

**LIBERIA
CIVIL AVIATION REGULATIONS**



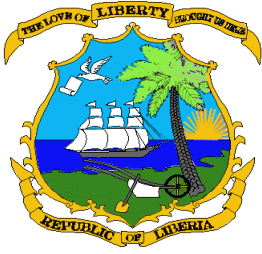
**PART 11
AERIAL WORK**

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EXTRAORDINARY

The Government of the Republic of Liberia announces that the Liberia Civil Aviation Authority, pursuant to its mandate under the Liberia Civil Aviation Act of 2019, and specifically consistent with Subchapter XII, Section 1218 (1), has issued on August 11, 2021 its Regulation N0. LCAA/LCAR/001/2021, herein under:

CONCERNING LIBERIA CIVIL AVIATION REGULATIONS

BY ORDER OF THE PRESIDENT

AMB. DEE-MAXWELL SAAH KEMAYAH, SR.
MINISTER OF FOREIGN AFFAIRS

MINISTRY OF FOREIGN AFFAIRS
MONROVIA, LIBERIA



AUTHORITY TO PROMULGATE CIVIL AVIATION REGULATIONS

IN EXERCISE OF THE POWERS CONFERRED ON THE DIRECTOR GENERAL OF LIBERIA CIVIL AVIATION AUTHORITY UNDER THE LIBERIA CIVIL AVIATION ACT OF 2019 THESE REGULATIONS ARE MADE.

DATE: 13th July 2021

SIGNATURE: _____



Hon. Moses Y. Kollie
DIRECTOR GENERAL

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INTRODUCTION

Part 11 of the Liberia Civil Aviation Regulations (LCARs) sets forth the requirements for aerial work operations, including agricultural aviation, external-load operations, glider and banner towing operations, television and motion picture filming operations, sightseeing flights, fish spotting, and news media and traffic reporting. Although the requirements of this part appear to address operations within Liberia, in some instances, aircraft registered in Liberia will perform aerial work in contiguous States.

The Annexes to the International Civil Aviation Organization (ICAO) Convention on International Civil Aviation (Chicago Convention) do not specifically address aerial work. ICAO Annex 1, Personnel Licensing, and Annex 6, Operation of Aircraft, contain a definition of aerial work, but the Foreword, or historical background section, of ICAO Annex 6, Part II, International General Aviation – Aeroplanes, notes that this definition is included so that States will know that Annex 6 does not address aerial work. Because aerial work operations may be conducted outside the boundaries of Liberia, it is necessary that aircraft used for aerial work operations be operated and maintained in accordance with the ICAO Standards set forth in other parts of these regulations.

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Table of Contents

PART 11 — AERIAL WORK	13
11.1 GENERAL	13
11.1.1 APPLICABILITY	13
11.1.2 DEFINITIONS.....	14
11.1.3 ABBREVIATIONS	15
11.2 AGRICULTURAL AIRCRAFT OPERATIONS	15
11.2.1 GENERAL.....	15
11.2.1.1 Applicability	15
11.2.2 CERTIFICATION RULES.....	16
11.2.2.1 Certificate Required	16
11.2.2.2 Application for Certificate	16
11.2.2.3 Amendment of Certificate	16
11.2.2.4 Certification Requirements.....	16
11.2.2.5 Duration of Certificate	17
11.2.3 OPERATING RULES AND RELATED REQUIREMENTS	18
11.2.3.1 Operating Rules	18
11.2.3.2 Carrying of Certificate.....	18
11.2.3.3 Limitations on Private Agricultural Aircraft Operator	18
11.2.3.4 Manner of Dispensing.....	18
11.2.3.5 Economic Poison Dispensing	18
11.2.3.6 Personnel.....	19
11.2.3.7 Operations in Controlled Airspace Designated for an Aerodrome	19
11.2.3.8 Operation Over Congested Areas: General.....	20
11.2.3.9 Operation over Congested Areas: Pilots and Aircraft.....	21
11.2.3.10 Availability of Certificate.....	21
11.2.4 RECORDS AND REPORTS	22
11.2.4.1 Records: Commercial Agricultural Aircraft Operator.....	22
11.2.4.2 Change of Address.....	22
11.2.4.3 Termination of Operations.....	22
11.3 ROTORCRAFT EXTERNAL LOADS OPERATIONS	22
11.3.1 GENERAL.....	22
11.3.1.1 Applicability	22
11.3.2 CERTIFICATION RULES.....	23
11.3.2.1 Certificate Required	23
11.3.2.2 Duration of Certificate	23
11.3.2.3 Application for Certificate Issuance or Renewal.....	23
11.3.2.4 Certification Requirements.....	23
11.3.2.5 limitations on private agricultural aircraft operator	23
11.3.2.6 Requirements for Issuance of a Rotorcraft External-Load Operator Certificate	23
11.3.2.7 Rotorcraft	23
11.3.2.8 Personnel.....	24
11.3.2.9 Amendment of Certificate	24
11.3.2.10 Availability, Transfer, and Surrender of Certificate.....	24

11.3.3	OPERATING RULES AND RELATED REQUIREMENTS	25
11.3.3.1	Operating Rules	25
11.3.3.2	Carriage of Persons	26
11.3.3.3	Crewmember Training, Currency, and Testing Requirements	26
11.3.4	AIRWORTHINESS REQUIREMENTS	27
11.3.4.1	Flight Characteristics Requirements	27
11.3.4.2	Structures and Design	27
11.3.4.3	Operating Limitations	28
11.3.4.4	Rotorcraft-Load Combination Flight Manual	28
11.3.5	Markings and Placards	29
11.4	GLIDER TOWING	29
11.4.1	APPLICABILITY	29
11.4.2	CERTIFICATE OF WAIVER OR EQUIVALENT AUTHORIZATION REQUIRED	29
11.4.3	AIRCRAFT REQUIREMENTS	29
11.4.4	EXPERIENCE AND TRAINING REQUIREMENTS	30
11.4.5	OPERATING RULES	31
11.5	BANNER TOWING	31
11.5.1	APPLICABILITY	31
11.5.2	Certificate of waiver or equivalent Authorization Required	31
11.5.3	Aircraft Requirements	31
11.5.4	Experience and Training Requirements	32
11.5.5	Operating Rules	32
11.6	MOTION PICTURE AND TELEVISION FILMING OPERATIONS	33
11.6.1	APPLICABILITY	33
11.6.2	Certificate of Waiver or Equivalent Authorisation Required	33
11.6.3	Aircraft Requirement	33
11.6.4	Experience and Training Requirements	33
11.6.5	Operating Rules	33
11.6.6	Contents Of A Motion Picture And Television Flight Operations Manual	34
11.7	SIGHT-SEEING FLIGHTS	35
11.7.1	APPLICABILITY	35
11.7.2	Certificate of Waiver or Equivalent Authorisation Required	36
11.7.3	Experience and Training Requirements	36
11.7.4	Operating Rules	36
11.8	FISH SPOTTING	37
11.8.1	APPLICABILITY	37
11.8.2	CERTIFICATE OF WAIVER OR EQUIVALENT AUTHORISATION REQUIRED	37
11.8.3	EXPERIENCE AND TRAINING REQUIREMENTS	37
11.8.4	OPERATING RULES	37
11.9	NEWS MEDIA AND TRAFFIC REPORTING	38
11.9.1	APPLICABILITY	38
11.9.2	CERTIFICATE OR AUTHORIZATION REQUIRED	38
11.9.3	OPERATING RULES	38
11.9.4	EXPERIENCE AND TRAINING REQUIREMENTS	38

PART 11 — IMPLEMENTING STANDARDS	39
Part 11 – Implementing Standards	40
IS 11.1.1(F) Applicability	40

