**[DROP ZONE NAME]**

# DROP ZONE OPERATIONALSAFETY MANAGEMENT SYSTEM

**[USPA MASTER TEMPLATE]**

**[DZ LOGO]**

[DZ LOCATION]

**USPA Template v1**

**July 2023**

### Document Control

#### Revision History

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#### References

1. FAA: [14 CFR Part 5 – Safety Management Systems](https://www.ecfr.gov/current/title-14/chapter-I/subchapter-A/part-5)

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### Definitions

| TERM | DEFINITION / INTERPRETATION |
| --- | --- |
| As low as reasonably practicable (ALARP) | Means a risk is low enough that attempting to make it lower, or the cost of assessing the improvement gained in an attempted risk reduction, would be more costly than any cost likely to come from the risk itself. |
| Change management | A systematic approach to controlling changes to any aspect of processes, procedures, products, or services, both from the perspective of an organisation and of individuals. Its objective is to ensure that safety risks resulting from change are reduced to as low as reasonably practicable. |
| Drop Zone | (Name of Business) |
| Safety and Training Advisor (S&TA) | Person responsible for managing all aspects of the Drop Zone’s safety management system.  |
| Hazard | A source of potential harm. |
| Human factors (HF) | The minimisation of human error and its consequences by optimising the relationships between people, activities, equipment, and systems. |
| Incident*[This detailed definition is from taken RS 55.]* | Any event which may or may not result in injury, illness, property damage or a near miss. This includes:(i) any breach of the regulations;(ii) any happening which, in the course of operations, causes injury to any person or damage to property;(iii) any unusual occurrence which it is reasonable to conclude might have caused injury to any person, or damage to property, or significantly increased the risk of a skydive; and(iv) any off drop zone landing by a student parachutist, a tree or water landing, any equipment malfunction and the activation of a reserve parachute or an AAD. |
| Just culture | An organisational perspective that discourages blaming the individual for an honest mistake that has contributed to an accident or incident. Sanctions are only applied when there is evidence of a conscious violation, or intentional, reckless, or negligent behaviour. |
| Likelihood | A general description of probability or frequency that can be expressed qualitatively or quantitatively. |
| Management | Planning, organising, resourcing, leading, or directing, and controlling an organisation (a group of one or more people or entities) or effort for the purpose of accomplishing a goal. |
| Risk | The chance of something happening that will have an impact on objectives.* A risk is often specified in terms of an event or circumstance and any consequence that might flow from it.
* Risk is measured in terms of a combination of the consequences of an event, and its likelihood.
* Risk can have a positive or negative impact
 |
| Risk assessment | The overall process of risk identification, risk analysis and risk evaluation. |
| Risk identification | The process of determining what, where, when why and how something could happen. |
| Risk management | The culture, processes and structures directed towards realising potential opportunities whilst managing adverse effects. |
| Safety culture | An enduring set of beliefs, norms, attitudes, and practices within an organization concerned with minimising exposure of the workforce and the public to dangerous or hazardous conditions. A positive safety culture promotes concern for, commitment to, and accountability for safety. for, safety. |
| Safety management system (SMS) | A systematic approach to managing safety, including the necessary organisational structures, accountabilities, policies, and procedures. |
| Safety | The state in which the probability of harm to persons or property is reduced to, and maintained at, a level which is as low as reasonably practicable through a continuing process of hazard identification and risk management. |
| Serious injury*[This detailed definition is from taken RS 55.]* | Any serious injury or illness that results in:(i) immediate hospital treatment as an in-patient (ii) immediate treatment for serious injuries (for example amputation, scalping, a spinal injury, loss of a bodily function or a serious laceration, burn, head injury or eye injury), or (iii) medical treatment within 48 hours of exposure to a substance. |

## ABOUT THIS DOCUMENT: COMPANION GUIDETO THE USPA DROP ZONE OPERATIONAL SMS

#### 1. INTRODUCTION

The attached Drop Zone Operational SMS has been written to assist drop zones in preparing their SMS. This document can, and should, be changed to reflect the individual characteristics of each drop zone. Drop Zones can:

1. Change and adopt this document and its format to meet their needs, or,
2. Write their own SMS.

##### WHY?

It is a Federal Government and USPA recommendation that all drop zones have an SMS. However, there are sound business and safety reasons for this to be taken up enthusiastically by drop zone management:

* It forms a structured approach to safety management – less likely to miss critical hazards, risks and mistakes.
* It is a formal acknowledgement of what we are already doing – a properly presented document holds more weight in a legal setting than a witness statement which involves interpretation of the ‘facts’.
* Significant evidence shows that an SMS approach reduces direct costs (aircraft/equipment damage, lost time from injuries) and indirect costs (insurance implications, business reputation).

##### WHEN?

Long term USPA members, especially those in management roles, were aware that this requirement has been on FAA agenda for some years. To maintain USPA’s credibility and ongoing relationship with FAA and other bodies, SMS need to be implemented and maintained. At the same time, drop zones will need opportunity to reflect on the implications, prepare their own SMS and brief and train their staff.

##### SMS GAP ANALYSIS

Completion of a gap analysis is a useful tool to identify your present status versus where you should be. A copy designed for drop zones is attached to this document as Appendix C.

##### SMS DROP ZONE IMPLEMENTATION PLAN

The gap analysis should identify what SMS components are already in place and what deficiencies need to be fixed. The implementation plan forms the next step in the process.

There are many guides on the web on how to construct an implementation plan; it is suggested that the drop zone safety committee should be involved at this stage.

##### DROP ZONE SAFETY AND TRAINING ADVISOR (S&TA)

An appropriate Safety and Training Advisor is critical to the success of the safety system. In a small drop zone, the S&TA’s duties may have to be added to an existing role or the use of part time employee or outsourcing may have to be considered.

Ideally, the S&TA should have operational management experience, technical knowledge of the drop zone’s operation, understanding of safety management principles and an approachable and communitive style with members.

**SAFETY RISK MANAGEMENT**

A proactive approach to hazard identification and the management of risk is at the core of the Safety Management System.

The USPA uses the Federal Aviation Administration Safety Management System. Drop Zone owners/S&TAs are encouraged to read 14 CFR Part 5 available at the FAA website.

