

# Proposed rules for drones envision routine commercial use (Update)

February 14 2015, byJoan Lowy

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Aeryon Scout UAV in flight.

Small drones could become a familiar sight across the nation's skies if the government adopts proposals that are largely favorable to commercial use of the remote-controlled aircraft.

An economic analysis by the Federal Aviation Administration envisions small drones—defined as those weighing 55 pounds or less—routinely

taking off to perform aerial photography, crop monitoring and mapping, inspections of cell towers and bridges and many others commercial tasks.

The FAA says it plans to release the draft rules on Sunday. The rules have been in the works for years and were submitted to the White House budget office in October for review. They were revealed ahead of schedule Saturday when the economic analysis describing them was posted online by mistake.

The regulations would improve safety by using small, lightweight unmanned aircraft instead of heavier, manned aircraft that "pose a higher level of risk," the analysis said. It notes that between 2004 and 2012, there were 95 fatalities involving climbers working on cell and other towers.

If the rules would prevent only one fatality by using a small drone instead of a tower climber, the \$9.2 million saved—the amount the government says is the economic value of a single life—would exceed the entire cost of the regulations to society, according to the document.

The analysis does not offer a total estimate on the annual economic benefit of regulations but says it would exceed \$100 million a year. For example, about 45,000 annual bridge inspections could be conducted with small drones. Most bridge inspections currently employ hydraulic mobile cranes called "snoopers." The average cost of an inspection using a snooper is \$3,250. Cable bridge inspections are even more expensive because they often require a 200-foot aerial lift.

The Association of Unmanned Vehicle Systems International, an industry trade association, estimates that small, commercial drones will create 70,000 jobs with an economic impact of more than \$13.6 billion in the first three years after their integration into U.S. skies.

The analysis doesn't address jobs that might be displaced by drones, like some types of pilots.

The FAA currently bans all commercial drone flights except for those by a small number of companies that have been granted waivers. Congress has been leaning on the FAA to move faster on regulations that would allow a wide variety of companies to employ drones for everything from monitoring pipelines to delivering pizzas. Under a law passed in 2012, the FAA was to issue final regulations by September 2015, but that appears unlikely.

Even if the White House approves the FAA's proposal, the agency is still required to offer it for public comment. Tens of thousands of comments are anticipated, and it could take two to three years for the agency to address them before issuing final regulations.

The document indicates the agency has dropped its insistence that drone operators have the same licenses and medical certificates required for pilots of manned aircraft. Industry officials complained that obtaining a private pilot license or medical certificate would be unnecessarily burdensome.

Commercial operators would have to take an aerospace knowledge test administered by the FAA before they could receive a certificate granting permission to operate a drone. The agency estimates the cost to operators of obtaining certificate at about \$300.

A private pilot license can cost thousands of dollars because it requires many hours of experience flying a plane.

Operators would have to keep drone flights below 500 feet in altitude, which is lower than most manned aircraft fly. That's 100 feet higher than the agency typically has approved in waivers to commercial operators.

But the draft rules would still prohibit drones from flying farther away than they can be seen by their operator, and nighttime flights would remain banned. The line-of-sight requirement would preclude delivery drones of the type envisioned by Amazon. Google is also experimenting with such drones.

Industry officials have chafed at both restrictions, saying they significantly reduce the usefulness of unmanned aircraft. The FAA's concern is that with no pilot on board, the operator on the ground is best able to prevent a collision with another aircraft by keep the drone in sight at all times.

Drone operators would also have to be checked out by the Transportation Safety Administration to determine whether they pose a security threat before they could receive an FAA operator certificate. There is no fee for the security check, but one might be applied in the future, the analysis said.

Last month, a small drone flew over the White House fence and crashed on the lawn. Although the operator later came forward saying the incident was an accident, the episode has raised concern that small drones might pose a security threat.

Agriculture is expected to become one of the first industries to embrace drones. Helicopter drones that are widely used for spraying crops in Japan would not fall under the FAA rules because they weigh significantly more than 55 pounds. But the rules would apply to small drones that monitor crops to better target watering or for mapping fields.

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Citation: Proposed rules for drones envision routine commercial use (Update) (2015, February 14) retrieved 22 September 2024 from <https://phys.org/news/2015-02-faa-drone-favorable->

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