Why Trees! – Benefits & Importance of Community Trees

Vince Urbina

Colorado State Forest Service

Economics – Property Value

Right Tree – Right Place – Right Reason

Economics – Property Value

Economics – Property Value

Economics – Save Energy

Economics – Save Energy

Economics – Cooling

Air Pollutants

- Sunlight + NO3 + volatile organic compounds = Ozone
- Sulfur dioxide
- Nitrogen oxide – vehicle emissions, gasoline vapor
- Particulates – microscopic solids like dust

Tree and Pollution

- Absorb pollutants through the leaf surface (i.e.,stomates) and tie up pollutant in the leaf.
- Intercept particulates like dust, ash, pollen and smoke on leaf surface.
- Release oxygen as a by product of photosynthesis.
- Transpire water lowering air temperature and production of ozone.
- Shading reduces the production evaporative hydrocarbon emissions from parked vehicles.

Infrastructure – Lower Pollution

Infrastructure – Lower Pollution

American linden

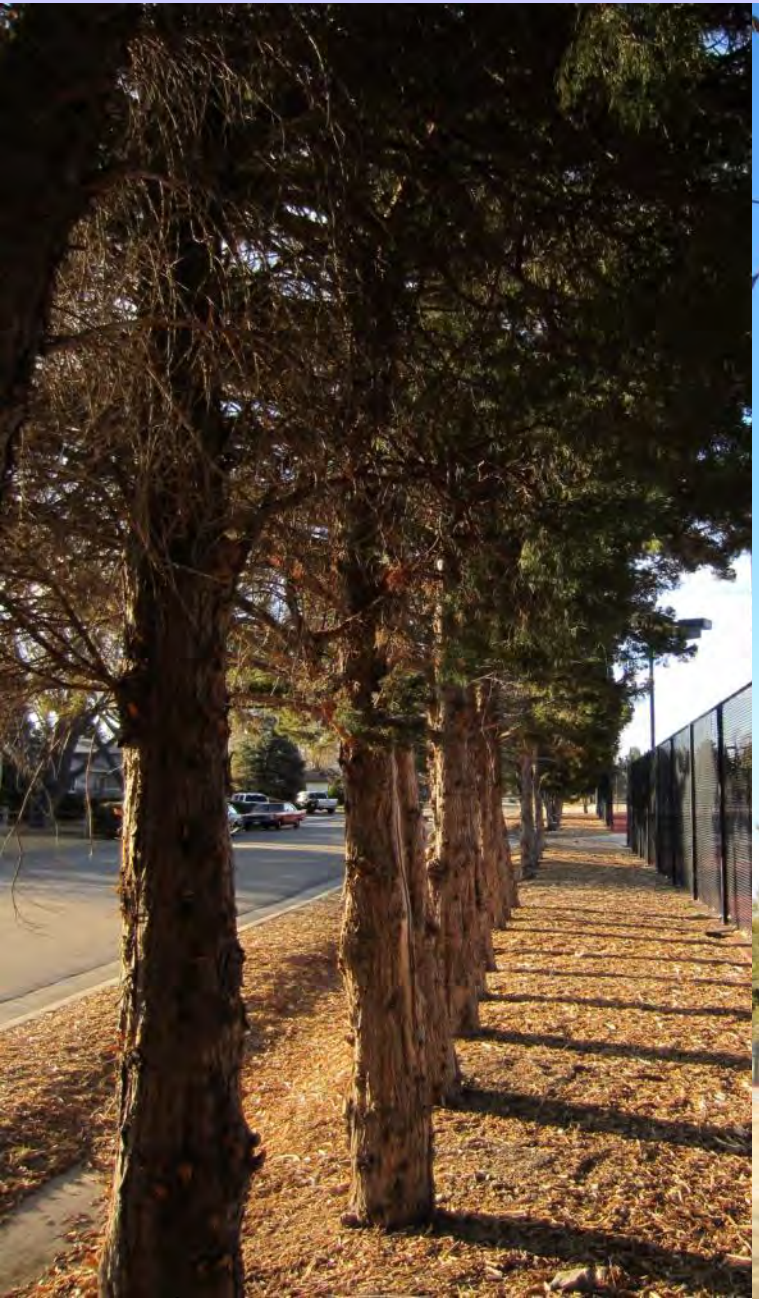
Infrastructure – Trap Dust

Infrastructure – Temperature Modification

Infrastructure – Traffic Modification

Visually confining driver’s vision causes drivers slow down.

