



Urban Trees: Preserving the Growing Investment in Fall River and Beyond

3rd Annual Urban Forestry Workshop, Fall River, MA

Opening: Mayor William A. Flanagan, City of Fall River; Emily Hamilton, DRG; Rick Harper, UMass
Presentations: Allan Fenner, DRG; Mollie Freilicher, DCR; Dave Bloniarz, USFS/ReGreen Springfield
Date: March 19, 2014



Agenda

Opening

Mayor William A. Flanagan, City of Fall River

Introductions

Emily Hamilton, DRG

Rick Harper, UMass Cooperative Extension

Presentations:

- Elements of Successful Tree Preservation in Municipalities
Allan Fenner, DRG
- Planning, Planting, and Preserving the Urban Forest
Mollie Freilicher, DCR
- ReGreen Springfield: A Community Experience
Dave Bloniarz, USFS/ReGreen Springfield

Welcome!

Trees are our Future

History of Forests in America

Logging industry
is born

Mid-
1600s

History of Forests in America

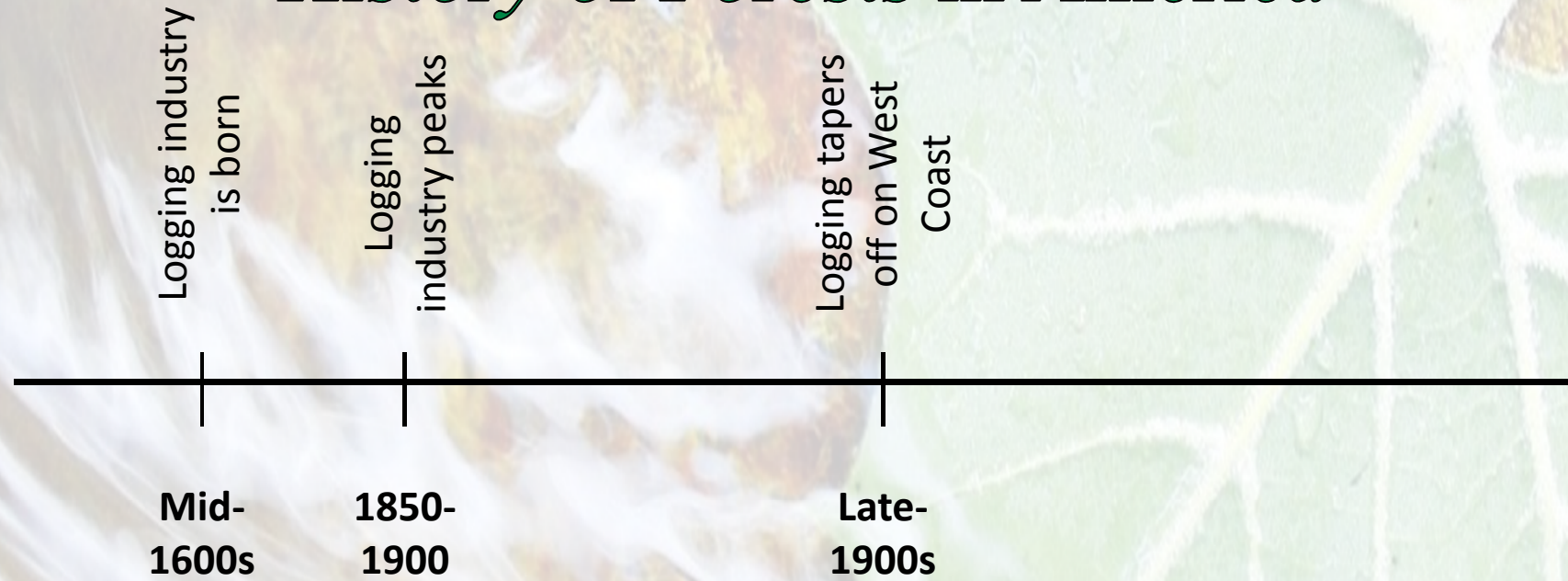
Logging industry