The Practical Guides are located at:

FAA: [14 CFR Part 5 – Safety Management Systems](https://www.ecfr.gov/current/title-14/chapter-I/subchapter-A/part-5)

## SAFETY POLICY STATEMENT

#### Vision

*[i.e., Strategic statement about your safety vision. Example:]*

The management of this drop zone is committed to providing safe, healthy, secure work conditions and fostering positive safety attitudes.

#### Safety Policy Objectives

*[i.e., values to guide your staff in achieving your safety vision. Example:]*

I/we are committed to:

* ongoing pursuit of an accident-free workplace, including no harm to people and no damage to equipment, the environment, or property.
* a culture of open reporting of all safety hazards.
* an open reporting culture in which management will not initiate disciplinary action against any personnel who, in good faith, disclose a hazard or safety occurrence resulting from unintentional conduct.
* supporting effective communication throughout the organisation.
* support for safety training and awareness programs.
* conducting regular audits of safety policies, procedures, and practices
* monitoring industry activity to ensure best safety practices are incorporated into the organisation.
* providing the necessary resources to support this policy.
* requiring all employees to maintain a safe work environment through adherence to approved policies, procedures, and training; and familiarising themselves (and complying), with safety policies and procedures.
* all levels of management, starting with the owner/president and S&TA, being accountable for safety performance
* the principle that the organisation is strengthened by making safety excellence an integral part of all activities.

(Name)

Owner

(Drop Zone Name)

Date

(Name)

Safety and Training Advisor

(Drop Zone Name)

Date

## SMS COMPONENT 1: SAFETY POLICY AND OBJECTIVES

### 1.1 Responsibilities

All participants in this drop zone’s activities are to take shared responsibility for their own and other’s safety in all aspects of the drop zone’s activities. This applies not only to operational activities but includes general hazard identification and reporting. Everyone is encouraged to report possible hazards or potential risks to the drop zone’s senior members.

Specific responsibilities for safety in the drop zone are outlined below.

#### 1.1.1 Safety Representatives

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Position** | **Name** | **Contact****Number** | **Email** | **Remarks** |
| Owner |  |  |  |  |
| Safety and Training Advisor |  |  |  |  |
| Instructors |  |  |  |  |
| Rigger |  |  |  |  |
| Chief Pilot |  |  |  |  |
| Manifest Supervisor |  |  |  |  |

#### 1.1.2 Owner

The owner will:

1. Implement, maintain, review, and revise the drop zone SMS.
2. Implement, maintain, review, and revise the drop zone pilot training requirements
3. Maintain the emergency response plan.
4. Actively support and promote the SMS and a positive safety culture.
5. Ensure that they and all staff comply with the SMS processes and procedures.
6. Ensure that resources are made available to achieve the outcomes of the SMS.
7. Monitor ongoing activities to ensure a safe environment for participants.

#### 1.1.3 Safety and Training Advisor (S&TA) / Safety Manager

In addition to their overall responsibility for drop zone safety, the S&TA will:

1. Appoint appropriate and qualified persons to the other safety related positions in the drop zone.
2. Schedule and chair drop zone safety committee meetings and appoint appropriate members responsible for follow up action.
3. Introduce and monitor human factors integration in drop zone activities, e.g., clear and understood communications with staff, procedures for preventing fatigue and stress.
4. Provide safety advice to drop zone management and staff.
5. Promote and ensure an open and fair reporting culture.
6. Investigate incidents or accidents.
7. Ensure timely incident follow up and feedback given to other members.
8. Identify any SMS-related training requirements, e.g., pilot training/recurrency, safety induction for members or visiting jumpers.
9. Oversee internal and external SMS audit programs.

#### 1.1.4 Instructors

Instructors reflecting their critical role in safety, have direct access to all management levels. In addition to their responsibilities, under this SMS the Instructors responsibilities include:

1. Contribute as a member of the club safety committee.
2. Identify and report incidents and hazards of which they become aware; not just specifically related to aircraft operations.

#### 1.1.5 Rigger / Packer

In addition to their responsibilities under FAA Regulations, under this SMS the Rigger/Packer responsibilities include:

1. Contribute as a member of the club safety committee.
2. Encourage all members under their control to report incidents or hazards and take follow up action.

#### 1.1.6 Chief Pilot

In addition to their responsibilities under FAA Regulations, under this SMS the chief pilot’s responsibilities include:

1. Contribute as a member of the club safety committee.
2. Identify and report incidents and hazards of which they become aware; not just specifically related to aircraft operations.

#### 1.1.7 Drop Zone Safety Committee

#### The drop zone safety committee will have scheduled meetings [once/ month, once a quarter] notified to all members in advance.

All drop zone members are invited to attend. Regular and required members of the committee are:

* Owner and S&TA – committee chair
* Instructors (Assistant CI) – minutes and agenda (committee chair in the absence of owner/S&TA)
* Chief Pilot (and or assistant Senior Pilot)
* Manifest Supervisor
* Rigger

The safety committee is committed to action on safety related matters and its role includes:

1. Reviewing progress on identified hazards and action taken following accidents or incidents.
2. Making decisions to fix safety hazards.
3. Reviewing risk assessments based on hazard identification.
4. Instituting and reviewing internal safety audits.
5. Reviewing communications methods to advise members of safety related matters.
6. Reviewing drop zone safety objectives and targets.

### 1.2 Safety Objectives

The drop zone safety committee will formally review safety objectives yearly. Our initial objectives are:

|  |  |  |
| --- | --- | --- |
| **Safety Objective** | **Target** | **Measurement/KPI** |
| **Short Term Objectives** |  |  |
| Implement initial drop zone SMS | Before approval | All management and critical members fully briefed and inducted in the SMS plan |
| A culture of open reporting of all safety hazards | 100% of incidents formally reported.  | Number of reports received?Number of know/ list incidents known not to have a formal report |
| **Longer Term Objectives**  |  |  |
| Encourage active participation in SMS provisions by all senior staff | Within 6 months | Enthusiastic attendance by senior members at safety meetings |
| Safety training and awareness programs | Implement a number of safety training initiatives | Number of staff who completed safety training and what type of training was conducted. |
| Conducting regular audits of safety policies, procedures, and practices | Develop an audits and inspections programme for the company and complete all scheduled audits and inspections | How many audits and inspections were completed this reporting period |

### 1.3 Emergency Response Plan (ERP)

The owner or, in their absence, the S&TA will control any emergency associated with the drop zone. Any information regarding the emergency is to be passed to them immediately and instructions on required action will be issued by them.

