

Hedgerow Planting Plan Template

How to use, and how to create your own

Parts of a Template

Reason & Characteristics

Each Template aligns with a goal from the Hedgerows How-To Handbook, and each goal comes with recommended plant characteristics to help accomplish that goal. These are shown in the top-right of each Planting Plan Template.

Plants & Recommended Alternatives

We've pre-selected plants for each template to accomplish a few things:

- Match the recommended plant characteristics for each Template's goals
- Diversity in color, size, shape, and bloom times throughout the hedgerow
- Ease and success in planting and growth

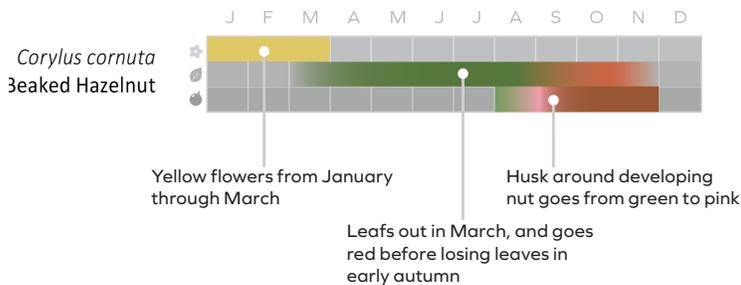
Each plant has an icon to help locate it within the larger template illustration and give a preview of its colors, as well as a number to note how many we placed in that template.



You might prefer to customize based on availability, price, increased variety along your hedgerow, or other personal considerations, so we've included recommended alternatives for swapping in and out.

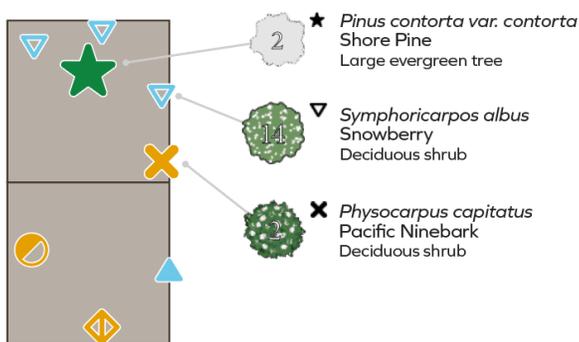
Fruit, Flower, and Foliage Diagrams

These show the color changes throughout the year:



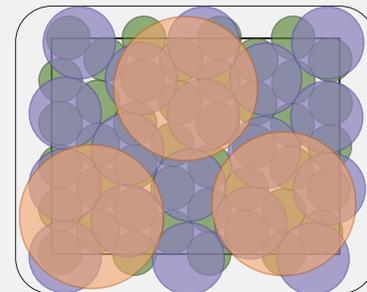
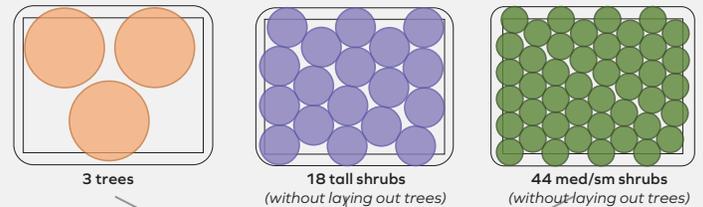
Planting Placement Diagrams

The large illustrations for each Template best show the overall layout and effect of the planting, but the density of the foliage and canopy are shown years into their growth. We've included these smaller planting plans with symbols for each species to better show where each is actually planted (or the center of each plant).



How to Space Plants

When designing your hedgerow, start with circles to represent the spacing for each type/size of plant (e.g. small shrubs vs. trees) rather than the size of the plants themselves. Using the recommended spacing, the center of one tree (large, orange circles here) should be 10 feet from the center of another tree. When laying out large shrubs (medium, purple circles) in the same way, those circles should not overlap one another, but can fill in and overlap the trees' spacing.

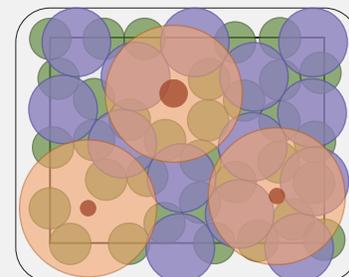
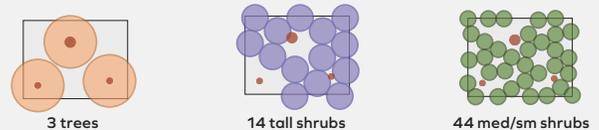


Total possible plants, ignoring impossible overlap

The spacing recommendations ensure the center of each plant is a certain distance from another—the actual plants you choose might be larger or smaller than their spacing circles.



When you drop in the actual widths of your chosen plants (we suggest using the height and width of the plant at at least around 8 years maturity), do so from the largest category to smallest in order to get a sense of what will fit. Remember, two trees spaced 10 feet apart might not require the same amount of space underneath. One could be bushy and wide near the ground, the other could have a narrow trunk and a 20-foot spread in the canopy, which will change the plants you choose to place around and under it.



