



**FREESTYLE  
SKI  
ACROBATIQUE**

**CANADIAN FREESTYLE SKI ASSOCIATION**

**(CFSA)**

**AIR MANUAL**

**2005 Edition**

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## 1.0 INTRODUCTION

1. This document outlines, standardizes and regulates all activities surrounding the training of Air (inverted Air in particular) in Freestyle skiing in Canada. Its purpose is to encourage safety and reduce potential elements of risk that affect the training of any of the Air disciplines of Freestyle skiing.
2. The policies and procedures set out in this document are intended to ensure a safe and consistent format for the training and performance of Air manoeuvres. It must be recognized, however, that the physical environment for Freestyle skiing is subject to many external influences (weather, light, snow conditions and so forth). Because of this, the judgement of the coach and/or qualifier is the paramount consideration, at all times, in determining the appropriateness of facilities, conditions, and the specific training and/or competitive activities being conducted.

## 2.0 DEFINITIONS

1. An ***Air Coach*** (referred in this document as Coach) is a certified NCCP Level 2 (or higher) Air Freestyle Coach having completed at least the Technical Freestyle course of the National Coaching Certification Program. Please note that the pre-requisites for the Level 2 Air Technical course include full Level 1 Freestyle certification (Theory, Technical and Practical) and Level 2 Theory.
2. An ***Air Qualifier*** (referred in this document as Qualifier) is a certified Air Coach, designated by the Canadian Freestyle Ski Association (CFSA) as being capable of safely qualifying athletes to perform specific Air manoeuvres on water ramps and on snow. A Certified Coach is not automatically a Qualifier. In order to become a Qualifier a coach must qualify five manoeuvres in the presence of a fully certified coach (supervisor). If this supervisor feels that he candidate is capable of acting in the capacity of Qualifier. The supervisor will inform the CFSA in writing. .

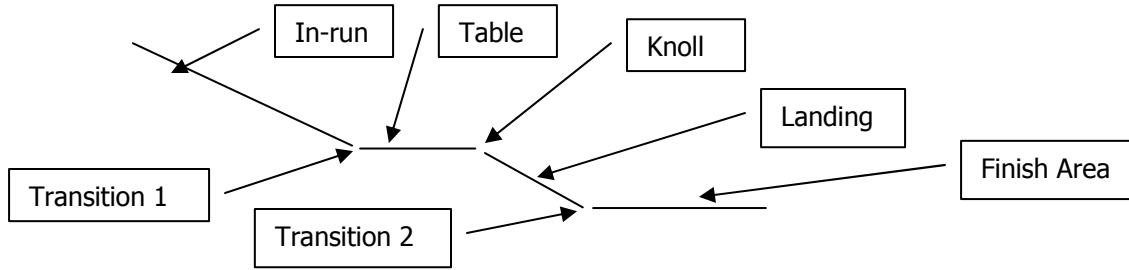
## **3.0 AIR SITE SPECIFICATIONS**

### **3.1 F.I.S AIR SITE SPECS.**

### 3.2

## CFSA SNOW AIR SITE NORMS

### Site Characteristics (Profile View)



|                            | <b><u>BIG AIR SITE</u></b> | <b><u>SINGLE AERIAL</u></b> | <b><u>DOUBLE AERIAL</u></b> |
|----------------------------|----------------------------|-----------------------------|-----------------------------|
| <b><u>INRUN:</u></b>       |                            |                             |                             |
| Length (meters)            | 30 minimum                 | 30 minimum                  | 40 minimum                  |
| Width (meters)             | 5 per jump                 | 15 minimum                  | 20 minimum                  |
| Slope (degrees)            | 5 – 25                     | 18 - 25                     | 20 - 25                     |
| <b><u>TABLE:</u></b>       |                            |                             |                             |
| Length (meters)            | 15                         | 15                          | 20                          |
| Width (meters)             | 5 per jump                 | 15 minimum                  | 20 minimum                  |
| Slope (degrees)            | 0                          | 0                           | 0                           |
| <b><u>LANDING:</u></b>     |                            |                             |                             |
| Length (meters)            | 15 - 30 **                 | 15 minimum                  | 20 minimum                  |
| Width (meters)             | 15 minimum                 | 15 minimum                  | 20 minimum                  |
| Slope (degrees)            | 30 – 39                    | 37 +/-2                     | 37 +/-2                     |
| <b><u>FINISH AREA:</u></b> |                            |                             |                             |
| Length (meters)            | 30                         | 30                          | 30                          |
| Width (meters)             | 25                         | 25                          | 25                          |
| Slope (degrees)            | 0                          | 0                           | 0                           |

\*\* Multiple spin / position Big Air tricks require landing hills longer than 15 meters. The following are the required minimum lengths for various tricks:

|                                   |           |
|-----------------------------------|-----------|
| Single and double spin / position | 15 meters |
| Triple                            | 20 meters |
| 3+                                | 25 meters |

## **4.0 SANCTION PROCEDURES**

### **4.1 SANCTIONING**

1. A sanction is a formal proof of registration of an activity with the CFSA, and formal notification of approval to conduct the activity. All training and competitive activities on snow, water ramp and on the trampoline must be sanctioned by the CFSA. Sanctioning requires that proper procedures as outlined in this manual be followed.
2. The Coach, Qualifier, Division, Club, and proprietor of the site are required to ensure that all training regulations and procedures are enforced.
3. All CFSA sanctioned activities must take place on schedule as registered with the CFSA national office. To sanction an activity, please contact your Division office and complete the form for sanction requests under Appendix 3.

### **4.2 SANCTION REQUIREMENTS**

1. Any Air training on snow and water ramp must be sanctioned by the CFSA and must be held on CFSA homologated Air sites and water ramps only.  
  
Homologation of Air site must be conducted by a CFSA appointed Technical Delegate or water ramp inspector. They must complete and submit an Air Homologation Form. All expenses for homologation are the responsibility of the water ramp owner/operator. Please contact the CFSA National Office for more information.
2. All participants in any CFSA sanctioned activities must be members in good standing of the Canadian Freestyle Ski Association.
3. A Coach must supervise the participants at all times on all facilities and equipment. Please refer to sections 5.1.1 and 5.2.1 of this document for more information.
4. A notice must be posted at every Air site and water ramp stating: "Unauthorized use of this facility is strictly prohibited. All participants must be members of the Canadian Freestyle Ski Association".

