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## I. PURPOSE

Airspace traffic has become more complex with the introduction of Unmanned Aircraft Systems (UAS), also known as drones. UAS consist of unmanned aircraft and the set of equipment used to operate the aircraft.<sup>1</sup> Under federal law, the Federal Aviation Administration (FAA) has authority to regulate certain UAS.<sup>2</sup>

## II. HISTORY

The FAA first authorized use of unmanned aircrafts in 1990.<sup>3</sup> Prior to 2012, the FAA had a rigid, case-bycase licensing process for authorizing use of UAS.<sup>4</sup> In February 2012, Congress passed the FAA Modernization and Reform Act (FMRA),<sup>5</sup> which required the FAA) to establish

- 1. a comprehensive plan to integrate "civil" (i.e. commercial) UAS into the national airspace system;<sup>6</sup>
- 2. rules regarding the operation of "public" UAS (e.g. UAS used by police or other agencies);<sup>7</sup> and
- special rules or exceptions (known as Section 333 exemptions) for UAS that do not pose a danger and need not require special authorization.<sup>8</sup>

The FMRA also generally prohibits the FAA from regulating "model aircraft" if certain conditions are met.<sup>9</sup>

In September 2013, the FAA published its Comprehensive Plan for UAS Systems,<sup>10</sup> and in November 2013, the FAA published a roadmap for integration of civil UAS into the national airspace system.<sup>11</sup> In 2014, the FAA issued public guidance for petitions for Section 333 exemptions,<sup>12</sup> and the FAA proceeded to grant a number of such exemptions.<sup>13</sup> On October 22, 2015, the FAA issued a clarification that <u>all</u> UAS (including

<sup>5</sup> Pub. L. No. 112-95, §§ 331-36, 126 Stat. 11 (2012).

<sup>&</sup>lt;sup>1</sup> Fed. Aviation Admin., Unmanned Aircraft Systems (UAS) Frequently Asked Questions, <u>https://www.faa.gov/uas/faqs/</u> (last modified May. 10, 2016) (hereafter "FAA FAQs").

<sup>&</sup>lt;sup>2</sup> FAA Modernization and Reform Act, Pub. L. No. 112-95, §§ 331-36, 126 Stat. 11 (2012).

<sup>&</sup>lt;sup>3</sup> Press Release, Fact Sheet – Unmanned Aircraft Systems (UAS), Fed. Aviation Admin. (Feb. 19, 2013), *republished at* <u>http://www.uadrones.net/civilian/research/2013/0219.htm</u>.

<sup>&</sup>lt;sup>4</sup> J. Tyler Black, Over Your Head, Under the Radar: An Examination of Changing Legislation, Aging Case Law, and Possible Solutions to the Domestic Police Drone Puzzle, 70 WASH. & LEE L. REV. 1829, 1842-43 (2013).

<sup>&</sup>lt;sup>6</sup> Id. § 332.

<sup>&</sup>lt;sup>7</sup> Id. § 334.

<sup>&</sup>lt;sup>8</sup> Id. § 333.

<sup>&</sup>lt;sup>9</sup> Id. § 336.

<sup>&</sup>lt;sup>10</sup> Fed. Aviation Admin., Unmanned Aircraft Systems (UAS) Comprehensive Plan (Sep. 2013), <u>http://www.faa.gov/about/office\_org/headquarters\_offices/agi/reports/media/uas\_comprehensive\_plan.pdf</u>.

<sup>&</sup>lt;sup>11</sup> Fed. Aviation Admin., Integration of Civil Unmanned Aircraft Systems (UAS) in the National Airspace System (NAS) Roadmap (Nov. 2013), http://www.faa.gov/uas/media/uas\_roadmap\_2013.pdf.

<sup>&</sup>lt;sup>12</sup> Fed. Aviation Admin., Public Guidance for Petitions for Exemption Filed under Section 333 (Sep. 25, 2014),

https://www.faa.gov/uas/beyond the basics/section 333/how to file a petition/media/section333 public guidance.pdf.

<sup>&</sup>lt;sup>13</sup> See Bart Jansen, FAA Lets 4 Companies Fly Commercial Drones, USA TODAY, Dec. 10, 2014, <u>http://www.usatoday.com/</u> story/money/business/2014/12/10/faa-drones-trimble-vdos-clayco-woolpert-amazon/20187761.



