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### Aerial Surveillance



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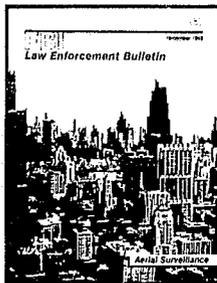
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# **Aerial Surveillance**

## *Fourth Amendment Considerations*

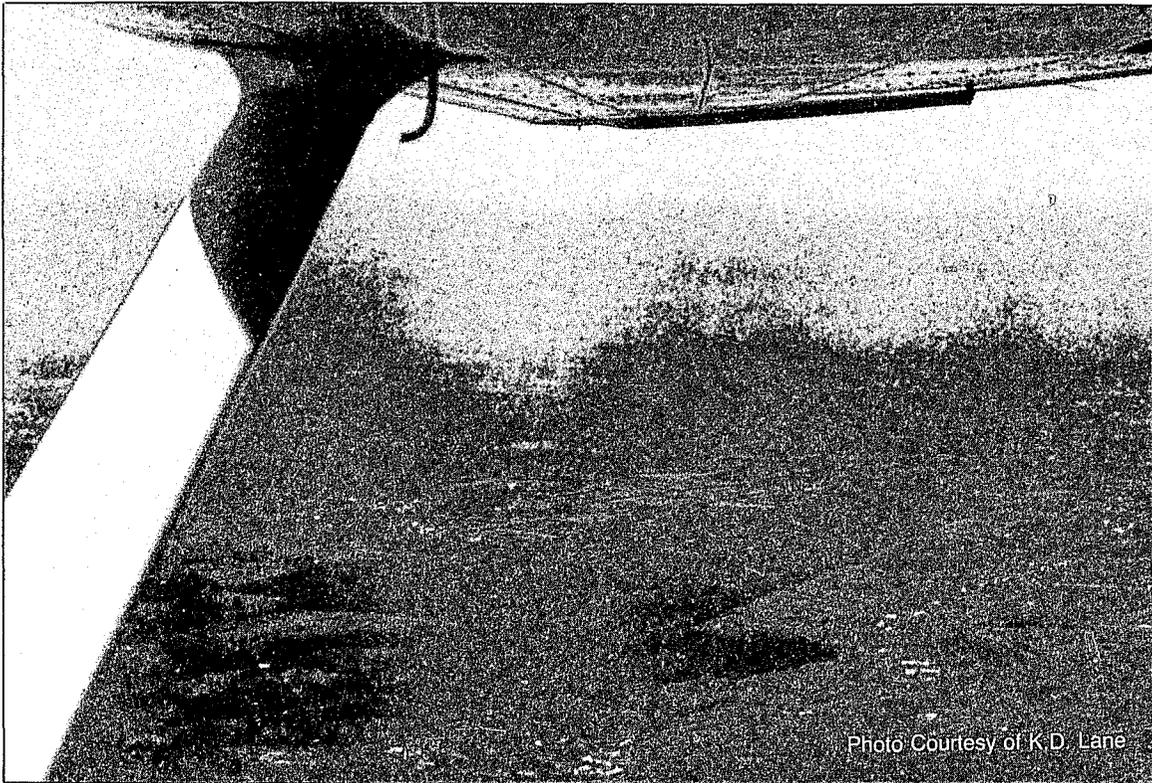


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**L**aw enforcement's use of aircraft as an observation platform to gather evidence, particularly in enforcing laws against marijuana cultivation, and the resulting constitutional challenges to such aerial surveillance have increased significantly since the late 1970's.<sup>1</sup> In three recent cases, the U.S. Supreme Court upheld warrantless aerial surveillance because the government's conduct did not intrude into a reasonable expectation of privacy, and therefore, did not constitute a search or seizure under the fourth amendment to the U.S. Constitution.<sup>2</sup> However, under certain circumstances, law enforcement's use of aircraft to inspect activity on the ground will intrude into a person's reasonable expectation of privacy and is only constitutionally permissible if conducted pursuant to a search warrant. This article begins with an analysis of the Court's recent aerial surveillance decisions, and then discusses several factors that law enforcement officers should consider in determining whether a particular aerial surveillance is permitted by the fourth amendment.

