liability.

What about the homeowner whose teenager flies a small drone in the yard or neighborhood? What regulations—if any—apply?

Teenagers who fly small unmanned aircraft systems (sUAS) for hobby or recreational purposes are exempt from FAA Part 107.

However, a teenager must register a UAS with the FAA if it weighs between 0.55 pounds and 55 pounds. Additionally, a teenager must fly the UAS within a specific set of rules established by Congress for model aircraft. These rules state that you cannot fly higher than 400 feet above ground level, you must keep the aircraft within line of sight, and you cannot fly within five miles of an airport. A good website for more information is:

www.knowbeforeyoufly.org. ■

About the Author

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Insurance Coverage Options—Commercial and Personal Lines

Most insurers have received questions about drone coverage. Farm owners want to know if they are covered for drones inspecting crops. Parents ask if they are covered if a child crashes a drone that causes injury or damage. Fortunately, the insurance bureaus are providing answers, particularly in their policy forms.

Commercial Liability Coverage

ISO's core commercial liability insurance policies exclude injury and damage arising out of the ownership, maintenance, use or entrustment to others of aircraft. With the growth of drone popularity, ISO introduced a suite of coverage options for insurers to offer varying degrees of coverage. The endorsements became effective beginning June 1, 2015 for Commercial General Liability and Commercial Umbrella policies, and are planned to become effective starting December 1, 2016 for Businessowners policies. Included in the package is a revised exclusion that is intended to align with the new coverages. At the same

time, individual insurers have been filing their own endorsements to suit the needs of their unique books of business.

- > Exclusion—Unmanned Aircraft (CG 21 09/CU 21 71)—Coverage A (BI&PD) and B (P&AI); BP 15 11 for Coverages A, B or both (select)
- > Exclusion—Unmanned Aircraft—Coverage A Only (CG 21 10/CU 21 72)
- > Exclusion—Unmanned Aircraft—Coverage B Only (CG 21 11/CU 21 73)

The above endorsements add language to the existing aircraft exclusion. A new “unmanned aircraft” provision essentially carves drones out from the aircraft exclusion for separate attention. The new subsection precludes coverage for the ownership, maintenance, use or entrustment to others of “unmanned aircraft.” That term is then defined as aircraft not “designed, manufactured, or modified after manufacture” to be “controlled directly by a person from within or on the aircraft.”

A few points are worth noting. The exclusion applies beyond actual ownership or use. Negligent supervision, hiring, training and monitoring are specifically excluded. The definition of unmanned aircraft is broad in that it does not incorporate the size, weight and other characteristics found in the federal regulations. It applies to any aircraft controlled by someone not within or on that aircraft. Finally, the assumed contractual liability exception traditionally



AAIS Filings—Commercial Farm and Agribusiness

AAIS has also filed unmanned aircraft endorsements to be used with their Farm Commercial Liability Coverage and Agribusiness Commercial General Liability Coverage. Two of the endorsements (AL 2111 05 16 and AL 2112 05 16) provide scheduled Occurrence and Aggregate Limits for unmanned aircraft by adding two exceptions to the aircraft exclusion.

The first exception states that the exclusion does not apply to “bodily injury” or “property damage” arising out of the ownership, operation, maintenance, use or loading or unloading of an unmanned aircraft. The second exception involves the negligent supervision, hiring or training of another person if the “bodily injury” or “property damage” involves an unmanned aircraft as described in the first exception.

The third endorsement (AL 2113 05 16) is labeled by AAIS as mandatory and excludes coverage for “personal and advertising injury” arising out of an aircraft owned by, operated by, rented to, or loaned to any “insured” or the negligent supervision, hiring or training of another person by an “insured” if the “personal and advertising injury” involves an aircraft owned by operated by, rented to or loaned to an Insured.

If AL 2113 05 16 is attached to the Commercial Farm or Agribiz policy, the endorsement creates a potential drop-down of coverage from an umbrella policy for personal and advertising injury arising out of an aircraft. We expect similar UA endorsements for their Farmowner and Farm Umbrella/Excess policies.

extended to aircraft does not apply to drones. In addition to liability arising out of the insured’s own drones, the exclusion applies if the insured contracts with another party for a drone service and incurs liability as a result.

- > Limited Coverage for Designated Unmanned Aircraft (CG 24 50/CU 24 50)—Coverage A (BI&PD) and B (P&AI); BP 15 12 for Coverages A, B or both (select)
- > Limited Coverage for Designated Unmanned Aircraft (CG 24 51/CU 24 52)—Coverage A Only
- > Limited Coverage for Designated Unmanned Aircraft (CG 24 52/CU 24 52)—Coverage B Only

These endorsements provide a coverage vehicle for drones by adding an exception to the new unmanned aircraft exclusion with respect to scheduled aircraft operations or projects. The endorsement allows carriers to identify a particular UA make or model, size, use, etc. and hence customize coverage for the specific insured. The insurer can list “all operations” or identify specific activities.

