CERTIFICATION STANDARDS FOR REMOTE PILOT OPERATIONS



PURPOSE

The Regional Disaster Preparedness Organization (RDPO) *Certification Standards for Remote Pilot Operations* is a supplement to 14 CFR Part 107 and to the authority under which each flight is conducted, including public aircraft operations under 14 CFR Part 91 and an agency Certificate of Waiver or Authorization (CoW/A). This manual identifies and establishes the additional pilot knowledge and skills that are expected for each specific UAS pilot carding and aircraft. *Remote Pilot Certification Standards (RPCS) and Certification Standards for Remote Pilot Operations* are synonymous and "used equally" throughout this document.

The Federal Aviation Administration (FAA) remote pilot certificate has been identified as the minimum pilot performance standard for interagency government pilots and interagency cooperator pilots. The standards required to obtain an FAA remote pilot certificate are outlined in the FAA's 14 CFR Part 107. The FAA issues a remote pilot certificate with a small UAS rating (14 CFR Part 107, Subpart C). It is a certificate, not a certification, and the FAA may suspend or revoke it (14 CFR §§ 107.57 and 107.59; 49 U.S.C. § 44709). Some flight missions and aircraft flown in support of the RDPO call for pilot skills and proficiency not covered by 14 CFR Part 107. These skills and proficiencies as well as additional training requirements are covered within this document.

This manual includes the requirements for all RDPO UAS pilot carding, the benchmarks, and framework for the UAS Pilot Evaluator and Final Evaluator designations. This manual is maintained by the Scappoose Fire District (SRFD).

REMOTE PILOT CERTIFICATION STANDARDS CONCEPT

The goal of the remote pilot certification process is to ensure the applicant possesses the knowledge, skills, and abilities consistent with RDPO aviation standards, as well as the missions and aircraft currently utilized by agencies in the RDPO region.

The RDPO recognizes that safe operations within the National Airspace System (NAS), Emergency Temporary Flight Restrictions (TFRs), and the Fire Traffic Area (FTA) require a more systematic integration of aeronautical knowledge, pilot skill, and risk management. The RPCS integrates the elements of knowledge, pilot skill and risk management contained 14 CFR part 107, participating agency UAS Policy, RDPO Standards for UAS Operations, NFPA 2400, NIST UAS Test Methods, and practical test standards outlined within this document.

In keeping with this integrated and systematic approach, the knowledge elements of each task identify what the applicant should know and understand for UAS operations conducted under participating agencies operational control.

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Chapter 1: Introduction

Revisions and Amendments

Users are encouraged to recommend changes to the Remote Pilot Certification Standards through the RDPO UAS Program Manager. Recommended changes will be reviewed annually by the RDPO UAS Program Manager.

Version 1.2 (October 2026): Added the Extended Line of Sight / Beyond Visual Line of Sight (Shielded) evaluation plan and task sheets BV 01 through BV 35; added lighting and documented night training to BR 65; and aligned operating authority, airspace authorization, and visual observer references with the Scappoose Fire District 14 CFR § 91.113(b) Certificate of Waiver or Authorization (CoW/A) and revised Policy 534; added the two-tier Remote Pilot Qualification Pathway (Chapter 2), which separates all-hazards qualification (A-450, NIST Level 3, and an all-hazards course) from wildland fire qualification (S-373); and changed references to the FAA credential to "remote pilot certificate." Cross-referenced the RDPO Standards for UAS Operations, Version 1.0 (October 2026): added mission specialty endorsements and placeholder evaluation plans for Hazardous Materials, Fire Investigation / Crime Scene Documentation, and Drone as a First Responder; and replaced remaining national-program references with RDPO roles. Added Tier 1 (green) and Tier 2 (red) pilot card examples, the A-454 aircraft and GCS add-on, SAFECOM reporting on interagency wildland fire assignments, and the UAS Module (U-MOD) response configuration.

Version 1.3 (October 2026): Added A-454 add-ons for the ParaZero SafeAir M30 Pro and Skydio X10 parachute recovery systems (with manufacturer-required training), operations over people and moving vehicles, operations above 400 feet AGL in Class G airspace (pending FAA waiver), and payload delivery; added these to the check rides a pilot evaluator conducts; and aligned with the RDPO Standards for UAS Operations, Version 1.1 (October 2026).

Version 1.4 (October 2026): Added task BR 72, Perform Cold Weather and Icing Procedures, to the Master Task List and to the Basic Remote Pilot and Type 3 and Type 4 Aircraft evaluation plans; added cold weather and icing to the knowledge topics, flight crew currency, and the A-454 aircraft add-on, using SAFECOMs 23-0164 and 23-0202 as case studies; and aligned with the RDPO Standards for UAS Operations, Version 1.2 (October 2026).

Special Emphasis Areas

UAS Pilot Evaluators and Final Evaluators shall place special emphasis upon areas of aircraft operations considered critical to flight safety for day and night operations. These are:

- Cooperation, professionalism, and positive attitude toward aviation safety.
- Risk assessment and risk management.
- Aeronautical Decision Making (ADM).
- Crew Resource Management (CRM).
- Checklist usage.

Although these areas may not be specifically addressed under each task, they are essential to flight safety and will be evaluated during training or practical tests. In all instances, the applicant’s actions will relate to the complete situation.

Use of Checklists

The remote pilot is evaluated on the use of an appropriate aircraft checklist. Proper use is dependent upon the specific task being evaluated. The situation may be such that the use of the checklist, while accomplishing elements of an objective, would be either unsafe or impractical, especially in a single-pilot operation. In this case, a review of the checklist after the elements have been accomplished would be appropriate. Division of attention and proper visual scanning should be considered when using a checklist.

Standards and Performance

Evaluation Plans (Chapter 3) comprised of Remote Pilot Tasks (Appendix A), will be used to evaluate a pilot's knowledge, skills, and abilities of mission or aircraft.

Satisfactory Performance

An initial pilot card will be issued only after satisfactory performance has been demonstrated for basic remote pilot tasks or approved by a final evaluator to remain in basic remote pilot trainee status. Satisfactory performance to meet the requirements for RDPO aircraft and missions (unless designated as a trainee for ELOS, BVLOS, or Aerial Ignition) is based on the applicant's ability to safely:

a. Perform the tasks specified for the aircraft or missions and meet or exceed the standard. Master Task List and Evaluation Plans are in Chapter 4 and Appendix A.
b. Meet the specifications within policy as appropriate.

Unsatisfactory Performance

When in the judgment of a qualified UAS pilot evaluator or final evaluator, the remote pilot is rated unsatisfactory, the applicant will not receive a pilot qualification card or endorsement for the specific mission or aircraft. If a retest is administered, at a minimum those tasks that were determined to be unsatisfactory will be reevaluated. Additional tasks may be retested at the discretion of a UAS pilot evaluator in coordination with a UAS final evaluator.

Chapter 2: Designations and Training Roles

Flight Crew

Flight Crew are positions required for the actual operation of the aircraft for flight. UAS flight crew members hold an FAA remote pilot certificate (14 CFR Part 107) and may commonly be referred to as Pilot, Remote Pilot, or Remote Pilot in Command (RPIC). Only remote pilots who have successfully completed the appropriate syllabi and have been designated may act as qualified flight crew in their respective position during operational flights. Flight crew members who are gaining experience, in training or operational flights may act as Remote Pilot in Command when under the direct supervision of a qualified and current UAS pilot evaluator for the respective aircraft or mission.

UAS Module (U-MOD): The recommended response configuration is a U-MOD: a U-MOD Supervisor, a UAS Pilot (RPIC), and a Visual Observer or second pilot. The minimum operational response is a qualified pilot and a second person. U-MOD roles and qualifications are in the RDPO Standards for UAS Operations, Chapter 2.

Flight Crew Requirements

1. Pilots shall hold a current and valid FAA Remote Pilot Certificate.
2. Have successfully completed the RDPO standardized syllabi for the aircraft or mission. Course requirements for each qualification tier are listed under Remote Pilot Qualification Pathway.
3. Pilots shall have completed the RDPO UAS training plan per the curriculum and RDPO Standards for UAS Operations.

Remote Pilot Qualification Pathway

The RDPO uses a two-tier qualification pathway. Tier 1 is built so that most pilots can complete it, and it qualifies a pilot to respond to all incidents except wildland fire. Tier 2 adds S-373, which is required to fly on wildland fire incidents. These tiers set the incident types a pilot may support; they are separate from the day and night certification levels (ORPIC Level 1 and Level 2) in the UAS Program Guide.

Tier 1 — All-Hazards Remote Pilot (all incidents except wildland fire)

1. Current FAA remote pilot certificate with a small UAS rating (14 CFR Part 107).
2. A-450, Small Unmanned Aircraft System (sUAS) Basic Remote Pilot Course.
3. NIST Level 3 (BR 60, item 6).
4. All-Hazards UAS Incident Operations course (in development; expected release February or March 2027). Until the course is released, the RDPO UAS Program Manager may approve an interim equivalent and document it in the pilot's training record.
5. Current RDPO pilot qualification card for the aircraft type, issued after a check ride (Chapter 4).

Tier 2 — Wildland Fire Remote Pilot (all incidents, including wildland fire)

1. All Tier 1 requirements.
2. S-373, Unmanned Aircraft Systems (UAS) Incident Operations.
3. Any additional qualification required by the ordering or host agency on interagency wildland fire incidents (for example, the NWCG UAS Pilot position under PMS 515).

Tier 2 is shown by the Wildfire endorsement on the pilot qualification card. A pilot without the Wildfire endorsement shall not fly on a wildland fire incident.

Mission Specialty Endorsements: Some missions require training beyond Tier 1 or Tier 2. Endorsements for ELOS/BVLOS (Shielded), Night, Hazardous Materials (NIST Level 5 plus additional training to be determined), Fire Investigation / Crime Scene Documentation, Aerial Ignitions, and Drone as a First Responder (placeholder) are defined in the RDPO Standards for UAS Operations, Chapter 3 (Mission Specialty Endorsements and Figure 1, RDPO UAS Training Pathways) and Chapter 6 (Mission Specialties).

Each endorsement is issued on the pilot card after the pilot passes the matching evaluation plan in Chapter 4 of these standards.

Pilot Card Format: Tier 1 and Tier 2 pilot cards look different so the tier can be identified at a glance. Tier 1 (All-Hazards) cards use green lettering. Tier 2 (Wildland Fire) cards use red lettering and show the Wildfire endorsement. Examples of both cards are in Appendix C (RDPO Standards for UAS Operations, Chapter 3, Pilot Card Format).

Flight Crew Responsibilities

1. Demonstrate the highest level of performance, quality control, and proficiency with UAS operations.
2. Crew agency aircraft to meet agency mission objectives.
3. Maintain agency pilot training records and ensure accessibility for a QA review.
4. Serve as an agency aviation subject matter expert.
5. Communicate flight crew standardization or training issues to the attention of the appropriate RDPO UAS Program Manager.
6. Train and brief all visual observers, mission crewmembers and ordering unit prior to mission,
7. Perform a preflight inspection of the UAS in accordance with the manufacturer's recommendations, Agency best practices and ensure the aircraft is in an airworthy condition.
8. Coordinate with regional aviation officers and appropriate dispatch in advance of missions to identify, assess and de-conflict any potential airspace issues.
9. Fly in accordance with the manufacturer's specifications and established agency policy. Proposed deviations from established operational procedures (checklists, etc.), which may affect the safety of flight, shall be discussed with the RDPO UAS Program Manager prior to the deployment of such operations to minimize programmatic and operational risk.
10. If a procedure is required for a specific mission, and was not instructed during an approved agency training, it is the responsibility of the RPIC to work with the RDPO UAS Program Manager for approval.
11. Understand, implement, and maintain the responsible areas of the RDPO Aviation Safety Management System within the scope of their duties.
12. Report every accident, mishap, and near miss. File a NASA ASRS UAS Report for each one, on any type of operation, in addition to the NTSB and FAA reports and, on every interagency wildland fire assignment, a SAFECOM. ASRS gives public safety national tracking of causes such as manufacturer defects, battery failures, bird strikes, loss of link, and fly-aways; SAFECOM tracks them only within the interagency community, so both are filed when both apply (RDPO Standards for UAS Operations, Chapter 4).