## **5.0 CFSA AIR TRAINING PROCEDURES**

### **5.1 ON-SNOW TRAINING REGULATIONS**

#### 5.1.1 Supervision

1. Only NCCP certified Air Coaches who are members in good standing with the CFSA are allowed to open jump sites and supervise those Air manoeuvres that they are permitted to qualify.

Air Qualifier levels are as follows:

Level 2: A certified Level 2 NCCP Air coach who has completed at least the L2 Air curriculum. May qualify up to double twisting single inverted manoeuvres.

Level 3: Certified Level 3 NCCP Air coaches and may qualify up to triple twisting double flips

Level 4: Individuals specifically designated by the CFSA Coaching Development Committee. May qualify any manoeuvre.

Please refer to section 6.6 of this document for a complete description of the duties of Air Qualifiers.

2. The Coach who is supervising training must be situated on the knoll of the jump site and be prepared to "call" his/her athlete during the athlete's flight.

His/her role includes ensuring that all athletes hold valid CFSA memberships and that the jumpers have the appropriate Air qualifications.

3. Training must be stopped when the Coach leaves his/her position on the knoll. On occasion the Coach may demonstrate a manoeuvre only if he/she is being supervised by another Air coach. He/she will not be allowed to continue jumping as part of the training session unless there is another Coach present.

### 5.1.2 Site Preparation

1. The physical characteristics of the jumps and the jump site must conform to the norms established by the FIS for triple inverted manoeuvres and/or by the CFSA for Big Air and for single and double inverted manoeuvres. See sections 3.1 and 3.2.
2. The landing hill must be smooth and even, and as free as possible of ice and chunks of ice and/or hard snow.

For uprights and horizontal trajectory (i.e Big Air) tricks the snow on the landing shall be broken to a depth of 15 cm. (6 inches) and packed smooth by side-stepping with skis on the entire length of the hill.

For inverted Aerials, the snow on the landing hill must be softened to a minimum depth of 50 cm. (20 inches) for the following minimum distances from the knoll:

| Jump                        | Chop length | Chop width |
|-----------------------------|-------------|------------|
| Single inverted manoeuvres: | 15 metres   | 3 metres   |
| Double inverted manoeuvres: | 20 metres   | 5 metres   |
| Triple inverted manoeuvres: | 25 metres   | 10 metres  |

3. The knoll and table must be chopped and softened to a minimum depth of 50 cm., a minimum width of 3 meters per jump and at the following minimum distances from the knoll towards the jumps:

|                |            |
|----------------|------------|
| Single kickers | 1 metres   |
| Double kickers | 2 metres   |
| Triple kickers | 3 metres   |
| Floater        | 2-3 metres |

### 5.1.3      Access Restrictions

1. One person shall be designated as Knoll Master and he/she shall have sole authority to control the activity on the jump site during a training session. In a competition situation, a Jury Member may overrule a Knoll Master's decision.

The Knoll Master shall communicate with the athletes and coaches vocally, with arm signals and/or with a flag.

The responsibilities of the Knoll Master include:

- ensuring that the jump site is run in a safe and organized manner;
- constantly inspecting and maintaining the knoll and landing;
- keeping the table, knoll and landing clear of spectators and unauthorized individuals;
- directing the order of the jumps to be performed;
- closing the jumps when maintenance must be performed on the jumps, knoll and/or landing;
- clearing the jump for the next jumper.

The position of Knoll Master must be appointed by an Air Coach, Air Qualifier, Chief of Competition or Technical Delegate and may be awarded to any member of the CFSA in good standing.

A Knoll Master who is not a certified Air Coach cannot open a jump site and supervise training alone without being accompanied by an Air Coach in good standing with the CFSA.

2. Access to the knoll area is restricted to only the Knoll Master, Technical Delegate, Coaches and Qualifiers who have athletes actively training Air. Access to this area by other individuals must be authorized by the Knoll Master and/or the Technical Delegate, Chief of Competition, or Chief of Course in a competition situation.
3. All persons wishing to cross the knoll or table while the site is in operation must request permission from the Knoll Master to do so.
4. Spectators must be situated at least 2 meters in distance from the sides of the jump site, ideally behind fencing.
5. If the jump site is located in an area that has easy spectator access or is near an adjacent public ski run, fencing must be used to completely close-off the table, landing and outrun areas of the jump site.

6. The jump site must be closed with fencing or in a manner that makes the jumps inaccessible to anyone who may attempt to use them outside a supervised training period.

#### 5.1.4 Equipment

1. All athletes participating in Freestyle skiing activities must wear helmets when training and/or competing Air.
2. Ski brakes must be present on all skis. Safety straps are strictly forbidden.
3. Pole straps must be removed from the wrists when using poles.
4. Properly fitted mouth guards are strongly encouraged.

#### 5.1.5 Safety And Accidents

1. The Ski Patrol must be informed in advance that Air training is scheduled to take place. The amount of advance notice required is subject to a mutual agreement between the Ski Patrol, the ski area, and the Air Coach.
2. A toboggan and back-board must be present at the jump site at all times during training.
3. The Coach supervising the training must complete a CFSA Accident Report form (Appendix 5) any time an athlete sustains an injury. An accident report form must be sent directly to the CFSA national office and be received by the CFSA within 24 hours of the occurrence. If an injury is sustained, the athlete, or coach if athlete is incapable, is responsible for notifying the insurance company directly within 24 hours at 1-800-216-3588. At this time instructions will be given on how to proceed
4. When an athlete's registration form and payment is received at the National Office, a memo outlining accident insurance coverage and steps to take in case of accident is sent to them. This should be kept on file for reference. The athlete will receive an identification card from the insurance company that has the emergency telephone number and group policy number.
5. Athletes must complete a Medical Authorization and Information form in order to assist the coach in seeking medical attention for the athlete in the case of an accident.

6. The Coach supervising the training must:
  - a) frequently inspect the jump site to ensure that it is safe for training;
  - b) interrupt or cancel the training when weather and/or snow conditions introduce an undue degree of risk.

## 5.2

## WATER RAMP TRAINING REGULATIONS

### 5.2.1      Supervision

1. All water ramp training must be supervised by a certified NCCP Level 2 (or higher) Freestyle Air Coach.
2. It is strongly recommended that a person certified in First Aid (and in particular with removal of injured persons from water) be on site at all times during training.

