Fundamentals of Pole Vault

John Lilygren
Master Official, Vertical Jumps
Pacific Association
jlilygren@gmail.com
Outline

• Overview of Pole Vault
  – Basic Rules
  – Time Limits for initiating an attempt
  – Definitions of Foul Attempts

• Safety
  – Venue inspection and preparation

• Venue Set-Up Procedures

• Procedures for conducting a safe competition

• How to score a Pole Vault competition
  – Tie Breaking procedures
  – Jump-Off procedures

• USATF Officials Best Practices
The Pole Vault Venue
## Pole Vault Basics

<table>
<thead>
<tr>
<th>Crossbar Length</th>
<th>4.50 meters</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of Attempts</strong></td>
<td>Unlimited until 3 misses in row</td>
</tr>
<tr>
<td><strong>Opening height</strong></td>
<td>Athlete’s choice</td>
</tr>
<tr>
<td><strong>Height progression</strong></td>
<td>Set by Games Committee</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>IAAF/USATF</th>
<th>NCAA</th>
<th>High School</th>
</tr>
</thead>
<tbody>
<tr>
<td>Late arrival after start of competition</td>
<td>Start at current height, if entered</td>
<td>Can’t jump</td>
<td>Can’t jump</td>
</tr>
<tr>
<td>Bar support pins</td>
<td>55 mm</td>
<td>55 mm</td>
<td>76 mm (3 in)</td>
</tr>
<tr>
<td>Height increments</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Open</td>
<td>15 cm</td>
<td>15 cm</td>
<td>6 in</td>
</tr>
<tr>
<td>Combined Events</td>
<td>10 cm</td>
<td>10 cm</td>
<td>15 cm</td>
</tr>
<tr>
<td>Standards</td>
<td>0 – 80 cm</td>
<td>45-80 cm</td>
<td>45-80 cm</td>
</tr>
<tr>
<td>Passes</td>
<td>Pass <strong>height</strong></td>
<td>Pass <strong>attempt</strong></td>
<td>Pass <strong>attempt</strong></td>
</tr>
<tr>
<td>Warm-ups on runway after competition starts</td>
<td>Not allowed</td>
<td>2 min. after 1 hour w/o bar @ entry height</td>
<td>2 min. after 3 consecutive passed heights w/o bar @ entry height</td>
</tr>
</tbody>
</table>
Time Limits for Initiating an Attempt

<table>
<thead>
<tr>
<th></th>
<th>IAAF/USATF</th>
<th>NCAA</th>
<th>High School</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Individual Event</td>
<td>Combined Event</td>
<td>Individual Event</td>
</tr>
<tr>
<td>&gt; 3 athletes</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2 – 3 athletes</td>
<td>2</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>1 athlete</td>
<td>5</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Consecutive attempts</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td><strong>Warning:</strong> Raise yellow flag</td>
<td>15 sec</td>
<td>15 sec</td>
<td>No rule</td>
</tr>
</tbody>
</table>
It is a foul if …

• When the crossbar is displaced in an attempt to clear it;
  – Exception: If, in the judgment of the official, the wind blew the pole into the
crossbar causing it to fall.

• When a competitor touches the ground, including the landing area beyond
  the vertical plane of the upper part of the stopboard, with any part of the
body, without first clearing the bar.
  – It is not a foul if the athlete’s arm or pole breaks the plane without touching the ground
or landing area beyond the plane.

• If a competitor fails to initiate a trial within the time limit.

• If, during or after the jump, the competitor deliberately steadies or
  replaces the bar.

• If the pole is touched when it is falling toward the bar or uprights such
  that, without the intervention, the bar would have been knocked off.

• If a competitor violates the warm-up restrictions.
It is a foul if ... (cont.)

• High School only:
  – If, after successfully clearing the bar, a competitor accidentally bumps the standards and displaces the bar while exiting the pit.
  – If the competitor uses a pole that is rated below his/her weight; the competitor will also be disqualified from the event.
  – If the competitor leaves the ground in an attempt and fails to clear the bar.
    • EXCEPTION: The competitor aborts the approach and in stopping plants the pole and momentum causes his/her feet to leave the ground.

• Note: *It shall not be counted as a trial or failure if a competitor’s pole breaks during an attempt to clear the bar. The vaulter shall be awarded a new trial.*
A proper set-up helps produce ...

• A safe competition
• A legal competition
• A fair competition
Crossbar

Midpoint: It may not be in the middle of label

Courtesy of Mike Armstrong
Arkansas Association
Crossbar

Ends

• Align and mark end pieces (NCAA 6.5.2) so that bar sag is down

Courtesy of Mike Armstrong
Arkansas Association
Pole Vault Venue Set Up

• Cover hard surfaces such as concrete, metal, wood or asphalt with a minimum of 2 inches of dense foam or other suitable material

• Remove movable objects such as hurdles
NCAA & high school competitions: Verify there is a box collar
Inspect the Box & Landing Area

• Check the area around the box
  – Remove debris & water from the box
  – Verify adequate clearance for poles to the pads
• Verify that the pits are properly connected and the top cover is in place
• Observe the condition of the pit
• Verify the pegs are the proper length
  – 55 mm for USATF & NCAA
  – 76 mm for High School
• Install extenders if necessary
Mark 0 to 80 cm scale on bases
Align standards with 0 line
Check Accuracy of Standards

• Move standards to “0”
• Put crossbar on pegs to be used
• Center bar on pegs & check overlap of ends
• Measure height & determine offset from standards setting
Observe the surroundings & anticipate problems you may encounter:
Anticipate Potential Problems from adjacent events
Conducting a Competition

• Read the rules the night before (from correct book)
• Arrive early (at least 1 hour before event start) to allow time for venue set-up and warm-ups
• Pick up 2 copies of entry sheets
• Make sure you have necessary equipment (crossbars, lifters, extenders, etc.) & helpers
• Make sure the venue is safe
• Have fun!
Scoring

X = Miss/Fail          O = Cleared          — = Pass

NCAA and High School: Record a “—” for each *attempt* that is passed.
- Be sure to ask athlete if they are passing, the attempt or the height.