Flight Crew Currency

1. Meet the currency, flight time and training requirements listed in RDPO Standards for UAS Operations (Chapter 3 Exhibit 1, UAS Pilot Flight Time & Training Requirements).
2. Meet special-use mission and aircraft currency requirements for authorized missions and aircraft.
3. Complete cold weather and icing training (task BR 72) in RDPO initial training (A-450 delivery) and in recurrent training.

Aircrew Member (ACM)

Aircrew Members are involved in UAS operations but not actively piloting the aircraft. There may be no formal requirements, but aircrew members must be adequately briefed prior to operations and duties necessary for flight.

Visual Observer (VO)

Certain Certificates of Authorization or Waiver (COAs) may require that observers have completed sufficient training or received adequate briefings to communicate to the pilot any instructions required to remain clear of conflicting traffic. UAS remote pilots shall ensure that VO training and briefing requirements have been met. Refer to 14 CFR part 107, COA, and agency approved best practices as applicable.

A VO is not required to possess or obtain a Remote Pilot Card. All RDPO remote pilots conducting operations under 14 CFR Part 107 must maintain visual contact with the UAS or utilize a VO. Use of VOs must comply with the provisions of Part 107.33. If operating under COA, the VO requirement of those authorizations must be complied with. Under the Scappoose Fire District 91.113(b) CoW/A, a VO is not required for shielded operations; however, District policy requires a VO for all night operations. Visual observers are required to:

1. Obtain a briefing from the RPIC.
2. Have a clear view of the area of operation and the unmanned aircraft.
3. In communication with the Remote Pilot always either within speaking distance or with a portable radio/cell phone equipped for immediate communication.
4. Keep the Remote Pilot advised of any possible collision hazards such as power lines, birds, other aircraft, terrain, and hazardous weather conditions.
5. VO’s may not act as flight crew unless they possess a valid FAA Remote Pilot Certificate and a current RDPO UAS Pilot Qualification Card.

Lead Instructor

A Lead instructor's role is to provide consistent instruction of course material and ensure course objectives are met. An instructor must be fully qualified and will be designated for each course offering.

UAS Pilot Evaluator

UAS Pilot Evaluators (Pilot Evaluator) work in conjunction with Lead instructors by teaching and or conducting flight exercises to develop a pilot's progress and administer a final evaluation (check ride). They are selected based on their expertise, practical skills, teaching ability, and dedication to the RDPO UAS program. Pilot evaluators conduct check rides assigned by a UAS final evaluator when a remote pilot completes training for specific aircraft, payloads, or missions. Pilot evaluators may also be tasked by a final evaluator to perform flight reviews or re-training, proficiency checks, standards checks, or other quality assurance duties.

Aircraft, payloads, and missions requiring a check ride:

1. Initial carding as a remote pilot for all aircraft within the interagency UAS fleet
2. Aerial ignition payload
3. ELOS
4. BVLOS
5. Nonstandard operating procedures as required (NSOP)
6. New or emerging payloads or missions as defined by RDPO UAS Program Manager.
7. Parachute recovery systems (ParaZero SafeAir M30 Pro; Skydio Parachute System for X10), after the manufacturer-required training.
8. Operations over people and moving vehicles (OOP/OOMV).
9. Operations above 400 feet AGL in Class G airspace (when the FAA waiver is issued).
10. Payload delivery, for each aircraft and release device (Alta X; M30T with drop device).

UAS Pilot Evaluator Requirements

1. Current FAA Part 107 Remote Pilot Certificate.
2. Current RDPO pilot card for the designated aircraft, payload, or mission being evaluated.
3. Subject Matter Expert (SME) on agency policy, aircraft, and missions for which they are qualified.
4. Dedication, potential, and interest in the positive development of the RDPO UAS Program.
5. Pilot Evaluator recommendation and approval. (Appendix C)
6. Complete required pilot evaluator training.

The table below lists the flight hours needed before designation as a pilot evaluator for that mission or aircraft. Flight hour minimums vary depending on the complexity of the mission or aircraft.

Initial Carding	ELOS/BVLOS/Night	Aerial Ignitions	Type 3 Aircraft	Type 4 Aircraft
20 hours (TT*)	10 hours	10 hours	15 hours	10 hours

*TT = Total time as a RPIC

UAS Pilot Evaluator Responsibilities

1. Conducting quality assurance reviews of pilot records and assisting with audits.
2. Administering flight training or evaluations assigned by a designated UAS final evaluator.
3. Coordinating with Lead instructors for teaching and or providing oversight of approved UAS training content related to flight and flight control systems for agency aircraft, payloads, and missions.

4. Utilization of approved and current curriculum.
5. Ensuring all training and evaluations are recorded to agency standards.
6. Recommending and documenting additional training.
7. Responding appropriately to pilot safety concerns and providing recommendations on how to resolve concerns or bring deficiencies up to standard.
8. Documenting and reporting performance deficiencies to the Agency UAS Program Coordinator.
9. Maintaining required documentation of administered evaluations in coordination with a final evaluator.

UAS Pilot Evaluator Currency

1. Must maintain the currency, flight time, and training requirements listed in RDPO Standards for UAS Operations (Chapter 3 Exhibit 1, UAS Pilot Flight Time & Training Requirements).
2. 2 hours conducting UAS pilot evaluations within a 24-month period.
3. Attend a RDPO UAS standardization workshop every 24 months.
4. Attend or participate in aircraft and mission-specific training every 24 months to maintain evaluator designation for each aircraft and mission.

Request for Pilot Evaluator Designation

1. Evaluators must be nominated by a participating agency Aviation Officer or Designee.
2. The nominator will complete the UAS Pilot Evaluator Recommendation Form and submit to RDPO UAS Program Manager. (Appendix C)
3. The RDPO UAS Program Manager will maintain annual letters.

UAS Final Evaluator

UAS Final Evaluators (Final Evaluators) are RDPO remote pilots with an RDPO Remote Pilot Qualification Card signing authority. This designation should be retained and assigned to permanent UAS staff at the agency or regional level.

Final evaluators provide oversight and quality assurance of pilot standards. They work in conjunction with Lead instructors, pilot evaluators, and RDPO UAS Program Manager to ensure consistency. Final evaluators coordinate with pilot evaluators to assign check rides when a remote pilot completes training for specific aircraft, payloads, or missions.

UAS Final Evaluator Requirements

1. Current FAA Part 107 Remote Pilot Certificate.
2. Current RDPO pilot card.
3. Subject matter expert (SME) in UAS policy and operations.
4. Designation by RDPO UAS Program Manager.
5. *Must meet All requirements, responsibilities, and currency requirements of the UAS Pilot Evaluator designation when conducting flight evaluations.*

UAS Final Evaluator Responsibilities

1. Conducting quality assurance reviews and audits of pilot standards and records.
2. Providing oversight and coordination with pilot evaluators for flight training and evaluations.
3. Ensuring all required evaluation documentation is complete.
4. Updating and issuing RDPO Remote Pilot Qualification Cards.
5. Mentoring and recommending potential UAS pilot evaluators and prospective Lead instructors.
6. Collaborating with interagency UAS management to develop and improve training content.
7. Responding appropriately to pilot safety concerns and providing recommendations on how to resolve concerns or correct deficiencies to standard.
8. Documenting and reporting performance deficiencies to the RDPO UAS Program Manager when warranted.
9. Maintaining required documentation of administered evaluations in coordination with RDPO UAS Pilot Standards.

UAS Final Evaluator Currency

1. Maintain the currency, flight time, and training requirements listed in RDPO Standards for UAS Operations (Chapter 3 Exhibit 1, UAS Pilot Flight Time & Training Requirements).
2. Attend a RDPO UAS Standardization Workshop every 24 months.

Request for Final Evaluator Designation

1. Evaluators must be nominated by a participating Agency Aviation Officer or Designee.
2. Agency Aviation Officer or Designee will submit a letter requesting Final Evaluator designation to RDPO UAS Pilot Standards.
3. The RDPO Program Manager will maintain annual letters.

Chapter 3: Training and Evaluation Methodology

Pilots cannot be expected to perform aircraft or mission standards satisfactorily without introduction, demonstration, and training. Training consists of academic training, pilot records review and flight exercises. Pilot evaluators conduct a phased approach to train pilots before a final evaluation can be conducted. Tasks must be completed by the pilot and assessed for deviations on procedure and where technique can be improved. Pilots cannot be carded for an aircraft or mission without successfully completing all phases of training and evaluation. Any pass or fail evaluation or final evaluation (check ride) must be conducted by a qualified pilot evaluator in coordination with a final evaluator.

Methodology Principles

The method used to conduct a training or evaluation must be based on uniform standards found in the Master Task List (Appendix A) and developed into an evaluation plan. An effective plan should address the special emphasis areas (Chapter 1) and contain critical tasks and knowledge subjects pertinent to the purpose of the event. Plans may contain a required minimum task list for training such as A450 (Chapter 4 Evaluation Plans- Basic Remote Pilot) or may be purpose built for events such as a standards check or retraining. Depending on the event, evaluation plans may include demonstration flights, training flights, and or evaluation flights. Flight training guides may be used to facilitate an event. Role reversals may be incorporated into the delivery
method to evaluate a pilot's response to specific scenarios (evaluator acts as an effective aircrew member or intentionally performs as an ineffective aircrew member).

An evaluation determines the pilot's competency to perform specific aircraft operations or missions to agency standards. Evaluations test a pilot's aviation knowledge, practical skills, and risk management aptitude. The pilot evaluator must ensure a complete evaluation is given in all required areas and must produce specific findings to identify any needs for additional training. Pilots must understand what procedures have been performed correctly or incorrectly and how improvements can be made.

Flight Training Guides

UAS Flight Training Guides contain a systematic approach to training remote pilots on specific aircraft or missions within an agencies operation control. Guides outline the minimum required knowledge, tasks, and phase procedures that must be performed successfully by a pilot prior to carding. Guides are not a replacement for sound judgment as both a pilot and as an evaluator. Plans may require change to facilitate instruction for an individual student. Flight training guides are not stand-alone documents and shall be used concurrently with this manual.

Demonstration Flights

Tasks are introduced by demonstrating how to correctly perform the standard. This can be accomplished by the pilot evaluator performing the task or the pilot performing the task under the supervision of the pilot evaluator. The pilot evaluator shall highlight any areas for increased focus and all questions from the pilot should be addressed during this phase. The demonstration flight must be documented prior to conducting a training flight.

Training Flights

Once a task has been demonstrated, the pilot can then perform the identified procedures. The pilot evaluator shall have full authority over the flight and provide feedback to the pilot. The pilot evaluator shall document the pilot's performance using the evaluation criteria, debrief with the pilot, and annotate any deviancies from the standard on the evaluation remarks form. When all tasks in an evaluation plan have been performed to a satisfactory level and all documentation is complete, an evaluation flight may be conducted.

Evaluation Flights

Evaluation flights are pass or fail flights that may be conducted for proficiency, standards checks, or a final evaluation (check ride). The pilot evaluator will determine the amount of time devoted to each phase.

Computer- based instruction, mock-ups, or other approved devices (to include the aircraft or simulator) may be used to determine the pilot's competency of the tasks. Task standards are based on an ideal situation and evaluation is based on meeting the minimum standards. The pilot evaluator must consider deviations (high wind, turbulence, or poor visibility) from ideal conditions.

