Planting Trees

JUSTIN KINDT

FORESTER

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Overview

Before planting

- Assessment and selection

Planting

- Start to finish



https://www.snoqualmiewa.gov/m/newsflash/Home/Detail/1635

After planting

- Care and maintenance



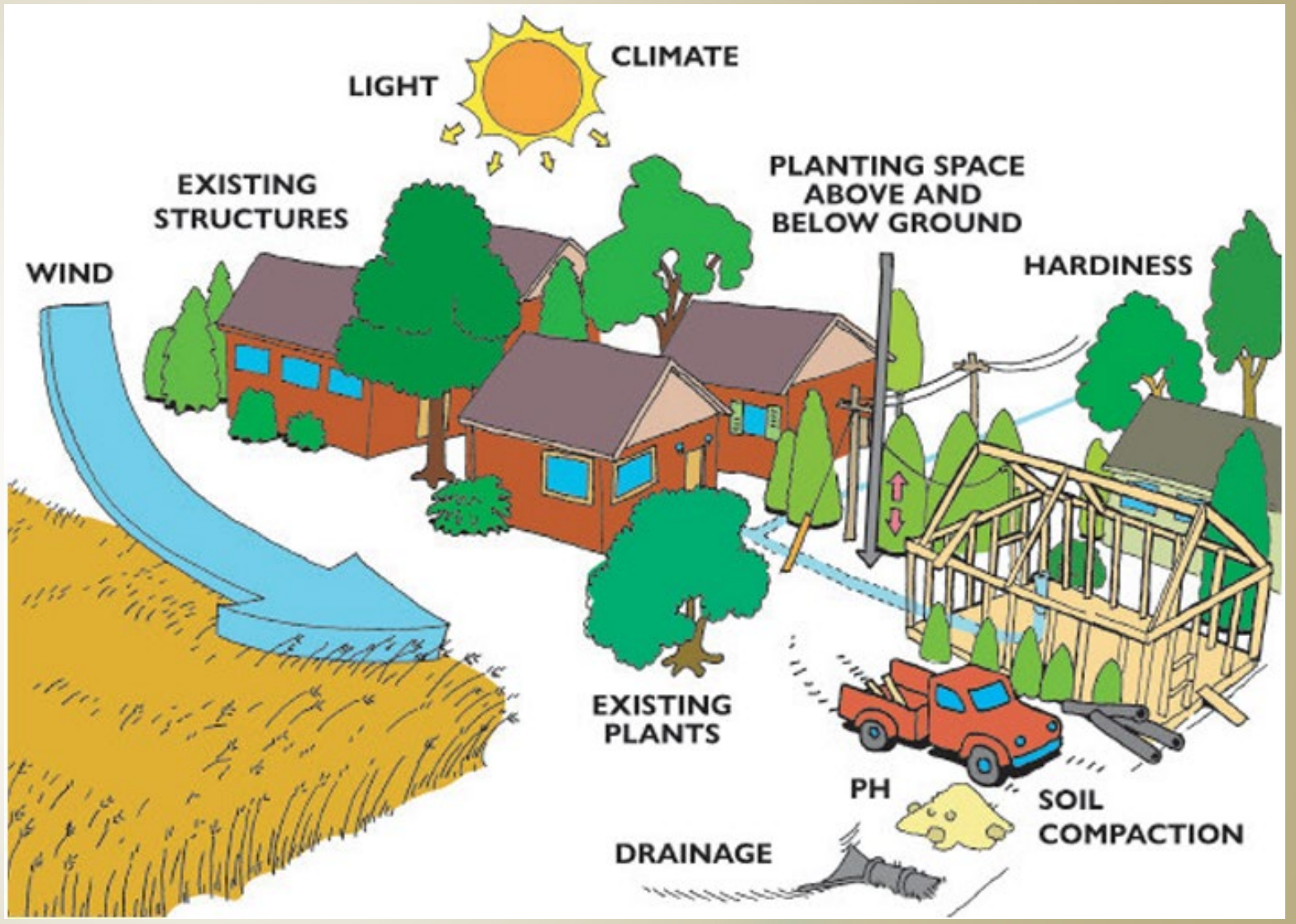
https://fairfaxgardening.org/canopy-trees/

