

**FOR OPERATIONS WITHIN  
THE  
CHILOQUIN VECTOR CONTROL DISTRICT**

UAV Operations Manual

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In accordance with

ORS 837.362

Chiloquin Vector Control District's Unmanned Aerial Vehicle flight Operations manual is designed to implement the policies and procedures for the utilization and implementation of research and general operations via unmanned aircraft. This policy is based upon Chiloquin Vector Control authority under ORS 452.

RECORD OF CHANGES

No.	Date of Change	Change	Initials	Date
Original	2/1/2018	Creation	DJ / ESH	1/24/2018
2019-01	1/23/2019	Edits Cover, Sec 1.2.2, Sec 1.3.3, Sec 4.1, Sec 5.2.1, Sec 7.3.2, Sec 9.4.1, Additions of Sec 2.2.2, Sec 2.4, Sec 2.5, Sec 4.2, Sec 7.2.3		

\_\_\_\_\_  
 Edward S. Horvath  
 Chief Pilot  
 TRMVC

\_\_\_\_\_  
 Dennis Jefcoat  
 Chairman of the Board  
 CVCD

*This is signed by both TRMVC and the CVCD, as an agreement that the Chief Pilot is responsible for all flight operations and will conduct operations safely and in a manner consistent with how operations would be conducted by the CVCD if the CVCD were conducting the operations themselves.*

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## TERMS AND ACRONYMS

ATC -	Air Traffic Control
AV -	Air Vehicle
ARTCC -	Air Route Traffic Control Center
DCP -	Divert / Contingency Point
GS -	Ground Station
ISRB -	Independent Safety Review Board
FPG -	Flight Planning Guide
FRR -	Flight Readiness Review
LLP -	Lost Link Point
PIC -	Pilot in Command - The UAV PIC is the sole and final authority for the safe operation of the UAV. The UAV PIC shall only operate one UAV at a time. The PIC is responsible for ensuring all crew members understand and can properly perform their specific roles for the flight. A PIC shall be designated and briefed prior to each flight.
CP -	Chief Pilot - The Chief Pilot is responsible for oversight of all UAV operations conducted. The CP is the final authority on all CVCD/TRMVC specific policy as it pertains to UAV use. The CP will also be tasked with maintaining FAA compliance through monthly reporting, along with approving flights via the "Drone Complier" and other software.
VO -	Visual Observer - The UAV Observers are responsible for assuring visual separation between the UA and any other air traffic. The visual observers shall maintain direct two-way communication with the UAV PIC either through direct voice, or radio communications. A visual observer shall only be responsible for one UAV at a time.
SMS -	Safety Management System
TCAS -	Traffic Collision Avoidance System
UA -	Unmanned Aircraft
UAV -	Unmanned Aerial System
UAV –	Unmanned Aerial Vehicle
sUAV –	small Unmanned Aerial Vehicle

## 1. GENERAL

### 1.1. Purpose

1.1.1. This document is to support the aerial activities conducted by Three Rivers Mosquito and Vector Control (TRMVC), for the Chiloquin Vector Control District (CVCD) Unmanned Air Vehicle (UAV) operations, it is designed to govern the operations under the authority of CVCD and the FAA. It provides the guidance and support to enable employees or contractors to fulfill their requirements under the authority that is delegated to by the FAA to operate drones.

### 1.2. Distribution

1.2.1. This manual is to be assigned for any and all personnel who are utilizing unmanned aircraft for any CVCD sponsored activity. A printed or hard copy will be maintained at the office of the Chief Pilot (CP) at address:

651 Market Street,  
Klamath Falls, Oregon 97601.

1.2.2. Digital copies will be made available through the CVCD website:

[www.chiloquinmosquito.org/aerial-program.html](http://www.chiloquinmosquito.org/aerial-program.html)

### 1.3. Revision Control

1.3.1. Each revision will be approved by the CP, with final authority to approve changes and submissions to this document and adopted by the CVCD Board of Trustees. Each revision will have a separate consecutive number.

1.3.2. Each document holder shall comply with this document and ensure their manuals and records are kept current in accordance with the changes and policies established through this operation's manual.