Training or Evaluation Phases

There are four phases to training or evaluation:

Phase 1 – Introduction

In this phase, the pilot evaluator confirms the purpose of the training or evaluation, explains the procedure, and discusses the standards and criteria to be used. The pilot evaluator reviews the pilot's training and qualification records and verifies all prerequisites are met for the flight. A training records review must be completed prior to any flight. Discrepancies or missing information should be discussed with the pilot and their Agency UAS Program Coordinator. In this phase, the evaluator must verify that the pilot meets all prerequisites for the platform and or mission set that is being instructed and has a current RDPO Pilot Card for all events other than initial carding.

Phase 2 - Knowledge Competency

An academic knowledge training or evaluation (knowledge checks) shall be conducted as directed by designated flight training guides or at the pilot evaluator's discretion when no flight training guide is established. An outline of knowledge topics is listed in *Chapter 4 – Evaluation Plans* and subsequent questions will depend on the aircraft or mission being evaluated.

Phase 3 - Flight Exercise

The flight exercise may consist of demonstration, training, or evaluation flights as designated by a flight training guide or pilot evaluator's discretion when no flight training guide is established. The pilot evaluator will address the flight profile with the pilot. When this phase is required, the following procedures apply.

Briefing:

Pilot Evaluators shall brief the pilot on the required tasks and explain any required flight procedures. An operational safety briefing shall be conducted by either the pilot evaluator or pilot.

Preflight Tasks:

Ground operations, checklists, preflight inspections, and before-takeoff checks shall be administered by the pilot evaluator based on the flight profile. Use of aircraft manuals and related maintenance publications may be referenced as needed. FAA Registration and airworthiness shall be verified by the pilot evaluator.

Flight Tasks:

Flight tasks for the aircraft or mission being conducted shall be administered by the pilot evaluator and follow applicable checklists for takeoff, after takeoff, before landing, and landing procedures.

Post Flight Tasks:

Inspections and flight use reporting will be completed in accordance with the operator's manual, applicable checklists, and RDPO Standards for UAS Operations.

Phase 4 – Debrief

Elements of a debrief may differ depending on the event. A debriefing should occur after each flight but may be deferred until the conclusion of multiple flights. At a minimum, this phase should include the following:

- Tasks not performed to standard.
- The pilot's strengths and weaknesses.
- Pilots shall be advised whether they passed or failed an evaluation.
- Discuss recommendations for improvement.
- Inform the pilot of any restrictions, limitations, or revocations recommended to the pilot's aviation leadership following an unsatisfactory evaluation.
- Complete the applicable forms and ensure the pilot has adequate time to review and sign.

Evaluation Criteria

Criteria characteristics apply for ideal environmental conditions during a phase of training or evaluation. The pilot evaluator must consider deviations from the ideal (high wind, turbulence, or poor visibility) during the event. If other than ideal conditions exist, the evaluator must make appropriate adjustments to the standards. Remote pilot evaluation forms will be used (Appendix B) to document a pilot's performance using the following key:

Introduction	**DM**	Introduced tasks are rated as DM for "Demonstrated". Demonstrations may be performed by the evaluator or by the student under the evaluator's guidance.
Training	**4,3,2,1**	After a task is introduced, training performance will be rated as 4, 3, 2, or 1.
No Action	**/**	No action is taken to introduce, train, or evaluate a task.
Final Evaluation	**S,U**	The pilot's check ride will only be rated as S (satisfactory) or U (unsatisfactory)

Characteristics of 4

a) Performs near the optimum task standards most of the time.
b) Immediately recognizes errors and takes proper corrective action.
c) Rarely makes the same errors.
d) Performs so that the safe operation of the aircraft is never in doubt.

Characteristics of 3

a) Performs near the optimum task standards some of the time.
b) Quickly recognizes errors and takes proper corrective action.
c) Infrequently makes the same errors.
d) Performs so that the safe operation of the aircraft is never in doubt.

Characteristics of 2

a) Performs inconsistently within task standards. Extremes of the standards are approached routinely.
b) Is slow to recognize errors and/or take proper corrective action.
c) Frequently makes the same errors.
d) Performs so that the safe operation of the aircraft is never in doubt.

Characteristics of 1

a) Lacks sufficient knowledge, skill, or ability to perform within the task standards.
b) Does not recognize errors and/or takes improper corrective action.
c) Consistently makes the same errors.
d) Performs so that the safe operation of the aircraft or the possible recognized outcome of the performed task is in doubt.

Characteristics of DM

a) Demonstration **(DM)** will be used for tasks that are introduced. Proficiency is not required during this phase.

Remarks regarding pilot performance are documented on the remote pilot evaluation form and are required for all flights. Remarks shall use “Basic Qualities” terminology when relating to specific rating characteristics or general performance.

Basic Qualities

Basic Qualities are the distinctive attributes or characteristics possessed by individuals in relationship to flight performance. Basic Qualities are used to identify personal characteristics that support an evaluation for qualification training

Cognitive Qualities

a) *Retention* - Ability to remember previous instruction.
b) *Aptitude* - Ability to learn basic principles at an appropriate speed.
c) *Planning & Judgement* - Ability to promptly select the best method to achieve the desired objective, considering the situation and previous instruction.
d) *Alertness* - Ability to perceive and properly respond to the flight maneuver or circumstance.

Physical Qualities

a) *Control Touch* - Ability to make smooth and accurate control inputs.
b) *Physical Coordination* - Ability to achieve a desired aircraft maneuver with proper control inputs.
c) *Reaction Time* - Recognition of an action required and/or performance of an action required.
d) *Crew Coordination* - Understanding and application of Crew Resource Management (CRM) principles.

Emotional Qualities

a) *Motivation* - Positive action toward learning; good study skills or habits necessary to learn.
b) *Attitude* - Positive demeanor toward flight instruction or necessary learning.
c) *Confidence* - Belief in one's ability to perform a task or maneuver.
d) *Composure* - Ability to maintain self-control.
e) *Safety* - Ability to recognize an unsafe situation and/or respond appropriately.

Final Evaluation Criteria

During a final evaluation, all tasks will be annotated as either Satisfactory **(S)** or Unsatisfactory **(U)** only (satisfactory task rating equivalency must be above a “1”). When in the judgment of a qualified UAS pilot evaluator, the pilot does not meet the standard, the practical test is failed. The pilot will not receive a RDPO pilot card or endorsement for the specific mission or aircraft.

Chapter 4: Evaluation Plans

Remote Pilot Tasks

Remote Pilot Tasks (Tasks) are used when developing evaluation plans for events such as training, standard checks, or recommendations related to pilot performance. Tasks are listed by number and title (example: *BR 25 - Perform Radio Communication Procedures*) and have a corresponding task sheet with the following components:

Conditions	The context in which a task is conducted. This may include environmental factors, materials, or circumstances.
Standard	The criteria established to ensure quality, safety, and compatibility. The standard serves as a reference point to guarantee requirements can be consistently replicated for conditions and may require specific performance.
Performance	The Performance listed for each task are examples or indicators of items or actions related to the task. The purpose is to assist the pilot evaluator in training or evaluating the trainee; the performance elements are not all-inclusive but represent specific criteria that may be used during training/evaluation flights to ensure the standard is met.
Training & Evaluation Requirements	The conditions in which a training or evaluation may be conducted such as in a classroom or in the field.

Tasks are selected by event and compiled into an evaluation plan for training, evaluation, or both. Not all tasks are relevant to all events. It is the responsibility of the pilot evaluator to use established evaluation plan minimums when required and the *Evaluation Principles (Chapter 3)* when adding tasks or developing custom evaluation plans.

The Master Task List (MTL) is a consolidated listing of all individual standards that apply to aircraft and missions performed by the RDPO Agencies *(Appendix A)*. The MTL identifies minimum required training modes per task and should be referenced during the development of evaluation plans.

Knowledge Topics

Knowledge topics encompass a wide range of subjects and information relevant to the field of aviation and are essential for individuals performing agency UAS missions. Flight training guides or individual evaluation plans outline applicable topic areas for which pilots must show a working knowledge of. Key areas include:

ORS 837	Airspace Authorizations	Fly Away/Lost Link Procedures
Agency Policies	NOTAMs	Airworthiness Requirements
RDPO Standards for UAS	System Limits	Pilot Records
Operations Weather Hazards	Emergency Procedures	Maintenance

A-454 Add-On Topics: Specific aircraft system or mission limitations

Cold Weather and Icing: All pilots must show a working knowledge of icing conditions and the no-flight

rule, the cold-weather limits of each aircraft, battery, and parachute recovery system they fly, the icing warning signs, and the manual emergency landing, using SAFECOMs 23-0164 and 23-0202 as case studies (task BR 72; RDPO Standards for UAS Operations, Chapter 4).

Minimum Requirements for Aircraft or Mission Certification

Evaluation plan minimum requirements shall not be reduced. Optional tasks or knowledge topics may be added depending on the event. Pilot evaluators may use their discretion when more than one delivery mode is identified.

Basic Remote Pilot

Unmanned Aircraft Systems: Basic Remote Pilot								
Task #	Task Title	Training			Evaluation		
BR 15	Participate in a Crew/Mission Brief	A		C	A		C
BR 20	Perform System Ground Inspection	A		C	A		C
BR 25	Perform Radio Communication Procedures	A		C	A		
BR 30	Perform System Preflight	A		C	A		
BR 35	Perform Aircraft Takeoff	A		C	A		
BR 40	Perform Flight in Manual Control	A		C	A		
BR 45	Perform Flight Utilizing Automatic Flight Mode	A		C	A		
BR 50	Operate Optical Sensor Payload	A		C	A		
BR 55	Perform Battery Management Procedures	A		C	A		
BR 60	Perform Basic Flight Maneuvers	A		C	A		
BR 70	Respond to Emergencies	A		C	A		C
BR 72	Perform Cold Weather and Icing Procedures	A		C	A		C
BR 75	Perform Aircraft Landing	A		C	A		
BR 80	Perform After Landing Checks	A		C	A		
BR 85	Participate in a Crew After Action Review	A		C	A		C
Training/Evaluation Modes							
(A) Aircraft (S) Simulator (C) Classroom							

Type 3 and Type 4 Aircraft

Aircraft and GCS Add-On (A-454): This evaluation plan, together with the A-454 add-on topics for the specific aircraft, is used to add a new or different aircraft platform (for example, Freefly Astro, Freefly Alta X, Parrot Anafi USA, DJI M30T, Skydio X10, DJI M4T, Edge 130, or another approved aircraft) or specialized ground control station (GCS) software to a current pilot card. Prerequisites, minimum flight time, and card entries are in the RDPO Standards for UAS Operations, Chapter 3 (Aircraft and GCS Qualification). The added aircraft or GCS is listed under Authorized Aircraft / GCS on the pilot card (Appendix C). Each aircraft add-on covers that aircraft's cold-weather limits, battery warming procedures, and icing response (BR 72).

A-454 is also used to add safety devices and operations to a current pilot card: the parachute recovery system for each aircraft (PRS-M30 or PRS-X10), operations over people and moving vehicles (OOP/OOMV), operations above 400 feet AGL (400+), and payload delivery (PAYLOAD). Each add-on includes the manufacturer-required training for the device, the phase-of-flight checklist items (pre-flight, takeoff, before landing, and after landing), and a check ride with a pilot evaluator. Requirements, aircraft payload limits, and the approved payload list are in the RDPO Standards for UAS Operations, Chapters 3 and 4.

