

REFORESTATION AREA MAINTENANCE

Lois Harrison-Jones Elementary School



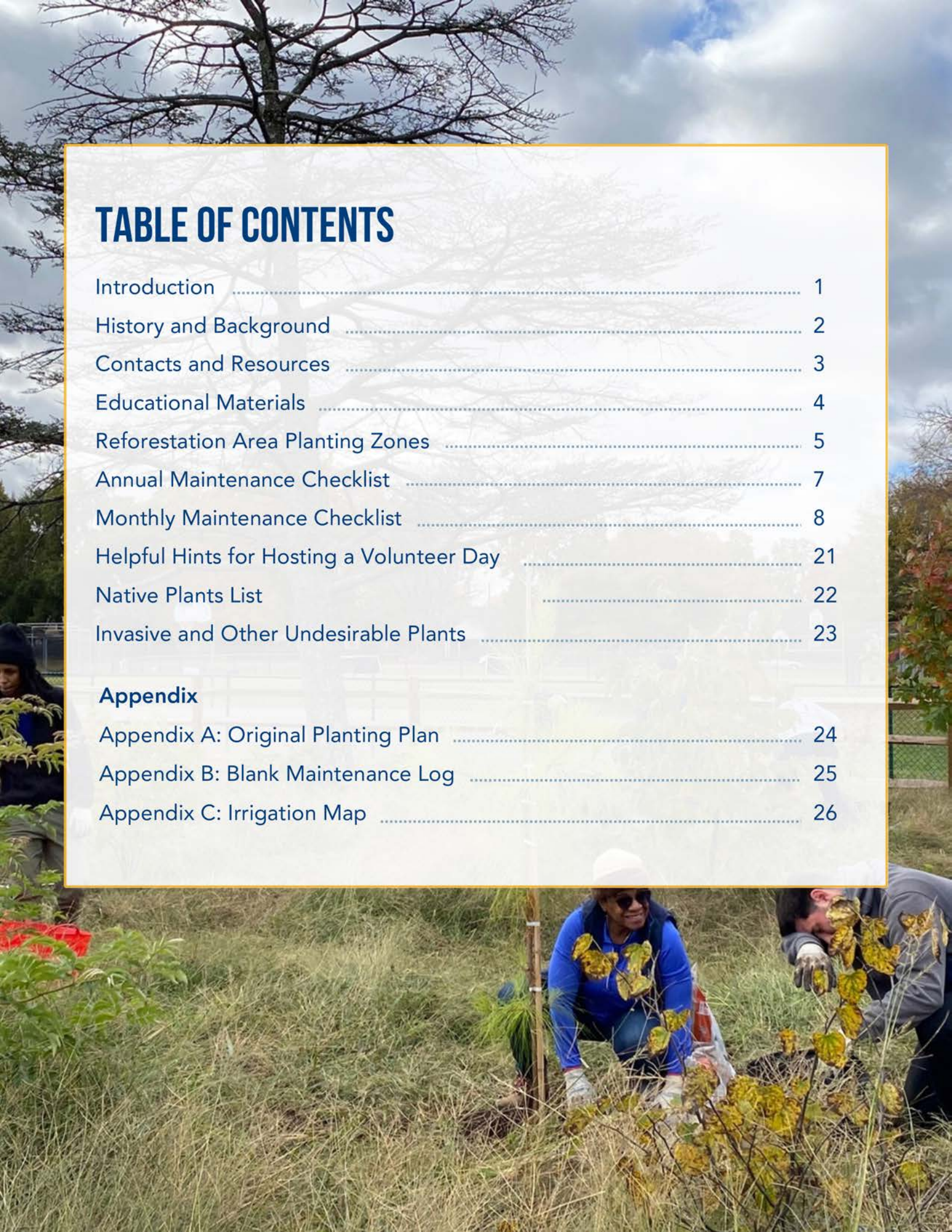
Created by



ALLIANCE
for the Chesapeake Bay

TABLE OF CONTENTS

| | |
|---|----|
| Introduction | 1 |
| History and Background | 2 |
| Contacts and Resources | 3 |
| Educational Materials | 4 |
| Reforestation Area Planting Zones | 5 |
| Annual Maintenance Checklist | 7 |
| Monthly Maintenance Checklist | 8 |
| Helpful Hints for Hosting a Volunteer Day | 21 |
| Native Plants List | 22 |
| Invasive and Other Undesirable Plants | 23 |
| Appendix | |
| Appendix A: Original Planting Plan | 24 |
| Appendix B: Blank Maintenance Log | 25 |
| Appendix C: Irrigation Map | 26 |



INTRODUCTION

This maintenance plan is a guide for stewardship of the Reforestation Area at Lois Harrison-Jones Elementary School (LHJ). The Reforestation Area is located in the northwest corner of the school grounds near the corner of Maplewood Avenue and Belmont Avenue bounded by sidewalks on the sides and adjacent to the blacktop. This space was designed to mimic forest succession, with the height of vegetation increasing from one end to the other, much like how a forest develops over time. The goal for stewardship is to strike a balance between a manicured and natural look appropriate for use by the school and community.