is born

Logging
industry peaks

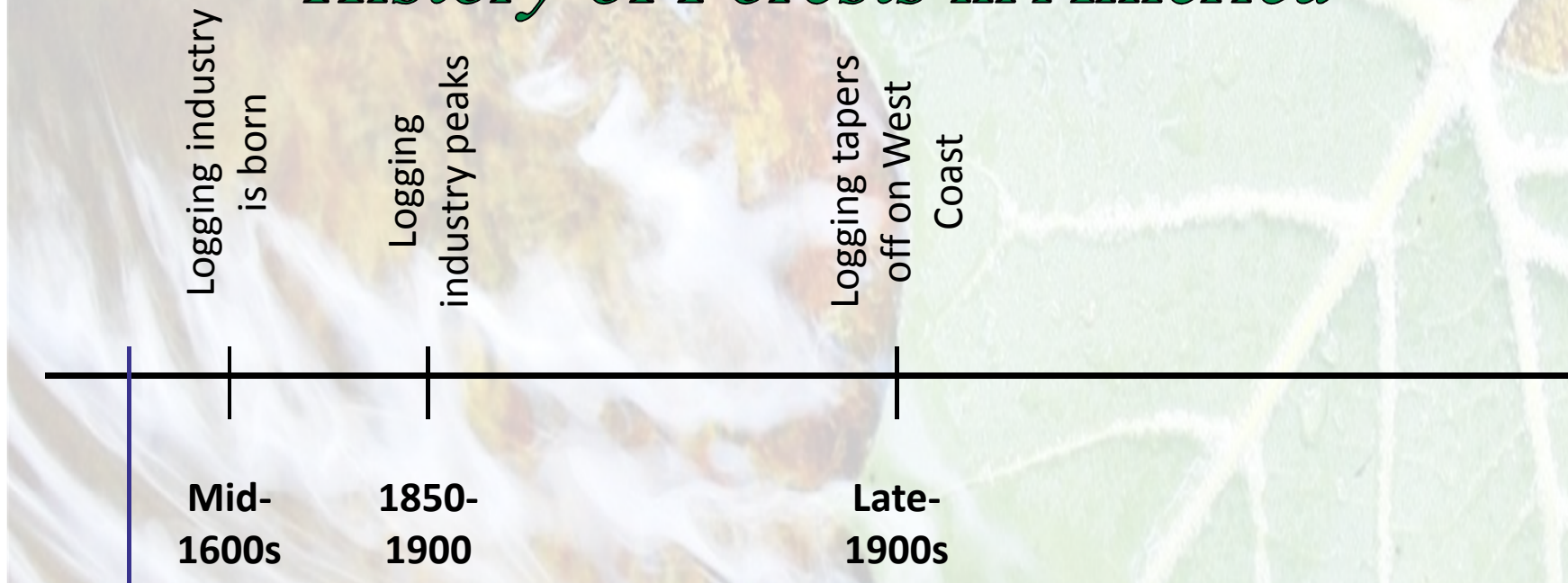
Mid-
1600s

1850-
1900

History of Forests in America



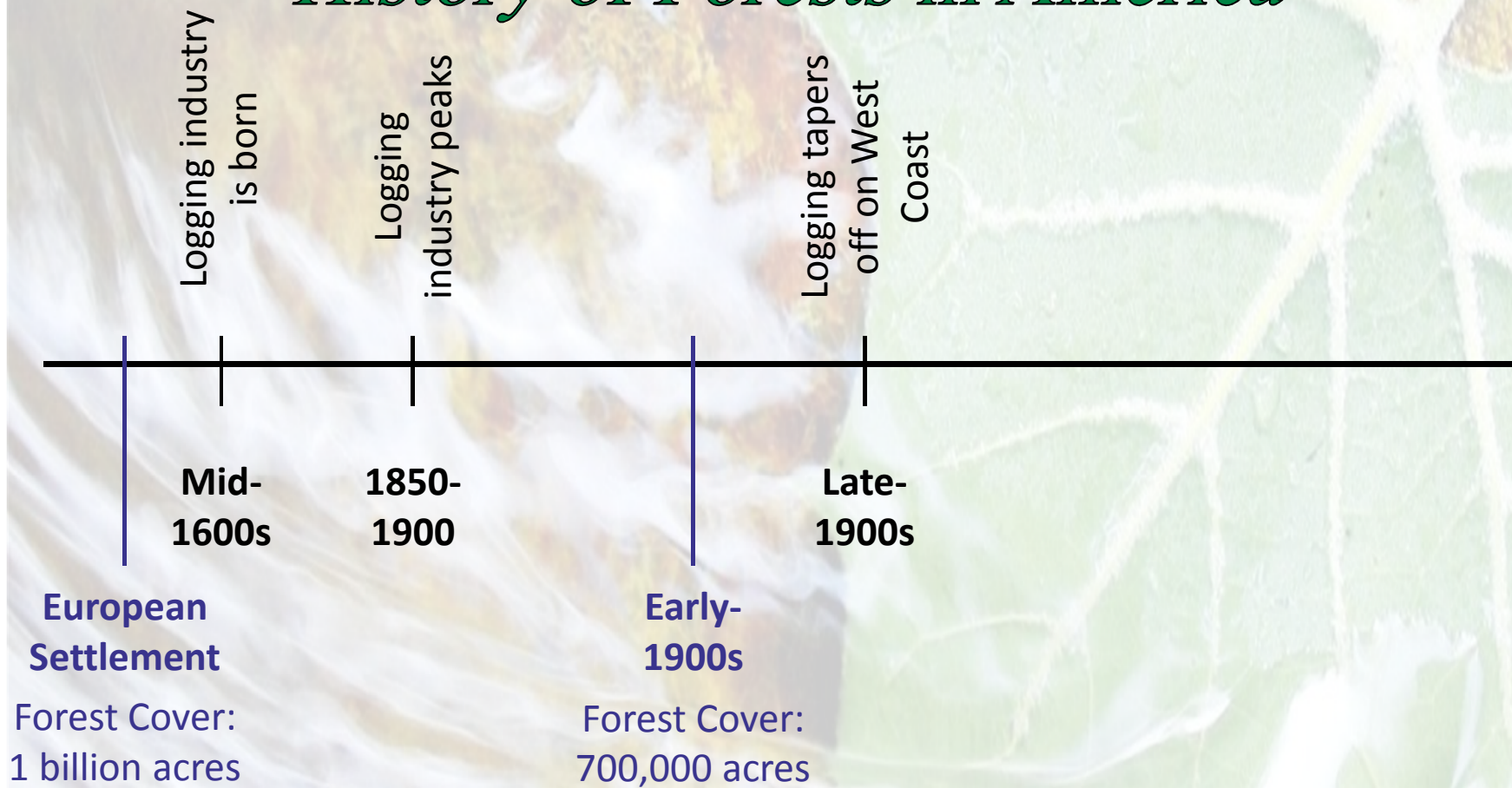
History of Forests in America



European Settlement

Forest Cover:
1 billion acres

History of Forests in America



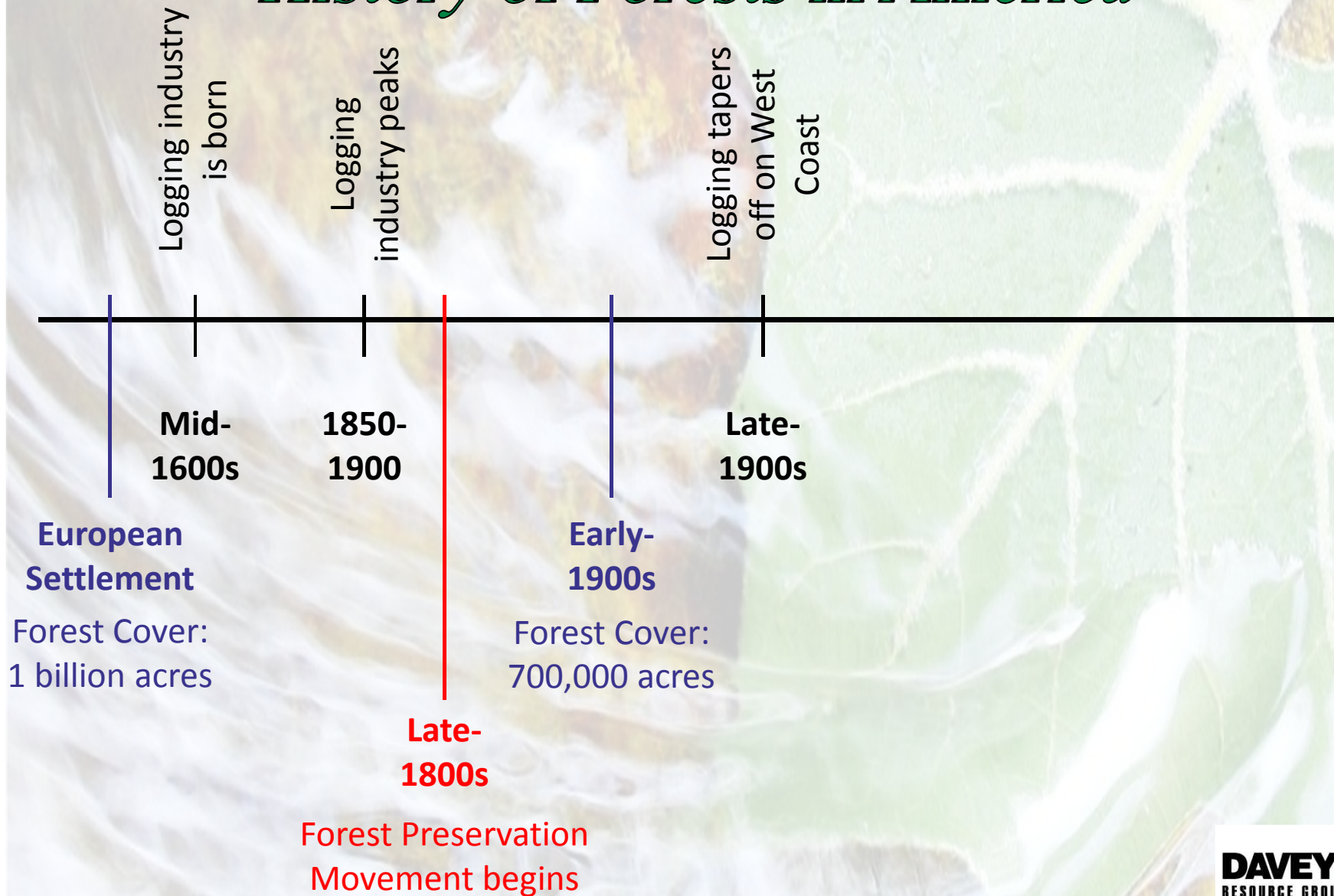
European Settlement

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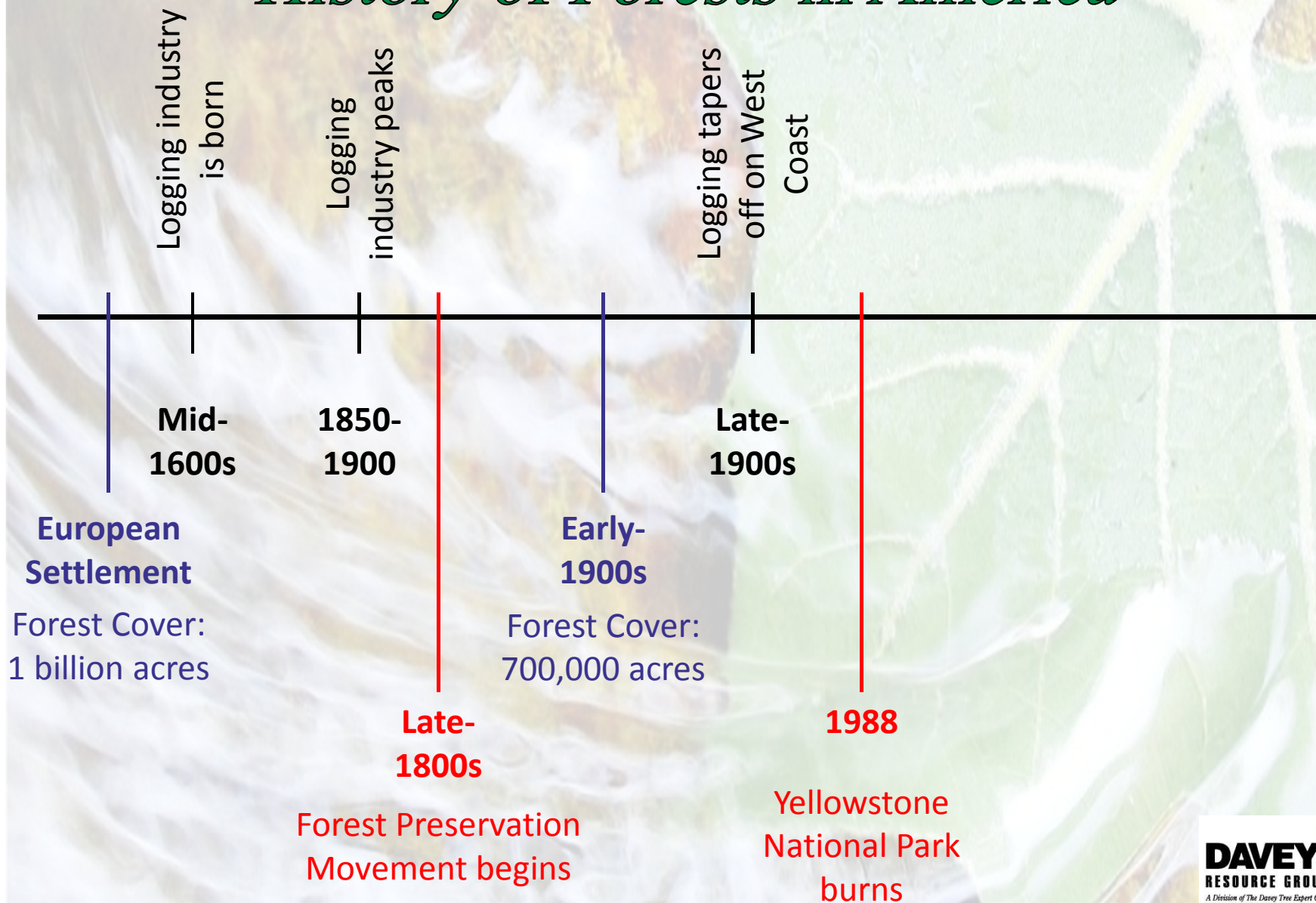
Early-1900s

