

## Physical Capability Guideline Summary

### Snow Australia Physical Capability Guidelines



Event Level *				
Club Level Tasks	4 & 5		3	
	MALE	FEMALE	MALE	FEMALE
Single Leg Squats (# L+R)	15	15	25	25
Single Leg Hops (L+R) %	Athlete height + up to 10% of height		Athlete Height + over 10% of height	
Prone Plank Hold (Secs)	120	90	180	150
Max Push ups	25	15	30	20
Chin Ups (#)	3	1	6	2
45cm - Box Jump (90 seconds)	55	45	65	55
20m Beep Test (Level)	9.06	7.06	10.06	8.06

*\*refer to respective discipline selection criteria for event level classification*

**Summary only, for full details see Snow Australia Physical Capabilities Protocols**

## Physical Capability Guidelines – Tasks & Protocols

The Snow Australia physical capability guidelines are designed to ensure validity and reliability across disciplines, and wherever they are performed. The exercises are selected to require a minimum of equipment, to ensure accessibility to all, while preparing athletes for a long and healthy involvement through the pathways. They also align with the NSWIS/OWIA performance testing protocols without requiring the specialist equipment.

STANDARDISED WARM UP:	TESTS:	Page
<ul style="list-style-type: none"> <li>• 5 min cycle on bike @80rpm+</li> <li>• 20m jogging (up and back)</li> <li>• 20m sidestep (each side)</li> <li>• 20m grapevine (each side)</li> <li>• 20m high knee running</li> <li>• 20m butt kick running</li> <li>• 10 x walking lunges</li> <li>• 10 x body weight squats</li> <li>• 10 x push ups</li> <li>• 10 x TRX pull ups</li> <li>• 2 x 5 body squat jumps</li> </ul>	<ol style="list-style-type: none"> <li>1. Single Leg Hop (Lower body power)</li> <li>2. Single Leg Squats (Lower body strength) (Core Endurance)</li> <li>3. Prone Plank Hold (Upper body strength)</li> <li>4. Max Push ups (Upper body strength)</li> <li>5. Max Chins (Anaerobic Endurance / Speed)</li> <li>6. Box Jumps (Aerobic capacity)</li> <li>7. Beep Test</li> </ol>	<p>3</p> <p>4</p> <p>5</p> <p>6</p> <p>7</p> <p>8</p> <p>9</p>
<b>EQUIPMENT REQUIRED:</b> <ul style="list-style-type: none"> <li>• Stopwatch</li> <li>• Tape measure</li> <li>• Chin up bar</li> <li>• Multistage beep test and 20m marked area</li> </ul>		

Disciplines select and utilise the test data appropriate to their specific events.

Alpine	Snowboard	Freestyle	Park and Pipe
Single Leg Hop	Single Leg Hop	Single Leg Hop	Single Leg Hop
Single Leg Squats	Single Leg Squats	Single Leg Squats	Single Leg Squats
Prone Plank Hold	Prone Plank Hold	Prone Plank Hold	Prone Plank Hold
Max Pushups	Max Pushups	Max Pushups	Max Pushups
Max Chins	Max Chins	Max Chins	Max Chins
Box Jumps (30/60/90)	Box Jumps (30/60/90)	Box Jumps (30/60/90)	Box Jumps (30/60/90)
Beep Test	Beep Test	Beep Test	Beep Test

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## Test 1: Single Leg Hop

### Set Up

- Tape measure laid out along floor

### Protocol

- The athlete stands on one leg with their toe behind the zero line
- The athlete hops forward (landing on the same leg) for maximum distance
- The athlete is required to “stick” the landing without their other foot or any part of their body touching the ground

### Test Rules

- The landing must be “stuck” and held for 2secs. No hopping, shuffling or stepping forward/backward
- The recorded distance is measured from the start line (“0”) to the back of the heel. Use a clipboard flush against the back of the heel and perpendicular to the tape measure to make it easier to accurately read the measurement off the ground.
- The best result from three trials for each leg is recorded to the nearest centimetre

### Key Variables

- Distance (cm’s)
- For scoring it is important to record the athlete’s height
- Please videotape this test

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## Test 2: Single Leg Squats

### Set Up

- Bench/box/plinth of appropriate height for the athlete
- Athlete's knee should be at 90 degrees when they touch the box at bottom of squat
- Metronome set to a beat of 2 seconds up, 2 seconds down

### Protocol

- The athlete is instructed to place their hands across their shoulders for the duration of the task while they perform repeated single leg squats to the assigned height.
- The pace of this task is set to the beat of a metronome – 2 seconds up, 2 seconds down.
- The athlete should lightly touch the bench or box at the bottom. They should not completely sit down.
- The test is complete when subjects are unable to complete any further squats, or the tempo or form is incorrect.

### Test Rules

- Athlete must touch the box and not fully sit down on each rep
- Athlete must use a box height to allow for 90-degree knee angle at touch
- Athlete must keep proper technique with arms in crossed position and proper hip, knee, toe alignment.

### Key Variables

- Number of reps completed at set tempo

### Test 3: Prone Plank Hold



#### Set Up

- Soft surface
- Stopwatch
- Confirm protocols and test rules with athlete

#### Protocol

- Hold a front supported position with weight on toes and elbows / forearms as pictured
- below with palms facing down
- Ensure hands remain apart with forearms parallel to each other
- Keep ankles, knees, hips and shoulders in a straight line
- Keep head in a neutral posture

#### Test Rules

- The test stops when the athlete is unable to maintain the proper posture
- Athletes receive 1 (one) warning if there is a significant deviation from any of the Protocol points
- If an athlete is unable to correct that deviation the assessment is terminated.