Before Planting

Before Planting

Site Assessment

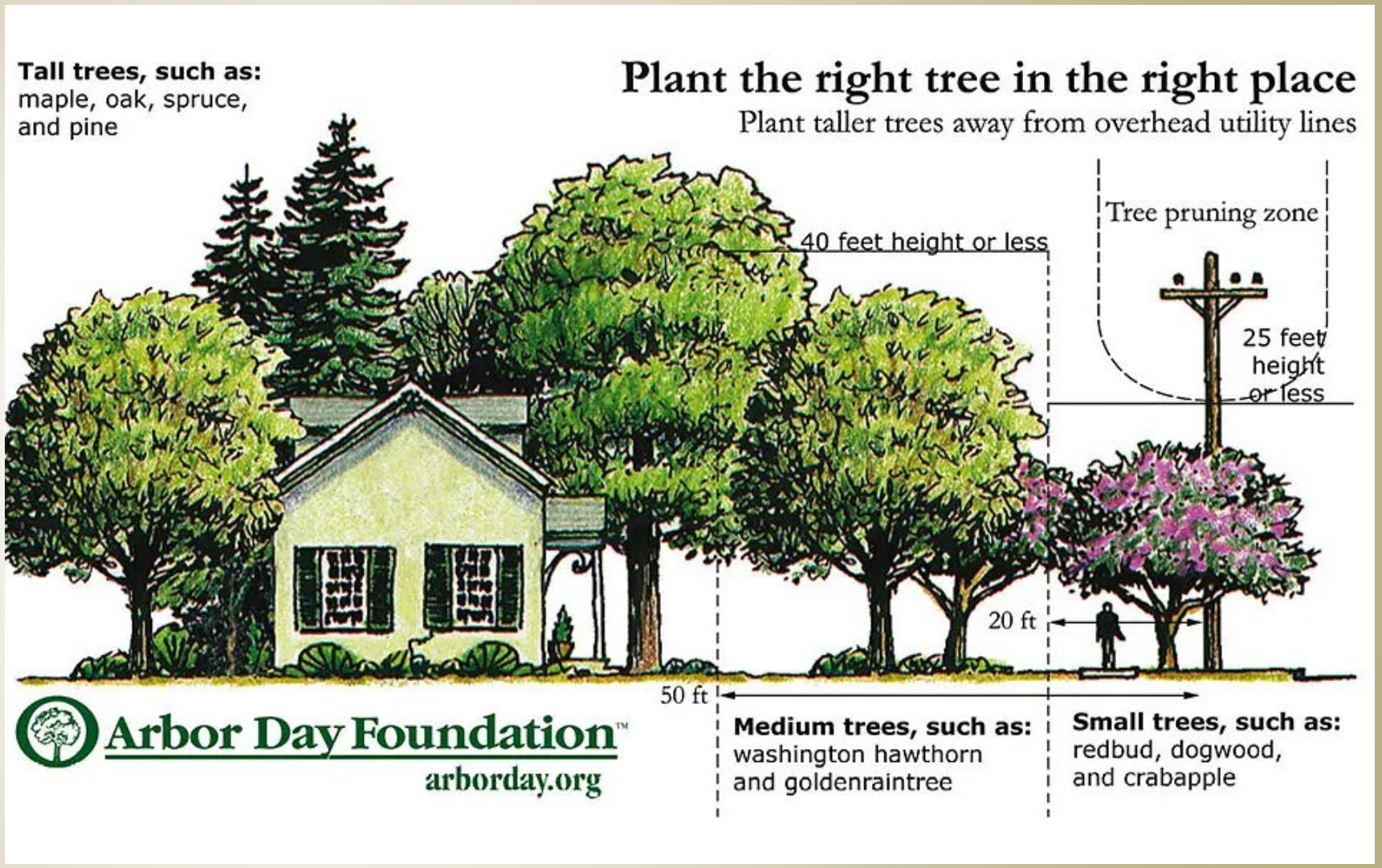
- Overhead conflicts
  - Utility lines
  - Lamp posts
- Ground level conflicts
  - Fire hydrants
  - Structures
- Below ground conflicts
  - Utility lines
  - Drainage lines
- Seasonal conflicts
  - Salt
  - Flooding
- Ecological conflicts
  - Pests
  - Biodiversity