1.3.3. Revision Naming - Each revision will have the following information associated with each change:

1.3.3.1. Section or Page

1.3.3.2. Revision Number

1.3.3.3. Date

### 1.4. Management Personnel

1.4.1. Edward S. Horvath - Chief Pilot (CP)

1.4.2. Dennis Jefcoat – CVCD Board Chairman

1.4.3. TBD

## 2. UAV OPERATIONAL INTEGRITY

### 2.1. Accountability

#### 2.1.1. Legal Compliance

2.1.2. All UAV operations shall comply with FAA regulatory and legal policies as well as any state and local policies regarding public aircraft that may affect the operations as listed in this document.

2.1.3. This document is intended as a guidance document and may not appropriately address regional or international UAV operations legalities and it is up to the individual Pilot in Command to ensure compliance.

### 2.2. Liability

2.2.1. UAV operations that occur outside of authorized use for District Operations and/or flight limitations of the air vehicle will not be covered under the CVCD liability policy.

2.2.2. The CP will maintain liability insurance for operations within the District.

### 2.3. Record Retention

2.3.1. UAV operations are required to maintain and keep all records of each UAV and each flight operation for no more than (3) three years.

### 2.4. .Data Storage

2.4.1. All flight records will be maintained by the Chief Pilot's company and be made available to the public for a reasonable charge.

### 2.5. Data sharing with other Government bodies

2.5.1. The CVCD will authorize data to be released by the Chief Pilot to other government agencies by a vote of the District's Board of Trustees.

### 3. PRIVACY

#### 3.1. General

- 3.1.1. As a public institution the UAV flight operations occur under federal authority as a public entity. CVCD is responsible for compliance with all Federal, State, and local laws as they pertain to privacy laws.
- 3.1.2. TRMVC, as a legal contractor shall abide by regulations that the CVCD are bound to when conducting operations in direct support of the CVCD.
- 3.1.3. Disclosure
  - 3.1.3.1. CVCD and its contractor adheres to all State and Federal statutes and regulations that prohibit information disclosure for students, employees and other constituents. CVCD will not sell, trade, or otherwise disclose any person identifiable information in any manner that is not in conformity with applicable State or Federal statutes. CVCD takes appropriate steps to communicate all privacy policies and guidelines to all employees and contractor.
  - 3.1.3.2. Freedom of Information
    - 3.1.3.2.1. As a public entity CVCD complies with the Freedom of Information Act, 5 U.S.C. § 552, originally passed in 1966. Any information collected by UAV operations that falls under public domain will remain publicly accessible by request.
    - 3.1.3.2.2. TRMVC, as a licensed operator, will comply with FIA requirements, however requests are also limited to the responsibilities of the commercial field.

## 4. REPORTING REQUIREMENTS

- 4.1. All flights conducted by TRMVC that are directly benefiting the CVCD will be logged through the "Drone Complier", "AirMap", "Drone Deploy" and/or other similar software. Flight logs will include the following relevant information will be collected for every flight and be submitted upon request to the FAA. Flight records will be maintained in AirData or other similar recordkeeping system.
  - 4.1.1. PIC
  - 4.1.2. Visual Observer (VO) if used
  - 4.1.3. Aircraft Registration or N Number
  - 4.1.4. Date and Time
  - 4.1.5. Flight Duration
  - 4.1.6. Maintenance Issues and Status
- 4.2. Annual report will be submitted by the Chief Pilot by January 31<sup>st</sup> each year as required by ORS 837.360 (6).



## 5. UAV FLIGHT PROCEDURES

### 5.1. Purpose

5.1.1. Each mission shall have the following relevant information:

- 5.1.1.1. Grant, Project, or Customer
- 5.1.1.2. Platform approved for operation
- 5.1.1.3. Location Identified

### 5.2. Drone Complier and/or other UAV software

5.2.1. Each flight will be performed in accordance with “Drone Complier” software or other UAV planning platform. The software is designed to support in lieu of a published flight planning guide. It is not a user’s manual or operations manual. For each UAV, the responsibility to ensure compliance with manufacture limitations and certification will fall on the PIC and CP.