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PART 11 — AERIAL WORK

11.1 GENERAL

11.1.1 APPLICABILITY

- (a) This part prescribes the requirements for those operators that are conducting aerial work and operations that are considered to be aerial work in Liberia.
- (b) All persons who conduct aerial work in Liberia shall, at all times, continue in compliance with the certification requirements of this part.
- (c) All persons who conduct aerial work in Liberia shall, at all times, continue in compliance with the applicable airworthiness requirements and operating rules of this part, except where this part grants relief from those requirements.
- (d) All persons who conduct remotely piloted aircraft (RPA) aerial work in Liberia shall, at all times, continue in compliance with:
 - (1) The RPA requirements in 8.8.1.33 of these regulations;
 - (2) The RPA requirements for foreign air operators in Part 10 of these regulations;
 - (3) The personnel licensing requirements for RPA in Part 2 of these regulations; and
 - (4) The applicable requirements of this part, except where this part may be less prescriptive than 8.8.1.33 of these regulations.
- (e) A person operating an RPA and its remotely piloted aircraft systems (RPAS), registered in Liberia or holding an operator certificate from Liberia, shall:
 - (1) Not operate in Liberia without appropriate authorization from the Authority;
 - (2) Not engage in international air navigation without appropriate authorization from the State from which the take-off of the RPA is made;
 - (3) Not operate across or within the territory of another State without special authorization issued by each State, and shall be obtained authorization prior to take-off if there is reasonable expectation, when planning the operations, that the aircraft may enter the airspace concerned;
 - (4) Not operate over the high seas without prior coordination with the appropriate air traffic service authority, and shall obtain authorization prior to take-off if there is reasonable expectation, when planning the operations, that the aircraft may enter the airspace concerned;
 - (5) Operate in accordance with conditions specified by the State of Registry, the State of the Operator, if different from the State of Registry, or the State(s) the flight is to operate within; and

- (6) Ensure that the RPAS meets the performance and equipment carriage requirements for the specific airspace in which the flight is to operate.
- (f) All persons who intend to conduct RPA aerial work in Liberia shall submit an application to the Authority on a form and in a manner as prescribed in IS 11.1.1(f).
- (g) All foreign air operators who intend to conduct RPA aerial work in Liberia shall submit an application to the Authority on a form and in a manner as prescribed in IS 10.8.1.1(a).

11.1.2 DEFINITIONS

- (a) For the purpose of Part 11, the following definitions shall apply:
 - (1) **Aerial work.** An aircraft operation in which an aircraft is used for specialized services such as agriculture, construction, photography, surveying, observation and patrol, search and rescue, aerial advertisement, etc.
 - (2) **Aerobatic flight.** An intentional maneuver involving an abrupt change in an aircraft's attitude, an abnormal attitude, or abnormal acceleration, not necessary for normal flight.
 - (3) **Agricultural aircraft operation.** The operation of an aircraft for the purpose of:
 - (i) Dispensing any economic poison,
 - (ii) Dispensing any other substance intended for plant nourishment, soil treatment, propagation of plant life, or pest control, or
 - (iii) Engaging in dispensing activities directly affecting agriculture, horticulture, or forest preservation, but not including the dispensing of live insects.
 - (4) **Banner.** An advertising medium supported by a temporary framework attached externally to the aircraft and towed behind the aircraft.
 - (5) **Economic poison.** Any substance or mixture of substances intended for:
 - (i) Preventing, destroying, repelling, or mitigating any insects, rodents, nematodes, fungi, weeds, and other forms of plant or animal life or viruses, except viruses on or in living human beings or other animals, which Liberia may declare to be a pest;
 - (ii) Use as a plant regulator, defoliant or desiccant.
 - (6) **Remote pilot.** A person charged by the operator with duties essential to the operation of a remotely piloted aircraft and who manipulates the flight controls, as appropriate, during flight time.
 - (7) **Remote pilot station.** The component of the remotely piloted aircraft system containing the equipment used to pilot the remotely piloted aircraft.
 - (8) **Remotely piloted aircraft (RPA).** An unmanned aircraft which is piloted from a remote pilot station.
 - (9) **Remotely piloted aircraft system (RPAS).** A remotely piloted aircraft, its associated remote pilot station(s), the required command and control links and any other components as specified in the type design.

- (10) **Rotorcraft load combinations.** Configurations for external loads carried by rotorcraft:
- (i) Class A – external load fixed to the rotorcraft, cannot be jettisoned, and does not extend below the landing gear, used to transport cargo.
 - (ii) Class B – external load suspended from the rotorcraft, which can be jettisoned, and is transported free of land or water during rotorcraft operations.
 - (iii) Class C – external load suspended from the rotorcraft, which can be jettisoned, but remains in contact with land or water during rotorcraft operation.
 - (iv) Class D - external load suspended from the rotorcraft for the carriage of persons.

11.1.3 ABBREVIATIONS

(a) The following abbreviations are used in this part:

- (1) **AGL** – above ground level
- (2) **ATC** – air traffic control
- (3) **ATPL** – airline transport pilot license
- (4) **CG** – centre of gravity
- (5) **CPL** – commercial pilot license
- (6) **IFR** – instrument flight rules
- (7) **PIC** – pilot-in-command
- (8) **PPL** – private pilot license
- (9) **RPA** – remotely piloted aircraft
- (10) **VFR** – visual flight rules

11.2 AGRICULTURAL AIRCRAFT OPERATIONS

11.2.1 GENERAL

11.2.1.1 Applicability

- (a) This subpart prescribes the requirements governing:
- (1) Agricultural aircraft operations within Liberia, and
 - (2) The issue of commercial and private agricultural aircraft operator certificates for those operations.
- (b) In a public emergency, a person conducting agricultural aircraft operations under this part may, to the extent necessary, deviate from the operating rules of this part in order to perform relief and welfare activities approved by an agency of Liberia or a local government.

- (c) Each person who deviates from a rule of this part shall, within 10 days after the deviation, send to the Authority a complete report of the aircraft operation involved, including a description of the operation and the reasons for it.

11.2.2 CERTIFICATION RULES

11.2.2.1 Certificate Required

- (a) Except as provided in paragraphs (c) and (d) of this subsection, no person may conduct agricultural aircraft operations without, or in violation of, an agricultural aircraft operator certificate issued under this part.
- (b) An operator may, if it complies with this subpart, conduct agricultural aircraft operations with a rotorcraft with external dispensing equipment in place without a rotorcraft external-load operator certificate.
- (c) A local or national government conducting agricultural aircraft operations with public aircraft need not comply with this subpart.
- (d) The holder of a rotorcraft external-load operator certificate under this Part conducting agricultural aircraft operations, involving only the dispensing of water on forest fires by rotorcraft external load means, needs not comply with this subpart.

11.2.2.2 Application for Certificate

- (a) An applicant for an agricultural aircraft operator certificate shall apply on a form and in a manner prescribed by the Authority.

11.2.2.3 Amendment of Certificate

- (a) An agricultural aircraft operator certificate may be amended—
 - (1) On the Authority's own initiative, under applicable laws and regulations, or
 - (2) Upon application by the holder of that certificate.
- (b) A certificate holder shall submit an application to amend an agricultural aircraft operator certificate on a form and in a manner prescribed by the Authority. The applicant shall file the application at least 15 days before the date that the applicant proposes the amendment shall become effective, unless the Authority approves a shorter filing period.
- (c) The Authority will grant a request to amend a certificate if it determines that safety in air commerce and the public interest so allow.
- (d) Within 30 days after receiving a denial to amend, the certificate holder may petition the Authority to reconsider the denial.

11.2.2.4 Certification Requirements

- (a) GENERAL. Except as provided in paragraph 11.2.2.4 (a)(3) of this subsection—
 - (1) The Authority will issue a private agricultural aircraft operator certificate to an applicant that meets the requirements of this subpart for that certificate.
 - (2) The Authority will issue a commercial agricultural aircraft operator certificate to an applicant that meets the requirements of this subpart for that certificate.

- (3) An applicant who applies for an agricultural aircraft operator certificate containing a prohibition against the dispensing of economic poisons is not required to demonstrate knowledge specific to economic poisons.

(b) PILOTS.

- (1) A private operator – pilot applicant shall hold a PPL, CPL, or ATPL issued by the Authority and shall be properly rated for the aircraft to be used.
- (2) A commercial operator – pilot applicant shall have available the services of at least one pilot who holds a current CPL or ATPL issued by the Authority and shall be properly rated for the aircraft to be used.

(b) AIRCRAFT. The applicant shall have at least one certificated and airworthy aircraft, equipped for agricultural operation.

