

**The Barefoot Group Inc.**  
**P.O. Box 1363**  
**Saint Augustine, Florida 32085**  
**904-687-4378**

**This 26<sup>th</sup> day of November, 2014**

**Administrator**

**Federal Aviation Administration**

**U.S. Department of Transportation**

**Docket Management System**

**1200 New Jersey Ave., S.E.**

**Washington, DC 2059**

## **Re: Exemption Request Section 333 of the FAA Reform Act**

**Pursuant to section 333 of the FAA Modernization and Reform act of 2012 (The Reform Act), and 14 C.F.R. Part 11, The Barefoot Group Inc. (BGI) , hereby seeks and applies for an exemption to the Federal Aviation Regulations (FARs) to allow BGI to operate Small Unmanned Aircraft Systems (sUAS) commercially in airspace regulated by the Federal Aviation Administration (FAA) under the conditions and limitations set forth in this petition.**

**The requested exemption would permit BGI to operate small, unmanned aircraft system (sUAS) for the purpose of providing an aerial photography and survey service to private consumers. The areas of use will include both photo and video in the Marine and watercraft industry, real estate industry, surveying industry, construction industry, both profit and non-profit events, agricultural industry.**

**The sUAS will be operated in airspace that is 1) limited 2) predetermined 3) would provide safety enhancements to the already safe operations in the industry presently using conventional aircraft. Approval of this exemption would thereby enhance safety and fulfill he Secretary of Transportations responsibilities to "...establish requirements for the safe operation of such aircraft systems in the national airspace system"**

**The name and address of the applicant is:**

**The barefoot Group Inc.**

**ATTN: John Wappenstein**

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**Saint Augustine, Florida 32085**

**904-687-4378**

**bestboatman@gmail.com**

**Regulations from which the exemption is requested (detailed in Appendix I)**

**14CFR Part 21**

**14CFR 45.23 (b)**

**14CFR 61.113 (a) & (b)**

**14 CFR 61.3**

**14 CFR 91.7 (a)**

**14 CFR 91.9 (b) (2)**

**14 CFR 91.103**

**14CFR 91.109**

**14 CFR 91.119**

**14 CFR 91.121**

**14 CFR 91.151 (a)**

**14 CFR 91.203(a) & (b)**

**14 CFR 91.205**

**14 CFR 91.215**

**14 CFR 91.405**

**14 CFR 407 (a) (1)**

**14 CFR 409 (a) (2)**

**14 CFR 417 (a) & (b)**

**This petition for exemption is submitted to fulfill Congress' goal under section 333(a) through (c) of the reform act directing the Secretary of Transportation to consider whether certain unmanned aircraft systems may operate safely in the national airspace system (NAS) before completion of the rulemaking required under section 332 of the reform act. In making this determination the Secretary**

of Transportation is required to determine which types of UASs do not create a hazard to users of the NAS or the public or pose a threat to national security in light of the following:

- 1) The UASs size, weight, speed, and operational capability
- 2) Operation of the UASs in close proximity to airports and populated areas; and
- 3) Operation of the UASs within visual line of sight of the operator

Reform Act Section 333 (a)

If the Secretary of Transportation determines that such operation of vehicles “may operate safely in the national airspace system, the secretary shall establish requirements for the safe operation of such aircraft in the national airspace system.” ID section 333 (c)

The Federal Aviation Act expressly grants the FAA the authority to grant exemption from its regulatory requirements for civil aircraft, as the term is defined under section 40101 of the Federal Aviation Act which includes sUASs. The Secretary of Transportation and/or The Administrator of the Federal Aviation Administration (acting on behalf of the Secretary of transportation) may grant an exemption from a requirement of a regulation prescribed under subsection (a) or (b) of this section or any sections 44702-44716 of the Federal Aviation Act if the Administrator finds the exemption in the public interest. 49 USC section 44701 (f) see also 49 USC section 44711 (a); 49 USC 44704; 49 14 CFR 91.203 (a) (1).