ADAPTIVE MANAGEMENT

As stewards of the Reforestation Area, the LHJ Parent Teacher Association (PTA) will provide efficient and effective care into the future. As the garden grows, matures, and evolves, the PTA should work collaboratively to balance their landscaping knowledge and skills with the amount of time they can dedicate to maintenance. Stewardship of this space can be thought of as a work in progress or a science experiment. As the garden changes, we expect the PTA to try new methods, make mistakes, and learn from them. Mother nature is unpredictable so it is best to be flexible and use adaptive management strategies for continued care.



HISTORY AND BACKGROUND

MARCH 2020

Alliance for the Chesapeake Bay is awarded a \$40,000 ConserveVAtion Fund Grant from the Community Foundation for a Greater Richmond to work with Manchester Gardening and LHJ. The City of Richmond Department of Public Utilities provided \$5,000 for additional trees.



SEPTEMBER 2020

Manchester Gardening creates initial landscape design for the space (see Appendix).

JANUARY TO MAY 2021

A virtual professional learning series called Come Outside Cougars! is held for LHJ staff to share the purpose of the project and how to use the space as an outdoor classroom.

FEBRUARY 2021

Construction begins. Irrigation is installed, paths are outlined, and planting beds are prepped with mulch and compost.



APRIL 2021

Native perennials, trees, and shrubs are planted by community volunteers.

SUMMER 2021

Stone paths are laid and volunteer maintenance days led by the Alliance for the Chesapeake Bay begin.

NOVEMBER 2021

The central meadow is planted by community volunteers.



APRIL 2022

LHJ is awarded a US Green Ribbon School award by the US Department of Education.

OCTOBER 2022

The Alliance and Dominion Energy plant an additional 22 trees.



MAY 2023

The Reforestation Area receives a BUBBA (Best Urban BMP in the Bay Award), Category: Best Habitat Creation from the Chesapeake Stormwater Network.

JANUARY 2024

Garden Party Committee formed under PTA.



CONTACTS AND RESOURCES

NICHOLAS LERECHÉ *LHJ Principal, RPS*

Contact when planning work in Reforestation Area or in case of emergency

✉ nlereche@rvaschools.net

BOBBY HATHAWAY *RPS Facilities Director, RPS*

Contact in case of landscaping emergency or facilities issue only after contacting Principal Lereche

✉ rhathaway@rvaschools.net

JESSE RESSLER *Irrigation tech, Earthworks Irrigation*

Contact to turn on and winterize irrigation system twice a year, and for troubleshooting with irrigation or sprinklers

☎ 804-400-4268

PTA PRESIDENT *LHJ PTA President and Board*

Contact for events, and activities that use the Reforestation Area or to volunteer to get involved

✉ lhjonespta@gmail.com

board@lharrisonjonespta.org

NEAL FREIDMAN *Green Infrastructure Projects Coordinator, Alliance for the Chesapeake Bay*

Contact for additional resources related to Reforestation Area or general questions

✉ nfriedman@allianceforthebay.org

☎ 757-277-2706

MEREDETH DASH *Environmental Education Specialist, Alliance for the Chesapeake Bay*

Contact for educational resources related to Reforestation Area or general questions

✉ mdash@allianceforthebay.org

☎ 804-241-4662

DEBBIE POWERS *Kiwanis Club*

Contact to recruit local volunteers for work days.

✉ debbiepowers1@gmail.com

MADELINE GRYGIEL *Science Instructional Support Teacher, Richmond Public Schools*

Contact to borrow education materials and classroom book sets and to help coordinate use of the Reforestation Area for lessons

✉ mgrygiel@rvaschools.net

☎ 207-712-9031



RICHMOND TOOL BANK

Provides tool rental for Richmond area non-profit and community organizations

✉ staff.Richmond@toolbank.org

☎ 804-219-0606



RICHMOND TREE STEWARDS

Provide assistance with annual tree care, pruning, and planting

✉ richmondtreestewards@gmail.com



COMMUNITY FOUNDATION FOR GREATER RICHMOND

Provides training and grant funding for nonprofits and community groups. CF Engage platform provides a volunteer management system for recruitment and communication with community volunteers

☎ cfrichmond.org

☎ 804-340-7300

EDUCATIONAL MATERIALS

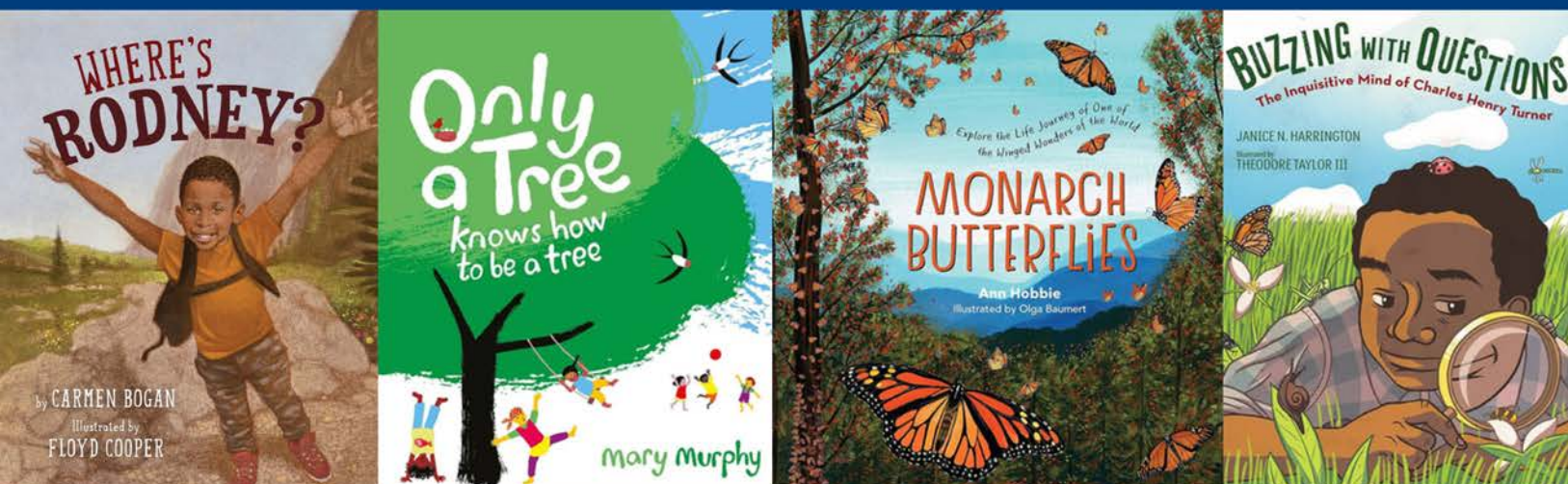
The following education materials are available in the Thinking and Tinkering Studio, Room 110 for the school community to borrow. Please contact Madeline Grygiel.