5.2.2. The software will be updated with current flight plan information and is to be used to ensure compliance with the FAA policy. The following documentation will be available to all PICs and CPs through the various software platforms:

- 5.2.2.1. Aircraft specific user manuals
- 5.2.2.2. CVCD/TRMVC Official policies
- 5.2.2.3. Flight plan details
- 5.2.2.4. Flight logs

### 5.2.3. Flight approvals

5.2.3.1. Each flight will have the following approved documents

- 5.2.3.1.1. Flight plan
- 5.2.3.1.2. Licensed Part 107 Pilot
- 5.2.3.1.3. Designated PIC

## 6. SAFETY

### 6.1. Safety Data Collection and Processing System (SDCPS)

- 6.1.1. Data collection and processing will be conducted through the software.  
(See section 5.2).

### 6.2. Five Steps of Risk Management

- 6.2.1. Identify the hazards
- 6.2.2. Assess the hazards
- 6.2.3. Develop controls and make decisions
- 6.2.4. Implement controls
- 6.2.5. Supervise and evaluate

### 6.3. Risk Mitigation

#### 6.3.1. Safety Management System (SMS)

- 6.3.1.1. The SMS is composed of five functional components:
- 6.3.1.2. Safety Assurances - ISRB / Flight Readiness Review SDCRS
- 6.3.1.3. Safety Risk Management
- 6.3.1.4. Safety Assurances – ISRB / Flight Readiness
- 6.3.1.5. Data collection and reporting will be conducted through the Software.

### 6.4. Safety Promotion

- 6.4.1. Safety Policy - The TRMVC/CVCD Standard Operations Procedure Manual is the source document for all operational policies and procedures. The software will provide supplementary support documentation. The Procedure Manual and all supporting documentation undergo management review, version control, and are subject to approval by the CP prior to operations.
- 6.4.2. Procedures and Checklists - Shall be followed for every mission and every PIC shall be fully trained and be the only authorized operators of the air vehicle. See Appendix A for Mandatory Briefing Items.
- 6.4.3. Safety Risk Management - A comprehensive Safety Risk Management (SRM) approach shall be applied to every UAV operated by TRMVC or CVCD. A risk analysis of every UAV shall be completed utilizing the software. The risk assessment includes guidance for the identification of risks, the creation of a hazard register for each of the identified risks. Utilizing a Risk Matrix, each risk shall be quantified and accounted for by the PIC.

### 6.5. Risk Assessment

- 6.5.1. The following tables shall be used to assess mission risk.
- 6.5.2. Risk Management Criteria

Risk Probability

Likelihood	Meaning	Value
Frequent	Likely to occur many times (has occurred frequently)	5
Occasional	Likely to occur sometimes (has occurred infrequently)	4
Remote	Unlikely to occur (has occurred rarely)	3
Improbable	Very unlikely to occur (not know to have occurred)	2
Extremely improbable	Almost inconceivable that the event will occur	1

Risk Assessment Matrix:

Risk Probability	Risk Severity					
	Catastrophic A	Hazardous B	Major C	Minor D	Negligible E	
Frequency	5	5A	5B	5C	5D	5E
Occasional	4	4A	4B	4C	4D	4E
Remote	3	3A	3B	3C	3D	3E
Improbable	2	2A	2B	2C	2D	2E
Extremely Improbable	1	1A	1B	1C	1D	1E

Risk Severity:

<b>Catastrophic:</b>	Equipment Destroyed, Multiple Deaths
<b>Hazardous:</b>	A large reduction in safety margins, physical distress or a workload that the operators cannot be relied upon to perform their tasks accurately or completely, Serious injury, major equipment damage.
<b>Major:</b>	A significant reduction in safety margins, a reduction in the ability of the operators to cope with the adverse operating conditions as a result of an increase in workload or as a result of conditions impairing their efficiency, serious injury, injury to persons.
<b>Minor:</b>	Nuisance, Operating limitations, use of emergency procedures, minor incident.
<b>Negligible:</b>	Few consequences

Risk Tolerability:

Risk Index Range	Description	Recommended action
5A, 5B, 5C, 4B, 3A	High Risk	Cease or cut back operation promptly if necessary. Perform risk mitigation to ensure that additional or enhanced preventative controls are put in place to bring down the risk index to the moderate or low range.
5D, 5E, 4C, 4D, 4E, 3B, 3C, 3D, 2A, 2B, 2C, 1A	Moderate Risk	Schedule performance of a safety assessment to bring down the risk to the low range if viable.
3E, 2D, 2E, 1B, 1C, 1D, 1E	Low Risk	Acceptable as is. No further risk mitigation required.

