



Protecting Outdoor Sculptures from Storm Damage

Outdoor sculptures require constant care and are particularly vulnerable to damage from high winds, tornadoes and hurricanes. The following guidelines, prepared by the fine art experts at AIG Private Client Group, were designed to help you identify risks and enhance protection from storm-related exposures.

Assess Your Collection

All outdoor sculptures are vulnerable to storm damage, regardless of size or medium. Before developing an effective protection plan, it is important to understand each piece's vulnerability.

Stone, Granite, Marble, Cement and Ceramics

These sculptures are most at risk in high winds. If a stone sculpture falls, it is likely to break in several places, resulting in a total loss. Be aware of any hard surfaces in the immediate vicinity that could worsen damage upon impact.

Conservation tip: If a conservation professional has not done so, replace original internal support pins with ones made of stainless steel. Pins of a lesser grade are susceptible to corrosion and instability, particularly in coastal locations.

Steel, Iron and Mixed Metal

Raw steel, iron and stainless steel sculptures sometimes can be repaired successfully without significantly impacting value. It is often possible to cut, replace, re-smooth and re-finish damaged sections. Look carefully for signs of corrosion, particularly below ground or around the base.

Conservation tip: Any type of metal sculpture is susceptible to corrosion, particularly in coastal climates. At a minimum, apply a light coating of oil or wax twice a year after cleaning to help prevent corrosion.

Bronze

Like steel, bronze is extremely resilient. In hurricane conditions, however, flying objects can damage its characteristically smooth surface. Any deterioration in surface condition will have a significant impact on both the value and aesthetic appeal.

Conservation tip: Most conservators favor a highly moisture-resistant wax to prevent oxidation and corrosion. As above, wax should be applied at least twice a year after cleaning and more frequently in coastal locations.

Fiber Glass, Resin and Plastic

Used mostly by contemporary sculptors, these are surprisingly lightweight and resilient materials.

Conservation tip: Due to the wide range of techniques and finishes that may be utilized, ongoing conservation must be determined on a case-by-case basis.

What to Do Well in Advance of Hurricane Season

1) Design a customized pre-storm action plan for every outdoor sculpture in your collection.

Assume the worst: a direct hit with 150 mph winds.

Your plan should include the following:

- a. A list of labor to be completed well in advance, such as drilling holes and sinking recessed support anchors
- b. Estimated timeframe for completion
- c. Suggested start time
- d. Phone numbers for the response team and suppliers of rental machinery (if needed)
- e. The number of people — and the skill sets — required to execute the plan
- f. Specific handling instructions for each piece
- g. A list of the tools needed to prepare the piece for protection
- h. A list of the materials needed to implement the protection, such as the type, number and thickness of harnesses
- i. Preferred method of securing each piece and specific storage instructions

2) Don't overlook large and heavy pieces. A six-ton sculpture can still be lifted by strong winds and thrown into other objects or structures.

3) Be particularly aware of attachments or parts that could sheer off in high winds.

Secure or remove unstable pieces, whichever is most appropriate. (see photo at right)



Implement Sophisticated Loss Prevention Measures

1) Lift and move indoors or to an alternate location.

Although it's the most effective technique, relocating sculptures is only suitable for fragile pieces light enough to be transported by hand, forklift or other rigging equipment, and then wheeled into a secure indoor space. Unnecessary removal of heavier works in a hurried timeframe is not recommended, as the risk of damage during handling is significantly increased.

The following examples illustrate sculptures that are suitable for lifting and moving:



Jacques Lipchitz (1891-1973), *Tree of Life* (bronze)

- Removal of this piece would require hiring a company to lift the bronze via forklift.
- A response team should oversee the move and have specific handling instructions for every phase, from forklift to dolly cart to storage area.
- The piece should be stored indoors in a pre-designated, taped-off, storm-secure area.



John Henry (born 1943), *Untitled III* (painted steel) (left)

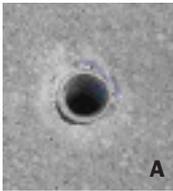
Joyce de Guatemala (20th Century), *Untitled* (steel) (right)

- In both these cases, a minimum of two people would be needed to lift the sculptures.
- One requires unscrewing from a base and one does not, but both require specific handling instructions and cushioning during transfer.
- Store indoors as above; do not remove cushioning until re-installed.