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public and model aircraft) had to be registered with the FAA,<sup>14</sup> but a federal appellate court later overruled that guidance.<sup>15</sup> On May 4, 2016, the FAA issued a memorandum clarifying its position on educational use of UAS.<sup>16</sup> Finally, on June 28, 2016, the FAA issued final regulations governing the operation of "small UAS" (i.e. those UAS under 55 lbs.), which became effective on August 29, 2016.<sup>17</sup>

The Hawaii legislature is in the process of addressing laws and regulations relating to the operation of UAS in Hawaii; however, to date, the only state regulations are those issued by the Hawaii Department of Land and Natural Resources that prohibits the launching or landing of drones in Hawaii state parks.

### III. APPLICABILITY TO BYU-HAWAII

Current federal UAS regulations apply to UAS "operations conducted by U.S. citizens only within the United States,"<sup>18</sup> or more specifically, "in the national airspace system."<sup>19</sup>The national airspace system is defined as the air outside of a structure from the ground up.<sup>20</sup> Thus, any use of UAS technology by BYU– Hawaii in the U.S. would be subject to UAS regulations, although certain UAS regulations may or may not apply to BYU–Hawaii depending on the type of UAS, as well as how and in what context it is used.

#### **IV. REQUIREMENTS**

With the exception of model UAS,<sup>21</sup> any flying of UAS in the national airspace is prohibited without specific authority from the FAA,<sup>22</sup> and <u>all</u> aircraft flown outdoors must be registered with the FAA and marked with a registration number.<sup>23</sup> Any aircraft that weighs between .55 lbs. and 55 lbs. may be registered online, while any aircraft weighing more than 55 lbs. must be registered through the FAA's paper process.<sup>24</sup>

#### A. Three Categories of Use for UAS

The FAA uses three general categories to designate use of UAS: (1) civil, (2) public, and (3) model.<sup>25</sup> The civil UAS category generally signifies UAS used for non-recreational and non-public purposes.<sup>26</sup> The public UAS category generally signifies UAS owned or leased by the federal, state, or local government.<sup>27</sup> The model UAS category generally signifies UAS used for "hobby or recreational purposes."<sup>28</sup>

<u>?newsld=76240</u> (last modified Mar. 7, 2014) (hereafter "Busting Myths").

<sup>&</sup>lt;sup>14</sup> Clarification of the Applicability of Aircraft Registration Requirements for Unmanned Aircraft Systems (UAS) and

Request for Information Regarding Electronic Registration for UAS, 80 Fed. Reg. 63912 (Oct. 22, 2015).

<sup>&</sup>lt;sup>15</sup> Taylor v. Huerta, ---F.3d----, 2017 WL 2192935, at \*1 (D.C. Cir. 2017).

<sup>&</sup>lt;sup>16</sup> Memo from Reginald Govan to Earl Lawrence et al., *Educational Use of Unmanned Aircraft Systems (UAS)*, FED. AVIATION ADMIN. (May 4, 2016), http://www.faa.gov/uas/resources/uas\_regulations\_policy/media/Interpretation-Educational-Use-of-UAS.pdf (hereafter the "Govan Memo").

<sup>&</sup>lt;sup>17</sup> Operation and Certification of Small Unmanned Aircraft Systems, 81 Fed. Reg. 42,064 (June 28, 2016).

<sup>&</sup>lt;sup>18</sup> *Id.* at 42,077; *see* Convention on Civil Aviation ("Chicago Convention"), art. 8, 7 December 1944, 61 Stat. 1180, 15 U.N.T.S. 295, *available at* <u>http://www.refworld.org/docid/3ddca0dd4.html</u>.

<sup>&</sup>lt;sup>19</sup> FAA Modernization and Reform Act §§ 331-36; *see also* 14 C.F.R. § 107.1 (applying the same rules to small UAS)

<sup>&</sup>lt;sup>20</sup> Fed. Aviation Admin., Busting Myths about the FAA and Unmanned Aircraft, <u>http://www.faa.gov/news/updates/</u>

<sup>&</sup>lt;sup>21</sup> Taylor v. Huerta, ---F.3d----, 2017 WL 2192935, at \*1 (D.C. Cir. 2017) (holding that the FAA has no authority to regulate model UAS and striking down FAA requirement that model UAS be registered).

