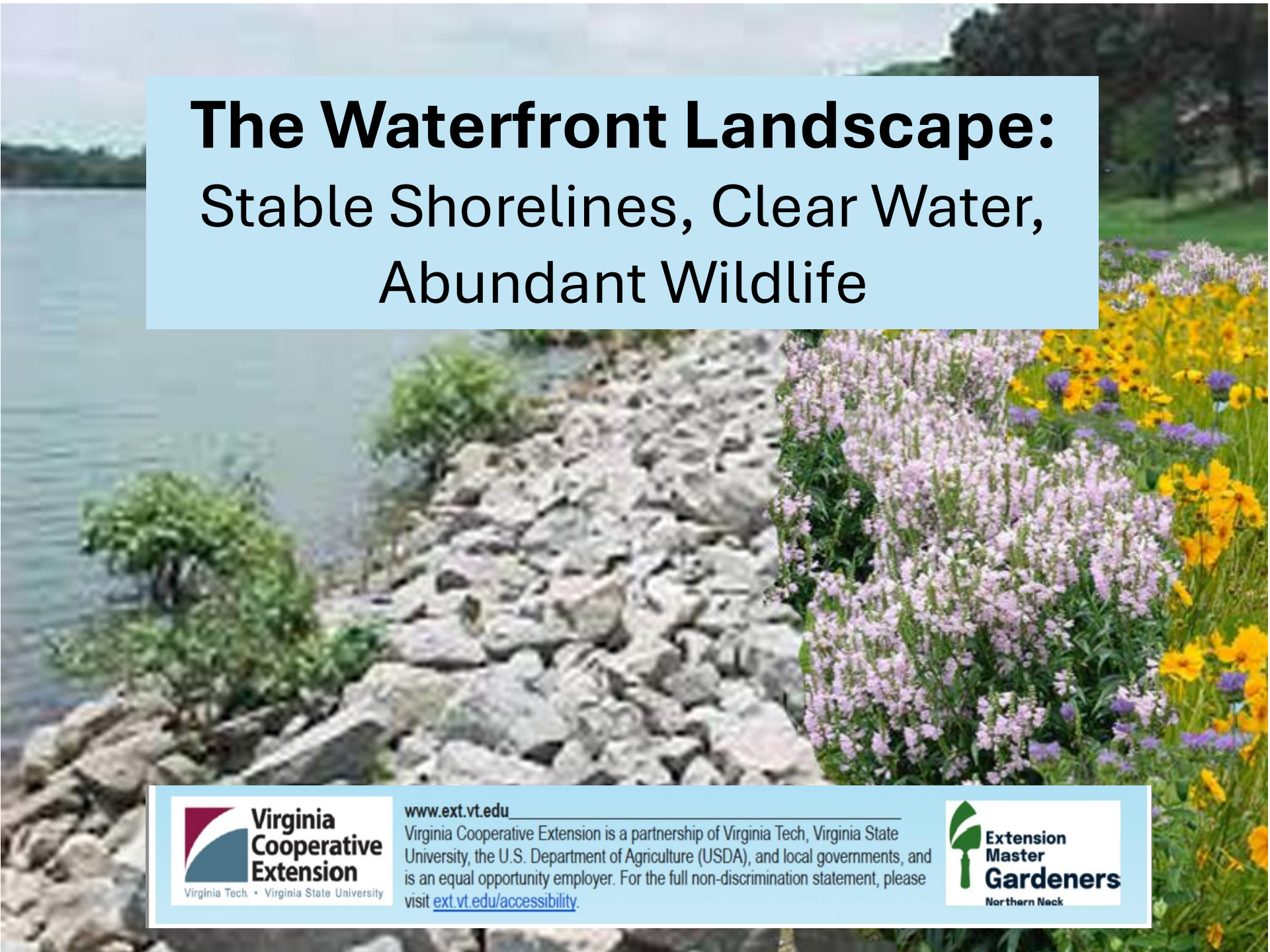
The Waterfront Landscape:

Stable Shorelines, Clear Water, Abundant Wildlife



Virginia Cooperative Extension
Virginia Tech • Virginia State University

www.ext.vt.edu

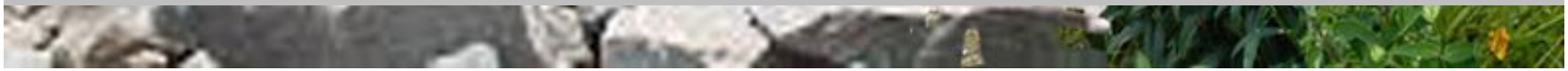
Virginia Cooperative Extension is a partnership of Virginia Tech, Virginia State University, the U.S. Department of Agriculture (USDA), and local governments, and is an equal opportunity employer. For the full non-discrimination statement, please visit ext.vt.edu/accessibility.

Extension Master Gardeners
Northern Neck



Susan Lindsey and Katherine McConnell

Northern Neck Master Gardeners'
Shoreline Evaluation Program Team



Shoreline Evaluation Program

The Shoreline Evaluation Program (SEP) was designed to educate waterfront homeowners about how to protect their shorelines and control erosion and upland run off, thus contributing to the restoration of the Chesapeake Bay.

SEP was developed by the Northern Neck Master Gardeners in 2012 with support from the Virginia Institute of Marine Science (VIMS). Members are trained in horticulture and stormwater management through the advanced Master Gardener Water Steward Program offered by Virginia Cooperative Extension (VCE) and Virginia Tech. They receive continuing education through VCE and shoreline assessment training through a partnership with VIMS.



Why do we garden?



1. To beautify our surroundings



2. To protect and preserve our properties



Traditional Gardens of Past Centuries



The Garden of the 21st Century



Recent influences that have changed our gardening philosophies:



Recognition of the interdependence of our ecosystems;



The rise of the environmental movement – from Rachel Carson to Doug Tallamy;



An understanding of some of the implications of climate change;



An increased awareness of the need for responsible stewardship of the earth.

Some results:

- Increased use of native plants;
- Reduced reliance on chemicals (pesticides, herbicides, fertilizers);
- Minimized impact on the ecosystem.







New gardening goals:

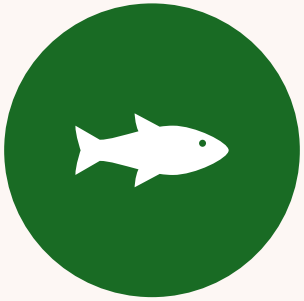
- Seek to imitate nature rather than re-order and control;
- Be mindful of the consequences of our actions.



Environmental Factors in Play



CLIMATE CHANGE



SEA-LEVEL RISE



WATER QUALITY



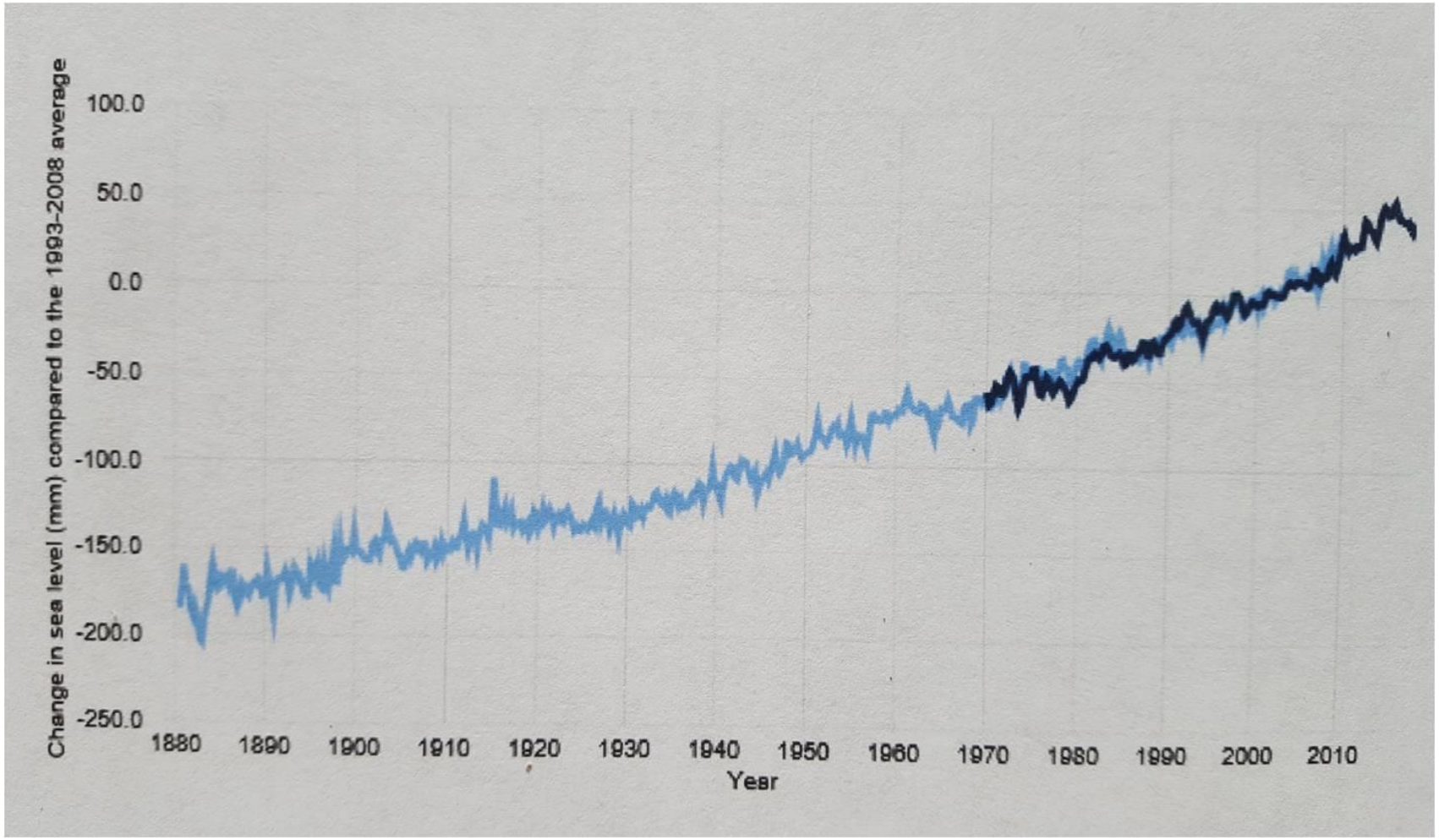
Climate Change:

We need to anticipate increasingly violent weather events.

Waterfront homeowners need to be aware of erosion and runoff issues.



Sea Level Rise:
Lewisetta, VA 1880 - 2010



Sea Level Rise in the Northern Neck:

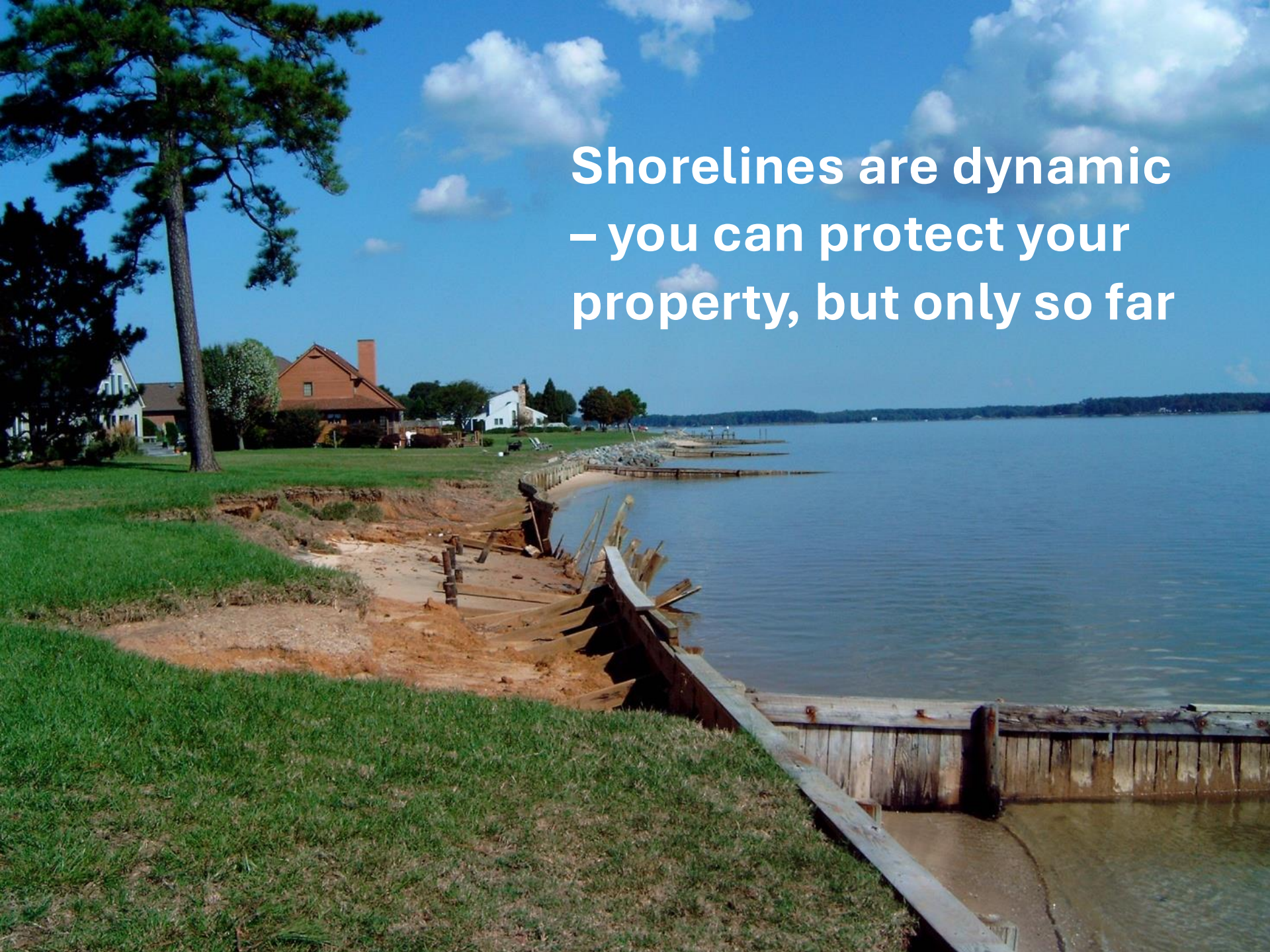


Our homes are vulnerable.

We need to proactively protect our properties



Sea-level rise is real!


Shorelines are dynamic – you can protect your property, but only so far

Remember these scenes?