Forest Cover:
700,000 acres

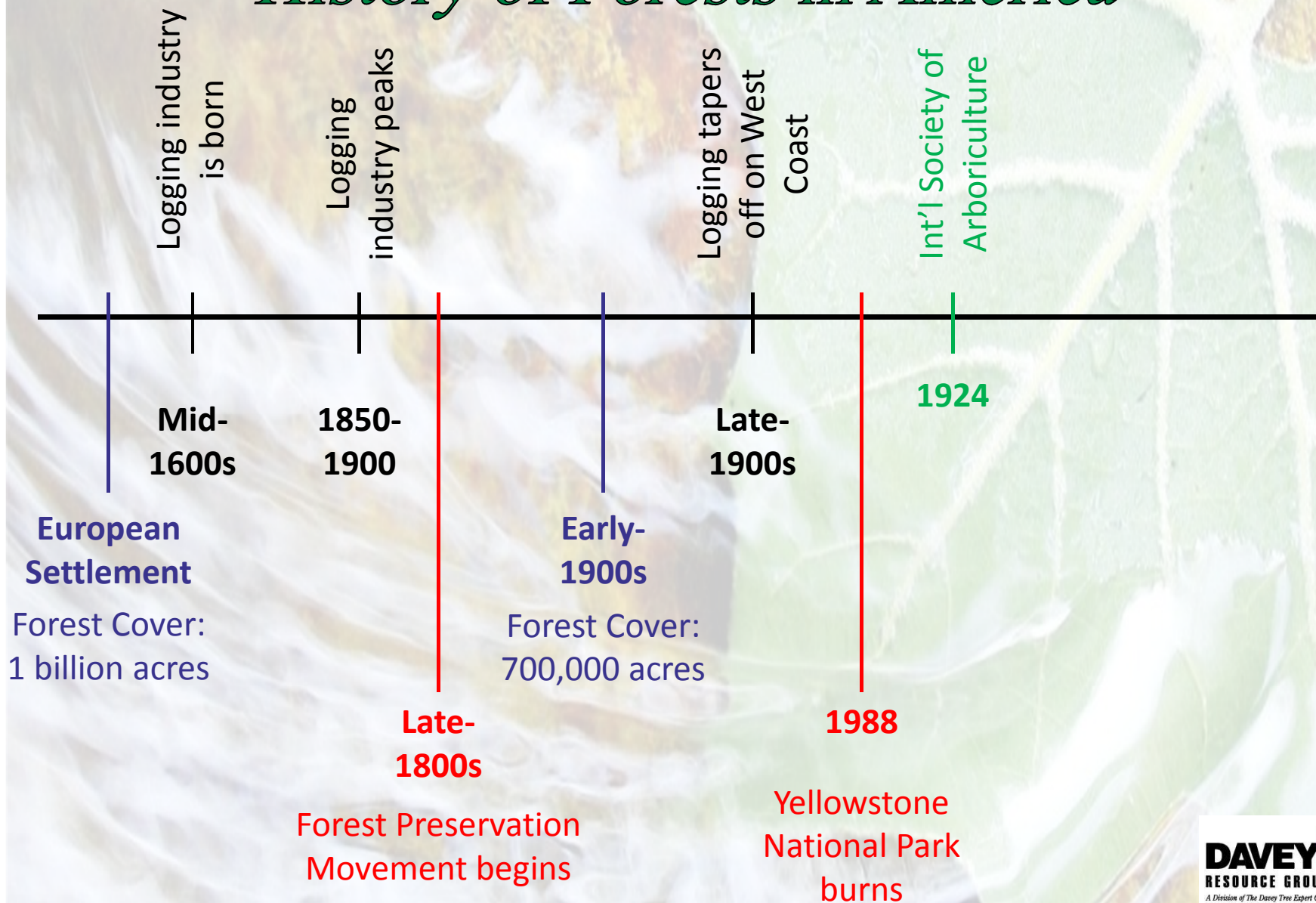
History of Forests in America



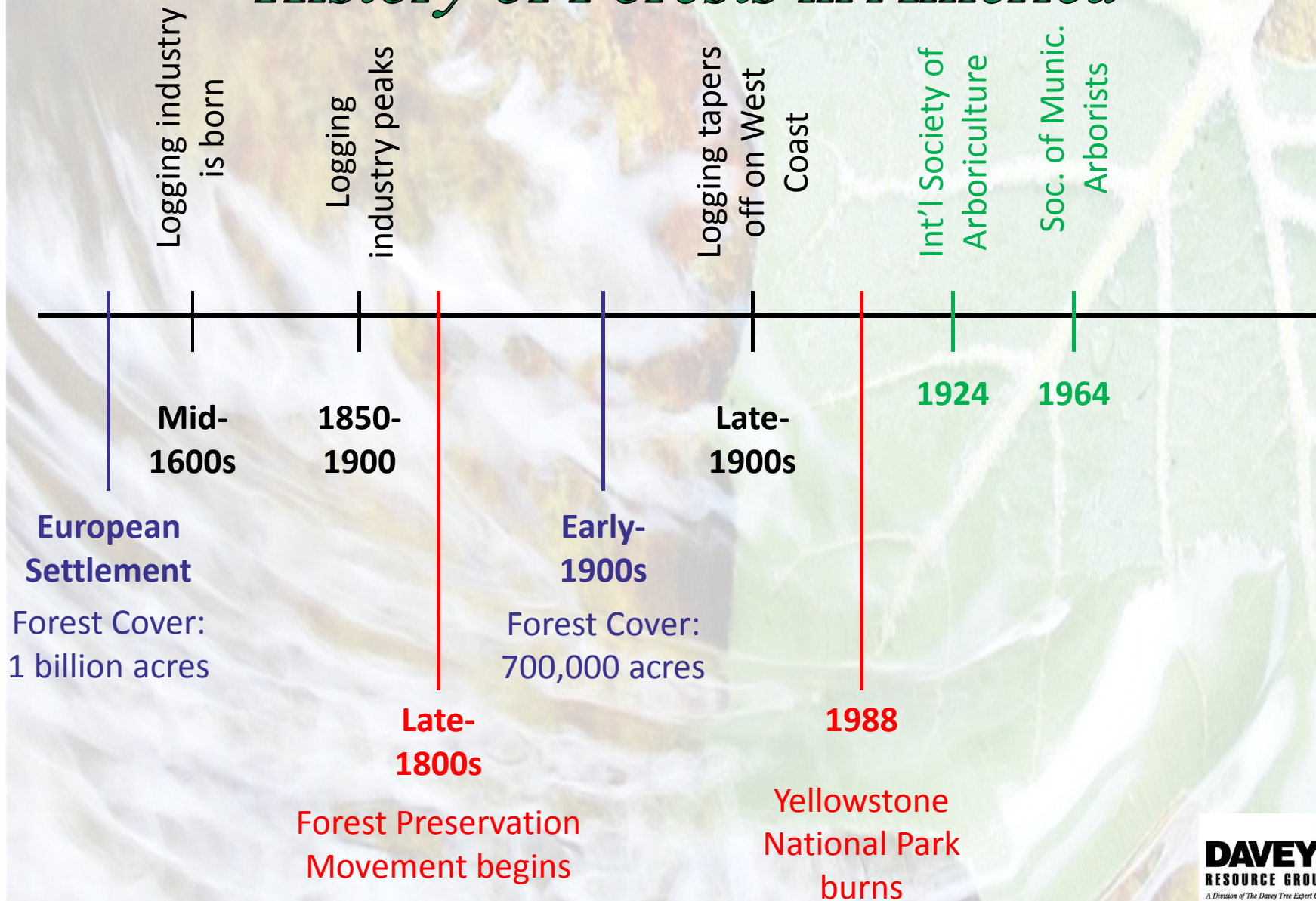
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