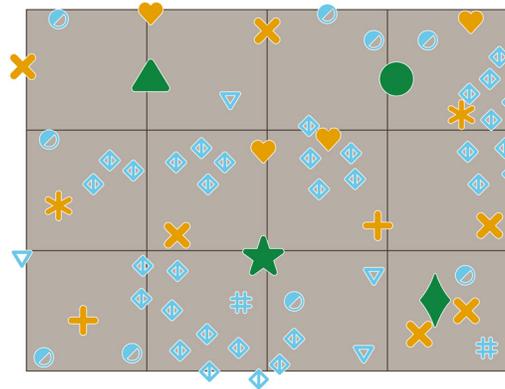
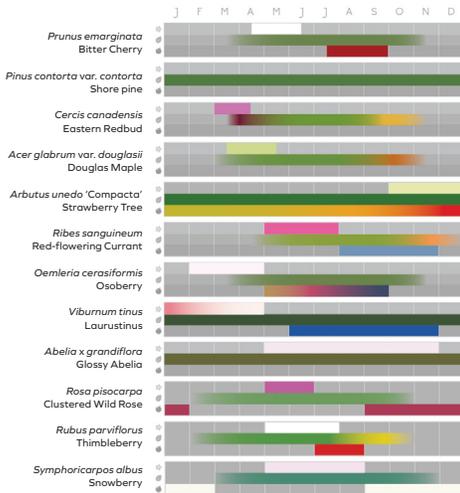
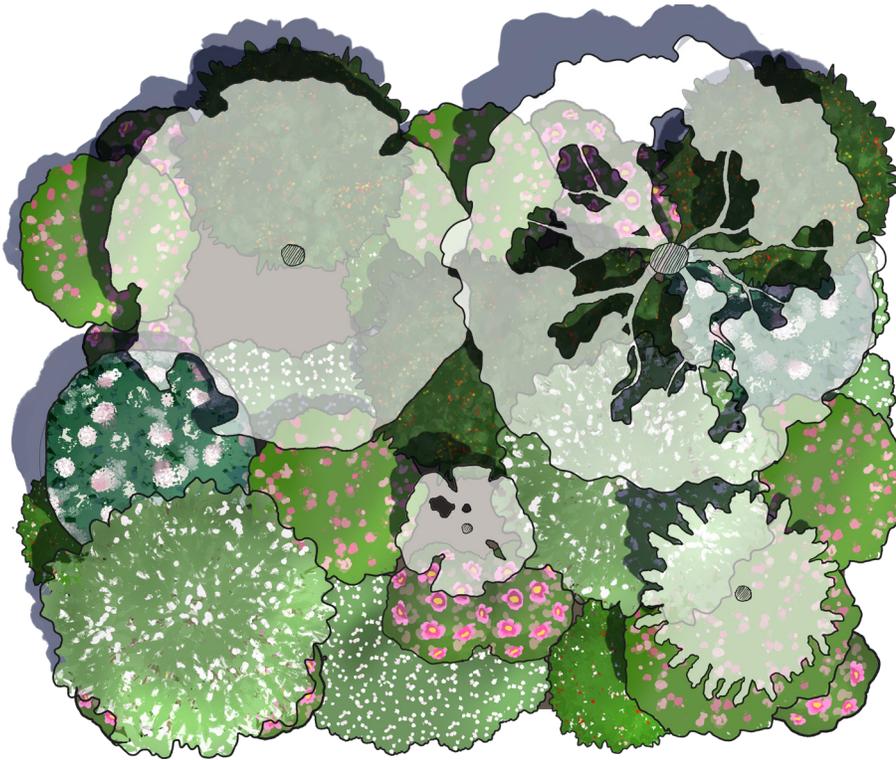
Habitat Block Template

Densely spaced - 20'x15' - 8-10 years

Reason: Habitat for wildlife, pollinators, and natural pest enemies

Key Plant Characteristics: Berries, fruit & nuts, Foliage at lower & ground levels, Larval hosts, Pollinator attracting, Shoulder-season blooming, Thicket-forming / dense woody structure

Spacing / Plant #: Mixed height, high density



Notes:

All hedgerows provide cover and act as corridors for wildlife, linking scattered habitats together. The diversity of hedgerow plant species also supports biodiversity of animals that support healthy crops in numerous ways. More diversity in structure (including height & growth habit) and flower shape, color, and bloom time provides support for a diversity of organisms and makes the hedgerow more resilient.

Native pollinators will appreciate the nearly year-round blooming in this plant selection:

late fall- and winter-blooming Dwarf Strawberry Tree and Laurustinus, early-blooming (Feb) Osoberry, and late-summer/fall-blooming Glossy Abelia support early and late pollinators.

Native roses provide nesting material for leafcutter bees, and are a host plant for many butterflies. Thimbleberry and Bitter Cherry provide food for birds, mammals, and pollinators such as bumblebees, mason bees, and early-emerging mining bees.

