Green Lots Guidebook

Abstract

This document serves as a tool to assist the City of Richmond's residents, administration, nongovernmental organizations and businesses in transforming vacant land into green spaces and improving the quality of life in the city. As of 2010, there are an estimated 10,830 vacant lots, abandoned properties, and parcels with potential for redevelopment in Richmond. While these vacant properties can present challenges, they also offer an opportunity to create greener neighborhoods, with increased environmental protections and space for outdoor activity. Here we classify the types of vacant land, describe nine different 'greening' strategies, and provide descriptions and photos of successful efforts. This document was inspired by and borrows from the City of Baltimore's Green Pattern Book, a part of its citywide Growing Green Initiative.

Contents

Introduction

In neighborhoods across Richmond, vacant land and abandoned housing are a blight on communities. Trash-filled, weedy lots are havens for rats and dumping, while boarded and abandoned houses attract crime and pose safety problems for adjacent neighbors. Vacant properties are a drain on City services, resources, and morale.

In 2010, Richmond had 10,830 vacant lots, abandoned houses, and parcels with potential for redevelopment. While these vacant properties can be a problem, they also offer an opportunity to create greener neighborhoods that improve the quality of life for current residents while attracting new people to Richmond.

Since 1990, the Enrichmond Foundation has undertaken initiatives to preserve land for public use in our urban environment. Enrichmond created this guidebook as a resource for residents, city administration, and nongovernmental organizations which desire to "green" and improve vacant land. This document grew out of the City of Baltimore's Green Pattern Book – one component of its citywide Growing Green Initiative – which was created to address Baltimore's chronically vacant lots and structures.

Richmond's vacant lots present an opportunity to transform blighted areas into green spaces, including parks and squares, rain gardens, urban farms, forests and community gardens. These green amenities have the potential to concurrently provide economic, social, and environmental benefits to the City and its residents.

The wide variety of greening techniques offered in this document support and assist the implementation of the Office of Sustainability's goals. The City's RVAgreen Sustainability Plan, accompanied by community resources and collaboration, offers a unique opportunity for land asset management and sustainable economic development, through which Richmond can grow sustainably into the next century. These greening strategies are a complement to the City's proactive planning and land assembly program to build attractive, mixed-income and walkable neighborhoods adjacent to green amenities.

The City may reference this guidebook when identifying spaces of interest for temporary and permanent green uses and strategies, with additional strategies for holding select properties for future redevelopment.

A combination of factors makes 2016 an opportune moment to add the Green Lots Guidebook to Richmond's sustainability repertoire. These factors include: state and federal environmental and water quality mandates; national and regional demographic trends; statewide smart growth policies and regional growth projections; the established strengths of many of Richmond's existing and growing communities, businesses, and institutions; and Richmond's inventory of underutilized and abandoned properties available for viable reuse strategies. Each of these factors, on its own, presents an isolated trend, strength, or challenge. However, once combined into a multi-year effort, with sustained leadership, an engaged community, and public, private, and nonprofit partners, the vision of creating, implementing and maintaining sustainability initiatives becomes compelling indeed.

This vision is already rooted in reality. Today, over 40 vacant lots have been adopted and turned into gardens and community open spaces; thousands of trees have been planted in street wells, public parks, and riparian efforts throughout Richmond. Multiple nonprofit organizations provide healthy produce to underserved communities. Vacant housing is being demolished to make way for new development and community spaces. The Green Lots Guidebook is an important tool that will help guide decisions to support Richmond's Sustainability Plan.

Why use Richmond's Green Lots Guidebook?

We believe that vacant land is an asset that can help grow the City to be resilient, sustainable, and competitive in the 21st century.

Vacant land allows us to rethink the form and function of the City, and build upon the public improvements already undertaken by Richmond's Department's of Public Utilities, Parks, Recreation, and Community Facilities, Public Works, nonprofit organizations, and myriad of volunteer groups.

This book provides the resources to set aside new areas to improve communities' quality of life through access to multi-use green spaces, healthy food from local gardens, and an increase in the city's tree canopy. Permanent green spaces clean the stormwater that rushes into our streams, the James River, and the Chesapeake Bay, and improve the biological health of our forests and ecosystems. We also contribute to the health and wellness of our youth and neighbors when vacant land is transformed into spaces for outdoor recreation within a short walk of peoples' homes. These efforts will strengthen our neighborhoods by attracting new investment and development and lay the foundation for a sustainable City for generations to come.

How do we accomplish this vision?

The Richmond Green Lots Guidebook is a tool to help us achieve the vision of a greener, more active city. It is a planning and implementation guide for greening vacant land – whether as a holding strategy to await future development or an immediate action for putting land into productive use. The Green Lots Guidebook establishes a common language that that City agencies, nongovernmental organizations (NGOs), community-based organizations, and residents can use to collectively address vacant land. We all end up paying for the crime, pollution, and health risks that vacant properties attract. An intentional investment in such properties converts vacant lots from drains on resources to city-wide assets.

With 26 years of experience establishing and supporting volunteer groups through our Partner program, Enrichmond is the ideal organization to facilitate greening projects. Enrichmond's history of collaboration with city council, the Department of Parks and Recreation, and neighborhood associations enables it to connect people and projects to the resources they need.

The Green Lots Guidebook has nine greening strategies that can be used for holding and reusing vacant land:

- **Clean and Green**—Temporary greened spaces meant as a short-term holding strategies for future redevelopment, whether as new development or for one of the other green techniques.

