

**Riparian Area Impact Assessment and
Restoration Plan
Atlantic Sunrise Project
Schuylkill County**

July 2017

Prepared for:

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Tree and Shrub Planting List

APPENDIX B
LIST OF APPROVED SPECIES FOR REPLANTING

| TREES | | | | | | | |
|--|---------|--------------------------|-------------|-----------------|------------|--------------------|--|
| Common/ Scientific Name | Region | ¹ Wet Code | Soil pH | Flood Tolerance | Height(ft) | Shade Tolerance | Wildlife Value |
| Red maple <i>Acer rubrum</i> | P, R, A | FAC | 5.5- 7.0 | tolerant | 75-100 | tolerant | food source-fruits and young shoots |
| *Silver maple <i>A. saccharinum</i> | P, R, A | FACW | 4.0- 6.5 | tolerant | 75-100 | intermediate | food source-seeds and young twigs |
| Sugar maple <i>A. saccharum</i> | R, A | FACU- | 4.0- 7.0 | intolerant | 75-100 | very tolerant | food source-seeds and twigs |
| Serviceberry <i>Amelanchier arborescens/laevis/ canadensis</i> | P, R, A | FAC- | 4.5- 7.0 | tolerant | 20-40 | intermediate | food source-fruit, twigs and leaves |
| Pawpaw <i>Asimina triloba</i> | P, R, A | FACU+ | 5.0- 7.0 | intolerant | 20-35 | tolerant | food source-fruit and leaves; host plant for zebra swallowtail |
| **Yellow birch <i>Betula alleghaniensis</i> | P, R, A | FAC | 4.5- 7.0 | intolerant | 60-100 | intermediate | food source-seeds, young twigs and shoots and catkins |
| Black (Sweet) birch <i>B. lenta</i> | R, A | FACU | 5.0- 7.0 | intolerant | 50-75 | intermediate | food source-catkins, buds, seeds, leaves and |
| River birch <i>B. nigra</i> | P, R | FACW | 4.5- 7.5 | tolerant | 40-70 | intolerant | food source-seeds, buds, young twigs and foliage |
| *American hornbeam <i>Carpinus caroliniana</i> | P, R, A | FAC | 4.0- 7.5 | intolerant | 35-50 | very tolerant | food source-catkins, buds, seeds, leaves and |
| **Bitternut hickory <i>Carya cordiformis</i> | P, R, A | FACU+ | 6.5- 7.5 | intermediate | 75-100 | intolerant | bitter nuts not favored as much as other hickories |
| **Shagbark hickory <i>C. ovata</i> | P, R, A | FACU- | 4.0- 8.0 | intolerant | 75-100 | intermediate | food source-twigs and nuts |
| *Redbud <i>Cercis canadensis</i> | P, R | FACU- | 4.5- 7.0 | intolerant | 20-35 | tolerant | food source-seeds, foliage and flower pollen for honeybees |
| Hackberry <i>Celtis occidentalis</i> | P, R | FACU | 6.0- 8.0 | intermediate | 75-100 | intermediate | food source-fruits and twigs; shelter and nesting sites |
| **Persimmon <i>Diospyros virginiana</i> | P | FAC- | 5.0- 7.0 | intermediate | 50-75 | tolerant | food source-fruits, twigs and nectar |
| American beech, <i>Fagus grandifolia</i> | P, R, A | FACU | 4.0- 6.5 | very intolerant | 75-100 | very tolerant | food source-nuts |
| Honey-locust <i>Gleditsia triacanthos</i> | R, A | FAC- | 6.0- 8.0 | intermediate | 50-75 | intolerant | food source-seeds and pods |
| **Kentucky coffee- tree <i>Gymnocladus dioica</i> | A | FACU- | 6.0- 8.0 | intermediate | 75-100 | intolerant | low appeal to wildlife |

