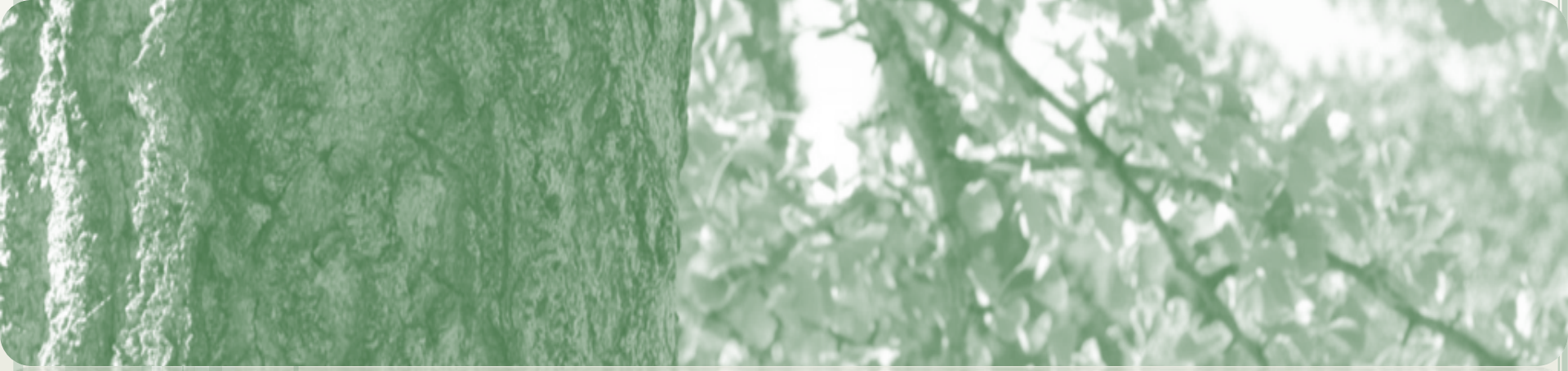

The Ins and Outs of Tree Pruning

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City of Tacoma

Summary

- What is pruning?
- Common Mistakes
- Who should prune?
- Why prune trees?
- When should pruning occur?
- Tree Biology Basics
- How to prune 1: the right tools for the job
- How to prune 2: making the cut
  - Prioritizing Pruning Needs

What is pruning?

- Pruning vs. Trimming
  - Trimming = to put into a neat and orderly condition
  - Pruning= The selective removal of plant parts to meet specific goals and objectives
- Have you been pruning or trimming?

Common Mistakes

Topping

Common Mistakes

Lion's tailing

No pruning can lead to failures

Common Mistakes

Stubs

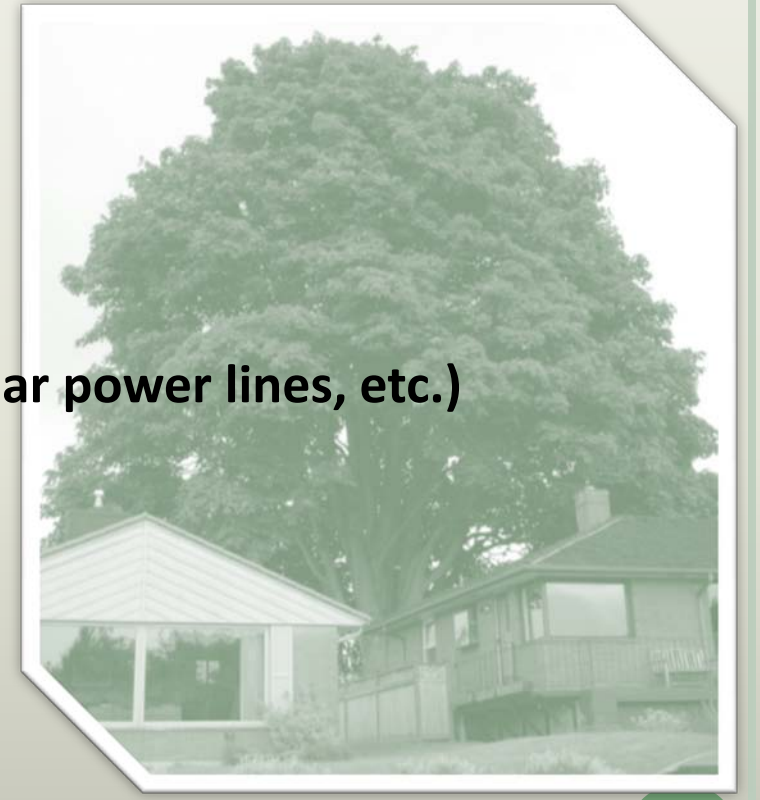
Flush Cuts

Who Should Prune?