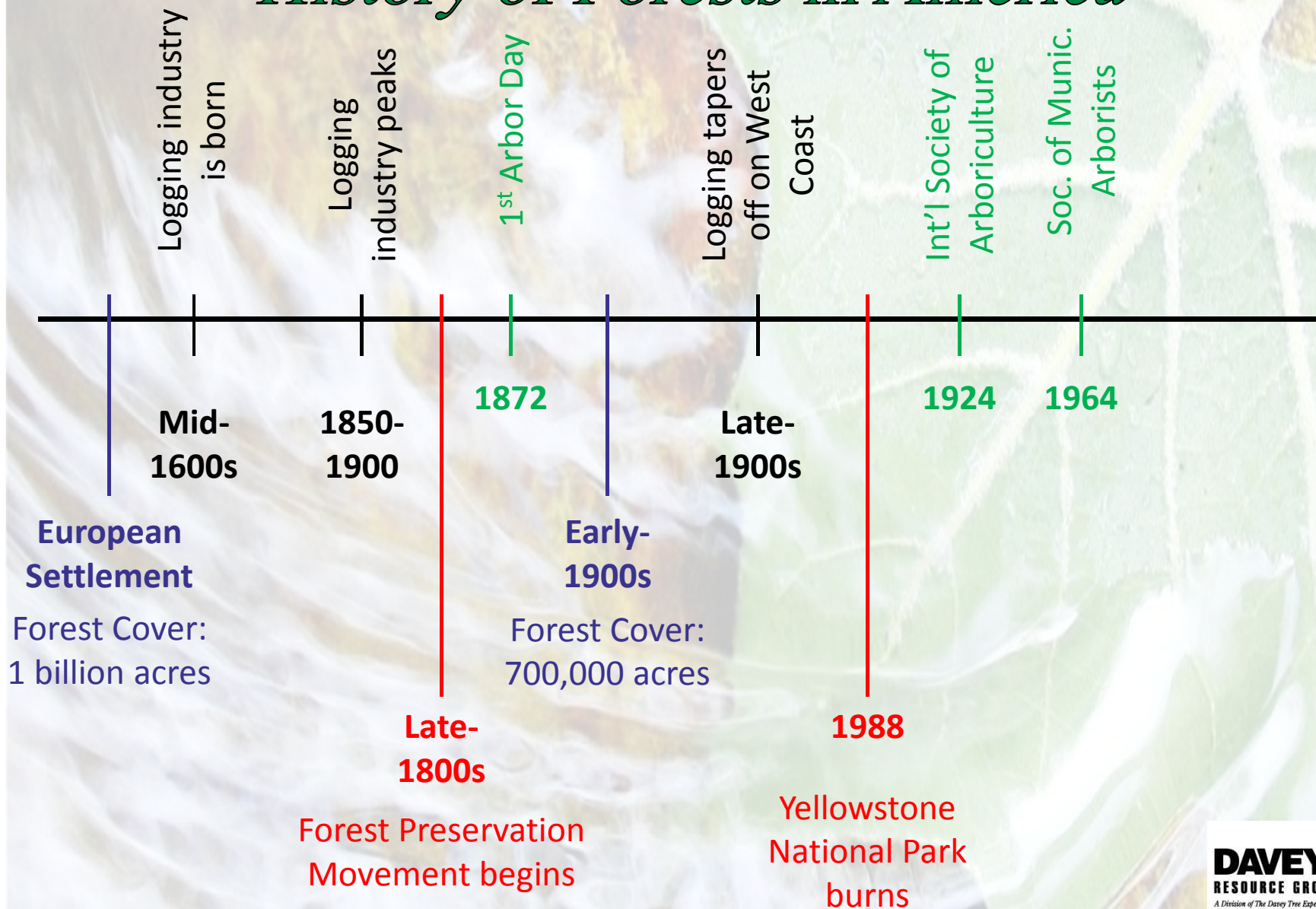
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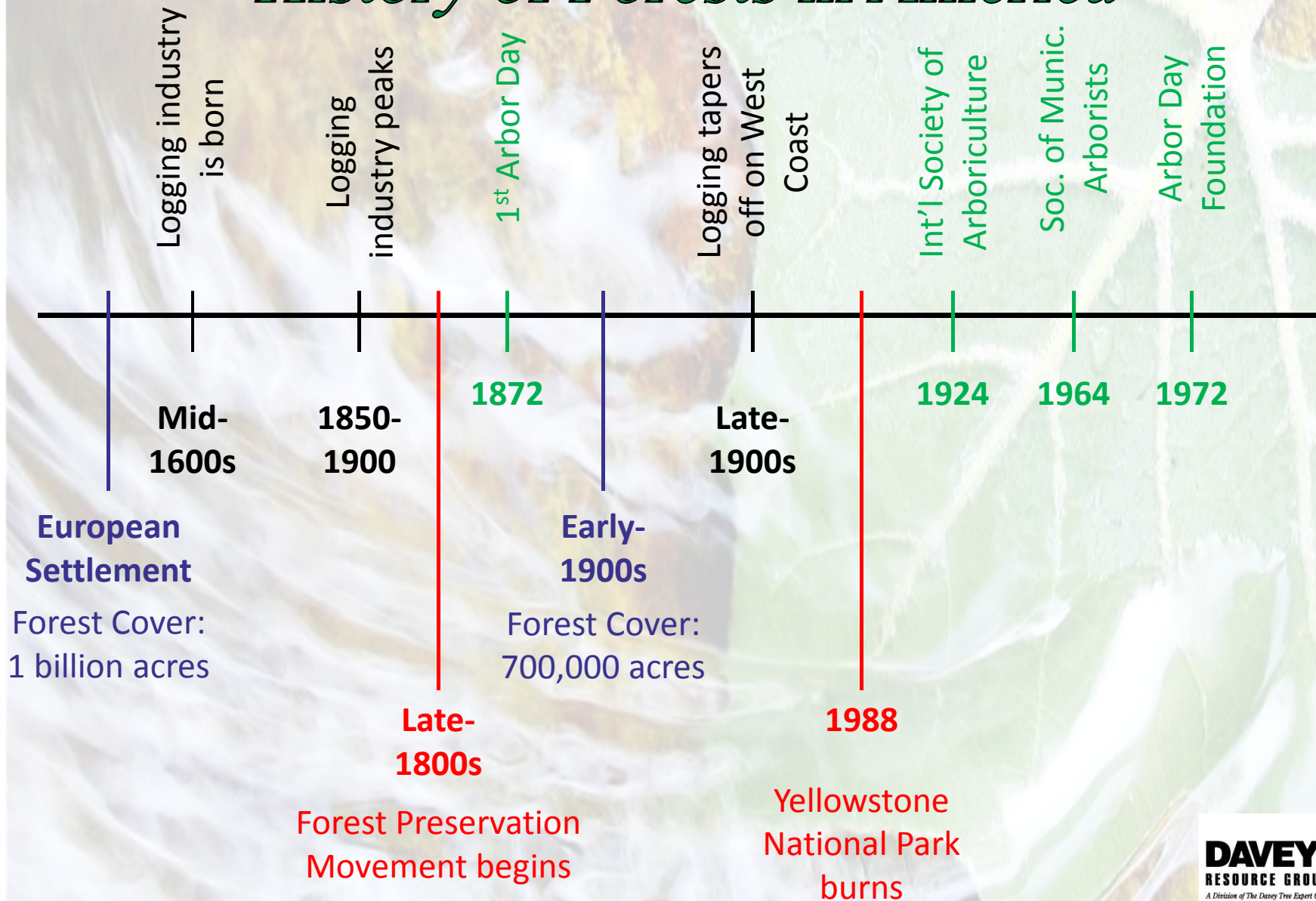
History of Forests in America