Unmanned Aircraft Systems: Type 3 and Type 4 Aircraft							
Task #	Task Title	Training			Evaluation		
BR 20	Perform System Ground Inspection	A		C	A		
BR 30	Perform System Preflight	A		C	A		
BR 35	Perform Aircraft Takeoff	A		C	A		
BR 40	Perform Flight in Manual Control	A		C	A		
BR 45	Perform Flight Utilizing Automatic Flight Mode	A		C	A		
BR 50	Operate Optical Sensor Payload	A		C	A		
BR 55	Perform Battery Management Procedures	A		C	A		
BR 60	Perform Basic Flight Maneuvers	A		C	A		
BR 70	Respond to Emergencies	A		C	A		C
BR 72	Perform Cold Weather and Icing Procedures	A		C	A		C
BR 75	Perform Aircraft Landing	A		C	A		
BR 80	Perform After Landing Checks	A		C	A		
BR 85	Participate in a Crew After Action Review	A		C			C
Training/Evaluation Modes							
(A) Aircraft (S) Simulator (C) Classroom							

Aerial Ignitions (Under Development)

Unmanned Aircraft Systems: Aerial Ignitions								
Task #	Task Title	Training			Evaluation		
Training/Evaluation Modes								
(A) Aircraft (S) Simulator (C) Classroom								

Extended Line of Sight / Beyond Visual Line of Sight (Shielded)

Unmanned Aircraft Systems: ELOS/BVLOS							
Task #	Task Title	Training			Evaluation		
BV 01	Perform Shielding Analysis	A		C	A		C
BV 05	Complete Air and Ground Hazard Assessment (1 SM)			C	A		C
BV 10	Program Lost-Link and Return-to-Home	A		C	A		
BV 15	Monitor ADS-B In and Traffic	A	S	C	A		
BV 20	Perform BVLOS Navigation and Position Reporting	A	S		A		
BV 25	Respond to a Manned Aircraft Encounter	A	S	C	A		
BV 30	Perform Fly-Away and Emergency ATC Notification		S	C	A		C
BV 35	Perform Night BVLOS Operations	A			A		
Training/Evaluation Modes							
(A) Aircraft (S) Simulator (C) Classroom							

Prerequisites: Current RDPO pilot card for the aircraft type (Basic Remote Pilot tasks BR 01 through BR 85). BV 35 also requires completion of BR 65 (Perform Flight at Night). BVLOS operations are conducted only as shielded operations under the agency CoW/A. Pilot Evaluators for this plan must have at least 10 hours as RPIC in ELOS/BVLOS/Night operations. Task sheets BV 01 through BV 35 are in Appendix A.

Non-Standard Operating Procedures (Under Development)

Unmanned Aircraft Systems: NSOP							
Task #	Task Title	Training			Evaluation		
Training/Evaluation Modes							
(A) Aircraft (S) Simulator (C) Classroom							

Hazardous Materials (Under Development)

Prerequisites: Tier 1 qualification and NIST Level 5. Additional training and the task sheets for this plan are to be determined. Operating standards and the interim rule are in the RDPO Standards for UAS Operations, Chapter 6 (Hazardous Materials).

Fire Investigation / Crime Scene Documentation (Under Development)

Prerequisites: Tier 1 qualification. Training and task sheets are to be determined. Operating standards, ORS Chapter 837 requirements, chain-of-custody steps, and the interim rule are in the RDPO Standards for UAS Operations, Chapter 6 (Fire Investigation / Crime Scene Documentation) and Appendix F (Oregon Law Enforcement Decision Tree).

Drone as a First Responder (DFR) (Under Development)

Placeholder. Training standards for DFR operations have not been developed. DFR operations shall not be conducted until the RDPO adopts DFR standards (RDPO Standards for UAS Operations, Chapter 6) and this evaluation plan is completed.

UAS Pilot Evaluator Evaluation may be completed per any aircraft or mission that the pilot is recommended for.

Unmanned Aircraft Systems: Pilot Evaluator								
Task #	Task Title	Training			Evaluation			
PE 165	Develop Evaluation Plan			C			C	
PE 175	Evaluate Academic Knowledge Subjects	A		C	A		C	
PE 180	Train Remote Pilot Tasks	A		C	A		C	
PE 185	Evaluate Remote Pilot Tasks	A		C	A		C	
PE 190	Administer Final Evaluation (Check Ride)	A		C	A		C	
Training/Evaluation Modes								
(A) Aircraft (S) Simulator (C) Classroom								

Chapter 5: Pilot Training and Qualification Records

All agency pilot competency records must be maintained in the pilot's training and qualification record and must contain the elements listed within agency policy as part of RDPO carding requirements. Pilots and evaluators shall refer to the RDPO Standards for UAS Operations (Chapter 3, Pilot Training and Qualification Records) for records folder structure, contents, and requirements. All applicable records shall be made available for review during any phase of training or evaluation.

APPENDIX A

MASTER TASK LIST

REMOTE PILOT

TASKS

Master Task List

Task #	Task Title	Training			Evaluation		
Basic Remote Pilot Tasks							
BR 01	Complete a Mission Aviation Safety Plan			C			C
BR 10	Create a UAS Mission Plan			C			C
BR 15	Participate in a Crew/Mission Brief	A		C	A		C
BR 20	Perform System Ground Inspection	A		C	A		
BR 25	Perform Radio Communication Procedures	A		C	A		C
BR 30	Perform System Preflight	A		C	A		
BR 35	Perform Aircraft Takeoff	A		C	A		
BR 40	Perform Flight in Manual Control	A		C	A		
BR 45	Perform Flight Utilizing Automatic Flight Mode	A		C	A		
BR 50	Operate Optical Sensor Payload	A		C	A		
BR 55	Perform Battery Management Procedures	A		C	A		
BR 60	Perform Basic Flight Maneuvers	A		C	A		
BR 65	Perform Flight at Night	A		C	A		
BR 70	Respond to Emergencies	A		C	A		C
BR 72	Perform Cold Weather and Icing Procedures	A		C	A		C
BR 75	Perform Aircraft Landing	A		C	A		
BR 80	Perform After Landing Checks	A		C	A		
BR 85	Participate in a Crew After Action Review	A		C	A		C
Pilot Evaluator Tasks							
PE 165	Develop Evaluation Plan			C			C
PE 170	Instruct Academic Knowledge Subjects	A		C	A		C
PE 175	Evaluate Academic Knowledge Subjects	A		C	A		C
PE 180	Train Remote Pilot Tasks	A		C	A		C
PE 185	Evaluate Remote Pilot Tasks	A		C	A		C
PE 190	Administer Final Evaluation (Check Ride)	A		C	A		C

Training/Evaluation Modes:

(A) Aircraft
(S) Simulator
(C) Classroom

BR 01 - Complete a Mission Aviation Safety Plan

CONDITIONS: While performing the duties of Remote Pilot; given a project or mission proposal, provided a copy of the agency policy, Operational Risk Management Practices, and RDPO Standards for UAS Operations.

STANDARDS: The pilot will create or modify a Mission Aviation Safety Plan (MASP) to:

1. Ensure all information is in accordance with agency policy, Operational Risk Management, and RDPO Standards for UAS Operations prior to flight.
2. Confirm MASP is approved.

PERFORMANCE: MASP is complete when the following criteria are met:

1. Mission aviation manager identified.
2. Mission name and objective is described.
3. Aircraft Justification is complete.
4. Mission date(s) filled.
5. Location is described, maps clearly show flight area, and aerial hazards are clearly indicated.
6. Mission cost of aviation resources is filled.
7. Aircraft information is completed if known.
8. Pilot information is completed if known.
9. Participant information is completed if known.
10. Flight following and emergency search-and-rescue procedures identified.
11. Aerial hazard analysis is completed with an attached map.
12. Protective clothing/equipment is identified as well as survival equipment.
13. Load calculations and weight-and-balance complete.
14. Risk/hazard assessment is completed in accordance with Operational Risk Management Practices.

NOTE

Prior to conducting aviation operations an emergency contact checklist should be completed as per *PMS 503 NWCG Aviation Mishap Response Guide and Checklist*. This information may be included in a MASP or attached.

TRAINING AND EVALUATION REQUIREMENTS:

1. Training may be conducted academically or with hands-on performance.
2. Evaluation will be conducted academically or with hands-on performance.

BR 10 - Create a UAS Mission Plan

CONDITIONS: While performing the duties of Remote Pilot; given a project or mission proposal, completed MASP, logbooks, system technical manuals, and RDPO Standards for UAS Operations.

STANDARDS: The pilot will confirm airspace, authorization for flight, and create or modify a UAS operations plan to determine:

1. Appropriate aircraft for mission.
2. Appropriate payload for mission.
3. Appropriate data storage availability for mission.
4. Appropriate transportation for mission.
5. Appropriate ground support for mission.

PERFORMANCE:

The pilot will create or modify a UAS operations plan to determine:

1. Appropriate aircraft for mission.
    a. Aircraft logbooks verified for serviceability.
    b. Aircraft has lift capacity for the appropriate payload.
    c. Aircraft has flight duration appropriate for the mission.
2. Appropriate payload for mission.
    a. Payload selected supports mission requirements.
    b. Payload has been tested prior to mission.
3. Appropriate data storage availability for mission.
    a. Data storage is appropriate for estimated mission duration.
    b. Appropriate data processing plan is in place.
4. Appropriate transportation for mission.
    a. Appropriate number of seats for personnel and security/storage for equipment.
    b. Transportation will be sufficient for anticipated terrain or environmental conditions.
5. Appropriate ground support for mission.
    a. Mission-Critical replacement parts/equipment available.
    b. Power and fuel supply adequate for estimated mission duration.
    c. Personnel supplies are adequate for estimated mission duration.

TRAINING AND EVALUATION REQUIREMENTS:

1. Training may be conducted academically or with hands-on performance.
2. Evaluation will be conducted academically or with hands-on performance.

BR 15 - Participate in a Crew/Mission Brief

CONDITIONS: While performing the duties of Remote Pilot; given a project or mission proposal and completed Mission Aviation Safety Plan (MASP).

STANDARDS: The pilot will brief aircrew members to the “Big 4” (Mission Aviation Safety Plan, airspace authorization, carded aircraft, carded pilot), mission objectives and intent, safety, and communication plans. The pilot will assign mission duties and responsibilities to flight crewmembers, brief assigned flight crewmembers on mandatory and mission-related items and conduct a Flight Risk Assessment (FRAT). The pilot will ensure understanding of duties or responsibilities and provide for effective crew resource management.

PERFORMANCE:

1. The pilot will briefto:
    a. Approved Operations Plan (MASP/PASP or PMS-515).
    b. Airspace authorization (14CFR PART-107/LAANC/COA/CoW/A/NOTAM/SGI).
    c. Carded pilot.
    d. Carded aircraft.
    e. Objectives and intent.
    f. Safety (weather, obstacles, hazards, other).
    g. Communication plan.
    h. Emergency procedures.
    i. Brief the assigned flight crewmembers on the mandatory and mission-related items.
    j. Conduct a Flight Risk Assessment (FRAT).

2. The pilot will ensure a full understanding of duties and responsibilities.
    a. Clarify misunderstandings.

3. Promote CRM.

TRAINING AND EVALUATION REQUIREMENTS:

1. Training may be conducted academically or with hands-on performance.
2. Evaluations may be conducted with hands-on performance or discussion.

BR 20 - Perform System Ground Inspection

CONDITIONS: While performing the duties of Remote Pilot; given an unmanned aircraft system (UAS), the logbooks/maintenance records for the UAS to be used, aircraft operating manual and agency standard operating procedures.

STANDARDS: The pilot will verify the data of the logbooks, maintenance records, current aircraft data card, and inspect the aircraft and GCS for anomalies. Ensure there are no maintenance requirements. Provide for effective crew resource management.

PERFORMANCE:

1. Review the aircraft logbook and maintenance records.
    a. Current interagency aircraft data card.
    b. Maintenance requirements.