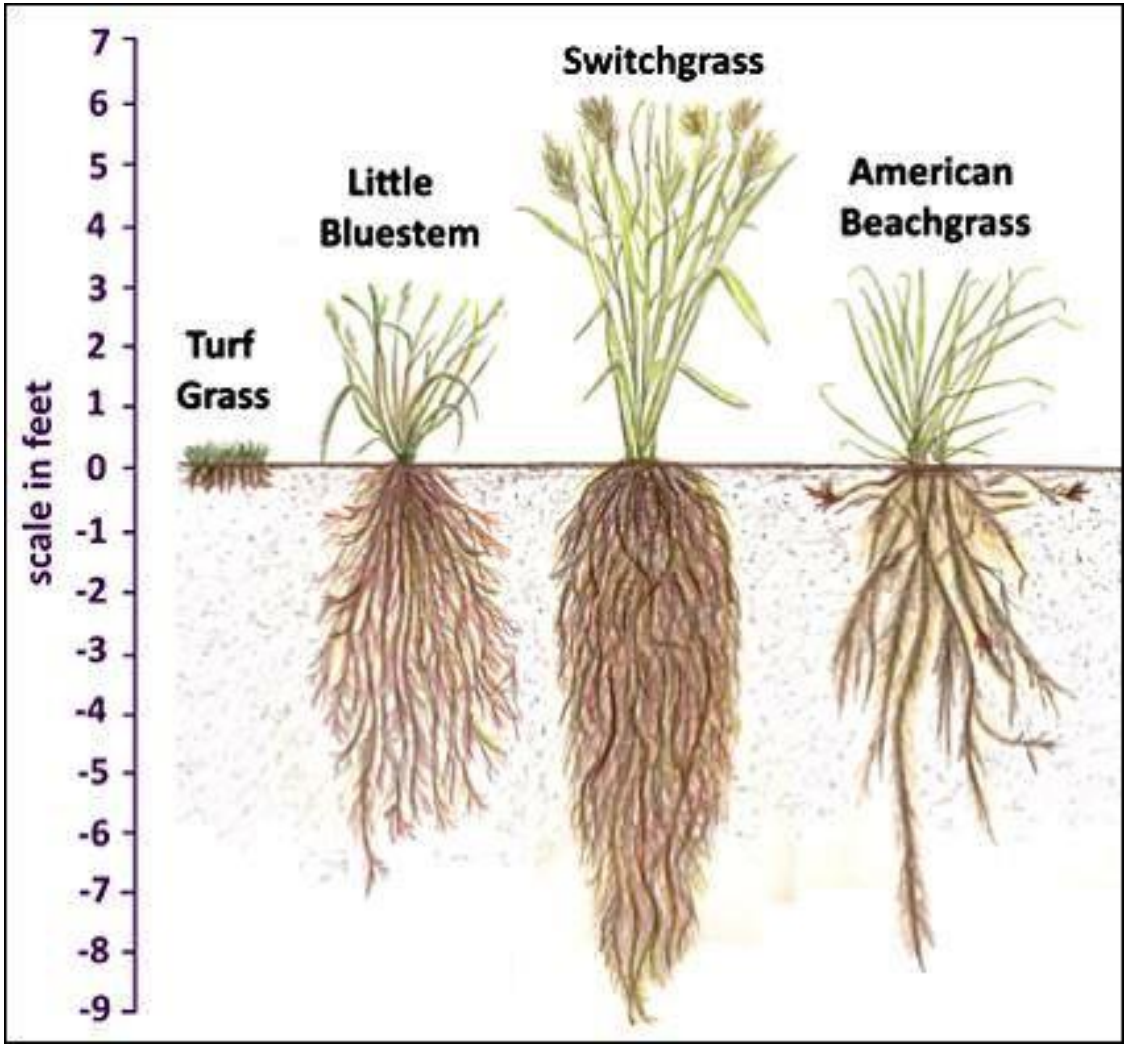


A cautionary tale.

Protecting our Properties

Plant wisely!

Be aware of what is happening beneath the surface.



Water Quality

- Looking at the bigger picture .....
- First – consider the Chesapeake Bay Watershed.
- (And everyone lives on a watershed.)



The Largest Land-to-Water Estuary Worldwide

- Average depth is 22 feet
- 17 million people
- 170,000 people move into watershed each year
- More than 3,600 species of animals and plants
- Supports $1 trillion in economic activity



What is the impact of all these people?



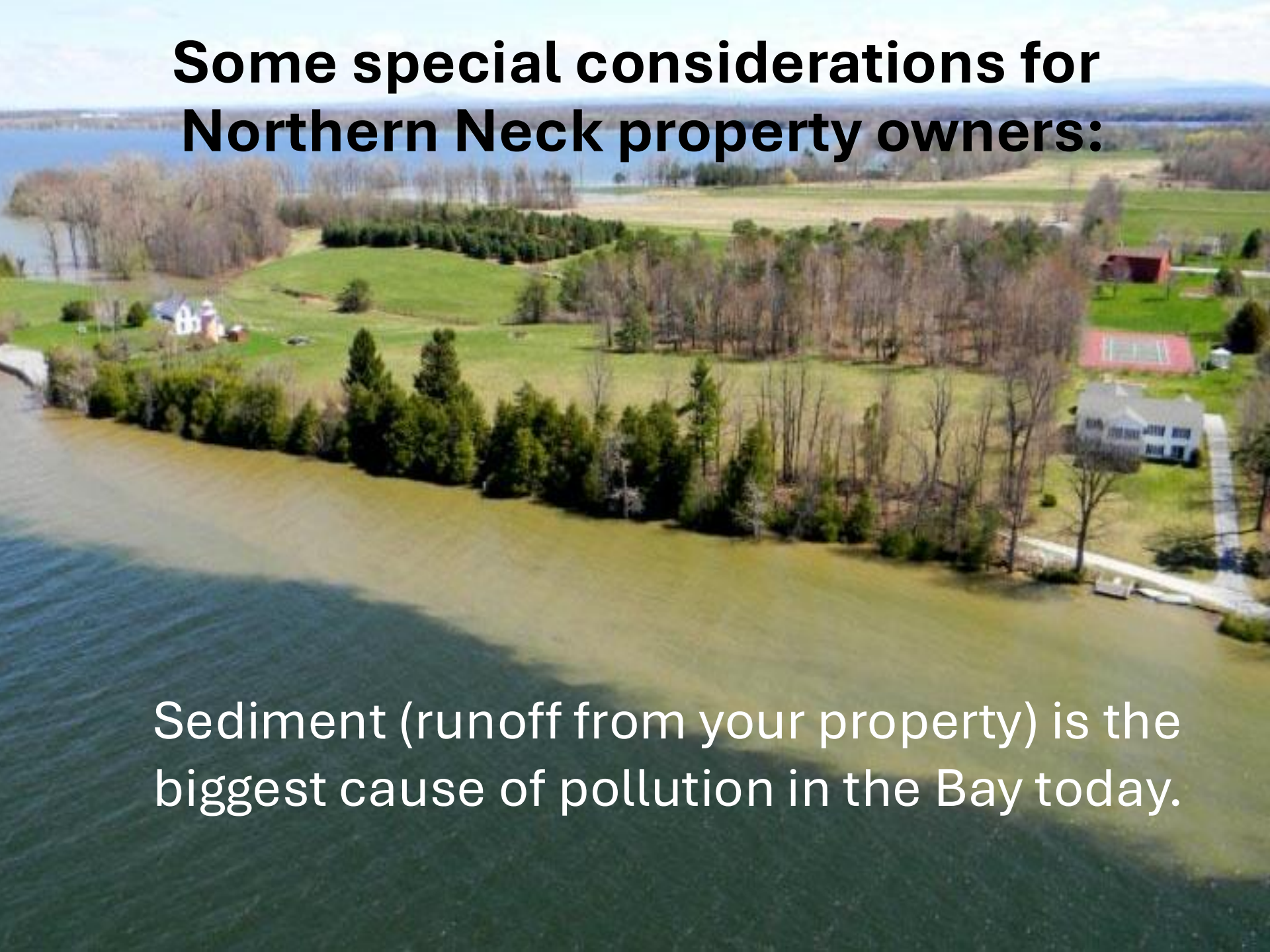

170,000 people
=
More homes, more development:

Increased development disrupts the water cycle by:



- Stripping plant cover
- Adding impervious surfaces
- Preventing infiltration of precipitation
- Creating high volume of urban runoff
- Causing erosion and down stream flooding.

Some special considerations for Northern Neck property owners:



Sediment (runoff from your property) is the biggest cause of pollution in the Bay today.

The Health of the Chesapeake Bay



1607 : Captain John Smith found a pristine body of water.
Scorecard: 100%

1998: Chesapeake Bay Foundation starts to issue its annual report.
Scorecard: 27%

2018: **Scorecard: 33%**

2022: **Scorecard: 32%**

Clean-up goal: **Scorecard 70%**





- **Chesapeake Bay water quality has major impacts –**

- Marine wildlife habitat,
- Fishing (commercial and sport),
- Tourism

Our actions have consequences

Informed, wise choices can have beneficial outcomes at many levels.

To Summarize

More violent weather - heavier, more intense rainfall.

More development means increased stormwater runoff carrying more sediment into the Bay.

This degrades water quality, impacting marine wildlife and vegetation.

Judicious planting can limit runoff, stabilize soil, strengthen banks and limit shoreline erosion.

Remember:

85% of the shoreline of the Chesapeake Bay is in private ownership.

What individual homeowners do makes a difference!



Which brings us back to your garden:

- What to plant?





- Where to plant?





- Why are you planting it?

The two goals in gardening: 1. To Beautify 2. To Protect



We protect our property and the water quality of the Bay by:

a) Minimizing areas of bare earth (runoff/sediment)

b) Choosing plants with deep roots to hold the soil

c) Selecting resilient plants suited for our local conditions

d) Reducing lawns (turf grass)

e) Managing stormwater

f) Creating riparian buffers to stabilize banks and limit runoff while benefiting our local ecosystems

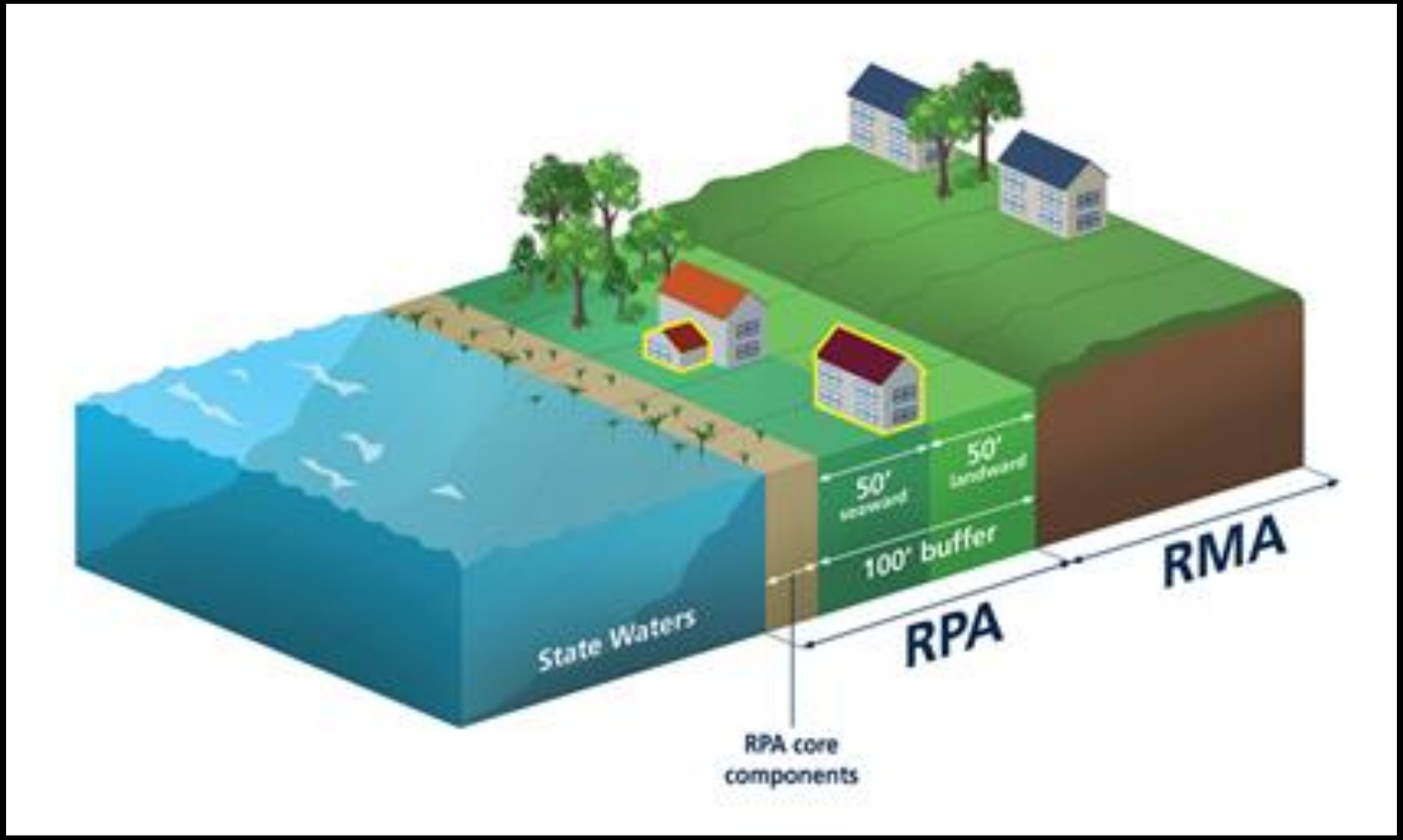
To achieve these goals, remember:

- Success in the garden is not random and capricious!
- There is no such thing as a green thumb – only a little knowledge based on observation and analysis.
- Know your conditions and plant accordingly – **Katherine will tell you how.**





Planting Along Your Shoreline



RESOURCE PROTECTION AREA (RPA)



Riparian/ Shoreline Buffer

A riparian buffer offers a natural defense against the destructive forces of erosion and upland runoff. This protective grouping of trees, shrubs, perennials, and grasses is a required feature for every waterfront property under the terms of the Chesapeake Bay Preservation Act.

