

## Tent, Canopy, and Special Event Structures Weight Policy

### **PURPOSE:**

Summit County often has unpredictable weather and strong, gusty, and erratic winds. While participants use canopies to shield themselves from the rain and sun, the region's winds can turn a tent or canopy into a deadly missile with one unexpected gust.

Strong gusts can develop without warning before, during, or after an event has closed. Summit County events WILL have wind. Participants may experience calm conditions during morning set-up; however, conditions can change dramatically by late afternoon and break down.

Tents and canopies are most vulnerable to wind during set-up and break-down periods. Structures shall be secured entirely as soon as they are set up, and at the end of the event, structures must be broken down immediately following the removal of weights.

**The event organizer is responsible for ensuring all temporary structures meet the requirements of this policy. Failure to comply with this policy will result in legal action, fines, and/or removal of the structure from the event site.**

### **POLICY:**

- A. A tent or canopy up to 20'X20' must be weighted down utilizing 40-pound weights on each leg of the tent:
  1. The weight must be suspended from the top corner of the tent and secured to each leg of the tent.
  2. The weight must be self-contained and permanently sealed. It must be capable of being suspended.
    - a. Please see Exhibit A for allowable weights.
    - b. EXCEPTION: Approved sandbags or weight plates designed by the manufacturer are allowed.
  3. Items not allowed include but are not limited to:
    - a. containers of water (open or sealed) other than 55-gallon drums as listed in Section II
    - b. bags of sand (not designed by the tent/canopy manufacturer)
    - c. bricks, cinder blocks, rocks
    - d. gym-type weights
    - e. stakes, etc.
  4. Tents and canopies shall not be tethered to a fence, light post, bench, trash can, or another fixed object. The tent or canopy shall be self-weighted.
- B. A tent or canopy up to 40' X 40' can be weighed down with four closed 55-gallon water barrels. One water barrel shall be attached to each leg of the tent.

- a. The water barrels shall be attached to the tent using a ratchet-type strap rated for the tension.
  - b. The strap must run from the top of the tent through the water barrel.
  - c. The straps shall be in good repair with no physical damage.
- C. A tent or canopy over 40' X 40' shall be engineered to withstand winds of 90 miles per hour (mph) under a 3-second gust and a snow load of 90 pounds per square foot.
- D. Non-standard structures (domes, odd-shaped tents, custom designs) or any structure that requires custom anchoring (e.g., staking or snow and ice anchors) shall require an engineered submittal.
  - a. The engineer shall specify the correct attachment points and angles for tie-downs.
  - b. The engineer shall specify whether the tent, canopy, or structure meets the 90-mph wind load under a 3-second gust and the maximum wind load if it does not.
  - c. The engineer shall specify that the tent meets or exceeds the snow load requirement of 90 pounds per square foot. The engineer shall specify the maximum snow load if the structure does not meet the snow load requirement.
  - d. The engineer shall specify the anchor's type, size, and depth.
- E. All trussed structures shall be engineered to meet the wind load requirements of a 90-mph wind under a 3-second gust.
  - a. The submittal shall illustrate how to tether the structure properly. In detail, it shall specify:
  - b. The anchor points to the structure.
  - c. Angle of tether strap at anchor point and ballast point.
  - d. Type of material required for the rope.
  - e. Required tensile strength for the rope.
- F. Tents, canopies, and structures that do not meet the required wind and snow loads shall implement a weather management plan. A tent, canopy, or trussed structure erected during snow months (November through May) shall be designed to maintain a snow load of 90 pounds per square foot. If the tent, canopy, or structure cannot be designed to meet the snow load, then a weather management plan shall be required. Weather management plans shall be submitted to the Fire District for approval.

## Exhibit A

### Quick Reference Guide

- Tents or canopies up to and including 20' x 20' require a minimum of 40 pounds per leg. The weight shall be affixed to the tent with a rated rope or ratchet strap.
- Tents or canopies up to and including 40' x 40' require a minimum of a 55-gallon barrel filled with water per leg. The barrel shall be affixed to the tent with a rated rope or ratchet strap.
- Tents or canopies over 40' x 40' require a State of Colorado Engineer to determine the proper ballasting.
- Non-standard tents defined under Item IV of this guideline require a State of Colorado Engineer to determine the proper ballasting.
- Trussed temporary structures require a State of Colorado Engineer to determine the proper ballasting

#### **Up to and including a 20' X 20' Tent or Canopy**

What is allowed:

- Sealed tube-type weights constructed of PVC. The weights shall have an eye-type hook on one end for attachment to the tent's top structure.
- Steel rods or bars. The weights shall have an eye-type hook on one end for attachment to the tent's top structure.
- Weight plates that the manufacturer designs. The weight plates shall be capable of latching or locking onto the structure's leg.
- Sandbags that the tent manufacturer designs. Sandbags shall be capable of attaching to the leg of the structure. The manufacturer shall specify ballast material.
- A minimum of 40 pounds shall be attached to each leg of the structure.

What is **NOT** allowed:

- Bricks
- Cinder Blocks
- Water Jugs
- Buckets of any kind
- Gym Style Weights
- Rocks
- Bags of sand or sand tubes not designed by the structure manufacturer.

**Alternative materials and methods may be approved on a case-by-case basis. At least one (1) month before the event, a separate submittal shall be provided to the Fire District.**

**The event organizer is responsible for ensuring all temporary structures meet the requirements of this policy. Failure to comply with this policy will result in legal action, fines, and/or removal of the structure from the event site.**