2. Confirm all required aircraft, GCS, and support systems components are accounted for.

3. Inspect the aircraft for anomalies.
    a. Fuselage
    b. Arms
    c. Props
    d. Antennas
    e. Battery
    f. Payload
    g. Landing gear

4. Inspect GCS for anomalies.
    a. Button function
    b. Stick movement
    c. Screen
    d. Antennas

TRAINING AND EVALUATION REQUIREMENTS:

1. Training may be conducted academically or with the aircraft.
2. Evaluation will be conducted with the aircraft.

BR 25 - Perform Radio Communication Procedures

CONDITIONS: While performing the duties of Remote Pilot; given a project or mission proposal, a completed Mission Aviation Safety Plan (MASP) or Incident Action Plan (IAP) and radios that can communicate on appropriate mission frequencies.

STANDARDS: The pilot will program and operate radios as required; establish and maintain radio contact with the desired individual, unit, aerial supervision, and or ATC. Operate all communication systems in accordance with mission requirements. Communicate as required using correct radio procedures and phraseology according to the FAR/AIM, NWCG, and published Standard Operating Procedures. Acknowledge each radio communication by using the correct aircraft call sign. Perform two-way radio failure mitigation. Provide for effective crew resource management.

PERFORMANCE:

1. Program and operate radios as required.
2. Establish and maintain radio contact with the desired individual, unit, aerial supervision, and or ATC facility.
3. Communicate using correct radio procedure and phraseology according to the FAR/AIM and published standard operating procedures.
4. Communicate using established NWCG scripts for authorization and deconfliction when on incidents.
5. Acknowledge each radio communication by using the correct aircraft call sign.
6. Perform two-way radio failure mitigation.
    a. Establish other means of performing communication with required parties.
        i. May utilize cellular device.
        ii. May utilize another radio and or frequency.
    b. Troubleshoot equipment to determine communication issue if possible.

TRAINING AND EVALUATION REQUIREMENTS:

1. Training may be conducted academically or with the aircraft.
2. Evaluation will be conducted with the aircraft.

BR 30 - Perform System Preflight

CONDITIONS: While performing the duties of Remote Pilot; given an aircraft that has a completed ground inspection, aircraft operating manual, pilot logbook, current aircraft checklist, and agency standard operating procedures.

STANDARDS: The pilot will verify the flight area is appropriate for the mission; establish a launch and recovery zone (LRZ), ensure all aircraft assemblies, settings, batteries, functions, and support equipment are ready for flight, and perform the “Preflight” and “Before Takeoff” checklist. Provide for effective crew resource management.

PERFORMANCE:

1. Verify the flight area for the mission and establish LRZ.
    a. Ensure LRZ is appropriate for mission and hazards (Reference BR 65 for flights at night).
    b. Confirm all applicable support equipment for the LRZ is on site and prepared before flight.
    c. Record location, mission, and aircraft information in pilot logbook.

2. Confirm correct MicroSD card format.
3. Confirm battery voltage minimums meet requirements or SOP best practices:
    a. Aircraft (>%90)
    b. Camera (>%90)
    c. Controller (>%90)
    d. Tablet (>%50)

4. Calibrate aircraft and GCS as required.
5. Ensure no active cautions or warnings are present on GCS.
6. Set or verify safety and emergency functions are appropriate for the mission and hazards.
7. Perform “Preflight” checklist procedures.
8. Perform “Before Takeoff” checklist procedures.

TRAINING AND EVALUATION REQUIREMENTS:

1. Training may be conducted academically or with the aircraft.
2. Evaluation will be conducted with the aircraft.

BR 35 - Perform Aircraft Takeoff

CONDITIONS: While performing the duties of Remote Pilot; given an aircraft that has completed ground inspection & system preflight, current aircraft checklist, confirmed airspace authorization, and system manual.

STANDARDS: The pilot will perform the aircraft “Takeoff” checklist, “After Takeoff” checklist, and perform coordination with aircrew members for hazard avoidance, and remain within applicable airspace authorization requirements. Provide for effective crew resource management.

PERFORMANCE:

1. Perform aircraft “Takeoff” checklist.
2. Perform aircraft “After Takeoff” checklist.
3. Demonstrate effective CRM and coordinate with aircrew members for hazard avoidance as required.
4. Remain within applicable airspace authorization requirements.

TRAINING AND EVALUATION REQUIREMENTS:

1. Training may be conducted academically or with the aircraft.
2. Evaluation will be conducted with the aircraft.

BR 40 - Perform Flight in Manual Control

CONDITIONS: While performing the duties of Remote Pilot; given an aircraft in flight (with or without GPS), and system manual.

STANDARDS: The pilot will ensure the aircraft maintains proper altitude and airspeed to meet mission requirements, maintain a heading to stay in approved airspace boundaries, ensure the aircraft operates within the operating limits, and provide for effective crew resource management.

PERFORMANCE:

1. Adjust and maintain airspeed commands to meet mission requirements.
2. Adjust and maintain altitude commands to meet mission requirements.
3. Maintain a heading to stay in approved airspace boundaries.
4. Ensure the aircraft operates within operating limits.
5. Demonstrates ability to apply stick inputs for smooth and stable manual flight control.
6. Provide for effective crew resource management.

TRAINING AND EVALUATION REQUIREMENTS:

1. Training may be conducted academically or with the aircraft.
2. Evaluation will be conducted with the aircraft.

BR 45 - Perform Flight Utilizing Automatic Flight Mode

CONDITIONS: While performing the duties of Remote Pilot; given an aircraft and systems manual.

STANDARDS: The pilot will climb to mission altitude prior to entering the automated flight plan and perform flight utilizing automatic flight modes. Verify waypoints, airspeed and altitude are appropriate for the mission and do not exceed system limitations. Select the correct flight mode and verify the aircraft enters the selected flight mode. Verify airspeed, heading, and altitude are set to programmed settings and provide for effective crew resource management.

PERFORMANCE:

1. Climb to mission altitude prior to entering automated flight plan.
2. Perform flight utilizing automated flight modes.
    a. Select the correct flight mode and verify the aircraft enters the selected flight mode.
    b. Verify waypoints, airspeed and altitude are appropriate for the mission and do not exceed system limitations.
    c. Verify airspeed, heading, and altitude are set to programmed settings.

3. Provide for effective crew resource management.

TRAINING AND EVALUATION REQUIREMENTS:

1. Training may be conducted academically or with the aircraft.
2. Evaluation will be conducted with the aircraft.

BR 50 - Operate Optical Sensor Payload

CONDITIONS: While performing the duties of Remote Pilot; given an aircraft equipped with a common sensor payload, configured for operation, powered on, and systems manuals.

STANDARDS: The pilot will perform optical sensor payload procedures and checks; determine any malfunctions and apply corrective action or troubleshooting procedures as required. Determine the operational status of the optical sensor payload, perform operational checks and employ all optical sensors.

PERFORMANCE:

1. Perform optical sensor payload procedures in accordance with system manual and standard operating procedures.
    a. Determine the operational status of the optical sensor payload.
    b. Record any malfunctions as required.
    c. Apply corrective action or troubleshooting procedures as required.

2. Employ the optical sensors as required by the mission requirements.

TRAINING AND EVALUATION REQUIREMENTS:

1. Training may be conducted academically or with the aircraft.
2. Evaluation will be conducted with the aircraft.

BR 55 - Perform Battery Management Procedures

CONDITIONS: While performing the duties of Remote Pilot; given an aircraft that has a completed ground inspection with preflight procedures completed, system manual, and standard operating procedures.

STANDARDS: The pilot will verify the required amount of battery charge at time of takeoff, prioritize mission requirements based on endurance, monitor battery consumption throughout the flight and initiate alternate course of action if the flight cannot be completed with the required battery level.

PERFORMANCE:

1. Verify that the required amount of battery charge at the time of takeoff (refer to **BR 30**).
2. Prioritize mission requirements based on:
    a. Distance to furthest requirement.
    b. Time needed on station.
    c. Wind conditions.

3. Monitor battery consumption throughout the flight.
4. Initiate alternate course of action if the flight cannot be completed with the required battery level.

TRAINING AND EVALUATION REQUIREMENTS:

1. Training may be conducted academically or with the aircraft.
2. Evaluation will be conducted with the aircraft.

BR 60 - Perform Basic Flight Maneuvers

CONDITIONS: While performing the duties of Remote Pilot; given an aircraft in flight, system manual, and standard operating procedures.

STANDARDS: The pilot will navigate the aircraft with a dynamic maneuver that utilizes multi-stick inputs. For initial aircraft carding events, all performance elements must be completed.

PERFORMANCE:

Complete the following basic flight maneuvers using smooth and accurate inputs:

1. Circle

    a. The aircraft starts at a level hover-hold.
    b. The pilot will fly the aircraft in a circle to the left or right using pitch and yaw while avoiding erratic stick inputs and maintaining level flight.
    c. The maneuver is complete when the pilot arrives at the approximate starting point of the hover-hold.

2. Vertical Diamond

    a. The aircraft will start at a level hover-hold at the bottom of the diamond pattern.
    b. The pilot will fly the aircraft climbing and pitching left or right until establishing a level hover-hold.
    c. The pilot will fly the aircraft gaining altitude with a pitch left or right to above the original starting point.
    d. The pilot will fly the aircraft descending with a pitch left or right to an equal point of the first maneuver and will establish a level hover-hold.
    e. The pilot will fly the aircraft losing altitude with a pitch left or right to the original start point and establish a level hover-hold.

2. Vertical Square

    a. The aircraft will start at a level hover-hold, this will be a bottom corner of the square pattern.
    b. The pilot will fly the aircraft gaining altitude, establishing level hover-hold.
    c. The pilot will yaw the aircraft 90 degrees to the left or right.
    d. The pilot will fly the aircraft left or right and establish a level hover-hold.
    e. The pilot will yaw the aircraft 90 degrees in the direction of the first yaw maneuver.
    f. The pilot will fly the aircraft losing altitude, establishing a level hover-hold.
    g. The pilot will yaw the aircraft 90 degrees in the direction of the first yaw maneuver.
    h. The pilot will fly the aircraft to the approximate start point and establish a level-hover-hold.

4. Figure “8”

    a. The aircraft will start at a level hover-hold in the center of the “8” pattern.
    b. The pilot will fly the aircraft in a circle to the left or right avoiding erratic stick inputs and maintaining level flight.

c. When the aircraft arrives at the approximate start point the pilot will fly the aircraft in the opposite direction of the original circle avoiding erratic stick inputs and maintaining level flight.
d. When the aircraft arrives at the approximate start point the maneuver is complete.

5. Orbit

    a. The aircraft will start at a level hover-hold with optical sensor trained on point of interest.
    b. The pilot will utilize roll and yaw inputs to orbit in a circle to the left or right avoiding erratic stick inputs and maintaining level flight.
    c. Point of interest shall remain in view during orbit.
    d. When the aircraft arrives at the approximate start point the maneuver is complete.

6. NIST

    a. Successfully complete NIST Level 3.

TRAINING AND EVALUATION REQUIREMENTS:

1. Training may be conducted academically or with the aircraft.
2. Evaluation will be conducted with the aircraft.

BR 65 - Perform Flight at Night

CONDITIONS: While performing the duties of Remote Pilot; given an aircraft in flight at night, aircraft operating manual, and standard operating procedures.

STANDARDS: The pilot will ensure the aircraft maintains proper altitude and airspeed to meet mission requirements, maintain a heading to stay in approved airspace boundaries, ensure the aircraft operates within the operating limits, and provide for effective crew resource management.