Risk Acceptance

Control/Barrier	High Risk (Intolerable)	Medium Risk (Incorporated Risk Reduction Measures)	Low Risk (Manage for the Continuous Improvement)
Threat	<b>Minimum of 3</b> Independent, effective controls/barriers to be	<b>Minimum of 2</b> Independent, effective controls/barriers to be	<b>Minimum of 1</b> effective controls/barriers to be placed for each threat
Consequence Recovery	<b>Minimum of 3</b> Independent, effective recovery measures for each	<b>Minimum of 2</b> Independent, effective recovery measures for each	<b>Minimum of 1</b> effective recovery measures for each consequence.
Escalation	<b>Minimum of 2</b> Independent, effective controls/barriers for each escalation factor	<b>Minimum of 1</b> effective controls/barriers for each escalation factor	<b>Minimum of 1</b> effective controls/barriers for each escalation factor

6.5.3. Criteria that must be met

- 6.5.3.1. Hazards identified
- 6.5.3.2. Hazards assessed
- 6.5.3.3. Control measures and risk decisions
- 6.5.3.4. Hazard controls
- 6.5.3.5. Supervision
- 6.5.3.6. Casualty expectation criteria
- 6.5.3.7. Property damage criteria
- 6.5.3.8. Midair collision avoidance criteria
- 6.5.3.9. Criteria for reliability and adequacy of safeguards

6.6. System Safety

6.6.1. Airworthiness - The CP shall determine the airworthiness of each UAV submitted for authorization to fly.

6.6.1.1. Factors to analyze for the determination of UAV airworthiness

- 6.6.1.1.1. System configurations
- 6.6.1.1.2. Failsafe characteristics
- 6.6.1.1.3. Equipment installations
- 6.6.1.1.4. Training
- 6.6.1.1.5. Flight testing
- 6.6.1.1.6. Flight Operations checklists
- 6.6.1.1.7. Communications / data links
- 6.6.1.1.8. Automation levels
- 6.6.1.1.9. Handling qualities
  - 6.6.1.1.9.1. Operating limitations

- 6.6.2. System Maturity - The CP may limit the operation of the UAV based on a Maturity Level determination. As UAV flights progress, a UAV may progress to higher maturity categories through the demonstration of specific exit criteria.

***Commercially available UAV are considered mature systems upon purchase and do not need to progress through the system maturity levels.***

- 6.6.2.1. The Four Maturity Levels are:

- 6.6.2.1.1. **Unproven** - Unproven is a UAV that has minimal if any flights. Exit criteria for this level are: 5 consecutive takeoff, approach, and landing/recovery cycles over 5 separate test periods without a safety-of-flight critical failure or serious deviation from planned parameters.
- 6.6.2.1.2. **Experimental** - Experimental is a UAV that is active in developmental flight testing that has demonstrated the basic abilities to conduct test flights under specific conditions and has shown the system maturity to safely stay within the flight test boundaries. Exit criteria for this level are:
- 6.6.2.1.2.1. 30 successful takeoff and landing cycles during a minimum of 15 separate test periods.
- 6.6.2.1.2.2. Ability of the UAV to perform safe flight under the control of the pilot.
- 6.6.2.1.2.3. Ability of the UAV to perform safe and controlled semi-autonomous and autonomous flight.
- 6.6.2.1.2.4. Ability of the UAV to perform emergency procedures
- 6.6.2.1.3. **Provisional** - Provisional is a UAV that is fine-tuning the system elements of UAV safe flight of has added subsystems that enhance safety of flight. Exit criteria for this level are:
- 6.6.2.1.3.1. UAV has shown the ability to consistently perform normal safe flight maneuvers and consistently remain within the designated set parameters of the system design throughout the full spectrum of design conditions.
- 6.6.2.1.3.2. UAV has shown the ability to consistently and safely perform all emergency procedures in a variety of conditions.
- 6.6.2.1.4. **Mature** - Mature is a UAV that has shown the ability to consistently and safely perform all emergency procedures in a variety of conditions.