The S&TA will nominate members to be part of an incident response team and their details will be promulgated to all members.

Emergency procedures covering various possible emergencies will be exercised every six months on a rotation basis, e.g., response to fire, response to in flight emergency, response to parachute accident.

Detailed information on the drop zone emergency response plan is attached as Appendix A. Additionally, Appendix D is a sample Search and Rescue procedure for off drop zone landings.

The Owner and Safety and Training Advisor are both responsible for maintaining the ERP, particularly contact details.

### 1.4 IMPLEMENTATION PLAN

The implementation plan for the integration of a formal SMS into the drop zone is:

|  |  |  |
| --- | --- | --- |
| **Milestone**  | **Implement by** | **Notes**  |
| **Initial consultation on SMS** |  |  |
| Draft initial drop zone SMS  |  | All management and critical members fully briefed and inducted in the SMS plan |
| Brief all staff on draft SMS and get feedback and input |  | *[Suggest use an annual management review agenda to run all staff through an entire introduction to the SMS manual, their expectations and your expectations]* |
| Implement the SMS  | Before approval |  |
| **Review SMS**  | *(Within 6 months)* | Conduct an internal audit of the system, expecting to have no less than one tool integrated for the management of each section |
| Major alterations as a result of review  | *(Within 6 to 12 months)* |  |
| Annual induction training to the SMS for all new and existing staff  |  | Conduct a full induction process of all staff to integrate changes as a result of the major update.  |

## SMS COMPONENT 2:SAFETY RISK MANAGEMENT

Reference: FAA: [14 CFR Part 5 – Safety Management Systems](https://www.ecfr.gov/current/title-14/chapter-I/subchapter-A/part-5)

The policy of this drop zone is to identify and minimise weaknesses and hazards BEFORE they can cause an accident or incident.

All members are encouraged and required to report (or fix and report) any issues they feel could pose a risk. This can be done verbally to a senior member or by using the hazard report form (Appendix B1).

Any senior member of staff receiving a report of this nature is to advise either the owner or S&TA.

### 2.1 Hazard Identification

In addition to encouraging all members to report (or fix and report) hazards and weaknesses, the drop zone will:

* Raise the subject of safety and hazard identification at each drop zone meeting.
* Review all new and previously reported hazards at drop zone safety meetings.
* Conduct an internal assessment of procedures and operations yearly to ensure hazards have been identified and minimised.
* Carry out formal hazard identification procedures prior to any change in the drop zone, e.g., expansion of operations, introduction of new aircraft, equipment, or procedures, changes to key personnel or at any time a new risk may be apparent.

All reports of hazards are to be directed to the Safety and Training Advisor. After verification, they will include the data in the hazard identification template (see Appendix B2) and allocate a priority for attention.

### 2.2 Risk Assessment and Risk Mitigation

The S&TA is responsible to hold and maintain the drop zone risk assessment register (see template at Appendix B3). This is an integral component of safety management.

The risk register is to be held at the drop zone operations office. It is available for all members to read but not to be removed from the operations office without approval from the S&TA.

The S&TA and all Instructors will take the following steps to ensure that risk management is applied:

* Hazards are identified and all members are encouraged to participate in the identification of hazards and weaknesses.
* A risk analysis is conducted on all identified hazards to assess the probability of an event occurring and the severity of that event.
* A clear and logical assessment is made to evaluate the seriousness of possible harm to persons, equipment, or the environment and whether these are tolerable or not.
* Controls and mitigation are applied to the risk, and these are communicated to the safety committee and members.
* A periodic review is conducted to ensure the validity and relevance of the mitigation measures.

**Risk Control Hierarchy**

In controlling hazards and risks, the primary aim is to eliminate the hazard entirely. This may not be always possible. The following table demonstrates a commonly accepted hierarchy of controls.



### 2.3 Action on Identified Risks

*[After deciding on risk elimination/mitigation strategies, the drop zone needs to document the actual action taken with reminders on further follow-up and when. A checklist will be developed, but drop zones may use their own follow-up system, e.g., a diary. The checklist needs sufficient information included so the action can be traced clearly...]*

**Drop Zone SMS Continuing Improvement Packs**

The USPA has continual improvement packs available for Drop Zones to use. These involve identifying potential risks and implementing procedures to help manage and reduce these risks at a drop zone level. They are issued periodically and can be found in the publications section of the USPA website. members/publications/publications

## SMS COMPONENT 3:SAFETY ASSURANCE

The drop zone is aware that the introduction of a new system, like our SMS, is one thing; maintaining it in the intended way is quite another. Staff and members are entitled to know that their safety is of prime concern to the drop zone and are encouraged to participate in the ongoing maintenance of our safety culture.

### 3.1 Safety Performance Monitoring and Measuring

In addition to the yearly USPA review of our SMS, the drop zone, under leadership and scheduling by the Owner or S&TA will measure and monitor compliance with SMS principles by:

* Reviewing our overall compliance with SMS once every six months. The S&TA will delegate this task to a senior instructor on a rotational basis.
* Reviewing drop zone safety objectives and their measurement annually. This review is to be done by the Drop Zone Safety Committee.
* Assessing the effectiveness of SMS procedures and processes outlined in this document regarding their implementation and, importantly, how they are practiced by staff and members.

### 3.2 Internal Safety Investigation

There are a few occurrences that fall outside the reporting and investigation regime required by the FAA and USPA. Although these may appear minor to members, investigating these occurrences may reveal potential dangers and hazards.

Members are encouraged to report any occurrences where they have concerns to the Owner or S&TA. This can be done verbally or by using the hazard report form.

The S&TA will determine the severity, and therefore the priority for corrective action, including investigation. They may appoint an investigating officer or conduct the investigation themselves. The investigation will:

* Be objective and focus on the ‘what’ and ‘how’ circumstances rather than the person(s).
* Be reviewed at the drop zone safety committee meeting to identify if improvements or changes need to be made to drop zone procedures or the SMS.
* Determine if any lessons can be drawn from the occurrence.
* Suggest if other members or other drop zones in the area could benefit from the investigation results and means by which this communication could be done.