1. Pollinator kit including butterfly life cycle lessons with life cycle magnets
2. Virginia field guides including Birds, Wildlife, Butterflies & Moths and Trees & Wildflowers
3. Infrared thermometers for measuring surface temperatures
4. Project WET lesson plan called The Incredible Journey to teach the water cycle
5. Real specimens encased in plastic including "Life Cycle of a Butterfly and Life Cycle of a Honeybee"
6. Mini watershed models with spray bottles (set of 5) will be available.



CLASSROOM BOOKS

Classroom sets of *Where's Rodney?* and *Only a tree knows how to be a tree* picture books, at least 3 copies of *Monarch Butterflies* and *Buzzing with Questions*



ADDITIONAL RESOURCES AND LESSONS CAN BE FOUND AT ALLIANCEFORTHEBAY.ORG/LHJ

REFORESTATION AREA PLANTING ZONES

POLLINATOR ZONE



ORANGE SHRUB ZONE



MEADOW



BLUE SHRUB ZONE



MULCH LINE

TREE ZONE



OAK CIRCLE

COMPOST PILE

KEY:



water hydrants

REFORESTATION AREA PLANTING ZONES CONTINUED

WHERE TO MOW

- Mow in grassy areas between planted areas to keep walking paths and open spaces clear.
- Mow in the green area under and around the trees.
- A weed whacker or trimmer should also be used on paths, edges, and *carefully*, around shrubs and trees.
- Mow at a high setting, at least two inches.

IRRIGATION

Irrigation is installed throughout the Reforestation Area, which includes an in-ground sprinkler system and above-ground water hydrants. **This system must be winterized each fall and turned on again each spring**, which can be done by coordinating with Earthworks Irrigation (see Contacts page). They will need access to the school building twice a year to do this.



Keys

There is a set of keys to the irrigation control box and to the locks on the water hydrants in the school office. The Alliance also has an extra pair of keys if needed.



Hydrants

There are three water hydrant locations:

- Near the pine trees in the back entrance off Belmont
- On the south side of the meadow
- On the east side of the garden near the bald cypress trees

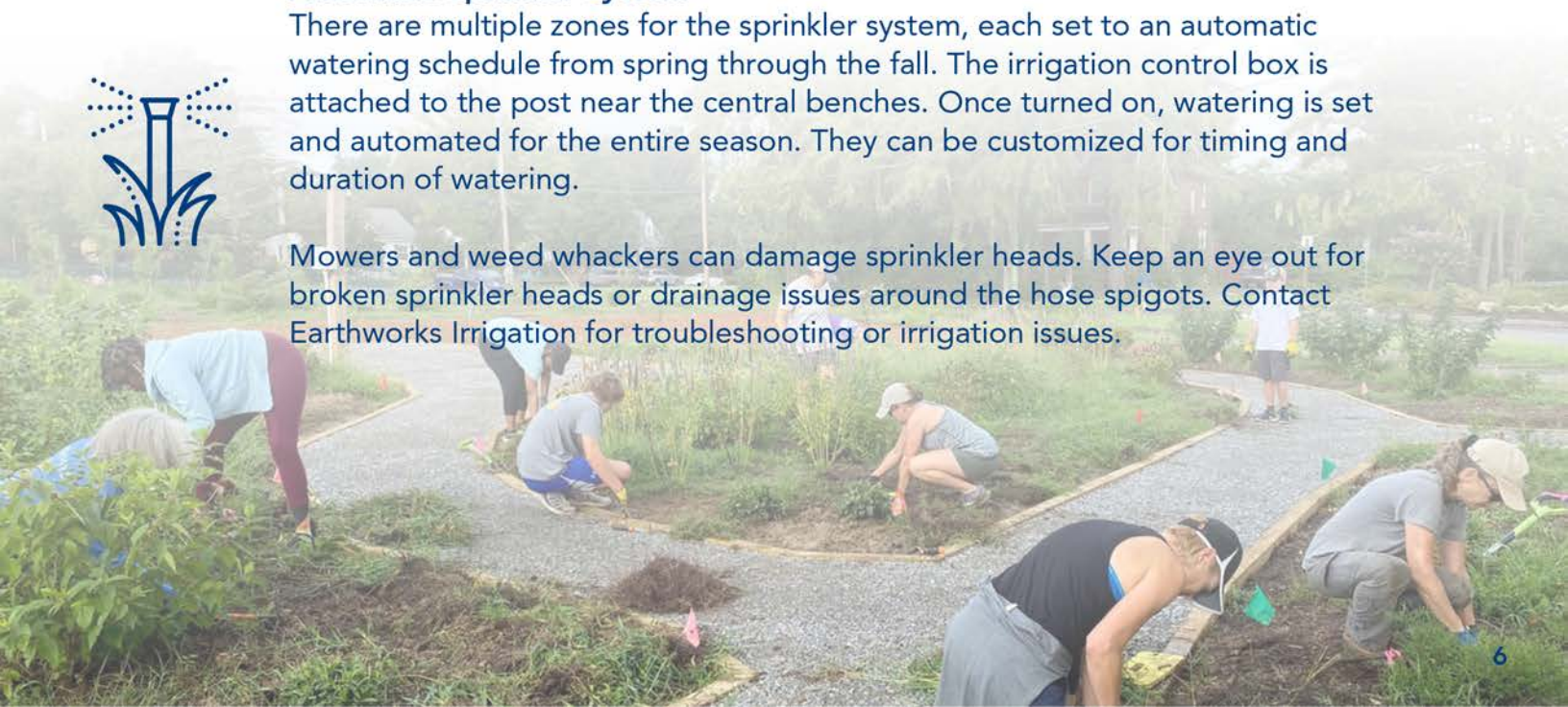
Hoses can be attached for watering or to connect to sprinklers. When not in use, hydrants should be kept locked. They are attached to the irrigation main system.