### Naked-Eye Observations From 1,000 Feet

In *Ciraolo v. California*,<sup>3</sup> the Santa Clara, CA, police received an anonymous telephone tip that marijuana was growing in Ciraolo's backyard. Police were unable to observe Ciraolo's yard from ground level because of a 6-foot outer fence and a 10-foot inner fence completely enclosing the yard. Officers trained in marijuana identification secured a private airplane and flew over Ciraolo's house at an altitude of

1,000 feet. The officers readily identified marijuana plants in Ciraolo's backyard and photographed the area with a standard 35mm camera. A search warrant based in part on these naked-eye observations was executed, and 73 marijuana plants were seized.

In ruling that the warrantless aerial observation of Ciraolo's backyard did not violate the fourth amendment, the U.S. Supreme Court applied the two-pronged test from *Katz v. United States*,<sup>4</sup> which required the Court to determine whether Ciraolo by his conduct exhibited an actual (subjective) expectation of privacy in his backyard<sup>5</sup> and whether that expectation is objectively reasonable by society's standards. The Court began its analysis by first concluding that Ciraolo met the (subjective) prong of the *Katz* test and did clearly "manifest his own subjective intent and desire to maintain privacy as to his unlawful agricultural pursuits"<sup>6</sup> from at least street-level views.

Then, the Court addressed the second inquiry under *Katz*—whether society as a whole would

recognize Ciraolo's expectation as objectively reasonable. Ciraolo argued that because the yard was within the curtilage<sup>7</sup> of his home, the warrantless aerial observation was prohibited by the fourth amendment. Ciraolo also contended that he had done all that could reasonably be expected of him to maintain privacy without covering his yard, which would defeat its purpose as an outside living area. The Court stated that even though the marijuana crop fell within the curtilage, that fact does not itself bar all police observation because what a person knowingly exposes to the public, even in his own home or office, is not a subject of fourth amendment protection.<sup>8</sup>

The Court concluded that Ciraolo was not entitled to assume that his unlawful conduct would not be observed by a passing aircraft or by a power company repair mechanic on a pole overlooking the yard.<sup>9</sup> The security measures taken by Ciraolo were inadequate to prevent observations of his backyard from the airways. The mere fact that an individual

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**The fourth amendment simply does not require the police ... to obtain a warrant in order to observe what is visible with the naked eye.**

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Special Agent DiPietro



has taken measures to restrict some views of his activities does not preclude an officer's observations from a public vantage point where he has a right to be and which renders the activities clearly

fourth amendment simply does not require the police traveling in the public airways at an altitude of 1,000 feet to obtain a warrant in order to observe what is visible with the naked eye.<sup>13</sup>

warrant based on these observations was subsequently executed and the marijuana was seized.

Since Riley left the sides and roof partially open, the Court held that he could not reasonably expect that the contents of his greenhouse were protected from aerial surveillance. Although the inspection in Riley was made from a helicopter, the Court considered that fact to be constitutionally irrelevant since private and commercial flight by helicopter in public airways is routine. Riley could not reasonably have expected that his greenhouse was protected from observation from a helicopter that was flying within lawful airspace for helicopters.

Also, the Court noted that FAA regulations permit helicopters to fly below the limit established for fixed-wing aircraft "if the operation is conducted without hazard to persons or property on the surface."<sup>15</sup> While approving the 400-foot, naked-eye aerial surveillance on the facts in *Riley*, the Court cautioned against assuming that compliance with FAA regulations will automatically satisfy fourth amendment requirements since FAA regulations are intended to promote air safety rather than protect the right against unreasonable searches and seizures.<sup>16</sup> The fact that a helicopter can fly over a person's home at virtually any altitude or angle without violating FAA regulations does not automatically defeat an individual's reasonable expectation of privacy from such observation.<sup>17</sup> Instead, courts must determine whether the helicopter is in the public airways at an altitude at which members of the public regularly travel. The Court found that Riley failed to produce

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**... the intrusiveness of an aerial surveillance and the degree of disruption caused are relevant in assessing fourth amendment interests.**

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visible.<sup>10</sup> The fourth amendment has never required law enforcement officers to shield their eyes when passing by a home on public thoroughfares, and any member of the public flying in this airspace could have seen everything that these officers observed.<sup>11</sup>