### 5.2.2      Site Requirements

1. Water in the landing area of a water ramp shall have a minimum depth of 2.5 m. (eight feet).

There must be a margin of error of four metres on each side of each jump landing area.

2. For water ramps built above the ground, the in-run and top of the transition of the ramp shall have safety railings on both sides of the in-run. The railing must be a minimum height of 100 cm. (three feet) and be built solid enough to resist the impact of a skier. (Note: this is subject to local building requirements)

A 20 cm. (eight inch) high baseboard running the entire length of the in-run must be built on the inside base of the railing. This baseboard should be designed to deflect the skis of an athlete back towards the in-run.

Water ramps built on the ground on a hillside do not require safety railings.

3. The flat area of the transition situated above the water and jump should not have protective railings, except where they are protecting the athlete from an identifiable hazard.

4. The following safety equipment must be installed and be present at all times:

a buoy-line enclosing the water landing area to exclude boats, swimmers, or unauthorized people;

a ring buoy (life-saver) with an appropriate length of line;

a first aid kit;

an aquatic backboard;

a telephone within 500 meters. A charged cell phone in good range is also acceptable.

### 5.2.3      Access Restrictions

1. The Coach must control the number of athletes in the preparation area at the top of the ramp. Spectators should not be permitted in this area.

Access to the transition of the ramp must be controlled and limited only to the Coach or to the designated person watering the ramp.

2. The ramp must be locked, roped, or fenced off to make it inaccessible during non-training hours.

### 5.2.4      Jumping Procedures

The Coach must clear the jump before each departure down the ramp and be prepared to assist the jumper if he/she sustains an injury.

### 5.2.5      Equipment

Athletes are required to wear Canadian Standards Approved (CSA) helmets when performing Airs, and approved personal flotation devices (lifejackets). The use of wet or dry suits is strongly recommended.

### 5.2.6      Safety And Accidents

1. It is understood that water ramps are the safest method known in Freestyle skiing for learning and training new Air manoeuvres. An athlete training on a water ramp is allowed to attempt any new manoeuvre he/she wishes as long as the athlete has followed and learned the progression of skills leading up to the new manoeuvre. The responsibility for ensuring that the progression is followed rests with the Air Coach.
2. The Air Coach supervising the training must complete the CFSA Accident Report Form every time an injury is sustained by an athlete. An accident report form must be sent directly to the CFSA national office and be received by the CFSA within 24 hours of the occurrence.
3. Athletes who are members in good standing of the CFSA receive accident insurance coverage. If an injury is sustained, *the athlete*, or coach if athlete is incapable, *is responsible for notifying the insurance company directly within 24 hours at 1-800-995-1662*. At this time instructions will be given on how to proceed.

4. The Coach supervising training must:
  - a) frequently inspect the water ramp to ensure that it is fit for safe training;
  - b) interrupt or cancel the training when weather conditions present an undue degree of risk.
5. The water ramp structure must be inspected and maintained on an ongoing basis.

**Please note that the Canadian Freestyle Ski Association has technical data available for anyone interested in installing a water ramp facility. Please contact the CFSA National office for more details.**

### 5.3

### TRAMPOLINE TRAINING REGULATIONS

The CFSA will sanction trampoline training only under the following conditions. Those individuals and coaches partaking in any trampoline activity without abiding by these regulations, will do so entirely **at their own risk:**

1. Strict supervision must be provided by a Certified NCCP Level 1 Technical Trampoline Coach for upright training and Level 2 for the training of inverts. .
2. The training must be incorporated as part of a complete Air training program for Freestyle skiing.
3. All participants must have valid CFSA membership and competitor card and must have signed and submitted the waiver form.
4. A minimum of four spotters (one located on each side of the trampoline) is required at all times when an athlete is bouncing without a spotting belt.
5. All other standard trampoline safety procedures as established by the Canadian Gymnastics Federation and outlined in the Level 2 Trampoline Coaching Certification and Safety Manual must be followed at all times.

**For more information on Trampoline Coaching Certification please contact your Provincial Gymnastics/Trampoline office.**

## **6.0 CFSA AIR QUALIFICATION SYSTEM**

### **6.1 SANCTIONING AUTHORITIES**

1. Athletes must be members in good standing of the CFSA.
2. Qualifications must take place on CFSA or FIS sanctioned Air or water ramp sites.

### **6.2 AIR QUALIFIERS**

#### 6.2.1 Qualifiers

1. Only individuals designated by the CFSA may qualify athletes to perform Air manoeuvres on water ramps and on snow. For more information on an updated list of active and accredited Air Qualifiers in your area, contact your Division office or the CFSA national office.
2. There are three levels of Air Qualifiers. The levels indicate the degree of difficulty of the Air manoeuvres that the Qualifier is approved to qualify. Qualifiers at Level 3 and above can automatically qualify manoeuvres at lower levels.
3. Level 2 Qualifiers may qualify all manoeuvres up to double twisting single inverted manoeuvres. Level 1 Qualifiers include certified Level 2 NCCP Air Coaches having completed at least the Level 2 Technical Air course on the National Coaching Certification Program (NCCP).
4. Level 2 Qualifiers may qualify all manoeuvres up to triple twisting double flips.. Level 3 Qualifier status is generally granted to fully certified Level 3 NCCP Air coaches upon their written application to the Coaching Development Committee. Please note that the pre-requisites for the Level 3 Air Technical course include full Level 2 Air certification (Theory, Technical and Practical) and Level 3 Theory.
5. Level 4 Qualifiers may qualify all manoeuvres. Level 4 Qualifier status is granted by the CFSA Applicants for Level 4 Qualifier status must submit a request to the CFSA,.

### 6.2.2 Application for, and Removal of, Qualifier Status

1. Other individuals, such as foreign coaches, who wish to be granted qualifier status should make a written application to the CFSA.
2. The CFSA may rescind an individual's Qualifier status if it is deemed that a Qualifier has neglected their responsibilities (see section 6.2.3), acted incompetently or unethically. The CFSA also reserves the right to remove the name of a Qualifier who has been inactive as a qualifier for an extended period of time.