- Homeowners with small, young trees
- Professional Tree Care Companies
  - (Licensed, Bonded and Trained)
- Not Lawn Care Companies, the family dog, your plumber, etc.

Why Prune Trees?

- Trees don't NEED to be pruned: People need trees to be pruned.
- But why?
  - **Risk reduction (aka safety)**
  - **Manage tree health**
  - **Clearance (over roads, sidewalks, near power lines, etc.)**
  - **Structural improvement/correction**
  - View improvement/creation
  - Aesthetic improvement
  - Restoration
  - Fruit production



Why Prune Trees?

- **Manage Tree Health**
  - Three D's
    - Dead
    - Damaged
    - Diseased
  - Related to structural improvement/correction

Why Prune Trees?

- **Clearance**
  - Crucial for pedestrians and motorists (sight distance at corners, sidewalks, etc.)
  - Power utilities are required to maintain clearance to their lines (pole to pole)- approx. 10’
  - City of Tacoma requires minimum vertical clearance for the full width of:
    - Sidewalks- 8’
    - Roads and alleys- 14’
  - Cannot be achieved at planting with young trees

Why Prune Trees?

- **Structural improvement/correction in young trees is ESSENTIAL:**
  - Many trees come from the nursery with defects
  - Most defects are correctable while trees are young
  - If not done, could lead to failures and/or removal of an otherwise healthy tree

When Should Pruning Occur?

- Best time to prune is while dormant (no leaves), but…
- …There's always exceptions to rules:
  - If the plant blooms in the spring, it's best to prune after bloom/leaf out.
  - Summer pruning can be a better time for restoration, clearance, and managing tree health.
- Avoid pruning in late summer and fall as the plant may respond with new growth that will likely not make it through our winters

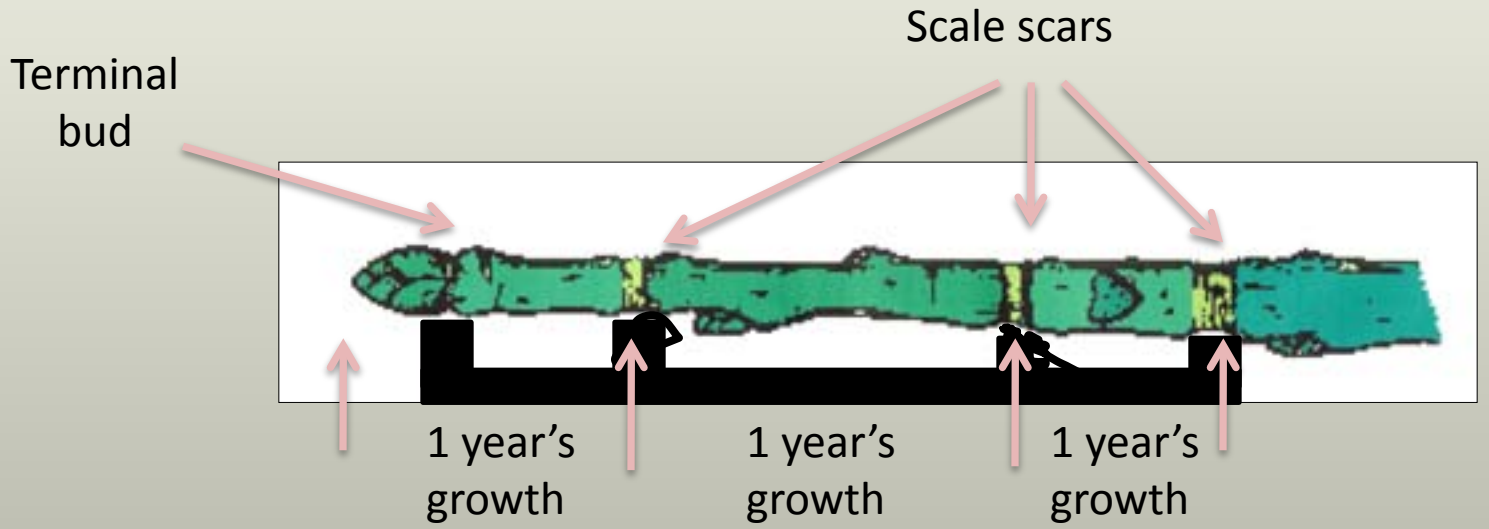
Basics of Tree Biology

Each pruning cut is an injury.