## 7. FLIGHT CREW QUALIFICATIONS

- 7.1. Training Records – CVCD and TRMVC UAV users shall submit training records and other supporting documents to substantiate the experience and qualifications of all flight crew members involved with flight operations. Copies of these records shall be kept on file by the CP.
- 7.2. UAV Pilot in Command - The UAV PIC shall meet the requirements of the CVCD and TRMVC policies and FAA regulations.
  - 7.2.1. The UAV PIC is responsible for ensuring that the visual observers are able to see the UAV throughout the entire flight and are able to provide the PIC with the UA's flight path, and proximity to all aviation activities and other hazards (e.g., terrain, weather, and structures).
  - 7.2.2. PIC Recent Flight Experience (Currency).
    - 7.2.2.1. After designation, PICs must fly at least one 1-hour mission per 30 calendar days to maintain currency. If a PIC has not flown for 30 calendar days, a 1-hour refresher mission with an instructor, and a 1-hour simulator in UAV type, is required to regain currency. Instructors may regain currency by a 1 hour simulator in UAV type.
    - 7.2.2.2. If any operations require a certificated pilot or FAA accepted agency equivalent, based on the application, the PIC must have flight reviews 14 CFR Part 61.56, and if the pilot conducts takeoff, launch, landing or recovery the PIC must maintain recent pilot experience in manned aircraft per 14 CFR Part 61.57; Recent Flight Experience: Pilot in Command.
    - 7.2.2.3. For operations approved for night, the PIC must obtain a waiver under FAA Part 107 or other Parts as required.
  - 7.2.3. Pesticide Applications
    - 7.2.3.1. Any operations conducted with pesticide applications will be conducted in accordance with Federal and State requirements.
      - 7.2.3.1.1. FAA Part 137 will be maintained by the CP.
      - 7.2.3.1.2. Department of Agriculture licensing will be maintained by the CP and all applicators.
      - 7.2.3.1.3. FAA and ODA records will be maintained by the CP.
- 7.3. UAV Payload Operators and Other Crewmembers
  - 7.3.1. UAV Visual Observer(s) - UAV Visual Observer(s) when used shall be included in person in any pre-mission brief.
    - 7.3.1.1. The visual observers must be able to clearly communicate to the UAV PIC any instructions to remain clear of any conflicting traffic, using standard phraseology as listed in the Aeronautical Information Handbook when practical. 2-way radios may be used to meet the communication requirements.
  - 7.3.2. Chief Maintenance Officer - The Maintenance Officer shall be qualified to repair the air vehicle in accordance with manufacturer specified training and certifications. The CMO duties may be assigned to the CP and/or PICs or other qualified staff by the CP
- 7.4. UAV AIRWORTHINESS
  - 7.4.1. Configuration Management - All UAV users shall have a configuration management

process in place for hardware and software changes for their UAV. This configuration management process shall include logbooks for aircraft hardware and software changes and for control station hardware and software changes.

- 7.5. Major Hardware and Software Changes - Software changes to the aircraft or control station, as well as hardware system changes, are classified as major modifications or changes by the FAA. Any major modifications or changes to the aircraft or control station shall be approved prior to any follow-on flight operation. A new airworthiness statement shall be generated by the CP and be approved prior to conducting any flight operations.
- 7.6. System Configuration Changes - All previously flight proven systems to include payloads, may be installed or removed as required, and that activity recorded in the unmanned aircraft and ground control stations logbooks by persons authorized to conduct UAV maintenance. Additionally, **all** payload configurations that do not modify the aircraft in any way and stay within the payload requirements and limitations as set forth by the aircraft COA are not considered major modifications. Such modifications may include similarly proportioned and weighted payloads with identical mounting methods. Describe any payload equipment configurations in the UAV logbook that will result in a weight and balance change, electrical loads, and or flight dynamics, unless the agency has a formal process, accepted by the FAA.
- 7.7. Maintenance Records and Airworthiness Statement - For unmanned aircraft system discrepancies, a record entry shall be made by an appropriately rated person to document the finding in the logbook. No flights may be conducted following major changes, modifications or new installations unless the party responsible for certifying airworthiness has determined the system is safe to operate in the national airspace system and a new air worthiness statement is generated. The successful completion of these tests must be recorded in the appropriate logbook.
  - 7.7.1. Major Change: Any modification to the autopilot or software responsible for flight control. Any modification to the propulsion or flight operating controls. Any change that requires a new air worthiness statement.

