

Trees & Drought

Frank Niccoli

Trees



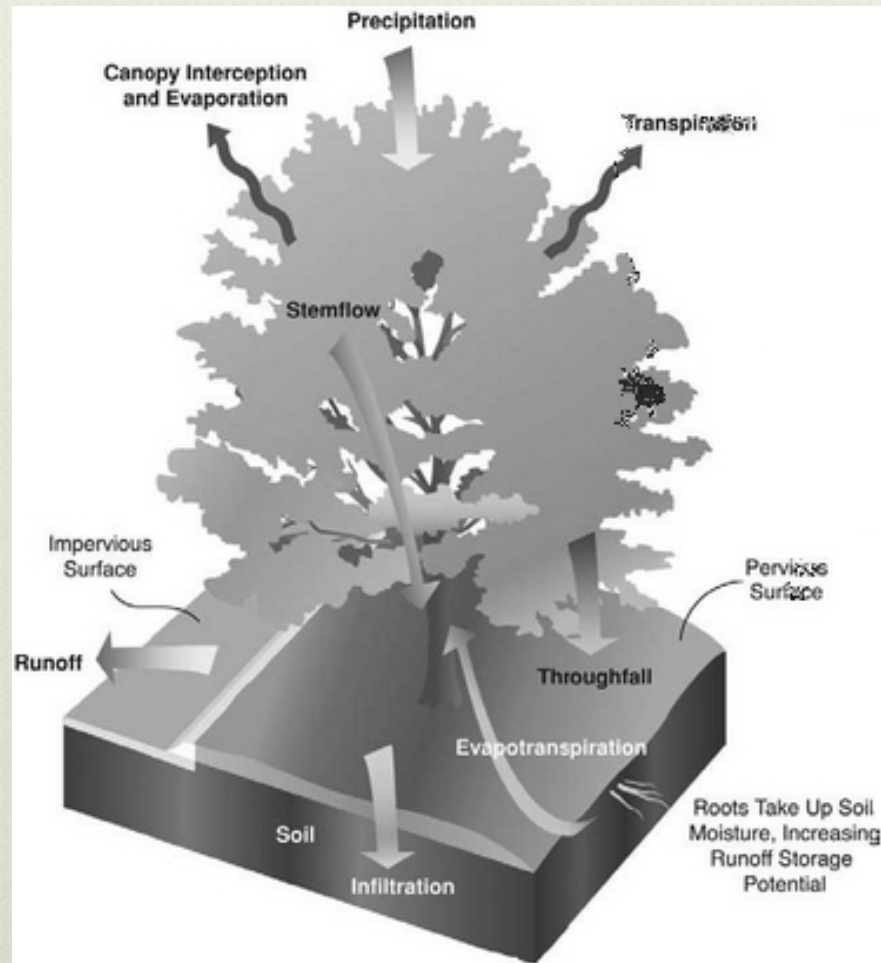
What do They Provide?