The Barefoot Group Inc. is a new company owned by a Disabled Combat Veteran (John Wappenstein). Our goal is to provide a long term, living wage, sustainable career opportunity to disabled veterans throughout our community and beyond with the use of sUASs for controlled commercial aerial photography and survey. The unemployment and lack of opportunity for our Disabled veterans is at crisis level in the United States. The training and deployment (as specified in this document) of the sUAVs is a feasible and logical solution for veterans with disabilities including, but not limited to, amputations, paralysis, PTSD, unemployable status.

The primary vehicle to be used will be the DJI Phantom 2 Vision+ (operation and flight manual attached). While vehicles may be upgraded as new technological and safety advanced occur the bar for operation and safety will be set by DJI Phantom 2 Vision + and any new vehicles or versions will exceed the current safety and operational standards. No vehicle operated by BGI will be modified from the manufacturer's design unless specifically directed by the same manufacturer.

**Operational and safety guidelines:**

The sUASs will operate below 400 feet above ground level and have a built in capability to restrict altitude.

The distance the sUAS flies from the ground operator and restriction of flights in class B, C, and D airspace, including no fly zones shall be included in the software and hardware features.

The sUAS has a built in failsafe to return to its point of launch should connection be disabled between the control and sUAS.

**The sUAS will return to its point of launch should the battery level fall below a safe level (25%).**

**The sUAS will go into hover mode holding at a stationary point in space should the operator become incapacitated or unable to use the controls at any time during the flight, eventually safely returning to its point of launch and landing safely.**

**The sUAS will only be operated in line of sight from the operator**

**The approximate maximum flight time of the sUAV will be 30 minutes**

**The sUAS will not exceed 55 lbs. nor will it exceed a maximum speed of 45 knots**

**The sUAS operators will be required to attend and complete BGI's course on safety, regulation, privacy, and flight.**

**Safety to the public and property will be of the highest priority when training operators.**

**All operators will be required to fully know and understand the regulations for flight as set forth in this petition and the FAA's regulations.**

**All operators will be required to know and understand that BGI will in no way use its sUASs to conduct surveillance, spy, or in any way violate the expectation of privacy of anyone. All photography will be of landscape and structures in "Plain View" of the public.**

**All operators will undergo extensive training on software use, preflight inspection, start up, and take off, landing, safe navigation and emergency operation.**

**All operators will be required to provide a written description in a provided log of each flight to include detailed preflight check list of sUAS components including battery charge, weather conditions, purpose of flight, area hazards prior to take off, and flight time.**

**No sUAS will take flight with any mechanical, electrical, or software deficiency.**

**The sUAS operator will have the flight and operation manual provided by the manufacturer in his possession during all flights.**

**The sUAS will have navigational lighting to be visible by the operator at all times to determine location and orientation.**

**The sUAS will at no time create a hazard to the National Airspace System or to the public.**

**The sUAS shall be immediately grounded and yield right of way should any manned aircraft come within an unsafe proximity of the sUAS.**

**As known by the FAA many sUAS operators and companies are currently flying commercially WITHOUT the required exemption from the FAA. This creates a substantial burden on BGI, its employees, and other companies operating within the FAA's regulations and restrictions. Unless the petition presented and requested herein is granted the burden on BGI will cause its dissolution and collapse as BGI is not willing to operate outside FAA regulations in concern for the safety of the public.**

Furthermore, the mass amount of companies operating outside of the FAA's regulations are gaining a significant competitive advantage on the market through their illegal operation. The 120 day minimum time for review of this application is unreasonable and creates an unjust burden on BGI. Therefore BGI hereby requests that the Administrator of the Federal Aviation Administration expedite this request for exemption. Time is of the essence.

The limitations provided herein enforce an equivalent or higher level of safety and privacy to operations under the current regulatory structure. The proposed operations satisfy the criteria provided in section 333 of the Reform Act relating to size, weight, operating capabilities, proximity to airports and populated areas, privacy, operation within visual line of sight, and national security. This provides adequate justification for the grant of the requested exemptions allowing commercial operation of applicant's sUASs in the aerial photography and survey industry.

Sincerely,

A handwritten signature in black ink that reads "John Wappenstein". The signature is written in a cursive, flowing style.

John Wappenstein

The Barefoot Group Inc.