PERFORMANCE:

1. Confirm airspace authorization has not changed (example: removal of TFR post evening civil twilight).
2. Verify any changes in communication plan.
3. Verify all lighting requirements are met prior to preflight checklist (anti-collision lighting visible to 3 statute miles and position lighting).
4. Utilize best practices for optimized night sight. Apply documented night training, including how the eye works, spatial disorientation and visual illusions, and improving night vision.
5. Perform an LRZ site visit in daylight prior to night mission and confirm hazards.
6. Ensure effective LRZ lighting is utilized.
7. The pilot will ensure the aircraft maintains proper altitude and airspeed for mission requirements.
8. Adjust airspeed commands to meet mission requirements.
9. Adjust altitude commands to meet mission requirements.
10. Maintain a heading to stay in approved airspace boundaries.
11. Ensure the aircraft operates within the operating limits.
12. Perform crew coordination actions as required.

TRAINING AND EVALUATION REQUIREMENTS:

1. Training may be conducted academically or with the aircraft.
2. Evaluation will be conducted with the aircraft.

BR 70 - Respond to Emergencies

CONDITIONS: While performing the duties of Remote Pilot; given an unmanned aircraft system, indications of an emergency, aircraft operating manual, current aircraft checklist, and standard operating procedures.

STANDARDS: The pilot will perform the appropriate emergency procedure in accordance with the system manual and checklist; perform immediate action procedure and make appropriate notifications as required. Perform crew coordination actions to mitigate hazards to the aircraft, safety to personnel, and effectively manage the situation as required. Provide for effective crew resource management.

PERFORMANCE:

1. Perform the appropriate emergency procedure in accordance with the system manual and checklist.
2. Make appropriate notifications as required.
3. Perform crew coordination actions to mitigate hazards to the aircraft, safety to personnel and to effectively manage the situation as required.

TRAINING AND EVALUATION REQUIREMENTS:

CAUTION

The training and evaluation will not create a condition which would place the aircraft in a situation which could result in the damage or loss of equipment.

1. Training may be conducted academically or with the aircraft.
2. Evaluation will be conducted academically or with the aircraft.

BR 72 - Perform Cold Weather and Icing Procedures

CONDITIONS: While performing the duties of Remote Pilot; given an aircraft and batteries, current weather (outside air temperature, dew point, relative humidity, wind, visibility, and precipitation) for the launch site and the work area, the aircraft operating manual, the current aircraft checklist, and the RDPO Standards for UAS Operations, Chapter 4 (Cold Weather and Icing Operations).

STANDARDS: The pilot will determine whether icing conditions exist and make the go/no-go decision; prepare the aircraft and batteries for cold weather; recognize the warning signs of propeller or airframe icing; and land the aircraft manually without relying on return to home or automated landing.

PERFORMANCE:

1. Determine the outside air temperature (OAT), dew point, and temperature-dew point spread, and identify icing conditions: OAT at the surface or at flight altitude of 41 °F (5 °C) or lower with visible moisture, a spread of 5 °F (3 °C) or less, or frost or ice forming.
2. State that manufacturer temperature and ingress-protection (IP) ratings do not approve flight in icing, and that RDPO aircraft do not fly into known or forecast icing except for an imminent threat to life under the Chapter 4 exception.
3. State the cold-weather limits for the aircraft, battery, and parachute recovery system flown, including the minimum battery temperature for takeoff and the battery warming procedure.
4. Warm and insulate the batteries to the manufacturer’s minimum; remove all frost, snow, and ice from the propellers, arms, sensors, and lenses; and carry spare propellers.
5. Plan for reduced endurance: raise the low-battery warning and return-to-home thresholds, plan shorter flights, set the return-to-home altitude below any cloud or fog layer, and identify alternate landing sites near the work area.
6. After takeoff, hover at low altitude near the launch point for 30 to 60 seconds and check motor sound, vibration, battery temperature, and voltage before departing.
7. In flight, recognize the icing warning signs: difficulty climbing, holding altitude, or maneuvering; uncommanded yaw; gimbal warnings; uneven control response; rapid battery discharge or a battery heat warning; and new vibration or a change in motor sound.
8. At the first warning sign, leave visible moisture, stop climbing, announce the emergency to the crew, and land immediately at the nearest safe site, flying the landing manually.
9. After landing, inspect the propeller leading edges and tips for ice, let the aircraft and batteries warm and dry before the next flight, and record the temperature, dew point, and any icing in the flight log.
10. Describe the reporting requirements for an icing encounter, a cold-related battery failure, or a lost aircraft (agency mishap reporting, SAFECOM on interagency incidents, and NASA ASRS), and the lessons of SAFECOMs 23-0164 and 23-0202.

TRAINING AND EVALUATION REQUIREMENTS:

CAUTION

Training and evaluation will not place the aircraft in icing conditions. Icing warning signs and the manual emergency landing are trained and evaluated academically or as a simulated emergency in non-icing conditions.

1. Training may be conducted academically or with the aircraft.
2. Evaluation will be conducted academically or with the aircraft.

BR 75 - Perform Aircraft Landing

CONDITIONS: While performing the duties of Remote Pilot; given an aircraft in flight, current aircraft checklist, aircraft operating manual, and standard operating procedures.

STANDARDS: The pilot will configure the aircraft for landing; complete aircraft “Before Landing” checklist procedures, aircraft “Landing” checklist procedures, and land within weather and system limitations. Perform “GO-AROUND” procedure as required and provide effective crew resource management for obstacle avoidance.

PERFORMANCE:

1. Coordinate with air and ground resources.
2. Perform coordination with aircrew members for obstacle avoidance as required.
3. Perform “Before Landing” checklist procedures.
4. Perform “Landing” checklist procedures.
5. Perform “GO-AROUND” procedure.
    a. Input full deflection climb and pitch forward.
    b. Climb and depart to a safe altitude and distance.
    c. Resume standard landing procedures after the hazard has been resolved.

TRAINING AND EVALUATION REQUIREMENTS:

1. Training may be conducted academically or with the aircraft.
2. Evaluation will be conducted with the aircraft.

BR 80 - Perform After Landing Checks

CONDITIONS: While performing the duties of Remote Pilot; given an unmanned aircraft system post landing, current aircraft checklist, logbooks for the ground control equipment and the aircraft to be used, aircraft operating manual and agency standard operating procedures.

STANDARDS: The pilot will complete aircraft “After Landing” checklist and complete required flight use reporting.

PERFORMANCE:

1. Perform the aircraft “After Landing” checklist.
2. Perform post-flight inspection of the ground control system and aircraft.
3. Enter flight into the appropriate flight use report and record discrepancies encountered as required.

TRAINING AND EVALUATION REQUIREMENTS:

1. Training may be conducted academically or with the aircraft.
2. Evaluation will be conducted with the aircraft.

BR 85 - Participate in a Crew After Action Review

CONDITIONS: While performing the duties of Remote Pilot after completing a mission or operation.

STANDARDS: The pilot will conduct a detailed after-action review (AAR) to capture lessons learned, Identify the roots of perceived successes or problems, and assign follow-up responsibilities. All aircrew members shall be included.

PERFORMANCE:

The pilot shall conduct a mission AAR to include the following:

1. Restate what was intended.
    a. Reason for mission.
    b. Objectives and desired results.
    c. Planned actions/interactions for each mission segment.

2. Describe what happened.
    a. Deviations to planned actions.
    b. Favorable and or unfavorable events.
    c. Crew coordination strengths & weaknesses.
    d. Aircraft & equipment operation.
    e. Impacts of any signal interference.
    f. Causal factors.

3. Discuss why it happened. Identify any required improvements in:
    a. Team relationships.
    b. mission planning.
    c. crew coordination, CRM.
    d. aircrew training.

4. Determine lessons learned for future missions.
    a. Changes required for improvement.
    b. Sustain strengths.

5. Brief leadership on the events and lessons learned from the mission as required.

6. Identify any accident, mishap, or near miss from the mission, including equipment, battery, wildlife (bird strike), or link problems, and confirm that the NASA ASRS UAS Report, the NTSB and FAA reports as required, and the SAFECOM on interagency wildland fire assignments are filed.

TRAINING AND EVALUATION REQUIREMENTS:

1. Training may be conducted academically or with hands-on performance.
2. Evaluations may be conducted with hands-on performance or discussion.

BV 01 - Perform Shielding Analysis

CONDITIONS: While performing the duties of Remote Pilot; given a mission request, current aeronautical charts or an FAA-approved electronic flight application, imagery and terrain data, the agency CoW/A, and the UAS Program Guide.

STANDARDS: The pilot will identify a shielded flight corridor that keeps the UAS within CoW/A BVLOS limits for the entire flight.

PERFORMANCE:

1. Identify the airspace class and the applicable BVLOS altitude limit.
2. Identify the obstructions (natural or man-made) along the route and estimate their heights.
3. Define a route that stays at or below 200 feet AGL, or within 100 feet above an obstruction within 100 feet of the UAS, never above 400 feet AGL (or the UAS Facility Map altitude in controlled airspace).
4. State that smoke, fog, and vapor plumes are not obstructions and are never used as shielding.
5. Brief the corridor, altitudes, and limits to the crew.

TRAINING AND EVALUATION REQUIREMENTS:

1. Training may be conducted academically or with the aircraft.
2. Evaluation will be conducted academically and with the aircraft.

BV 05 - Complete Air and Ground Hazard Assessment (1 SM)

CONDITIONS: While performing the duties of Remote Pilot; given a mission area or route, charts, imagery, and the agency hazard checklist.

STANDARDS: The pilot will complete and brief the 1-statute-mile air and ground hazard assessment before launch.

PERFORMANCE:

1. Identify low-level aviation areas: helipads, airstrips, airports, seaplane areas, MOAs and military training routes below 500 feet AGL, tour routes, and agricultural areas.
2. Identify expected pedestrian and vehicle traffic.
3. Identify the highest obstacle and the shielding obstructions.
4. Identify primary, alternate, and abort landing sites.
5. Record weather and visibility against agency minimums, including the wildland fire smoke standard.
6. Make the deconfliction call to the regional air ambulance dispatch center in Boise, Idaho.

TRAINING AND EVALUATION REQUIREMENTS:

1. Training may be conducted academically.
2. Evaluation will be conducted academically or with the aircraft.

BV 10 - Program Lost-Link and Return-to-Home

CONDITIONS: While performing the duties of Remote Pilot; given an aircraft, ground control station, and a planned shielded corridor.

STANDARDS: The pilot will program and verify lost-link behavior that clears all obstructions while remaining within CoW/A limits.

PERFORMANCE:

1. Set the return-to-home altitude to clear obstructions and remain at or below 200 feet AGL or within 50 feet of an obstruction in Class G airspace, or at or below the UAS Facility Map altitude in Class B, C, D, or E surface areas.
2. Set the return-to-home point and update it for moving-vehicle launches.
3. Verify the lost-link action and timing with the crew.
4. Re-plan the route or launch point when a compliant return-to-home profile is not possible.

TRAINING AND EVALUATION REQUIREMENTS:

1. Training will be conducted academically and with the aircraft.
2. Evaluation will be conducted with the aircraft.

BV 15 - Monitor ADS-B In and Traffic

CONDITIONS: While performing the duties of Remote Pilot during flight; given a ground control station with ADS-B In (1090 MHz and 978 MHz) and an assigned radio frequency.

STANDARDS: The pilot will maintain traffic awareness throughout the flight and take timely avoidance action.

PERFORMANCE:

1. Confirm the ADS-B In display is active before launch.
2. Interpret traffic range, altitude, and track.
3. Integrate radio reports and visual observer calls with ADS-B information.
4. Describe and perform actions on loss of ADS-B In (return to VLOS or land).

TRAINING AND EVALUATION REQUIREMENTS:

1. Training may be conducted academically, in a simulator, or with the aircraft.
2. Evaluation will be conducted with the aircraft.

BV 20 - Perform BVLOS Navigation and Position Reporting

CONDITIONS: While performing the duties of Remote Pilot during BVLOS flight; given a planned corridor and the incident communications plan.