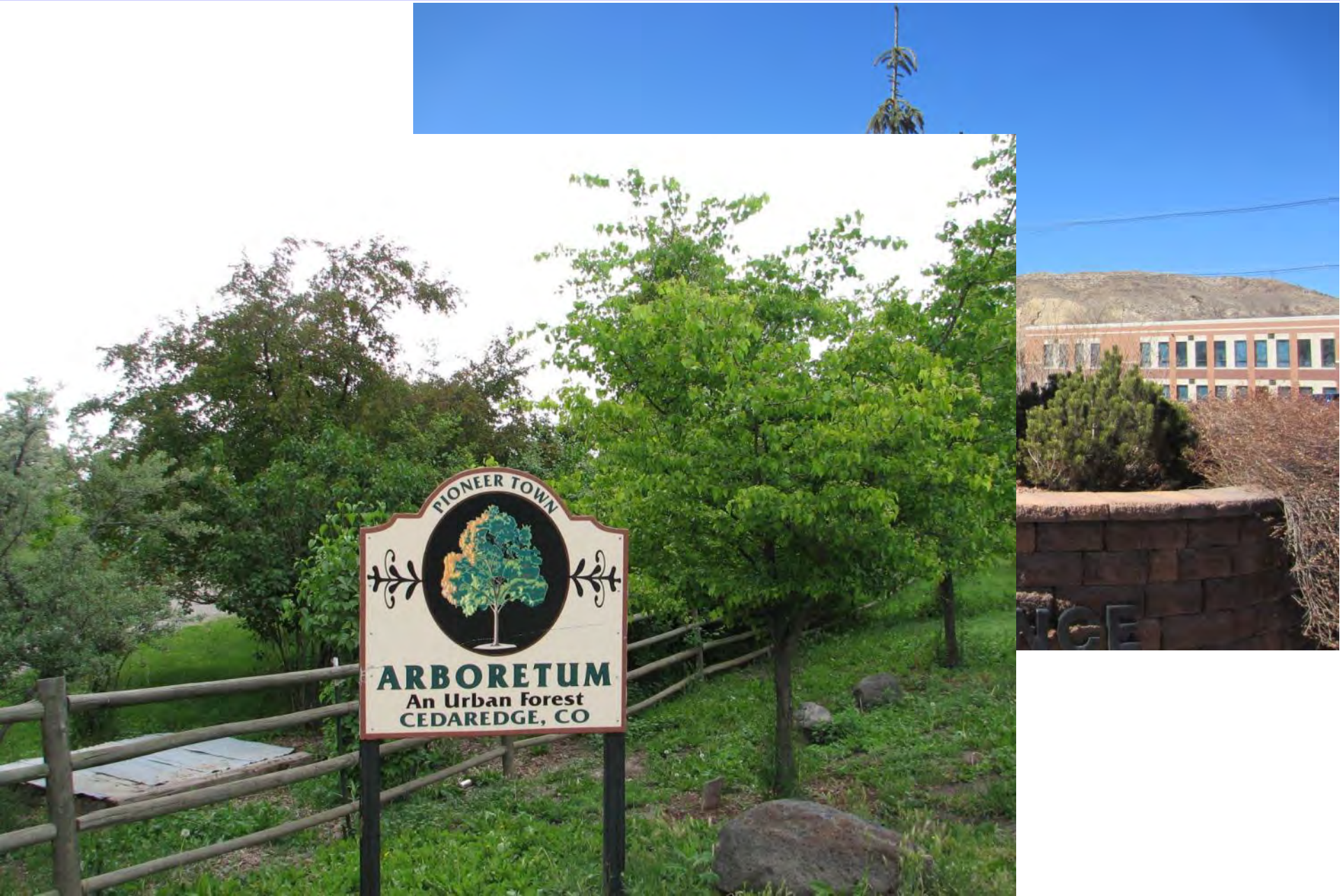
Infrastructure – Screening



Infrastructure – Screening

Infrastructure – Frame View

Infrastructure – Enhance Signage



Infrastructure – Soften Hard Lines

Aesthetics - Color

Aesthetics - Color

Aesthetics - Color

Catalpa

Aesthetics - Color

Aesthetics - Wildlife

Aesthetics - Wildlife

Grand Junction – Operation Foresight

- Population of Grand Junction was 21,000 in the 60's.
- The city's leaders were not happy with the existing downtown situation. There were some nagging problems.
- Construction started in 1962 and it was to be built in five phases.

