

LONGWOOD
GARDENS

March 29, 2017

Longwood Climate Change and Trees

“No tree, dead or alive, is to be removed or trimmed, no matter whether located on the farm or in the woods, unless by special permission of the owner...” P.S. du Pont, 1912

In 1932, Pierre was inspired by a Massachusetts law to propose that historic trees become semi-public property, that they be registered, and that even the owners be restricted from cutting, trimming, or injuring them.





- 8,101 trees have been assessed and identified since 2009
- 1 National Champion
- 1 Northeast height champion – tulip poplar 163.3 feet tall
- 183 State champions (1-6th)



Historical Trees

- 1800 series trees = 165
 - Sugar maple = 33
 - Tulip poplar = 24
 - Canada hemlock = 51
- 'L' series trees = 1,344
 - Sugar maple = 39
 - Tulip poplar = 53
 - Canada hemlock = 151
 - White pine = 94



Specimen Tree Replacement Plan

(Core Gardens)

Longwood Gardens is determined to preserve the heritage and aesthetic of the gardens, which is built upon the core structure provided by the mature trees and shrubs. Preserving these is the focus of the Specimen Tree Replacement Plan. The STR plan includes:

- Identifying plants to preserve
- Determine appropriate source for replacements
- Create schedule for replacement trees to be propagated
- Schedule transfer of the replacement plants into the gardens



Acer rubrum L-0428*BB at Large Lake, removed October 2013



Acer rubrum clonal propagation from L-0428*BB at Longwood's nursery 2015



	2010	2011	2012	2013	2014	2015	2016	Total (2006-2016)
Total removed	94	105	91	113	392 [^]	246 [^]	157	1,198
Accessioned trees planted	190	106	126	158	767	419	426 [*]	2,192

*Total does not include plantings in the MFG, Generator station or (South parking lot = 90 trees) projects

[^]includes MFG project removals (326 trees)