<sup>&</sup>lt;sup>22</sup> Unmanned Aircraft Operations in the National Airspace System, 72 Fed. Reg. 6689, 6690 (Feb. 13, 2007).

<sup>&</sup>lt;sup>23</sup> 14 C.F.R. pt. 48 (registration and marking requirements for small UAS); *id.* pt. 47 (requirements for other aircraft).

<sup>&</sup>lt;sup>24</sup> FAA FAQs, supra note 1. Online registration is through the <u>Small Unmanned Aircraft System Registration Service</u>.

<sup>&</sup>lt;sup>25</sup> FAA Modernization and Reform Act § 332(d)(3); see also 14 C.F.R. § 1.1. (2016) (giving FAA general definitions).

<sup>&</sup>lt;sup>26</sup> 49 U.S.C. § 40102(a)(16) (2016) (providing definition of "civil aircraft").

<sup>&</sup>lt;sup>27</sup> Id. §§ 40102(a)(41), 40125 (providing definitions of and qualifications for public aircraft).

<sup>&</sup>lt;sup>28</sup> FAA Modernization and Reform Act § 336 (defining model aircraft).



## 1. Civil UAS

Civil UAS operators who use a UAS for non-recreational purposes have three options to qualify to fly the UAS (each of which is outlined below): (1) follow the requirements for "small UAS"; (2) receive a "Section 333 exemption"; or (3) obtain a "special airworthiness certificate" from the FAA.<sup>29</sup>

### i. Small UAS

The FAA has separate regulations ("Part 107") for small UAS (those weighing less than 55 lbs.).<sup>30</sup> The following are the key operational rules for small UAS:<sup>31</sup>

- 1. The UAS must weigh less than 55 lbs. (25 kg.).<sup>32</sup>
- 2. The operator, RIC, and a separate visual observer must be able to see the UAS at all times without anything except corrective lenses.<sup>33</sup>
- 3. If utilized a separate visual observer, must be able to see the UAS during the flight and must maintain communication and coordinate scanning for potential hazards.<sup>34</sup>
- 4. Flights may not be over any persons except those who are directly involved in the operation or who are protected by a covered structure or vehicle.<sup>35</sup>
- 5. Flights may not be at night; any UAS flying during civil twilight<sup>36</sup> must have anti-collision lighting.<sup>37</sup>
- 6. The operator must yield the right-of-way to other aircraft and may not create a collision hazard.<sup>38</sup>
- 7. The operator may not use a first-person camera view to satisfy the requirement that pilots maintain "vigilance" to see and avoid other aircraft.<sup>39</sup>
- 8. The UAS may not exceed a maximum speed of 100 mph.<sup>40</sup>
- 9. The UAS may not exceed a maximum altitude of 400 feet above ground or 400 feet above a structure, whichever is higher.<sup>41</sup>
- 10. The operator must have a minimum weather visibility of three miles from control station.<sup>42</sup>
- 11. No person may operate a small UAS from a moving aircraft, or from a moving land or water vehicle unless the operation is over a sparsely populated area.<sup>43</sup>
- 12. Small UAS may fly in uncontrolled airspace without permission from air traffic control (ATC), but operation in controlled airspace requires such permission.<sup>44</sup>

<sup>&</sup>lt;sup>29</sup> FAA FAQs, *supra* note 1.

<sup>&</sup>lt;sup>30</sup> See generally 14 C.F.R. pt. 107 (setting forth the small UAS rules).

<sup>&</sup>lt;sup>31</sup> For a more detailed summary of the small UAS rules, see Fed. Aviation Admin., Summary of Small Unmanned Aircraft Rule (Part 107) (June 21, 2016), http://www.faa.gov/uas/media/Part 107 Summary.pdf (hereafter "Summary").

<sup>32 14</sup> C.F.R. § 107.3.

<sup>&</sup>lt;sup>33</sup> *Id.* § 107.31.

<sup>&</sup>lt;sup>34</sup> Id. § 107.33. A person may not operate or act as the visual observer for more than one UAS at a time. Id. § 107.35.

<sup>&</sup>lt;sup>35</sup> *Id.* § 107.39.

<sup>&</sup>lt;sup>36</sup> Civil twilight is defined as from thirty minutes before official sunrise until thirty minutes after official sunset, except in Alaska. NAUTICAL ALMANAC OFFICE & UNITED STATES NAVAL OBSERVATORY, THE AIR ALMANAC 2016 A130-45 (2016).