Phase 1 – Put in new storm sewer in Colorado Avenue (parallel street) because existing storm sewer didn't drain storm water in the downtown area.

Phase 2 – Widen Rood, Colorado & Main Streets from 3rd to 7th Street. Make the four blocks of Main a Shopping Park with trees, shrubs and flowers. "This was to be the heart of Operation Foresight, which would make Grand Junction the only city of its kind". Most of the $400,000+ cost was to be picked up by the downtown property owners.

Phase 3 – Provide off-street parking for downtown shoppers

Phase 4 – Modernize store fronts on Main Street.

Phase 5 – Build well-lite walkways to connect off-street parking with the downtown shopping area.

Grand Junction's Main Street in the Early 1900's

Courtesy of Museum of Western Colorado, Loyd Files Research Library

Main Street - 2008

Corner of Third and Main Street - 1962

Courtesy of Museum of Western Colorado, Loyd Files Research Library

Corner of Third and Main Streets – Midsummer 2008

What did the Citizen's Think?

- In 1966, Empire Magazine came to Grand Junction to talk with citizens. Twenty four people were randomly picked in the downtown and this is what they said.
- Only two were not in favor. One said bluntly, "It's a helluva thing to have on Main Street."
- Those in favor of the project said things like this. "Now it's a treat to come downtown and shop." "If I get tired there's a pleasant place to sit down and rest." "A few years ago I dreaded coming downtown, the streets and the sidewalk were so messy. Now it's a real pleasure to spend an afternoon looking around the stores."

TUXEDO COMPANY

Front Range Tree Recommendation List©

This Front Range Tree Recommendation List® was developed through the collaborative efforts of 12 individuals, three from each of the four participating professional groups: the American Society of Landscape Architects (ASLA), the Colorado Nursery & Greenhouse Association (CNGA), municipal arborists representing the Colorado Tree Coalition (CTC), and the Colorado State University (CSU) Extension. Based on the committee's collective education, knowledge, and experience over 250 trees or varieties were evaluated and rated, resulting in a single reference list for professionals to use and share with their customers or residents.

The purpose of this project was to create a Front Range tree list for use by Green Industry professionals based on decades of actual experience growing and caring for trees in our area. This list is intended to assist those involved in the buying, growing, selling, selection, siting, and specification of trees, with the ultimate goal of a healthy, diverse, and geographically appropriate landscape and urban forest. The ratings apply to the Colorado Front Range, generally defined as the region from Colorado Springs to the Wyoming border and from the foothills to the eastern plains. We encourage industry professionals to prepare similar lists for other geographic regions using this as a template.

The initial list of evaluated trees was based on a compilation of six 2010 Front Range Nursery catalogs plus recommendations from committee members. The group evaluated each tree based upon 5 Critical and 8 Cautionary Cultural Factors, resulting in one of four ratings:

A - Generally Recommended.
A tree is Generally Recommended if it has consistently displayed no serious vitality issues related to any of the five Critical factors.

B - Conditionally Recommended. A tree is Conditionally Recommended if it has consistently displayed serious vitality issues related to one or more of the five Critical factors. Some cultural factors such as sun scald can be mitigated thru proper horticultural care, in this case using tree wrap.

C - Potential/Unproven. A tree is listed as Potential/Unproven if it is offered for sale locally and has the potential to do well here (a USDA Hardiness Zone Rating of 5 or below), but the committee has less than ten years of experience growing and maintaining a significant population of the tree in our area. As this list is periodically updated, the intention is to move trees with a C rating to one of the other categories based upon the collective experience of the list users.

D - Not Recommended. A tree is Not Recommended if it has consistently displayed overwhelming vitality issues related to one or more of the five Critical factors or can be expected to do poorly under normal circumstances.

When using this list to assist in tree selection for a specific planting location, a site analysis relating to the cultural factors, including a soil test to determine pH, texture, and composition should be performed. We assume the list users are aware of the physical attributes of these trees (mature size, fall color, growth habit, texture, flowers, fruit, etc) or have access to this information.