(c) KNOWLEDGE AND SKILL TESTS. The applicant shall show, or shall have the person who is designated as the chief supervisor of agricultural aircraft operations for him or her show, that the applicant meets the following knowledge and skill requirements for agricultural aircraft operations:

- (1) The test of knowledge, which consists of the following:
- (i) Steps to be taken before starting operations, including a survey of the area to be worked;
 - (ii) Safe handling of economic poisons and proper disposal of used containers for those poisons;
 - (iii) The general effects of economic poisons and agricultural chemicals on plants, animals, and persons, with emphasis on those normally used in the areas of intended operations, and the precautions to be observed in using poisons and chemicals;
 - (iv) Primary symptoms of poisoning of persons from economic poisons, the appropriate emergency measures to be taken, and the location of poison control centres;
 - (v) Performance capabilities and operating limitations of the aircraft to be used; and
 - (vi) Safe flight and application procedures.
- (2) The test of skill, which consists of the following manoeuvres that must be shown in any of the aircraft specified in paragraph 11.2.2.4(c) of this subsection at that aircraft's maximum certificated take-off mass or the maximum mass established for the special purpose load, whichever is greater:
- (i) Short-field and soft-field take-offs (aeroplanes and gyroplanes only);
 - (ii) Approaches to the working area;
 - (iii) Flare-outs;
 - (iv) Swath runs;
 - (v) Pullups and turnarounds; and
 - (vi) Rapid deceleration (quick stops) in helicopters only.

11.2.2.5 Duration of Certificate

- (a)** An agricultural aircraft operator certificate is effective until it is surrendered, suspended, or revoked.

- (b) The holder of an agricultural aircraft operator certificate that is suspended or revoked shall return it to the Authority.

11.2.3 OPERATING RULES AND RELATED REQUIREMENTS

11.2.3.1 Operating Rules

- (a) Except as provided in paragraph 11.2.3.1(c) of this subsection, this section prescribes rules that apply to persons and aircraft used in agricultural aircraft operations conducted under this part.
- (b) The holder of an agricultural aircraft operator certificate may deviate from the requirements of Part 9 of these regulations without a certificate of waiver, as authorized in this subpart, for dispensing operations when conducting nondispensing aerial work operations related to agriculture, horticulture, or forest preservation in accordance with the operating rules of this section.
- (c) The operating rules of this subpart apply to rotorcraft external-load operator certificate holders conducting agricultural aircraft operations involving only the dispensing of water on forest fires by rotorcraft external-load means.

11.2.3.2 Carrying of Certificate

- (a) No person may operate an aircraft in an agricultural aircraft operation unless a copy of the agricultural aircraft operator certificate under which the operation is conducted is carried on that aircraft. The copy shall be presented for inspection upon the request of the Authority or any government law enforcement officer.
- (b) The certificate of aircraft registration and the certificate of airworthiness issued for the aircraft need not be carried in the aircraft, provided that the certificates be kept available for inspection at the base from which the dispensing operation is conducted.

11.2.3.3 Limitations on Private Agricultural Aircraft Operator

- (a) No person may conduct an agricultural aircraft operation under the authority of a private agricultural aircraft operator certificate—
 - (1) For compensation or hire,
 - (2) Over a congested area, or
 - (3) Over any property unless that person is the owner or lessee of the property, or has ownership or other property interest in the crop located on that property.

11.2.3.4 Manner of Dispensing

- (a) No persons may dispense, or may cause to be dispensed, from an aircraft any material or substance in a manner that creates a hazard to persons or property on the surface.

11.2.3.5 Economic Poison Dispensing

- (a) Except as provided in paragraph 11.2.3.5(b) of this subsection, no person may dispense or may cause to be dispensed from an aircraft, any economic poison that is registered with Liberia—

- (1) For a use other than that for which it is registered,
 - (2) Contrary to any safety instructions or use limitations on its label, or
 - (3) In violation of any law or regulation of Liberia.
- (b)** This section does not apply to any person dispensing economic poisons for experimental purposes under—
- (1) The supervision of a Liberia agency authorized by law to conduct research in the field of economic poisons, or
 - (2) A permit from Liberia.

11.2.3.6 Personnel

- (a)** Information. The holder of an agricultural aircraft operator certificate shall insure that each person used in the certificate holder's agricultural aircraft operation is informed of that person's duties and responsibilities for the operation.
- (b)** Supervisors. No person may supervise an agricultural aircraft operation unless he or she has met the knowledge and skill requirements of this subpart.
- (c)** Pilot in command. No person may act as pilot in command of an aircraft operated under this subpart unless that pilot—
- (1) Holds a pilot license and rating prescribed by this subpart as appropriate to the type of operation conducted, or
 - (2) Has demonstrated to the holder of the agricultural aircraft operator certificate conducting the operation, or to a supervisor designated by that certificate holder, that the person has met the knowledge and skill requirements of this subpart. However, a demonstration of the knowledge and skill requirements is not necessary for any PIC who:
 - (i) Is, at the time of the filing of an application by an agricultural aircraft operator, working as a PIC for that operator; and
 - (ii) Has a record of operation under that applicant that does not disclose any question regarding the safety of his or her flight operations or his or her competence in dispensing agricultural materials or chemicals.

11.2.3.7 Operations in Controlled Airspace Designated for an Aerodrome

- (a)** Except for flights to and from a dispensing area, no person may operate an aircraft within the lateral boundaries of the surface area of Class D airspace designated for an airport unless authorization for that operation has been obtained from the ATC facility having jurisdiction over that area.
- (b)** No person may operate an aircraft in weather conditions below VFR minimums within the lateral boundaries of a Class E airspace area that extends upward from the surface unless authorization for that operation has been obtained from the ATC facility having jurisdiction over that area.
- (c)** The holder of a rotorcraft external-load operator certificate shall submit to the Authority a current and valid standard or restricted certificate of airworthiness, as described in 11.2.3.5 of this part, for each aircraft to be added to the certificate.
- (d)** A certificate holder may operate an aircraft under special VFR weather minimums without meeting the requirements prescribed in Part 8 of these regulations.

11.2.3.8 Operation Over Congested Areas: General

- (a)** No person may operate an aircraft over a congested area except in accordance with the requirements of this paragraph.
- (1) Prior written approval shall be obtained from the appropriate official or governing body of the political subdivision over which the operation is conducted.
 - (2) Notice of the intended operation shall be given to the public by some effective means, such as daily newspapers, radio, television, or door-to-door notice.
 - (3) A plan for each complete operation shall be submitted to and approved by the Authority and include:
 - (i) Consideration of obstructions to flight;
 - (ii) The emergency landing capabilities of the aircraft to be used; and
 - (iii) Any necessary coordination with ATC.
- (b)** A certificate holder may operate, or may cause the operation of, an aircraft over a congested area at altitudes required for the proper accomplishment of the agricultural aircraft operation if the operation is conducted:
- (1) With the maximum safety to persons and property on the surface, consistent with the operation; and
 - (2) In accordance with the requirements of 11.2.3.8(a) of this subsection
- (c)** Each certificate holder shall ensure that all single-engine aircraft, while over a congested area, operate:
- (1) Except for helicopters, not loaded during take-offs and turnarounds;
 - (2) Not below the altitudes prescribed in Part 8 of these regulations except during the actual dispensing operation, including the approaches and departures necessary for that operation; and
 - (3) During the actual dispensing operation, including the approaches and departures for that operation, not below the altitudes prescribed in Part 8 of these regulations unless it is in an area and at such an altitude that the aircraft can make an emergency landing without endangering persons or property on the surface.
- (d)** Each certificate holder shall ensure that all multi-engine aircraft, while over a congested area, operate:
- (1) During take-off, under conditions that will allow the aeroplane to be brought to a safe stop within the effective length of the runway from any point on take-off up to the time of attaining, with all engines operating at normal take-off power, 105 per cent of the minimum control speed with the critical engine inoperative in the take-off configuration or 115 per cent of the power-off stall speed in the take-off configuration, whichever is greater;

Note: Assume still-air conditions and no correction for any uphill gradient of 1 per cent or less when the percentage is measured as the difference between elevations at the end points of the runway divided by the total length. For uphill gradients greater than 1 per cent, the effective take-off length of the runway is reduced 20 per cent for each 1 per cent grade.