### 3.3 Change Management

All members, especially staff, are reminded that any change, particularly to known methods and procedures, can bring further risk which needs identification, management and mitigation. This will be managed by:

* Risk management procedures being applied to minor changes. The S&TA and, if necessary, the any Instructor are to be kept informed of any proposed changes and the risk management techniques which have been applied.
* The Drop Zone Safety Committee will consider the safety implications of any proposed major changes in the drop zone, e.g., introduction of new equipment, aircraft, drop zone location or procedures.

### 3.4 Continuous Improvement

After initial introduction of this SMS, the drop zone needs to remain focused on safety and regularly review our safety net to ensure it is still relevant and working for us.

We will:

* Continuously monitor and annually formally review our risk management process. This will be done through the Drop Zone Safety Committee.
* Implement recommendations from any of our incident investigations and review other incident investigations to determine their relevance to us.
* Implement recommendations from our own internal audits and those conducted by the S&TA.
* All members are welcome and invited to attend drop zone safety meetings. The S&TA will post notice of meeting dates and agenda in the operations office. Minutes will be issued and posted as soon as possible after each meeting.
* Attend annual S&TA meetings and share safety information with the other drop zones.

## SMS COMPONENT 4:SAFETY PROMOTION

The drop zone is aware that a Safety Management System is of little use unless it is promoted and understood by all members. We will achieve this by a combination of safety training and ongoing communication programs.

### 4.1 Safety Training

As an initial step, the Drop Zone S&TA will:

* Conduct a training needs analysis to determine what training is needed, who needs to receive this training and how it can be done.
* Compile a record of members who have appropriate qualifications, e.g., First Aid (including details of currency including CPR), training or experience in risk management, training, or experience in project planning.
* Review present safety training and establish its relevance and adequacy, e.g., induction training for new members, safety briefings for contractors or workers.

The safety committee is to review the adequacy and appropriateness of safety training as an agenda item at each meeting.

### 4.2 Safety Communication

Our safety communication strategy is aimed at ensuring there is unimpeded two-way communication on safety matters. That is, members are kept informed about safety initiatives and feedback is captured and acted upon.

As an initial step, we will:

* Make clear that all members are welcome at safety meetings by posting agenda and minutes in the operations office.
* Make safety signage obvious and clear.
* Require safety critical members to wear high-vis clothing when engaged in safety related activities, e.g., refuelling, marshalling aircraft, coordinating loads.

## SMS COMPONENT 5:HUMAN FACTORS (FATIGUE AND STRESS)

### 5.1 Introduction

In considering our policy for human related safety issues, the drop zone accepts that:

* Human performance limitations continue to dominate aviation and parachuting accident statistics.
* The effective management of error remains one of the greatest challenges to the further reduction of accidents and improving safety.
* Effective technical **and** human factors are required for safe and efficient operations.
* The need for improved efficiency and having fit-for-duty personnel highlights the crucial role of effective human factors.

In resolving the hazards and risks related to human activity within the drop zone and to avoid long term prescriptive measures (fixed and inflexible duty periods), we will gradually introduce a Fatigue Risk Management System (FRMS).

The FRMS is a systems-based approach to manage human related risk and introduces management practices and procedures to predict, manage and monitor fatigue and stress related risk.

Our eventual aim is to achieve a fully incorporated FRMS where a culture change has occurred leading to all our members contributing to the reduction in fatigue risk.

We recognise that this change will not occur quickly and have designed the change to happen over three phases (outlined below).

### 5.2 FRMS Policy and Objectives

#### 5.2.1 Management Commitment

The drop zone’s safety vision and safety policy objectives remain as outlined in the Safety Policy Statement located at the start of this SMS. Effective communication and an open reporting culture are vital to the reduction of risks related to fatigue and stress.

No one will be penalized for reporting suspected fatigue hazards relating to themselves or others.

#### 5.2.2 Responsibilities

Some symptoms of fatigue and stress may be obvious but not necessarily to the individual. The drop zone encourages members to be on the lookout for fatigue in their peers as part of our ‘buddy check’ procedures and ask that the member be reminded to check in with the Owner/S&TA.

The drop zone encourages members to report to their immediate supervisor (Owner, S&TA, Chief Pilot) if they are not completely fit for their duties. It is recognised that this may involve a temporary reduction in income for the individual but the results of a failure to make appropriate decisions due to fatigue or stress have far reaching impact.

The responsibilities of the owner, S&TA, Chief Pilot and the Safety Committee outlined in Component 1 of this SMS apply also to this Component.

#### 5.2.3 Objectives

During initial introduction of this Component, our objectives are:

1. Raise awareness of human factors safety issues by including discussions at each drop zone meeting.
2. Encourage a culture of open reporting and communication of fatigue and stress concerns by not penalizing members who report.
3. Foster an environment based on trust and ‘just culture’ principles with fatigue related incidents.

#### 5.2.4 Affected Members

Although all members could be affected by stress and fatigue, this instruction applies specifically to Operational Crew Members (OCM) who, if affected by stress or fatigue, could present a hazard to other persons or property. OCM include:

* Tandem Masters
* AFF Instructors
* Rigger/Packers
* Pilots

#### 5.2.5 FRMS Phases

Introduction of the fully integrated FRMS will be conducted over three phases:

1. Phase 1 (Within the first year of SMS implementation) The drop zone will provide sufficient rest opportunities for OCM, and those members are responsible for using the rest opportunities provided. Suggested duty/rest periods and limits are outlined below. We will encourage members, especially OCM, to record and report instances where they are fatigued so that alternate strategies can be developed.
2. Phase 2 (during the second year of SMS implementation) Initial fatigue management introduction. Specific to drop zone risk management assessment, training, and education for operational staff, increased and continuous monitoring of staff and risks specific to the drop zone.
3. Phase 3 (Within the third year of SMS implementation) Full compliance with a drop zone based FRMS. This will remove a great deal of the prescriptive limitations but will require increased focus on education and training, formal evaluation and review, improvement recommendations, record keeping and audit.