Choosing Plants for Your Shoreline Buffer







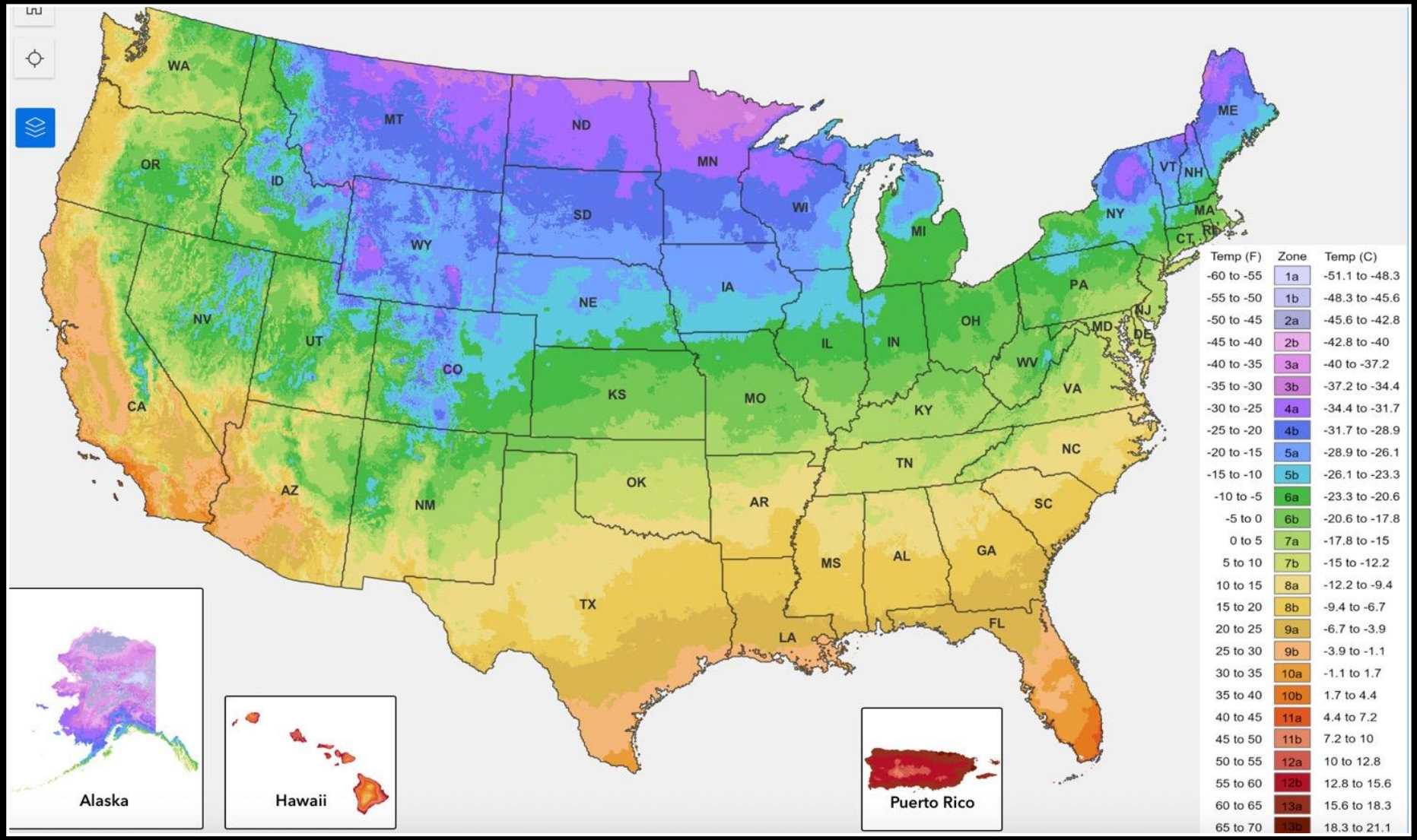


- **Plant Choice Considerations**
- **Plants for Shoreline Scenarios**
- **Wildlife Benefits**

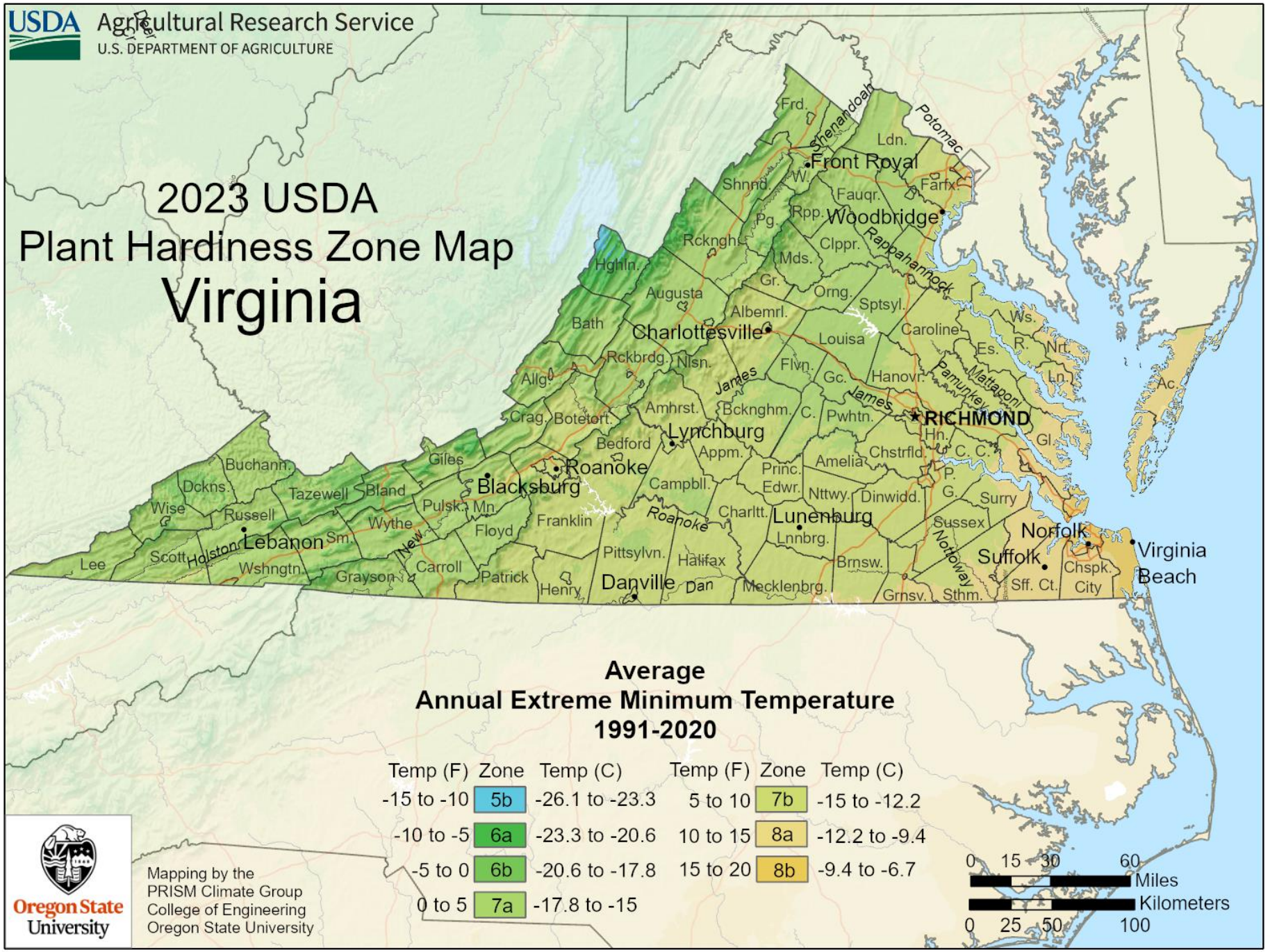


What Are Your Shoreline Conditions?

- Sunny or shady?
- Steep bank?
- Is your shoreline protected?
- What type of soil do you have?
- How far does water seep during high tides and storms?

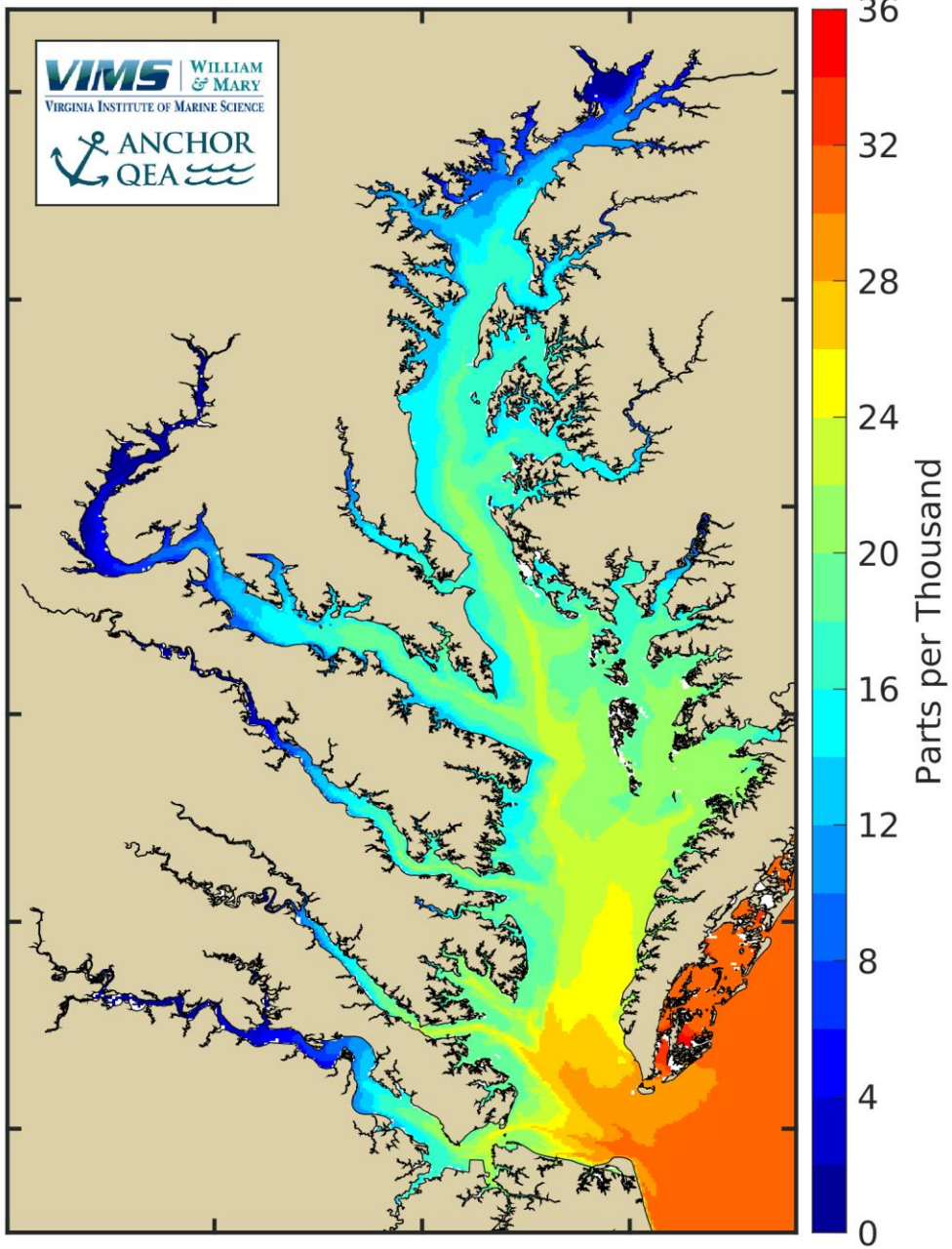


USDA HARDINESS ZONE MAP



Mapping by the
PRISM Climate Group
College of Engineering
Oregon State University

Bottom Salinity: Forecast
September 30, 2025



Consider Sun/Shade Requirements

Full sun: At least 6 hours of direct sunlight per day

Partial sun/partial shade: 3-6 hours of sunlight.

Full shade: Less than 3 hours of direct sunlight

- **Plants requiring ‘full sun or part shade’ generally prefer part shade in our area.**
- **Part shade in our area usually means morning sun and afternoon shade. Afernoon sun is much more intense than morning sun.**

ADDITIONAL CONSIDERATIONS FOR CHOOSING SHORELINE PLANTS

- Salt Tolerance
- Strong Root Systems
- Deer Resistance
- Resilience
- Four Season Interest
- Occasional Flooding Tolerance
- Drought Tolerance
- Black Walnut Tolerance

Natives, Friendly Non-Natives, Cultivars, & Nativars



Yellow Wild Indigo
(*Baptisia tinctoria*)

Entomologist & author **Doug Tallamy** recommends that we aim for at least **70% native plant biomass** in our landscapes to create a sustainable ecosystem that supports local bird and insect populations. This research is supported by the National Wildlife Federation and the National Audubon Society.

This leaves room for 30% friendly non-native (not invasive) cultivars. Cultivars are plants bred for specific attributes such as color, size, and disease resistance.



Spike Speedwell
'Royal Candles'
(*Veronica spicata*)



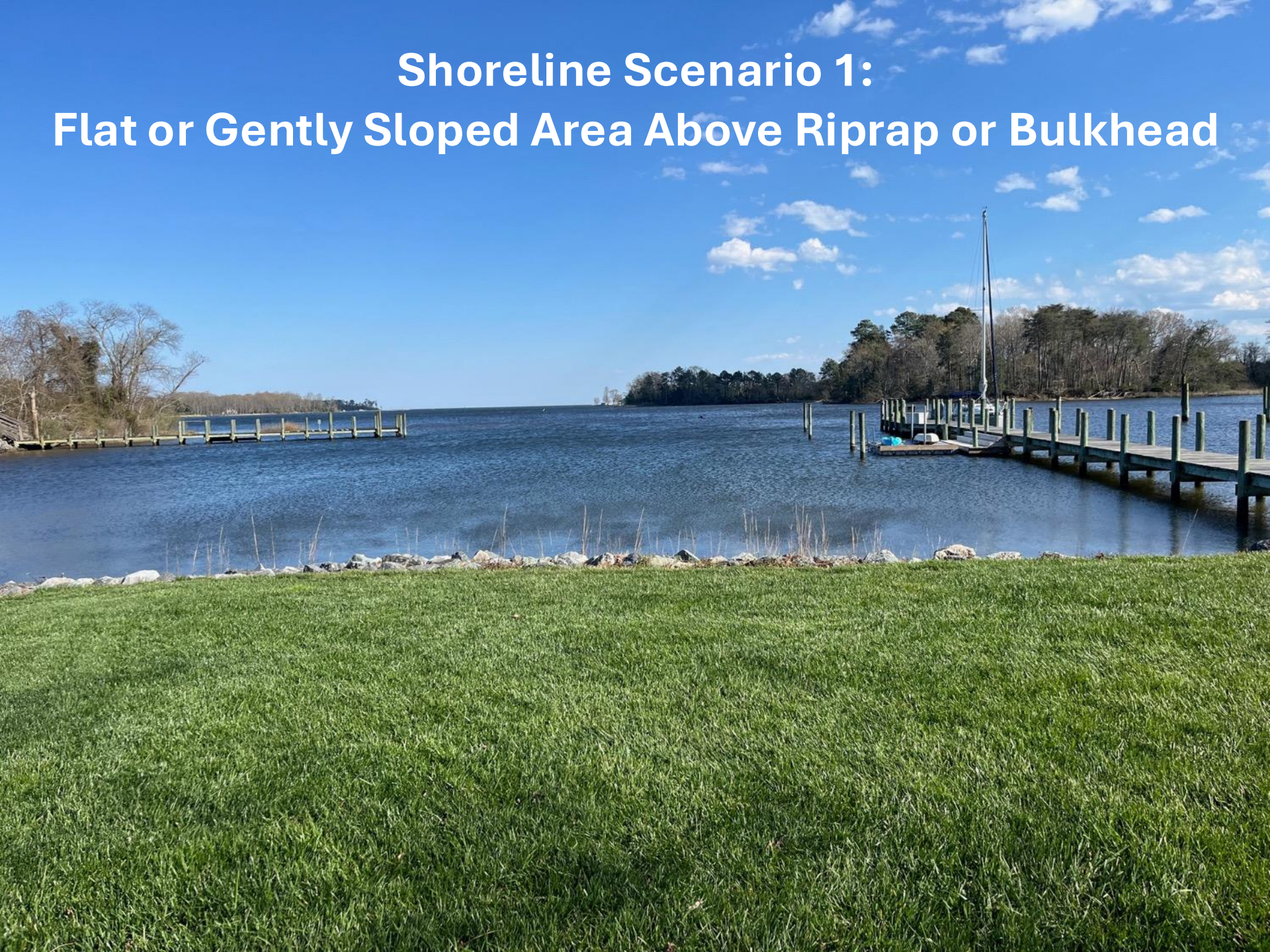
Nativars are cultivars of native plants. Nativars that are identical to the species in every way except size have similar wildlife benefits to the species.