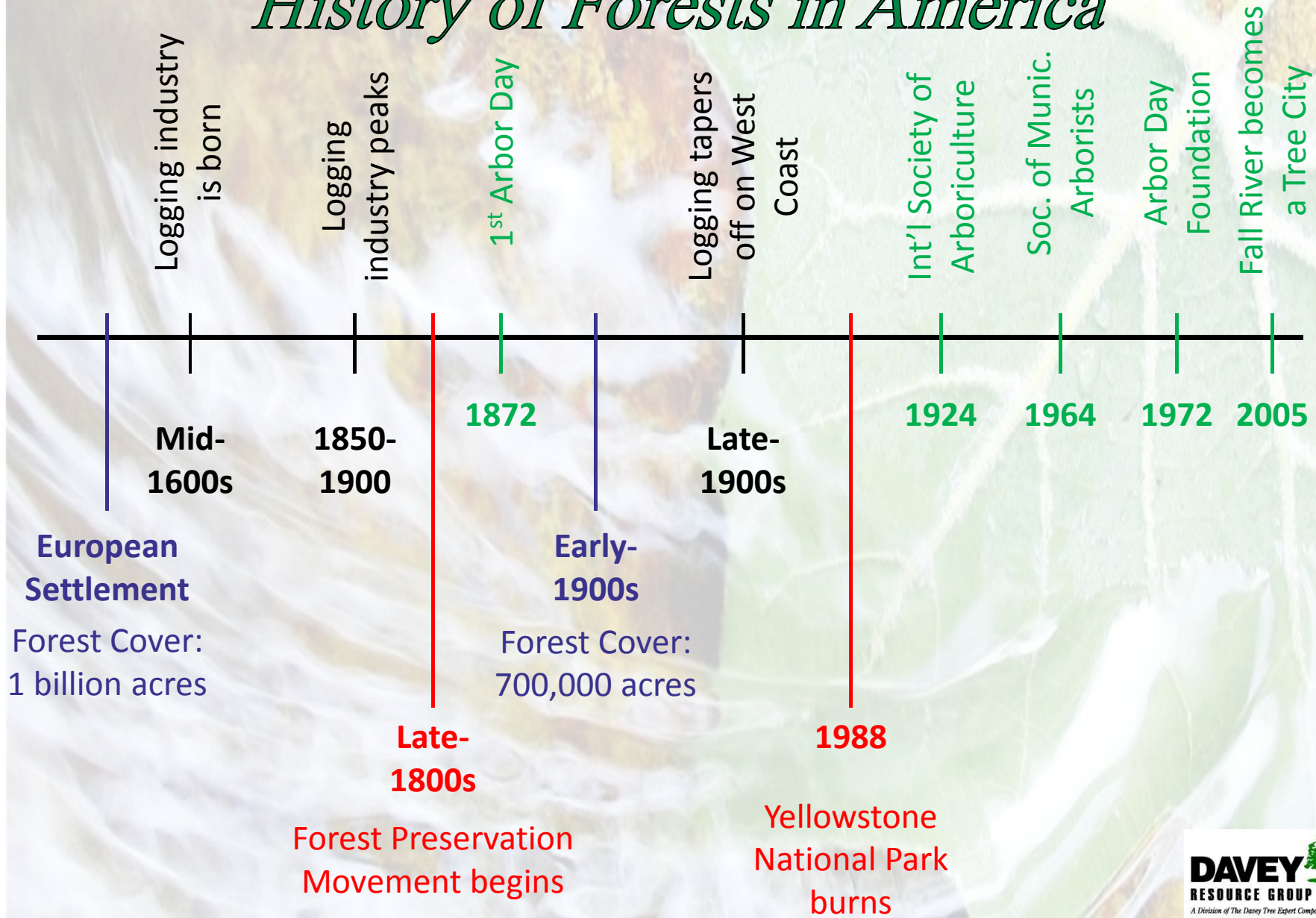
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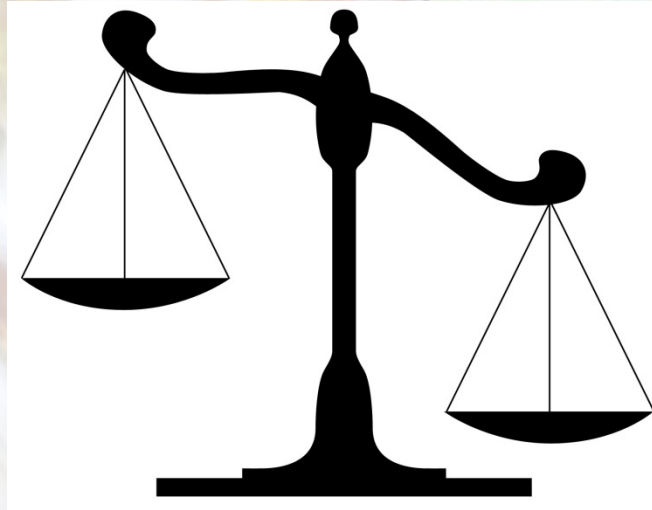
History of Forests in America