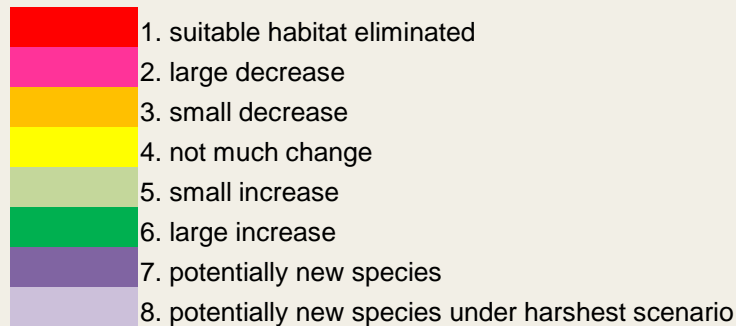
Additional trees planted

2006 - 2016 = 1,019

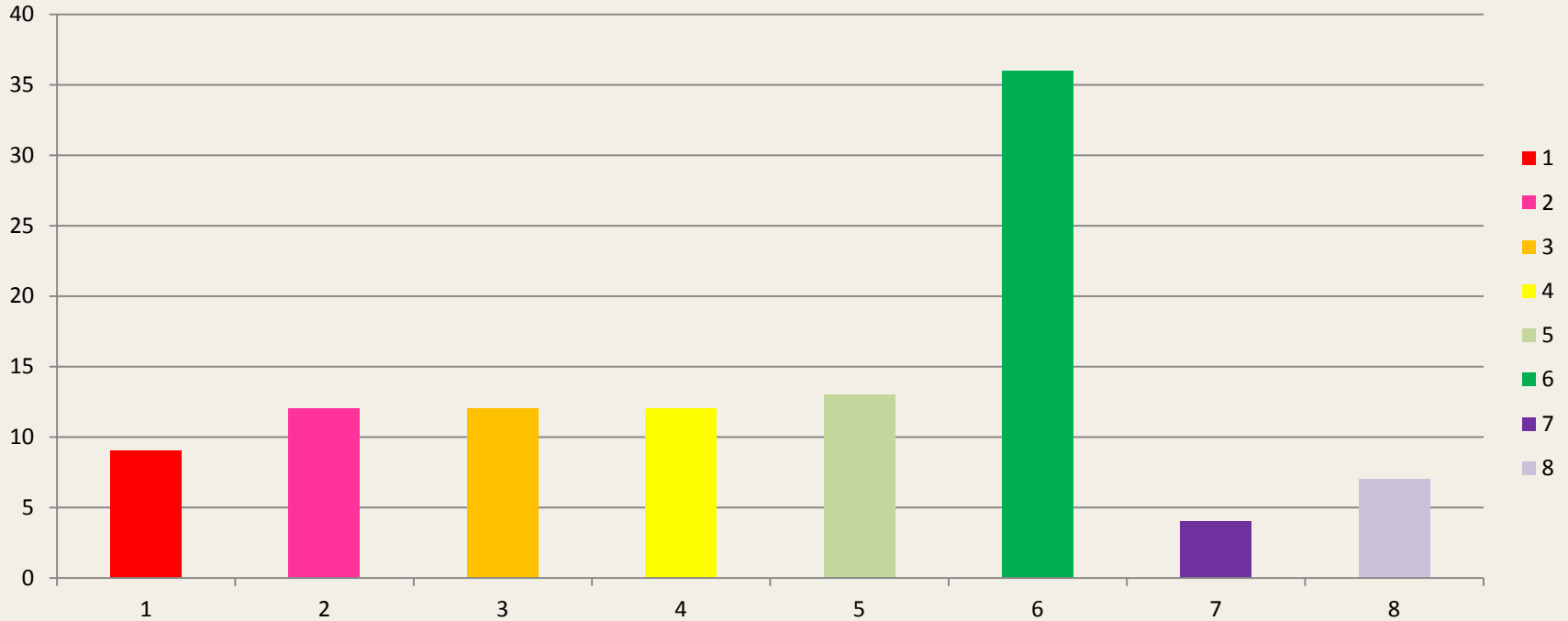


Large decrease to decrease in habitat:

- American beech - 130
- Eastern hemlock - 377
- Eastern White pine – 569
- Tulip poplar – 250
- Sugar maple - 280



Number of trees species in each category for climate change model

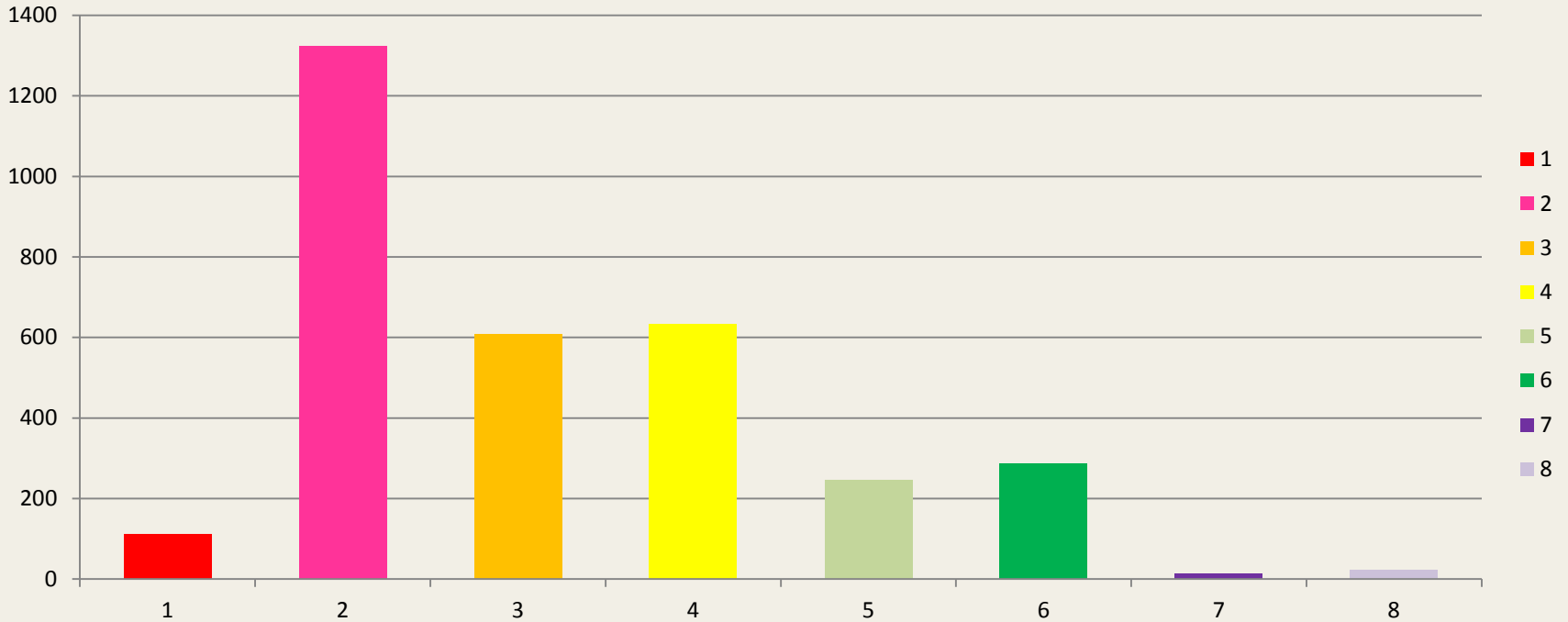


- 1. suitable habitat eliminated
- 2. large decrease
- 3. small decrease
- 4. not much change
- 5. small increase
- 6. large increase
- 7. potentially new species
- 8. potentially new species under harshest scenario

36% of Longwood tree species are high to medium high risk



Number of total trees in each category at longwood



- 1. suitable habitat eliminated
- 2. large decrease
- 3. small decrease
- 4. not much change
- 5. small increase
- 6. large increase
- 7. potentially new species
- 8. potentially new species under harshest scenario

41% of Longwood trees are high to medium high risk (3,623 trees)





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