## 8. FREQUENCY MANAGEMENT

8.1. Frequency Licensing - UAV Operators are responsible for obtaining any necessary frequency licensing and authorization from the FCC prior as part of the flight authorization process. This will be done through the Federal Communication Commission Policy found in the General University Policies Manual.

8.1.1. PIC/VO will utilize 2-way radios with approved frequencies, through approved FCC frequency channels.



## 9. MISSION PLANNING

### 9.1. Preflight Weather

- 9.1.1. The UAV PIC shall gather observed and forecast weather conditions prior to conducting flight operations. This weather data shall be part of the preflight safety briefing.
- 9.1.2. Weather minimums are determined by the approval authority documents responsible for the governance of the flight (COA, Exemption etc.).

### 9.2. Daily Flight Operations Schedule

- 9.2.1. The CP shall publish a schedule of all flight operations. The schedule shall be made available through the UAV flight management software and/or app.

### 9.3. Notice to Airmen (NOTAM)

- 9.3.1. A distant (D) NOTAM shall be filed by personnel for each flight operation when required. The NOTAM shall be filed through the Flight Service Station at (877) 487-6867 not more than 72 hours in advance, but not less than 48 hours prior to the flight operation, unless otherwise authorized as part of a special provision. The filing personnel shall provide the following information to the FSS:

- 9.3.1.1. Name and address of the personnel filing the NOTAM
- 9.3.1.2. Location and altitude of the operating area
- 9.3.1.3. Time and nature of the activity

### 9.4. Accident / Incident Reporting

- 9.4.1. Immediately after an incident or accident, and before additional flight under this operation, the proponent must provide initial notification of the following to the FAA via the UAV On-Line forms (Incident/Accident), when necessary or upon FAA request.
- 9.4.2. All accidents/mishaps involving UAV operations where any of the following occurs:
  - 9.4.2.1. Fatal injury, where the operation of a UAV results in a death occurring within 30 days of the accident/mishap.
  - 9.4.2.2. Serious injury, where the operation of a UAV results in a hospitalization of more than 48 hours, the fracture of any bone (except for simple fractures of fingers, toes, or nose), severe hemorrhage or tissue damage, internal injuries, or second or third-degree burns
  - 9.4.2.3. Total unmanned aircraft loss
  - 9.4.2.4. Substantial damage to the unmanned aircraft system where there is damage to the airframe, power plant, or onboard systems that must be repaired prior to further flight
  - 9.4.2.5. Damage to property, other than the unmanned aircraft.
- 9.4.3. Any incident/mishap that results in an unsafe/abnormal operation including but not limited to:
  - 9.4.3.1. A malfunction or failure of the unmanned aircraft's on-board flight control system (including navigation)
  - 9.4.3.2. A malfunction or failure of ground control station flight control hardware or software (other than loss of control link)
  - 9.4.3.3. A power system failure or malfunction

- 9.4.3.4. An in-flight fire
- 9.4.3.5. An aircraft collision
- 9.4.3.6. Any in-flight failure of the unmanned aircraft's electrical system requiring use of alternate or emergency power to complete the flight
- 9.4.3.7. A deviation from any provision contained in the waiver or authorization.
- 9.4.3.8. A deviation from an ATC clearance and/or Letter(s) of Agreement/Procedures.
- 9.4.3.9. A lost control link event resulting in
  - 9.4.3.9.1. Fly-away, or
  - 9.4.3.9.2. Execution of a pre-planned/unplanned lost link procedure.