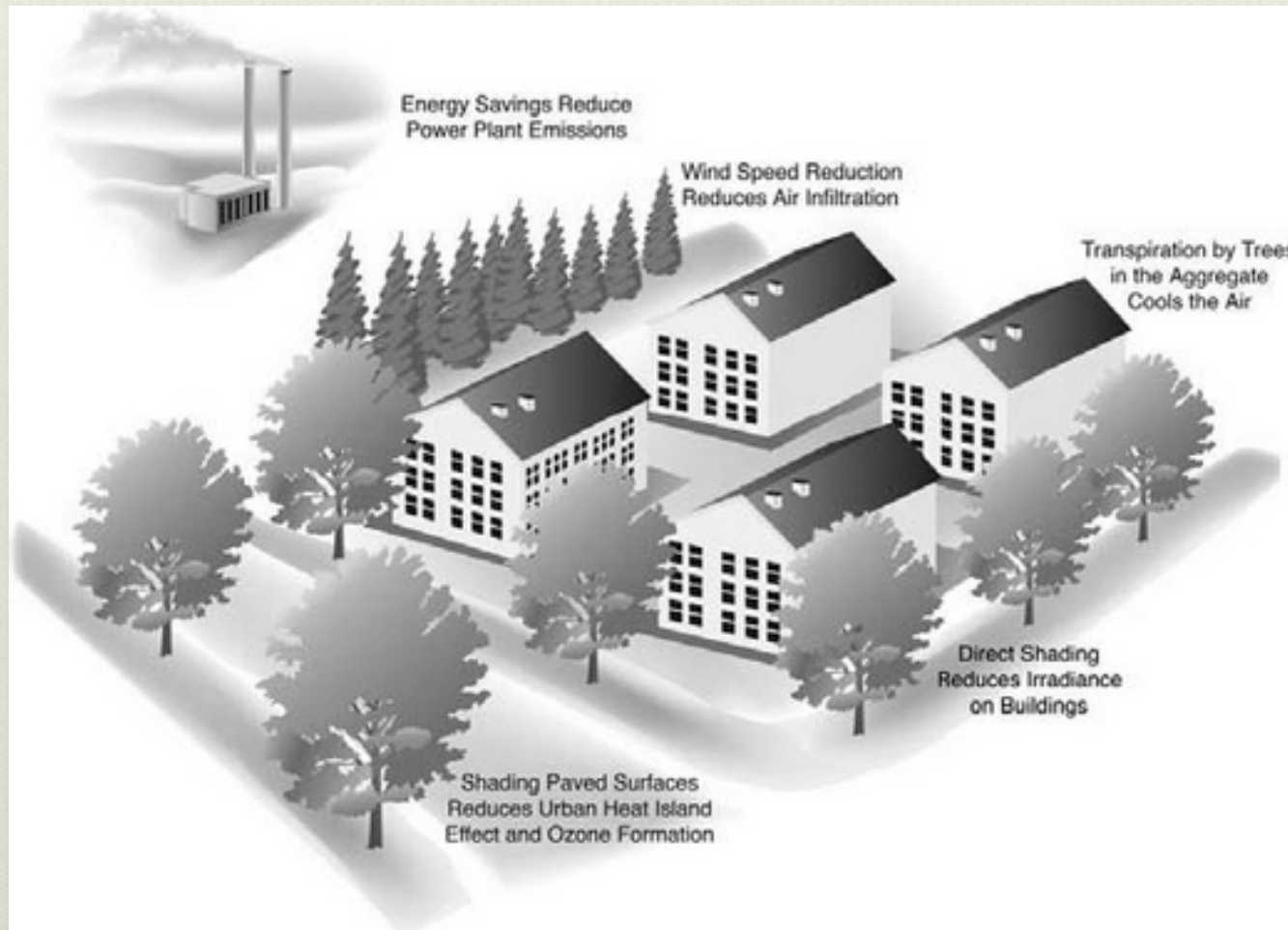
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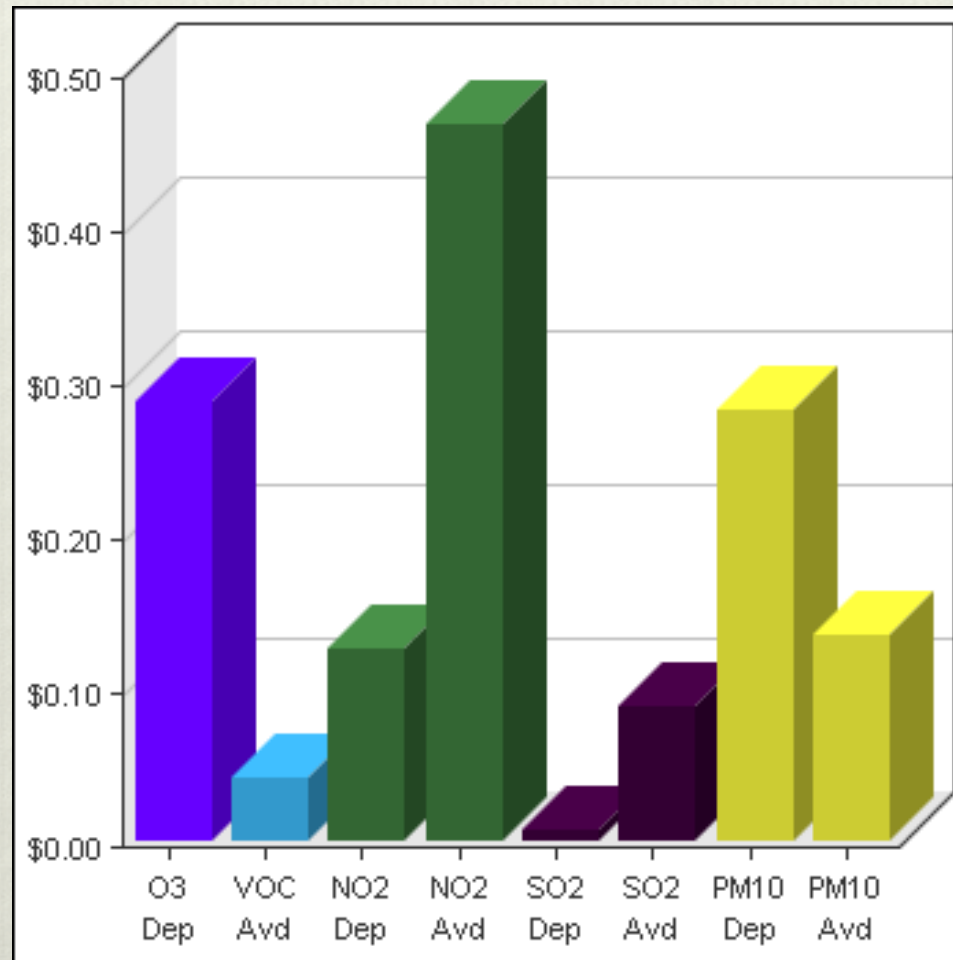