#### 5.2.6 Phase 1

##### (a) Phase 1 Prescriptive Guidelines

* No authority within the drop zone will require an OCM to perform operational duties if that authority has reason to believe the OCM is suffering from fatigue which may impair the safety of the operation.
* A duty cycle will consist of any 168 hours (7 days) period.
* Off Duty. Following a period of duty, an OCM will have an off-duty period of at least 10 hours. An OCM will be required to be free of all duty for at least 24 hours in any duty cycle (7-day period).
* Duty Period. The maximum duty period is 11 hours.
* Meals. If a duty period exceeds 5 hours, an OCM must have an opportunity to access a meal and a minimum of 30 minutes rest away from the operational area.
* Extensions. The duty period may be extended for up to 1 hour for unforeseen operational circumstances and the OCM considers themself, fit for the time extension after consultation with the S&TA.
* Limit on Cumulative Duty Periods. Due to the significant fluctuations on operations imposed by weather and other factors, putting limits on cumulative duty periods is not considered necessary at this time. The S&TA will monitor operational levels and, if considered necessary, may impose mandatory rest periods for OCM who exhibit fatigue symptoms.

##### (b) Phase 1 Data Collection

Ideally, the drop zone would like to collect data on individual’s fatigue level over time. However, it is recognised that this would be extremely difficult to manage in a meaningful way and create additional load on members and management.

Members, OCM, are encouraged to record unusual fatigue levels in their logbooks and raise these incidents either with the S&TA or in drop zone meetings so that all members can benefit from the experience and changes can be made to operations to make them safer.

#### 5.2.7 Phases 2 and 3

Details on the introduction of Phases 2 and 3 will be advised following assessment on the results achieved during Phase 1.

### 5.3 FRMS Risk Management

#### 5.3.1 FRMS Overview

FRMS risk management uses the same principles as the general risk management process outlined in Component 2 of this document. Its approach is to be proactive in identifying fatigue hazards and depends on honest communication between OCM and drop zone management. As with all risk management, the main steps are:

* Identify fatigue hazards and assessing the risk to operations and personnel.
* Treating the risk using control measures to eliminate or mitigate the risk.
* Monitoring, reporting and, if necessary, improving the control measures.

#### 5.3.2 Common Causes of Fatigue

|  |
| --- |
| **Common work-related causes** |
| Restricted sleep due to short rest periods or long commutes to the DZ |
| Multiple high workload periods |
| Long duty days |
| Hot weather during duty periods |
| High cumulative duty times (hours/month or year) |
| Changes to operations or procedures |
| Tasks required to be done before or after duty periods (administration, training, cleaning) |
| **Common non-work-related causes** |
| Having a second job |
| Long commutes to and from work |
| Changes in domestic arrangements |
| New baby |
| Family commitments |
| Social life |
| Moving house |
| Sleep disorders or sickness affecting quality/quantity of sleep |

#### 5.3.3 FRMS Process

The FRMS process is similar to the standard SMS risk assessment detailed in Component 2 of this document. In summary:

1. Communicate and consult with members either individually or in meetings.
2. Identify fatigue hazards – all members are encouraged to speak up about perceived fatigue hazards (rest facilities, insufficient education, lack of clear policies or difficulty in following policies and procedures).
3. Assess the severity of fatigue hazards by the drop zone safety committee, Owner or S&TA using the likelihood/consequence risk assessment matrix.
4. Evaluate and mitigate the risks by calculated control measures. This will be done by the drop zone management and may involve changes to rosters, operational procedures or other measures to preferably eliminate the risk completely.
5. The drop zone will record the results of the risk management plan and share that with all staff.
6. The drop zone will monitor any changes and formally review them on a regular basis to ensure any changes are effective. Members are encouraged to participate in this review at any time.

### 5.4 FRMS Promotion

#### 5.4.1 Communication

It is essential that all staff and members participate in communicating issues relating to safety so we can build a more robust fatigue safety culture within the drop zone.

The risks to our clients are considerable if we do not maintain high levels of professionalism. Complacency, lack of awareness and bad decision making cannot be tolerated in our business and sport.

## APPENDICES

### Appendix A: Emergency Response Plan (ERP)

Remnants

#### Part A: Drop Zone Particulars

Drop Zone Name:

Phone:

Drop Zone Address (location) *[Insert GPS/ Street Address]*

Specific instructions:

Safety and Training Advisor:

**Personnel Trained to Administer First Aid, CPR**

|  |
| --- |
| **First Aid, CPR Qualifications**  |
| Name | Telephone |
|  |  |
|  |  |
|  |  |

**Location of:**

**First Aid Kits**

A First Aid Kit is kept in Manifest office.

**Fire Extinguishers**

* Manifest
* Equipment room
* Each aircraft
* Bus
* Refuelling point
* Hanger
* Accommodation areas

**Fire Alarms Fitted and operational.**

#### Part B: Medical Emergency

 *[This part has been limited to medical emergencies as a guide. Drop Zones may consider changing the heading to, for example, ‘Emergency Protocols’, and including other emergencies like vehicle accidents, aircraft accidents, other operational fatalities, water landings, etc.]*

Unless it is not possible due to circumstances, the person responsible for calling emergency services is the Manifest under instructions of the S&TA.

##### Serious Incident/injury/medical emergency

* **If a medical emergency is reported, dial 911** and request an ambulance.
* If injuries are deemed serious enough, request that a helicopter be sent
* Then provide the following information:
1. Number and location of victim(s)
2. Nature of injury or illness
3. Hazards involved
4. First aid care being administered
5. Address of the nearest entrance (emergency access point)

##### Medical Emergency Response Procedures

* The Incident Controller/S&TA will proceed to accident scene (with Mobile Phone) and render assistance to the injured until EMS arrives.
* Alert any First Aid, CPR trained employees, drop zone members to also respond to victim’s location with a first aid kit.
* Incident Management Team will assume their roles and commence action in accordance with this plan.
* Ambulance to be met at nearest entrance/emergency access point; direct them to victim(s)
* Any person on the DZ at the time of the incident who is trained in first aid/CPR should respond and provide first aid assistance if possible.
* The victim should not be moved unless the victim’s location is unsafe.
* Control access to the scene
* Take precautions to prevent contact with body fluids.

##### Secondary Response Procedures

* Preserve equipment as found until photos/video have been taken and S&TA has arrived.

