

TAKE HEART –

STRESSED TREES SLOWLY RECOVERING FROM GREAT NOVEMBER FREEZE

Much of Wyoming and at least half a dozen other states show the stark effects of last year's weather extremes.

The drastic temperature drop following unseasonably warm weather last November had the greatest effect on trees and shrubs. This was followed by an unusually warm winter that reduced cold hardiness of many trees and shrubs. Those that did leaf out in spring were then further stressed by another hard frost on Mother's Day.

Many experts compare the November 2014 freeze with the 1991 Halloween freeze. The 1991 event resulted in tens of thousands of dead Siberian elms throughout a multi-state area; however, the November 2014 freeze has resulted in more severe damage and is considered one of the most extreme temperature drops on record.

Lethal Extreme

The temperature reached 60 degrees November 10 in Casper and then dropped to minus 27 degrees by the night of November 12 – an 87-degree drop. As day length shortens and temperatures cool, trees and shrubs prepare for winter. This winter preparation process was not complete, and the plant cells of trees and shrubs simply froze. Pine trees and junipers



A pine tree this spring showing the effects of the November 2014 dramatic temperature drop.



Tree TLC

The “Care” section in the Trees and Shrubs category on the Barnyards and Backyards website provides great suggestions for tree health. See <http://bit.ly/wyotreecare>.

showed damage immediately. Many trees, including Siberian elm and crab apples, still had green leaves when the frost occurred.

Most of the pine trees this spring produced new growth and are now appearing more green than brown. Those that are recovering will still be stressed since some lost three or more years of needles. Junipers are experiencing a much slower recovery. For the Siberian elms, crab apples, and several other varieties of ornamental and shade trees, the severity of the frost damage wasn't apparent until May and June. Many had top dieback and sparse foliage, while others died completely and began sending up shoots from their roots. Established fruit trees and newly planted landscape trees were especially affected by the November freeze.

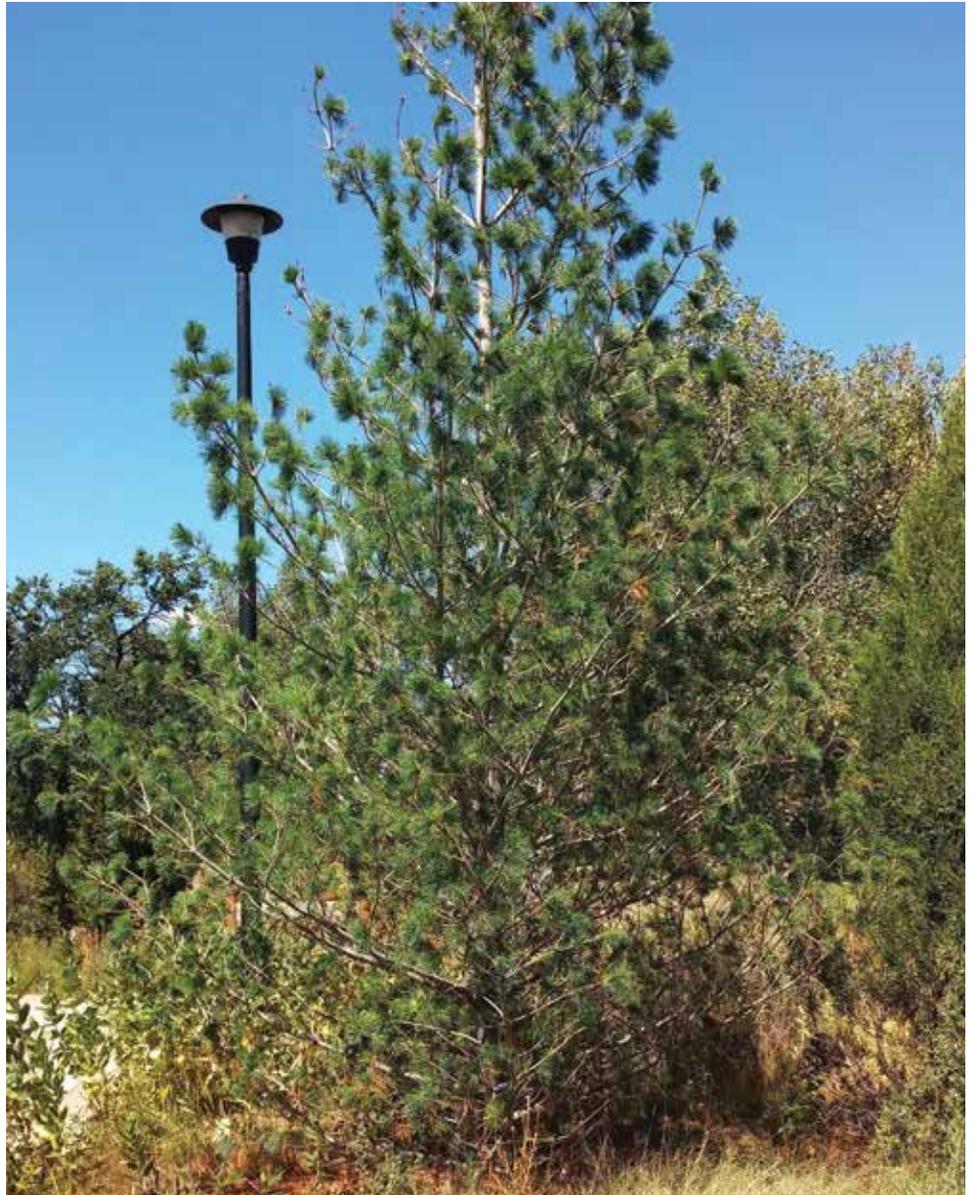
Survivors Need Attention

Fall color was already appearing by mid-August this year in many areas of the state. This is not an indicator of additional stress but rather the trees' natural reaction to a combination of recent extreme weather events. Abundant precipitation this spring greatly helped stressed trees, and tree owners should give special attention to proper watering and mulching to further help recovery. Remove any branches and even entire trees that had not leafed out by late summer. They will not recover.

In some cases, environmental stress lowers a tree's natural chemical defense, opening the tree to attack by

pests. Canker diseases may be more common the next few years. Also, an increase in boring insects often occurs one to a few years after or during years of environmental stress.

Trees and shrubs will need a little extra care and attention to help them overcome this freeze damage. Proper care, patience, and persistence will help trees to recover and thrive again.



The same tree recovering this summer.

Mark Hughes is the community forestry coordinator with the Wyoming State Forestry Division. He can be reached at (307) 777-5478.