Trees don't **heal** their wounds, they **seal** them.

Tree Growth

- **Terminal bud**
  - Found at end of every branch
  - Produces auxin to stay dominant
  - Laterals compete to replace if it is removed
- **Adventitious buds**
  - Initiate growth if too many branches are removed or stressed
  - Found under bark, branches and roots
  - Known as watersprouts (above ground) and suckers (at ground level)



How to prune 1:

The right tools for the job

- Bypass hand pruners

(up to 1”)

- Bypass loppers

(from ¾” up to 2”)

No Anvil Pruners

How to prune 1:

The right tools for the job

- Pruning saw – folding or sheath

Stay away from the chainsaws!
(and pole based tools)

And always use sharp, clean tools

How to prune 2:
Making the Cut

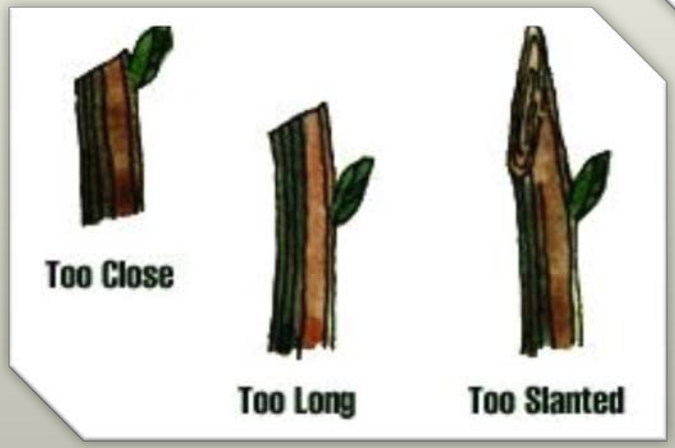
Remember our objectives:

- **Risk reduction (aka safety)**
- **Manage tree health**
- **Clearance (over roads, sidewalks, near power lines, etc.)**
- **Structural improvement/correction**

- Reduction cuts
  - Typically used for structural improvement/correction and clearance
- Removal cuts
  - Typically used to clean the 3 D's-manage tree health, clearance, structural improvement/correction

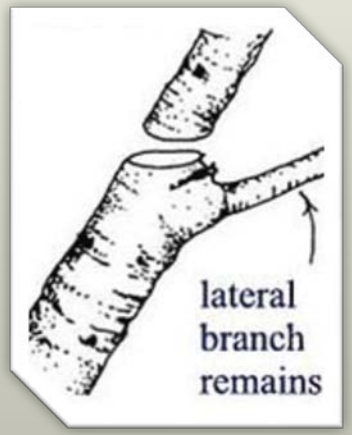
How to prune 2:
Making the Cut

- Reduction cuts
  - Primarily for young trees and small branches
  - Reduces length of stem or branch (not overall height)
  - Redirects or slows growth to improve structure



How to prune 2:
Making the Cut

- Reduction cuts
  - Cut back to a lateral branch (or a bud in small twigs) which is of adequate size to assume the lead
  - NO TOPPING!!

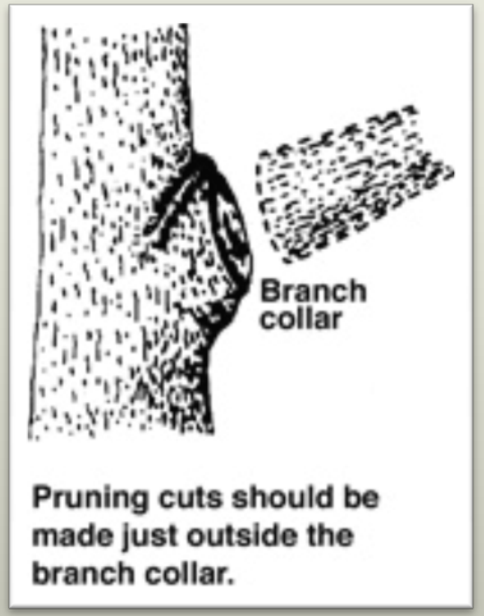


Lateral Branch is about 1/3 of original branch, this is the smallest that branch that the cut should be made to

How to prune 2:
Making the Cut

- Removal cuts
  - Removes a branch back to its parent stem or trunk
  - The part that remains is larger than what was removed
  - Cut as close as possible to the branch collar
    - No stubs or flush cuts


Proper Finish Cut (1-2 years later)



Pruning cuts should be made just outside the branch collar.