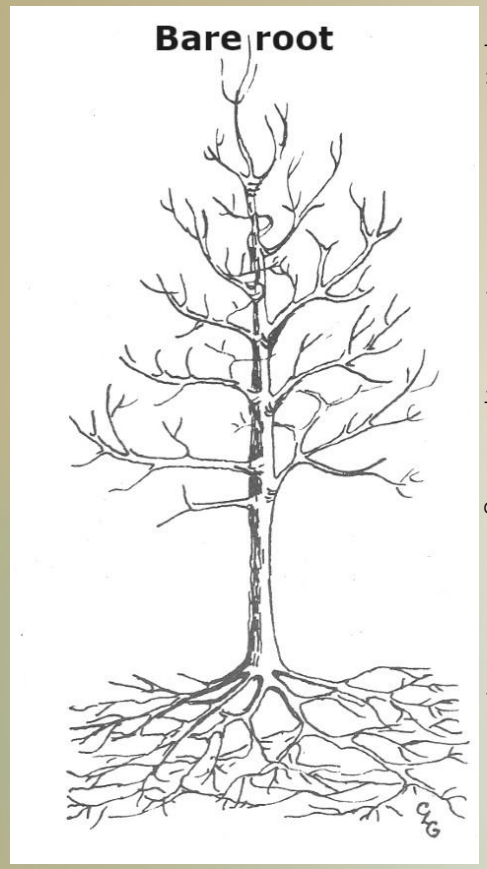
Before Planting
Tree selection

Tree species are selected by traits to match site limitations and desired aesthetics

- Mature height
  - Small – less than 25 ft
  - Medium – 25 – 40 ft
  - Large – over 40 ft
- Form
- Hardiness
  - Zone 6
- Native or non-native
  - 70% rule
- Biology
  - Fall color
  - Spring color
  - Fruits
- Water and salt tolerances



Before Planting Nursery options



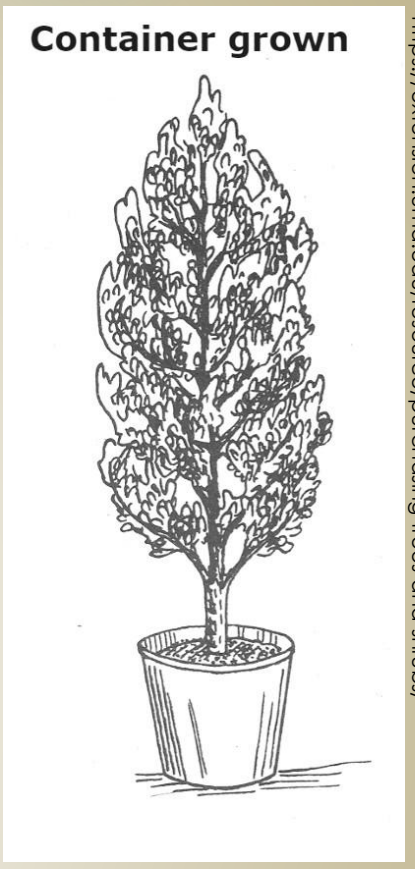
https://extension.umd.edu/resource/purchasing-trees-and-shrubs/

- Cheapest, lightest option
- Only viable for spring planting



https://extension.umd.edu/resource/purchasing-trees-and-shrubs/

- Root loss from digging process
- Heaviest
- Option for larger trees



https://extension.umd.edu/resource/purchasing-trees-and-shrubs/

- Available at most nurseries
- Weigh less than B&B
- Less root disturbance
- Most expensive



https://threetimbersmn.com/blogs/news/container-vs-bb-vs-bare-root-minnesota?srsltid=AYCX9vLFCumZHweqwtHTCVO8borwiFLBV-uMcYC4Wh7VOMfaIJBzOS3K

Before Planting

Putting it all together



Planting

Planting
Timing

Cool weather for root establishment

- Late winter/early spring – before bud break
- Late fall – when tree is dormant but before the ground freezes
- Spring rain and summer heat trigger new top growth





With stock:

- Best as close to delivery day

Bare root

- Keep in package and refrigerated (up to two weeks)