- (2) At a weight greater than the weight that, with the critical engine inoperative, would permit a rate of climb of at least 50 ft per minute at an altitude of at least 1 000 ft above the elevation of the highest ground or obstruction within the area to be worked or at an altitude of 5 000 ft, whichever is higher. Assume that the propeller of the inoperative engine is in the minimum drag position; that the wing flaps and landing gear are in the most favourable positions; and that the remaining engine or engines are operating at the maximum continuous power available; and
 - (3) Below the altitudes prescribed in Part 8 of these regulations except during the actual dispensing operation, including the approaches, departures, and turnarounds necessary for that operation.
- (e) Each certificate holder shall issue notice of the intended operation to the public as may be specified by the Authority.
- 11.2.3.9 Operation over Congested Areas: Pilots and Aircraft
- (a) GENERAL. No person may operate an aircraft over a congested area except in accordance with the pilot and aircraft rules of this subsection.
 - (b) PILOTS. Each PIC shall have:
 - (1) 25 hours of PIC flight time in the make and basic model of the aircraft, at least 10 hours of which shall have been acquired within the preceding 12 calendar months; and
 - (2) 100 hours of flight experience as PIC in dispensing agricultural materials or chemicals
 - (c) AIRCRAFT.
 - (1) Each aircraft shall:
 - (i) If it is an aircraft not specified in paragraph 11.2.3.9(c)(1)(ii) of this subsection, have had within the preceding 100 hours of time in service a 100-hour or annual inspection by a person authorized in accordance with Part 8 of these regulations or have been inspected under a progressive inspection system; and
 - (ii) If it is a large or turbine-powered multi-engine civil airplane of [STATE] registry, have been inspected in accordance with the applicable inspection programme requirements of Part 8 of these regulations.
 - (2) Except for helicopters, each aircraft shall be equipped with a device capable of jettisoning at least one-half of the aircraft's maximum authorized load of agricultural material within 45 seconds. If the aircraft is equipped with a device for releasing the tank or hopper as a unit, there shall be a means to prevent inadvertent release by the pilot or other crew members.
- 11.2.3.10 Availability of Certificate
- (a) Each holder of an agricultural aircraft operator certificate shall keep that certificate at the main base of operations and shall present it for inspection on the request of the Authority or any government law enforcement officer.

11.2.4 RECORDS AND REPORTS

11.2.4.1 Records: Commercial Agricultural Aircraft Operator

(a) Each holder of a commercial agricultural aircraft operator certificate shall maintain and keep current, at the main base of operations designated in its application, the following records—

- (1) The name and address of each person for whom agricultural aircraft services were provided,
- (2) The date of the service,
- (3) The name and quantity of the material dispensed for each operation conducted, and
- (4) The name, address, and license number of each pilot used in agricultural aircraft operations and the date that pilot met the knowledge and skill requirements of this subpart.

(b) The records required by this section shall be kept for at least 12 months and shall be made available for inspection by the Authority upon request.

11.2.4.2 Change of Address

(a) Each holder of an agricultural aircraft operator certificate shall notify the Authority in writing in advance of any change in the address of its main base of operations.

11.2.4.3 Termination of Operations

(a) Whenever a certificate holder ceases operation under this part, it shall surrender that certificate to the designated office of the Authority.

11.3 ROTORCRAFT EXTERNAL LOADS OPERATIONS

11.3.1 GENERAL

11.3.1.1 Applicability

(a) This subpart prescribes—

- (1) Airworthiness requirements for rotorcraft used in external-load operations, and
- (2) Operating and certification rules governing the conduct of rotorcraft external-load operations in Liberia.

(b) The certification requirements of this part do not apply to—

- (1) Rotorcraft manufacturers when developing external-load attaching means,
- (2) Manufacturers demonstrating compliance of equipment utilized under this part;
- (3) Operations conducted by a person demonstrating compliance for the issuance of a certificate under this part,
- (4) Training flights conducted in preparation for the demonstration of compliance with this part, or
- (5) A local or national government conducting operations with public aircraft.

(c) For the purpose of this part, a person other than a crewmember or a person who is essential and directly connected with the external-load operation may be carried only in approved Class D rotorcraft-load combinations.

11.3.2 CERTIFICATION RULES

11.3.2.1 Certificate Required

- (a)** No person subject to this part may conduct rotorcraft external-load operations within Liberia without, or in violation of the special limitations and specific approvals of, a Rotorcraft External-Load Operator Certificate issued by the Authority.

11.3.2.2 Duration of Certificate

- (a)** Unless sooner surrendered, suspended, or revoked, a Rotorcraft External-Load Operator Certificate expires at the end of the twenty-fourth month after the month in which it is issued or renewed.

11.3.2.3 Application for Certificate Issuance or Renewal

- (a)** Application for an original certificate or renewal of a certificate issued under this Part shall be made on a form, and in a manner, prescribed by the Authority.

11.3.2.4 Certification Requirements

- (a)** The Authority will issue a rotorcraft external-load operator certificate to an applicant that meets the requirements of this subpart for that certificate.
- (b)** The Authority will issue authorization to operate specified rotorcraft with those classes of rotorcraft-load combinations for which the applicant or certificate holder qualifies under the applicable requirements of this subpart.

11.3.2.5 limitations on private agricultural aircraft operator

- (b)** No person may conduct an agricultural aircraft operation under the Authority of a private agricultural aircraft operator certificate:
 - (1) For compensation or hire;
 - (2) Over a congested area; or
 - (3) Over any property unless he or she is the owner or lessee of the property, or has ownership or other property interest in the crop located on that property.

11.3.2.6 Requirements for Issuance of a Rotorcraft External-Load Operator Certificate

- (a)** If an applicant shows that it complies with this subpart, the Authority will issue a Rotorcraft External-Load Operator Certificate to it.
- (b)** The Authority will issue authorization to operate specified rotorcraft with those classes of rotorcraft-load combinations for which the applicant or certificate holder qualifies under the applicable provisions of this subpart.

11.3.2.7 Rotorcraft

- (a)** An applicant shall have the exclusive use of at least one rotorcraft that:
 - (1) Is type certificated under, and meets the requirements of, those regulations that prescribe requirements for rotorcraft external-load operations;
 - (2) Complies with the certification requirements in this subpart that apply to the rotorcraft-load combinations for which authorization is requested; and
 - (3) Has a valid certificate of registration and a valid standard or restricted category certificate of airworthiness.

- (b)** For the purposes of this subsection, a person has exclusive use of a rotorcraft if he or she has sole possession, control, and use of it for flight, as owner, or has a written agreement (including arrangements for the performance of required maintenance) giving him or her that possession, control, and use for at least 6 consecutive months.
- (c)** For the purposes of this subsection, Class A, B, C, and D are defined in subpart 1.5 of these regulations under rotorcraft-load combinations.

11.3.2.8 Personnel

- (a)** An applicant shall hold, or shall have available the services of at least one person who holds a current commercial or airline transport pilot license issued by the Authority with a rating appropriate for the rotorcraft to be used.
- (b)** An applicant shall designate one pilot, who may be the applicant, as chief pilot for rotorcraft external-load operations.
- (c)** An applicant may designate qualified pilots as assistant chief pilots to perform the functions of the chief pilot when the chief pilot is not readily available.
- (d)** The chief pilot and assistant chief pilots shall be acceptable to the Authority and each shall hold a current Commercial Pilot License or Airline Transport Pilot License, with a rating appropriate for the rotorcraft to be used.
- (e)** The holder of a Rotorcraft External-Load Operator Certificate shall report any change in designation of chief pilot or assistant chief pilot immediately to the Authority.
- (f)** A newly designated chief pilot shall comply with the knowledge and skill requirements of this subpart within 30 days or the operator may not conduct further operations under the Rotorcraft External-Load Operator Certificate, unless otherwise authorized by the Authority.

11.3.2.9 Amendment of Certificate

- (a)** The holder of a Rotorcraft External-Load operator Certificate may apply to the Authority for an amendment of the certificate, to add or delete a rotorcraft-load combination authorization.
- (b)** The holder of a rotorcraft external-load operator certificate may apply for an amendment to add or delete a rotorcraft-load combination authorization by submitting to the Authority a new list of rotorcraft, by registration number, with the classes of rotorcraft-load combinations for which authorization is requested.

11.3.2.10 Availability, Transfer, and Surrender of Certificate

- (a)** Each holder of a rotorcraft external-load operator certificate shall keep that certificate and a list of authorized rotorcraft at the main base of operations and shall make it available for inspection by the Authority upon request.
- (b)** Each person conducting a rotorcraft external-load operation shall carry a copy of the rotorcraft external-load operator certificate in each rotorcraft used in the operation.
- (c)** The holder of a rotorcraft external-load operator certificate shall return the certificate to the Authority:
 - (1) If the Authority suspends or revokes the certificate; or
 - (2) If the certificate holder discontinues operations under the certificate and does not resume operations within 2 years.