STANDARDS: The pilot will navigate the corridor using instruments and maps and report position accurately.

PERFORMANCE:

1. Remain within the corridor and altitude limits.
2. Report position in degrees and decimal minutes (DDM) and by landmarks.
3. Make position, altitude, heading, flight time, and mission reports in clear text.

TRAINING AND EVALUATION REQUIREMENTS:

1. Training may be conducted in a simulator or with the aircraft.
2. Evaluation will be conducted with the aircraft.

BV 25 - Respond to a Manned Aircraft Encounter

CONDITIONS: While performing the duties of Remote Pilot during BVLOS flight; given a scenario in which crewed traffic is detected, reported, heard, or seen.

STANDARDS: The pilot will give way to the crewed aircraft and keep the UAS clear.

PERFORMANCE:

1. Recognize the traffic and announce it to the crew.
2. Descend deeper into the shielded envelope, hold clear, or land, as appropriate.
3. Communicate with the aircraft or aerial supervision when able.
4. Describe the reporting requirements for a near miss: FAA report for any operation less than 500 feet from an aircraft with a person on board, NASA ASRS UAS Report (required for every near miss, for national tracking), and SAFECOM on every interagency wildland fire assignment (and on other interagency incidents where the host agency uses SAFECOM).

TRAINING AND EVALUATION REQUIREMENTS:

1. Training may be conducted academically, in a simulator, or with the aircraft.
2. Evaluation will be conducted with the aircraft (simulated traffic).

BV 30 - Perform Fly-Away and Emergency ATC Notification

CONDITIONS: While performing the duties of Remote Pilot; given a simulated fly-away toward an airport or aviation hazard.

STANDARDS: The pilot will make the required notification without delay.

PERFORMANCE:

1. Identify the ATC facility having jurisdiction (telephone number from the pre-flight checklist).
2. Report the nature of the emergency, last known position, altitude, and direction of flight, and maximum remaining flight time.
3. Notify the incident aviation organization and dispatch.
4. Use the emergency procedures on the back of the aircraft checklist.
5. Describe the post-event reporting: NTSB and FAA reports as required, a NASA ASRS UAS Report for every fly-away (national tracking of causes such as manufacturer defects, battery failures, and loss of link), and a SAFECOM on every interagency wildland fire assignment.

TRAINING AND EVALUATION REQUIREMENTS:

1. Training may be conducted academically or in a simulator.
2. Evaluation will be conducted academically or with the aircraft.

BV 35 - Perform Night BVLOS Operations

CONDITIONS: While performing the duties of Remote Pilot at night; given an aircraft with anti-collision and position lighting, an infrared payload, and a visual observer.

STANDARDS: The pilot will perform BV 01 through BV 30 at night within all CoW/A limits.

PERFORMANCE:

1. Confirm anti-collision lighting (visible to 3 statute miles) and position lighting are on.
2. Confirm a visual observer is assigned.
3. Apply night illusion and night vision training.
4. Complete BV 01 through BV 30 at night.

TRAINING AND EVALUATION REQUIREMENTS:

1. Training will be conducted with the aircraft.
2. Evaluation will be conducted with the aircraft.

PE 165 - Develop Evaluation Plan

CONDITIONS: When preparing to administer flight training or verify a pilot's knowledge, skills, and abilities to perform specific tasks based on aircraft or mission; given required equipment and materials, aircraft or simulator as needed, and access to an appropriate academic environment or flight area.

STANDARDS: The pilot evaluator shall follow applicable agency policy and aviation regulations while performing the following:

1. Confirm policy requirements and local considerations for the event.
2. Demonstrate a thorough understanding of the RPCS, processes, forms, and phases.
3. Develop or select an appropriate evaluation plan for a specific event.
4. Develop or utilize existing flight training guides as required.
5. Prepare adequate materials and or environment.

TRAINING AND EVALUATION REQUIREMENTS:

1. Training may be conducted academically or with hands-on performance.
2. Evaluation may be conducted academically or with hands-on performance.

REFERENCES: Agency manuals and handbooks, Individual pilot training records, required information for any unit's standard operating procedures or directives, common aviation references, FAA-H-8083-9 (Aviation Instructor's Handbook).

PE 170 - Instruct Academic Knowledge Subjects

CONDITIONS: When required to instruct academic subjects based on event; given required materials or equipment and an appropriate academic environment.

STANDARDS: The pilot evaluator shall follow applicable agency policy and aviation regulations while performing the following:

1. ***PE 165 Develop Evaluation Plan.***
2. Review or confirm the pilot's records prior to instruction.
3. Reference *UAS RPCS Chapter 4: Evaluation Plans-Knowledge Topics* and determine the training objective.
4. Deliver method of instruction (written, oral or classroom).
5. Deliver and adjust level of instruction based on student comprehension and level of retention.
6. Identify areas of delivery in need of improvement.
7. Record student training completion as required.

TRAINING AND EVALUATION REQUIREMENTS:

1. Training will be conducted academically.
2. Evaluation will be conducted with academically.

REFERENCES: Agency manuals and handbooks, FAA regulations, private industry updates, system manuals, required information for unit standard operating procedures or directives, pilot training records, common aviation references, FAA-H-8083-9 (Aviation Instructor's Handbook).

PE 175 - Evaluate Academic Knowledge Subjects

CONDITIONS: When required to evaluate academic knowledge subjects based on event; given required materials or equipment and an appropriate academic environment.

STANDARDS: The Pilot Evaluator shall follow applicable agency policy and aviation regulations while performing the following:

1. ***PE 165 Develop Evaluation Plan.***
2. Review or confirm the pilot's records prior to evaluation.
3. Reference *UAS RPCS Chapter 4: Evaluation Plans-Knowledge Topics* and determine the evaluation objective.
4. Inform pilot of process and criteria.
5. Administer evaluation (written, oral or classroom). Evaluate academic knowledge of applicable standards.
6. Debrief pilot performance.
7. Offer additional training or resources as needed to support the pilot's development.
8. Record evaluation as required.

TRAINING AND EVALUATION REQUIREMENTS:

1. Training may be conducted academically or with aircraft.
2. Evaluation may be conducted academically or with aircraft.

REFERENCES: Agency manuals and handbooks, FAA regulations, private industry updates, system manuals, required information for unit standard operating procedures or directives, pilot training records, common aviation references, FAA-H-8083-9 (Aviation Instructor's Handbook).

PE 180 - Train Remote Pilot Tasks

CONDITIONS: When required to conduct remote pilot task training based on event; given required materials or equipment for selected tasks, an aircraft or simulator as required and appropriate academic environment or flight area.

STANDARDS: The pilot evaluator shall follow applicable agency policy and aviation regulations while performing the following:

1. ***PE 165 Develop Evaluation Plan.***
2. Review or confirm the pilot's records prior to training flights.
3. Inform pilot of the training process.
    a. Ensure rating characteristics and basic qualities are understood.
4. Introduce and explain task purpose and standards.
5. Determine student comprehension and level of retention.
6. Deliver and adjust level of learning based on student needs and objective.
7. Demonstrate tasks to standard.
    a. Demonstration flights may be performed either by the evaluator or student.
8. Train tasks to standard.
    a. Ensure performance rating of 1-4 is accurate.
    b. Ensure remarks adequately include reference to the pilot's basic qualities.
    c. Ensure remarks include notes on progress.
9. Debrief pilot performance.
    a. Address pilot's strengths and areas needing improvement.
10. Identify areas of delivery in need of improvement.
11. Offer additional training or resources as needed to support the pilot's development.
12. Complete required documentation.

TRAINING AND EVALUATION REQUIREMENTS:

1. Training may be conducted academically or with the aircraft.
2. Evaluation may be conducted academically or with the aircraft.

REFERENCES: Agency manuals and handbooks, Individual pilot records, required information for any specific unit standard operating procedures or directives, common aviation references, FAA-H-8083-9 (Aviation Instructor's Handbook).

PE 185 - Evaluate Remote Pilot Tasks

CONDITIONS: When required to verify a pilot's knowledge, skills, and abilities to perform specific tasks based on aircraft or mission; given required equipment and materials, aircraft or simulator as needed, appropriate academic environment, and adequate flight area.

STANDARDS: The pilot evaluator shall follow applicable agency policy and aviation regulations while performing the following:

1. ***Confirm standards are met for PE 165 Develop Evaluation Plan.***
2. Review or confirm the pilot's records prior to evaluation.
3. Inform pilot of evaluation process.
    a. Ensure rating criteria and basic qualities are understood.
    b. Allow ample time for questions.
4. Ensure pilot compliance with all evaluation considerations, warnings, cautions, and notes of the task.
5. Describe pilot's observed performance and compare to established standards.
6. Determine final "Satisfactory/Un-Satisfactory" status for all required tasks.
7. Provide feedback on pilot performance and areas for improvement.
8. Offer additional training or resources as needed to support the pilot's development.
9. Complete required documentation.
10. Maintain evaluation records.

Note: Task standards are minimum performance standards for normal conditions. Pilot evaluators must account for abnormal conditions while assessing pilot performance. Indicators of whether a pilot is likely to perform to standard in normal conditions include the magnitude and duration of deviations from established parameters.

TRAINING AND EVALUATION REQUIREMENTS:

1. Training may be conducted academically or with the aircraft.
2. Evaluation may be conducted academically or with the aircraft.

REFERENCES: Agency manuals and handbooks, Individual pilot records, required information for any specific unit standard operating procedures or directives, common aviation references, FAA-H-8083-9 (Aviation Instructor's Handbook).

PE 190 - Administer Final Evaluation (Check Ride)

CONDITIONS: When required to verify a pilot's knowledge, skills, and abilities to perform specific tasks based on aircraft or mission; given required equipment and materials, aircraft or simulator as needed, appropriate academic environment, and adequate flight area.

STANDARDS: The pilot evaluator shall follow applicable agency policy and aviation regulations while performing the following:

1. Confirm standards are met for ***PE 165 Develop Evaluation Plan.***
2. Review or confirm the pilot's records prior to evaluation.
3. Introduce scenarios or tasks to test the following:
    a. Risk Management.
    b. Operational decision making and problem solving.
    c. Aeronautical Decision Making (**ADM**).
    d. Crew Resource Management (**CRM**).
    e. Response to unexpected situations.
4. Confirm standards are met for ***PE 175 Evaluate Academic Knowledge Subjects.***
5. Confirm standards are met for ***PE 185 Evaluate Remote Pilot Tasks.***

Note: Task standards are minimum performance standards for normal conditions. Pilot evaluators must account for abnormal conditions while assessing pilot performance. Indicators of whether a pilot is likely to perform to standard in normal conditions include the magnitude and duration of deviations from established parameters.

TRAINING AND EVALUATION REQUIREMENTS:

a. Training may be conducted academically or with the aircraft.
b. Evaluation may be conducted academically or with the aircraft.

REFERENCES: Agency manuals and handbooks, Individual pilot records, required information for any specific unit standard operating procedures or directives, common aviation references, FAA-H-8083-9 (Aviation Instructor's Handbook).

APPENDIX B

REMOTE PILOT EVALUATION
REMOTE PILOT EVALUATION: CRITERIA
REMOTE PILOT EVALUATION: REMARKS

REMOTE PILOT EVALUATION

RDPO Remote Pilot Certification Standards: Appendix (B)

Name:	**Agency:**	**Unit:**
Pilot Records Review:	**Event:**	
Aircraft Make/Model:	**FLIGHT DATE:**	

SELECT MODE	REMOTE PILOT TASK	Flight 1												Check Ride
	FLIGHT DURATION *(Minutes)*													
	PILOT EVALUATORS Name & Unit:													

Total Flight Time (HOURS: MINUTES)	**Final Evaluation Rating:**
Pilot Evaluator Signature (Final): **Date:**	**Pilot Signature:** **Date:**

REMOTE PILOT EVALUATION: CRITERIA

RDPO Remote Pilot Certification Standards: Appendix (B)

EVALUATION CHARACTERISTICS

Characteristics of 4

a) Performs near the optimum task standards most of the time.
b) Immediately recognizes errors and takes proper corrective action.
c) Rarely makes the same errors.
d) Performs so that the safe operation of the aircraft is never in doubt.