Trees

- 1 ▲ *Prunus emarginata*
Bitter Cherry
Deciduous tree
- 1 ◆ *Pinus contorta* var. *contorta*
Shore Pine
Evergreen tree
- 1 ● *Cercis canadensis*
Eastern Redbud
Deciduous tree
- 1 ★ *Acer glabrum* var. *douglasii*
Douglas maple
Deciduous tree

Recommended alternatives

Acer macrophyllum - Bigleaf Maple
Prunus virginiana - Chokecherry
Populus balsamifera ssp. *trichocarpa* - Black Cottonwood
Malus fusca - Pacific Crabapple
Frangula purshiana - Cascara
Crataegus douglasii - Black Hawthorn
Carpinus japonica - Japanese Hornbeam
Cercis occidentalis - Western Redbud

Large Shrubs

- 4 ♥ *Arbutus unedo* 'Compacta'
Dwarf Strawberry Tree
Evergreen shrub
- 6 ✕ *Ribes sanguineum*
Red-flowering Currant
Deciduous shrub
- 2 + *Oemleria cerasiformis*
Osoberry
Deciduous shrub
- 2 * *Viburnum tinus*
Laurustinus
Evergreen shrub

Recommended alternatives

Amelanchier alnifolia - Serviceberry
Ceanothus sanguineus - Redstem Ceanothus
Cornus sericea ssp. *occidentalis* - Red-osier Dogwood
Holodiscus discolor - Oceanspray
Sambucus racemosa - Red Elderberry
Berberis spp. - Barberries (evergreen species)
Pyracantha spp. - Firethorns

Medium/low Shrubs

- # *Abelia x grandiflora*
Glossy Abelia
Semi-evergreen shrub
- 1 ○ *Rosa nutkana* / *R. pisocarpa*
Nootka or Clustered Wild Rose
(Based on soil conditions)
Deciduous shrub
- 4 ▼ *Rubus parviflorus*
Thimbleberry
Deciduous shrub
- 32 ◆ *Symphoricarpos albus*
Snowberry
Deciduous shrub

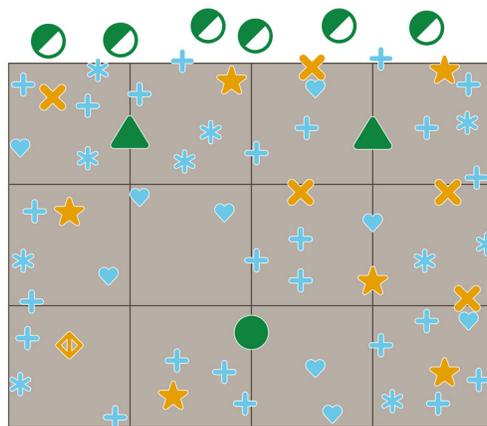
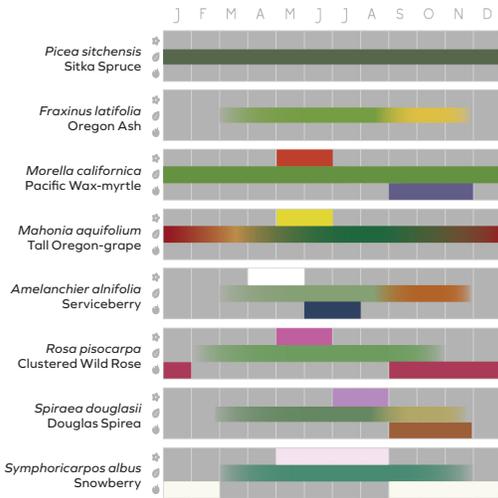
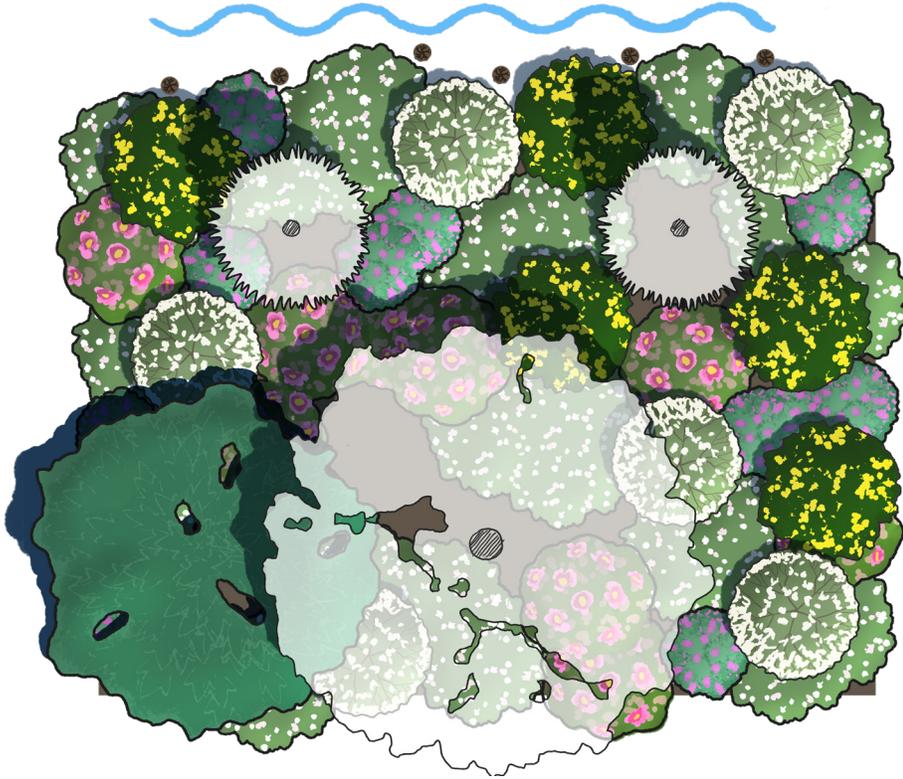
Riparian Block Template