History of Forests in America



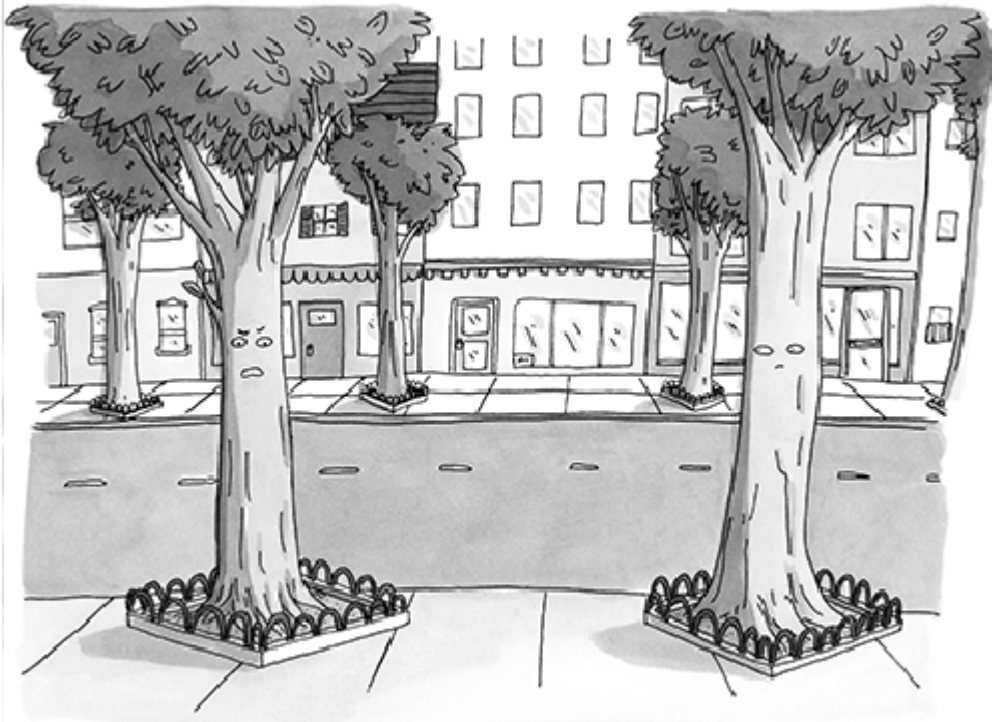
We Need Balance!



Not just *clear-cut logging*

Not just “*tree – hugging*” preservation

A Common Goal



Kanin

"If it wasn't for this tiny fence, I'd make a run for it."



A Common Goal



Joint Infrastructure Benefits

- Rainwater capture
- Energy cost savings
- Urban Heat Island effect (UHI)
- Increased business
- Increased property values

Tree Benefits



\$5,870

The Value of a Tree in the Northeast

A large tree in the Northeast will provide \$5,870 in environmental and other benefits over its lifetime. That's nearly a 440-percent return on investment!

Properly cared for, trees are valuable and growing assets worth nearly four and a half times the investment.

Trees produce benefits for us when we plant and nurture them in our urban environments. The Urban Ecosystems and Social Dynamics Program at the USDA Forest Service Pacific Southwest Research Station is assessing the ways that trees pay us back and their value to us.



It pays to care for trees

Landscape trees provide benefits that far exceed the costs of planting and care over their lifetime.

Environmental and aesthetic benefits, such as energy savings, stormwater runoff reduction, cleaner air, and higher property values, are consistently many times greater than tree care costs.

The greatest benefits are higher property values and energy savings from heating and cooling.

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

Annual benefits	\$147
Annual costs	\$34
Annual net benefit	\$113

Over 40 years, 100 large public trees total:

Benefits	\$587,360
Costs	\$134,280
40-year net benefit	\$453,080

Healthy trees mean:

Healthy people

Each year, 100 large, mature street trees

- Remove 24 tons of carbon dioxide (CO₂)
- Remove 261 pounds of other air pollutants
- Catch about 190,900 gallons of rainwater



Homeowner savings

One well-placed large tree

- Provides average savings of \$39 in home heating costs each year

Better business

In tree-lined commercial districts, shoppers report

- More frequent shopping
- Longer shopping trips
- Willingness to pay more for parking
- Willingness to spend 12 percent more for goods



Healthy communities

Tree-filled neighborhoods

- Report lower levels of domestic violence
- Are safer and more sociable
- Reduce stress of body and mind
- Decrease need for medication, and speed recovery times



Higher property values

Trees increase the resale value of houses

- Each large front yard tree adds 1 percent to the sales price of a house
- Large specimen trees can add 10 percent to property value



Tree Benefits



Instead of:

“Not in my backyard”
“Yes in my front yard!”