Characteristics of 3

a) Performs near the optimum task standards some of the time.
b) Quickly recognizes errors and takes proper corrective action.
c) Infrequently makes the same errors.
d) Performs so that the safe operation of the aircraft is never in doubt.

Characteristics of 2

a) Performs inconsistently within task standards. The extremes of the standards are approached routinely.
b) Is slow to recognize errors and/or take proper corrective action.
c) Frequently makes the same errors.
d) Performs so that the safe operation of the aircraft is never in doubt.

Characteristics of 1

a) Lacks sufficient knowledge, skill, or ability to perform within the Task List standard.
b) Does not recognize errors and/or takes improper corrective action.
c) Consistently makes the same errors.
d) Performs so that the safe operation of the aircraft or the possible recognized outcome of the performed task is in doubt.

Other Task Characteristics

a) **Demonstration (DM)** will be used for tasks that are required to be shown one time, but proficiency is not required in that phase/stage of training.

Final Evaluation

1. S – Satisfactory
2. U – Unsatisfactory

BASIC QUALITIES

Basic Qualities are the distinctive attributes or characteristics possessed by individuals in relationship to flight performance. Remarks are required for all flight evaluations regardless of rating and are ***required for all flights***. Remarks shall reference "Basic Qualities" when relating to specific evaluation characteristics or general performance.

Cognitive Qualities

Retention - Ability to remember previous instruction.

Aptitude - Ability to learn basic principles at an appropriate speed.

Planning and Judgement - Ability to promptly select the best method to achieve the desired objective, considering the situation and previous instruction.

Alertness - Ability to perceive and properly respond to the flight maneuver or circumstance.

Physical Qualities

Control Touch - Ability to make smooth and accurate control inputs.

Physical Coordination - Ability to achieve a desired aircraft maneuver with proper control inputs.

Reaction Time - Recognition of an action required and/or performance of an action required.

Crew Coordination – Understanding and application of Crew Resource Management (CRM) principles.

Emotional Qualities

Motivation – Positive action toward learning; good study skills or habits necessary to learn.

Attitude – Positive demeanor toward flight instruction or necessary learning.

Confidence - Belief in one's ability to perform a task or maneuver.

Composure - Ability to maintain self-control.

Safety - Ability to recognize an unsafe situation and or respond appropriately.

During a final evaluation, all tasks will be annotated as either Satisfactory (S) or Unsatisfactory (U) only. When in the judgment of a qualified UAS Pilot Evaluator, the applicant does not meet the standard, the practical test is failed. The applicant will not receive a pilot qualification card or endorsement for the specific mission or aircraft.

REMOTE PILOT EVALUATION: REMARKS

RDPO Remote Pilot Certification Standards: Appendix (B)

Name of Pilot:

Event:

Remarks regarding pilot performance are required for all flights. Reference the pilot “Basic Qualities” criteria when relating to specific evaluation characteristics or general performance.

Flight	Remarks

APPENDIX C

UAS PILOT EVALUATOR RECOMMENDATION
CURRENT YEAR DESIGNATIONS & TRAINING
RDPO PILOT CARD

UAS PILOT EVALUATOR RECOMMENDATION		RDPO
NAME	DATE	TITLE
AGENCY		SUPERVISOR

REQUESTING PILOT EVALUATOR DESIGNATION FOR:		
☐ Initial Carding	☐ ELOS/BVLOS/Night	☐ Aerial Ignitions
☐ Type 3 Aircraft	☐ Type 4 Aircraft	☐ Other

QUALIFICATIONS/DESIGNATIONS				
☐ UASP	☐ UASL	☐ UASM	☐ UASD	☐ Lead Instructor

FLIGHT TIME			
Current FAA Part 107 Remote Pilot Certificate (RP)	☐ YES	☐ NO	REMARKS:
20 hrs. Total Time (TT) as a RP	☐ YES	☐ NO	
10 hrs. TT on Type 4, Aircraft Specific (Identify aircraft below)	☐ YES	☐ NO	
15 hrs. TT on Type 3, Aircraft Specific (Identify aircraft below)	☐ YES	☐ NO	
AERIAL IGNITION			
10 hrs. Fully Qualified Aerial Ignition time	☐ YES	☐ NO	
3 hrs. Ignitions Ops (Annual)	☐ YES	☐ NO	
ELOS/BVLOS/Night			
10 hrs. TT Fully Qualified ELOS/BVLOS/Night	☐ YES	☐ NO	
ADDITIONAL TRAINING			
M410 / NFPA Instructor 1	☐ YES	☐ NO	
Instructor Updates	☐ YES	☐ NO	
Other:	☐ YES	☐ NO	

☐ I certify that the information listed on this form is true and correct. I recommend the above for UAS Evaluator Training.	☐ I certify that the information listed on this form is correct and the above has completed the UAS Evaluator Training.
Print (RAO or designee)	*Print (RDPO UAS Program Manager)*
Sign (RAO or designee)	*Sign (RDPO UAS Program Manager)*

UAS Pilot Current Year Designations and Training - Instructions

I. Pilot Information

a. Pilot Name
b. Agency/Bureau
c. Phone Number
d. Email
e. County/Region
f. FAA Number
g. Initial Part 107 Certificate Issue Date
h. Initial A-450 Date
i. Initial All-Hazards UAS Course Date
j. Initial S-373 Date (Wildfire endorsement)

II. Pilot Flight Time

a. Total Time: Total flight time as an agency UAS pilot flying agency approved aircraft. Total time includes time as a RPIC and UAS Pilot Evaluator.
b. Last 12 months: Flight time as an agency UAS pilot flying agency approved UAS in the previous year. Time includes time as a RPIC and UAS Pilot Evaluator.

III. Pilot Qualifications / Endorsements and Designations

a. AIRCRAFT QUALIFICATIONS: List all aircraft you are carded to fly. If you are a Pilot Evaluator for that aircraft, select the option that states “Pilot Evaluator”.
b. MISSION ENDORSEMENTS: List all missions and qualifications you are carded to perform. If you are a Pilot Evaluator for that mission, select the option that states “Pilot Evaluator”. Refer to
c. instructions for section IV (b.) when selecting “Remote Pilot TRAINEE”.
d. PILOT DESIGNATIONS: Check the boxes for your UAS Pilot Designations. Check UAS Instructor if you are fully qualified or a trainee instructor for any UAS courses. Complete section V.
e. NWCG QUALIFICATIONS: Check each box you are fully qualified for.

IV. Current Year Training Requirements:

a. List the due dates and dates completed for mandatory UAS recurrency training.
b. **Final Evaluator only:** Describe any requirements or limitations when “Remote Pilot TRAINEE” has been selected under III (b.) MISSION ENDORSEMENTS.

V. Pilot Instructor Qualifications

List all UAS IAT courses you are “Fully Qualified” to teach or are a “Trainee”.

Signature Blocks

VI. Pilot
VII. UAS Pilot Evaluator
VIII. UAS Final Evaluator

UAS PILOT CURRENT YEAR DESIGNATIONS and TRAINING

RDPO
Regional Disaster Preparedness Organization

SCAPPOOSE FIRE AVIATION

I. Pilot Information

a. Pilot Name (Last, First)	b. Agency	c. Phone Number:	d. Email

e. County/Region	f. FAA Number:
Address:	g. Initial Part 107 Certificate Issue Date:
City, State, Zip:	h. Initial A-450 Date: i. Initial All-Hazards UAS Course Date: j. Initial S-373 Date:
Supervisor:	
Supervisor Telephone:	

II. Pilot Flight Time a. Total Time ☐ b. Last 12 Months ☐

II. Pilot Qualifications / Endorsements and Designations

a. AIRCRAFT QUALIFICATIONS (Make/Model)	b. MISSION ENDORSEMENTS	c. PILOT DESIGNATIONS
		☐ LEAD INSTRUCTOR*
		☐ UAS PILOT EVALUATOR
		☐ UAS FINAL EVALUATOR
		*Lead Instructors Complete Section V
☐	*For Remote Pilot TRAINEE, Complete section IV (b.)	
d. Qualifications: UASP ☐	UASL ☐ UASM ☐ UASD	☐

IV. Current Year Training Requirements

a. Course or Training	Due Date	Date Completed
FAA Part 107 Recurrency		
Aircraft Refresher Training		
Refresher Training - UAS Operations		
Crew Resource Management		
Basic Aviation Safety		
Mishap Review		
Remarks:		

b. Training Plan (Describe requirements or limitations)

V. Pilot Instructor Qualifications

Lead Instructor	Qualified/Trainee	Lead Instructor	Qualified/Trainee
☐	☐	☐	

VI. I certify that the information listed on this form is true and correct.	VII. I certify that any final evaluation conducted followed the criteria outlined in the RDPO Remote Pilot Certification Standards	VIII. I certify that I have verified the information on this form and that it is true and correct to the best of my knowledge
Print	*Print*	*Print*
Sign *Date*	*Sign* *Date*	*Sign* *Date*

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AGENCY / RDPO TIER 1 PILOT QUALIFICATION CARD

RDPO
Regional Disaster Preparedness Organization
Unified. Prepared. Resilient.

Pilot Name: _____
(Last, First)

AGENCY: _____

ISSUED BY: _____ _____
(Agency / Home Unit)

UAS Final Evaluator: _____ **Issue Date:** _____

STATUS / ENDORSEMENTS

Interagency ☐ (Agency) Only ☐ ODF Only ☐ Law Enforcement Only ☐

Initial ☐ Renewal ☐ Restricted ☐ Non Emergency ☐

HazMat ☐ FI/CSD ☐ Mapping ☐ BVLOS ☐

Night Ops ☐ Law Enforcement ☐ Above 400 ☐

RPIC ☐ VO ☐ OOP ☐ DFR ☐Other ☐

Lead Instructor ☐ UAS Pilot Evaluator ☐ UAS Final Evaluator ☐

AIRCRAFT TYPE: 2 ☐ 3 ☐ 4 ☐

Authorized Aircraft / GCS:

FAA 107 Recurrency Date: _____ **Expiration Date:** _____

RDPO Remote Pilot Qualification Card: Tier 1 (All-Hazards), Green Lettering

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***AGENCY* / RDPO TIER 2 PILOT QUALIFICATION CARD**

RDPO
Regional Disaster Preparedness Organization
Unified. Prepared. Resilient.

Pilot Name: _____
(Last, First)

AGENCY: _____

ISSUED BY: _____ _____
(Agency / Home Unit)

UAS Final Evaluator: _____ **Issue Date:** _____

STATUS / ENDORSEMENTS

Interagency ☐ (Agency) Only ☐ ODF Only ☐ Law Enforcement Only ☐

Initial ☐ Renewal ☐ Restricted ☐ Non Emergency ☐

Aerial Ignition ☐ Wildfire ☐ Mapping ☐ BVLOS ☐

TFR Operations ☐ Law Enforcement ☐ Above 400 ☐

RPIC ☐ UASP ☐ UASM ☐ UASL ☐ UASD ☐

Lead Instructor ☐ UAS Pilot Evaluator ☐ UAS Final Evaluator ☐

AIRCRAFT TYPE: 2 ☐ 3 ☐ 4 ☐

Authorized Aircraft / GCS:

FAA 107 Recurrency Date: _____ **Expiration Date:** _____

RDPO Remote Pilot Qualification Card: Tier 2 (Wildland Fire), Red Lettering