### 6.2.3 Responsibilities

1. The Qualifier must be a member in good standing of the CFSA.
2. The Qualifier is required to evaluate candidates wishing to become qualified according to the criteria outlined in Section 6.5.4 below.
3. The Qualifier is required to sign the candidate's Air Passport when the candidate qualifies a manoeuvre on a water ramp or on snow, or when the candidate updates their qualification.
4. The Qualifier is required to cancel an athlete's "on-snow qualified" status for a particular manoeuvre when the athlete consistently fails to perform the manoeuvre in a safe and controlled manner. A Qualifier may cancel only those manoeuvres they are permitted to qualify.

## **6.3 The Air Passport**

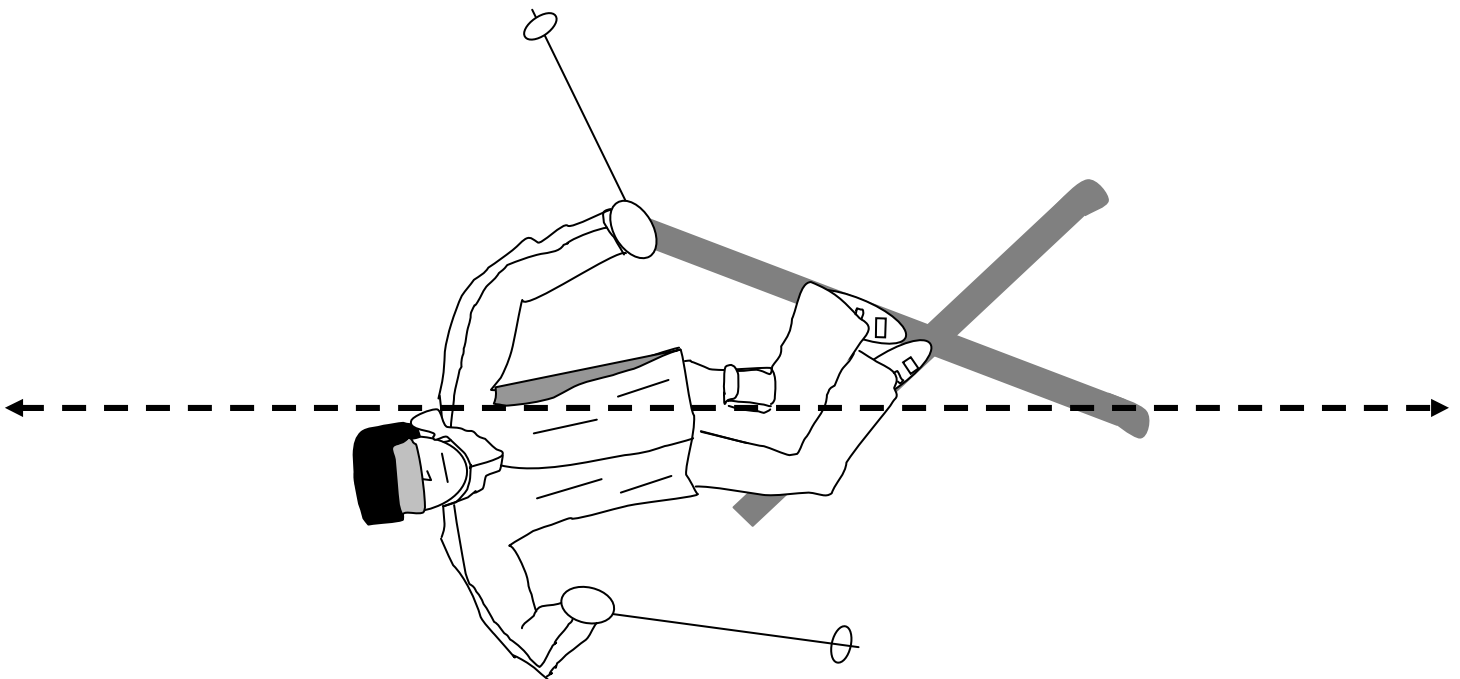
1. An Air Passport will be given to every Air competitor, by their coach, upon their first inverted manoeuvre qualification. All qualified and inverted manoeuvres will be registered in the Air Passport. The Passport will serve to identify an athlete's Air manoeuvre qualification status. The Air Passports will be substantiated through the CFSA Air qualification database.
2. The Passport will remain in the athlete's possession for his or her entire competition career, and the athlete will be responsible for keeping it up to date. It will be signed by certified Air Qualifiers on an ongoing basis authorizing the athlete to perform specific inverted Air manoeuvres in training and in competition.

## 6.4 Upright Air Manoeuvres

1. Uprights and rotational upright Air manoeuvres (e.g. helicopter) do not need to be qualified. In the event that an athlete is deemed to be posing an undue risk due to repeated unsuccessful attempts at a particular manoeuvre, they may be suspended from further attempts at that manoeuvre by a certified Air coach. Certified competition officials (Technical Delegate, Head Judge, Chief of Competition and Chief of Course) have the power to recommend suspending a qualification if the athlete is in danger of injuring themselves.

## 6.5 Inverted Air Manoeuvres

An inverted Air manoeuvre is, by definition of the CFSA, any manoeuvre whereby the athlete's feet go above the athlete's head at any time during the said manoeuvre (see diagram below). For purposes of clarification Mysty, Rodeo, Flat Spin, Flair, and Underflip are all considered by the CFSA to be inverted manoeuvres. In addition switch is considered a different take-off and there-for any switch manoeuvres must be qualified separately (i.e qualifying back flip does not mean that a switch back has been qualified at the same time). If there is any question about the status of other new manoeuvres, they must be clarified before being performed on a CFSA sanctioned snow training site.



### 6.5.1 Basic Principles

1. The basic premise for the qualification of inverted Air manoeuvres is that the athlete must be completely familiar and comfortable with the execution of an inverted Air manoeuvre before that manoeuvre may be qualified.
2. The athlete must perform the jump enough times to assure the Qualifier that he or she is completely aware of where he or she is while in an inverted or inverted and twisting position. The athlete must also demonstrate that he or she can consistently land the jump being qualified.
3. In order to correctly learn the mechanics of more difficult jumps, the athlete must follow a pre-determined progression. A jump will not be considered qualified unless the manoeuvres from the progression which lead up to the jump have also been qualified.
4. All inverted Air manoeuvres must be qualified on a water ramp before being qualified on snow. All athletes should follow these three steps of skill development:  
  
First Step: Learn the skill on a trampoline or diving board;  
  
Second Step: Learn, achieve a high standard of form and technical ability, and qualify the manoeuvre on a water ramp;  
  
Third Step: Qualify the manoeuvre on snow.
5. All coaches must be completely familiar and comply with the Air qualification procedures contained herein.