11.3.3 OPERATING RULES AND RELATED REQUIREMENTS

11.3.3.1 Operating Rules

- (a)** No person may conduct a rotorcraft external load operation without, or contrary to, the Rotorcraft/Load Combination Flight Manual prescribed in 11.3.4.4.
- (b)** No person may conduct a rotorcraft external load operation unless—
 - (1) The rotorcraft complies with 11.3.2.6, and
 - (2) The rotorcraft and rotorcraft/load combination is authorized under the Rotorcraft External Load Operator Certificate.
- (c)** Before a person may operate a rotorcraft with an external-load configuration that differs substantially from any that person has previously carried with that type of rotorcraft (whether or not the rotorcraft-load combination is of the same class), that person shall conduct, in a manner that shall not endanger persons or property on the surface, those of the following flight operational checks that the Authority determines are appropriate to the rotorcraft-load combination:
 - (1) Make a determination that the mass of the rotorcraft-load combination and the location of its CG are within approved limits and that the external load is securely fastened and does not interfere with devices provided for its emergency release.
 - (2) Make an initial lift-off and verify that controllability is satisfactory.
 - (3) While hovering, verify that directional control is adequate.
 - (4) Accelerate into forward flight to verify that no attitude (whether of the rotorcraft or of the external load) is encountered in which the rotorcraft is uncontrollable or which is otherwise hazardous.
 - (5) In forward flight, check for hazardous oscillations of the external load, but if the external load is not visible to the pilot, other crew members or ground personnel may make this check and signal the pilot.
 - (6) Increase the forward airspeed and determine an operational airspeed at which no hazardous oscillation or hazardous aerodynamic turbulence is encountered.
- (d)** Notwithstanding the requirements of Part 8, the holder of a rotorcraft external-load operator certificate may conduct rotorcraft external-load operations over congested areas if those operations are conducted without hazard to persons or property on the surface and comply with the following:
 - (1) The operator shall develop a plan for each complete operation and shall obtain approval for the operation from the Authority; and
 - Note: The plan shall include an agreement with the appropriate political subdivision that local officials will exclude unauthorized persons from the area in which the operation will be conducted; coordination with ATC, if necessary; and a detailed chart depicting the flight routes and altitudes.*
 - (2) Each flight shall be conducted at an altitude, and on a route, that shall allow a jettisonable external load to be released and the rotorcraft to be landed in an emergency without hazard to persons or property on the surface.

- (e) Notwithstanding the requirements of Part 8, and except as provided by paragraph 11.3.4.3(a)(4) of this part, the holder of a rotorcraft external-load operator certificate may conduct external-load operations, including approaches, departures, and load-positioning manoeuvres necessary for the operation, below 500 ft above the surface and closer than 500 ft to persons, vessels, vehicles, and structures, if the operations are conducted without creating a hazard to persons or property on the surface.
- (f) No person may conduct rotorcraft external-load operations under IFR unless specifically approved by the Authority. However, under no circumstances may a person be carried as part of the external-load under IFR.

11.3.3.2 Carriage of Persons

- (a) No certificate holder may allow a person to be carried during rotorcraft external load operations unless that person—
 - (1) Is a flight crewmember,
 - (2) Is a flight crewmember trainee,
 - (3) Performs an essential function in connection with the external load operation, or
 - (4) Is necessary to accomplish the work activity directly associated with that operation.
- (b) The PIC shall ensure that all persons are briefed before takeoff on all pertinent procedures to be followed (including normal, abnormal, and emergency procedures) and equipment to be used during the external load operation.

11.3.3.3 Crewmember Training, Currency, and Testing Requirements

- (a) No certificate holder may use, nor may any person serve, as a pilot in rotorcraft external load operations unless that person—
 - (1) Has successfully demonstrated to the Authority the knowledge and skill with respect to the rotorcraft/load combination, and
 - (2) Has in his or her personal possession a letter of competency or an appropriate logbook entry indicating compliance with paragraph (a)(1) of this section.
- (b) No certificate holder may use, nor may any person serve as, crewmember or other operations personnel in Class D operations unless, within the preceding 12 calendar months, that person has successfully completed either an approved initial or a recurrent training program.
- (c) Notwithstanding the provisions of paragraph (b) of this section, a person who has performed a rotorcraft external load operation of the same class and in an aircraft of the same type within the past 12 calendar months need not undergo continuation training.

11.3.4 AIRWORTHINESS REQUIREMENTS

11.3.4.1 Flight Characteristics Requirements

- (a)** The applicant shall demonstrate to the Authority, by performing the following operational flight checks, as applicable, that the rotorcraft-load combination has satisfactory flight characteristics, unless these operational flight checks have been demonstrated previously and the rotorcraft-load combination flight characteristics were satisfactory. For the purposes of this demonstration, the external-load weight (including the external-load attaching means) is the maximum mass for which authorization is requested.
- (b)** Class A rotorcraft-load combinations: The operational flight check shall consist of at least the following maneuvers:
 - (1) Take off and landing.
 - (2) Demonstration of adequate directional control while hovering.
 - (3) Acceleration from a hover; and
 - (4) Horizontal flight at airspeeds up to the maximum airspeed for which authorization is requested.
- (c)** Class B and Class D rotorcraft-load combinations: The operational flight check shall consist of at least the following maneuvers:
 - (1) Pickup of the external load.
 - (2) Demonstration of adequate directional control while hovering.
 - (3) Acceleration from a hover.
 - (4) Horizontal flight at airspeeds up to the maximum airspeed for which authorization is requested.
 - (5) Demonstrating appropriate lifting device operation; and
 - (6) Maneuvering of the external load into release position and its release, under probable flight operation conditions, by means of each of the quick-release controls installed on the rotorcraft.
- (d)** Class C rotorcraft-load combinations: For Class C rotorcraft-load combinations used in wire-stringing, cable-laying, or similar operations, the operational flight check must consist of the maneuvers, as applicable, prescribed in paragraph (c) of this section.

11.3.4.2 Structures and Design

- (a)** External-load attaching means. Each external-load attaching means shall be approved by the Authority.
- (b)** Quick release devices. Each quick release device shall be approved by the Authority.
- (c)** Mass and centre of gravity:
 - (1) Mass. The total mass of the rotorcraft-load combination shall not exceed the total mass approved for the rotorcraft during its type certification

- (2) Centre of gravity. The location of the centre of gravity shall, for all loading conditions, be within the range established for the rotorcraft during its type certification. For Class C rotorcraft-load combinations, the magnitude and direction of the loading force shall be established at those values for which the effective location of the centre of gravity remains within its established range.

11.3.4.3 Operating Limitations

- (a)** In addition to the operating limitations set forth in the Manufacturer's approved Rotorcraft Flight Manual, and to any other limitations the Authority may prescribe, the operator shall establish at least the following limitations and shall set them forth in its Rotorcraft-Load Combination Flight Manual for rotorcraft-load combination operations:

- (1) The rotorcraft-load combination shall be operated only within the mass and centre of gravity limitations established in accordance with this subpart.
- (2) The rotorcraft-load combination shall not be operated with an external load weight exceeding that used in showing compliance with this subpart.
- (3) The rotorcraft-load combination shall not be operated at airspeeds greater than those established in accordance with this subpart.
- (4) No person may conduct an external-load operation under this part with a rotorcraft type certificated in the restricted category over a densely populated area, in a congested airway, or near a busy airport where passenger transport operations are conducted and
- (5) The rotorcraft-load combination of Class D shall be conducted only in accordance with the following:
 - (i) The rotorcraft to be used shall be type certificated under transport Category A for the operating mass and shall provide hover capability with one engine inoperative at that operating mass and altitude;
 - (ii) The rotorcraft shall be equipped to allow direct radio intercommunication among required crew members;
 - (iii) The personnel lifting device shall be approved by the Authority; and
 - (iv) The lifting device shall have an emergency release requiring two distinct actions.

