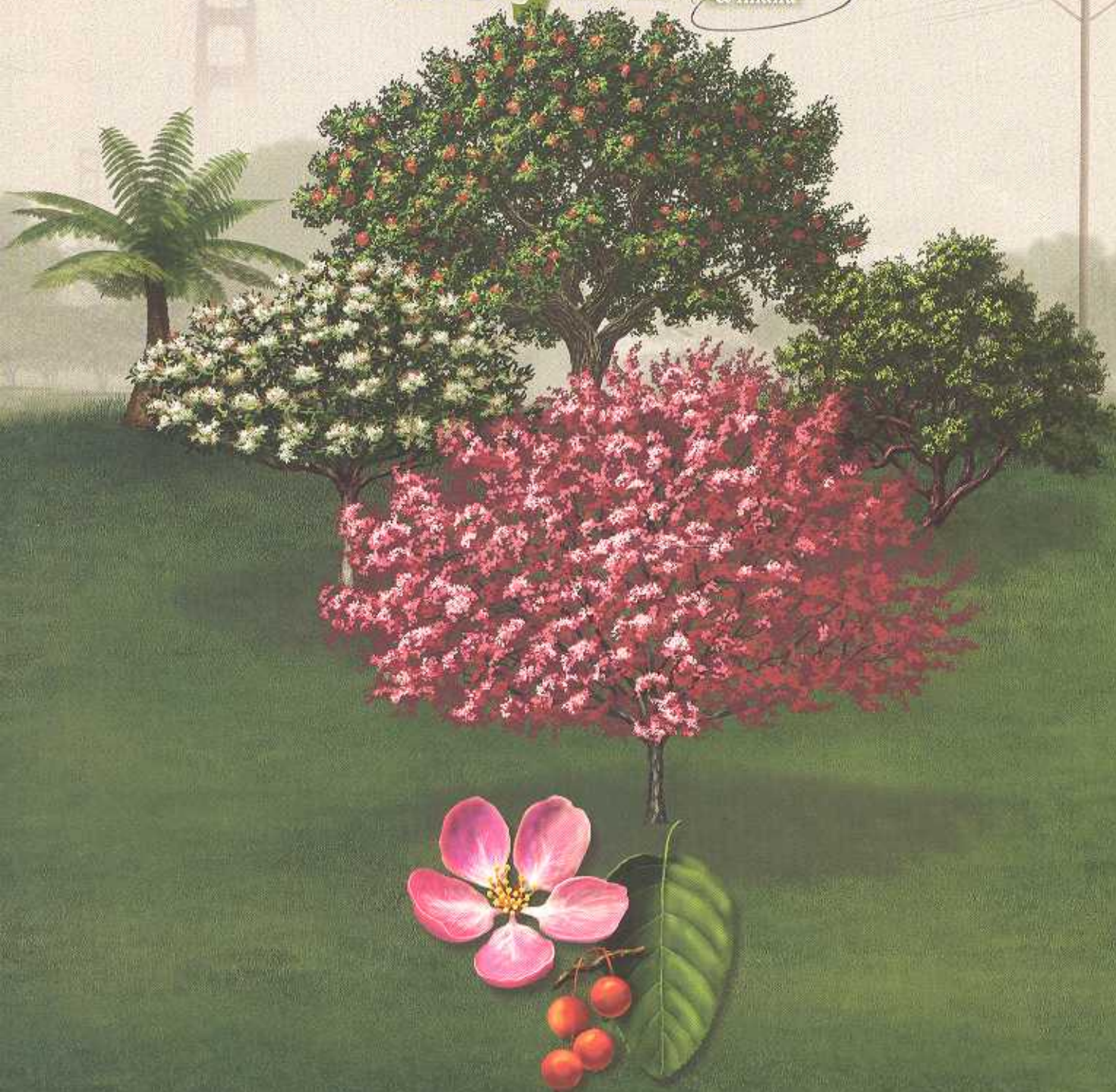


A SELECTION & PLANTING

Guide to
Small Trees

Near Power Lines for the

San Francisco
Bay Area
& Inland



A Pacific Gas & Electric Company "Right Tree Right Place" Publication



PACIFIC GAS AND ELECTRIC COMPANY (PG&E) created this special Small Tree Guide to help you choose the right trees if you are thinking about landscaping or planting near power lines or in limited spaces. You see, PG&E is required by law to prune and sometimes remove tall trees that grow into or threaten electric lines. This also provides for public safety and reduces power outages. That's why, to stay safe, keep the lights on and get the long-term benefits, beauty and satisfaction from trees planted near power lines, it is important you choose small trees that are less than 25 feet at maturity.