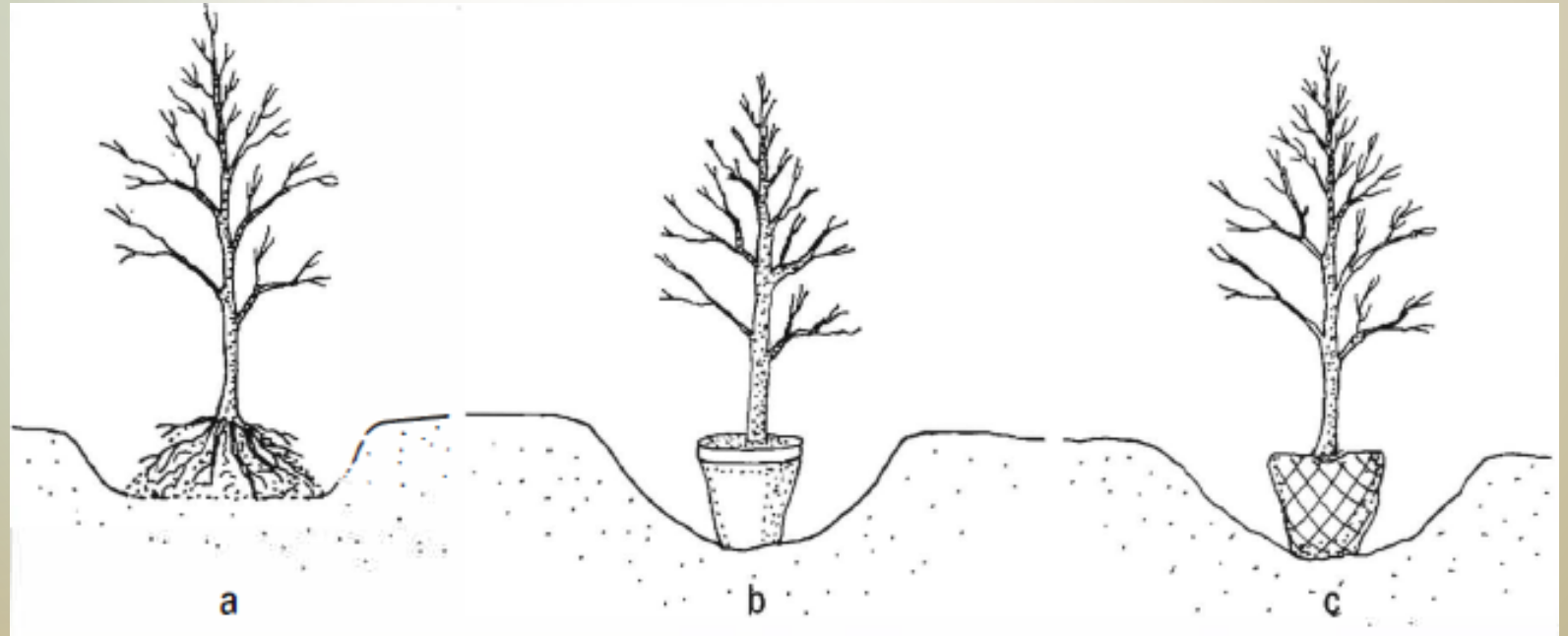
Other

- Keep in cool, shaded area and watered

Planting Technique

All types

- Hole should be same depth as root depth and three times as wide (1x by 3x)
- Ensure root collar/root flare/trunk flare is at the soil line and partially visible
- Gently backfill halfway with loose soil and water to settle and remove air pockets
- Check for plumb from all sides
- Finish backfilling and firmly pack soil to stabilize



Planting Technique

Bare Root

- Soak roots in water bucket (up to a day before planting)
- Untangle roots to natural position



Container

- Handled only by container
- Unwind spiral roots to prevent girdling root issues



B & B

- Handle only by ball
- Remove wire (top half)
- After placed remove top half of burlap (natural) or all burlap (synthetic)



Planting
Finishing

Mulching

- Retains moisture
- Suppresses weeds
- Moderates ground temperature
- Protection from lawn equipment
- Do the donut not the volcano
- Two to four inches deep
- Extended to drip line or minimum of three feet



Planting
Finishing

Staking and tubing

- For support and protection
- Not always needed
- High wind
- Snowbanks
- Wildlife damage
- Check regularly to prevent other issues