Automatic Sprinkler System

There are multiple zones for the sprinkler system, each set to an automatic watering schedule from spring through the fall. The irrigation control box is attached to the post near the central benches. Once turned on, watering is set and automated for the entire season. They can be customized for timing and duration of watering.

Mowers and weed whackers can damage sprinkler heads. Keep an eye out for broken sprinkler heads or drainage issues around the hose spigots. Contact Earthworks Irrigation for troubleshooting or irrigation issues.



ANNUAL MAINTENANCE CHECKLIST

This checklist is provided as a starting point to monitor and keep track of maintenance tasks throughout the year. Following the annual checklists are monthly breakdowns of maintenance tasks with more detailed notes for each month.

| TASK | WINTER | | | SPRING | | | SUMMER | | | FALL | | |
|---|--------|-----|-----|--------|---------|-----|--------|-----|------|------|-----|----------|
| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEPT | OCT | NOV | DEC |
| Chip drop (if needed) | | | x | x | | | | | | | | |
| Hand weeding | | | x | x | x | x | x | x | x | x | x | |
| Herbicide application (optional) | | | x | x | | | | | | | | |
| Irrigation | | | | | Turn on | | | | | | | Turn off |
| Mowing | | | | x | x | x | x | x | x | x | | |
| Mulch replacement (as needed) | | | x | x | | | | | | | | |
| Replacement planting (shrubs, perennials) | | x | x | x | x | | | | x | x | | |
| Replacement planting (trees) | | | | | | | | | | x | x | |
| String trimming/weed whacking | | | | x | x | x | x | x | x | | | |
| Trash removal (as needed) | | x | | x | | x | | x | | x | | x |
| Tree and shrub pruning | x | x | | | | | | | | | | x |
| Deer cages (put up and down) | x | x | | | | | | x | | | | |
| Monitor for watering | | | | | x | x | x | x | x | | | |

MONTHLY MAINTENANCE CHECKLIST - BLANK TEMPLATE

| TASK | NOTES |
|--|-------|
| Hand weeding | |
| Herbicide application | |
| Irrigation | |
| Mowing | |
| Mulch replacement | |
| Replacement planting (shrubs, perennials) | |
| Replacement planting (trees) | |
| String trimming/weed whacking | |
| Trash removal (as needed) | |
| Tree and shrub pruning | |
| Watering | |
| Deer fencing | |

JANUARY MAINTENANCE CHECKLIST

| TASK | NOTES |
|---|---|
| Hand weeding | A warm, wet winter day is a good time to pull up wire grass and crab grass and other invasives from the roots. Try to dig up wire grass root systems. This can be done with a tool like a shovel or a broad fork. They might be a couple inches below the surface. Although it is not explicitly listed in each month's checklist, hand weeding work can be done any month of the year. |
| Herbicide application | |
| Irrigation | |
| Mowing | |
| Mulch replacement | |
| Replacement planting (shrubs, perennials) | |
| Replacement planting (trees) | |
| String trimming/weed whacking | |
| Trash removal (as needed) | Monitor for trash year round. |
| Tree and shrub pruning | Pruning should be done in late winter, when trees are still dormant and right before spring growth occurs. It's also easier to get to the branches when there are no leaves at this time. Prune hydrangeas and beauty berries in pollinator zone if they are growing above shoulder height. Hydrangeas can be cut back low. This can also be done in the fall after summer growth. |
| Watering | |
| Deer fencing | Can start taking down deer fencing in January as deer mating season ends. Will need to take down eventually to weed around trees in spring and summer. |