Why Plant Small Trees

Tree size does matter when planting where space is limited — near power lines, in narrow side yards, or close to buildings. In this case, small is the right choice!

The good news is there is a wide variety of beautiful, small trees from which to choose.

The tree listings and illustrations in this Small Tree Guide can help you plant a power line-perfect tree that won't need utility pruning or removal in the future.

Landscaping small spaces can also be challenging, and selecting small trees can enhance a modest area without overcrowding it.

Small trees provide beauty and enjoyment through their many forms, colors, flowers and fruits and may be the most important feature of a landscape. Additionally they:

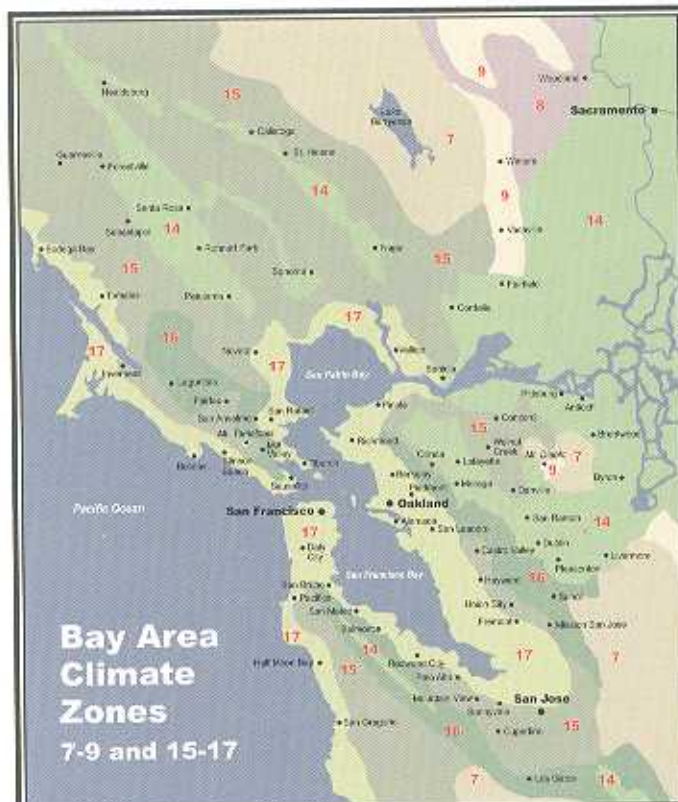
- can block wind
- screen undesirable views, like A/C units
- shade benches and pool-side lounging areas
- produce edible fruit
- create wildlife habitat
- provide fragrance
- attract butterflies
- provide ornamental and seasonal color
- increase property value
- can lower utility bills

Small trees also enhance our environment by producing oxygen, storing carbon, cooling through shade, preventing erosion and filtering noise and pollutants.

Where to Plant Trees

No matter what the reason for planting trees, from beautifying your landscape to shading your home for energy conservation to creating a screen or barrier or for honoring an event or person. Knowing why you are planting will help you select where to plant and what tree species to choose.

Before you choose what type of tree to plant, it also helps to look at where you are planting. Make sure your tree has room to grow, both for root space and for the canopy. Take into consideration sunlight and soil conditions.



Trees and other plants live and die by a combination of elements — latitude, elevation, ocean influence, mountains or valleys, micro climates and continental air influence — unique to climate zones. Soil, while not a climate condition, also influences or limits growth. The *Sunset Western Garden Book* provides climatic information that is most relevant to the west for trees and plants to survive.

It helps to make a sketch that shows where you already have trees and landscaping, sidewalks, driveways, building outlines, compass directions and, of course, overhead utility lines.

Planting the "right tree in the right place" will provide for a long future of landscaped enjoyment. (See recommendation inside poster and chart.)

Landscaping with Small Trees

Small trees can add interest and beauty to small spaces.

