

Exhibit 9- Landscape buffers

Best species of evergreens for Pa. for screening

- Windbreaks and large screens: Eastern White Pine, Scots Pine, Norway Spruce, Eastern Red cedar.
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This is from the following web link: [Types Of Evergreen Trees That Thrive In Pennsylvania | Cultivating Flora](#)

Other details of these species are:

Eastern White Pine (*Pinus strobus*)

Eastern White Pine is one of the most versatile and fast-growing native evergreens in Pennsylvania. It tolerates a range of soils, prefers full sun to partial shade, and can reach 50 to 80 feet tall with a 20 to 40 foot spread.

Practical takeaways:

- Best for large properties, windbreaks, and reforestation.
- Rapid early growth: expect 2 to 3 feet per year under good conditions.
- Requires space; needle drop and soft wood make it less suitable for tightly planted screens.
- Prefers well-drained soil; avoid heavy, waterlogged sites

Scots Pine (*Pinus sylvestris*)

Scots Pine is a hardy, long-lived pine that adapts to many soil types and conditions. It has an attractive orange-brown bark on mature trunks.

Practical takeaways:

- Useful in exposed sites, road edges, and poor soils.
- Moderately fast growth, with mature heights of 30 to 60 feet.
- Tolerant of wind and salt; good for coastal or roadside use.
- Can be used as a specimen or in mixed plantations.

Norway Spruce (*Picea abies*)

Norway Spruce is a hardy, adaptable tree with a broad, pyramidal form. It grows 40 to 60 feet tall and tolerates wet soils better than many pines.

Practical takeaways:

- Excellent for screens and specimen planting.
- Tolerant of urban conditions and salt to a degree.
- Heavy rooting habit; space from foundations.

- Watch for spruce beetles and needlecast; maintain good air circulation.

Eastern Red cedar (*Juniperus virginiana*)

Eastern Red cedar (a juniper) is a rugged evergreen that tolerates dry soils, heat, and urban conditions. Mature form ranges from 20 to 40 feet depending on growing conditions.

Practical takeaways:

- Excellent for narrow screens and wildlife habitat (berries feed birds).
- Very tolerant of poor, rocky soils and salt exposure.
- Can become weedy in some landscapes; manage by pruning if needed.
- Susceptible to cedar-apple rust where apples are nearby; avoid planting adjoining apple orchards if possible.

Additional recommendations from other sites:

Zone 5a · Mountains

Norway Spruce and Eastern White Pine are your best bets. Green Giant is technically hardy but deer pressure is extreme. Expect slower establishment.

What Makes a Good Privacy Tree in PA?

Before we get to specific trees, here's what you're actually looking for in a PA privacy screen:

- **Year-round coverage** — deciduous trees give you privacy in summer but leave you exposed all winter. For most privacy needs, evergreens are the right call.
 - **Zone-appropriate hardiness** — a tree that's marginal in your zone will struggle, look bad, and eventually fail. Always confirm the USDA zone rating before buying.
 - **Deer resistance** — PA deer populations are significant, especially in suburban and rural areas. A non-deer-resistant arborvitae in Chester County is a meal, not a screen.
 - **Mature size that fits your space** — the most common planning mistake is buying a tree without thinking about its mature spread. A 15-foot-wide tree planted 4 feet from a fence is a future problem.
 - **Disease resistance** — Pennsylvania's wet springs and humid summers create conditions for fungal diseases. Some trees (looking at you, Leyland cypress) are beautiful until year 8, then collapse.
- **Best Evergreen Privacy Trees for Pennsylvania**
 - **Green Giant Arborvitae**
 - This is the **gold standard privacy tree in PA**, and it deserves to be. Green Giant (*Thuja standishii* × *plicata*) grows 3–5 feet per year once established, reaches 40–60 feet tall and 12–18 feet wide, and maintains **dense foliage from the ground up** without much pruning.
 - It handles PA's clay soil better than most evergreens, tolerates both full sun and partial shade, and is hardy to zone 5a. It's also **deer-resistant** — a huge deal in Pennsylvania where deer

browsing destroys thousands of arborvitae every winter. (Emerald Green arborvitae, by contrast, is essentially a deer buffet.)

- **Spacing:** Plant 5–6 feet apart for a solid screen within 3–4 years. If you’re not in a rush, 8–10 feet gives each tree room to develop its natural shape.
- **Drawbacks:** Green Giants get big. If your yard is small or the screen is close to a property line, they may overwhelm the space within 10–15 years. For small yards, consider Emerald Green arborvitae or Skip Laurel instead.
- **Eastern White Pine**
 - If you want height **fast** and don’t mind a more natural, open look, white pine (*Pinus strobus*) grows 2–3 feet per year and can reach 50–80 feet tall. It’s native to PA, thrives in zones 3–8, and does well even in poor, acidic soils.
 - White pine works best where you need a windbreak or tall canopy screen rather than a dense ground-level barrier. Lower branches thin naturally with age, so it won’t give you a solid screen from the ground up the way arborvitae does — but for blocking an upper-story view or creating a windbreak along a rural property line, it’s hard to beat for the price.
 - **Spacing:** 8–10 feet for a windbreak; 6 feet if you want a denser screen. Avoid exposed hilltops where ice and wind can break the crown.
- **Norway Spruce**
 - Norway spruce (*Picea abies*) is among the fastest-growing conifers available in PA — 2–3 feet per year — and one of the most wind-resistant. Its strongly pyramidal shape and dense, downward-sweeping branches create a **classic formal screen** that holds its form without pruning.
 - Hardy to zone 3, it thrives across all PA zones including the coldest mountain areas where Green Giant may struggle with deer or ice damage. Mature trees reach 60–80 feet, so give them room.
 - **Spacing:** 10–12 feet for a naturalistic screen; 6–8 feet if you want faster closure. Good choice for large rural properties where mature scale isn’t a concern.
- **Eastern Red Cedar**
 - Eastern red cedar (*Juniperus virginiana*) is a PA native that deserves far more credit than it gets. Growth rate is modest (1–2 feet per year), but it thrives in conditions that would kill most other screening trees: **dry, poor soils, full sun, exposed ridges, road salt spray.**