<sup>37 14</sup> C.F.R. §107.29.

<sup>&</sup>lt;sup>38</sup> *Id.* § 107.37.

<sup>&</sup>lt;sup>39</sup> Id. § 107.31; see also Summary, supra note 33. The "see-and-avoid" rule requires that "vigilance shall be maintained by each person operating an aircraft so as to see and avoid other aircraft." 14 C.F.R. § 91.113.

<sup>40 14</sup> C.F.R. § 107.51(a).

<sup>&</sup>lt;sup>41</sup> *Id.* § 107.51(b).

<sup>&</sup>lt;sup>42</sup> Id. § 107.51(c).

<sup>&</sup>lt;sup>43</sup> Id. § 107.25.

<sup>&</sup>lt;sup>44</sup> Id. § 107.41; see also Fed. Aviation Admin., Aeronautical Information Manual, ch. 3 (May 26, 2016),

https://www.faa.gov/air\_traffic/publications/media/aim.pdf (providing details regarding airspace classes). On Oct. 3, 2016, the FAA issued an order with specific guidelines for requesting an ATC airspace waiver through the FAA. See FED. AVIATION ADMIN., AIR TRAFFIC ORGANIZATION POLICY, ORDER JO 7200.23, pp. 7–9 (Oct. 3, 2016), https://www.faa.gov/documentLibrary/media/Order/FAA\_JO\_7200\_23\_2.pdf.



- 13. An individual can only act as the operator or visual observer for one UAS at a time.<sup>45</sup>
- 14. Careless or reckless operation of a small UAS is prohibited, including unsafely dropping objects.<sup>46</sup>
- 15. A small UAS may not carry hazardous materials.<sup>47</sup>
- 16. The operator must conduct a preflight inspection of the UAS.<sup>48</sup>
- 17. Objects attached to a small UAS must be secure and must not adversely affect UAS controllability.<sup>49</sup>

The regulations also allow the FAA to issue a certificate of waiver from some (but not all) of these requirements, including, but not limited to, operating a small UAS

- 1. from a moving vehicle;
- 2. at night;
- 3. beyond the visual line of site;
- 4. over people;
- 5. in restricted airspace;
- 6. faster than 100 mph; and
- 7. higher than 400 feet above ground or 400 feet above a structure, whichever is higher.<sup>50</sup>

In addition to the above rules governing the operation of a small UAS, any person operating a small UAS must <u>either</u> (1) have a remote pilot certificate with a small UAS rating <u>or</u> (2) be under the direct supervision of someone who does.<sup>51</sup> To qualify for a remote pilot certificate with a small UAS rating, a person must submit an application<sup>52</sup> and must meet each of the following qualifications:<sup>53</sup>

- 1. Be at least 16 years of age;
- 2. Read, speak, write, and understand English;
- 3. Not have a physical or mental condition that would interfere with safe operation of the UAS; and
- 4. Demonstrate aeronautical knowledge by either (a) passing an initial aeronautical test;<sup>54</sup> or (b) holding a pilot certificate (a non-student certificate)<sup>55</sup> and completing a small UAS training.<sup>56</sup>

Also, anyone operating a small UAS must have complete specified UAS training within the last 24 months.<sup>57</sup> Operators also must make the UAS available to the FAA for inspection or testing,<sup>58</sup> and must report accidents resulting in injury or property damage of at least \$500 to the FAA within ten days.<sup>59</sup>

#### ii. Section 333 Exemption

Section 333 of the FMRA also allows the FAA to grant an exemption to the requirements to obtain a certificate of airworthiness for UAS operations that the FAA deems not to create a hazard or to pose a

<sup>45 14</sup> C.F.R. § 107.35.

<sup>&</sup>lt;sup>46</sup> Id. § 107.23.

<sup>&</sup>lt;sup>47</sup> *Id.* § 107.36.

<sup>&</sup>lt;sup>48</sup> *Id.* § 107.49.

<sup>&</sup>lt;sup>49</sup> *Id.* § 107.49(e).

<sup>&</sup>lt;sup>50</sup> *Id.* § 107.200 (waiver policy and requirements), 107.205 (small UAS regulations subject to waiver). *See* Fed. Aviation Admin., Request a Waiver/Airspace Authorization: Small Unmanned Aircraft System (sUAS), <u>https://www.faa.gov/uas/request\_waiver/</u> (last visited May 17, 2017) (providing the Section 107 waiver form).