Aromatic Aster 'Raydon's Favorite'

Tickseed 'Red Satin'

Shoreline Scenario 1:
Flat or Gently Sloped Area Above Riprap or Bulkhead



Extension Master Gardeners Northern Neck

Suggested Low Growing Riparian Buffer Plants for Virginia Northern Neck



Sunny flat or gently sloped area above riprap or bulkhead (>6 hours of sun)

Plant requirements: deer resistant, drought tolerant once established, <3' in height to maintain view, salt spray tolerant.

Deciduous Shrubs



Dwarf Fragrant Sumac
Rhus aromatica
'Gro Low' *V



Glossy Abelia
Abelia grandiflora
'Rose Creek' +



Viburnum
Viburnum x 'Moonlit Lace'



Weigela
Weigela florida
'Spilled Wine' +

Evergreen Shrubs



Dwarf Wax Myrtle
Morella (Myrica) cerifera
'Strawberry Shortcake' *



Dwarf Yaupon Holly
Ilex vomitoria 'Bordeaux' *+



Eastern Red Cedar
Juniperus virginiana 'Grey Owl' *

Grasses



Little Bluestem
Schizachyrium scoparium
'Brushstrokes' *+



Pink Muhly Grass
Muhlenbergia capillaris *



Purple Love Grass
Eragrostis spectabilis *



Rose Muhly Grass
Muhlenbergia reverchonii



Virginia Switchgrass
Panicum virgatum
'Cheyenne Sky' *+

Perennials



Aromatic Aster
Symphyotrichum oblongifolium *



Black-Eyed Susan
Rudbeckia fulgida *



Blue Star
Amsonia
'Blue Ice'



Butterfly Weed
Asclepias tuberosa *(CN)



Eastern Showy Aster
Eurybia spectabilis *



False Indigo
Baptisia australis v. minor
'Lemon Meringue' *+



False Sunflower
Heliopsis helianthoides
'Tuscan Gold' *+



Giant Hyssop
Agastache
'Blue Fortune' +



Lanceleaf Coreopsis
Coreopsis lanceolata *V



Obedient Plant
Physostegia virginiana
'Vivid' *+V



Rough Goldenrod
Solidago rugosa
'Fireworks' *+



Virginia Mountain Mint
Pycnanthemum virginianum *



Wandflower
Gaura lindheimeri
'Belleza Dark Pink' +

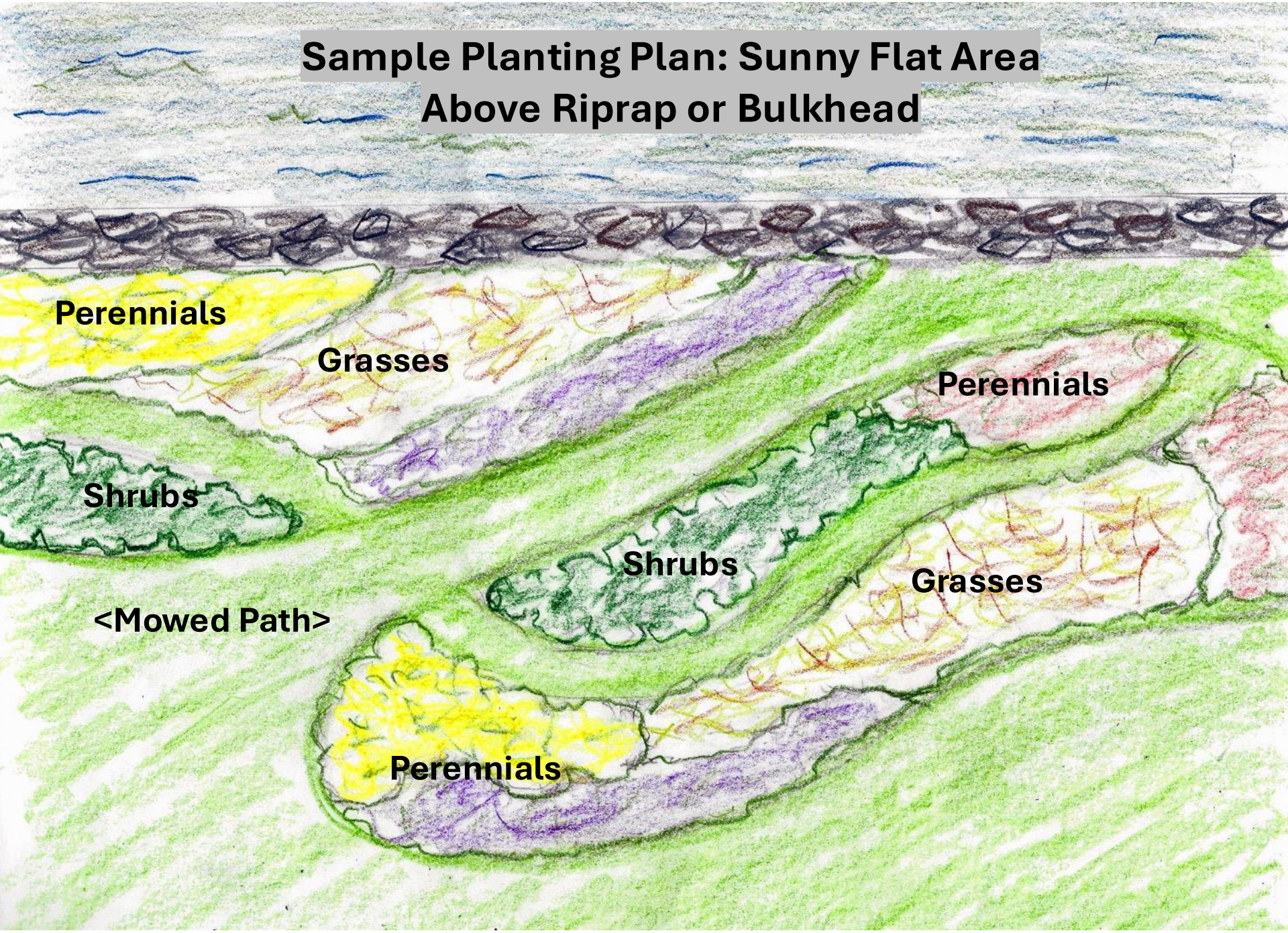


Yarrow
Achillea millefolium
'Paprika' +



Yellow Wild Indigo
Baptisia tinctoria *

*Virginia native/native cultivar; + Additional low growing cultivars available; V Vigorous spreader


Sample Planting Plan: Sunny Flat Area
Above Riprap or Bulkhead
Perennials
Grasses
Perennials
Shrubs
Shrubs
Grasses
<Mowed Path>
Perennials

Sample Planting Plan Using ‘Well Behaved’ Plants



Sample Planting Plan Using Spreading Plants



Shoreline Scenario 2: Sunny Bank



Extension Master Gardeners Northern Neck

Suggested Low Growing Riparian Buffer Plants for Virginia Northern Neck



Sunny Upper Bank (>6 Hours of Sun), No Inundation

Plant requirements: deer resistant, drought tolerant once established,<4' to maintain views.

Retaining recommended for slopes >30%.

Deciduous Shrubs



Dwarf Fragrant Sumac
Rhus aromatica
'Gro Low' *V



Glossy Abelia
Abelia grandiflora
'Rose Creek' +



Viburnum
Viburnum x
'Moonlit Lace'



Weigela
Weigela florida
'Spilled Wine' +

Evergreen Shrubs



Distylium
Distylium myricoides
'Cinnamon Girl' +



Dwarf Yaupon Holly
Ilex vomitoria
'Bordeaux' *+



Dwarf Wax Myrtle
Morella (Myrica) cerifera 'Strawberry Shortcake' *



Eastern Red Cedar
Juniperus virginiana
'Grey Owl' *

Groundcover



Moss Phlox
Phlox subulata
'Emerald Blue *+

Grasses



Little Bluestem
Schizachrium scoparium *



Pink Muhly Grass
Muhlenbergia capillaris *



Purple Love Grass
Eragrostis spectabilis *



Ruby Muhly Grass
Muhlenbergia reverchonii



Virginia Switch Grass
Panicum virgatum
'Shenandoah' *+

Perennials



Aromatic Aster
Symphyotrichum oblongifolium *



Autumn Sage
Salvia greggii +



Black-Eyed Susan
Rudbeckia fulgida *



Blue Wild Indigo
Baptisia australis *



Butterfly Weed
Asclepias tuberosa *



Catmint
Nepeta x faassenii
'Walker's Low' +



Eastern Showy Aster
Eurybia spectabilis *



False Sunflower
Heliopsis helianthoides
'Tuscan Gold' *+



Lanceleaf Coreopsis
Coreopsis lanceolata *V



Obedient Plant
Physostegia virginiana 'Vivid' *+V



Rough Goldenrod
Solidago rugosa
'Fireworks' *



Virginia Mountain Mint
Pycnanthemum virginianum *V



Wild Bergamot
Monarda fistulosa
'Claire Grace' *+

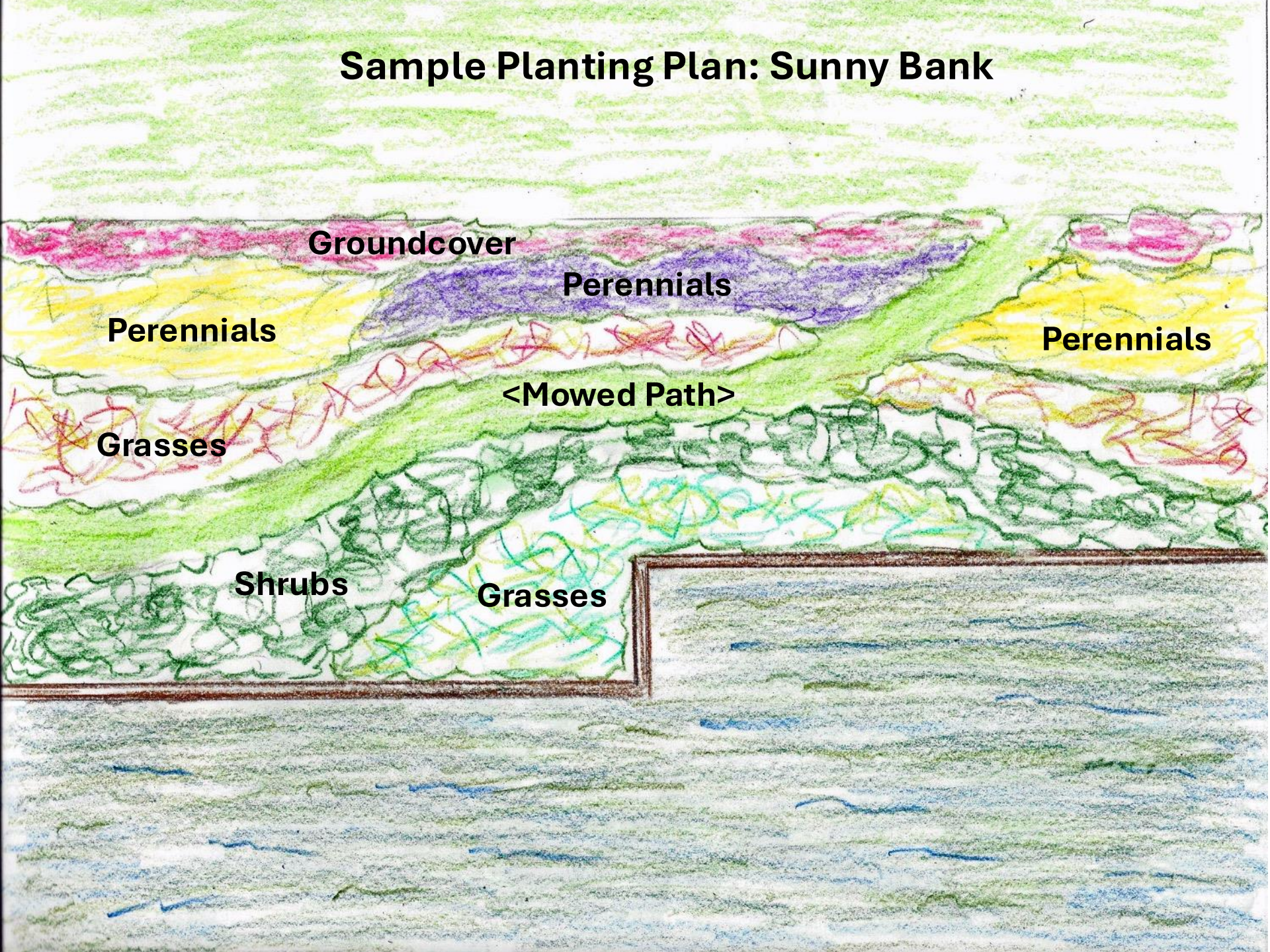


Yarrow
Achillea millefolium
'Paprika' +



Yellow Wild Indigo
Baptisia tinctoria *

*Native/Native Cultivar; +Additional low growing cultivars available; V Vigorous spreader


Sample Planting Plan: Sunny Bank
Groundcover
Perennials
Perennials
Perennials
<Mowed Path>
Grasses
Shrubs
Grasses

Sample Planting Plan Using ‘Well Behaved’ Plants



Creeping Phlox
‘Scarlet Flame’



Rough Goldenrod
‘Fireworks’



Catmint
‘Walkers Low’



Virginia
Switch Grass
‘Shenandoah’



Wax Myrtle
‘Strawberry
Shortcake’



Little Bluestem
‘Prairie Blues’

Sample Planting Plan
Using Spreading Plants & No Mow Area

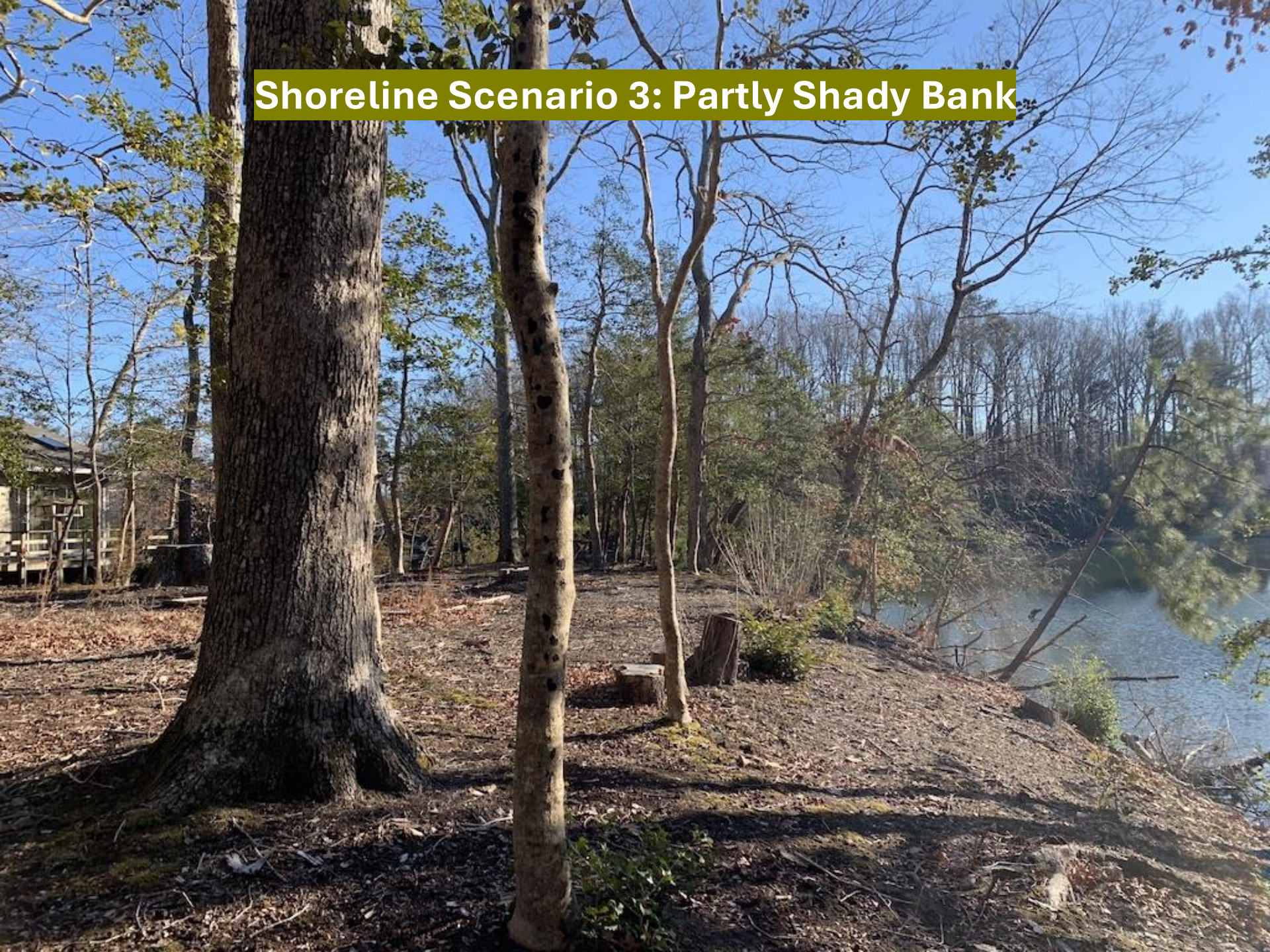


Virginia Mountain Mint



Sumac ‘Gro-Low’

No Mow Lawn Area >


Shoreline Scenario 3: Partly Shady Bank

Extension Master Gardeners Northern Neck

Suggested Low Growing Riparian Buffer Plants for Virginia Northern Neck

Partly Shady Upper Bank (3-6 Hours of Sun), No Inundation

Plant requirements: deer resistant, drought tolerant once established, <4' to maintain views.