The Front Range Tree Recommendation List® is downloadable on the websites of the CNGA, ASLA, CTC, and CSU Extension. This hardcopy document was paid for with contributions from the GreenCO Foundation and the Colorado Nursery Research and Education Foundation (CNREF). If you are interested in participating in future updates of this list, please provide your contact information on the CNGA website, coloradonga.org. Click on Resources and Tree List.

COMMITTEE MEMBERS

Landscape Architects - ASLA: Gail Barry; David Flaig; Don Godi
Nurserymen - CNGA: Stan Brown; Matt Edmundson; Gary Epstein
CSU Representatives: Robert Cox; Jim Klett, PhD; Alison O'Connor
Municipal Arborists - CTC: Tim Buchanan, Fort Collins; Scott Grimes, South Suburban Parks; Michael Swanson, Denver

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ASLA COLORADO CNGA Colorado Tree Coalition Colorado State University Extension

http://www.ext.colostate.edu/pubs/garden/treereclist.pdf

Trees Recommended for Southeastern Colorado Listed by Size Class and then Alphabetically by Common Name *All trees listed have some degree of drought tolerance after establishment**	Drought Tolerance			High Soil pH/alkalinity Tolerance (pH of 7 or higher)			Soil Texture Tolerance (Well Drained ⟷ Poorly Drained)					Protected Site Recommended	Good Windbreak Component	Recommended Cultivars	Comments
	High	Moderate	Fair	High	Moderate	Fair	Sandy	Sandy Loam	Loam	Clay Loam	Clay	Yes	Yes	Some varieties have shown superior qualities compared with others	Other items of note
Large Shade Trees - 50'+ at maturity															
catalpa, northern (same as western)		X			X		X	X	X	X	X				Can have weak wood; prune for good structure and eliminate codominant stems (stems growing too close together).
cottonwood, plains			X	X			X	X	X	X				Male cultivars are seedless: 'Jeronimus', or ask for Sargent cottonwood	Not for residential use. Do not plant near structures due to weak wood and breakage potential. Good for riparian area planting, or out in large open areas.
elm, American (Dutch elm disease resistant hybrids)	X			X			X	X	X	X	X			'Liberty', 'Valley Forge', 'Princeton', 'Jefferson', 'Delaware #2', 'Accolade'	
elm, English	X			X			X	X	X	X	X			limited commercial availability	State champion trees in Rocky Ford and La Junta.
elm, 'Frontier' (Chinese [lacebark] elm hybrid)	X			X			X	X	X	X	X	X			State champion tree in Rocky Ford.
elm, lacebark (true Chinese elm)		X		X			X	X	X	X	X				High tolerance to elm leaf beetle. More upright form.
elm, 'Patriot'	X			X			X	X	X	X	X				Good choice if looking for a somewhat smaller version of American elm.
elm, 'Prospector'	X			X			X	X	X	X	X	X		'Presidential Gold', 'Autumn Gold'	
ginkgo (male cultivars with no fruit)		X			X			X	X	X	X		X		
hackberry, common	X			X			X	X	X	X	X		X	'Shademaster', 'Skyline', plant 'Sunburst' in area protected from south west exposure	Avoid over-watering.
honeylocust	X			X			X	X	X	X	X				
Kentucky coffeetree	X			X			X	X	X	X		X		'Legend', 'American Sentry'	Not tolerant of de-icing or road salts.
linden, American			X		X		X	X	X	X		X		'Columbia', 'Liberty'	
London planetree			X	X			X	X	X	X	X		X		
oak, bur	X			X			X	X	X	X	X				
oak, English		X		X			X	X	X	X					
oregon		X		X			X	X	X	X				'Pawnee', others	
sycamore, common		X			X		X	X	X	X		X		Limited commercial availability	State champion tree in Rocky Ford.
sycamore, American			X		X		X	X	X	X					State champion tree in Rocky Ford. Potentially affected by anthracnose.
Medium Shade Trees - 30' to 40' at maturity															
boxelder, 'Sensation'		X		X			X	X	X	X	X			'Sensation'	'Sensation' is the only cultivar recommended as it is a male cultivar with no seeds and has superior growth habit.
Chinese pistache	X			X			X	X	X	X	X	X			
