



## **2009-10 COLD DAMAGE**

### **ASSESSMENT**

Florida is in the middle of an unprecedented long-term cold snap. In many places in the state we have seen temperatures dip to 32\* and lower at least 7 times since it began. January is currently tracking as of 1-12-10 as the coldest January on record.

What affects will these temperatures have on our turf, ornamentals, palms, and flowers? This is a difficult question to answer with a blanket statement, chilling and cold injury depends on several factors that affect individual landscapes. I will identify some of the variables which may affect a given landscape.

- What has been previous weather patterns of normal cool down? A gradual progress of declining temperatures better prepare plants to withstand increasingly colder temperatures by adaptation. Sudden temperature drops at or below freezing with succulent tissue (un-hardened) causes more damage. Previous low temperatures in SW Florida vary by community.
- Different projects and their location in the state determine how low temperatures have gone. Projects close to the Gulf of Mexico, SE side of any water body, the amount of overhead canopy cover, and undulating topography on a specific property all will have an influence as to low temperatures and the amount of damage. We call these microclimates.

- Underlying factors to also consider in cold assessment include, but are not limited to; poor drainage, compacted soils, excessive thatch, reduced lighting, excessive fall fertilization, and close mowing.
- Another extremely important observation, especially after several years of moderate winter cold is the hardiness zone has been extended northward. We are increasingly seeing zone 10 plants in zone 9a and 9b. See attached hardiness zone map. A good resource guide can be found at [www.floridata.com](http://www.floridata.com) as to hardiness zones. Pull up Allamanda, zones 9-11, but freezes at 30\*. We have hit 30\* in all of our service locations which tells me we have Allamanda injury.
- What kind of freeze we experience affects plants differently. We have 2 types, **radiational freezes** or frost occurs on calm clear nights. Damage is usually seen in low areas and exposed areas of a landscape. **Advectional freezes** occur when cold air masses move from northern regions causing a sudden drop in temperatures. All areas of a landscape are at risk including plants with an over-story canopy. We have had both types of freezes this year.

**Mainscape** follows the University of Florida “Best Management Practices” in lessening the affects of cold weather injury.

- If a known freeze is announced all irrigation system are to be turned off. This will lessen cold wet leaf damage.
- We follow the general guidelines of responsible fertility practices to lessen succulent late season growth of plants. We use balanced fertilizers to enhance stress hardiness.
- We delay and or minimize late season prunings to minimize late season tender growth.
- We cover tender annual flowers if in the contract, if not; owners will be notified of their options. This process does not reduce losses from **advectional freezes** or extreme cold temperatures.

What **Mainscape** does after a freeze is dependent on the owners/community individual needs.

- We turn the irrigation system back on to provide needed water when temperatures return to normal patterns.
- We uncover all annual flowers when temperatures are to return to normal.
- We delay pruning of cold damaged plant material until the threat of the last frost is over, February 1, in Naples, February 15, in Sarasota area. Horticulturally this practice

provides an over-story to limbs and lower leaves which are still alive and offers future cold protection. It also minimizes future new succulent growth that initiates after a pruning that is most susceptible to cold further endangering the health of the mother plant. \*Note-owners and managers are often challenged to remove any damaged material immediately; an educational session should be the first line of defense to resist this potentially harmful practice.

Florida homeowners enjoy a vast array of plant materials and often desire a tropical or semitropical appearance to their landscapes. Plants are often planted past their northern limit in Florida, although microclimates differ dramatically. Tropical and subtropical plants can be used effectively in the landscape, but they must be protected or replaced when necessary. A combination of tender and hardy plants should be planted in order to prevent total devastation of the landscape by extremely cold weather. ***Excerpt from Univ. of Florida publication ENH1 Cold Protection of Ornamental Plants.***

Gary Hill

Technical Director, Mainscape, Inc.