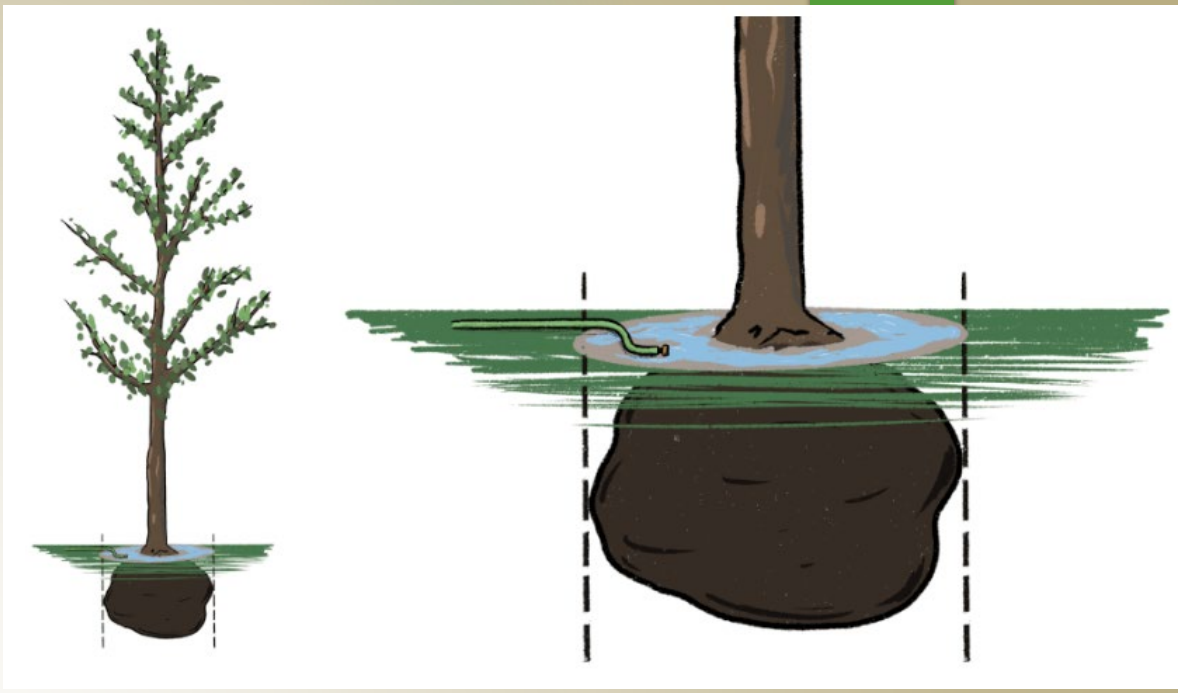


After Planting

After Planting

Watering

- Morning or evenings – avoiding peak sunlight hours
- Two or threes times a week – at least once a week until October
- Continue until tree establishment, two or three years
- Slow watering for full ground saturation and percolation - brief frequent watering can encourage upward root growth
- Root zone/root ball
- Six to nine inches of moist soil
- Watering aids:
  - TreeBuddy
  - Treegator
  - TreeDiaper



https://www.russelltreeexperts.com/arbor-ed/2020/8/12/watering-best-practice



https://mortonarb.org/blog/how-to-keep-trees-and-plants-healthy-this-summer/

After Planting

Pruning

- Winter season - Observe interior structure and Reduce risk of disease and pests
- Begin two years after planting with exception of broken branches
- Young trees – faster, easier, and cheaper to prune than mature trees
- Never prune more than 1/3 of the live crown at once

Prune:

- Dead, dying, and broken branches
- Rubbing branches
- Codominant leaders
- Crowded or unaesthetic branches
- Future conflicts – street or sidewalk