Densely spaced - 20'x15' - 8-10 years

Reason: Water-quality protection & riparian buffer

Key Plant Characteristics: Foliage at lower & ground levels, Shade-providing, Soil-binding/erosion-control properties, Thick-et-forming

Spacing / Plant #: Mixed height, high density

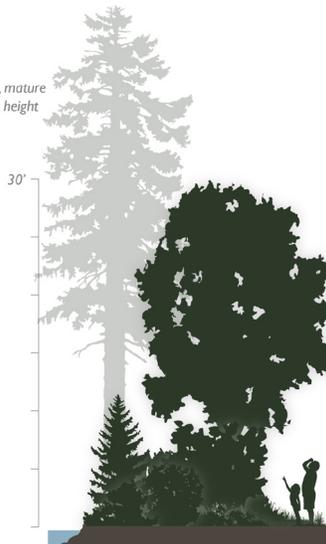


Notes:

Planting taller trees on the stream side of your hedgerow won't make a clear difference initially, but the shade those plants will provide to the stream will help regulate the summer water temperature, critical for salmon and other aquatic creatures. Warm water holds less oxygen and increases the metabolic rates of aquatic organisms.

Willow stakes are especially useful for growing quickly to prevent erosion on the slopes & providing shade over the waterway. Dense roots of plants chosen here prevent erosion and provide additional habitat.

Future, mature spruce height



Trees

- 2 ▲ *Picea sitchensis*
Sitka Spruce
Evergreen tree
- 1 ● *Fraxinus latifolia*
Oregon Ash
Deciduous tree
- 6 ① *Salix sitchensis*
Sitka Willow
(Live stakes*)
Deciduous tree

Recommended alternatives

Pseudotsuga menziesii - Douglas-fir
Abies grandis - Grand Fir
Salix spp. - Willow species
Crataegus douglasii - Black Hawthorn
Frangula purshiana - Cascara
Alnus rubra - Red Alder
Prunus emarginata - Bitter Cherry
Malus fusca - Pacific Crabapple

Large Shrubs

- 1 ◆ *Morella californica*
Pacific Wax-myrtle
Evergreen shrub
- 5 ✕ *Mahonia aquifolium*
Tall Oregon-grape
Evergreen shrub
- 6 ★ *Amelanchier alnifolia*
Serviceberry
Deciduous shrub

Recommended alternatives

Cornus sericea ssp. *occidentalis* - Red-osier Dogwood
Physocarpus capitatus - Pacific Ninebark
Lonicera involucrata - Black Twinberry
Corylus cornuta - Beaked Hazel

Medium/low Shrubs

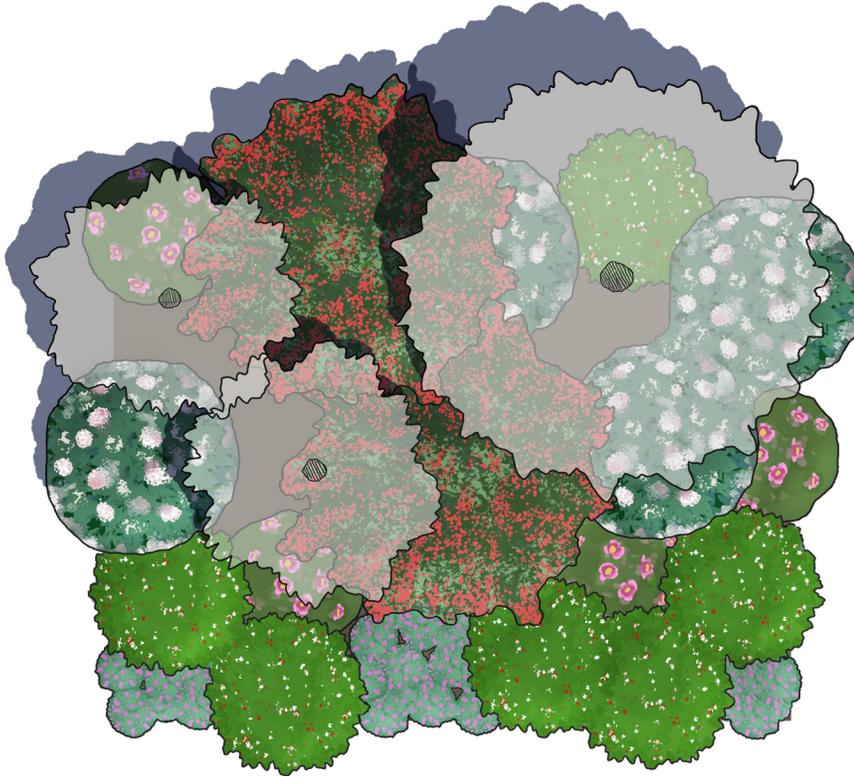
- 10 ♥ *Rosa nutkana* / *R. pisocarpa*
Nootka or Clustered Wild Rose
(Based on soil conditions)
Deciduous shrub
- 10 ✱ *Spiraea douglasii*
Douglas Spirea
Deciduous shrub
- 25 + *Symphoricarpos albus*
Snowberry
Deciduous shrub