# Appendix I

**14 CFR Part 21 regarding aircraft certification requirements and procedures is designed for manned aircraft and is not suitable for off the shelf sUASs.**

**14 CFR 45.23 (b) requiring aircraft to be marked in 2" to 6" lettering is impossible, there is not sufficient space on the sUAS.**

**14 CFR 61.113 (a) & (b) limiting pilots to non-commercial operations, referring to the PIC. The sUASs will not carry a pilot, a passenger, or cargo for compensation or hire. The operators training from the manufacturers manual creates a higher level of safety for the public as a Commercial Pilot's certificate in no way provides specific safe operational training of a remote controlled sUAS tethered to the operator on the ground.**

**14 CFR 61.3 requiring a pilot certification. Pilot certification is designed for manned aircraft, The operators training from the manufacturers manual creates a higher level of safety for the public as a Pilot's certificate in no way provides specific safe operational training of a remote controlled sUAS tethered to the operator on the ground. A description of our training for sUAS operators included in this document and petition far exceeds the minimal safety provided by a pilot certification when applied to sUASs.**

**14 CFR 91.7 (a) Civil Aircraft Airworthiness requirements. No airworthiness certificate is available for this aircraft. The sUASs will not be modified and will be inspected prior to any flight as outlined in this petition.**

**14 CFR 91.9 (b) (2) requires that the flight manual be available in the aircraft. Given the size and the fact that the aircraft is unmanned this rule cannot apply in its current language. However, as outline in this petition, the flight manual will be in the possession of the operator during any flight.**

**14 CFR 91.103 preflight action requirements for crew on board aircraft. While this is important to the safe flying of the sUAS it does not apply given its current language. We have included a similar, more comprehensive solution in our operational and safety guidelines, "All operators will be required to provide a written description in a provided log of each flight to include detailed preflight check list of sUAV components including battery charge, weather conditions, purpose of flight, area hazards prior to take off, and flight time."**

**14 CFR 91.109 requiring that no person shall operate a civil aircraft for flight instruction unless the aircraft has fully functioning dual controls. SUASs and Remote controlled aircraft by design do not have dual controls, to do so on a radio controlled aircraft would lower the ability to safely operate the sUAS. This section cannot reasonably apply.**

**14 CFR 91.119 designating minimum safe altitudes. The sUASs operated by BGI will not exceed an altitude of 400 feet AGL. This is below the altitude designated in this section. Also given the size, weight, and speed of the sUAS, the line of sight rule when operating, and the overall safeguards and restrictions in flight outlined in this petition maintain a higher level of safety to the public.**

**14 CFR 91.121 regarding altimeter settings. A barometric altimeter is not provided on any sUAS. However a GPS altitude indicator is displayed to the operator at all times during flight. While an exemption to this regulation is requested a modification to meet the current technology of the sUASs would be acceptable.**

**14 CFR 91.151 (a) Fuel requirements for flight. The maximum flight time under ideal conditions is 30 minutes with the current manufacturers battery pack. The proposed rule under the Operation and Safety guidelines in this petition requiring the sUAS to return to its point of launch if its battery reaches less than 25% provides a higher standard of safety when applied to sUASs.**

**14 CFR 91.203(a) & (b) requiring that a civil aircraft certificate and registration be displayed at the cockpit entrance cannot apply to sUASs, there is no cockpit and the size limitations prevent this.**

**14 CFR 91.205 refers to cockpit instruments and cannot reasonably apply to sUASs as there is no cockpit.**

**14 CFR 91.215 requiring a transponder cannot reasonably apply to sUAVs operated by BGI because they will be operated below ATC radar capabilities as outlined in this exemption request.**

**14 CFR 91.405, 14 CFR 407 (a) (1) (2), 14 CFR 409 (a) (2), 14 CFR 417 (a) & (b) referring to maintenance, preventive maintenance, and alterations to the sUAV. The operator will provide minor maintenance and inspection to the sUAV, documented as outlined in the operational and safety guidelines. Given the size and simplicity of the sUAV combined with the operational and safety guidelines outlined in this petition the operator can maintain or exceed the required level of safety.**