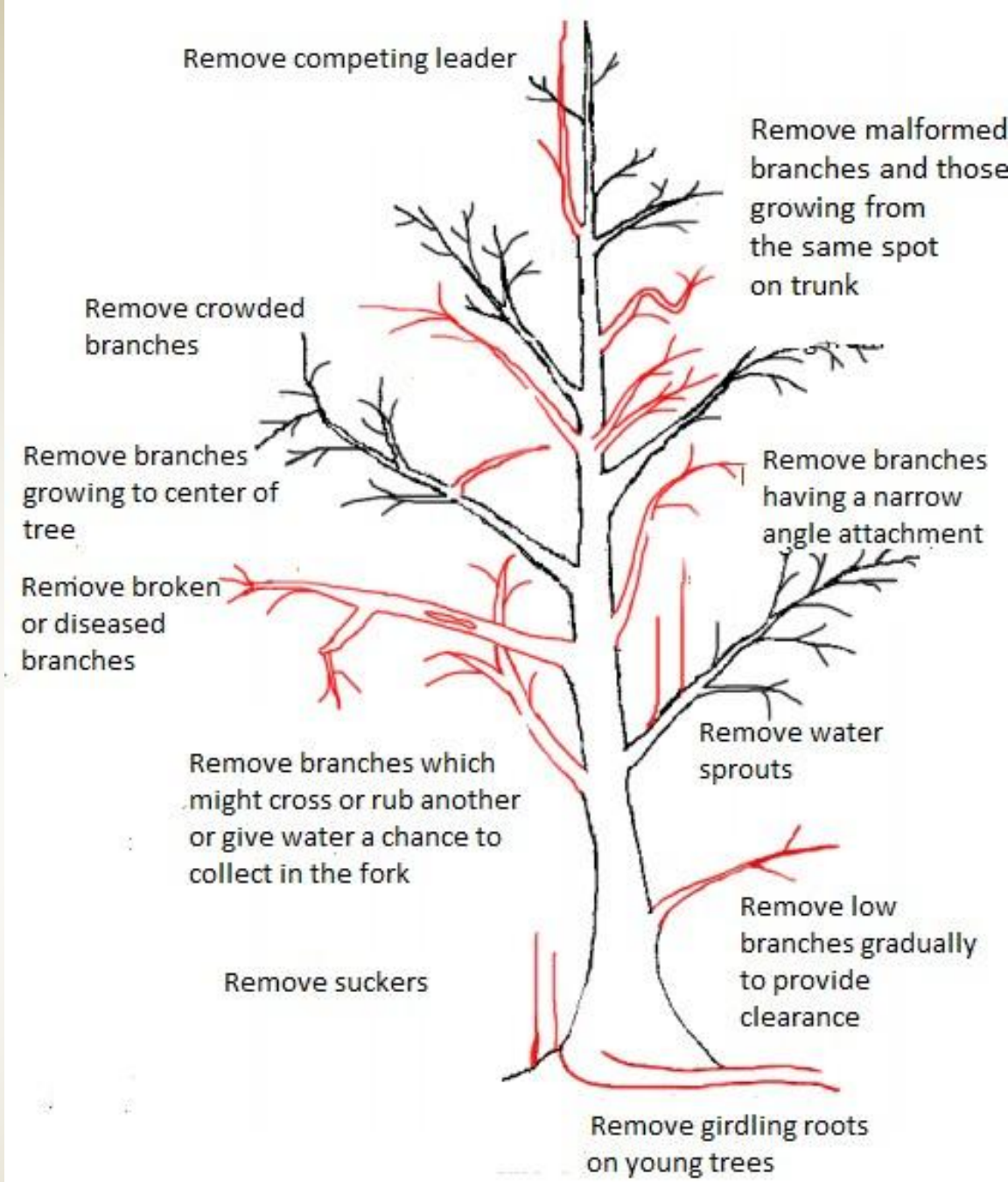


Illustration of Reasons to Prune Trees (red branches are to be removed)
Credit: Don Wittig, former UME Master Gardener

After Planting

Monitoring

- Check annually, at minimum
- Try to check after weather events
- Tree decline is usually gradual – potentially time to catch and correct



https://dnrtreelink.wordpress.com/2024/08/01/what-happens-to-a-tree-under-drought-stress/