Windbreak / Dust / Odor Block Template

Densely spaced - 20'x15' - 8-10 years

Reason: Wind protection, management of odor and/or dust, privacy

Key Plant Characteristics: Dense foliage, Foliage at lower & ground levels, Short/ground-hugging understory, Tall evergreen plants



Trees

-  *Pseudotsuga menziesii*
Douglas-fir
Evergreen tree
-  *Abies grandis* var. *grandis*
Grand Fir
Deciduous tree

Recommended alternatives

Picea sitchensis - Sitka Spruce (for wet conditions)
Arbutus unedo - Strawberry Tree (not for wet)
Populus balsamifera ssp. *trichocarpa* - Black Cottonwood

Large Shrubs

-  *Viburnum tinus*
Laurustinus
Evergreen shrub
-  *Pyracantha coccinea*
Scarlet Firethorn
Evergreen shrub

Recommended alternatives

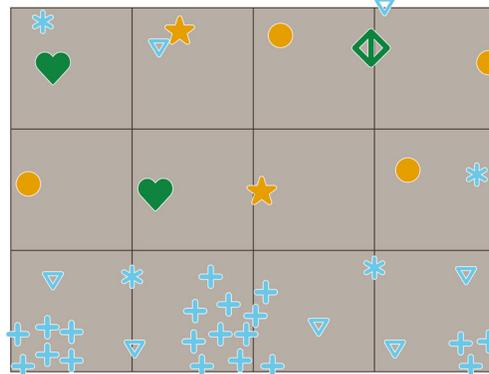
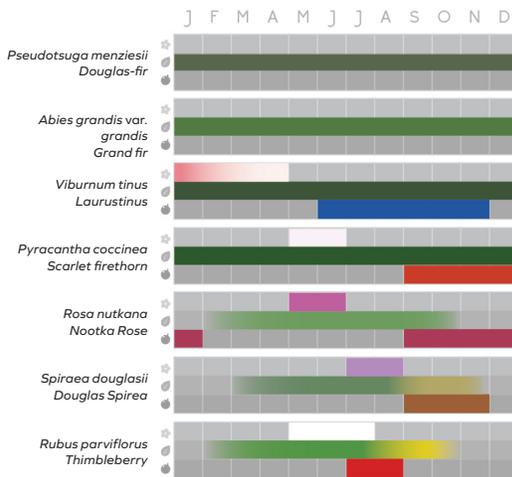
Corylus cornuta - Beaked Hazel
Holodiscus discolor - Oceanspray
Pyracantha fortuneana 'Graber's' - Graber's

Medium/low Shrubs

-  *Rosa nutkana* / *R. pisocarpa*
Nootka or Clustered Wild Rose
(Based on soil conditions)
Deciduous shrub
-  *Spiraea douglasii*
Douglas Spirea
Deciduous shrub
-  *Rubus parviflorus*
Thimbleberry
Deciduous shrub

Recommended alternatives

Symphoricarpos albus - Snowberry
Rhus trilobata - Skunkbush Sumac



Notes:

The focus of this goal is maintaining a diversity of plant species and multiple layers/strata that intercept windblown particles & aerosols. Some designs for odor control use hedgerows on both the upwind and downwind sides. Odor compounds on dust particles attach to leaf surfaces and are broken down by bacteria that naturally live on leaf surfaces. A diversity of leaf types in this template facilitates this process through all the seasons—note the use of tall evergreens with various leaf forms and sizes.

The choices here will result in quick coverage, using mid-sized and

low-growing plants that are equally successful in the full sun when first planted, and then adapt to shade that will be present in some parts of the design once the trees have matured. The Laurustinus offers evergreen foliage from the ground up, and may initially grow faster than the Grand Fir, but will ultimately fit below it; as the fir matures, its lower branches tend to lose foliage, offering more space and light to the Laurustinus.

Increase surface area to trap particles by arranging plants in rows with space between each.