How to prune 2:
Making the Cut

Cut **outside** the branch collar

How to prune 2:
Making the Cut

Flush cuts make **larger wounds** and injure the area that would grow to seal the wound, causing more damage than necessary

Branch collar removed (flush cut)

How to prune 2:
Making the Cut

When making larger cuts, prevent tearing by making three cuts

Prioritizing Pruning Needs

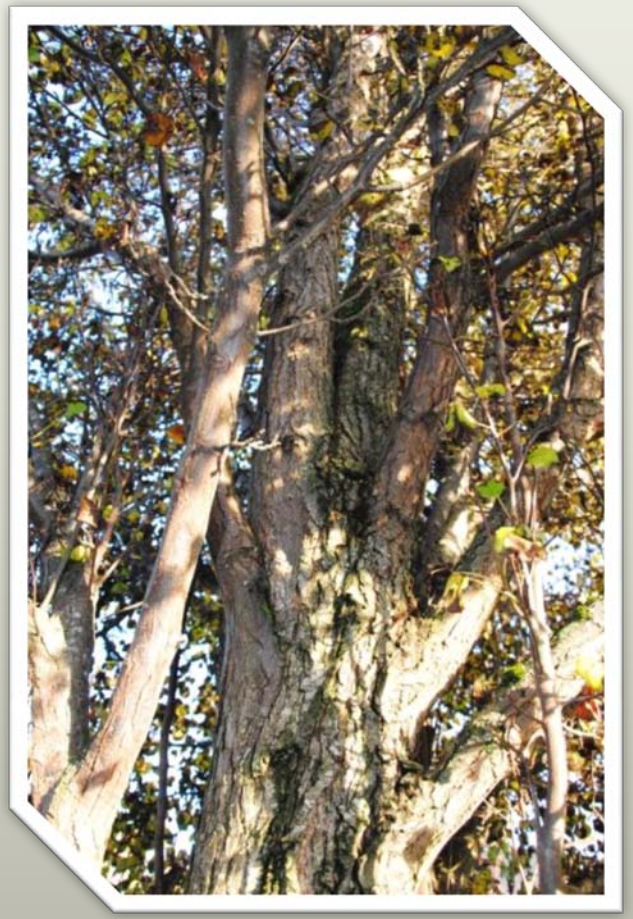
- Select a **strong central leader**
  - Should be the straightest and most centrally located
  - Should be vigorous
  - Subordinate competing stems

Prioritizing Pruning Needs

- Select a strong central leader
- Identify defects that are correctable by pruning:
  - The 3 D's: dead, damaged & diseased branches
  - **Defects such as:**
    - Narrow angles of attachment are weak, wide are strong "V" is bad - "U" is good
    - Crossing branches
  - Suckers and watersprouts

Prioritizing Pruning Needs: Defects

Narrow Branch Attachments…



lead to tear-outs

Prioritizing Pruning Needs: Defects

Co-dominant Stems

Watersprouts & Suckers

Prioritizing Pruning Needs

- Select a strong central leader
- Identify defects that are correctable by pruning
- Identify or establish lowest permanent branch
  - All branches below this are temporary
    - Keep them from becoming too large
    - May require annual subordination until they can be removed for clearance
    - They are necessary to retain for proper trunk development

Prioritizing Pruning Needs

- Select a strong central leader
- Identify defects that are correctable by pruning
- Identify or establish lowest permanent branch
- Monitor spacing and size of scaffold branches
  - Radial and vertical spacing
  - Monitor for weak branch attachments
  - Prevent lower scaffold limbs growing into upper canopy
  - Imagine what branches will be in 10 years
  - If needed, head back branches getting too large
    - Scaffold branches should be less than half of trunk diameter

Wrapping up

- Ideal time for pruning is dormant season
- Don’t remove more than 25% live canopy annually
  - Annual pruning of a smaller % of branches is best
- Refer to the priority list
- Monitor how the tree is responding

- Questions?