USATF - a pass is a pass of the *height*.

Places are determined by 1) fewest attempts at a height; 2) fewest total misses throughout the competition.
- If the tie still remains for first place, the tying athletes must jump off.

<table>
<thead>
<tr>
<th>Bib #</th>
<th>Name</th>
<th>Metric</th>
<th>3.30</th>
<th>3.45</th>
<th>3.60</th>
<th>3.70</th>
<th>3.80</th>
<th>3.90</th>
<th>BEST MARK</th>
<th>Jumps Tied Ht</th>
<th>Total Misses</th>
<th>PLACE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Adams</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>3.70</td>
<td>1 / 1</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Bradley</td>
<td>O</td>
<td>X</td>
<td>O</td>
<td>X</td>
<td>O</td>
<td>X</td>
<td>X</td>
<td>3.60</td>
<td>2 / 2</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Crane</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>3.80</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Douglas</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>N/H</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Edwards</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>3.70</td>
<td>2 / 1</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Graham</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td></td>
<td></td>
<td>X</td>
<td>3.70</td>
<td>1 / 0</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Howe</td>
<td>X</td>
<td>O</td>
<td>X</td>
<td>X</td>
<td>O</td>
<td>X</td>
<td>X</td>
<td>3.60</td>
<td>2 / 4</td>
<td>6 Tie</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Irons</td>
<td>X</td>
<td>X</td>
<td>O</td>
<td>X</td>
<td>O</td>
<td>X</td>
<td>X</td>
<td>3.60</td>
<td>2 / 4</td>
<td>6 Tie</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Jackson</td>
<td>O</td>
<td>X</td>
<td>O</td>
<td>X</td>
<td>X</td>
<td>O</td>
<td>X</td>
<td>3.60</td>
<td>3 / 3</td>
<td>8</td>
<td></td>
</tr>
</tbody>
</table>
## Pole Vault Jump Off Procedures

<table>
<thead>
<tr>
<th>Pole Vault</th>
<th>IAAF/USATF</th>
<th>NCAA</th>
<th>High School</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Starting Height</strong></td>
<td>Next height in progression above tie</td>
<td>Next height in progression above tie</td>
<td>Lowest final failing height</td>
</tr>
<tr>
<td><strong>Increment</strong></td>
<td>5 cm</td>
<td>5 cm</td>
<td>3 inches</td>
</tr>
</tbody>
</table>

### High School Example

<table>
<thead>
<tr>
<th>Athlete</th>
<th>Height and Performance</th>
<th>Total Fails</th>
<th>Jump Off</th>
<th>Place</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>10' O 10'6&quot; XO 11' O 11'6&quot; XO 12' PPP 12'6&quot; XXX</td>
<td>2 X O X</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>10'6&quot; XO O PPP XO PPP XXX</td>
<td>2 X O O</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>12'6&quot; PPP XO XO XO PPP XXX</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

### NCAA, USATF and IAAF Example

<table>
<thead>
<tr>
<th>Athlete</th>
<th>Height and Performance</th>
<th>Total Fails</th>
<th>Jump Off</th>
<th>Place</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4.10 O 4.20 XO 4.30 O 4.40 XO 4.45 P 4.50 XXX</td>
<td>2 X O X</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>4.45 XO O P XO P XXX</td>
<td>2 X O O</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>4.45 P XO XO XO P XXX</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>
Officiating Resources > Vertical Jumps

**Best Practices**

- **Absence from Competition - Field Events**
  - January 2016
  - Field Events - General
  - High Jump
  - Horizontal Jumps
  - Pole Vault
  - Throws
  - Vertical Jumps

- **Crossbar Preparation for Vertical Jumps**
  - April 2016
  - High Jump
  - Pole Vault
  - Vertical Jumps

- **Evaluation Form - Vertical Jumps**
  - January 2013
  - High Jump
  - Pole Vault
  - Vertical Jumps

- **Event Recording Sheet - Vertical Jumps (Landscape)**
  - December 2010
  - Vertical Jumps

- **Event Recording Sheet - Vertical Jumps (Portrait)**
  - December 2010
  - Vertical Jumps

- **Field Event Scoring and Tie-Breaking**
  - May 2016
  - Field Events - General
  - Horizontal Jumps
  - Throws
  - Vertical Jumps

- **Field Event Time Limits**
  - January 2016
  - Field Events - General
  - High Jump
  - Pole Vault
  - Throws
  - Vertical Jumps

**Other Resources**

- **FieldLynx Quick Start Guide - Vertical Jumps (Palm OS)**
  - November 2007
  - Electronic Measurement
  - Vertical Jumps

- **FieldLynx Quick Start Guide - Vertical Jumps (Windows CE/Mobile)**
  - November 2007
  - Electronic Measurement
  - Vertical Jumps

- **Five Alive Clinic (2004 Olympic Trials)**
  - July 2004
  - Field Events - General
  - Vertical Jumps

- **Five Alive Webinar**
  - April 2010
  - Field Events - General
  - Vertical Jumps

- **Vertical Jump Pocket Guide**
  - December 2007
  - Electronic Measurement
  - Vertical Jumps

- **Vertical Jumps - USATF Officials Monograph Series**
  - August 2012
  - Field Events - General
  - Vertical Jumps