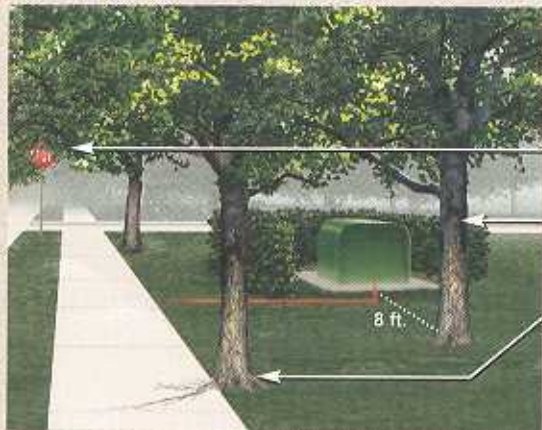
Plant only small trees or shrubs near power lines.

Small trees that produce fruit or nuts attract birds and other wildlife.

Small trees can be planted to create hedges for privacy or to screen undesirable views.

Many small tree species work well as street trees and can help improve your neighborhood.

Small flowering trees add interest and beauty to the landscape. Many species attract butterflies and hummingbirds.



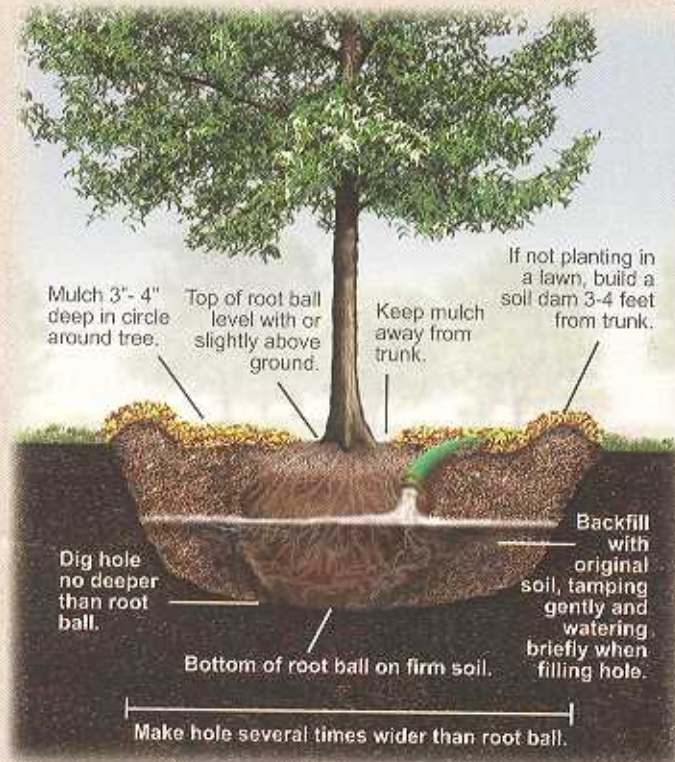
What to Avoid in Planting:

- Blocking vision at street corners. Plant at least 10 feet from curb at corners.
- Planting closer than 8 feet from underground utilities or pad-mounted transformers.
- Planting too close to sidewalks, streets or driveways.
- Trees, shrubs and other woody plants should not be planted within 10 feet of the base of a power pole.