Ciraolo also argued that the observations were not made from police aircraft engaged in "routine patrol" but rather by officers trained to recognize marijuana for the specific purpose of observing his particular yard, and that these "focused" observations violated his reasonable expectation of privacy. In finding this argument concerning "focused" observations to be constitutionally irrelevant, the Court stated: "We find difficulty understanding exactly how [Ciraolo's] expectations of privacy from aerial observation might differ when two airplanes pass overhead at identical altitudes, simply for different purposes."<sup>12</sup>

In summary, the Court concluded that Ciraolo's expectation that his garden was constitutionally protected from naked-eye observation from 1,000 feet altitude is unreasonable and not one society is prepared to honor. The

#### **Warrantless Naked-Eye Observations From Helicopter at 400 Feet**

In a more recent aerial surveillance case, *Florida v. Riley*,<sup>14</sup> the Court approved a warrantless aerial surveillance of a partially covered greenhouse within the residential curtilage from a helicopter at 400 feet. The greenhouse was located 10 to 20 feet behind Riley's mobile home on five rural acres; two sides of the greenhouse were not enclosed but the contents were obscured from view from surrounding property. The greenhouse was covered by corrugated roofing panels that were either translucent or opaque, and two of the panels were missing. A wire fence surrounded the mobile home, and the greenhouse and the property was posted with a "do not enter" sign.

Officers received an anonymous tip that marijuana was being grown on Riley's property and then discovered that the contents of the greenhouse could not be seen from the road. An officer then circled twice over Riley's property in a helicopter at a height of 400 feet and observed with his naked eye marijuana growing inside the greenhouse. A search

evidence that helicopters flying at 400 feet were so rare that he could not have reasonably anticipated the observation of his greenhouse from that altitude and that in fact there was considerable public use of airspace at altitudes of 400 feet and above.<sup>18</sup>

Investigators contemplating aerial observations below altitudes specified for fixed-wing aircraft<sup>19</sup> should seek evidence of the frequency and/or routine nature of other such overflights from sources such as local airport managers, flying schools, flight instructors, FAA flight service stations, military installations and aeronautical charts.<sup>20</sup>

Finally, the Court stated that the intrusiveness of an aerial surveillance and the degree of disruption caused are relevant in assessing fourth amendment interests. In that regard, the Court found there was no interference with Riley's use of his greenhouse or other parts of the curtilage; no "intimate details" connected with the home or curtilage were observed nor was there any undue noise, wind, dust or other threat of injury.<sup>21</sup> Law enforcement aviators should therefore endeavor to conduct aerial surveillance with a minimum of disruptiveness to the people on the ground.

#### **Warrantless Enhanced Viewing of Chemical Plant From 1,200 Feet**

Dow Chemical Company operated a 2,000-acre facility for manufacturing chemicals which consisted of numerous covered buildings, outdoor manufacturing equipment, and piping conduits located between the various buildings that were exposed to visual observation from the air. Elaborate

security around the perimeter of the complex prevented ground-level public views of the facility. When Dow denied a request by the Environmental Protection Agency (EPA) for an on-site inspection of the plant, the EPA employed a commercial aerial photographer, using a standard floor-mounted precision aerial mapping camera, to take photographs of the facility from altitudes of 12,000, 3,000, and 1,200 feet. At all times the aircraft was lawfully within navigable airspace.<sup>22</sup> Dow alleged that EPA's warrantless aerial photography violated the fourth amendment.

In *Dow Chemical v. United States*,<sup>23</sup> the Court noted that one "may not legitimately demand privacy for activities out of doors in fields, except in the area immediately surrounding the home."<sup>24</sup>

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**... factors such as altitude, sensory enhancement and intrusiveness take on greater significance with respect to observations of a curtilage.**  
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In rejecting Dow's claim, the Court observed that the government has greater latitude to conduct warrantless aerial inspections of commercial property because the expectation of privacy that the owner of commercial property enjoys in such property is significantly less than the privacy and sanctity accorded an individual's home.<sup>25</sup> While acknowledging

Dow's reasonable, legitimate, and objective expectation of privacy in its covered buildings, the Court held that the warrantless taking of aerial photographs of the open areas of Dow's plant complex from an aircraft lawfully in public navigable airspace was not a search. The Court also emphasized that EPA's aerial observation of Dow's manufacturing facility took place without physical entry.<sup>26</sup>