Retaining recommended for slopes > 30%.



Groundcovers



Alleghany Spurge
Pachysandra procumbens *J



Blue-Eyed Grass
Sysrinchium angustifolium *



Dwarf Crested Iris
Iris cristata *V



Golden Ragwort
Packera aurea *JV)



Green and Gold
Chrysogonum virginianum *J



Pennsylvania Sedge
Carex pennsylvanica *J



Creeping Woodland Phlox
Phlox stolonifera * J



Woodland Stonecrop
Sedum ternatum *J

Evergreen Shrubs



Distylium
Distylium myricoides
'Cinnamon Girl' +



Dwarf American Holly
Ilex opaca
'Maryland Spreader' *J



Dwarf Yaupon Holly
Ilex vomitoria
'Bordeaux' *+J



Dwarf Wax Myrtle
Morella (Myrica) cerifera
'Strawberry Shortcake' *J

Grass



Virginia Switch Grass
Panicum virgatum
'Shenandoah' *+

Deciduous Shrubs



Dwarf Fragrant Sumac
Rhus aromatica
'Gro Low' *V



Glossy Abelia
Abelia grandiflora
'Rose Creek' +



Slender Deutzia
Deutzia gracilis
'Yuki Cherry Blossom' +J



Summersweet
Clethra alnifolia
'Hummingbird' *+J



Virginia Sweetspire
Itea virginica
'Scentlandia' *+J

Perennials



Aromatic Aster
Symphyotrichum oblongifolium *J



Autumn Sage
Salvia greggii +



Black-Eyed Susan
Rudbeckia fulgida *J



Blue Star
Amsonia tabernaemontana *



Blue Wild Indigo
Baptisia australis *



Blue Wood Aster
Symphyotrichum cordifolium * JV



Catmint
Nepeta x faassenii
'Walker's Low' +



Eastern Showy Aster
Eurybia spectabilis *J



Obedient Plant
Physostegia virginiana
'Vivid' *JV



Rough Goldenrod
Solidago rugosa
'Fireworks' *J



Virginia Mountain Mint
Pycnanthemum virginianum *V



Virginia Spiderwort
Tradescantia virginiana *JV



White Wood Aster
Eurybia divaricatus *JV

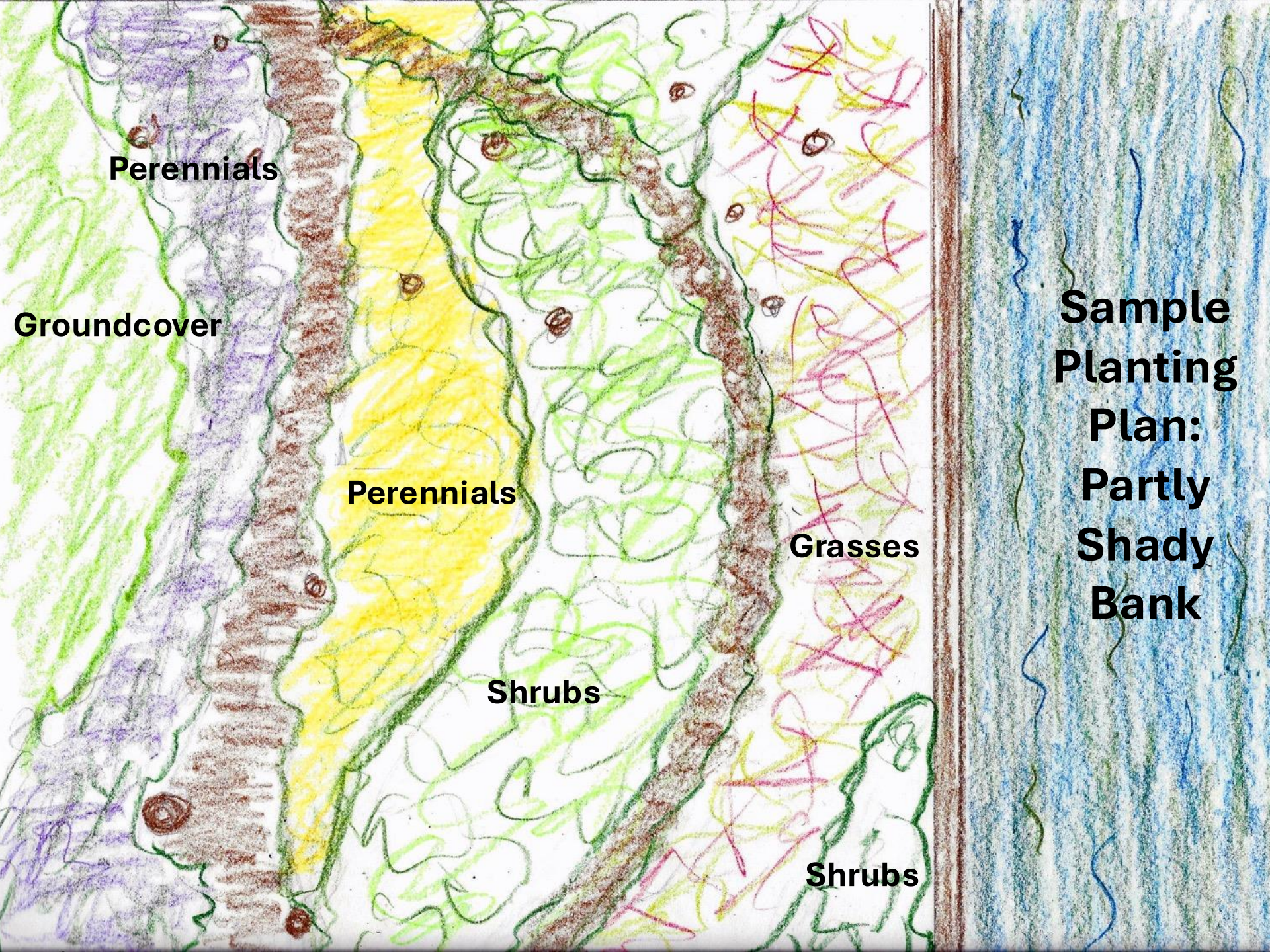


Wreath Goldenrod
Solidago caesia *J



Yellow Wild Indigo
Baptisia tinctoria *

*Native/Native Cultivar; +Additional low growing cultivars available; J Juglone/Black Walnut tolerant; V Vigorous spreader


Perennials
Groundcover
Perennials
Grasses
Shrubs
Shrubs
Sample Planting Plan: Partly Shady Bank


Sample Planting Plan Using ‘Well Behaved Plants’
Pennsylvania Sedge
Black-Eyed Susan
Virginia Sweetspire
‘Scentlandia’
Blue-Eyed Grass
Virginia Switchgrass
‘Shenandoah’

Sample Planting Plan Using Spreading Plants




Shoreline Scenario 4: Shady Bank

Extension Master Gardeners Northern Neck

Suggested Low Growing Riparian Buffer Plants for Virginia Northern Neck

Shady Upper Bank (< 3 Hours of Sun), No Inundation

Plant requirements: deer resistant, drought tolerant once established, <4' to maintain views. Retaining recommended for slopes >30%.