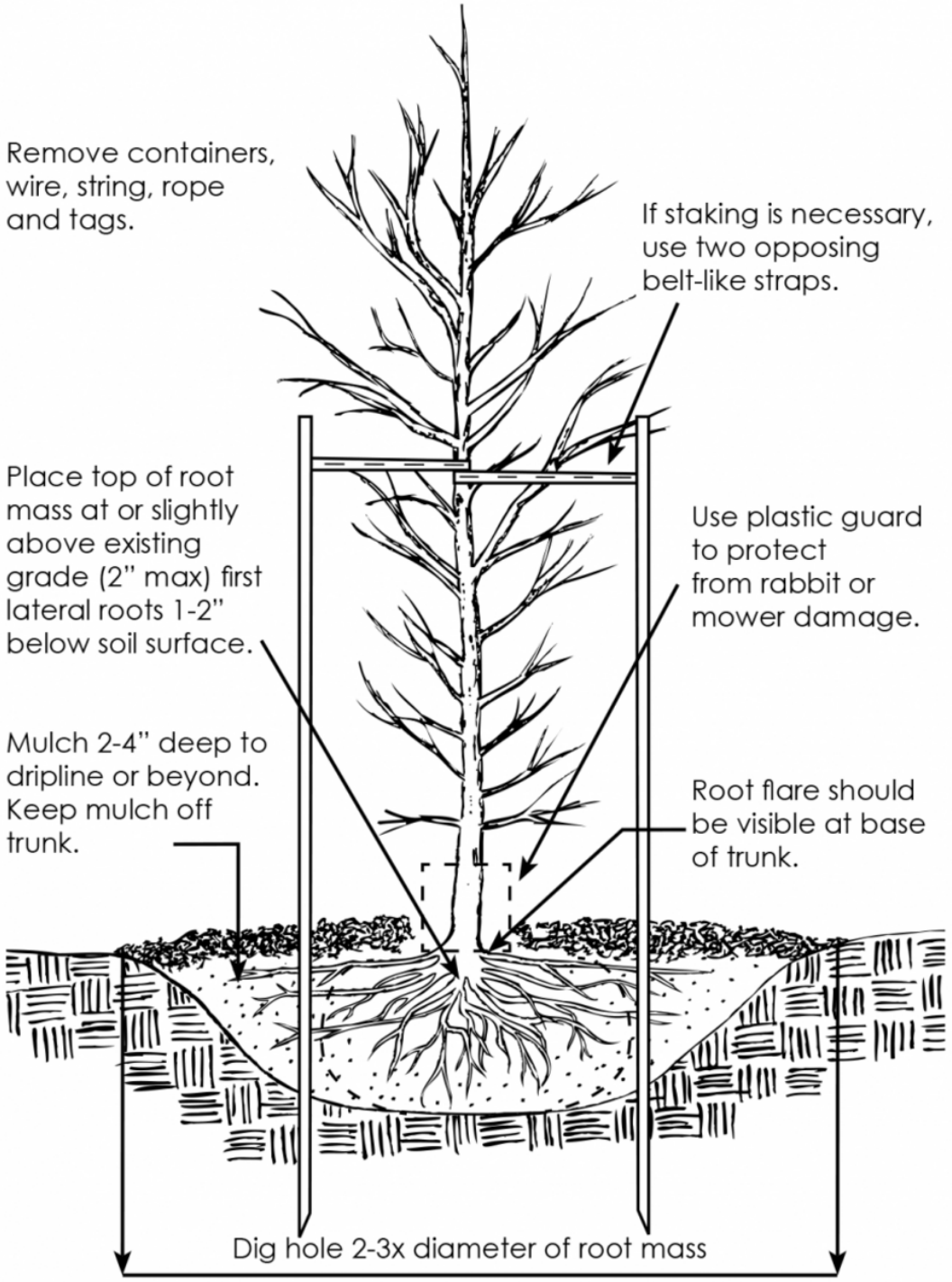
https://sawatree.com/tree-service-fort-wayne/emergency-tree-removal-for-storm-damage-in-fort-wayne/



https://extension.psu.edu/heat-stress-in-urban-trees

Recap

- Before planting
  - Site assessment
  - Tree selection
  - Nursery options
- During planting
  - Timing
  - Technique
  - Finishing
- After planting
  - Watering
  - Pruning
  - Monitoring



https://nfs.unl.edu/tree-care/tree-planting-guide/

References

- Caring For Urban Trees – NYS DEC https://dec.ny.gov/nature/forests-trees/urban-and-community-forestry/urban-tree-care#assessing
- How To Plant A Tree – NYS DEC https://dec.ny.gov/nature/forests-trees/how-to-plant-a-tree#Natural
- Winter Is Tree Pruning Season – Penn State Extension https://extension.psu.edu/winter-is-tree-pruning-season
- The Cornell Guide for Planting and Maintaining Trees and Shrubs – Cornell University Cooperative Extension – Information Bulletin 24
- Trees Are Good – International Society of Arboriculture https://www.treesaregood.org/Tree-Owner-Resources



HTTPS://WWW.ALBANY.CENTER/BLOG/BETHLEHEM-IN-NOVEMBER-SEASONAL-EVENTS-AND-THINGS-TO-DO/

Thank you!

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