FEBRUARY MAINTENANCE CHECKLIST

| TASK | NOTES |
|---|--|
| Hand weeding | Good time to pull weeds before they start to throw out seeds and multiply. Weeds are gathered up and placed in the compost pile in the back corner of the space near the entrance on Belmont. |
| Herbicide application | |
| Irrigation | |
| Mowing | |
| Mulch replacement | Spot mulching can be done to prevent spring weed growth. When mulching the perennials in pollinator beds, keep mulch or wood chips away from about 1-2" of the plant's base. |
| Replacement planting (shrubs, perennials) | Perennials in the pollinator beds can be divided and replanted in bare spots. Try to determine where they are going before you divide and pull up plants. |
| Replacement planting (trees) | |
| String trimming/weed whacking | |
| Trash removal (as needed) | |
| Tree and shrub pruning | February is a good time to prune the elderberry bushes in the Reforestation Area. Cut shoots that may be popping up from the base, beginning to form thickets or long branches that are leaning over into pathways, so that there is space to walk between shrubs and trees. Don't be afraid to cut elderberries low, even to knee height. Experiment with different pruning techniques if interested. They will bounce back. Contact the Alliance for additional guidance on pruning. |
| Watering | |
| Deer fencing | Continue to take down deer fencing. The metal fences can be stored in the fenced in area behind the school building, and then reused next year. Contact the Alliance or Tree Stewards if guidance is needed to put the cages back up. |

MARCH MAINTENANCE CHECKLIST

| TASK | NOTES |
|---|---|
| Hand weeding | March is a good time to start hand weeding before spring weeds flower and set seed. |
| Herbicide application | In order to control wiregrass around young trees and on the paths, herbicide can be applied in March and early spring. Contact a professional to discuss the use of herbicides or alternatives. |
| Irrigation | |
| Mowing | |
| Mulch replacement | Consider sheet mulching with cardboard to limit weed growth and improve soil health. |
| Replacement planting (shrubs, perennials) | Perennials can be divided and replanted to fill out empty spaces in beds through March and April before it gets too hot. |
| Replacement planting (trees) | Tree planting can be done in March through the early spring in Virginia. |
| String trimming/weed whacking | |
| Trash removal (as needed) | |
| Tree and shrub pruning | |
| Watering | |
| Deer fencing | Take down the rest of deer fencing in March or April. It will be easier to take down before the summer heat. |

APRIL MAINTENANCE CHECKLIST

| TASK | NOTES |
|---|---|
| Hand weeding | Hand weed whenever you feel the inclination now that it will be getting warmer. This is a good activity to do at volunteer events with groups and for individuals or small groups that want to work at the reforestation space outside of organized volunteer events on their own time. Clear around bases of shrubs and trees and weed throughout perennial beds. Weed inside deer fences. Pull up elm saplings that may pop up in the meadow and other areas throughout the garden. Don't try to eradicate all weeds (they will win), but do as much as you can to limit their competing with things that we've planted and to fit how you want the garden to look. |
| Herbicide application | A relatively simple alternative to herbicide application is solarizing. Solarizing involves placing a tarp or other surface over a garden bed or other area for a couple of weeks to smother the plant life growing there; and then replanting after. |
| Irrigation | |
| Mowing | Start to monitor for mowing needs. How fast the grass grows depends on a few things like amount of rainfall and how hot the spring has been. Keep paths and small gathering spaces clear. |
| Mulch replacement | Bags of mulch or bulk mulch can be used. A bulk mulch pile can be kept outside of the Reforestation Area, with permission from the school, and used over a season for multiple events. Discuss with school staff to find the best location to store mulch. |
| Replacement planting (shrubs, perennials) | |
| Replacement planting (trees) | |
| String trimming/weed whacking | Start to monitor for string trimming and weed whacking needs. Keep paths and open spaces clear. Watch for or mark sprinkler heads around the garden when trimming. The string trimmer can break them. |
| Trash removal (as needed) | |
| Tree and shrub pruning | |
| Watering | |
| Deer fencing | |

MAY MAINTENANCE CHECKLIST

| TASK | NOTES |
|---|---|
| Hand weeding | Spring weeds should be dying off and wiregrass will be more prevalent. Pull wiregrass as best you can. |
| Herbicide application | |
| Irrigation | Turn on irrigation system. Contact Earthworks to coordinate turning on the system for the year. Begin to check irrigation once throughout each month to make sure it is working. Look for water pooling in specific spots or along edges. This may be a sign of busted sprinkler heads or a leak. |
| Mowing | Mow twice a month if needed. Mow at one of the highest settings and don't collect grass cuttings to limit crab grass growth. |
| Mulch replacement | Renew mulch before summer heat after weeding. This is best done as a group activity at volunteer events where a bulk order of mulch can be picked up or delivered. |
| Replacement planting (shrubs, perennials) | If planting or dividing shrubs and perennials in May or late spring, make sure to water thoroughly and consistently into the summer months. |
| Replacement planting (trees) | |
| String trimming/weed whacking | Weed whack twice a month to limit invasive grass growth. It's helpful to trim, as well as hand weed, around trees and shrubs, inside the mulch rings. |
| Trash removal (as needed) | |
| Tree and shrub pruning | |
| Watering | For new plantings you may want to supplement the irrigation system with additional watering. Water new plantings once a week if dry. |
| Deer fencing | |