<sup>&</sup>lt;sup>51</sup> 14 C.F.R. § 107.12.

<sup>&</sup>lt;sup>52</sup> *Id.* § 107.63.

<sup>&</sup>lt;sup>53</sup> *Id.* § 107.61.

 $<sup>^{\</sup>rm 54}$  Id. § 107.73(a) (outlining the areas of knowledge that are tested).

<sup>&</sup>lt;sup>55</sup> *Id.* pt. 61 (outlining the rules governing pilot certificates).

<sup>&</sup>lt;sup>56</sup> Id. § 107.73(b) (outlining the areas of knowledge for the required training).

<sup>&</sup>lt;sup>57</sup> Id. § 107.65.

<sup>&</sup>lt;sup>58</sup> *Id.* § 107.7.

<sup>&</sup>lt;sup>59</sup> *Id.* § 107.9.



threat.<sup>60</sup> Those who petition the FAA for a Section 333 Exemption must submit significant details regarding the proposed UAS operation, including information regarding

- 1. the design and operational characteristics of the UAS used;
- 2. procedures utilized to ensure safety;
- 3. the qualifications and certifications of pilots in command;
- 4. the maximum speed and altitude of UAS operations;
- 5. the characteristics of the area and potential hazards;
- 6. the proximity to populated areas and airports; and other information.<sup>61</sup>

According to the FAA, entities who obtain a Section 333 exemption also must obtain a Certificate of Waiver or Authorization (COA) from the FAA Air Traffic Organization prior to conducting operations.<sup>62</sup> Although the FAA may grant a Section 333 exemption for small UAS, the FAA has indicated that the specific regulations governing small UAS (i.e. Section 107) are the primary method for authorizing small UAS operations.<sup>763</sup> To fly a UAS that weighs more than 55 lbs., operators must use the Section 333 exemption process.

According to the FAA, the small UAS regulations do not obviate the need for the Section 333 exemption process but likely cover most of the circumstances previously requiring a Section 333 exemption.<sup>64</sup>

### iii. Special Airworthiness Certificate

Civil UAS operators also have the option to obtain from the FAA an airworthiness certification for UAS used for a specific purpose or for specific types of UAS.<sup>65</sup> For example, the FAA may issue a special airworthiness certificate in the "experimental" category for a UAS used for research and development, showing compliance with regulations, crew training, exhibition, air racing, market surveys, operating amateur-built aircrafts, operating primary kit-built aircrafts, and operating light-sport aircrafts.<sup>66</sup> Civil UAS operators also may apply for type certification for certain types of UAS, including in the "special" category for nonconventional aircraft such as gliders or airships;<sup>67</sup> or in the "restricted" category for UAS used for agriculture, forest and wildlife conservation, aerial surveying, weather control, aerial advertising, or other operations specified by the FAA.<sup>68</sup>

#### 2. Public UAS

Public aircraft operation generally refers to aircraft that is owned and operated by a governmental entity.<sup>69</sup> Government entities seeking to qualify for public UAS operations are not required to fulfill the requirements for civil UAS but still must apply for and obtain a Certification of Waiver or Authorization (COA) from the FAA. To be classified as "public" UAS operation, the UAS may not be used for commercial purposes (i.e., for compensation or hire).<sup>70</sup>

<sup>60</sup> Pub. L. No. 112-95, §§ 333, 126 Stat. 11.

<sup>&</sup>lt;sup>61</sup> Public Guidance for Petitions for Exemption Filed under Section 333, FED. AVIATION ADMIN. (Sep. 25, 2014), https://www.faa.gov/uas/beyond the basics/section 333/how to file a petition/media/section333 public guidance.pdf.

<sup>&</sup>lt;sup>62</sup> *Certificates of Waiver or Authorization (COA)*, FED. AVIATION ADMIN., <u>https://www.faa.gov/about/office\_org/headquarters\_offices/ato/service\_units/systemops/aaim/organizations/uas/coa/</u>.

 <sup>&</sup>lt;sup>63</sup> Section 333, FED. AVIATION ADMIN., <u>http://www.faa.gov/uas/beyond\_the\_basics/section\_333/</u> (last visited May 17, 2017).
<sup>64</sup> FAA FAQs, *supra* note 1.