11.3.4.4 Rotorcraft-Load Combination Flight Manual

- (a)** The applicant shall prepare a Rotorcraft-Load Combination Flight Manual and shall submit it for approval by the Authority. The limiting height-speed envelope data need not be listed as operating limitations. The manual shall set forth—
 - (1) Operating limitations, procedures (normal and emergency), performance, and other information established under this subpart,
 - (2) The class of rotorcraft-load combinations for which the airworthiness of the rotorcraft has been demonstrated in accordance with this subpart, and
 - (3) In the information section of the Rotorcraft-Load Combination Flight Manual—
 - (i) Information on any peculiarities discovered when operating particular rotorcraft-load combinations,

- (ii) Precautionary advice regarding static electricity discharges for Class B, Class C, and Class D rotorcraft-load combinations, and
- (iii) Any other information essential for safe operation with external loads.

11.3.5 Markings and Placards

- (a) The following markings and placards shall be displayed conspicuously and shall be such that they cannot be easily erased, disfigured, or obscured:
 - (1) A placard (displayed in the fleck deck or cabin) stating the class of rotorcraft-load combination and the occupancy limitation for which the rotorcraft has been approved; and
 - (2) A placard, marking, or instruction (displayed next to the external-load attaching means) stating the maximum external load approved.

11.4 GLIDER TOWING

11.4.1 APPLICABILITY

- (a) This subpart applies to those operations involving towing gliders by aircraft.

11.4.2 CERTIFICATE OF WAIVER OR EQUIVALENT AUTHORIZATION REQUIRED

- (a) The Authority will require each person conducting operations in accordance with this subpart to hold a certificate of waiver or equivalent authorization.
- (b) The Authority will issue a certificate of waiver or equivalent authorizations to an applicant that meets the requirements of this subpart for that certificate or authorization.

11.4.3 AIRCRAFT REQUIREMENTS

- (a) No person may operate an aircraft that is towing a glider unless:
 - (1) The aircraft is equipped with a tow hook and release control system that meet the applicable standards of airworthiness, and
 - (2) The towline used has a breaking strength not less than 80 percent of the maximum certificated operating mass of the glider and not more than twice the maximum certificated operating mass.
 - (3) The towline used may have a breaking strength more than twice the maximum certificated operating mass of the glider if:
 - (i) The PIC of the towing aircraft is qualified under Part 2 of these regulations;
 - (ii) A safety link is installed at the point of attachment of the towline to the glider with a breaking strength not less than 80 per cent of the maximum certificated operating mass of the glider and not greater than twice this operating mass; or
 - (iii) A safety link is installed at the point of attachment of the towline to

the towing aircraft with a breaking strength greater, but not more than 25 per cent greater, than that of the safety link at the towed glider end of the towline and not greater than twice the maximum certificated operating mass of the glider.

11.4.4 EXPERIENCE AND TRAINING REQUIREMENTS

- (a)** No person may act as a PIC for towing a glider unless that person has—
- (1) At least a private pilot license with a category rating for the tow aircraft,
 - (2) Logged at least 100 hours of pilot in command time in the same aircraft category, class, and type, if applicable, as the tow aircraft,
 - (3) Received training in and instructor endorsement for—
 - (i) The techniques and procedures essential to the safe towing of gliders, including airspeed limitations,
 - (ii) Emergency procedures,
 - (iii) Signals used, and
 - (iv) Maximum angles of bank.
 - (4) Except as provided in paragraph 11.4.1.4(b) of this subsection, has completed at least three flights as the sole manipulator of the controls of an aircraft towing a glider or simulating glider-towing flight procedures while accompanied by a pilot who meets the requirements of this section, and
 - (5) Except as provided in paragraph (b) of this section, has received a logbook endorsement from the pilot, described in paragraph (a)(4) of this section, certifying that the person has accomplished at least 3 flights in an aircraft while towing a glider, and
 - (6) Within the preceding 12 months has—
 - (i) Made at least three actual glider tows while accompanied by a qualified pilot who meets the requirements of this subsection, or
 - (ii) Made at least three flights as pilot in command of a glider towed by an aircraft.
- (b)** The pilot, described in paragraph 11.4.1.4(a)(4) of this subsection, who endorses the logbook of a person seeking glider-towing privileges shall have:
- (1) Met the requirements of this section prior to endorsing the logbook of the person seeking glider-towing privileges, and
 - (2) Logged at least 10 flights as pilot in command of an aircraft while towing a glider.
- (c)** If the pilot described in paragraph (a)(4) of this section holds only a private pilot license, then that pilot shall have:
- (1) Logged at least 100 hours of pilot-in-command time in airplanes, or 200 hours of pilot in command time in a combination of powered and other than powered aircraft, and

- (2) Performed and logged at least three flights within the 12 calendar months preceding the month that pilot accompanies or endorses the logbook of a person seeking towing privileges -
 - (i) In an aircraft while towing a glider accompanied by another pilot who meets the requirements of this section, or
 - (ii) As pilot in command of a glider being towed by another aircraft.

11.4.5 OPERATING RULES

- (a) No pilot shall conduct any towing operation in controlled airspace until the pilot has received the appropriate clearance from the air traffic control service.
- (b) No pilot shall conduct any towing operation in uncontrolled airspace until the pilot has notified the appropriate Authority for such activity to be entered into the NOTAM service of Liberia.
- (c) No pilots shall engage in towing operations, either as the pilot of the towing aircraft or as the pilot of the towed glider, until all pilots have agreed upon a general course of action, including takeoff and release signals, airspeeds and emergency procedures for each pilot.
- (d) No pilot of a civil aircraft may intentionally release a towline, after release of a glider, in a manner that endangers the life or property of another.

11.5 BANNER TOWING

11.5.1 APPLICABILITY

- (a) This subpart applies to those operations involving towing aircraft banners or other signs, lit or unlit.

11.5.2 Certificate of waiver or equivalent Authorization Required

- (a) The Authority will require each person conducting operations in accordance with this subpart to hold a certificate of waiver or equivalent authorization.
- (b) The Authority will issue a certificate of waiver or equivalent authorization to an applicant that meets the requirements of this subpart for that certificate or authorization.
- (c) A helicopter operating under the requirements of 11.3 of this part may tow a banner using an external-load attaching means without a certificate of waiver or equivalent authorization only if the operator has at least a Class B authorization on the operating certificate.

11.5.3 Aircraft Requirements

- (a) No person may operate an aircraft that is towing a banner unless the aircraft is equipped with a tow hook and release control system that meet the applicable standards of airworthiness.
- (b) No person may operate a helicopter that is towing a banner unless the helicopter has a means to prevent the banner from becoming entangled in the helicopter's tail rotor during all phases of flight, including autorotations.

Note: The only way to prevent the banner from tangling in the tailrotor during autorotation may be to jettison the banner.

11.5.4 Experience and Training Requirements

- (a) For non-revenue flights, the pilot of the tow aircraft shall hold at least a valid private pilot license and have a minimum of 200 hours PIC time.
- (b) When banner towing operations are conducted for compensation or hire, the pilot shall have at least a commercial pilot license (instrument rating not required) and at least a valid second class medical certificate.
- (c) All pilots engaged in banner towing operations shall demonstrate competence to the Authority by performing at least one pickup and drop of the maximum number of letters (panels) to be used by the certificate holder.

Note: This demonstration should be observed from the ground to allow the inspector to evaluate the competence of any essential ground personnel as well as the flight operation.

11.5.5 Operating Rules

- (a) All banner-towing operations shall be conducted only:
 - (3) In VFR weather conditions as described in Part 8 of these regulations; and
 - (4) Between the hours of official sunrise and official sunset.
- (b) No person may conduct banner-towing operations:
 - (5) Over congested areas or open-air assemblies of persons lower than 1 000 ft; and
 - (6) Elsewhere lower than the minimum safe altitude requirements of Part 8 of these regulations.
- (c) Helicopters may be operated at less than the minimums prescribed in paragraph 11.5.1.5(b) of this subsection if the operation is conducted without hazard to persons or property on the surface.
- (d) The certificate holder shall obtain the aerodrome manager's approval to conduct banner-towing operations.
- (e) If banner-towing operations take place at an aerodrome with a control tower, the certificate holder shall inform that control tower of the time of the banner-towing operation.
- (f) The certificate holder shall notify the appropriate aerodrome officials in advance when banner-towing operations will be in close proximity to an uncontrolled aerodrome.
- (g) Only essential crew members shall be carried when conducting banner-towing operations.
- (h) When banner-towing operations are conducted over congested areas, the pilot shall exercise due care, so that an emergency release of the banner and/or tow rope shall not cause undue hazard to persons or property on the surface.
- (i) Each pilot shall drop the tow rope in a predesignated area at least 500 ft from persons, buildings, parked automobiles, and aircraft.