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| Black walnut <i>Juqlans nigra</i> | P, R | FACU | 5.5- 8.0 | intermediate | 75-100 | intolerant | food source-twigs and nuts |
| Tuliptree/poplar <i>Liriodendron tulipifera</i> | P, R, A | FACU | 4.5- 6.5 | intermediate | 75-100 | intermediate | food source-nectar and seeds |
| Black-gum <i>Nyssa sylvatica</i> | P, R, A | FAC | 4.5- 6.0 | intermediate | 50-75 | intolerant | food source-fruits, twigs and nectar |
| * **Hop-hornbeam <i>Ostrya virginiana</i> | P, R | FACU- | 4.0- 7.5 | very intolerant | 35-50 | very tolerant | food source-buds, catkins and seeds |
| Eastern white pine <i>Pinus strobus</i> | P, R, A | FACU | 4.0- 6.5 | intolerant | 75-100 | intermediate | high value food source- needles and seeds; used for cover |
| Sycamore <i>Platanus occidentalis</i> | P, R, A | FACW- | 5.0- 6.5 | intermediate | 75-100 | intermediate | moderate value for cover and nesting; food source- fruits |
| Eastern cottonwood <i>Populus deltoides</i> | P, A | FAC | 6.5- 7.5 | tolerant | 75-100 | intolerant | food source-bark, twigs, leaves and buds |
| Large-toothed aspen <i>P. grandidentata</i> | P, R, A | FAC- | 5.0- 6.5 | intolerant | 50-75 | very intolerant | food source- bark, twigs, leaves, catkins and buds |
| Wild black cherry <i>Prunus serotina</i> | P, R, A | FACU | 5.0- 7.5 | very intolerant | 50-75 | intolerant | high value food source- fruits, twigs and nectar |
| White oak <i>Quercus alba</i> | P, R, A | FACU- | 4.5- 7.0 | intolerant | 75-100 | intermediate | high value food source- acorns and twigs |
| Swamp white oak <i>Q. bicolor</i> | P, R | FACW+ | 4.5- 6.5 | tolerant | 75-100 | intermediate | food source-acorns and twigs |
| **Chestnut oak <i>Q. montana</i> | P, R | UPL | 4.5- 7.0 | intolerant | 50-75 | intermediate | food source-acorns and twigs |
| Pin oak <i>Q. palustris</i> | P, R, A | FACW | 4.5- 6.5 | tolerant | 50-75 | intolerant | food source-acorns and twigs |
| Northern red oak <i>Q. rubra</i> | P, R, A | FACU- | 4.5- 6.5 | intermediate | 75-100 | intermediate | medium value for nesting and food source-acorns |
| *Black willow <i>Salix nigra</i> | P, R, A | FACW+ | 5.0- 8.0 | very tolerant | 35-50 | very intolerant | food source-buds, fruit, and twigs |
| Sassafras <i>Sassafras albidum</i> | P, R, A | FACU- | 4.5- 7.0 | very intolerant | 35-50 | intolerant | food source-twigs and fruits |
| American basswood <i>Tilia americana</i> | P, R, A | FACU | 4.5- 7.5 | intolerant | 75-100 | tolerant | food source-twigs, seeds and nectar |
| **Red (Slippery) elm <i>Ulmus rubra</i> | P, R, A | FAC | 5.5- 7.0 | tolerant | 50-80 | intermediate | food source-seeds and twigs |