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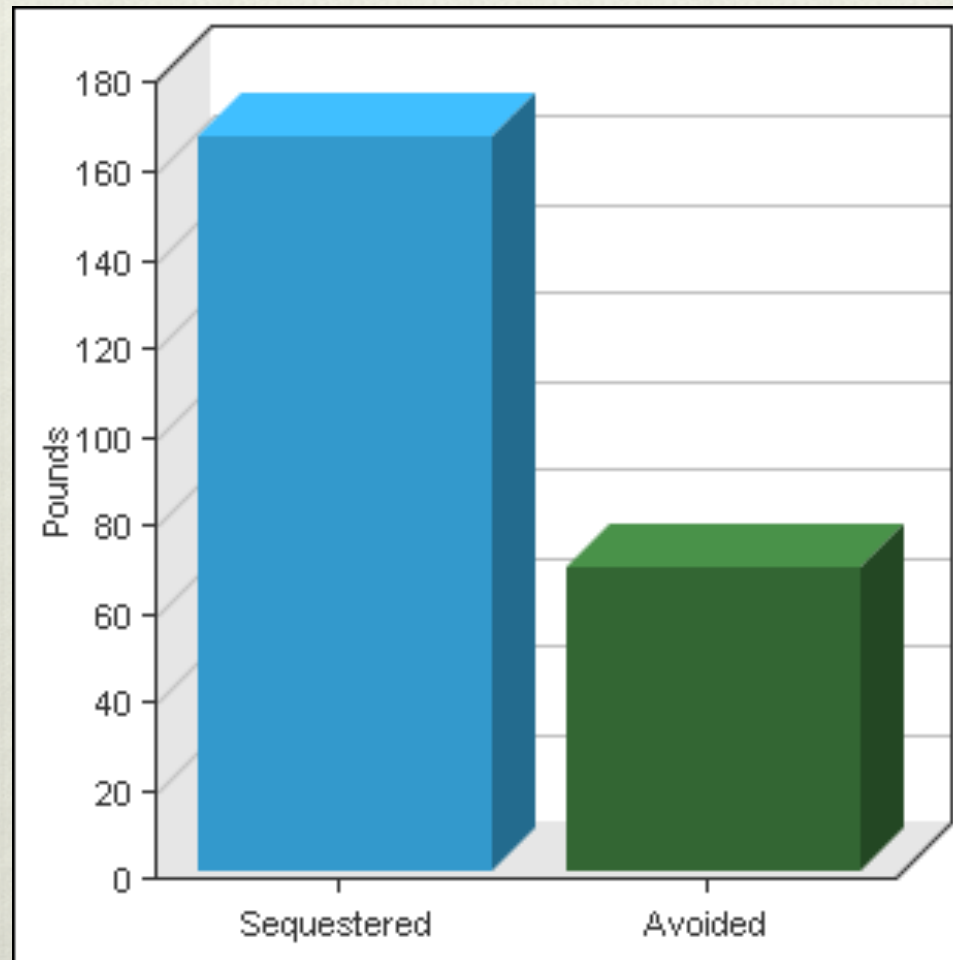
What do They Provide?