Under the CGL and BOP endorsements, the insurer can also add an aggregate limit across all drone coverages. Any UA aggregate is subject to the policy aggregates, and to the extent that the UA aggregate

is available, the Each Occurrence and P&AI limits continue to apply.

For Commercial Umbrella, ISO introduced additional endorsements effective beginning November 1, 2016 to provide unmanned aircraft coverage on a follow form basis (CU 21 74 for Coverage A (BI&PD) and B (P&AI), CU 21 81 for Coverage A only, and CU 21 91 for Coverage B only).

Commercial Property Coverage

For Property coverage of the drone itself, building and personal property forms do not cover “Vehicles” operated principally away from the described premises. Aircraft is specifically noted as a vehicle. There are many other policy provisions that can limit coverage for the drone itself, or the insured’s property damaged by a drone.

To address potential gaps in coverage, ISO introduced a suite of endorsements, effective beginning December 1, 2016, allowing insurers to provide “Scheduled and/or Blanket Coverage.”

- > AG 04 54—Limited Coverage for Unmanned Aircraft
- > CP 04 14—Limited Coverage for Unmanned Aircraft
- > OP 04 54—Limited Coverage for Unmanned Aircraft

As with the commercial liability options, these new endorsements provide considerable flexibility for covering specific operations and aircraft. Insurers can schedule limits or provide coverage on a blanket basis with one limit of insurance. Coverage can be written on an actual cash value or replacement cost basis. Business Interruption (BI) coverage can be added as well. Finally, there are two aggregate limit options, one for Electronic Data and another for interruption of computer operations, which are applicable to BI coverage. The three endorsements are further tailored for each line, but the basic options are the same.

Personal Lines Coverage

The most recent ISO filing on drones concerns coverage under the Homeowners (but not Personal Umbrella) insurance forms. The filing includes several optional endorsements which are anticipated to become effective beginning March 1, 2017. To access the filing, see ISO Circular LI-HO-2016-132 (August 8, 2016).

To start, the Homeowners policy excludes “aircraft liability” arising out of ownership, maintenance, use, entrustment to others and failure to supervise, similar to the commercial exclusions. The HO policy also excludes vicarious liability for the actions of a minor involving aircraft. As defined in the HO form, aircraft includes any “contrivance used or designed for flight **except** model or hobby aircraft not used or designed to carry people or cargo.” The HO property provisions have a similar limitation on the aircraft definition, and additional hurdles, such as covered perils, that must be satisfied. There are no specific provisions for UAs, so the coverage would likely follow that for model/hobby aircraft.

ISO Filings—Homeowners

- > HO 34 02—Aircraft Liability Definition Revised to Remove Exception for Model or Hobby Aircraft
- > HO 34 03—Personal Injury for Aircraft Liability Excluded

The first new endorsement adds unmanned aircraft to the policy’s aircraft liability exclusion. Specifically, “aircraft” is defined to mean any contrivance used or designed for flight including but not limited to “unmanned aircraft, whether or not model or hobby.”

This change effectively removes all liability coverage associated with model/hobby aircraft, including drones. The second endorsement achieves the same result for insurers providing personal injury coverage. There is no filing as yet addressing coverage for damage to the drone itself.

Conclusion

To date, we have not seen any court interpretations of ISO or other aircraft exclusions for injury or damage involving drones. Without such precedent, we do not have legal guidance or certainty as to how those aircraft exclusions will be applied to a drone claim. As with so many new wordings, the new ISO filings offer greater certainty by addressing the specific exposure.

Farm and Personal Umbrella filings are likely to follow. Insurers should expect to see an evolution of rules and coverage forms as more drone uses emerge and losses arise. The occasional claim from bodily and personal injury may remain occasional—or we could see more losses as drones rise in popularity. The good news is that laws and policy forms are providing underwriters with some rules and tools. If a drone is in your holiday plans or classes of business, check the new requirements. ■

MORE DRONE READING

“FAA Introduces New Regulations for Commercial Use of Drones,” Gen Re blog by Ridge Muhly (September 22, 2016) available at www.genre.com/knowledge/blog/new-regulations-for-commercial-use-of-drones-en.html

New Regulation for Small Unmanned Aircraft—Part 107, *Insights* by Regina Pettus, Genesis Insurance, available at www.genesisinsurance.com/assets/pdfs/In%20the%20News/InsightsPart1071608.pdf

Drones Hit Radar Screen—And Insurance Policies, Gen Re *Policy Wording Matters* (June 2015), available at www.genre.com/knowledge/publications/pwm1506-37-en-drone.html



Gen Re Perspectives—on Drones and Underwriting



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Insurers were watching closely to see what the FAA and insurance bureaus would do.