JUNE MAINTENANCE CHECKLIST

| TASK | NOTES |
|---|--|
| Hand weeding | Hand weed as needed in garden beds. |
| Herbicide application | |
| Irrigation | |
| Mowing | Mow twice a month to limit grass growth later in summer. Mow at highest or second highest setting. |
| Mulch replacement | Continue to mulch beds and around trees where needed. This will improve soil, retain moisture and limit weed growth. |
| Replacement planting (shrubs, perennials) | |
| Replacement planting (trees) | |
| String trimming/weed whacking | Keep paths and open spaces clear. Trim wire grass intruding on meadow edges. |
| Trash removal (as needed) | |
| Tree and shrub pruning | Cut back large elderberry and other tree branches where branches prevent you from walking between trees. Trim elderberry tree in meadow low. It will grow back fine. |
| Watering | Start checking plants and trees for watering needs as summer draws in. |
| Deer fencing | |

JULY MAINTENANCE CHECKLIST

| TASK | NOTES |
|---|---|
| Hand weeding | Wiregrass will be easier to pull up after a summer rain when the ground is wet. |
| Herbicide application | |
| Irrigation | |
| Mowing | Grass will be thickest and tallest at this point of the summer. Mow at highest setting. |
| Mulch replacement | |
| Replacement planting (shrubs, perennials) | |
| Replacement planting (trees) | |
| String trimming/weed whacking | Use a weed trimmer to keep paths through the garden clear. Consider using a weed trimmer with a brush cutter attachment instead of string. Available at the ToolBank. |
| Trash removal (as needed) | |
| Tree and shrub pruning | |
| Watering | Monitor plants and trees for watering needs. |
| Deer fencing | |

AUGUST MAINTENANCE CHECKLIST

| TASK | NOTES |
|---|--|
| Hand weeding | Check meadow and beds for elm saplings that popped up over the summer. |
| Herbicide application | |
| Irrigation | |
| Mowing | Try to schedule August mowing close to the first day of school. You may be able to switch to mowing once a month as the summer ends. |
| Mulch replacement | |
| Replacement planting (shrubs, perennials) | Start to think about fall replacement planting. |
| Replacement planting (trees) | |
| String trimming/weed whacking | Keep paths trimmed, especially leading up to school being back in session. |
| Trash removal (as needed) | August is a good time for trash pickup and garden clean up before school is back in session. |
| Tree and shrub pruning | |
| Watering | Monitor for watering needs. |
| Deer fencing | |

SEPTEMBER MAINTENANCE CHECKLIST

| TASK | NOTES |
|---|--|
| Hand weeding | Continue to hand weed through early fall. |
| Herbicide application | |
| Irrigation | |
| Mowing | Check for mowing and trimming needs as weather cools. |
| Mulch replacement | |
| Replacement planting (shrubs, perennials) | |
| Replacement planting (trees) | |
| String trimming/weed whacking | |
| Trash removal (as needed) | |
| Tree and shrub pruning | |
| Watering | Continue to monitor for watering through September, depending on weather conditions. |
| Deer fencing | |

OCTOBER MAINTENANCE CHECKLIST

| TASK | NOTES |
|---|---|
| Hand weeding | |
| Herbicide application | |
| Irrigation | |
| Mowing | |
| Mulch replacement | |
| Replacement planting (shrubs, perennials) | |
| Replacement planting (trees) | October is prime tree planting season in Virginia. If you have new or replacement trees to add, this is the time. |
| String trimming/weed whacking | |
| Trash removal (as needed) | |
| Tree and shrub pruning | |
| Watering | |
| Deer fencing | Put up deer fencing around young trees in early to mid fall to coincide with deer mating season. This can be done as a group activity. Most of the trees at LHJ may only need a season or two more of protection. |

NOVEMBER MAINTENANCE CHECKLIST

| TASK | NOTES |
|---|---|
| Hand weeding | |
| Herbicide application | |
| Irrigation | Irrigation system should be winterized and shut down late November or early December. |
| Mowing | |
| Mulch replacement | |
| Replacement planting (shrubs, perennials) | |
| Replacement planting (trees) | Tree planting can be done through November and early December in Virginia, depending on weather conditions. |
| String trimming/weed whacking | |
| Trash removal (as needed) | |
| Tree and shrub pruning | |
| Watering | |
| Deer fencing | |

DECEMBER MAINTENANCE CHECKLIST

| TASK | NOTES |
|---|--|
| Hand weeding | |
| Herbicide application | |
| Irrigation | Turn off irrigation system for winter. Contact Earthworks to coordinate winterizing. |
| Mowing | |
| Mulch replacement | |
| Replacement planting (shrubs, perennials) | |
| Replacement planting (trees) | |
| String trimming/weed whacking | |
| Trash removal (as needed) | As you monitor the gardens for trash, check for pruning and spring planting needs as well. |
| Tree and shrub pruning | |
| Watering | |
| Deer fencing | |

HELPFUL HINTS FOR HOSTING A VOLUNTEER DAY

1 HAVE A PLAN

Create an achievable list of tasks and think through all logistics. Questions to consider:

- What supplies and tools will be needed?
- How long will each task take?
- How many volunteers are needed for the tasks?
- What extra tasks can I have in the hopper in case we finish early?