The Court also addressed in *Dow* the constitutional significance of using visual enhancement devices to augment sensory faculties. The precision camera used by EPA's photographer was a conventional, albeit precise, \$22,000 commercially available camera commonly used in map making. It had the capability of taking photographs which could be significantly enlarged without loss of acuity and photographs which could provide the viewer with depth perception.<sup>27</sup> The photographs actually taken by EPA were not enlarged "to any significant degree"; yet, simple magnification could permit identification of 1/2-inch diameter wires.<sup>28</sup>

Additionally, the Court found that although the photographs undoubtedly gave EPA more detailed information than could be obtained from naked-eye views, they were limited to an outline of the buildings and equipment and were not revealing of intimate details protected by the Constitution.<sup>29</sup> Although the mapping camera possessed the capability of revealing much greater detail than was actually done, the Court stressed that it is not the potential for an invasion of privacy that constitutes a search but rather the actual exploitation of technological advances.<sup>30</sup> Thus, since the

camera used was available to the public and its technology was not exploited to reveal intimate details, the Court held that the mere fact that human vision was enhanced somewhat, "at least to the degree here,"<sup>31</sup> does not give rise to constitutional problems. However, the Court suggested that a search would have occurred had the government used more highly sophisticated surveillance equipment not generally available to the public.

### Factors That Determine the Extent of Fourth Amendment Protection

Courts reviewing the constitutionality of a particular aerial surveillance evaluate various factors to determine whether law enforcement intruded into an expectation of privacy that society is prepared to recognize as reasonable. Knowledge of the following

open fields, and it is unlikely that aerial observations of any property or activity in such open fields (regardless of altitude or sensory enhancement) would intrude upon a reasonable expectation of privacy. However, factors such as altitude, sensory enhancement and intrusiveness take on greater significance with respect to observations of a curtilage. Naked-eye surveillance of the curtilage in a physically nonintrusive manner from lawful airspace routinely used by the public was approved in both *Ciraolo* and *Riley*.

For other areas that are not clearly identified as curtilage or open fields, courts look to factors such as public access to the area and the historical protection traditionally given a particular area. For example, the industrial complex in *Dow* was considered to be more like open fields than curtilage.<sup>33</sup>

### Steps Taken to Conceal Property and Activity From Aerial Observation

A person must take effective action to ensure privacy against the types of aerial observations that can be commonly made by the public. For example, the two missing roofing panels and open sides of *Riley's* greenhouse meant that his expectation of privacy was not objectively reasonable; *Ciraolo* concealed his backyard marijuana plot from ground-level observation but made no effort to conceal his crop from aerial inspection. A defendant therefore has some duty to "plug the knothole"<sup>35</sup> if he wishes to protect privacy. However, he need not take extraordinary measures to protect his curtilage against sophisticated high-tech sensory enhancement devices that could not reasonably be foreseen.<sup>36</sup>

### Location of Observer

The observations in *Ciraolo*, *Dow* and *Riley* were all made from lawful altitudes. Courts generally approve warrantless aerial observations when police are conducting an aerial surveillance from a lawful vantage point. Although maintaining lawful altitudes under FAA regulations during aerial surveillance remains a very important factor, it is not determinative for all fourth amendment claims. Law enforcement aviators cannot assume that compliance with FAA regulations alone will guarantee that a surveillance will not intrude into an expectation of privacy that society is prepared to recognize as reasonable. However, aerial surveillance of open fields even from below FAA minimums would not

“**... compliance with FAA regulations alone will [not] guarantee that a surveillance will not intrude into an expectation of privacy....**”

factors can help law enforcement officers to evaluate whether a contemplated aerial surveillance will intrude into an individual's reasonable expectation of privacy and, if so, to adjust their surveillance techniques to ensure compliance with the fourth amendment.

### Type of Property

The Supreme Court in *United States v. Oliver*<sup>32</sup> ruled that the fourth amendment does not recognize an expectation of privacy in

### Frequency of Other Aircraft Flights

If law enforcement can produce evidence that there are routine flights over the suspected area at the contemplated altitude, that evidence will tend to undermine the reasonableness of any claimed expectation of privacy.<sup>34</sup> This factor is especially significant where the surveillance is made from altitudes below 500 feet which is the lower limit of navigable airspace for fixed-wing aircraft.

constitute a search since such areas are not afforded fourth amendment privacy protection.