<sup>&</sup>lt;sup>65</sup> See Fed. Aviation Admin., Airworthiness Certification of Unmanned Aircraft Systems and Optionally Piloted Aircraft, Order 8130.34C (Aug. 2, 2013).

<sup>&</sup>lt;sup>66</sup> 14 C.F.R. §§ 21.191, 21.193, 21.195.

<sup>67</sup> Id. § 21.17(b)

<sup>&</sup>lt;sup>68</sup> Id. § 21.25.

<sup>69 49</sup> U.S.C. § 40102(a)(41) (2016); Pub. L. No. 112-95, § 334, 126 Stat. 11.

<sup>&</sup>lt;sup>70</sup> 49 U.S.C. § 40125(a)(1), (b); 14 C.F.R. § 101.41.



# 3. Model UAS

Under the FMRA, Congress generally restricted the FAA from regulating the use and development of a "model aircraft" if certain conditions are met. Therefore, the operation of a "model" UAS is not subject to the regulations governing civil UAS or public UAS and does not require prior permission from the FAA, *if* the following requirements are met:<sup>71</sup>

- 1. The UAS must be flown for "hobby or recreational purposes" only;<sup>72</sup>
- 2. The UAS must be operated in accordance with a community-based set of safety guidelines;
- 3. The UAS must be flown within visual line of sight of the operator;
- 4. The UAS generally must be less than 55 lbs.;<sup>73</sup>
- 5. The UAS must be operated in a manner that does not interfere with manned aircraft; and
- 6. When flying a UAS within five miles of an airport, the UAS operator must give prior notice to both the airport operator and the airport control tower (or establish a mutually agreed upon procedure).

Based on a case decided in 2017, model UAS are not required to be registered.<sup>74</sup> The FAA also has a <u>"Fly</u> for Fun" website, which provides safety rules and guidelines that apply to model UAS operation.

# B. Educational Use of UAS

Because of the many questions involving educational use of UAS, the FAA has published legal guidance regarding whether UAS operation in an educational context constitutes "hobby or recreational use."<sup>75</sup> The FAA has not yet promulgated regulations specifically addressing educational use of UAS, but the FAA's guidance at least provides the FAA's legal position on whether and how such uses may be regulated. According to the FAA, a person's operation of a UAS at an educational use, as long as the person (1) is not compensated; or (2) any compensation received is neither directly nor incidentally related to the person's operation of the aircraft.<sup>76</sup> For educational institutions, different rules apply depending on whether the UAS operator is a student or a faculty member.

# 1. Student UAS Operations

Student flight of UAS qualifies as hobby or recreational use, not civil use, provided that the student does not receive compensation for the operations. Specifically, student UAS operation in connection with coursework—including <u>both</u> courses directly related to UAS design and flight (e.g. science, technology, aviation, aeronautical design) <u>and</u> courses only tangentially related to UAS operation (e.g., photography, film production)—constitutes hobby or recreational use. However, student operation of UAS for the professional research objectives of faculty renders the operation non-hobby and non-recreational. Thus, student operation of UAS generally is not subject to the regulations governing civil UAS as long as the student meets the "model" requirements and is not furthering the research (commercial) objectives of faculty.

# 2. Faculty UAS Operations<sup>77</sup>

Generally, a faculty member engaging in the operation of a UAS, as part of professional duties for which he or she is paid, is not engaging in hobby or recreational activity. Therefore, according to the FAA, faculty operation of a UAS generally must fulfill the regulations governing civil UAS. Nonetheless, limited faculty

<sup>&</sup>lt;sup>71</sup> FAA Modernization and Reform Act § 336, 126 Stat. 11 (2012); 14 C.F.R. § 101.43.

<sup>&</sup>lt;sup>72</sup> Although neither the statute nor the regulations define "hobby" or "recreational use," the FAA has indicated that it has "relied on the ordinary dictionary definition of these terms." FAA FAQs, *supra* note 1.

<sup>&</sup>lt;sup>73</sup> The only exception to the 55 lb. limit for model UAS is for those "certified through a design, construction, inspection, flight test, and operational safety program administered by a community-based organization." FMRA § 336(a)(3).