#### Part C: Emergency Contact Information

*[Ensure these are KEPT UPDATED. For ease of access, a copy of the emergency contacts list should be prominently displayed in manifest.]*

|  |
| --- |
| **Table One: Emergency Contacts Information**  |
| **Club Contacts** |
| **Position**  | **Name** | **Emergency Telephone** | **Business Telephone** |
| Owner |  |  |  |
| S&TA |  |  |  |
| Manifest  |  |  |  |
| Chief Pilot  |  |  |  |
| Rigger |  |  |  |
| Instructor |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
| **USPA Contacts** |
| **Position**  | **Name** | **Emergency Telephone** | **Business Telephone** |
| Executive Director  | Albert Berchtold |  | 540-604-9740 ex.325 |
| Director of Safety & Training | Ron Bell | 612-859-4300 (Text) | 540-604-9740 ex.314 |
| Director of Government Relations | Michael Knight |  | 540-604-9740 ex.333 |
| Beyond Marketing | James LaBerrie |  | 704-268-9338 |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
| **Public Emergency Services & Contractors** |
| **Emergency Service Name** | **Emergency Telephone** | **Business Telephone** |
| Local FAA FSDO |  |  |
| NTSB |  |  |
| Local Fire Department |  |  |
| Local Police Department |  |  |
| Local Hospital |  |  |
| Electrical Company |  |  |
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##### Calls to be made

The following table details the calls that must be made by the drop zone in the event of an emergency. These calls would usually be made by the S&TA or any member of the IMT, depending upon the situation. The order that they are made in would be dependent upon the situation at the time, with calls to EMS (911) taking precedence over all else.

|  |
| --- |
| **Table Two: Incident Response Table - Calls to Make** |
|  |
| **Incident**  **Type**  | **Response** |
|  | Ambulance-911 | Fire Department | Police-911 | USPA  | NTSB | FAA | James LaBerrie | S&TA/Owner | Family  |
| Aircraft Accident – severe injuries, fatality |  |  |  |  |  |  |  |  |  |
| Aircraft Accident – minor injuries  |  |  |  |  |  |  |  |  |  |
| Parachuting accident – fatality(s)  |  |  |  |  |  |  |  |  |  |
| Parachuting accident – severe life-threatening injuries |  |  |  |  |  |  |  |  |  |
| Parachuting accident – moderate injuries requiring ambulance  |  |  |  |  |  |  |  |  |  |
|  | *Situation dependent*  |
|  | Calls or Reports to FAA are made by the chief pilot or owner |
|  | Calls to FAA are made by the Owner or S&TA |

#### Part D: Incident Response

The role and responsibilities of the Incident Management Team in the event of an emergency are as follows:

##### Incident Controller (S&TA).

1. **Establishing safety of the scene and immediate care of the injured**
2. Administer life saving techniques or first aid if qualified to do so. Continue this care until relieved by the EMS personnel
3. Acute care in an emergency situation should be provided by the most qualified individual on the scene.
4. **Controlling the scene** of the accident
5. Ensuring only essential personnel enter the accident site.
6. Controlling spectators, media, setting up barriers
7. Keeping EMS access clear.

##### Incident Controller (May delegate to manifest/instructors)

1. **Calling/liaising with Emergency Medical Services (EMS).** This must be done as soon as the situation is deemed an emergency, or a life threatening event. Time is a critical factor. The call may be made by anyone on the IMT however the person chosen must be calm under pressure, who communicates well, and is familiar with location of the drop zone/event. To avoid numerous calls to EMS all involved should know who is responsible.
2. **Communicate with media,** make media statements.
3. **Contact family**, next of kin - details to be conveyed should also be clearly specified and medical details should only be conveyed by, or with approval from, medical personnel.

##### Transport and Equipment Officer

1. One member of the team must be responsible for meeting emergency medical personnel as they arrive at the site of the emergency
2. Depending on ease of access, this person should have keys to any locked gates or doors that may slow the arrival of medical personnel including ensuring designated access is available to EMS vehicles and is kept clear
3. After EMS have arrived at the accident scene the responsibilities of this person diverge to include equipment retrieval

#### Part E: Emergency Response Procedures for Specific Events

The following table provides a summary of the actions to be taken by the various drop zone representatives in the event of an emergency.

|  |
| --- |
| **Table Three: Emergency Response Procedure Summary**  |
|  | **Response**  |
| **Incident** | **Owner/S&TA** | **Manifest** | **IMT – Instructors** | **IMT – Operations**  | **IMT – Operations** |
| **Serious parachuting incident – severe injuries**  | Secure accident scene, render assistance, make, or delegate calls. | Operations may continue with S&TA approval.  | Make calls in accordance with Table One, communicate, and liaise with EMS, Media, and Next of Kin. | Secure all operations. Control spectators. Set perimeters.  | Keep access clear,Meet EMS vehicles, direct to victim(s) |
| **Serious parachuting incident - fatality(s)** | Secure accident scene.Take photos. Cover victims.Make calls or delegate calls.Liaise with authorities.  | Shut down operations. Answer phones – **under instruction only** | Make calls in accordance with Table One, communicate, and liaise with EMS, Media, and Next of Kin. Give instruction to manifest phone answering.  | As above  | As above |
| **Aircraft accident – serious injuries** | Secure accident scene, give assistance. Make or delegate calls  | As above  | As above | As above | As above |
| **Aircraft accident – fatalities**  | Secure accident scene.Take photos. Cover victims.Make calls or delegate calls. Liaise with authorities.  | As above  | As above  | As above  | As above  |
| **Cutaway over populous area**  |  |  |  |  |  |
| **Power line landings**  |  |  |  |  |  |

*IMT = Incident Management Team*

##### Summary

It is important that all personnel are aware of their role and required actions in the emergency response plan. Emergency plans should be communicated to all drop zone members and participants. These plans should be updated regularly, and ideally should be rehearsed often for reinforcement of actions. Although these incidents may not occur often, a sound, communicated and well-understood emergency plan may mean the difference between life and death in an emergency.