How to Plant Your Tree

- 1. Prepare the planting area.** Mark an area several times wider than the root ball diameter (the wider the better). Loosen this area to about the depth of the root ball. This will enable your tree to extend a dense mat of tiny roots well out into the soil in the first several weeks in the ground.
- 2. Dig the hole** in the center of the loosened area, 2-3 times the diameter of the root ball and no deeper than the depth of the root ball — shallow is better than deep! Make sure the sides of the hole are rough and uneven. In very hard soils, a rough edge to the hole may help new roots to grow out into the surrounding soil.
- 3. If the tree is in a container,** gently remove the container from root ball — don't pull by the trunk. Loosen roots with finger tips and prune away damaged or circling roots.
- 4. For balled and burlapped trees,** rest the root ball in the center of the hole, and reshape the hole so the tree will be straight and at the proper level. After adjusting the tree, pull the burlap and any other material away from the sides and top of the root ball. Carefully remove the burlap material from the hole.
- 5. Loosen the soil near the trunk** to find the trunk flare. This is the area where the trunk gets wider as the first roots join the trunk. This point should be visible at the top of the root ball. If the trunk flare is not visible, remove soil from the top of the root ball until it is visible.
- 6. Place the tree in the hole.** The bottom of the ball should rest on solid undisturbed soil. When finished, the trunk flare should be at or just above the soil surface. Planting too deep is the most common mistake; since soil above the trunk flare causes the bark to rot!
- 7. Stand back and look at the tree** before putting the soil back into the hole. You can make careful adjustments at this time to the planting height and the direction the branches face without seriously harming the roots.
- 8. Gently backfill with the original soil** removed earlier. Do not add fertilizer, compost or other material. Use one-third of the soil at a time. Break up dirt clods and remove any grass, weeds or rocks. Lightly pack the soil with the shovel handle to remove air pockets. Do not stamp on or compress soil heavily. The best soil for root growth has spaces for both air and water, but not large air pockets, which causes problems. Water briefly. Refill and pack again until soil is even with top of root ball. The trunk flare should be slightly above the soil. Water thoroughly.
- 9. If your tree is not planted in a lawn,** construct a small earthen dam or berm, less than 4 inches tall, with excess soil just outside of the root ball zone. This will help hold water until it soaks into the soil, rather than letting it run off across the surface. The berm is temporary while your tree becomes established and, in most cases should be removed two years after planting.
- 10. Cover the entire loosened area** of soil with 3 to 4 inches of mulch (chipped wood or bark, compost, or dry leaves). Mulch will slow water loss, reduce competition from weeds and grasses, will moderate soil temperature and provide a small amount of nutrients. Keep mulch away from the trunk of the tree to prevent disease.
- 11. Staking Your Shade Tree (Optional)**
Stake only if tree stability is a problem. Staking is a temporary measure to allow the trunk to develop strength — remove as soon as possible. The sooner the stakes and ties are removed the stronger your tree will be. If staked, typically this can be one to two years and no longer than three. Reddy stakes are the easiest to use and are available from your local nursery.



The Right Tree in the Right Place

Use the right size tree for your planting site. Use small trees when planting under or near power lines.



Call Before You Dig!



Call Underground Service Alert at 811 at least two days before planting trees or landscaping, to have underground power lines and other utilities marked.

Plant Trees Safely

Here are some important safety tips when planting trees near residential (distribution) power lines:

- Before you plant your tree, know what's below! An important safety tip is to have buried utilities located before digging. Call Underground Service Alert (USA) at 811 at least 2 days before planting trees or landscaping, to have underground power lines and other utilities marked.
- Plant trees at least six feet away from any underground power lines.
- Take care not to plant trees, shrubs or flowers too close to the base of the power poles. PG&E crews need to be able get to the poles for emergency repairs.

If you are planting trees near high-voltage power lines remember:

- The "Ten-foot" rule: Keep all trees, equipment and people at least ten feet away from high-voltage electric power lines.
- Energized power lines are extremely dangerous and if touched, can be fatal. To protect you, the law requires that anyone working near overhead power lines be trained and qualified. It is a crime for anyone not trained and qualified to work within 6 feet of a high-voltage power line.
- For your safety, only qualified tree workers should prune or remove a tree that is within 10 feet of a high voltage power line and PG&E must be notified if a tree within ten feet of the power line needs to be pruned or removed. Call 1-800-PGE-5000.

Trees and Fire Risk

If you live in a Fire Risk Area, it is important to know that:

- Tree species and location can influence the fire safety of your home. Although all vegetation can burn, research has shown that some resist fire better than others. Trees that have a favor-

able fire resistance rating are identified in the tree chart below. • However, if you live in a fire risk area, before planting trees, please check with CAL FIRE (www.cdf.ca.gov) your local Fire Safe Council (www.firesafecouncil.org) or your local fire department for fire-safe landscaping tips.

Tree Care

It is important to take care of your newly planted tree. Do not add fertilizer at planting. Sprinkle a balanced fertilizer around the drip line of the tree after the first year if the tree fails to make good growth. Always follow the fertilizer manufacturer's label as to the amount to apply; too much will injure the tree.