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| SMALL TREES/SHRUBS | | | | | | | |
|---|---------|--------------------------|-------------|-----------------|------------|--------------------|--|
| Common/ Scientific Name | Region | ¹ Wet Code | Soil pH | Flood Tolerance | Height(ft) | Shade Tolerance | Wildlife Value |
| **Smooth alder <i>Alnus serrulata</i> | P, R, A | OBL | 5.0- 7.0 | very tolerant | 12-20 | very intolerant | food source-fruit |
| Red chokeberry <i>Photinia</i> (<i>Aronia</i>) <i>arbutifolia</i> | P, R, A | FACW | 5.5- 7.5 | very tolerant | 6-12 | intermediate | very low wildlife value |
| Black chokeberry <i>P. melanocarpa</i> | P, R, A | FAC | 6.5- 8.0 | very tolerant | 3-6 | intermediate | food source-seeds and twigs |
| Buttonbush <i>Cephalanthus</i> <i>occidentalis</i> | P, R, A | OBL | 5.5- 8.5 | very tolerant | 6-12 | very intolerant | food source-fruit |
| Summersweet <i>Clethra alnifolia</i> | P | FAC+ | 4.5- 6.5 | very tolerant | 6-12 | tolerant | food source-fruits and twigs |
| Silky dogwood <i>Cornus amomum</i> | P, R, A | FACW | 5.0- 7.0 | very tolerant | 6-12 | intolerant | food source-fruits |
| Gray dogwood <i>C. racemosa</i> | P, R, A | FAC- | 5.0- 7.0 | intermediate | 6-12 | tolerant | food source-fruits; cover |
| Red-osier dogwood <i>C. sericea</i> | P, R, A | FACW+ | 6.0- 8.5 | very tolerant | 6-12 | intermediate | food source-fruits, buds, and twigs |
| **Amer. hazelnut <i>Corylus americana</i> | P, R, A | FACU- | 5.0- 7.0 | intolerant | 6-12 | tolerant | food source-nuts (higher nutritional value than acorns and beechnuts) |
| Witchhazel <i>Hamamelis</i> <i>virginiana</i> | P, R, A | FAC- | 4.5- 6.0 | intolerant | 20-35 | very tolerant | leaves toxic to some animals |
| Winterberry <i>Ilex verticillata</i> | P, R, A | FACW+ | 4.5- 7.5 | very tolerant | 6-15 | intermediate | intermediate wildlife value |
| **Mountain laurel <i>Kalmia latifolia</i> | P, R, A | FACU | 4.5- 5.5 | intolerant | 12-20 | very tolerant | high value as food esp. for winter browse for |
| Common spicebush <i>Lindera benzoin</i> | P, R, A | FACW- | 4.5- 6.0 | intermediate | 6-12 | very tolerant | high value as food source fruits and leaves; host plant for spicebush swallowtail butterfly |
| Northern bayberry <i>Morella</i> (<i>Myrica</i>) <i>pensylvanica</i> | P, R | FAC | 5.5- 8.0 | very tolerant | 6-12 | intolerant | food source-fruits |
| **Ninebark <i>Physocarpus</i> <i>opulifolius</i> | P, R, A | FACW- | 4.5- 6.5 | very tolerant | 6-12 | intolerant | food source-fruit |
| **Rosebay rhododendron <i>Rhododendron maximum</i> | P, R, A | FAC | 4.0- 5.5 | tolerant | 20-35 | intolerant | food source-buds and twigs (winter browse) |
| **Swamp azalea <i>R. viscosum</i> | P | OBL | 4.0- 7.0 | very tolerant | 6-12 | intermediate | food source-nectar for hummingbirds and butterflies |
| Staghorn sumac <i>Rhus typhina</i> | P, R, A | None | 4.5- 7.0 | intolerant | 35-50 | intermediate | food source-fruit |
| **Swamp rose <i>Rosa palustris</i> | P, R, A | OBL | 4.0- 7.0 | very tolerant | 4-10 | intolerant | food source-fruit |
| *Pussy willow <i>Salix discolor</i> | P, R, A | FACW | 4.0- 7.0 | very tolerant | 20-35 | very intolerant | high value as food source |
| Sandbar willow <i>Salix</i> <i>exigua (interior)</i> | P, R, A | OBL | 6.0- 8.5 | very tolerant | 15-20 | very intolerant | food source-fruits and twigs |

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| **Silky willow <i>Salix sericea</i> | P, R, A | OBL | 5.0- 7.0 | very tolerant | up to 12' | intermediate | food source – foliage and nectar |
| American elder <i>Sambucus canadensis</i> | P, R, A | FACW- | 5.0- 7.0 | very tolerant | 6-12 | intermediate | high value food source- fruit, twigs and leaves |
| Meadowsweet <i>Spiraea latifolia</i> | P, A | FACW+ | 6.5- 7.5 | very tolerant | 3-6 | intermediate | food source-fruit and twigs |
| Highbush blueberry <i>Vaccinium corymbosum</i> | P, R, A | FACW- | 4.5- 7.5 | very tolerant | 6-12 | tolerant | food source-fruit |
| **Witherod <i>Viburnum cassinoides</i> | P, R, A | FACW | 5.0- 7.0 | very tolerant | 6-12 | tolerant | food source-fruit |
| Southern arrowwood <i>V. dentatum</i> | P | FAC | 5.0- 6.5 | tolerant | 6-12 | tolerant | food source-fruit |
| Nannyberry <i>V. lentago</i> | P, A | FAC | 5.0- 7.0 | intolerant | 20-35 | intermediate | food source – fruit and twigs |
| Blackhaw <i>V. prunifolium</i> | P, R, A | FACU | 5.0- 7.5 | very intolerant | 20-35 | intolerant | food source – fruit |
| Northern arrowwood <i>V. recognitum</i> | P, R, A | FACW- | 5.0- 7.0 | tolerant | 6-12 | tolerant | food source-fruit and nectar and pollen of the flowers |

Pennsylvania Department of Environmental, Bureau of Watershed Management. (2010). Riparian Forest Buffer Guidance, Document Number 394-5600-001. Online at: <http://www.elibrarv.deo.state.pa.us/dsweb/Get/Document-82308/394-5600-001.pdf> Accessed September 28, 2016.
Key for Appendix B:

* Short lived: Trees < 100 years Shrubs < 20 years

** May be hard to find in a nursery

P = Piedmont Province

R = Ridge and Valley Province

A = Allegheny Plateau Province

OBL = Obligate Wetland

FACW = Facultative Wetland

FACU = Facultative Upland

UPL = Obligate Upland