Deciduous Shrubs



Summersweet
Clethra alnifolia 'Hummingbird' *+J



Virginia Sweetspire
Itea virginica 'Scentlandia' *+J

Evergreen Shrubs



Dwarf American Holly
Ilex opaca 'Maryland Spreader' *J



Dwarf Yaupon Holly
Ilex vomitoria 'Bordeaux' *+J



Japanese Plum Yew
Cephalotaxus harringtonia 'Fritz Huber' +J



Sweetbox
Sarcococca hookeriana var. humilis J

Groundcovers



Alleghany Spurge
Pachysandra procumbens *J



Creeping Woodland Phlox
Phlox stolonifera *J



Dwarf Crested Iris
Iris cristata *V



Golden Ragwort
Packera aurea *JV



Green and Gold
Chrysogonum virginianum *J



Pennsylvania Sedge
Carex pennsylvanica *J



Woodland Phlox
Phlox divaricata *J



Woodland Stonecrop
Sedum ternatum *J

Perennials



Autumn Fern
Dryopteris erythrosora J



Blue Wood Aster
Symphyotrichum cordifolium *JV



Christmas Fern
Polystichum acrostichoides *J



Eastern Wood Fern
Dryopteris marginalis *J



Hay Scented Fern
Dennstaedtia punctilobula *JV



Japanese Beech Fern
Thelypteris decursive-pinnata JV



Lady Fern
Athyrium filix-femina *J



Lenten Rose
Helleborus sp. J



Sensitive Fern
Onoclea sensibilis *JV



Virginia Spiderwort
Tradescantia virginiana *JV

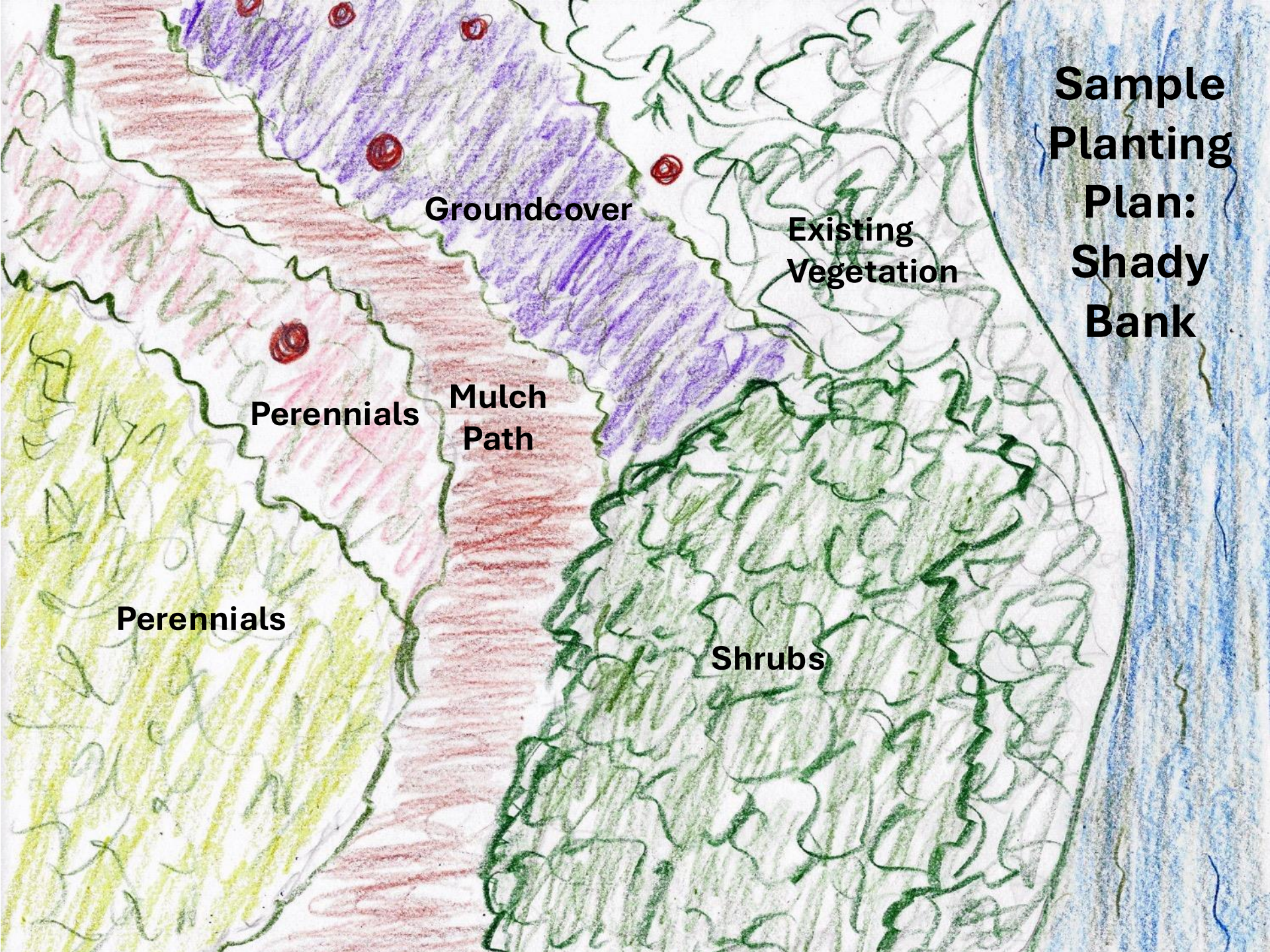


White Wood Aster
Eurybia divaricatus *JV

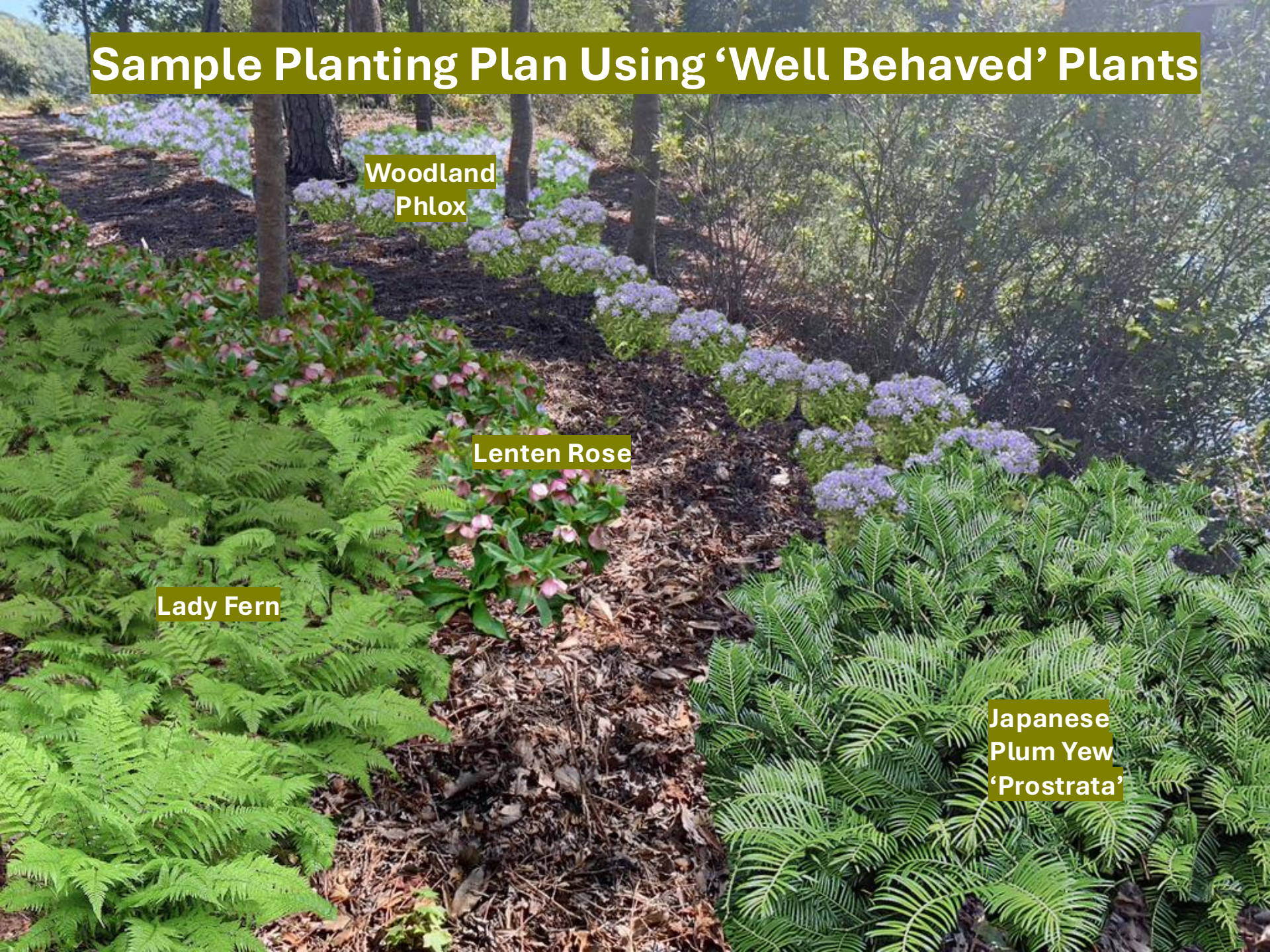


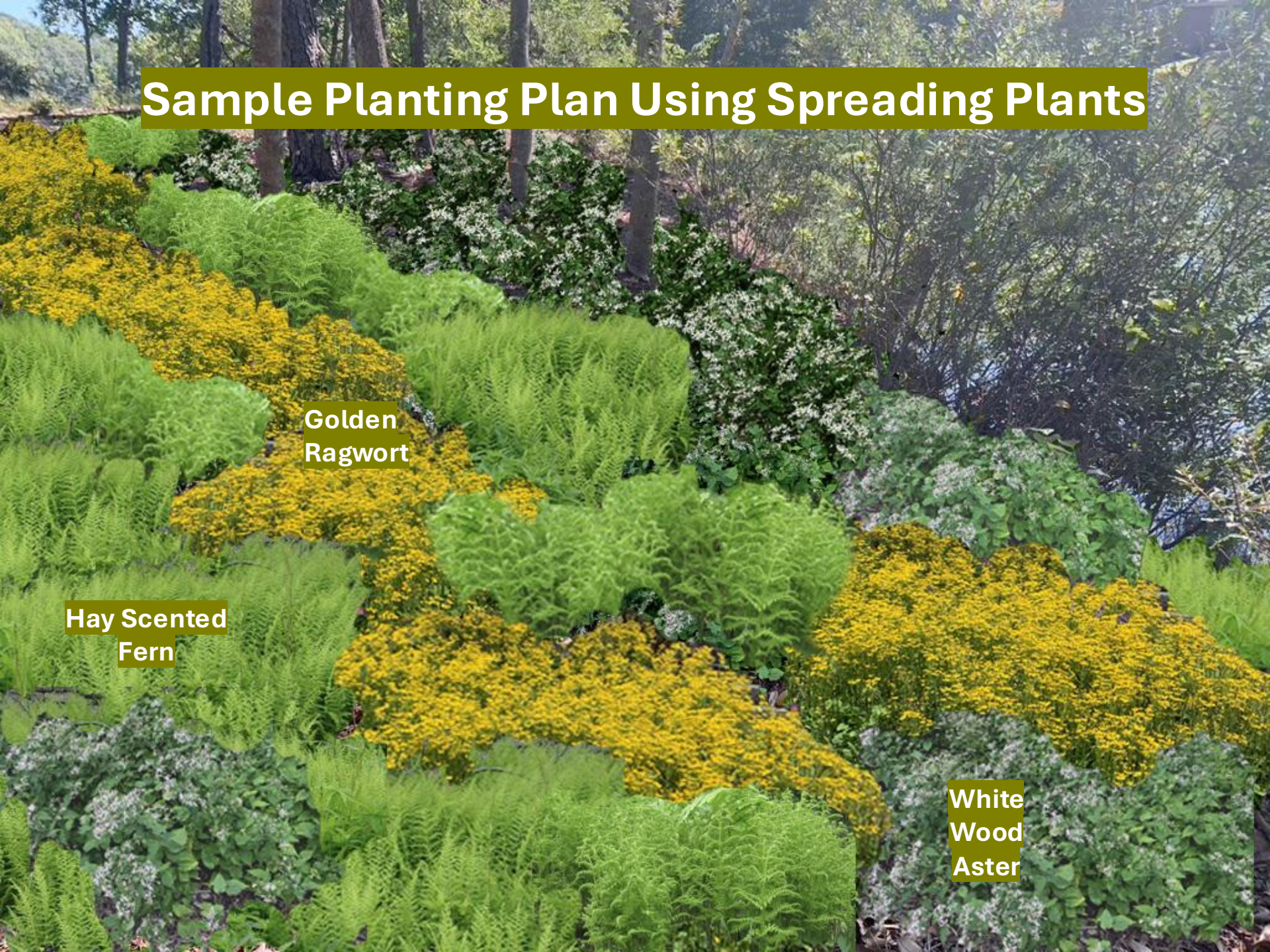
Wild Geranium
Geranium maculatum *J

*Native/Native Cultivar; +Additional low growing cultivars available; Juglone/Black Walnut tolerant; V Vigorous spreader


Sample Planting Plan: Shady Bank
Groundcover
Existing Vegetation
Perennials
Mulch Path
Perennials
Shrubs

Sample Planting Plan Using ‘Well Behaved’ Plants




Sample Planting Plan Using Spreading Plants
Golden Ragwort
Hay Scented Fern
White Wood Aster


Shoreline Scenario 5:
Sunny Lower Bank, Occasionally Inundated With Brackish Water

Extension Master Gardeners Northern Neck

Suggested Low Growing Riparian Buffer Plants for Virginia Northern Neck



Sunny Lower Bank (>6 Hours Sun),
Occasional Brackish Water Inundation

Plant requirements: deer resistant, drought tolerant once established, <4' to maintain views, salt tolerant, wet soil tolerant.

Evergreen Shrubs



Dwarf Wax Myrtle
Morella (Myrica) cerifera
'Strawberry Shortcake' *



Dwarf Yaupon Holly
Ilex vomitoria
'Bordeaux' *+



Inkberry
Ilex glabra
'Strongbox' *+

Grasses



American Beach Grass
Ammophila breviligulata *V



Blue Rush
Juncus inflexus V



Saltmeadow Cordgrass
Sporobolus pumilus (formerly Spartina patens) *V



Soft Rush
Juncus effusus *V



Virginia Switch Grass
Panicum virgatum 'Shenandoah' *+

Perennials



Joe Pye Weed
Eutrochium dubium 'Baby Joe' *+



New England Aster
Symphyotrichum novae-angliae 'Grape Crush' *+



New York Aster
Symphyotrichum novii-belgii 'Marie Ballard' * +



Northern Blue Flag
Iris versicolor *V



Seaside Goldenrod
Solidago sempervirens *



Seashore Mallow
Kosteletzkya virginica *

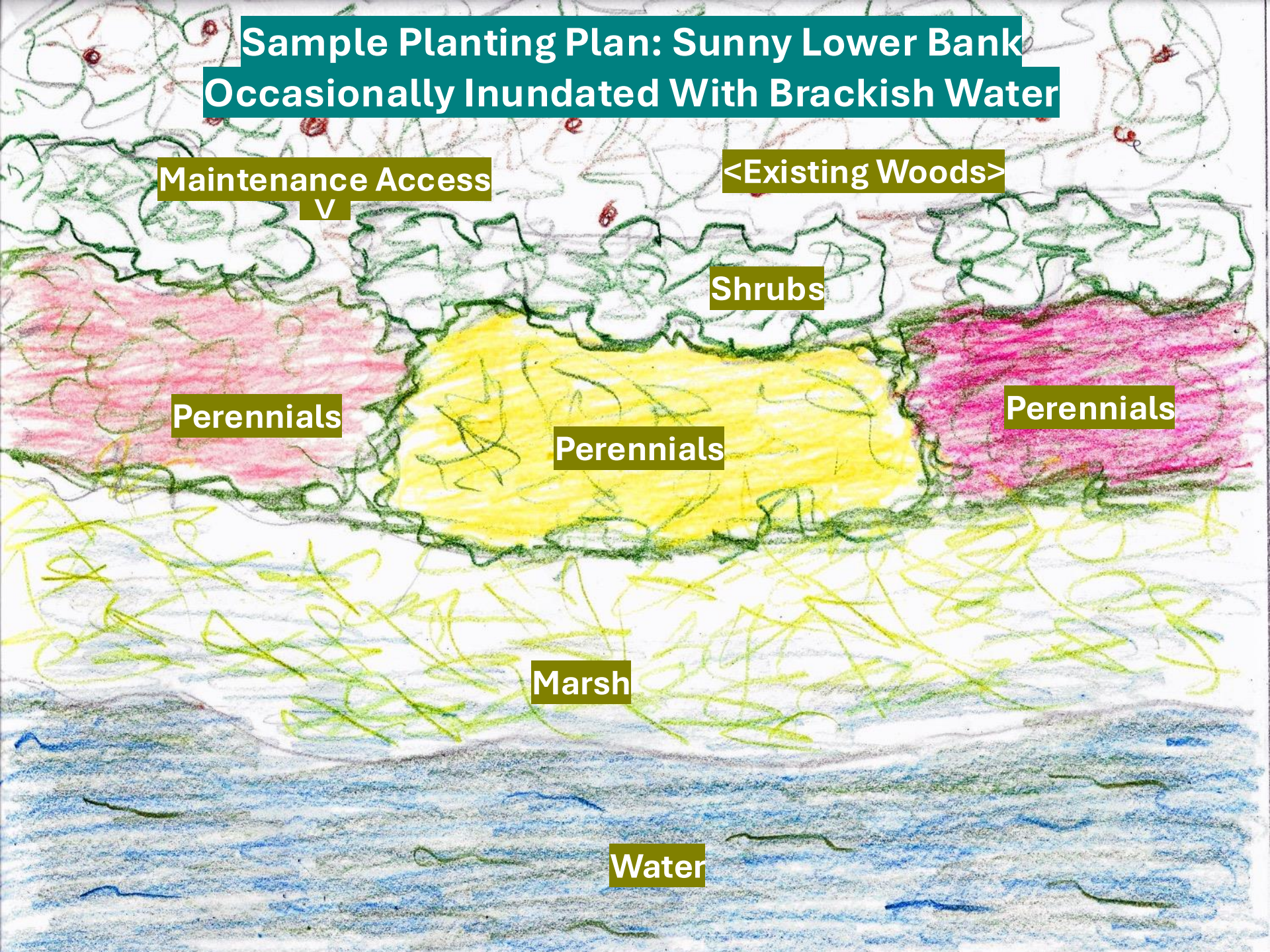


Southern Blue Flag
Iris virginica *V

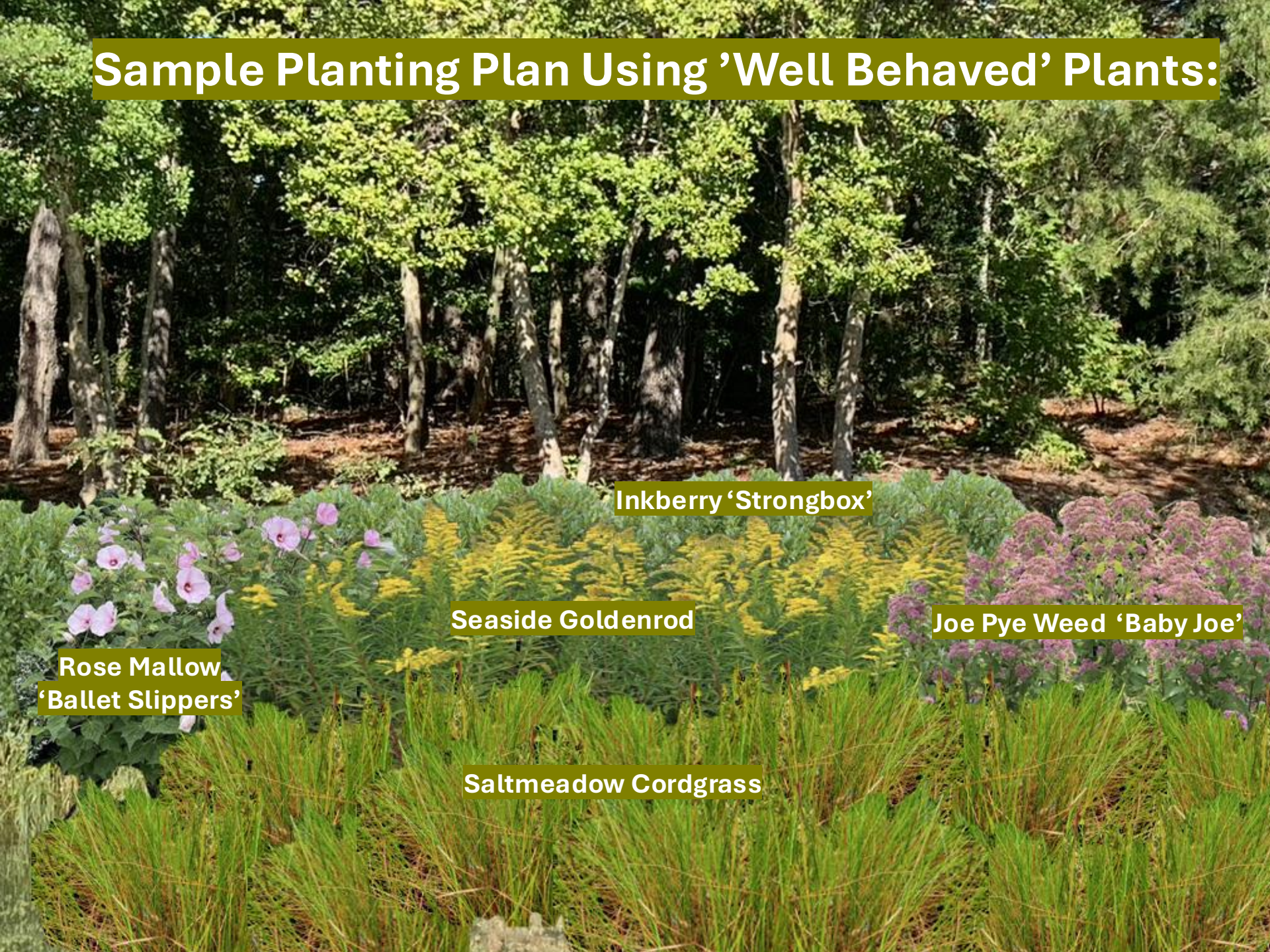


Swamp Rose Mallow
Hibiscus hybrid 'Ballet Slippers' *+

*Native/Native Cultivar; +Additional low growing cultivars available; V Vigorous spreader, **May grow taller than 4'**


Sample Planting Plan: Sunny Lower Bank
Occasionally Inundated With Brackish Water
Maintenance Access
V
<Existing Woods>
Shrubs
Perennials
Perennials
Perennials
Marsh
Water

Sample Planting Plan Using ’Well Behaved’ Plants:




Sample Planting Plan Using Spreading Plants
Wax Myrtle ‘Strawberry Shortcake
Soft Rush
Blue Flag Iris
Saltmeadow Cordgrass

Extension Master Gardeners Northern Neck

Suggested Low Growing Riparian Buffer Plants for Virginia Northern Neck



Sunny Lower Bank (>6 Hours of Sun), Occasional Fresh Water Inundation

Plant requirements: deer resistant, drought tolerant once established, <4' to maintain views, wet soil tolerant.