Remember: a good mulch layer will provide a natural source of nutrients to the tree and it will help cool the soil and conserve moisture. Maintain a 3-4 inch mulch layer within the planting area. Check the thickness of your mulch mid-summer and renew it as needed. Keep mulch away from the base of the trunk to avoid potential rotting of the bark.

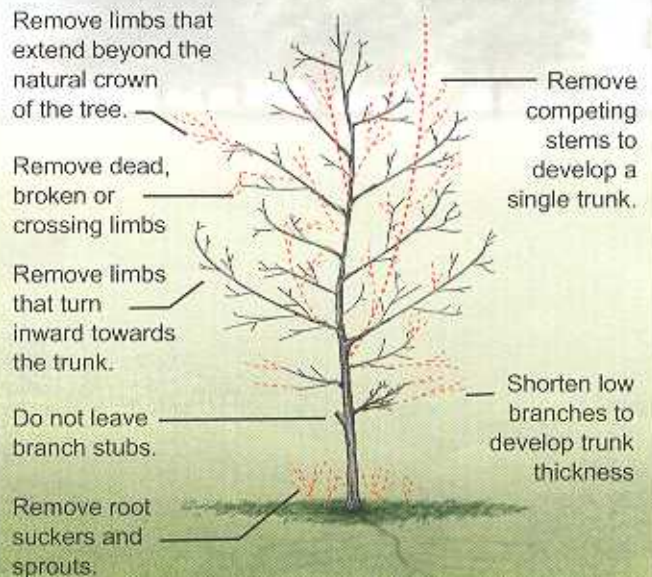
Regular watering is the single most important factor in the success of your new tree. New trees need about one inch of water per week for about two years. This is true for all trees even though they may be native or drought tolerant. Be careful not to drown the roots; they need air as well as water to grow.

Watering slowly by hand gives you a great opportunity to monitor your trees for problems such as disease, insects and broken or dead limbs. You will be amazed at how well your trees will respond to your care.



Young Tree Pruning

Remove branches shown with dotted lines:



PG&E is Here to Help you With Your Trees

The National Arbor Day Foundation has recognized the PG&E Vegetation Management Department's commitment to promoting healthy urban forests with the Tree Line USA Award every year since 1995.

The prestigious award acknowledges PG&E's environmental leadership in caring for the health of trees while providing safe and sound management of tree growth along electric power lines.

Call 1-800-PGE-5000 if you have questions about power line-perfect trees or want to schedule an appointment with a PG&E Vegetation Management tree care professional.

For more information about how to plant the "right tree in the right place," visit pge.com/trees.

For additional help in picking a power line-perfect tree for your climate zone, please visit www.selecttree.calpoly.edu and look for the "utility-friendly" icon:



What We Do to Keep Your Lights on and Communities Safe

PG&E's vast electric system crosses some of the most diverse terrain in the United States and includes over 110,000 miles of distribution lines, 18,500 miles of transmission line and 2.5 million wood poles and steel towers that deliver power to 5.2 million customers.

The pruning and removal of trees and other vegetation near power lines is vital to public safety and keeping the lights on, and is required by state and federal laws.

PG&E's Vegetation Management Team works year-round to keep trees and other plants away from power lines within its 70,000 square mile service area. To do this PG&E inspects over 55 million trees a year along power lines.

Under the leadership of local PG&E vegetation program managers, specially trained and qualified tree care professionals prune or remove approximately 2 million trees and clear vegetation from 120,000 power poles each year to ensure communities are provided with safe and reliable electric service.

That means every day nearly 9,000 trees are inspected, pruned or removed and vegetation is removed from 545 power poles to prepare for winter storms and summer fire seasons.

THANK YOU for helping us keep the lights on and your community safe by planting the "right tree in the right place!"

References and Credits

Climate Zone maps and information courtesy of *Sunset Western Garden Book*, 2008.

For More Information About Pacific Gas and Electric Company, visit pge.com

Other resources:

- California Tree Selections:
www.selecttree.calpoly.edu
- Planting the Right Tree in the Right Place:
www.arborday.org/trees/righttreeandplace/
- Protecting Your Home from Wildfire:
www.firesafecouncil.org
- Fire Safety Tips:
www.ca.fire.gov/fire_prevention

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To order a free copy of this guide or to get more 'tree and power line' information, contact PG&E at RightTreeRightPlace@pge.com



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