#### Key Variables

- Record the time in seconds

## Test 4: Max Push-ups

### Set Up

- The athlete adopts a lying prone position (on the mat) with feet hip width apart and the ankles dorsiflexed.
- Hands are placed flat on the floor with hands thumbs width away and inline from the outside of the shoulder. The fingers are pointing forward. Point the elbows towards the ceiling.

### Protocol

- The athlete braces the hips and trunk whilst simultaneously lifting the knees from the floor so that the legs are fully extended.
- Press up to start position maintaining body alignment with the head in a neutral position.
- The athlete lowers the body under control, so chest touches the ground.
- The athletes release and hands from the ground once they have touched down.
- The athletes placed hand on the ground to commence push up.
- The athlete presses back to the start position fully extending the elbows.

### Test Rules

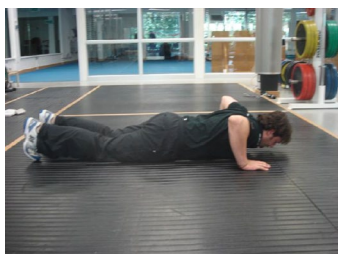
- Athletes must maintain body alignment with head in neutral position throughout.
- The athlete's chest must touch the floor and return to a full extension during each repetition.
- Athletes receive a warning if there is a significant deviation from points (1) and (2).
- If an athlete is unable to correct that deviation the assessment is terminated.
- The test can also be terminated with 2 significant movement deviations (e.g. hips sagging, hips piking, elbows not fully extending/ reaching 90°).

### Key Variables

- The total number of repetitions counted includes the last fully completed repetition.

### 1 Repetition

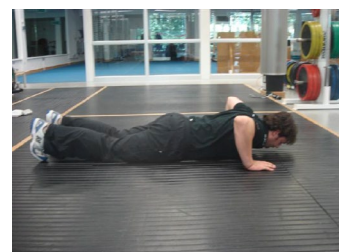
Set Up Position



Mid Position



End Position



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## Test 5: Max Chin Ups

### Set Up

- Athlete steps onto a box so appropriate arm width can be accurately assessed by tester. Width determined by standing under the bar, lifting arms to horizontal and flexing elbow to 90 degrees
- Pronated (overhand) grip must be used

### Protocol

- Ensure the athlete starts from a static hang with arms, body and legs straight
- In one smooth motion the athlete must pull their body straight up until the chin clears the bar with the head remaining level. Ensure the mandible process reaches the height of the bar on each rep.
- The athlete must lower themselves smoothly, returning to the static starting position with arms, body and legs straight
- The maximum number of correctly executed repetitions are recorded.

### Test Rules

- Legs, hips and body must remain straight and aligned for the entire movement
- Chalk can be used but lifting straps are not to be used
- The test is ceased if the athlete swings to generate movement, breaks the straight body position (i.e. lifts knees) or hangs on the bar for longer than 2 secs

### Key Variables

- Number of repetitions
- Please video record this test

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## **Test 6: Box Jumps**

### **Set Up**

- Setup stable 45cm box
- The athlete will start beside the box on whichever side they are most comfortable starting on; i.e. left shoulder beside the box

### **Protocol**

- On the command (Ready, Set, GO!) the athlete jumps laterally (sideways) onto the box and then down off the other side. This is done continuously for ninety (90) seconds.
- The recorder shall count one (1) for each time the athlete's feet touch the box. It is imperative that both feet touch the box together, or at the same time.
- The timer starts the watch on the 'GO!' command. The timer will call out the time lapsed for every fifteen (15) seconds during the test.

### **Test Rules**

- Record the number of touches at the 30, 60 and 90 second marks of the test

### **Key Variables**

- Number of repetitions - The final score is recorded at the 90sec mark.
- Please video record this test



### **Test 7: Multi-Stage Fitness Test (Beep Test)**

The multistage fitness test is a simple test of endurance fitness. It is a running test increasing progressively at approximately one-minute intervals. The accuracy is increased if the test is done under the same standardised conditions. The test is best done indoors on a non-slip surface under the same environmental conditions.

#### **Set Up**

- Mark out a 20m distance on a court or track surface
- Ensure you have a speaker set up loud enough for athletes to hear the “beep”
- Use a standardised ‘Beep Test’ recording

#### **Protocol**

- The athlete’s run forwards and backwards along a 20-metre marked distance, pacing so that they arrive at the marked distance coinciding with the single beep. The starting speed is slow, but at the end of each minute, a triple beep indicates an increase in pace. Do not run faster than necessary and ensure the athletes maintain the appropriate pacing.

#### **Test Rules**

- If an athlete reaches the line before the beep sounds, they must wait for the beep, they should not commence the level early.
- Subjects only need to place one foot on or over the 20-metre line. If the subject falls short or fails to reach the line at the sound of the beep, they will receive a verbal warning that they will be eliminated if they do not successfully reach the opposite end at the sound of the next beep. When the athlete fails to reach the line on two consecutive beeps their test will be terminated.
- The score is the level and number of shuttles immediately prior to the beep on which they were eliminated.

#### **Key Variables**

- Beep test score