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What do They Provide?



Value of Urban Trees

❖ *One large public tree, 40 years after planting , averaged:*

❖ Annual benefits\$129
Annual costs\$28

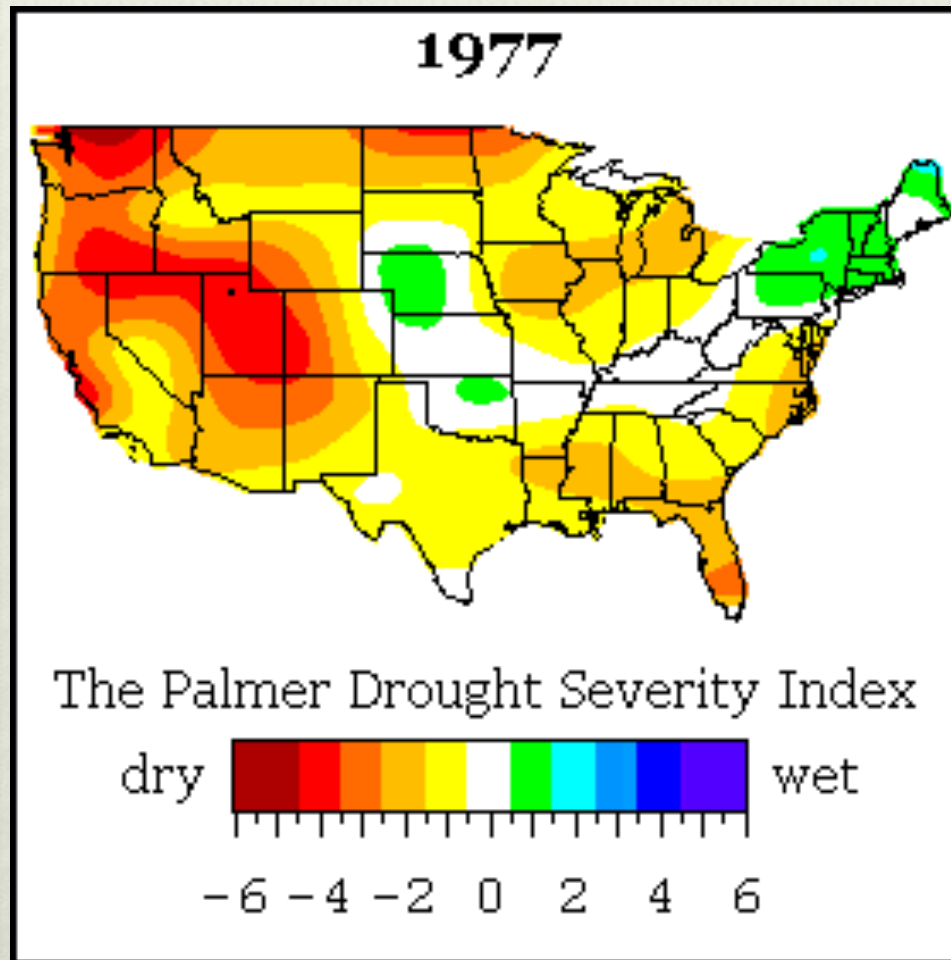
❖ Annual net benefit\$101

❖ *Over 40 years, 100 large public trees total:*

❖ Benefits \$516,800
Costs\$113,400

❖ 40-year net benefit \$403,400

The Drought of 1976-77



The Drought of 1976-77

The 1976 - 1977 California Drought A Review



How Many?



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7.7 million trees X \$200= \$1,540,000,000 in Ecosystem Services Value

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Borers were responsible for the most Tree Deaths

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Insects Primarily responsible for the most Deaths, Borers

Diseases were primarily Dwarf Mistletoe and Root Diseases

How Many?