- Its dense, columnar form provides solid year-round coverage. The blue-gray berries attract cedar waxwings and other birds. Hardy through zone 2, it's essentially indestructible in PA conditions.
- **Best use case:** Difficult sites where other evergreens won't establish — rocky, dry slopes, roadside plantings, clay-heavy fields. Not the right choice for a manicured suburban yard.

How to Design Your Privacy Screen

Row Layout

A single row is the simplest approach: one species, evenly spaced, straight line. This works well for **defined property lines** and is the easiest to maintain. For wider spaces, a **staggered double row** provides thicker coverage and a more natural look. Offset the second row so each tree fills the gap between two trees in the front row. This approach blocks sightlines faster and creates better wind protection.

Mixing Species

A mixed-species screen — for example, alternating Green Giant arborvitae with American holly — looks more natural and provides **insurance against species-specific diseases**. If one species gets hit by a pest or disease, you don't lose your entire screen.

The trade-off is that different species grow at different rates and have different mature sizes, so the screen will look uneven until everything fills in. For most homeowners, a single-species screen is easier to manage and still looks great.

Setback From Property Lines

Check your local ordinances before planting — many PA municipalities have setback requirements for trees and hedges. A common rule is **3–5 feet from the property line**, but this varies significantly by township.

Also think about mature spread. A Green Giant planted 2 feet from the fence line will eventually hang over your neighbor's yard, which creates ongoing friction. Plant at least half the mature spread distance away from the property line — for Green Giant, that means 6–8 feet minimum.

Buy Smaller Stock — It Catches Up Faster Than You Think

I know it's tempting to buy the biggest trees you can afford for instant results, but 3–4 foot nursery stock almost always outperforms 6–7 foot trees within 2–3 years. Smaller trees experience far less transplant shock, establish roots faster, and start putting on height growth sooner. A 3-foot Green Giant

planted in spring will often be taller by year 3 than a 6-footer planted the same day. You'll also spend significantly less money — which means you can plant more trees and close gaps faster.

Planting and Establishing Your Screen

The best time to plant a privacy screen in PA is **early spring (March–April) or early fall (September–October)**. For detailed zone-specific timing, see our [guide to when to plant trees in Pennsylvania](#).

At planting:

- Dig each hole **twice as wide and the same depth** as the root ball. Don't dig deeper — settled soil beneath the tree causes sinking and root flare burial.
- Don't amend the backfill soil. Roots need to grow into your **native clay**, not stay in a pocket of nice potting mix.
- Water deeply at planting — fill the hole with water, let it drain, set the tree, backfill, then water again.
- Mulch 2–3 inches around each tree, keeping mulch **away from the trunk**. No mulch volcanoes.
- For the first year, water deeply once per week during dry stretches. After that, established evergreens are largely self-sufficient in PA's rainfall.

Spacing is the other critical variable. Resist the urge to plant too close — it feels like it'll give faster coverage, but crowded trees develop poor form, compete for resources, and often require removal within 10 years. Follow the species-specific spacing recommendations above.

Cost Comparison

Privacy trees vary widely in price depending on size and species. Here's a rough guide for **5–6 foot nursery stock** (the most common size for screening projects):

Tree	Price Per Tree (approx)	Trees for 50 ft Screen	Total Cost
Green Giant Arborvitae	\$40–80	9–10 (at 5–6 ft spacing)	\$360–800
Emerald Green Arborvitae	\$25–50	13–17 (at 3–4 ft spacing)	\$325–850
Norway Spruce	\$50–100	5 (at 10–12 ft spacing)	\$250–500

Tree	Price Per Tree (approx)	Trees for 50 ft Screen	Total Cost
American Holly	\$60–120	7–8 (at 6–8 ft spacing)	\$420–960
Skip Laurel	\$30–60	10–17 (at 3–5 ft spacing)	\$300–1,020
Eastern White Pine	\$30–60	5–6 (at 8–10 ft spacing)	\$150–360

Eastern White Pine and Norway Spruce offer the **lowest cost per linear foot** of coverage for large properties. For smaller yards where mature size matters, Skip Laurel or Nellie Stevens Holly often provides the best value over a 10-year horizon — no removal cost when they outgrow the space.