2 COMMUNICATE IMPORTANT EVENT INFORMATION WITH VOLUNTEERS

Consider sharing:

- Time of event and rain dates (if possible)
- Meeting location and parking information.
- What volunteers are expected to wear and bring. Long pants and closed toed shoes are recommended. Remind them to bring a water bottle.
- What activities they will participate in.
- How to get in touch with the organizer on the day of event.

3 PROVIDE NECESSARY EVENT SUPPLIES AND TOOLS

- Provide water for volunteers. Snacks are not required, but nice to have.
- Always have proper first aid supplies on hand.
- Provide necessary tools and landscaping equipment for volunteers. Tool rental is available through the Richmond Community Toolbank (see Resources section).

4 COMMUNICATE AND COORDINATE WITH THE SCHOOL PRINCIPAL

- Share dates and times for any volunteer event. Communicate how many people you expect to be there.
- Check to make sure that there are no conflicts with the school (Testing days, dismissal time, holidays, etc.)
- Email the PTA and the Principal before each volunteer event.

5 PROMOTE YOUR EVENT

- Advertise and promote your event within the school community and the Alliance
- Post your event on CF Engage or other community calendars (see Resources section) to reach more community volunteers.

6 HAVE FUN!

- During the event, have fun and remind volunteers to take breaks, especially if it's a hot day.
- Celebrate! Come back together as a group at the end of your event to reflect on your accomplishments and celebrate your success. Be sure to thank volunteers for their time.

NATIVE PLANT LIST

TREES

- Magnolia virginiana*, Sweetbay Magnolia 💧
Pinus taeda, Loblolly Pine 🌙
Quercus bicolor Swamp Oak, Swamp Oak 🌙
Quercus phellos, Willow Oak 🌙
Quercus nuttallii, Nuttall's Oak 🌙
Taxodium distichum peve minaret, Bald Cypress 💧
Hamamelis virginiana, American Witchhazel 🌙
Betula nigra, River Birch ⚡

SHRUBS

- Callicarpa americana*, American Beautyberry 🌸
Cephalanthus occidentalis, Buttonbush ⚡
Viburnum denatum Blue muffin, Arrowwood Viburnum 🌙
Vaccinium corymbosum, Highbush Blueberry ⚡
Cornus stolonifera (artici fire), Red Twig Dogwood 💧
Sambucus canadensis, Common Elderberry 🌟🌙
Itea virginica, Sweetspire 💧

PERENNIALS

- Agastache Blue Fortune*, hyssop 🌸
Aster 'Wood's Purple,' aster 🌸
Baptisia australis, blue false indigo 🌸
Coreopsis nana, tickseed, calleo 🌸
Echinacea magnus, purple coneflower 🌸
Gaillardia goblin, blanket flower 🌸
Hibiscus moscheutos, swamp rose mallow 🌸
Monarda coral reef, bee balm 🌸
Penstemon digitalis, foxglove beardtongue 🌸
Phlox subulata emerald Blue, phlox 🌸
Rudbeckia goldsturm, black-eyed susan 🌸
Solidago little lemon, golden rod 🌸
Stokes color wheel, Stokes color wheel 🌸
Stokes peachie pick, stokes aster 🌸
Juncus effusus, juncus 💧

BALD CYPRESS *Taxodium distichum* peve minaret



BUTTONBUSH *Cephalanthus occidentalis*



BLUE FALSE INDIGO *Baptisia australis*



INVASIVE AND OTHER UNDESIRABLE PLANTS

- **Wire grass or bermuda grass (*Cynodon dactylon*)**

- Extremely difficult to control, shows up anywhere in the Reforestation Area, do your best to stay on top of it
- How to remove: Pull up from roots when hand weeding, can apply herbicide application to control



Photo from University of Maryland Extension



Photo from USDA Forest Service

- **Poke weed (*Phytolacca americana*)**

- Will pop up throughout the gardens in summer, best to pull up as early as you notice them growing, is a native plant but is not appropriate in Reforestation Area
- How to remove: Cut with loppers and pull up from ground

- **Elm (*Ulmus alata*)**

- The Reforestation Area is surrounded by elm trees, so the elm saplings take root throughout the space, watch for elm saplings all year, because the bigger they get the harder they are to pull out
- How to remove: Use a soil knife or hand trough to dig up smaller saplings. A bigger shovel or pick axe may be needed for larger elms.



Photo from NC State Extension



Photo from Penn State Extension

- **Tree of heaven (*Ailanthus altissima*)**

- One of the fastest growing invasive trees in Virginia, can be mistaken for sumac
- How to remove: Pull up with hands using gloves or dig up with shovel.

- **Wild lettuces (*Lactuca sp.*) & wild onions (*Allium canadense*)**

- These like to pop up in the compacted soil in the paths and meadow edges
- How to remove: Use soil knife or hand tools to dig up.