9.5. Substance Use

9.5.1. Alcohol use - All CVCD/TRMVC standards for the consumption of alcohol must be observed by all crew members to be eligible to participate in flight operations. Additionally all PICs must follow FAR 91.17 with the amendment of a 12 hour buffer period between the last drink consumed and the first flight.

9.5.2. Drug use - Official TRMVC/CVCD policies prohibits the use of any federally recognized drug including marihuana. All flight crew members must follow CVCD/TRRMVC's Drug Free Workplace policy to conduct flight operations.

9.6. Stop Work Authority - All personnel regardless of position and relationship have stop work authority for which they can execute a stoppage of all operations for any condition they perceive to be unsafe. This can be done without retribution or reprimand to that individual.

9.7. Focused Ground Station Procedures

9.7.1. The UAV PIC is responsible for ensuring that proper ground station procedures are maintained during all Critical Phases of Flight. Critical Phases of Flight include all ground operations to include pre-launch or pre-takeoff checks, taxi, launch/take-off and landing/recovery, and all flight operations in which safety or mission critical accomplishment might be compromised by distractions.

9.7.1.1. No crewmember may perform any duties during a critical phase of flight not required for the safe operation of the aircraft

9.7.1.2. The use of cell phones or other electronic devices are restricted to communications pertinent to the operational control of the UAV and any required communications with Air Traffic Control.

## 10. INCIDENT RESPONSE

- 10.1. ATC must be immediately notified in the event of any emergency, loss and subsequent restoration of command link, loss of PIC or observer visual contact, or any other malfunction or occurrence that would impact safety or operations.
- 10.2. Local Contact Numbers
  - 10.2.1. Fire - 9-1-1
  - 10.2.2. Medical - 9-1-1
  - 10.2.3. Police - 9-1-1
  - 10.2.4. Local ATC Tower
    - 10.2.4.1. (541) 883-5372
    - 10.2.4.2. ATC frequencies as posted to aerial charts.
- 10.3. ATC Communications
  - 10.3.1. If required by the FAA, the UAV PIC shall maintain direct, two-way communication with ATC, and have the ability to maneuver the AV in response to ATC instructions when required.
- 10.4. Reporting
  - 10.4.1. In the event of an accident or incident the CP shall immediately be notified by involved personnel.
  - 10.4.2. For ongoing inflight emergencies, the CP shall ensure that appropriate procedures are being followed. For post-incident response the CP shall follow the Master Emergency Management Plan set forth by CVCD and TRMVC.
  - 10.4.3. Emergency Reporting
    - 10.4.3.1. Type of UAV
    - 10.4.3.2. Last known location, or current location if applicable
    - 10.4.3.3. Last known course, or current course if applicable
    - 10.4.3.4. Estimated fuel or battery duration remaining
    - 10.4.3.5. Any Lost Link Points, Flight Termination Points
  - 10.4.4. ARTCC CONTACTS
    - 10.4.4.1. Seattle Center Manager- (253) 351-3520
    - 10.4.4.2. NAS Whidbey Island Range Scheduling Office (360) 257 -2877 12502
    - 10.4.4.3. Flight Service Station - (800) 992-7433
  - 10.4.5. LOCAL AIRPORTS
    - 10.4.5.1. Chiloquin Rural Airport
    - 10.4.5.2. Klamath Falls
      - CTAF: 133.975
      - UNICOM: 122.95
      - ATIS: 126.5 263.0
      - WX ASOS: PHONE 541-883-8127

## Appendix A

**FLIGHT BRIEF MANDATORY ITEMS**

- Time Hack
- Pilot In Command (PIC)
- Visual Observers (VO)
- Aircrew Currency Check
- Mission Overview
- Mission Objective
- Weather
- Sunrise / Sunset
- NOTAMS
- Unique Mission Hazards
- Operations Area
- Area Restrictions
- Area Hazards
- Emergency Divert Plan
- Communications Plan
- Navigation Plan
- Data Recording Plan
- Contingencies
  - Aircraft Failure
  - Late Takeoff
  - Weather
  - No GPS
  - Alternate Mission
- Emergencies
  - Location of first aid kit
  - Location of Fire Extinguisher
  - Aircraft Limitations
- Prohibited Operations
- Stop Work Authority
- Questions