Now that both have responded with new rules and forms, we expect to see more activity. This is particularly true for carriers with niche books of business, where drone use will be greatest.

On the commercial lines side, agriculture risks still drive most of the underwriting activity we see. Many carriers are tailoring coverage for the type of operations and drone characteristics. For example, we might see an insurer wishing to cover certain agricultural operations but not personal injury. They might condition coverage on compliance with FAA rules or drone size. Often any pollution-related operations are excluded. We have drafted or reviewed several such endorsements, and think they represent sound approaches to the exposure.

Our greatest concern is the personal injury exposure from an invasion of privacy, and this is true for both commercial and personal lines. We have heard many carriers express the same sentiment. Bodily injury and property damage are still worrisome, but the severity of such losses to date has not been high. ISO has endorsements that offer options for insurers to align coverage with underwriting intent—whether they want to cover certain commercial drone operations or exclude personal injury from a Homeowners policy. One major benefit of the new bureau endorsements is the additional detail and clarity they provide on this topic. However, there are several questions that still need answers. What if insurers do not address their policy forms for UAs? Will courts consider a drone to be an aircraft? ■



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Most of the interest in covering drone activities has come from our farm clients. We have worked with several carriers on policy wording to accommodate coverage needs. For example, the insurer might want to protect the farm risk when the drone is used to monitor crops but not for spraying insecticides.

Our concern involving the broader exposure from drones is focused on personal injury and invasion of privacy. That is not to say that losses from bodily injury and property damage will be insignificant. Teens and even adults will crash their drones into cars, buildings and other people. We simply anticipate more severity losses from privacy intrusions.

In the case of drones, as often occurs in Personal Lines, ISO filed the endorsements for Homeowners first and may follow with Personal Umbrella. If an insurer has adopted the new Homeowners drone exclusions but not filed similar language for its Personal Umbrella policy, or if its Personal Umbrella sits over another carrier's Homeowners with an exclusion, there is a mismatch and potential dropdown scenario. When we work with clients on policy wordings, this issue is addressed. ■



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While insurers are evaluating drone risks today, we must recognize how many more capabilities they will have in the future. You might not have much drone use in your book now, but that could look very different in a few years. Innovators are developing and testing the next technology that could put drones in more industries and critical functions.

I have seen presentations demonstrating all kinds of new capabilities and uses, from construction and manufacturing to emergency healthcare. It is far more than package deliveries, although that alone can be a game-changer for the many retailers you insure. Right now it might be of critical importance to farm business, but in the future drones will be a critical part of many lines and classes of business. That is one reason why we are monitoring developments and sharing them with you. ■

MORE GEN RE RESEARCH

Here are some recent Gen Re Research publications and blog posts. You can search on genre.com for these titles:

- > 5 Insights Test Cyber Insurance Policies—What Do Your Policies Say? (November blog by Mindy Pollack and Wendy Woolf)
- > Bad Faith Laws for First- and Third-Party Claims [Client Only State Survey]
- > Gen Re at NAMIC—The Feeling’s Mutual (October blog by Berto Sciolla)
- > U.S. Wildfire Risk Continues to Rise (October blog by Martha Flanagan)
- > Additional Insureds - A Question of Interpretation (September blog by Bob Button)
- > FAA Introduces New Regulations for Commercial Use of Drones (September blog by Ridge Muhly)
- > The Drive Towards Fully Automated Vehicles Continues (September blog by Charlie Kingdollar)
- > UM/UIM Updated Law Survey for Third Quarter 2016 (E-News Email to Auto clients)
- > Workers’ Comp—Positive Results While Facing a “Transforming” Landscape (August article by Bill Lentz and Diane Brown)
- > Crumb Rubber—Is It on Your Radar? (July blog by Andrea Garcia)
- > Umbrella Loss Segmentation—Trends for Better Insights (July blog by Liz Kramer and Maria Slowinski)
- > Cyber Education—10 Facts That Sell Cyber Insurance (June article by Mindy Pollack)
- > Do I Have Additional Insured Coverage or Not? (June article by Tressler LLP)
- > From Cyber to Construction to Cars—Developments Affecting Your Business (May article by Matt Burns, Jill Tumney and Mindy Pollack)
- > Commercial Umbrella Lesson From Losses—Segmentation Insights (May article by Matt Burns and Liz Kramer)
- > Is This Auto Claim Covered?—The Ridesharing Challenge (April article by David Hurt)
- > School Liability—Student Athlete Concussions (April article by Charlie Kingdollar and Jeffrey Weisel)

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