Tree Benefits

i-Tree Design v6.0

Fall River City Government, 1 Government Ctr, Fall River, MA
02722, USA

Start Over
Save Progress
About

Get started with these easy steps:

1. Draw Structures ?
2. Place Trees ?
3. Estimate Benefits ?

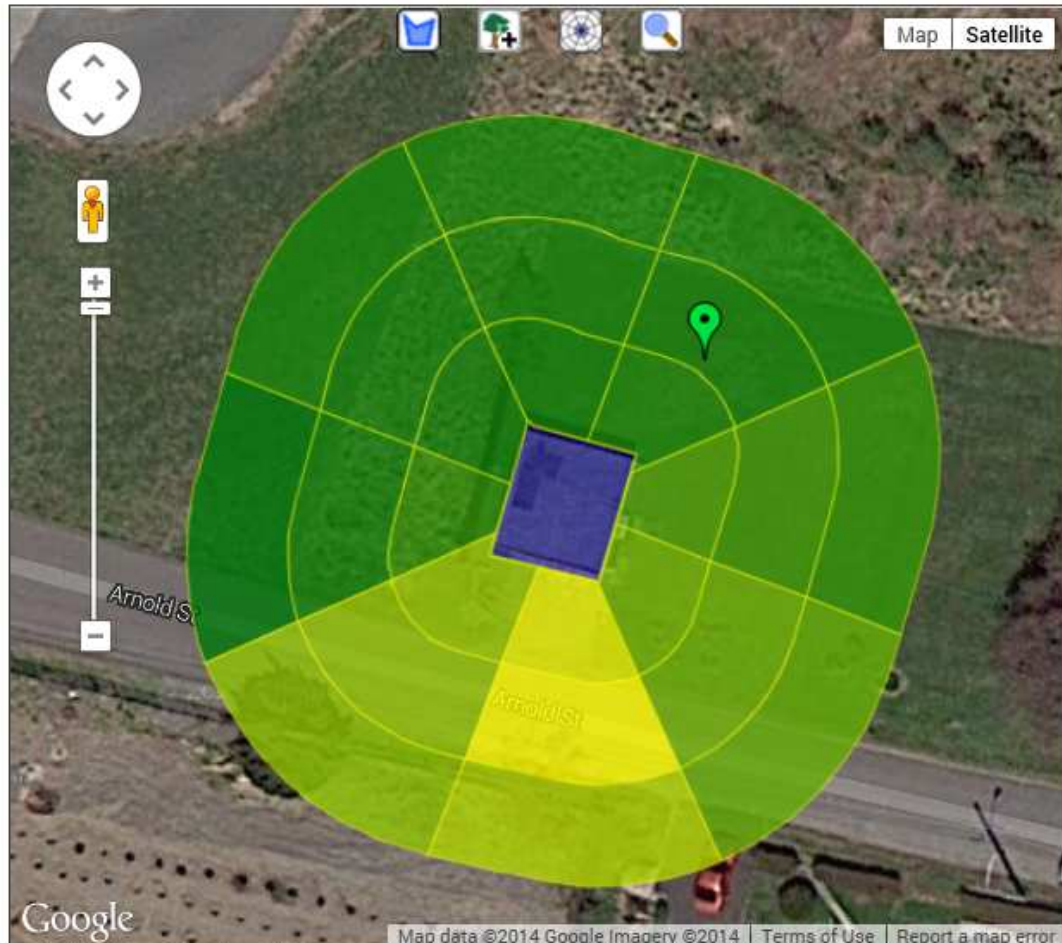
You can calculate the benefits of your tree(s) for current and future years, as well as the total to date.

- Enter the number of years (2-99) below to track tree growth and benefits.

Years:

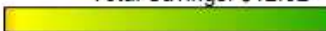
Get your results!

Calculate »



YOUR TREES YOUR STRUCTURES

Lat: 41.67517 Bearing: 82.7 Tree: Oak, Swamp white (12 Energy Savings: \$0.00
Lng: -71.19138 Distance: 23.2m (76.0ft) Inches kWh:
Total Savings: \$12.62

Less desirable  More desirable

Preferred planting zones to maximize tree benefits are shown around the structure.



<http://www.itreetools.org/>

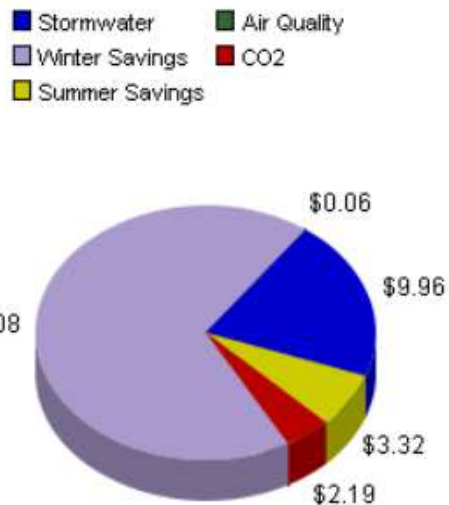
Tree Benefits

i-Tree Design v6.0 Fall River City Government, 1 Government Ctr, Fall River, MA 02722, USA

Start Over
Return to Setup
View Report
Print
Save Result
About

Overall Benefits Stormwater Energy Air Quality Carbon Dioxide

Current Year (2014)
Future Year (2024)
Total (2014-2024)



Breakdown of tree benefits

Click on one of the tabs above for more detail

This 12-inch diameter swamp white oak will provide overall benefits of \$49 in the current year.

While some functional benefits of trees are well documented, others are difficult to quantify (e.g., human social and communal health). Trees' specific geography, climate, and interactions with humans and infrastructure are highly variable and make precise calculations that much more difficult. Given these complexities, the results presented here should be considered initial approximations to better understand the environmental and economic value associated with trees and their placement.

Benefits of trees do not account for the costs associated with trees' long-term care and maintenance.

If this tree is cared for and grows, it will provide \$57 worth of annual benefit in 10 years. See 'Future Year (2024)' tab at left for details.



Swamp white oak
Quercus bicolor

<http://www.itreetools.org/>

Trees are our Future!