Pesticide Drift Interception Block Template

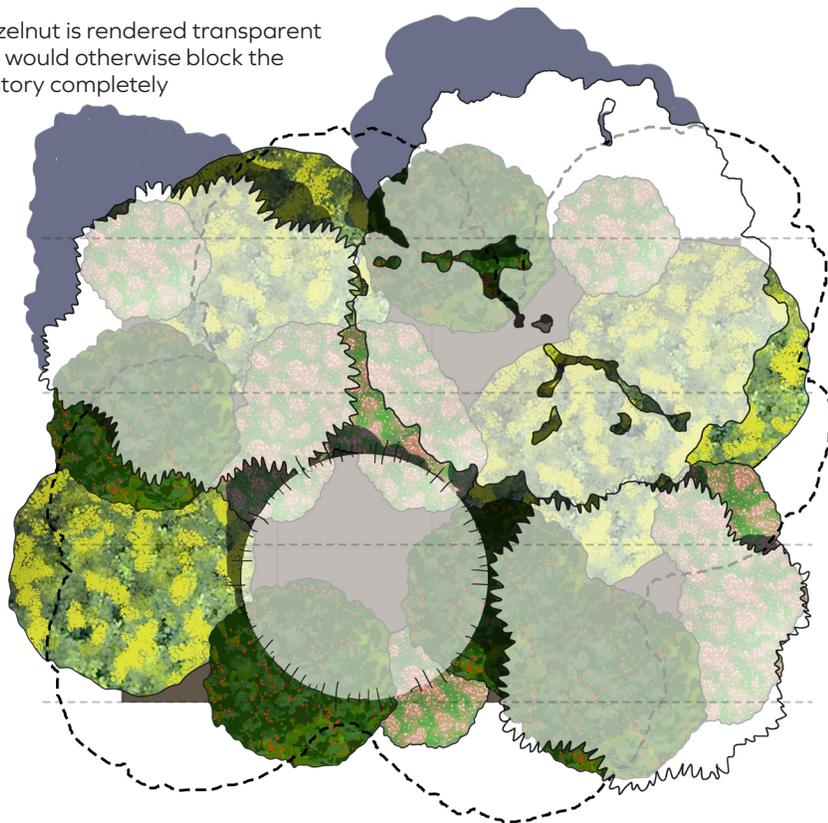
Moderately spaced - 20'x15' - 8-10 years

Reason: Keeping pesticide contained to spray area

Key Plant Characteristics: High overall optical porosity, Tall evergreen plants

Spacing / Plant #: Mixed height, medium density

*the hazelnut is rendered transparent here; it would otherwise block the understory completely



Trees

- *Pinus contorta* var. *contorta*
Shore Pine
Evergreen tree
- ★ *Fraxinus latifolia*
Oregon Ash
Deciduous tree
- ▽ *Calocedrus decurrens*
Incense Cedar
Evergreen tree

Recommended alternatives

- Pseudotsuga menziesii* - Douglas-fir
- Picea sitchensis* - Sitka Spruce
- Acer glabrum* var. *douglasii* - Douglas Maple

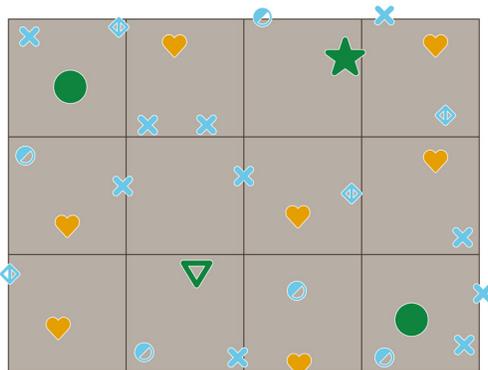
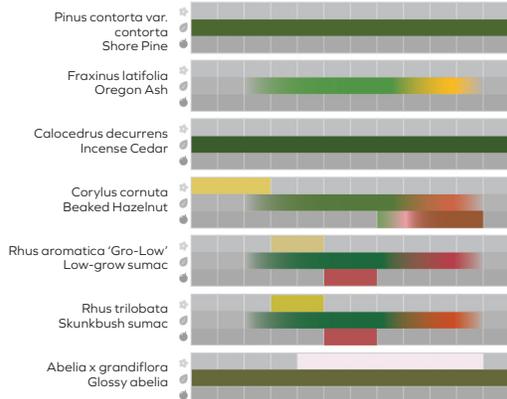
Large Shrubs

- ♥ *Corylus cornuta*
Beaked Hazelnut
Deciduous shrub

Medium/low Shrubs

- ◇ *Rhus aromatica* 'Gro-Low'
Low-grow Sumac
Deciduous shrub
- *Rhus trilobata*
Skunkbush Sumac
Deciduous shrub
- ✕ *Abelia x grandiflora*
Glossy Abelia
Semi-evergreen shrub

J F M A M J J A S O N D



Notes:

Unlike solutions for wind, dust, or odor, keeping pesticide from drifting requires a heavily-planted, but less-foliage-dense hedgerow. More pesticide is caught when aerosols are able to pass through several layers of foliage (rather than hit a solid mass and be sent up and over the hedgerow).

Planting rows are shown on this template; leaving a little space between the trees and larger shrubs when planting increases the surface area exposed to pesticide-laden air until the hedgerow knits together (although you can trim down the rows to keep them distinct).

Plants selected for this template offer foliage coverage from the high

canopy all the way to the ground. The predominance of deciduous trees and tall shrubs, as well as conifers with more open forms when mature, will lead to maximization of each row's interception of drift before it can pass through to be intercepted and filtered by the subsequent row. The trees and large shrubs are not especially attractive to pollinators, limiting beneficial insects' exposure to pesticide drift caught in the foliage.