### Appendix B1: Hazard Report Form

Reported by:

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Position: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Subject:

[ ] Workplace hazard

[ ] Hazardous work practice

[ ] Public hazard

[ ] Operations safety hazard

Description of hazard and any action taken:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Is further action required? Yes [ ] No [ ]

Reported to:

Drop Zone Safety and Training Advisor: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Safety committee/rep: Yes [ ] No [ ]

Reporting person’s name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Signature:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date:\_\_\_\_\_ /\_\_\_\_\_ /\_\_\_\_\_

**S&TA use only**

Date report received:\_\_\_\_\_ /\_\_\_\_\_ /\_\_\_\_\_

Action taken or recommended:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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Date implemented: \_\_\_\_\_ /\_\_\_\_\_ /\_\_\_\_\_

Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Signature:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

### Appendix B2: Hazard Identification Template

#### B2-1 Hazard ID – Operations (HO)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **#** | **Date** | **Description** | **Initial****Likelihood** | **Initial****Consequence** | **Name** | **Remarks** |
| HO1 | July 1 2023 | Deer in the aircraft landing area | 3 | 2 | Initial Assessment | Forward for risk assessment |
| HO2 | July 4 2023 | Passengers embarking aircraft while refuelling taking place | 3 | 4 | Initial Assessment | Forward for risk assessment |
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#### B2-2 Hazard ID – Grounds/Buildings (HG)

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| --- | --- | --- | --- | --- | --- | --- |
| **#** | **Date** | **Description** | **Initial****Likelihood** | **Initial****Consequence** | **Name** | **Remarks** |
| HG1 | July 1 2023 | Hawks swooping spectators  | 3 | 2 | Initial Assessment | Forward for risk assessment |
| HG2 | July 6 2023 | Visitors encroaching on landing or packing areas | 4 | 2 | Initial Assessment | Forward for risk assessment |
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#### B2-3 Hazard ID – Off Site Landing (HD)

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| --- | --- | --- | --- | --- | --- | --- |
| **#** | **Date** | **Description** | **Initial****Likelihood** | **Initial****Consequence** | **Name** | **Remarks** |
| HD1 |  |  |  |  |  |  |
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### Appendix B3: Risk Analysis and Assessment Template

| **Risk I.D #** | **Step 2. Potential Threats and Hazards** | **Step 3. Description of Risk** | **Step 4. Current control measures**  | **Step 5. Risk Rating** | **Step 6. Treatments to be Implemented** Measures to be taken to eliminate or reduce impact of the risk | **Step 7. Revised Risk Rating** after Implementing Treatments (Residual Risk) |
| --- | --- | --- | --- | --- | --- | --- |
| **A** **Consequence** | **B** **Likelihood** | **C****Risk Level** | **Measures**  | **Responsible person**  | **A** **Consequence** | **B** **Likelihood** | **C****Risk****Level** |
| H01 | Deer on the aircraft landing area | Deer can unpredictably walk onto the aircraft landing strip causing potential hazard to aircraft when taking off/landing | General awareness by pilot. | Moderate | Improbable | Medium | Considered erecting large fence around parts of landing stip. Committee determined further risk to landing parachutists in hitting fence. S&TA will keep area under observation. | S&TA | Moderate | Extremely Improbable | Minor |
| H02 | Passengers embarking aircraft while refuelling taking place | Passengers embarking aircraft while refuelling taking place could allow fire hazard | Observation by pilot while refuelling | Hazardous | Remote | Medium | Owner to provide fence barrier to be erected whilst refuelling. Refueller to supervise and open barrier as appropriate  | Refueller | Hazardous | Extremely Improbable | Minor |
|  |  |  |  |  |  |  |  |  |  |  |  |

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| HG1 | Hawks swooping spectators | Hawks regularly swoop jumpers and spectators during nesting season | Briefing of hazard | Minor | Occasional | Medium | Parachutists briefed to keep helmets on after landing. Signage to warn visitors | Owner/S&TA | Minor | Extremely improbable | Minor |
| HG2 | Visitors encroaching on landing or packing areas | Visitors are at risk if entering operational areas | S&TA Observation | Minor | Occasional | Medium | Improved signage. S&TA to restrict visitors as required | Owner/S&TA | Minor | Extremely improbable | Minor |
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### Appendix C: Gap Analysis Checklist for Clubs

*This USPA SMS Gap Analysis Checklist has been developed for use by Drop Zones. Whether developing and implementing drop zone SMS for the first time, or whether reviewing where an operation sits in relation to an existing SMS, completion of a Gap Analysis will provide a clear picture of which components of an SMS already exist and which need to be further developed.*

