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**The Myth of Winter Watering**  
*“Decrease fall irrigation to force landscape plants into winter dormancy”*

**The Myth**

To survive freezing temperatures, temperate landscape plants must become dormant and develop cold hardiness. Part of dormancy induction is the cessation of vegetative growth, during which time other biochemical and physiological changes occur. When cold temperatures finally arrive, properly hardened plants can resist freeze damage primarily caused by freeze-induced dehydration.

Though the processes of cold hardening and dormancy development are under genetic control, some people promote “assisted dormancy.” The thought behind this philosophy is that we must force plants to enter dormancy, or they will not be able to survive the winter. The method most commonly used to force dormancy on plants is by withholding water. Many websites insist that you must stop watering in early fall to induce dormancy in landscape plants and turf. The rationale is that by ceasing irrigation vegetative growth is halted and the plant will initiate the internal processes needed to survive freezing conditions.

**The Reality**

There is no valid reason that indigenous landscape plants, or those introduced from similar climates, need to have dormancy forced upon them. Temperate plants cue in on day length changes as well as temperature differences to initiate dormancy and cold hardening. As day lengths shorten following the summer solstice, developmental processes are triggered in each species as its particular light-to-dark ratio is reached. The changes are primarily internal and are manifested outwardly as a slowing of vegetative growth and formation of overwintering buds. While the lack of water will also cause temperate zone plants to cease vegetative growth, the presence of water will not cause these plants to grow beyond their natural period.

Decreasing irrigation to temperate landscape plants may actually cause more harm than good. The lack of water induces a drought stress on these plants, inhibiting their ability to undergo the biochemical and physiological changes needed to obtain maximal cold hardiness. Furthermore, the early leaf senescence induced by lack of water means the plant has fewer stored resources to put into next year’s growth. The overall result will be a stunted, stress-sensitive plant.

Damage also occurs below ground with reduced water. Fine roots die, decreasing the ability of the plant to take up water and nutrients. Decomposition slows, and soil organisms die or move elsewhere. When dry soil freezes, it has less insulative ability than moist soil, causing the freezing and damage or death of smaller roots. Roots of landscape trees and shrubs never go dormant, and their resistance to cold damage is much reduced compared to the above ground parts of the plant.

This myth seems to have originated from the misapplication of practices geared towards management of summer dormant species. Such species are adapted to dry summers and cue on water availability to initiate dormancy. Many introduced ornamental bulbs, corms, and tubers are summer dormant species and need to have irrigation reduced for this process to occur. While these are valid practices for plants from arid tropical and subtropical climates, they cannot be applied to temperate woody species.

A final caveat regarding fall and winter irrigation: be sure not to overwater landscapes during this time. Poorly drained soils will lead to root injury and death due to lack of oxygen and may also promote pathogenic fungal and bacterial growth.

### **The Bottom Line**

- Landscape plants grown in their native, or climatically similar, environments do not need dormancy forced upon them
- The roots of landscape plants do not go dormant and are not particularly cold hardy
- Moist soil is a better insulative barrier than dry soil
- Managed landscapes in the Puget Sound area (and similar regions) should be kept moist, but not soggy, throughout the dormant season
- Management practices for summer dormant species should not be applied to winter dormant species

For more information, please visit Dr. Chalker-Scott's web page at <http://www.theinformedgardener.com>.