Turf vs. Trees



Turf vs. Trees



The Drought of 1976-77

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Lawn Trees



Sycamores



Birch



Japanese Maple



Eastern Redbud



Ash



Chinese Pistache



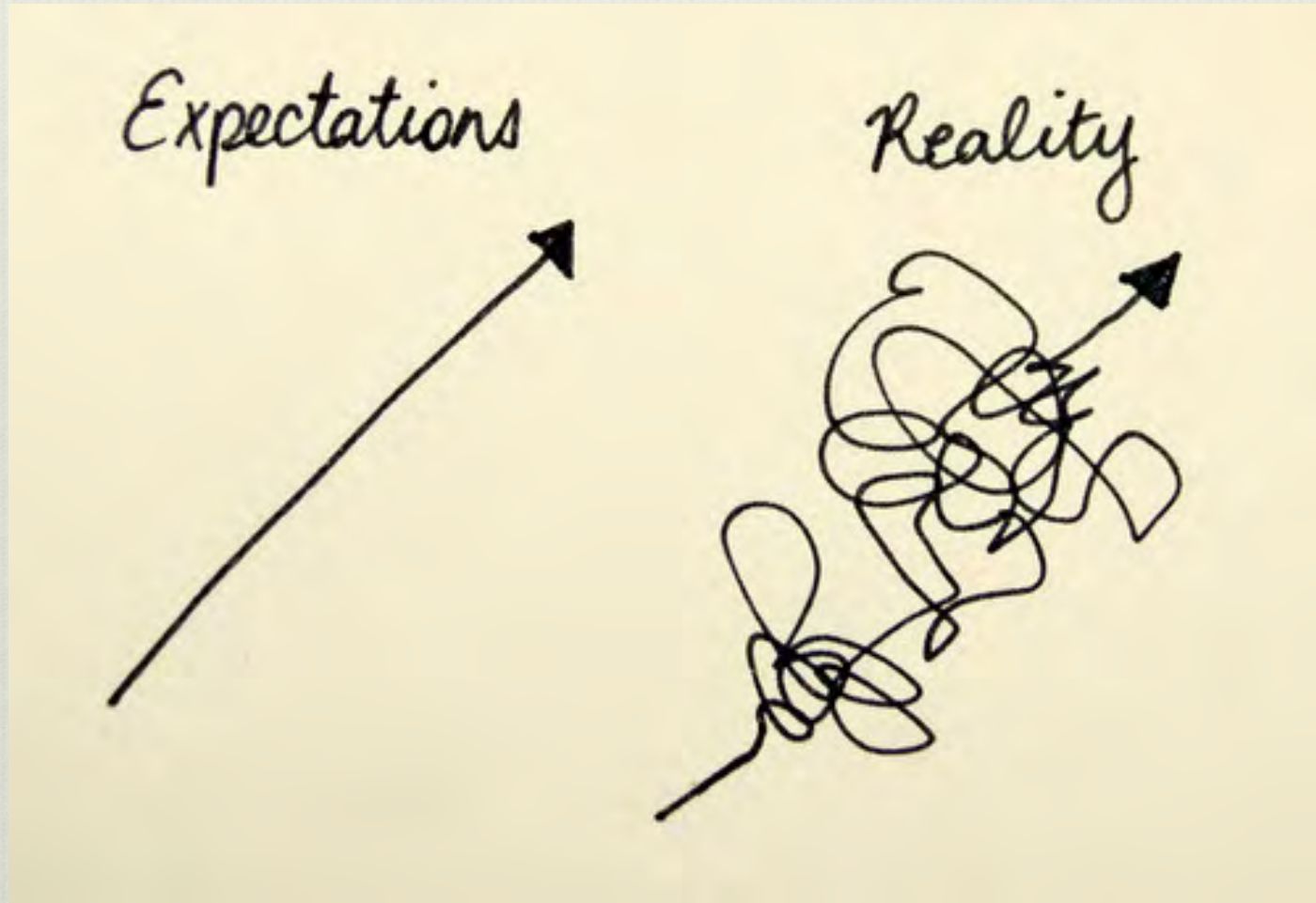
Golden Rain Tree



Thornless Honey Locust



What to Expect!



What to Expect!



What to Expect!



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Mistletoe on Ash Trunk



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Control



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Resistant



Resistant



Susceptible



Tolerant

The Numbers!



Bugs!