### 6.5.2 Age Restrictions

Please refer to FIS rules: 3046.1-3046.3 and 4007.2 for age restrictions.

### 6.5.3 Qualification Progression

1. A manoeuvre cannot be qualified, neither on snow nor on water ramp, until all manoeuvres on the progression chart preceding the one for which qualification is being sought have been qualified.

## QUALIFICATION PROGRESSION CHART

| MANOEUVRES   |           |             | MILEAGE                     |                  |
|--------------|-----------|-------------|-----------------------------|------------------|
|              |           |             | WATER                       | SNOW             |
|              | (fT)      |             | 0                           | 15 (all singles) |
|              | <b>I</b>  |             |                             |                  |
|              | (bT)      |             | 0                           |                  |
|              | <b>I</b>  |             |                             |                  |
|              | <b>bL</b> |             | 0                           |                  |
|              | <b>I</b>  |             |                             |                  |
|              | <b>bF</b> |             | 0                           |                  |
| /            |           | \           |                             |                  |
| <b>bdF</b>   |           | <b>bLT</b>  | 100 for first double        | 10 (all doubles) |
| <b>I</b>     |           | <b>I</b>    |                             |                  |
| <b>I</b>     |           | (bLL)       | (50 for subsequent doubles) |                  |
| <b>I</b>     |           | <b>I</b>    |                             |                  |
| <b>I</b>     |           | <b>bLF</b>  |                             |                  |
| <b>I</b>     |           | <b>I</b>    |                             |                  |
| (bFT/bFL)    |           | (bFT/bFL)   |                             |                  |
| <b>I</b>     |           | <b>I</b>    |                             |                  |
| <b>bFF</b>   |           | <b>I</b>    |                             |                  |
| <b>I</b>     |           | <b>I</b>    |                             |                  |
| <b>bFdF</b>  |           | <b>I</b>    |                             |                  |
| <b>I</b>     |           | <b>I</b>    |                             |                  |
| <b>bdFF</b>  |           | <b>I</b>    |                             |                  |
| <b>I</b>     |           | <b>I</b>    |                             |                  |
| <b>I</b>     |           | (bLTT)      | 100 for first triple        | 5 (all triples)  |
| <b>I</b>     |           | <b>I</b>    |                             |                  |
| <b>I</b>     |           | <b>bLTF</b> | 50 for subsequent triples   |                  |
| <b>I</b>     |           | <b>I</b>    |                             |                  |
| <b>I</b>     |           | <b>bLFF</b> |                             |                  |
| <b>I</b>     |           | <b>I</b>    |                             |                  |
| <b>I</b>     |           | <b>bLFT</b> |                             |                  |
| <b>I</b>     |           | <b>I</b>    |                             |                  |
| <b>bLFF</b>  |           | <b>bLFF</b> |                             |                  |
| <b>I</b>     |           | <b>I</b>    |                             |                  |
| <b>bFFF</b>  |           | <b>bFFF</b> |                             |                  |
| <b>I</b>     |           |             |                             |                  |
| <b>bFdFF</b> |           |             |                             |                  |
| <b>I</b>     |           |             |                             |                  |
| <b>bFdFF</b> |           |             |                             |                  |

### NOTES ON PROGRESSION CHART:

- Steps in parenthesis are recommended steps, but are not required steps. Athletes do not have to qualify these manoeuvres to move to the next manoeuvre.
- Steps in bold face are mandatory steps in the progression chart. Athletes must qualify each of these manoeuvres before moving to the next manoeuvre.
- fT: Though this is not a mandatory step, the mileage requirement is mandatory for qualification purposes.

#### 6.5.4      "Mileage" Requirements

1. All inverted Air manoeuvres must be qualified on a water ramp before they can be qualified on snow.
2. "Mileage" requirements apply only to the initial qualification of a manoeuvre. "Mileage" requirements do not apply to subsequent re-qualifications of a manoeuvre after the initial qualification.
3. There is no mileage requirement for all single somersaults up to and including back full (single flip with one twist) in degree of difficulty. However, if an athlete fails to qualify a manoeuvre the athlete must complete a minimum of fifty (50) jumps on the water ramp before attempting to qualify the manoeuvre again.
4. Before an athlete can qualify double inverted manoeuvres on a water ramp, they must complete a minimum of **100** double inverted manoeuvres while training on a water ramp.
5. For each subsequent double inverted jump to be qualified, an athlete must perform a minimum of fifty of that particular jump (i.e. if an athlete wishes to qualify Lay-Full, he/she must have performed 50 Lay-Fulls on water ramp before attempting to qualify it).
6. No double inverted manoeuvres shall be qualified within 1 calendar year of qualifying single inverted manoeuvres on water ramp or without qualifying bF on snow.
7. Before an athlete can qualify triple inverted manoeuvres on a water ramp, they must complete a minimum of **100** triple inverted manoeuvres while training on a water ramp.
8. For each subsequent jump to be qualified, an athlete must perform a minimum of fifty of that particular jump. "(i.e. if they wish to qualify Lay-Full-Full they must have performed 50 Lay-Full-Fulls on water ramp before attempting to qualify it)".
9. No triple inverted manoeuvres shall be qualified within calendar years of qualifying double inverted manoeuvres on water ramp or without qualifying bFF on snow.

10. Before an athlete can qualify a specific single inverted manoeuvre on snow, they must complete a minimum of **15** attempts of that particular single inverted manoeuvre while training on
11. Before an athlete progresses from singles to doubles on snow, they must perform a minimum of **100** single inverted Air manoeuvres on snow.
12. Before an athlete can qualify a specific double inverted manoeuvre on snow, they must complete a minimum of **10** attempts of that double inverted manoeuvre while training on snow.
13. Before an athlete progresses from doubles to triples on snow, they must perform a minimum of **75** double inverted Air manoeuvres on snow.
14. Before an athlete can qualify a specific triple inverted manoeuvres on snow, he or she must complete a minimum of **5** attempts of that particular triple inverted manoeuvre while training on snow.
15. A sample copy of the "Air Mileage Chart", used to record the number of complete manoeuvres at each qualifying level, is attached as Appendix 9.
16. An athlete cannot qualify a manoeuvre and perform that manoeuvre in competition on the same day.