2) Secure with braces and harnesses.

Use protective harnesses to secure sculptures that are pinned or cannot be lifted easily. Each harness should consist of an anchor, a buckle and a wind-rated construction strap. Standard harnesses and wind-rated straps can be purchased from any local hardware store. Specialty harnesses and cushioned straps must be ordered from specialty suppliers. The Art Collection Management team at AIG Private Client Group can facilitate these purchases.



- Use cushioned, non-abrasive harnesses if the surface can be easily scratched (stone, granite, marble, ceramic, bronze and painted sculptures).
- If the piece sits on concrete, harnesses should be secured by pins that are screwed into pre-drilled, recessed stainless steel anchors of at least four inches in depth. (photo A)
- If the piece sits on grass or earth, harnesses should be secured by eight-inch spikes or anchors that butterfly beneath the soil. (photo B)
- Always tie harnesses as tightly as possible, and always leave at least two feet between the anchor and the sculpture base (leave more space for tall sculptures). (photo C)
- For added protection, vertical sculptures that are heavy but do not have a wide base or internal pins can be tipped (and wrapped) before being braced and harnessed.
- For all other sculptures, the use of protective storm-resistant materials in addition to harnessing is crucial to minimizing impact damage from flying objects. Like harnesses, recommendations for protective materials should be obtained on a case-by-case basis.

The example at right illustrates a harness in use:

Steve Tobin (born 1957), *Forest Floor* (bronze)

- In this case, holes were drilled into the surrounding concrete in advance, and recessed steel anchors were then permanently sunk into the holes.
- At the time of harnessing, four eyebolts were screwed into the recessed anchors.
- Two harnesses were threaded through two of the eyebolts, tied tightly across the sculpture, and secured to the remaining two eyebolts using anti-slip knots.
- Only anti-slip knots or pre-sewn hooks will withstand high winds.



When a Major Storm Is Forecast to Hit Your Area

Do not wait until the first hurricane “warning” to set your plan into operation. Given the size and weight of many outdoor sculptures, any pre-plan should be mobilized at the first hurricane “watch.” Waiting will not allow sufficient time to handle pieces properly.

After the Storm Has Passed

If a sculpture has been damaged, first contact your independent agent or broker. If he/she is not available, report your claim directly to AIG Private Client Group via phone: (888) 760-9195 or fax: (866) 947-1512. AIG Private Client Group’s Concierge-level Claims ServiceSM professionals will quickly align you with the appropriate resources and expertise.

Caring for Outdoor Sculptures Year-Round

A professional conservation plan should include steps to mitigate damage from pollution, rainwater, air salts, groundwater and other ongoing threats. Regular inspection by a conservation professional will help minimize the likelihood of decaying supports and other emerging installation problems.

Sculpture Methods and Materials: An Overview

Stone, Granite and Marble

These works are hewn from one or a small number of solid blocks which are then pinned together. Sculptures are usually mounted on a stone base and stabilized by the sculptor with the insertion of internal steel pins up the shaft of the sculpture. This improves stability and reduces the likelihood of the work being knocked over. *(photo A)*



Cement and Ceramics

These works are molded from the material when wet. They set to form a brittle, stone-like material. Most cement and ceramic sculptures are mounted and stabilized as above.

Steel, Iron and Mixed Metal

Sculptures can be formed by taking pieces of metal and shaping, beating, cutting or melting them into a design. These pieces are usually stabilized by their own weight and are either mounted on top of a concrete podium or directly onto the ground. There are over 50 grades of steel, many of which appear in contemporary sculpture. The lowest grade of steel is raw steel; the highest is stainless steel. *(photo B)*



Bronze

These sculptures are cast inside a mold. Molten bronze is poured into a ceramic or kiln baked mold, left to cool and then sandblasted, ground and finished with a patina. Bronze sculptures are often hollow, usually stabilized by their own weight and mounted on top of a stone or concrete base. *(photo C)*



Wood

Extremely rare; not usually designed for outdoor display.

Fiber Glass, Resin and Plastic

These are works that have been molded from pliable and plastic materials. Usually lightweight, some plastic and fiber glass sculptures are extremely susceptible to climate changes. *(photo D)*



For additional information, please contact your independent insurance advisor, or e-mail: collections.pcg@aig.com

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