filbert, Turkish	X				X			X	X	X		X			Can be a prolific re-seeder in moist, sandy-loam soils.
golden raintree	X			X			X	X	X	X	X				
hackberry, netleaf	X			X			X	X	X	X	X			Limited commercial availability	State champion trees in Las Animas County.
Japanese pagodatree		X		X			X	X	X	X		X			
linden, littleleaf			X		X		X	X	X	X		X			Not tolerant of de-icing or road salts.
oak, gambel		X		X			X	X	X	X			X		May have problems with suckers.
Osage-orange	X			X			X	X	X	X	X		X	Male cultivars are fruitless and thornless: 'Wichita', 'Pawhuska', 'Chetopa'.	
pear, ornamental	X			X			X	X	X	X	X			'Aristocrat', 'Chanticleer', 'Cleveland Select', 'Autumn Blaze'	
raspberry, western			X	X			X	X	X	X	X			Limited commercial availability	State champion tree in Baca County - Picture Canyon, USFS Comanche National Grassland.
mulberry, white	X			X			X	X	X	X	X		X	'Fruitless' cultivar is fruitless, Russian mulberry	Consider planting fruit-bearing trees in windbreaks to add wildlife value.
Small Ornamental Trees - 25' or less at maturity															
apricot		X		X			X	X	X	X				'Moorpark', 'Moongold'	Very rarely sets fruit due to early blossom, but makes a hardy ornamental tree.
chokecherry, Canada red		X			X		X	X	X	X	X				Can have a problem with suckers at base.
crabapple		X		X			X	X	X	X	X			'Spring Snow', 'Profusion', 'Radiant', 'Centurion', 'Coralburst', 'Prairiefire'	Choose cultivars that are fireblight resistant.
euonymus, wintercreper			X	X			X	X	X	X	X	X		'Pink Lady'	State champion tree in La Junta. Limited commercial availability.
hawthorn, English	X			X			X	X	X	X	X			'Paul's Scarlet', 'Crimson Cloud'	Thornless. Takes annual pruning to maintain tree form, or do not prune for more of a large shrub form. Can have suckers at base.
hawthorn, Washington		X		X			X	X	X	X	X				Has thorns. Takes annual pruning to maintain tree form, or do not prune for large shrub form. Can have suckers at base.
Japanese tree lilac		X			X		X	X	X	X		X		'Ivory Silk'	
maple, Hedge			X		X		X	X	X	X		X			
maple, tatarian		X		X			X	X	X	X				'Hotwings'	
mulberry, weeping	X			X			X	X	X	X	X			'Chapparal' is fruitless weeping form.	State champion tree in Rocky Ford.
redbud, eastern			X	X				X	X	X	X	X		'Lavender Twist', 'Don Egolf' (seedless, small)	
serviceberry			X			X	X	X	X	X		X		'Saskatoon', 'Shadblow', 'Princess Diana', others	Best used as a multi-stemmed large shrub/small tree.
silver buffaloberry		X			X		X	X	X	X	X		X		Can be large shrub or small tree, depending upon how pruned.
Large Evergreen Trees - 30' to 60' at maturity **Do Not use as street trees!**															
fir, white			X			X		X	X	X		X			
pine, Austrian		X		X			X	X	X	X	X		X		
pine, ponderosa		X			X		X	X	X	X	X		X		
spruce, Colorado blue			X			X		X	X	X		X			
Small Evergreen Trees - 15' to 25' at maturity															
juniper spp.: Rocky Mountain eastern redcedar Utah one-seed	X			X			X	X	X	X	X		X	Many cultivars are available in many shapes, sizes, and coloration. Choose the best one for its purpose; windbreak or landscape ornamental.	State champion one-seed Juniper located in Las Animas County - USFS Comanche National Grassland.
pine, Pinyon	X			X			X	X	X	X	X				wide growing, give plenty of room to spread.
pine, pillion	X			X			X	X	X	X	X				Avoid over-watering.

*** All newly planted trees, regardless of drought tolerance, must be frequently deep watered to become established. Established trees must be consistently deep watered for the life of the tree. Deep watering means establishing soil moisture to a depth of 12 to 18 inches within the drip line of the tree.**

Created by S.Simmons

Colorado State Forest Service

La Junta District

http://csfs.colostate.edu/pdfs/SECOTreeSelectionMatrix_FINAL_SLS_March24.pdf

Colorado Tree Coalition

www.coloradotrees.org

‘Find the Right Tree’ section