Note: If the tow plane lands with the rope attached, due care shall be exercised to avoid trailing the rope and endangering other aircraft in the air or persons, property, or aircraft on the surface.

- (j) Each pilot conducting banner-towing operations shall carry on board the aircraft a current copy of the certificate of waiver or equivalent authorization allowing banner-towing operations.

11.6 MOTION PICTURE AND TELEVISION FILMING OPERATIONS

11.6.1 APPLICABILITY

- (a) This subpart applies to those operations involving motion picture and television filming, appearance in-flight in motion pictures, and airborne direction or production of such filming when those operations are conducted as part of a business enterprise or for compensation or hire.
- (b) For purposes of this subpart, “motion picture” shall include film, videos, and live broadcast in any format and the preparation and rehearsal for those operations.

11.6.2 Certificate of Waiver or Equivalent Authorisation Required

- (a) The Authority will require each person conducting operations in accordance with this subpart to hold a certificate of waiver or equivalent authorization.
- (b) The Authority will issue a certificate of waiver or equivalent authorization to an applicant that meets the requirements of this subpart for that certificate or authorization.

11.6.3 Aircraft Requirement

- (a) In order to be used in motion picture and television filming operations, an aircraft in the experimental category shall have a certificate of airworthiness issued to it for the purpose of exhibition.

11.6.4 Experience and Training Requirements

- (a) No pilot shall conduct motion picture and television filming operations unless that pilot has:
 - (1) A CPL with ratings appropriate to the category, class, and type of aircraft to be used under the terms of the authorization;
 - (2) At least 500 hours as PIC, including:
 - (i) At least 20 hours as PIC in the aircraft type;
 - (ii) A minimum of 100 hours in the category and class of aircraft to be used;
 - (iii) A minimum of 5 hours as PIC in the make and model of aircraft to be used under the authorization; and
 - (3) If the pilot intends to perform acrobatics below 1 500 ft AGL, the pilot shall hold a Statement of Acrobatic Competency for the operations to be performed.

11.6.5 Operating Rules

- (a) Each operator shall conduct motion picture and television filming operations so as not to endanger persons or property on the surface or aircraft in flight.
- (b) Each operator shall obtain a certificate of waiver or equivalent authorization from

the Authority if filming sequences require an aircraft to be flown:

- (1) In acrobatic flight below 1 500 ft AGL;
 - (2) Over a congested area;
 - (3) In controlled airspace; or
 - (4) In other instances where a departure from the requirements of Part 8 of these requirements is needed.
- (c)** The holder of the certificate of waiver or equivalent authorization shall provide a schedule of events that lists the:
- (1) Identification of the aircraft; and
 - (2) Performers in the sequence of their appearance.
- (d)** Any manoeuvres added or time changes made to the schedule of events shall be approved by the Authority.
- (e)** The holder of the certificate of waiver or equivalent authorization shall develop, have approved by the Authority, and comply with a Motion Picture and Television Filming Operations Manual.
- (f)** When conducting any motion picture or television filming operation requiring a certificate of waiver or equivalent authorization, the holder of the certificate or authorization shall ensure that all reasonable efforts are made to confine spectators to designated areas. If reasonable efforts have been taken and unauthorized persons or vehicles enter the airspace where manoeuvres are being performed during the filming production event, efforts shall be made to remove those persons or vehicles.

11.6.6 Contents Of A Motion Picture And Television Flight Operations Manual

- (a)** Each Motion Picture and Television Operations Manual shall contain at least the following:
- (1) COMPANY ORGANISATION.
 - (i) The business name, address, and telephone number of the applicant;
 - (ii) A list of pilots involved in the filming production, including their pilot licence numbers, grade and class, and date of medical certification; and
 - (iii) A list of aircraft by make and model.
 - (2) DISTRIBUTION AND REVISION. Procedures for revising the manual to ensure that it is kept current and procedures for the distribution of the manual to concerned personnel.
 - (3) PERSONS AUTHORISED. Procedures for ensuring that no persons, except those persons consenting to be involved and necessary for the filming production, are allowed within 150 m (500 ft) of the filming production area.
 - (4) AREA OF OPERATIONS. The area that shall be used during the term of the authorization.
 - (5) PLAN OF ACTIVITIES. Procedures for the submission, within 3 days of scheduled filming, of a written plan of activities to the Authority, including at least the following:

- (i) Dates and times for all flights;
 - (ii) The name and phone number of the person responsible for the filming production event;
 - (iii) The make and model of aircraft to be used and the type of certificate of airworthiness, including category;
 - (iv) The names of pilots involved in the filming production event;
 - (v) A statement that permission to conduct the filming production event has been obtained from property owners and/or local officials;
 - (vi) The signature of the certificate holder or a designated representative; and
 - (vii) A general outline, or summary, of the production schedule, to include maps or diagrams of the specific filming location, if necessary.
- (6) PERMISSION TO OPERATE. Requirements and procedures for obtaining permission from property owners and/or local officials (e.g., police, fire department), as appropriate for the conduct of all filming productions when using the certificate of waiver or equivalent authorization.
- (7) SECURITY. The method of security that shall be used to exclude from the location all persons not directly involved with the operation.

Note: This shall include the requirement used to stop activities when unauthorized persons, vehicles, and/or aircraft enter the operations area, or for any other reason, in the interest of safety.

- (8) BRIEFING OF PILOT/PRODUCTION PERSONNEL. Procedures for briefing personnel on the risks involved and on emergency procedures and safeguards to be followed during the filming production event.
- (9) CERTIFICATION/AIRWORTHINESS. Procedures for ensuring that required inspections will be conducted.
- (10) COMMUNICATIONS. Procedures for communicating with all participants during the actual operation and filming.

Note: The applicant may use oral, visual, and/or radio communications, as long as participants are continuously apprised of the current status of the operation.

- (11) ACCIDENT AND INCIDENT NOTIFICATION. Procedures for receiving notification of and reporting accidents and incidents.

11.7 SIGHT-SEEING FLIGHTS

11.7.1 APPLICABILITY

- (a) This subpart applies to those operations involving the carriage of persons for viewing natural formations, manmade objects, or wildlife on the ground when:
- (1) Those operations are conducted as part of a business enterprise or for compensation or hire;
 - (2) The flight is unquestionably advertised as “sightseeing”;
 - (3) The flight returns to the aerodrome of departure without having landed at any other aerodrome;

- (4) The flight is conducted within a 25-statute-mile radius of the departure aerodrome; and
- (5) The certificated passenger capacity of the aircraft does not exceed nine passengers.

Note: Any other passenger-carrying flight for remuneration, hire, or valuable consideration shall be conducted under an air operator certificate in accordance with Part 9 of these regulations.

11.7.2 Certificate of Waiver or Equivalent Authorisation Required

- (a)** The Authority will require each person conducting operations in accordance with this subpart to hold a certificate of waiver or equivalent authorization.
- (b)** The Authority will issue a certificate of waiver or equivalent authorization to an applicant that meets the requirements of this subpart for that certificate or authorization.

11.7.3 Experience and Training Requirements

- (a)** No pilot shall conduct sightseeing operations unless that pilot has:
 - (1) At least a CPL with ratings appropriate to the category, class, and type of aircraft to be used under the terms of the certificate of waiver or equivalent authorization;
 - (2) At least 500 hours as PIC, including:
 - (i) At least 20 hours as PIC in the aircraft type;
 - (ii) A minimum of 100 hours in the category and class of aircraft to be used; and
 - (iii) A minimum of 5 hours as PIC in the make and model of aircraft to be used under the certificate of waiver or equivalent authorization.

11.7.4 Operating Rules

- (a)** Each operator shall conduct operations so as not to endanger persons or property on the surface or aircraft in flight.
- (b)** All sightseeing operations shall be conducted only:
 - (1) In VFR weather conditions; and
 - (2) Between the hours of official sunrise and official sunset.
- (c)** No person may conduct sightseeing operations:
 - (1) Over congested areas or open-air assemblies of persons lower than 1 000 ft; and
 - (2) Elsewhere lower than the minimum safe altitude requirements of Part 8 of these regulations.
- (d)** In addition to any operational or equipment requirements of this subpart for manned free balloon operation, the following equipment is required for specific types of manned free balloon operation:
 - (1) For all balloons, an altimeter and a rate-of-climb indicator;
 - (2) For hot air balloons:
 - (i) If fuel cells are used, a means (e.g., fuel quantity gauge) to indicate

to the crew the quantity of fuel in each cell during flight, calibrated in appropriate units or in per cent of fuel cell capacity; and

- (ii) An envelope temperature indicator; and.
- (3) For captive gas balloons, a compass.
- (e) In addition to any requirements of this subpart for a specific type of tethered or moored balloon operation, the requirements of 8.8 of these regulations apply.
- (f) The requirements of Part 8 of these regulations apply to sightseeing operations described by this subpart.