#### 6.5.5      Qualification Tests

1. To qualify an Air manoeuvre on a water ramp or on snow, the candidate must pass a qualification test administered by an active and accredited Air qualifier.
2. For jumps up to and including the level of difficulty of a double twisting double inverted manoeuvre, the test consists of performing the manoeuvre five consecutive times on the test day. The candidate must obtain a **75%** score on each jump from each qualifier to pass.
3. For jumps with a greater level of difficulty than a double twisting double, the test consists of performing the manoeuvre three times over a maximum period of two consecutive days. The candidate must obtain a 75% score on each jump to pass.
4. The Air Qualification Registration/Score Form is used by the Qualifiers to record the test results. Refer to Appendix 10 for a sample copy of this form.

5. The criteria used to score a qualification test are:

**TAKE OFF (25%)**

Mental preparation  
Speed taken  
Body position in transition  
Arm movement  
Extension at lip of kicker

**CONTROL DURING FLIGHT (25%)**

Reaction to visual and verbal cues

Examples:

reacting to coach's call;  
looking between the layout and the tuck in a Lay-Tuck  
judging height or lack of it  
reacting to the landing

**EXECUTION (25%)**

Form  
Proper mechanical initiation and completion of the manoeuvre  
Twisting, tucking, or breaking out of a tuck at the right moment

**LANDING (25%)**

Preparation for landing  
Balanced landing on skis  
Body position  
Arms in front

6. Jumps must be started to from different points on the in-run to simulate different speeds.

**ADMINISTRATION**

1. When an athlete successfully qualifies a manoeuvre, the pink copy of the completed Registration/Score Form is given to the athlete. The remaining copies are sent to the national office (white copy) and division office (yellow copy). It is not necessary to distribute copies if the athlete fails to qualify a manoeuvre.
2. The qualified manoeuvre is registered in the athlete's Air Passport by the Air Qualifier.

## 6.6

### DURATION OF QUALIFICATIONS

1. Inverted Air manoeuvres qualified on a water ramp retain their qualified status for the duration of the competition year (that is, until the following May 1). To extend the qualified status of previously qualified inverted Air manoeuvres the athlete must re-qualify their most difficult manoeuvres (according to the F.I.S. Degree of Difficulty Chart) on a water ramp each year. (*revised June 8, 1997*)
2. In the event that an injury or other extraordinary circumstance prevents any opportunity for an athlete to re-qualify their most difficult manoeuvre on water ramp, an athlete may submit a written request to the CFSA outlining what their circumstances are and why they feel they should not have to re-qualify on water ramp in order to perform on snow the following season. In such instances, the CFSA may give an athlete permission to forego the regular qualification process.
3. Inverted Air manoeuvres qualified on snow retain their qualified status until such time as the coach and/or qualifier revokes this qualification. The qualification status of an athlete's inverted Air manoeuvre can be revoked if the athlete does not demonstrate competency. (*revised June 8, 1997*)
4. The maintenance of an inverted Air manoeuvre's qualified status must be recorded in the athlete's Air Passport and signed by appropriate Qualifiers. Each athlete is responsible for keeping their Air Passport up to date with notations of all qualified Air manoeuvres.
5. An Coach or Qualifier has the responsibility to cancel an athlete's "on-snow qualified" status for any manoeuvre when the athlete consistently fails to perform the manoeuvre in a safe and controlled manner. A Coach or Qualifier may cancel only those manoeuvres which they are permitted to qualify.
6. Before a manoeuvre's "on-snow qualified" status is cancelled, the Coach or Qualifier is required to warn the athlete that the manoeuvre must be relearned following the necessary progression. The athlete must demonstrate the proper progression for the Qualifier. The Qualifier will note any problems in the progression. If the athlete does not demonstrate the proper progression in a safe and controlled manner, the Qualifier will cancel the "on-snow qualified" status of the manoeuvre.
7. When a manoeuvre's "on-snow qualified" status is cancelled, the athlete must re-qualify the manoeuvre on a water ramp following the procedures outlined in Section 6.5.4 above.

## **7.0**

### **APPENDICES**

|             |  |
|-------------|--|
| APPENDIX 1  | Winter Air Jump Site Homologation Form         |
| APPENDIX 2A | Water Ramp Training Facility Homologation Form |
| APPENDIX 2B | Water Ramp Specification Form                  |
| APPENDIX 2C | Photos Required for Water Ramp Homologation    |
| APPENDIX 3  | Air Qualification/Registration Score Form      |

# APPENDIX 1

## CANADIAN FREESTYLE SKI ASSOCIATION WINTER AIRSITE HOMOLOGATION FORM



|  |                    |  |                    |                  |
|--|--------------------|--|--------------------|------------------|
| <b>GENERAL DATA</b>  |                    | NAME OF SKI AREA:  |                    |                  |
| ADDRESS:   |                    | TELEPHONE:   |                    |                  |
| <b>Jump site Data &amp; Dimensions</b>                           |                    |  |                    |                  |
| Uprights Site:   | Single Site:       | Compass reading measured when looking down the landing:                |                    |                  |
| Doubles Site:  | FIS Site:          |  |                    |                  |
| Is there a notice posted at the site?<br>Yes: _____<br>No: _____ |                    | Describe – fencing _____<br>- snowmaking _____<br>groomer access _____ |                    |                  |
| <b>SECTION</b>   | <b>LENGTH</b>      | <b>WIDTH</b>   | <b>SLOPE</b>       |                  |
| INRUN:   |                    |  |                    |                  |
| TABLE:   |                    |  |                    |                  |
| LANDING:   |                    |  |                    |                  |
| FINISH AREA:   |                    |  |                    |                  |
| <b>JUMPS:</b>  | <b>DISTANCE(m)</b> | <b>HEIGHT (m)</b>  | <b>ANGLE (deg)</b> | <b>WIDTH (m)</b> |
| Single Front   |                    |  |                    |                  |
| Single Back  |                    |  |                    |                  |
| Double Front   |                    |  |                    |                  |
| Double Back  |                    |  |                    |                  |
| Db/ Triple Back  |                    |  |                    |                  |
| Triple   |                    |  |                    |                  |
| Triple   |                    |  |                    |                  |
| Small Floater  |                    |  |                    |                  |
| Medium Floater   |                    |  |                    |                  |
| Large Floater  |                    |  |                    |                  |