Grasses



Blue Rush
Juncus inflexus V



Soft Rush
Juncus effusus *V



Virginia Switch Grass
Panicum virgatum 'Shenandoah' *+

Evergreen Shrubs



Distylium
Distylium myricoides 'Vintage Jade' +



Dwarf Wax Myrtle
Morella (Myrica) cerifera 'Strawberry Shortcake' *



Dwarf Yaupon Holly
Ilex vomitoria 'Bordeaux' *+



Inkberry
Ilex glabra 'Strongbox' *+

Perennials



Black-Eyed Susan
Rudbeckia fulgida *



Blue Wild Indigo
Baptisia Australis *+



Eastern Bluestar
Amsonia tabernaemontana *



Joe Pye Weed
Eutrochium dubium 'Baby Joe' *+



New England Aster
Symphyotrichum novae-angliae 'Grape Crush' *+



New York Aster
Symphyotrichum novii-belgii 'Marie Ballard' *+



Northern Blue Flag
Iris versicolor *V



Obedient Plant
Physostegia virginian 'Vivid' *+V



Rose Mallow
Hibiscus hybrid 'Ballet Slippers' *+



Seashore Mallow
Kosteletzkya virginica *



Southern Blue Flag
Iris virginica *V



Spotted Joe Pye Weed
Eutrochium maculatum 'Red Dwarf' *+



Swamp Milkweed
Asclepias incarnata *



Yellow Wild Indigo
Baptisia tinctoria *

*Native/Native Cultivar; +Additional low growing cultivars available; V Vigorous spreader, **May grow taller than 4'**

Extension Master Gardeners Northern Neck

Suggested Low Growing Riparian Buffer Plants for Virginia Northern Neck



Partly Shady Lower Bank (3-6 Hours of Sun), Occasional Fresh Water Inundation

Plant requirements: deer resistant, drought tolerant once established, <4' to maintain views, wet soil tolerant.

Evergreen Shrubs



Dwarf Wax Myrtle
Morella (Myrica) cerifera
'Strawberry Shortcake' *



Dwarf Yaupon Holly
Ilex vomitoria
'Bordeaux' *+



Inkberry
Ilex glabra
'Strongbox' *+

Grass



Virginia Switch Grass
Panicum virgatum
'Shenandoah' *+J

Groundcovers



Golden Ragwort
Packera aurea *JV)



Dwarf Crested Iris
Iris cristata *JV

Deciduous Shrubs



Summersweet
Clethra alnifolia
'Hummingbird' *+



Virginia Sweetspire
Itea virginica
'Scentlandia' *+

Perennials



Black-Eyed Susan
Rudbecki fulgida *+J



Joe Pye Weed
Eutrochium dubium
'Baby Joe' *+



New England Aster
Symphyotrichum novae-angliae
'Grape Crush' *+J



New York Aster
Symphyotrichum novii-belgii
'Marie Ballard' *+J



Northern Blue Flag
Iris versicolor *V



Seashore Mallow
Kosteletzkya virginica *



Southern Blue Flag
Iris virginica *JV



Spotted Joe Pye Weed
Eutrochium maculatum
'Red Dwarf' *+



Swamp Milkweed
Asclepias incarnata *



Swamp Rose Mallow
Hibiscus hybrid
'Ballet Slippers' *+

*Native/Native Cultivar; +Additional low growing cultivars available; J Juglone/Black Walnut tolerant; V Vigorous spreader

Extension Master Gardeners Northern Neck

Suggested Low Growing Riparian Buffer Plants for Virginia Northern Neck



Partly Shady Lower Bank (3-6 Hours of Sun), Occasional Brackish Water Inundation

Plant requirements: deer resistant, drought tolerant once established, <4' to maintain views, salt tolerant, wet soil tolerant.

Grasses



Soft Rush
Juncus effusus *V



Virginia Switch Grass
Panicum virgatum 'Shenandoah' *+J

Deciduous Shrub



Summersweet
Clethra alnifolia 'Hummingbird' *+

Evergreen Shrubs



Dwarf Wax Myrtle
Morella (Myrica) cerifera 'Strawberry Shortcake' *



Dwarf Yaupon Holly
Ilex vomitoria Bordeaux' *+



Inkberry
Ilex glabra 'Strongbox' *+

Perennials



Joe Pye Weed
Eutrochium dubium 'Baby Joe' *+



New England Aster
Symphyotrichum novae-angliae 'Grape Crush' *+



New York Aster
Symphyotrichum novii-belgii 'Marie Ballard' *+



Northern Blue Flag
Iris versicolor *V



Seashore Mallow
Kosteletzkya virginica *



Southern Blue Flag
Iris virginica *V



Spotted Joe Pye Weed
Eutrochium maculatum 'Red Dwarf' *+



Swamp Rose Mallow
Hibiscus 'Ballet Slippers' *+

*Native/Native Cultivar; +Additional low growing cultivars available, V Vigorous spreader, **May grow taller than 4'**

Extension Master Gardeners Northern Neck

Suggested Low Growing Riparian Buffer Plants for Virginia Northern Neck



Shady Lower Bank (<3 Hours of Sun), Occasional Fresh Water Inundation

Plant requirements: deer resistant, drought tolerant once established, <4' to maintain views, wet soil tolerant.

Evergreen Shrubs



Dwarf Wax Myrtle
Morella (Myrica) cerifera
'Strawberry Shortcake' *J



Dwarf Yaupon Holly
Ilex vomitoria
' Bordeaux' *+J



Inkberry
Ilex glabra 'Strongbox' *+

Groundcovers



Golden Ragwort
Packera aurea *JV



Dwarf Crested Iris
Iris cristata *JV

Deciduous Shrubs



Summersweet
Clethra alnifolia
'Hummingbird' *+J



Virginia Sweetspire
Itea virginica 'Scentlandia' *+J

Perennials



Cinnamon Fern
Osmundastrum cinnamomeum *J



Sweet Joe Pye Weed
Eutrochium purpureum *J



Royal Fern
Osmunda regalis *J

*Native/Native Cultivar; +Additional low growing cultivars available, J Juglone/Black Walnut tolerant; V Vigorous spreader, **May grow taller than 4'**

Extension Master Gardeners Northern Neck

Suggested Low Growing Riparian Buffer Plants for Virginia Northern Neck



Shady Lower Bank (<3 Hours of Sun), Occasional Brackish Water Inundation

Plant requirements: deer resistant, drought tolerant once established , <4' to maintain views, salt tolerant, wet soil tolerant.

Deciduous Shrub



Summersweet
Clethra alnifolia
'Hummingbird' *+

Evergreen Shrubs



Dwarf Wax Myrtle
Morella (Myrica) cerifera
'Strawberry Shortcake' *



Dwarf Yaupon Holly
Ilex vomitoria 'Bordeaux' *+



Inkberry
Ilex glabra 'Strongbox' *+

*Native/Native Cultivar; +Additional low growing cultivars available, V Vigorous spreader

Additional Plants to Consider

If deer are not a problem:



Dwarf Black Chokeberry
(*Aronia melanocarpa*)



Lowbush Blueberry
(*Vaccinium angustifolium*)



Purple Coneflower
(*Echinacea purpurea*)

If you have room for larger plants:



American Beautyberry
(*Callicarpa americana*)



Arrowwood Viburnum
(*Viburnum dentatum*)



Illicium ‘Miss Scarlet’
(*Illicium floridanum*)



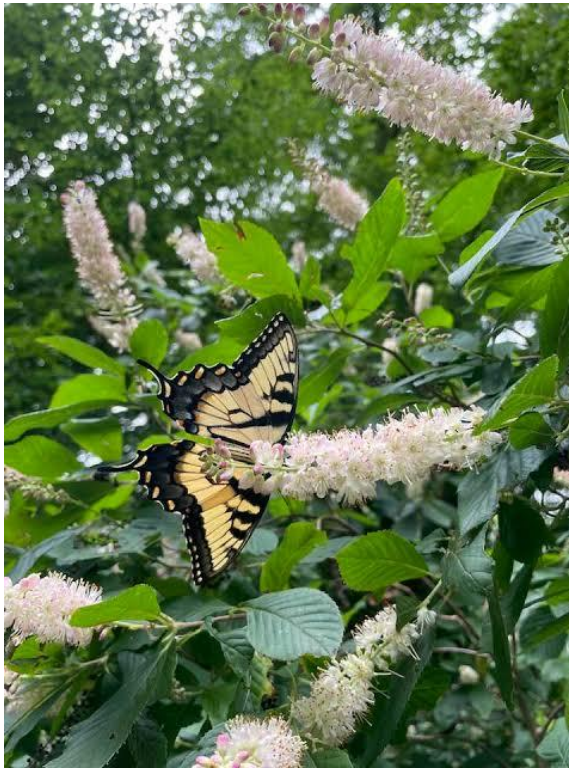
Giant Coneflower
(*Rudbeckia maxima*)

Wildlife Benefits of Riparian Buffers

Riparian buffers not only filter and slow stormwater runoff and stabilize your shoreline, but they also benefit our local ecosystems and enhance biodiversity on your property by:

- Providing foliage for feeding butterfly and moth caterpillars
- Providing pollen, nectar, seeds, and berries for feeding beneficial insects, birds, and small mammals
- Providing cover for insects, small mammals, amphibians, and reptiles
- Providing nesting areas for birds









Maximize Wildlife Benefits With Diverse Planting

Installing a variety of plant types--evergreen shrubs, deciduous shrubs, perennials, and grasses—in your riparian buffer provides year-round food and shelter for many wildlife species.

Evergreen Shrubs:

Shelter, Nesting Sites, Pollen, & Berries



Wax Myrtle (*Morella cerifera*):

Fall and Winter:

- Produces berries high in fats and lipids which are eaten by wild turkeys and many species of songbirds

Spring:

- Inconspicuous flowers provide early season nectar for honeybees and native butterflies

Summer:

- Foliage provides shelter from predators





Yaupon Holly (*Ilex vomitoria*):

Fall and Winter:

- Songbirds, thrushes, and game birds eat berries
- Evergreen foliage provides safe hiding spots and protection from cold winds and predators for small birds and mammals

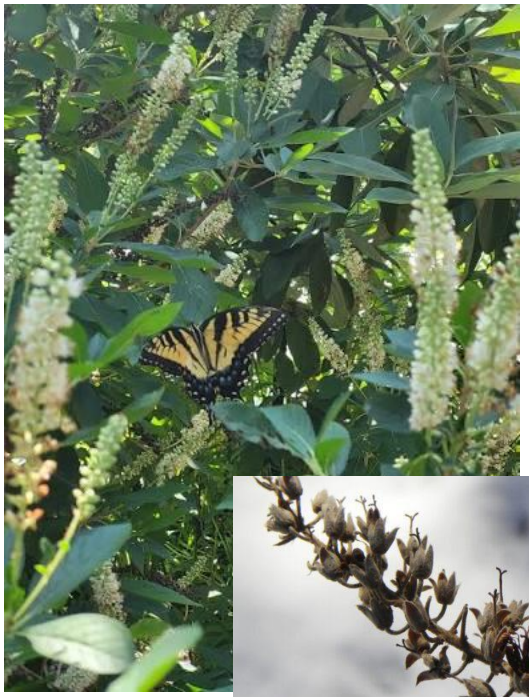
Spring:

- Foliage provides food for caterpillars, which are in turn food for birds, shelter for insects, and nesting sites for small birds
- Protein-rich pollen and nectar feeds generalist pollinators such as native bees, beneficial wasps, and butterflies.

Summer:

- Foliage provides cooling shelter for insects and safety from predators

Deciduous Shrubs:
Shelter, Nesting Sites, Pollen, Seed Pods





Summersweet/Sweet Pepper Bush (*Clethra alnifolia*)

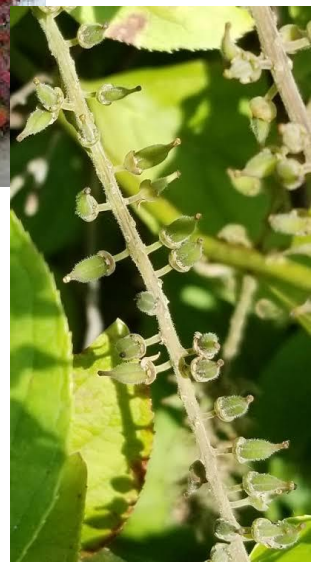
Spring, summer: Foliage serves as larval host plant for 11 species of caterpillars

Late summer/fall: fragrant flower spikes provide vital late season food for bees, butterflies, and hummingbirds

Winter: Migrating and overwintering songbirds eat persistent brown seed capsules that resemble peppercorns.







Virginia Sweetspire (*Itea virginica*)

Spring/early summer: Cascading, fragrant white flowers provide nectar for a wide range of generalist pollinators, beneficial predatory insects, and hummingbirds.

Fall/winter: Small tan seed capsules provide a steady food source for songbirds.

All seasons: Dense thickets provide secure nesting sites and seasonal cover for songbirds, small mammals, and amphibians.