11.8 FISH SPOTTING

11.8.1 APPLICABILITY

- (a) This subpart applies to those operations involving locating, tracking, and reporting on the location of fish and fish schools, when those operations are conducted as part of a business enterprise or for compensation or hire.

11.8.2 CERTIFICATE OF WAIVER OR EQUIVALENT AUTHORISATION REQUIRED

- (a) The Authority will require each person conducting operations in accordance with this subpart to hold a certificate of waiver or equivalent authorization.
- (b) The Authority will issue a certificate of waiver or equivalent authorization to an applicant that meets the requirements of this subpart for that certificate or authorization.

11.8.3 EXPERIENCE AND TRAINING REQUIREMENTS

- (a) No pilot shall conduct fish spotting operations unless that pilot has:
 - (1) At least a CPL with ratings appropriate to the category and class of aircraft to be used under the terms of the certificate of waiver or equivalent authorization;
 - (2) At least 500 hours as PIC, including:
 - (i) A minimum of 100 hours in the category and class of aircraft to be used;
 - (ii) A minimum of 25 hours as PIC the category and class of aircraft to be used; and
 - (iii) A minimum of 5 hours as PIC in the make and model of aircraft to be used under the certificate of waiver or equivalent authorization.

11.8.4 OPERATING RULES

- (a) Each operator shall conduct operations so as not to endanger persons or property on the surface or aircraft in flight.
- (b) Minimum cloud clearance requirements and minimum altitude requirements of Part 8 do not apply to those persons to whom the Authority has specifically approved different minimums as a part of a certificate of waiver or equivalent authorization under 11.8 of this part.

11.9 NEWS MEDIA AND TRAFFIC REPORTING

11.9.1 APPLICABILITY

- (a) This subpart applies to those operations involving the observation of, and reporting on, news media events and/or vehicular traffic conditions on the highways and streets when conducted by aircraft or airmen, or both, not designated as solely public use.

11.9.2 CERTIFICATE OR AUTHORIZATION REQUIRED

- (a) The Authority will require each person conducting operations covered by this subpart to hold a certificate or equivalent authorization.
- (b) The Authority will issue a certificate or authorization to each applicant who qualifies for it under the provisions of this subpart.

11.9.3 OPERATING RULES

- (a) Each operator shall conduct operations so as not to endanger persons or property on the surface nor aircraft in flight.
- (b) Minimum cloud clearance requirements and minimum altitude requirements of Part 8 do not apply to those persons to whom the Authority has specifically approved different minimums as a part of an authorization under this subpart.

11.9.4 EXPERIENCE AND TRAINING REQUIREMENTS

- (a) No pilot may conduct news media or traffic reporting operations unless he or she has:
 - (1) At least a commercial license with ratings appropriate to the category, class and type aircraft to be used under the terms of the waiver.
 - (2) At least 500 hours as PIC and at least 20 hours as PIC in the aircraft type.
 - (3) A minimum of 100 hours in the category and class of aircraft to be used.
 - (4) A minimum of 5 hours in the make and model aircraft to be used under the authorization.

LIBERIA CIVIL AVIATION REGULATIONS

Part 11 — IMPLEMENTING STANDARDS

For ease of reference the number assigned to each implementing standard corresponds to its associated regulation. For example IS: 11.1.1 would reflect a standard required in subsection 11.1.1.

PART 11 – IMPLEMENTING STANDARDS

IS 11.1.1(F) APPLICABILITY

- (a) The following application shall be used by an operator that intends to apply for approval to operate an RPA within Liberia.

Application for Remotely Piloted Aircraft Operations by a [STATE] Operator <i>(To be completed by a [STATE] operator for an approval to conduct operations in [STATE])</i>	
Section 1. Applicant Information	
1a. Operator's, or if applicable, company's registered name and trading name, if different; mailing address; telephone; fax; and email:	2. Remote aircraft pilot(s) mailing address; telephone; fax; and email:
1b. RPA operator certificate number:	2b. Remote pilot licence number(s) for each pilot:
3. Name of insurer and address, including telephone, fax, and email:	
Section 2: Aircraft Identification	
1. Aircraft registration number: _____	
2. Aircraft identification to be used in radiotelephony, if applicable: _____	
3. Aircraft type: _____	
4. Aircraft description (e.g., Engines, propellers, wing span): _____	
5. Aircraft controlled via:	
<input type="checkbox"/> Line of sight <input type="checkbox"/> Satellite <input type="checkbox"/> Computer programme <input type="checkbox"/> Other _____	
6. Aircraft equipment (e.g., Sprayers, -camera, type, live feed or photographs): _____	
7. If camera equipped, aircraft camera transmission destination:	
<input type="checkbox"/> Operator/Company home base <input type="checkbox"/> Other (identify): _____	
8. Frequency band to be used: _____	
9. Aircraft radio station license number, if applicable: _____	
Section 3. Description of Intended Operation	

1. Proposed type(s) of operation:

Aerial mapping; Aerial surveying; Aerial photography; Aerial advertising

Aerial surveillance and inspection; Forest fire management; Meteorological service

Search and rescue; Accident/incident investigation;

Cargo, indicate type of cargo: _____

 Is cargo classified as dangerous goods: yes no

 Is payload internal or external

Other: _____

2.	Flight rules: <input type="checkbox"/> VFR; <input type="checkbox"/> IFR; <input type="checkbox"/> IMC; <input type="checkbox"/> VLOS
3.	Dates/Geographic areas/description of intended operations and proposed route structure: a. Date(s) of intended flight (dd/mm/yyyy): _____ b. Point of departure: _____ c. Destination: _____ d. Route to be followed: _____ e. Cruising speeds(s): _____ f. Cruising level(s)/altitude: _____ g. Duration/frequency of flight: _____ h. Emergency set down sites along proposed route: _____ i. For emergency landings: i. Responsible person for aircraft recovery: _____ ii. Responsible person for clean up if impact occurs: _____ j. Emergency contact telephone numbers: _____
Section 4. RPA Characteristics	
1.	RPA characteristics: a. Type of aircraft: b. Maximum certificated take-off mass: c. Number of engines: d. Take-off and landing requirements: e. Detect and avoid capabilities: f. Number and location of RPSs as well as handover procedures between RPSs, if applicable: g. Payload information/description: h. Visual control for take-off and/or landing or take-off and landing handled through camera on board
2.	Performance characteristics: a. Operating speeds: _____ b. Typical and maximum climb rates: _____ c. Typical and maximum descent rates: _____ d. Typical and maximum turn rates: _____ e. Maximum aircraft endurance: _____ f. Other, such as limitations for wind, icing, precipitation: _____
3.	Communications, navigation, and surveillance capabilities: a. Aeronautical safety communications frequencies and equipment: i. ATC communications, including any alternate means of communication: _____ ii. Command and control links (C2) including performance parameters and designated operational coverage area: _____ iii. Communications between RP and RPA observer, if applicable: _____ b. Navigation equipment: _____ c. Surveillance equipment (e.g. SSR transponder, ADS-B out): _____
4.	Emergency procedures: a. Communications failure with ATC: _____ b. C2 failure: _____ c. RPA observer communications failure, if applicable: _____ d. Satellite failure, if applicable: _____

- | | |
|----|---|
| e. | Recovery during unplanned landings: _____ |
| f. | Communication procedure with local law enforcement in case of impact: _____ |

Attach copies of the following, in English translation if original documents are not in the English language:

- Insurance certificate;
- Noise certification document issued in accordance with ICAO Annex 16;
- Operator security programme; and
- Proposed flight plan to be filed with ATC.

Applicant's signature:

Date (dd/mm/yyyy):

Name and title:

Section 5 (to be completed by the CAA)

Evaluated by (name and office):

CAA decision:

Approval granted

Not approved

Remarks:

CAA representative signature:

Date (dd/mm/yyyy):