Bark Beetles



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Bark Beetles



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Bark Beetles



UC Statewide NPM Project
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Bark Beetles



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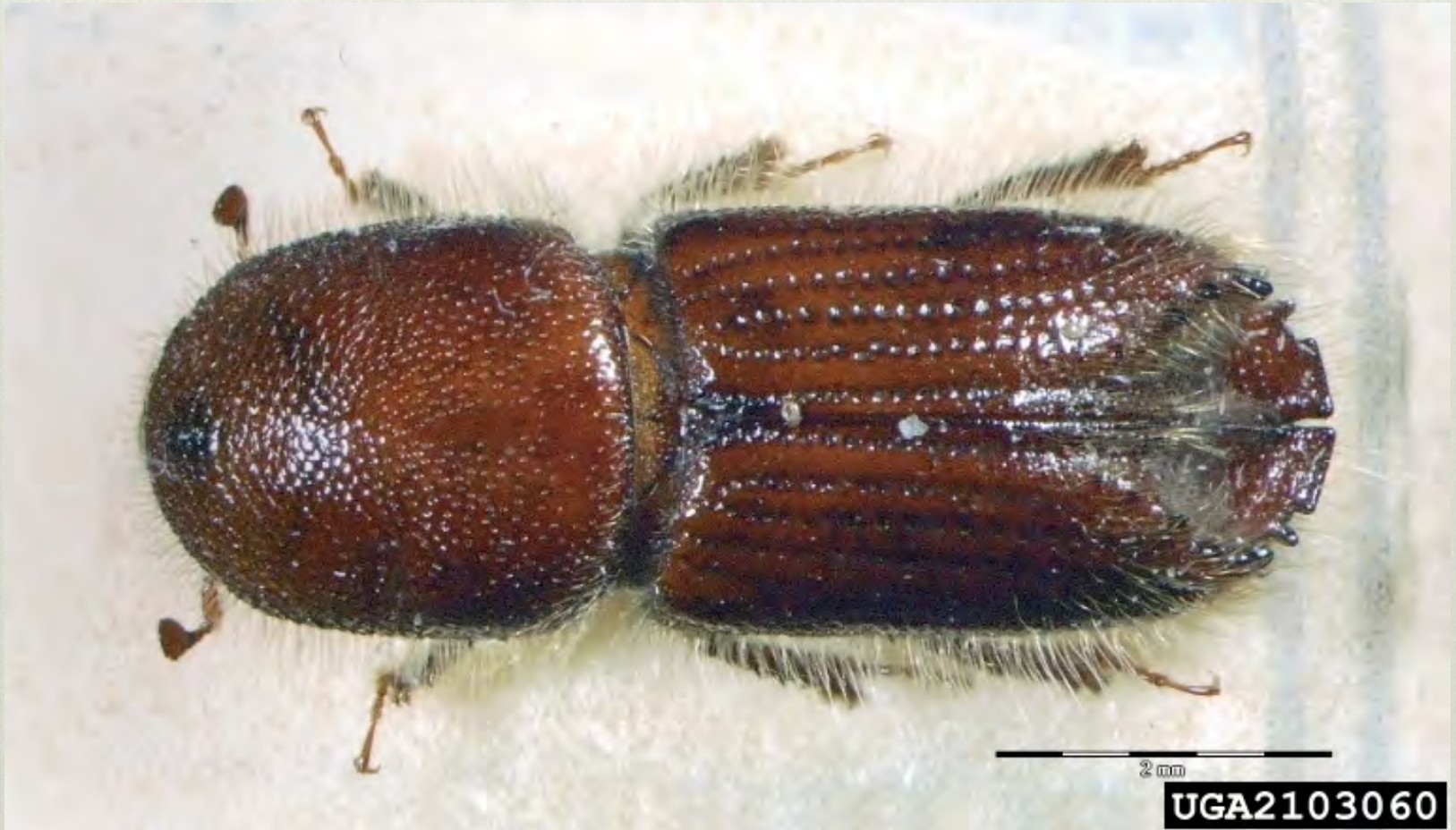
Bark Beetles



Bark Beetles



Bark Beetles



Bark Beetles



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Bark Beetles



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Elm Bark Beetles



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Diseases



Diseases



Armillaria



Armillaria



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Verticillium Wilt



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Verticillium Wilt



Verticillium Wilt

on maple trees, verticillium can often be diagnosed by the black staining in the xylem tissue