Date of Site Inspection: \_\_\_\_\_

Name of National Technical Delegate: \_\_\_\_\_

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

# APPENDIX 2A

|              | <b>CANADIAN FREESTYLE SKI ASSOCIATION<br/>WATER RAMP FACILITY INSPECTION FORM</b> |             |                  |                       |                |  |
|---|---|-------------|------------------|-----------------------|----------------|---|
| <b>GENERAL DATA (for comments in data sections, please use additional paper if required):</b> |   |             |                  |                       |                |   |
| <b>Date of Facility Inspection:</b>   |   | <b>DAY</b>  |                  | <b>MONTH</b>          |                | <b>YEAR</b>   |
| <b>Name of Water Ramp &amp; Location</b>  |   |             |                  |                       |                |   |
| <b>Name of Property Owner:</b>  |   |             |                  |                       |                |   |
| Address:  |   |             |                  |                       |                |   |
| Telephone No.:  |   |             | Email            |                       |                |   |
| <b>Name of Facility Operator:</b>   |   |             |                  |                       |                |   |
| Address:  |   |             |                  |                       |                |   |
| Telephone No.:  |   |             | Email            |                       |                |   |
| <b>FACILITY STAFF:</b>  |   |             |                  |                       |                |   |
| Name of Head Coach:   |   |             |                  |                       | NCCP #         |   |
| Name of Lifeguard / First Aid Provider:   |   |             |                  |                       | Qualification: |   |
| <b>RAMP AND JUMP STRUCTURE:</b>   |   |             |                  |                       |                |   |
| Condition of:   | <b>Good</b>   | <b>Fair</b> | <b>Poor</b>      | <b>Comments</b>       |                |   |
| Superstructure  |   |             |                  |                       |                |   |
| Sliding surface   |   |             |                  |                       |                |   |
| Jump(s)   |   |             |                  |                       |                |   |
| Railings  |   |             |                  |                       |                |   |
| Running boards  |   |             |                  |                       |                |   |
| Decking and stairs  |   |             |                  |                       |                |   |
| <b>WATER:</b>   |   |             |                  |                       |                |   |
| Water Filtration System:  |   |             |                  |                       |                |   |
| Water Quality   |   |             |                  |                       |                |   |
| Landing Area  | Depth (m)   |             | Width (m)        |                       | Length (m)     |   |
| <b>SAFETY EQUIPMENT:</b>  |   |             |                  |                       |                |   |
| First aid kit   |   |             |                  |                       |                |   |
| Aquatic backboard   |   |             |                  |                       |                |   |
| Buoy-line enclosure   |   |             |                  |                       |                |   |
| Ring buoy and line  |   |             |                  |                       |                |   |
| Non-accessibility of site   |   |             |                  |                       |                |   |
| Emergency phone on site   | Y   |             | N                |                       |                |   |
| <b>TRAMPOLINE:</b>  |   |             |                  |                       |                |   |
| Frame   |   |             |                  |                       |                |   |
| Bed   |   |             |                  |                       |                |   |
| Springs   |   |             |                  |                       |                |   |
| Frame/spring pads   |   |             |                  |                       |                |   |
| Spotting belt   |   |             |                  |                       |                |   |
| Spotting Frame  |   |             |                  |                       |                |   |
| Ropes/bungee/pulleys  |   |             |                  |                       |                |   |
| End Decks   |   |             |                  |                       |                |   |
| End Deck pads   |   |             |                  |                       |                |   |
| <b>Overall Evaluation</b>   | <b>Acceptable</b>   |             |                  | <b>Not Acceptable</b> |                |   |
| <b>COMMENTS</b>   |   |             |                  |                       |                |   |
| <b>Name of Facility Inspector:</b>  |   |             | <b>Signature</b> |                       |                |   |

## **Inspection Guidelines**

Facility inspectors are to use the following guidelines during their evaluation:

| <b>Ramp Structure</b>             |   |
|-----------------------------------|---|
| Super structure                   | Check for damage or rot in any of the supporting member of the structure. Check that all structural footings are in good order.   |
| Sliding surface                   | Check that all sections of the sliding surface are firmly attached and that no loose screws or nails are evident. There shall be no bare patches in the sliding surface.  |
| Jump(s)                           | Check that the jump surfaces and frames are solid. No cracks or soft spots.<br><br>If there is more than one jump and one or a number of them need work please indicate in the comments section.                  |
| Railings                          | All railings need to be able to support the weight of an average adult  |
| Running boards                    | No missing boards, exposed joints or gaps between boards. No exposed nails or loose screws.   |
| Decking and stairs                | Check for loose or rotten deck boards and that all stairs are sound and can support the weight of an average adult.   |
| <b>Water</b>                      |   |
| Filtration System                 | (If applicable) Check that the filtration system is in working order and that it has been inspected by a certified technician as per provincial or municipal norms.   |
| Water Quality                     | Would YOU swim in it?   |
| Landing                           | Minimum dimensions as per section 5.2.2.1 of the Air Manual   |
| <b>Safety equipment</b>           |   |
| First Aid Kit                     | The kit must meet the respective provincial guidelines the facility falls under. The kit must be fully stocked and shall include a current first aid manual.  |
| Aquatic backboard                 | The board must be able to float, and all tie-straps and accessories must be in working order.   |
| Buoy line enclosure               | The landing area must be delineated by a buoy line to keep swimmers out.  |
| Ring buoy and line                | Ring buoy and line must be in good order and readily available at a convenient location   |
| Non-accessibility of site         | Proper signage stating "CFSA members only" must be posted in obvious locations and there must be reasonably idiot-proof barriers installed to prevent members of the public using the facility when it is closed. |
| Emergency phone on site.          | Land line must be hooked up. Cell phone is acceptable providing it has coverage.  |
| <b>Trampoline (if applicable)</b> |   |
| Frame                             | No cracks or bends in the frame; no loose bolts; no burrs, chinks, kinks or splinters in the metal; all supporting members in place.  |
| Bed                               | All strings intact and no deformities in the shape of the bed.  |
| Springs                           | No missing springs. All spring hooks pointed down.  |
| Frame/spring pads                 | All pads in good order and firmly installed covering the metal frame and springs.   |
| Spotting belt                     | All straps, buckles and attachment points in good order and (if applicable) twisting mechanism working smoothly.  |
| Overhead frame                    | No cracks, breaks in frame or missing hardware used to hold the frame together. All footings in good order.   |
| Ropes/Bungee/Pulleys              | All ropes and bungee lines intact. All pulley mechanisms and attachment points in good order.   |
| End decks                         | Check that end decks are structurally sound and can with stand the forced weight of the average adult.  |
| End Deck pads                     | Check that end deck pads are in good shape with sufficient padding (none missing)   |