#### *Sensory Enhancement Devices*

The decision to use a particular enhancement device should depend on the degree of sophistication of that device and the cumulative effect of other factors present in a particular case. For example, if the aerial mapping camera used in *Dow* were exploited to its full capability to photograph a crop of marijuana growing in an open field and the photographs were then highly magnified to reveal the shape of individual leaves, such surveillance would not violate a reasonable expectation of privacy. The fourth amendment does not prohibit officers from augmenting their sensory faculties with enhancement devices that science and technology can afford them.<sup>37</sup> However, if the mapping camera were fully exploited to read an individual's mail or observe "intimate details"<sup>38</sup> inside a person's home from a hovering helicopter, such surveillance would clearly implicate fourth amendment privacy interests. The observations of curtilage in *Ciraolo* and *Riley* were justified, in part, because they were made with the naked eye. Additionally, the degree to which human vision was enhanced in *Dow* was not considered significant enough to convert the observation of a noncurtilage into a search. Similarly, when considering whether to use a sensory enhancing device during an aerial surveillance, law enforcement officers should consider the general availability of such device on

the open market, the degree to which its capabilities will be exploited, and the location of the aircraft.

#### *Nature and Degree of the Intrusion*

In both *Ciraolo* and *Dow Chemical*, the lack of a physical entry was emphasized by the

“**The fourth amendment does not prohibit officers from augmenting their sensory faculties with enhancement devices....**”

Court as an important factor. Likewise in *United States v. Dunn*,<sup>39</sup> the Supreme Court held that the fourth amendment did not forbid DEA Agents who had crossed several fences onto Dunn's 198-acre ranch from standing outside a barn in open fields and peering inside with the aid of a flashlight, since the Agents did not physically intrude into the barn. The intensity of an aerial surveillance is also a factor in evaluating whether a reasonable expectation of privacy is implicated. Courts consider the length of time over the property, the number of instances of surveillance, and the number of aircraft used. Any disruption or interference with the occupant's use or enjoyment of the property by noise, wind, dust, etc., is also evaluated.

#### Conclusion

In planning an aerial surveillance to obtain evidence, the investigator should consider all the factors discussed in this article. By learning the location and circumstances surrounding the property or activity of interest, the law enforcement aviator can choose those aerial surveillance techniques (in terms of altitude, enhancement devices, and degree of intrusion) that will reveal the best view without compromising privacy interests protected by the fourth amendment. **FBI**

#### Footnotes

<sup>1</sup>Zeese. "Aerial Searches For Marijuana," 9 Search & Seizure L. Rep. 33 (1982).

<sup>2</sup>U.S. Const. Amend. IV provides: "The right of the people to be secure in their persons, houses, papers, and effects against unreasonable searches and seizures, shall not be violated, and no Warrants shall issue, but upon probable cause, supported by Oath or Affirmation, and particularly describing the place to be searched, and the persons or things to be seized."

<sup>3</sup>476 U.S. 207 (1986).

<sup>4</sup>389 U.S. 347 (1967).

<sup>5</sup>This prong looks to the outward manifestations of a person's expectation of privacy and whether he seeks to preserve something as private.

<sup>6</sup>476 U.S. at 211.

<sup>7</sup>Curtilage is generally considered to be the area immediately adjacent to a residence to which the intimate activity related to the home and domestic life are associated.

<sup>8</sup>476 U.S. at 213.

<sup>9</sup>*Id.* at 215.

<sup>10</sup>*Id.* at 213.

<sup>11</sup>*Id.* at 213-14.

<sup>12</sup>*Id.* at 214, n. 2.

<sup>13</sup>*Id.* at 215.

<sup>14</sup>109 S.Ct. 693 (1989).

<sup>15</sup>*Id.* at 697, n. 3.

<sup>16</sup>*Id.* at 697.

<sup>17</sup>In a concurring opinion, Justice O'Connor stressed that reasonable expectations of privacy do not simply mirror FAA's safety concerns. *Id.* at 698.

<sup>18</sup>*Id.* at 697.

<sup>19</sup>FAA regulations specify 1,000 feet over congested areas and 500 feet above the surface in other than congested areas. 14 C.F.R. §91.79 (1989).