|  |
| --- |
| **USPA Gap Analysis Checklist for Drop Zones** |
| **SMS Element** | **Check Question**  | **Response** |
| **Safety Policy, Objectives and Planning** | **Management Commitment and Responsibility**  | Yes | No | Developing |
| 1 | Does the drop zone have a documented Safety Policy, signed by Senior Management?  |  |  |  |
| 2 | Is the Safety Policy appropriate for the size and complexity of the particular drop zone? |  |  |  |
| 3 | Is the Safety Policy readily visible and accessible to all staff?  |  |  |  |
| 4 | Are there clearly established and measurable safety objectives in the Safety Policy, which are reviewed regularly? |  |  |  |
|  | **Safety Accountability of Managers**  | Yes | No | Developing |
| 5 | Are the roles and responsibilities of SMS management documented? |  |  |  |
| 6 | Are the values of all SMS management levels, clearly identified as being safety orientated? |  |  |  |
| 7 | Are management aware of their SMS obligations? |  |  |  |
|  | **Appointment of Key Safety Personnel**  | Yes | No | Developing |
| 8 | Is there a safety manager appointed to lead and champion the SMS? *(for smaller clubs the S&TA and Safety Manager might be the same person)* |  |  |  |
| 9 | Is there a position description outlining the responsibilities of the Safety Manager? *(these responsibilities may be different to that of the S&TA)* |  |  |  |
| 10 | Does the appointed Safety Manager have the required knowledge for the job, or is he/she willing to undertake the necessary training? *(larger drop zones would need a safety manager with the required knowledge BEFORE assuming responsibilities)* |  |  |  |
| 11 | Are there sufficient resources (financial, human, hardware, software) to support the SMS? |  |  |  |
|  | **SMS Implementation Plan**  | Yes | No | Developing |
| 12 | Has the drop zone developed an SMS Implementation Plan? |  |  |  |
| 13 | Has a gap analysis been undertaken to identify existing and missing SMS elements? |  |  |  |
| 14 | Are priorities for SMS implementation based on identified risks?  |  |  |  |
|  | **Emergency Response Plan (ERP)** | Yes | No | Developing |
| 15 | Does the drop zone have an appropriate Emergence Response Plan (ERP)? (if multiple operations/DZ locations there must be an ERP for each one)  |  |  |  |
| 16 | Has the drop zone assessed which emergencies are most likely and developed plans for each different type? |  |  |  |
| 17 | Is there documentation of all major risks in operational areas?  |  |  |  |
| 18 | Are there sufficient notices in operational areas advising people of what to do in an emergency?  |  |  |  |
|  | **Documentation**  | Yes | No | Developing |
| 19 | As part of SMS documentation, has the drop zone developed a Safety Management Manual, appropriate to their drop zone’s particular size and complexity? |  |  |  |
| 20 | Are there written policies, procedures and instructions covering all the SMS standards?  |  |  |  |
| 21 | Are these written policies, procedures and documents authorised, current and available to all relevant personnel?  |  |  |  |
| **Safety Risk Management** | **Risk Identification**  | Yes | No | Developing |
| 22 | Is there an effective ongoing risk identification program?  |  |  |  |
| 23 | Does the risk identification program include a confidential reporting system? (this should include an internal drop zone reporting system, different to USPA incident reporting) |  |  |  |
| 24 | Does the drop zone use the USPA Incident Reporting System properly by ensuring participants report all incidents, occurrences, near misses? |  |  |  |
|  | **Risk Assessment and Mitigation** | Yes | No | Developing |
| 25 | Is the USPA’s standardised Risk Assessment and Management methodology utilised by those responsible for safety management?  |  |  |  |
| 26 | Does this include a continuous assessment of risks for their risk potential (likelihood and severity)?  |  |  |  |
| 27 | Does the drop zone have a process for managing risks to a tolerable level i.e. as low as reasonably practicable (ALARP)? |  |  |  |
| **Safety Assurance** | **Safety Performance Monitoring and Measurement**  | Yes | No | Developing |
| 28 | Are there key safety performance indicators to measure safety performance?  |  |  |  |
| 29 | Are the safety performance indicators monitored for achievement? |  |  |  |
|  | **Safety Investigation**  | Yes | No | Developing |
| 30 | Does the drop zone encourage the use of an Internal Drop Zone Reporting System? |  |  |  |
| 31 | Does the drop zone support the USPA’s system for incident reports, safety occurrences, and for investigating incidents/accidents?  |  |  |  |
|  | **Management of Change**  | Yes | No | Developing |
| 32 | Does the drop zone manage ‘change’ in a formal manner? |  |  |  |
| 33 | Are changes carefully planned and staggered? |  |  |  |
| 34 | Does this include identification of, and consultation with, all stakeholders?  |  |  |  |
| 35 | Are appropriate strategies used to reduce risks associated with proposed changes? |  |  |  |
|  | **Continuous Improvement**  | Yes | No | Developing |
| 36 | Are there regular internal reviews to check if the SMS is working as intended? |  |  |  |
| 37 | Does the drop zone have a written procedure specifying how regularly the effectiveness of the SMS is to be evaluated? |  |  |  |
| **Safety Promotion** | **Training and Education**  | Yes | No | Developing |
| 38 | Has the drop zone conducted a review of their training needs and clearly defined competencies necessary for their particular drop zone (either formally via a Training Needs Analysis, or informally through review, involving all stakeholders)?  |  |  |  |
| 39 | Is a supply of safety-related information (magazines, books, brochures, posters, educational videos etc.) readily available to all staff/employees/stakeholders who have safety responsibilities? (And also visible to all other participants)  |  |  |  |
| 40 | Are staff/employees encouraged and assisted to attend safety committee meeting and seminars? (USPA Safety Day) |  |  |  |
| 41 | Are new employees given sufficient training and checking (induction training), prior to being permitted to commence work?  |  |  |  |
| 42 | Is this training documented, including having the signatures of the new employee and the trainer? |  |  |  |
| 43 | Is refresher training conducted including checking all employees’ proficiency, and is the training adequate?  |  |  |  |
| 44 | When new procedures are introduced, are employees given sufficient training?  |  |  |  |
| 45 | Are trainers adequately trained and checked, both for competence and standardisation? |  |  |  |
| 46 | Are all employees trained in the procedures and policies of the drop zone’s SMS?  |  |  |  |
| 47 | Does the drop zone maintain a training records register? |  |  |  |
| 48 | Are training initiatives evaluated to determine their effectiveness? |  |  |  |
|  | **Safety Communication**  | Yes | No | Developing |
| 49 | Are regular staff meetings held and are they used to communicate current safety and training issues?  |  |  |  |
| 50 | Are there set standards for safety communication, including the method for communicating specific safety messages?  |  |  |  |
| 51 | Does the drop zone share safety-related information freely with all employees? |  |  |  |
| **Results** | **Total number of yes responses \_\_\_\_\_\_\_\_\_\_\_\_\_\_** |  | **Assessment Result (% of yes responses)****\_\_\_\_\_\_\_ %** |
|  |  |  |
|  | **Total number of No responses \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** |  |
|  | **Number of check questions completed \_\_\_\_\_\_\_\_\_** |  |  |  |
|  |  |  |  |  |

### Appendix D: Sample Search and Rescue Procedure

#### For: Off Drop Zone Landings

1. Write name on Search and Rescue (S&R) board daily before loading the aircraft.

2. Anybody noticing off-DZ landings should report this to manifest immediately. Manifest to inform S&TA.

3. Note approximate area of off-DZ landing and how many parachutists. Locate man-made and natural features as a reference.

4. S&TA to co-ordinate and send suitable vehicles to retrieve parachutists.

5. Each jumper must remove their own name from S&R board at the end of jumping/daily. If any name(s) remain after the last load of the day, this will ‘trigger’ a S&R procedure to locate the ‘missing’ jumpers. In the event this proves unnecessary, an appropriate ‘fine’ may be enforced.

6. If someone cannot be located, grid ground search to be coordinated by S&TA. Mobile phones are to be carried by searchers; the central contact phone to be manifest (include phone numbers).

7. If ground search unsuccessful, the aircraft may be used to assist.

8. If this is unsuccessful, S&TA to report to manifest and contact appropriate authorities.

#### Note to S&TA:

It may be useful for a drop zone to have appropriate rescue equipment to assist in the event of tree recovery and store in an accessible place. A First Aid kit and training in its use should be also available. Torches and a supply of batteries should also be available for conducting search after last light.