Flowering Perennials:
Pollen, Nectar, Seeds, Stalks, Foliage



Blue Wild Indigo (*Baptisia australis*):
Late Spring/Early Summer: Numerous species of caterpillars feed on new leaves, flower buds, and flowers; bumblebees feed on flower pollen and nectar
Late Summer/Fall : Caterpillars feed on seedpods and leaves
Winter: Dense standing stems provide shelter for overwintering insects



Gaura *(Oenothera lindheimeri)* 'Whirling Butterflies'
Spring-Fall: The long-blooming, star-shaped flowers provide a steady supply of nectar from late spring through the first fall frost, attracting bees, butterflies, and hummingbirds. Caterpillars feed on leaves, stems, and new flower buds.
Winter: Small overwintering songbirds feed on seeds



Seashore Mallow (*Kosteletzkya pentacarpos*):
Spring: Butterfly larva feed on foliage
Summer: Pink, hibiscus-like flowers provide rich nectar that attracts bees, butterflies, and hummingbirds. (Fun note: Flowers are edible!)
Fall/Winter: Oil and protein-rich seeds provide food for migrating and overwintering birds, waterfowl, & small mammals; stalks provide shelter for overwintering insects

Ferns:

Nesting Material, Shelter, Host Plants



Christmas Fern
(*Polystichum acrostichoides*)

- Larval host plant for specialized butterfly & moth larvae.
- Ground nesting songbirds use fronds for winter protection and for constructing nests in spring.
- Fronds provide a moist habitat underneath for frogs, toads, salamanders, beetles, and forest invertebrates.
- Gamebirds eat fronds during the winter
- Snails, grasshoppers, and game birds feed on fiddleheads in spring



Hay Scented Fern
(*Dennstaedtia punctilobula*)



Lady Fern
(*Athyrium filix-femina*)



Cinnamon Fern
(Osmundastrum Cinnamomeum)

Ornamental Grasses:
Food, Shelter, Nesting Sites



Little Bluestem (*Schizachyrium scoparium)*

Spring/Summer: Foliage is consumed by grasshoppers, leafhoppers, beetles, and spittlebugs, which in turn supply an essential protein-rich diet for insectivorous songbirds and their nestlings; serves as a crucial larval host plant for several native skipper butterflies.
Fall/Winter: Seeds are eaten by many songbirds, gamebirds, and small mammals; foliage provides shelter for overwintering insects.



Purple Love Grass (*Eragrostis spectabilis*)

Early Spring/Summer: Birds use the dry panicles and leaves to build nests; serves as larval host plant for specific butterflies and moths
Summer/Fall: Bees feed on the pollen in the pinkish purple panicles
Fall: Insects gather on the flowers and seed heads to drink morning dew
Fall/Winter: Songbirds and small mammals eat the nutritious seeds produced in the airy panicles; dense clumping foliage provides cover



Virginia Switch Grass (*Panicum virgatum*)

Early Spring: Birds use the stalks and fallen leaves for nests
Spring/Summer: Foliage serves as a larval host site for numerous skipper butterflies and satyrs
Fall/Winter: Songbirds, sparrows, finches, and upland game birds eat the nutrient-rich seeds; dense clumping stems provide shelter

Groundcovers: Food, Habitat, Cover



Pennsylvania Sedge
(*Carex pensylvanica*)

- Songbirds, waterfowl, and small mammals consume the tiny fruit produced after the spring bloom.
- Grasshoppers and other insects feed on the soft, green leaves.
- Serves as an essential larval host plant for native butterflies & moths
- The low, sweeping mats of foliage provide ground-level cover.



Golden Ragwort
(*Packera aurea*)

- Provides some of the earliest available nectar and pollen when emerging insects desperately need food.
- Nectar and pollen attracts native bees, butterflies and moths
- Serves as larval host plant for numerous caterpillar and moth species
- The dense, basal mat provides protective ground cover for beneficial insects, including fireflies.
- Fluffy, dried seedheads left behind in summer attract local songbirds.



Moss Phlox
(*Phlox subulata*)

- Offers a crucial, high-energy food source just as native bees and early butterflies begin searching for fuel.
- The tubular flower throats and sweet fragrance attract hummingbirds, butterflies, skippers, long-tongued native bees, and sphinx moths.
- The dense, mat-forming, semi-evergreen foliage provides low-level shelter, hiding spots, and micro-habitats for beneficial insects and small ground-dwelling wildlife.

Keystone Plants

- Enhance the biodiversity of your property by including keystone plants in your landscaping.
- Keystone plants are species with the biggest impact on ecosystem health and vitality.
- These plants generate a network of beneficial relationships and provide critical sources of food and/or shelter for numerous species.

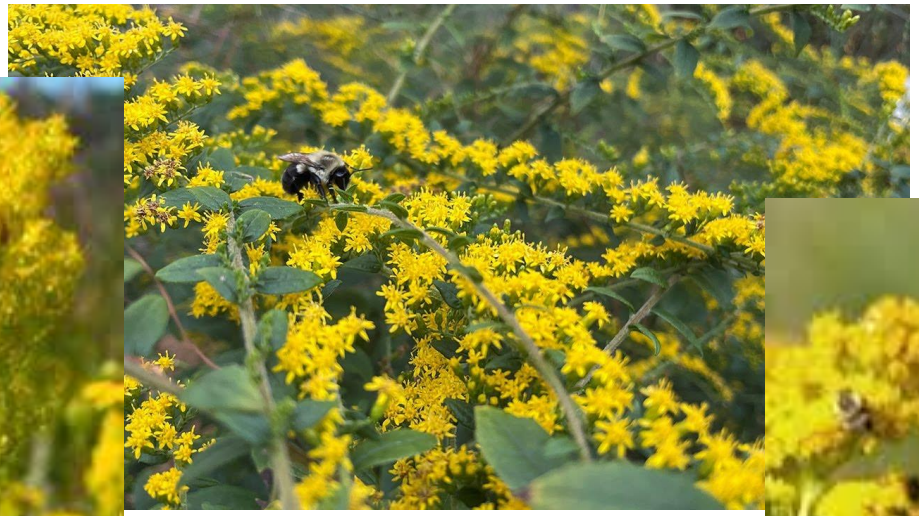


Goldenrods (*Solidago* species)

Support over 110 native caterpillar & 115 native bee and butterfly species



Sweet Goldenrod
(*Solidago odora*)



Rough-stemmed Goldenrod
(*Solidago rugosa*)



Blue-stemmed Goldenrod
(*Solidago caesia*)



Seaside Goldenrod
(*Solidago sempervirens*)

Joe Pye Weed (*Eutrochium* species)

Supports over 40 species of caterpillars and a wide variety of bees, butterflies, and birds



Sweet
Joe Pye Weed
(*Eutrochium purpureum*)



Spotted Joe Pye Weed
(*Eutrochium maculatum*)



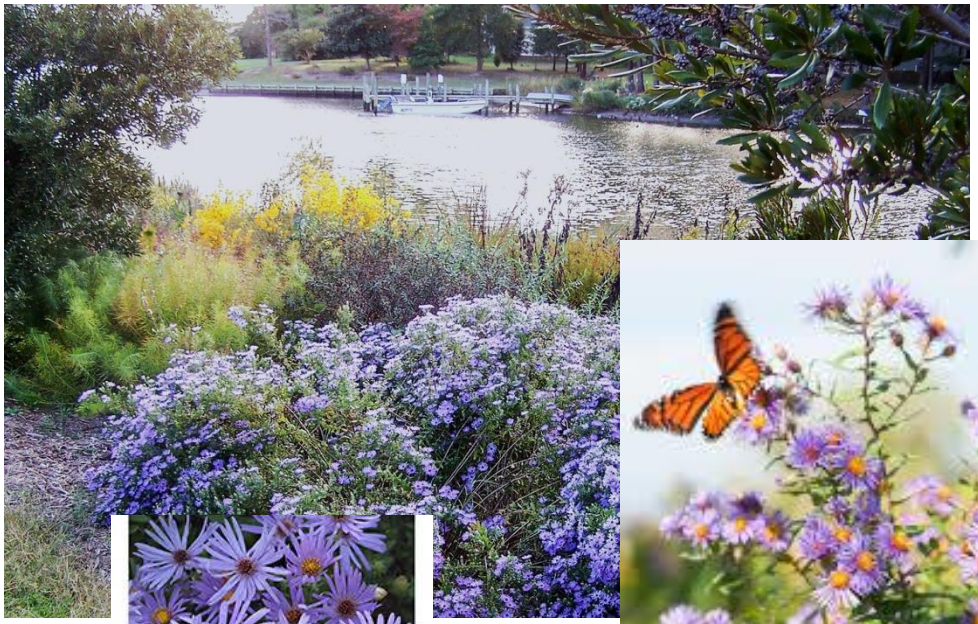
Coastal Plain Joe Pye Weed
(*Eutrochium dubium)*



Hollow Joe Pye Weed
(Eutrochium fistulosum)

Aster (*Symphyotrichum* species)

Essential Late Season Food Source, Supports 100+ Caterpillar Species





New England Aster
(*Symphyotrichum novae-angliae*)



White Heath Aster
(Symphyotrichum ericoides)



Aromatic Aster
(Symphyotrichum oblongifolium)



Blue Wood Aster
(Symphyotrichum cordifolium)

Perennial Sunflower (*Helianthus species*)

Ecological Powerhouses Supporting Hundreds of Species of Caterpillars, Bees, and Birds



Narrow-leafed Sunflower
(*Helianthus salicifolius*)



Swamp Sunflower
(Helianthus angustifolius)



Woodland Sunflower
(*Helianthus divaricatus*)

Thin-leaf Sunflower
(*Helianthus decapetalus*)



Black-Eyed Susan/Coneflower (*Rudbeckia* species)

Supports Over 60 Species of Caterpillars, Bees, and Birds



Black-eyed Susan/
Orange Coneflower
(*Rudbeckia fulgida*)



Cutleaf Coneflower
(*Rudbeckia laciniata*)



Giant Coneflower
(*Rudbeckia maxima*)



Brown-eyed Susan
(*Rudbeckia triloba*)

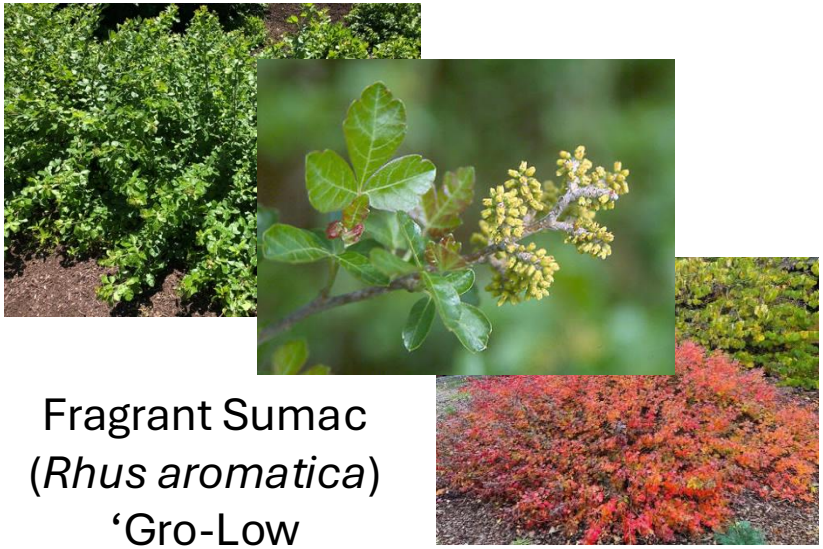
Keystone Shrubs

Blueberry (*Vaccinium* species)



Early Lowbush Blueberry
(*Vaccinium pallidum*)

Sumac (*Rhus* species)

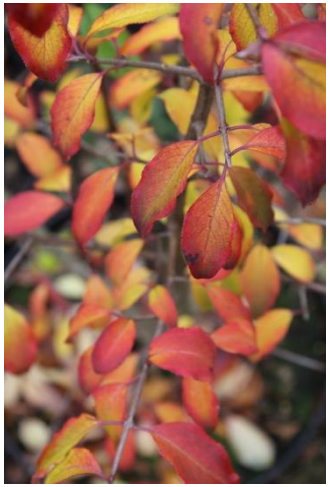


Fragrant Sumac
(*Rhus aromatica*)
'Gro-Low

Viburnum (*Viburnum* species)

Witherod Viburnum
(*Viburnum cassenoides*)
'Lil' Ditty'







Why Do Most Native Plants Have Yellow, Purple, or White Flowers?

Yellow Flowers



Low Energy Cost/High Visibility: The pigments that create yellow petals (carotenoids) require minimal production energy. Bees and many other insects cannot see red, but they detect yellow easily. Yellow is especially common in late-summer and autumn bloomers (like goldenrod and sunflowers), serving as a bright, highly visible beacon when fading foliage makes contrast difficult.



Purple Flowers

Ultraviolet (UV) Guides: Purple and pigments (anthocyanins) interact uniquely with ultraviolet light, creating hidden patterns or "bullseyes" that are invisible to humans but look like glowing neon landing strips to bees, guiding them straight to nectar.

White Flowers



Energy Savings and Visibility: White efficiently attracts generalist pollinators and saves the plant the energy required to produce complex color pigments. White petals reflect all wavelengths of visible light, making the blossoms highly visible against green foliage or in low light environments, appealing to a wide variety of generalist insects and nocturnal pollinators that navigate by light reflection rather than bright color vision.





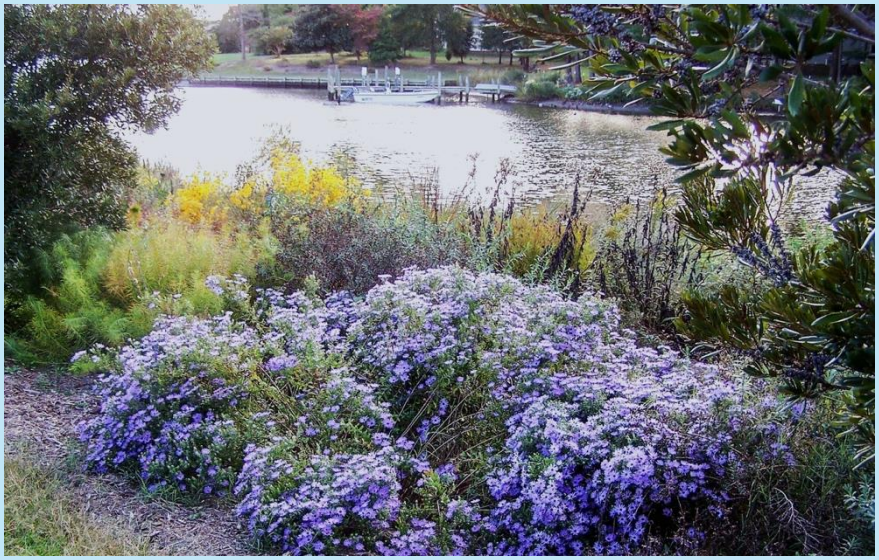

In Conclusion....

We encourage you to create planting buffers along your shoreline to:

- **Benefit the local ecosystem**
- **Prevent erosion**
- **Filter stormwater runoff**
- **Maintain your water views**
- **Add beauty to your property**



Questions? Need Guidance?



The SEP Team Can:

- Conduct an on-site evaluation and offer recommendations.
- Answer your questions at local Farmers Markets & our Help Desks.
- Speak to large or small groups on a range of shoreline topics.

Northern Neck Master Gardeners Shoreline Evaluation Program
Virginia Cooperative Extension (VCE) Lancaster County Office
804-462-5780
helpdesknnmg@gmail.com
shoreline@nnmg.org
https://nnmg.org/sep