<sup>&</sup>lt;sup>74</sup> Taylor v. Huerta, ---F.3d----, 2017 WL 2192935, at \*1 (D.C. Cir. 2017).

<sup>&</sup>lt;sup>75</sup> Govan Memo, *supra* note 16.

<sup>&</sup>lt;sup>76</sup> Id. at 1.

<sup>77</sup> Id. at 4–5.



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participation in student's UAS activities as part of coursework where the faculty's limited operation of the UAS is only "secondary to the design and construction of the UAS" does not rise to the level of a commercial use and therefore would constitute a hobby or recreational use. For example, an instructor teaching an engineering course in which construction and operation of the UAS are only a secondary aspect of the curriculum would be able to conduct limited UAS operations under the "model" classification. However, an instructor operating a UAS in connection with a course related to UAS flight instruction would not qualify as hobby or recreational use, and such faculty would need to fulfill the regulations governing civil UAS.

Even if an educational UAS operation is deemed "recreational or hobby" use, such operation still must meet the requirements for "model" aircraft outlined above in order to avoid having to comply with other civil UAS restrictions. Further, the federal law expressly authorizes the FAA to pursue enforcement actions against those operating model UAS in a manner that endangers the safety of the national airspace system.<sup>78</sup>

## C. Special Security Restrictions

The regulations also allow the FAA to issue "temporary flight restrictions" (TFR) for any type of aircraft, including UAS, for certain events or conditions.<sup>79</sup> One such TFR in effect prohibits flights over or within a three-mile radius of stadiums with a seating capacity of 30,000 or more during the period beginning one hour before and ending one hour after any MLB, NFL, NCAA, motor speedway event.<sup>80</sup> The FAA also issues other TFRs to protect persons or property, to provide a safe environment, or to prevent unsafe congestion.<sup>81</sup>

## D. Hawaii Laws Governing UAS

To date, the only regulations regarding the use of UAS in Hawaii are those are those issued by the Hawaii Department of Land and Natural Resources that prohibits the launching or landing of drones in Hawaii state parks.

## V. PENALTIES

The FAA may issue verbal warnings, written warnings, or stop orders to those who violate the federal regulations outlined above.<sup>82</sup> The FAA also has authority to issue orders assessing a civil penalty of up to \$50,000 against individuals and small businesses, and up to \$400,000 against anyone other than individuals or small businesses.<sup>83</sup> Such authority likely does not apply to use of model UAS.

### VI. STAYING UP-TO-DATE

The following websites provide valuable information regarding this law and its applicability.

DOCUMENT/REFERENCE	DESCRIPTION
Unmanned Aircraft Systems Information Page	FAA's main page for all rules, regulations,
	guidance, forms, applications, and other
	information regarding UAS.
Unmanned Aircraft Systems (UAS) Frequently Asked	FAA's FAQ page on UAS
Questions	
Special Airworthiness Certificates Regulations &	Maintains a list of federal regulations,
Policieshttp://www.faa.gov/aircraft/air_cert/airworthi	orders, advisory circulars, forms, and other
ness_certification/sp_awcert/sp_awcert_regs/	guidance for operating under a Special
	Airworthiness Certificate.

<sup>&</sup>lt;sup>78</sup> FAA Modernization and Reform Act § 336(b), 126 Stat. 11 (2012).

<sup>&</sup>lt;sup>79</sup> 14 C.F.R. §§ 91.137–145.

<sup>&</sup>lt;sup>80</sup> FED. AVIATION ADMIN., SPECIAL SECURITY NOTICE SPORTING EVENTS, FDC 9/5151 (Oct. 27, 2014).

<sup>&</sup>lt;sup>81</sup> 14 C.F.R. § 91.137.

<sup>&</sup>lt;sup>82</sup> Busting Myths, supra note 20.

<sup>&</sup>lt;sup>83</sup> 14 C.F.R. 13.16; *Civil Penalties*, Fed. Aviation Admin.



DOCUMENT/REFERENCE	DESCRIPTION
Part 107 Summary	Provides the FAA's summary of the rules
	governing small UAS
Guidance on Educational Use of Unmanned Aircraft	Provides the FAA's legal position on
<u>Systems</u>	educational use of UAS.
Public Guidance for Petitions for Exemption Filed under	Explains the process for seeking a Section
Section 333	333 exemption.
Section 107 Waiver Form	The waiver form for small UAS.