Living Fence Block Template

Densely spaced - 20'x15' - 8-10 years

Reason: Livestock exclusion, privacy

Key Plant Characteristics: Livestock support & browse, Shade-providing / canopy-forming, Tall evergreen plants, Thicket-forming / dense woody structure, Thorns, prickles/prickly foliage, spurs

Spacing / Plant #: Mixed height, high density



Trees

-  *Pinus contorta* var. *contorta*
Shore Pine
Evergreen tree
-  *Salix* spp.
Willow species
Deciduous tree
-  *Crataegus suksdorfii*
Black Hawthorn
Deciduous tree

Recommended alternatives

Malus fusca - Pacific Crabapple
Fraxinus latifolia - Oregon Ash (especially when wet)
Alnus rubra - Red Alder
Picea sitchensis - Sitka Spruce
Populus balsamifera ssp. *trichocarpa* - Black Cottonwood

Large Shrubs

-  *Mahonia aquifolium*
Tall Oregon-grape
Evergreen shrub
-  *Morella californica*
Pacific Wax-myrtle
Evergreen shrub

Recommended alternatives

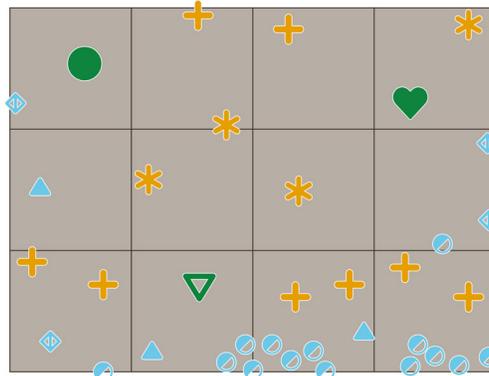
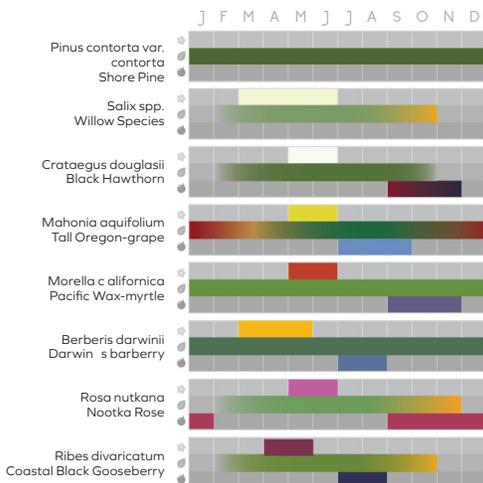
Physocarpus capitatus - Pacific Ninebark
Viburnum tinus - Laurustinus

Medium/low Shrubs

-  *Berberis darwinii*
Darwin's Barberry
Deciduous shrub
-  *Rosa nutkana* / *R. pisocarpa*
Nootka or Clustered Wild Rose
(Based on soil conditions)
Deciduous shrub
-  *Ribes divaricatum*
Coastal Black Gooseberry
Deciduous shrub

Recommended alternatives

Rubus parviflorus - Thimbleberry
Symphoricarpos albus - Snowberry



Notes:

A living fence (aka shelterbelt) can provide a few very different benefits for livestock. A core of dense, browse-deterrent, thicket-forming shrubs works as a barrier, while a palatable edge provides forage with needed minerals and nutrients. Willow bark provides selenium, zinc, and salicin (an analgesic); hazel contains copper; many trees contain condensed tannins, which provide protein and parasite control.⁶⁴

As the hedgerow matures, lower branches may become sparser as lower branches get shaded from above. Maintain density and ensure the thicket qualities that form a barrier are preserved in the lower levels of the planting over time by planting species recommended on the Sortable Plant Options Table under category 4. "Understory Shrubs/Ferns for Shade."

In addition to inclusion of plants that provide beneficial browse, **exclude** plants that are potentially harmful to livestock. Avoid including both wild

and cultivated cherries & plums (*Prunus* spp.); apples & crabapples (*Malus* spp.); and pears (*Pyrus* spp.). These three genera contain cyanogenic glycosides, chemical compounds that release hydrogen cyanide when chewed or digested (see Appendix C).