**The inspector shall make note of any deficiencies and establish timelines for rectification of any problems as well as a schedule for re-inspection.**

**The completed inspection form shall be sent to National Office within one week of the inspection.**

**APPENDIX 2B****CANADIAN FREESTYLE SKI ASSOCIATION  
WATER RAMP SPECIFICATION FORM**

|                |       |
|----------------|-------|
| Name of Ramp:  |       |
| Ramp Operator: |       |
| Completed by:  | Date: |

**SINGLE KICKER/FLOATER SPECIFICATIONS**

| SECTION                       | Length (metres) | Width (metres) | Slope (degrees) |
|-------------------------------|-----------------|----------------|-----------------|
| IN-RUN (structure)            |                 |                |                 |
| IN-RUN (track)                |                 |                |                 |
| TABLE (structure)             |                 |                |                 |
| TABLE (track)                 |                 |                |                 |
| JUMP                          |                 |                |                 |
| JUMP HEIGHT                   |                 |                |                 |
| HEIGHT FROM TAKE-OFF TO WATER |                 |                |                 |

**DOUBLE KICKER**

| SECTION                       | Length (metres) | Width (metres) | Slope (degrees) |
|-------------------------------|-----------------|----------------|-----------------|
| IN-RUN (structure)            |                 |                |                 |
| IN-RUN (track)                |                 |                |                 |
| TABLE (structure)             |                 |                |                 |
| TABLE (track)                 |                 |                |                 |
| JUMP                          |                 |                |                 |
| JUMP HEIGHT                   |                 |                |                 |
| HEIGHT FROM TAKE-OFF TO WATER |                 |                |                 |

**TRIPLE KICKER SPECIFICATIONS**

| SECTION                       | Length (metres) | Width (metres) | Slope (degrees) |
|-------------------------------|-----------------|----------------|-----------------|
| IN-RUN (structure)            |                 |                |                 |
| IN-RUN (track)                |                 |                |                 |
| TABLE (structure)             |                 |                |                 |
| TABLE (track)                 |                 |                |                 |
| JUMP                          |                 |                |                 |
| JUMP HEIGHT                   |                 |                |                 |
| HEIGHT FROM TAKE-OFF TO WATER |                 |                |                 |

## **APPENDIX 2C**

### **CANADIAN FREESTYLE SKI ASSOCIATION PHOTOS REQUIRED FOR WATER RAMP HOMOLOGATION**

1. Front view incorporating whole facility, wide angle (from boat if necessary).
2. Trampoline facility - best angle possible as many photos as necessary to attain best view.
3. Top of in-run of triple kicker using a wide angle to get all of the jumps.
4. Side view of only jumps from both sides.
5. Side profile of the complete structure.
6. View up in-run from middle jump transition.
7. All Facilities on site other than ramp.
8. Each individual ramp from one quarter of the way up the in-run.
9. Anything else you feel is pertinent to the homologation of your water ramp facility.

# APPENDIX 3

## AIR QUALIFICATION REGISTRATION/SCORE FORM

PLEASE PRINT CLEARLY

### ATHLETE DATA

|             |             |            |        |
|-------------|-------------|------------|--------|
| FAMILY NAME |             | FIRST NAME |        |
| STREET      |             | CITY ( )   |        |
| PROVINCE    | POSTAL CODE | TELEPHONE  |        |
| QUALIFIER   | LOCATION    | WATER 稿    | SNOW 稿 |
|             |             | DATE       |        |

SCORING CRITERIA (each component is scored out of a maximum of 25 points)

|   |  |  |  |
|---|--|--|--|
| <b>TAKE OFF:</b><br>- Mental preparation<br>- Speed taken<br>- Body position at transition<br>- Arm movements<br>- Extension at lip of kicker | <b>CONTROL DURING FLIGHT</b><br>- Reaction to visual and verbal cues examples:<br>1) reacting to the coach's call<br>2) looking between the layout and the tuck in a Lay-Tuck<br>3) judging height or lack of it<br>4) reacting to the landing | <b>EXECUTION:</b><br>- Form<br>- Proper mechanical initiation and completion of the manoeuvre<br>- twisting, tucking or breaking out of a tuck at the right moment | <b>LANDING:</b><br>- Preparation for landing<br>- Balanced landing on skis<br>- Body position<br>- Arms in front |
|---|--|--|--|

**The candidate must obtain a minimum score of 75 on every jump in order to qualify the manoeuvre**

| JUMP | TAKE-OFF | CONTROL | EXECUTION | LANDING | TOTAL | JUMP DATA   |
|------|----------|---------|-----------|---------|-------|---|
| 1    |          |         |           |         |       | JUMP NAME:<br><br>FIS DD Multiplier:<br><br>稿 Qualified 稿 Not Qualified<br><br>Qualifier's Signature: |
| 2    |          |         |           |         |       |   |
| 3    |          |         |           |         |       |   |
| 4    |          |         |           |         |       |   |
| 5    |          |         |           |         |       |   |
|      |          |         |           |         |       |   |
| 1    |          |         |           |         |       | JUMP NAME:<br><br>FIS DD Multiplier:<br><br>稿 Qualified 稿 Not Qualified<br><br>Qualifier's Signature: |
| 2    |          |         |           |         |       |   |
| 3    |          |         |           |         |       |   |
| 4    |          |         |           |         |       |   |
| 5    |          |         |           |         |       |   |
|      |          |         |           |         |       |   |
| 1    |          |         |           |         |       | JUMP NAME:<br><br>FIS DD Multiplier:<br><br>稿 Qualified 稿 Not Qualified<br><br>Qualifier's Signature: |
| 2    |          |         |           |         |       |   |
| 3    |          |         |           |         |       |   |
| 4    |          |         |           |         |       |   |
| 5    |          |         |           |         |       |   |
|      |          |         |           |         |       |   |

1- NATIONAL OFFICE COPY 2-DIVISIONAL OFFICE COPY 3-ATHLETE COPY

# NOTES