Verticillium Wilt



Verticillium Wilt



Verticillium Wilt



Conclusions



Overwatering



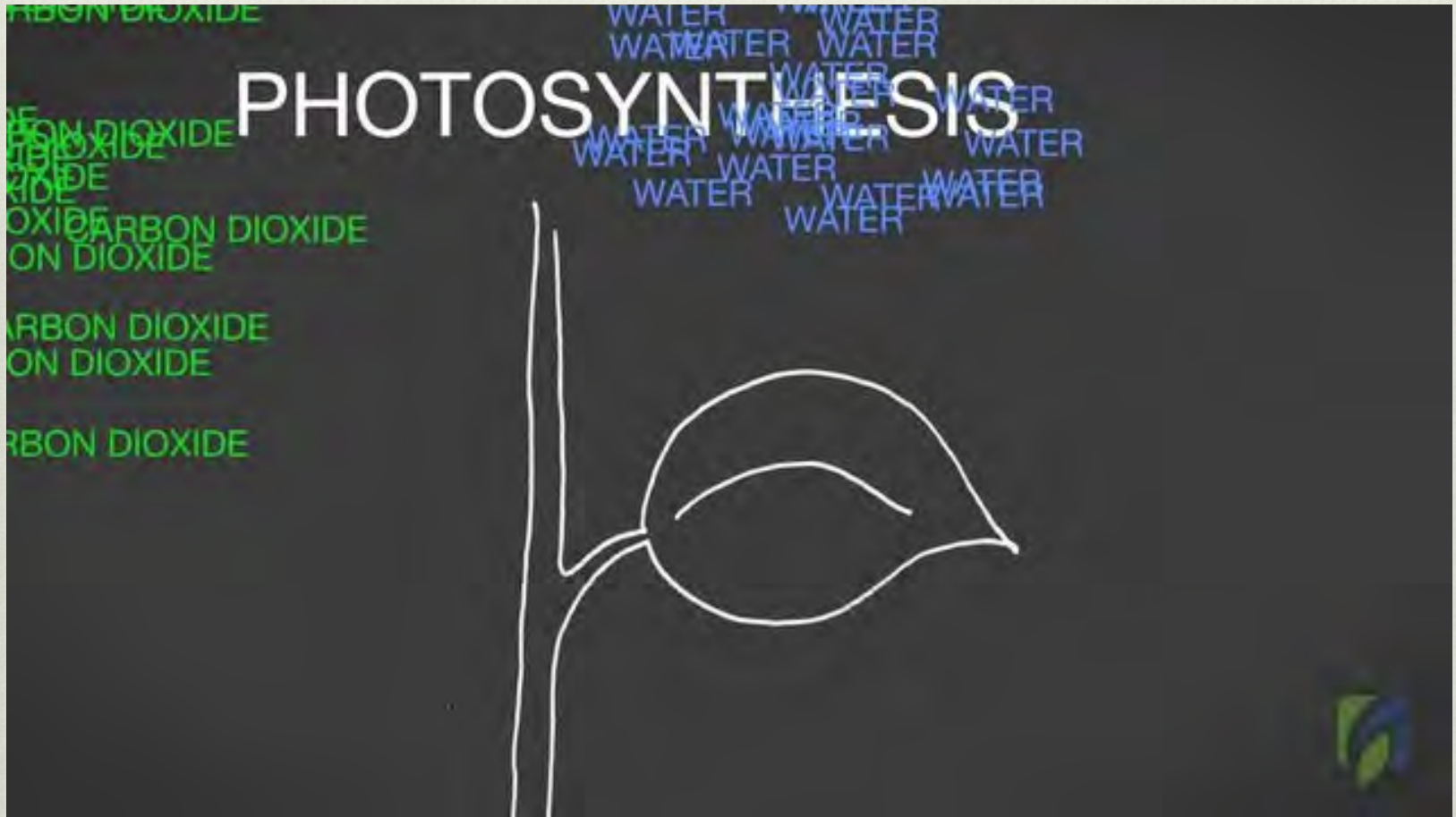
Check, Please!



Check, Please!



Understand Your Plant!



Compaction



Compaction



Compaction



Compost



Mulch



Mulch



Mulch



Mulch



Buckets



Shower with a Friend, Maybe!





KEEP
CALM
IT
IS
FINISHED

John 19:30

*Ministry
of Great*