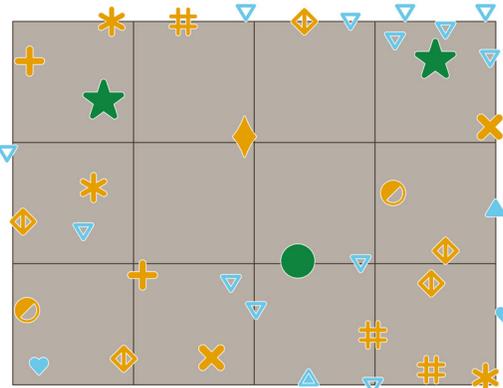
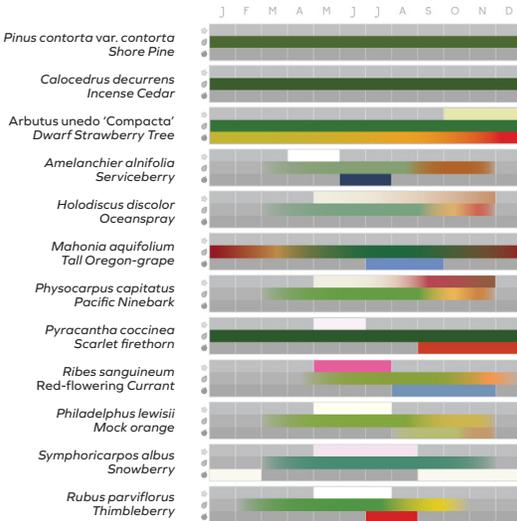
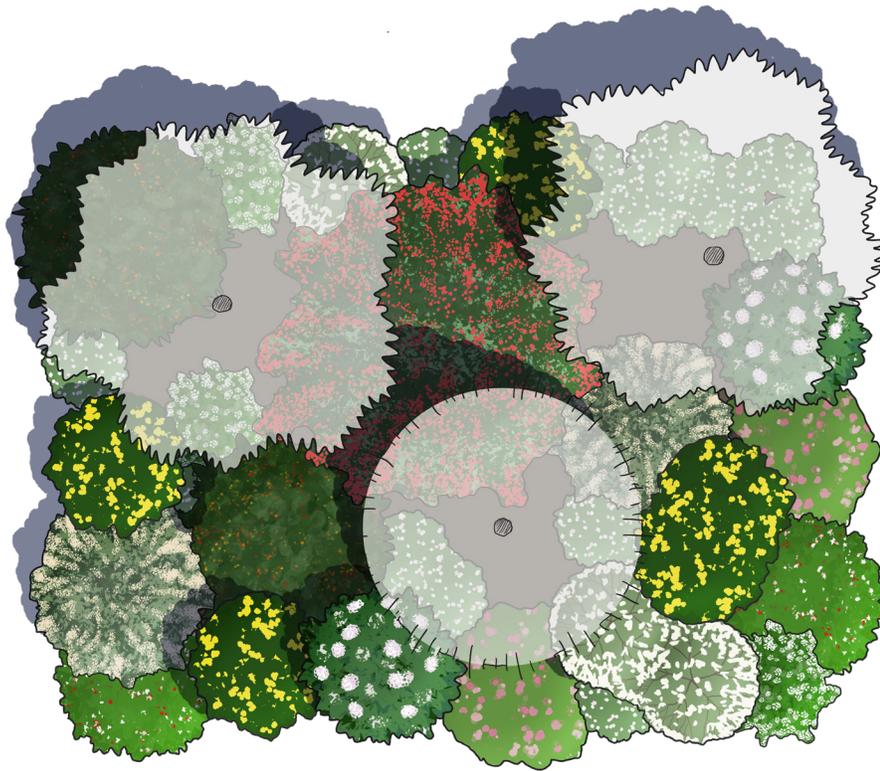
Design tips:

- Place along paddock divisions & perpendicular to the prevailing winds.
- Living fences designed for shading are best oriented east to west, but for winter protection, north-to-south orientation is best. However, if winter protection is needed but the only possible orientation runs east to west, then favor planting more deciduous shrubs and trees to prevent frost pockets and allow more sunlight.
- Gaps from underperforming, dead or dying plants undermine the hedgerow's function and must be replanted with fast-growing species immediately.

Close to Home / "Top Picks"

Densely spaced - 20'x15' - 8-10 years

Reason: If you're between "types," aren't sure what suits your needs, or want diversity for viewing wildlife from your home, these are our favorite plants for growth, benefits, beauty, and are widely available for sale.



Trees

- ★ *Pinus contorta* var. *contorta*
Shore Pine
Large evergreen tree
- *Calocedrus decurrens*
Incense Cedar
Large evergreen tree

Large

- + *Arbutus unedo* 'Compacta'
Dwarf Strawberry Tree
Evergreen shrub
- # *Amelanchier alnifolia*
Serviceberry
Deciduous shrub
- *Holodiscus discolor*
Oceanspray
Deciduous shrub
- ◇ *Mahonia aquifolium*
Tall Oregon-grape
Evergreen shrub
- × *Physocarpus capitatus*
Pacific Ninebark
Deciduous shrub
- ◆ *Pyracantha coccinea*
Scarlet firethorn
Deciduous shrub
- * *Philadelphus lewisii*
Mock orange
Deciduous shrub
- ▲ *Ribes sanguineum*
Red-flowering Currant
Deciduous shrub

Medium/low Shrubs

- ▽ *Symphoricarpos albus*
Snowberry
Deciduous shrub
- ♥ *Rubus parviflorus*
Thimbleberry
Deciduous shrub

Recommended alternatives

- Rosa nutkana* - Nootka Rose
- Rosa pisocarpa* - Clustered Wild Rose
- Viburnum* spp - Deciduous Viburnum
- Berberis thunbergii* - Japanese barberry

Notes:

This template features a collection of favorite "tried-and-true" hedgerow plants that are adaptable for a wide variety of settings. The plant selection would support multiple benefits, including a privacy screen, protection from wind, habitat for pollinators and birds, and year-round color and beauty.

It's a great choice to place near a residence, as an alternative "fence" near a property line or to buffer from a roadway, or near vegetable

gardens to support pollinators, beneficial insects, and other pest enemies.

Our food-crop add-on design would further enhance this template, as this hedgerow would provide a backdrop for rows of dwarf fruit trees or berries. Further, this hedgerow could provide structure for a small crop of hops or vines that attract pollinators.