Photos from UMASS Extension (left) and SERNEC/W. C. Burger (right)

APPENDIX A. ORIGINAL PLANTING PLAN

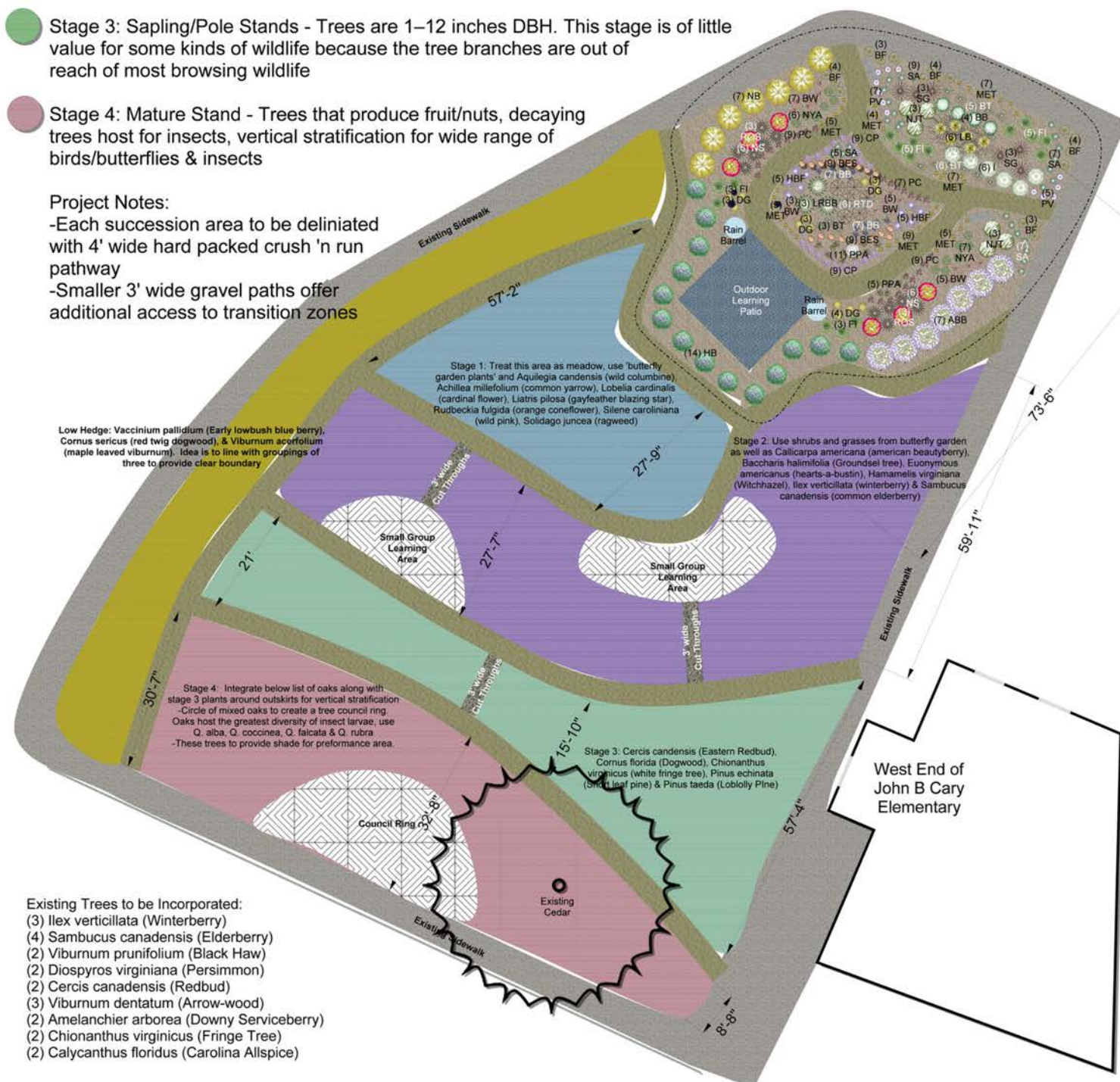
Succession Planting Diagram:

- Goal to set distinct forest succession areas
- Help guide natural walking and instruction patterns

-  Low Hedge: Purpose is to encourage children to stay within the garden area
-  Stage 1: Herbaceous Opening - Mix of grasses, supporting a wide range of insects and small mammals
-  Stage 2: Shrub/Seeding Brush - Young trees/shrubs. Nesting and food for birds and other wildlife
-  Stage 3: Sapling/Pole Stands - Trees are 1–12 inches DBH. This stage is of little value for some kinds of wildlife because the tree branches are out of reach of most browsing wildlife
-  Stage 4: Mature Stand - Trees that produce fruit/nuts, decaying trees host for insects, vertical stratification for wide range of birds/butterflies & insects

Project Notes:

- Each succession area to be delineated with 4' wide hard packed crush 'n run pathway
- Smaller 3' wide gravel paths offer additional access to transition zones



Design by:

9-22-20

Manchester Gardening
The Spirit Flourishes with Beauty

For Design Purposes Only
Installer(s) responsible for Verification of Field Measurements

John B. Cary
Elementary School
3021 Maplewood Avenue
Richmond, VA 23221
Butterfly Garden

Manchester Gardening, LLC
3204 Rosedale Avenue
Richmond, VA 23230
Scale: 1" = 10'
Print on: 8.5" x 14"

APPENDIX B. MAINTENANCE LOG

| TASK | COMPLETED BY | DATE | NOTES |
|--|--------------|------|-------|
| Hand weeding | | | |
| Herbicide application | | | |
| Irrigation | | | |
| Mowing | | | |
| Mulch replacement | | | |
| Replacement planting (shrubs, perennials) | | | |
| Replacement planting (trees) | | | |
| String trimming/weed whacking | | | |
| Trash removal | | | |
| Tree pruning | | | |
| Watering | | | |
| Deer fencing | | | |