- **Urban Agriculture**—Land leased for community gardens or for urban farmers to grow food commercially.

- **Community-Managed Open Space**—Vacant lots maintained by a community, nonprofit, or more than one household used for pocket parks and small recreational spaces.

- **Stormwater Management**—Land used to reduce runoff, filter stormwater, and decrease impervious surfaces to meet Richmond's requirements for improving water quality of our

streams and rivers.

- **Green Parking**—Land that can accommodate neighborhood parking needs while keeping greening and stormwater considerations in mind.

- **Urban Forest and Buffer**—Trees planted and maintained on vacant lots, buffers along railroads and highways, and existing forest patches.

- **Neighborhood Park**—Permanent public spaces that can be developed for passive or active recreation or both.

- **Urban Meadow** – Land preserved and planted with native plant species to attract pollinators, provide habitat, and reduce the need for maintenance.

- **Mixed Greens**—Land that can combine the uses described above to achieve a greater number of goals.

Benefits

Using the Green Lots Guidebook to transform vacant lots into green spaces will provide both short-term and long-term benefits, including:

- Decreasing costs—A growing body of evidence shows that managed green spaces reduce crime, increase property values, and improve health. In addition, they cost less per acre to maintain than vacant buildings.
- Creating jobs—Greening vacant land will help support job growth through landscape maintenance and planting, stormwater facility development, urban farming, and food systems.
- Consolidating parcels and preparing land to encourage future redevelopment.
- Strategically integrating stormwater management, parks, and green spaces for multiple public benefits.

Finally, the Green Lots Guidebook addresses several of the major goals of Richmond's RVAgreen Sustainability Plan, including:

Supporting a vibrant and sustainable economy.
Creating a healthy urban environment.
Developing a thriving cityscape that connects people to natural spaces.

Specifically, the Green Lots Guidebook supports or addresses these objectives and initiatives proposed by the City in its Sustainability Plan:

- Create opportunities for Richmond businesses to enhance their overall sustainability through an online, one-stop resource center for energy efficiency, clean energy, and sustainable practices.
- Make local, healthy, and sustainable food accessible and affordable.

- Improve the state of good repair and efficiency of city infrastructure through a citywide beautification program, maintaining public spaces to create a safer and more welcoming environment.
- Protect and enhance Richmond's water resources through use of stormwater BMPs in new construction and maintenance, and through a reduction in the percentage of impermeable surface area.
- Enable the Richmond community to use water wisely through the promotion of rainwater collection systems for homes and businesses.
- Increase the accessibility, quantity, and quality of public space.
- Increase Richmond's tree canopy.
- Promote the use of vacant and blighted property through legislation that allows transfer of ownership of abandoned/vacant property, brownfield redevelopment, and zoning that promotes the use of vacant properties for urban agriculture.

How to Use the Green Lots Guidebook

Use by Agencies

- Help outside partners (NGOs, communities) understand permit processes and land use codes associated with the improvement of land.
- Provide outline for utilizing green strategies for capital projects and planning purposes that support the missions and responsibilities of individual agencies.

Use by NGOs/Nonprofit Organizations

- Tool for decision-making and planning that shows how public agencies, NGOs, and residents can work together to share resources.
- Guidance on policies, standards, and permits for implementing various green strategies.
- Model for documenting NGO projects, including costs and budgets.

Use by Community Development Corporations and Faith-based Groups and Residents

- Help residents analyze a site and make decisions about the site improvements, costs, and project phasing.
- Clarify project costs, maintenance needs, and responsibilities.
- Help direct people to the best resources—City agencies, NGOs, and funders.
- Introduce terminology that community groups will use in interacting with City agencies.

Use by Businesses:

- Demonstrate social responsibility by utilizing recommended sustainability practices.
- Contribute to the beautification of the city, enhancing the image of the city as a safe, welcoming place to work and live.
- Provide a resource to identify potential partners and projects to fund.

Throughout the book, City agencies and nonprofits are mentioned. Many resources and their contact information are found in the Appendix (page __).

How This Book is Organized

Introduction: This provides an overview of the problems and opportunities posed by vacant properties, how the Green Lots Guidebook fits into the City's Sustainability Plan, how different groups can use the book, and quick tips for getting started.

Vacant Land Types (begins on page __): A broad overview of the common vacant land types found in Richmond.

Reusing Vacant Land (begins on page __): This section describes the nine green strategies and includes:

- Definitions and images of each of the green techniques
- Site selection criteria that provide a base level of technical guidance about what site factors need to be considered in selecting lots
- Guidance on required permits and agreements, implementation, maintenance, and resources
- Examples of local successes and pilot projects

Appendix (begins on page __): This provides contact information, examples of leases and agreements, and other resource material.

Icons: The following abbreviations and icons designate the sections of this book that discuss each associated strategy:

C+G – Clean and Green

UA – Urban Agriculture

CMOS – Community-Managed Open Space

SWM – Stormwater Management

GP – Green Parking

UF – Urban Forest and Buffer

NP – Neighborhood Park

UM – Urban Meadow

MG – Mixed Greens

Quick Tips for Commonly Asked Questions

How do I find out who owns a vacant lot?

The Richmond Real Estate Assessor's Office has an online tool to help you identify who owns a vacant lot or property. You can search by Parcel ID, Address, Owner, or Other Information (such as type of property) to find out more about the lot. The tool can be accessed here: http://eservices.ci.richmond.va.us/applications/PropertySearch/default.aspx. You can also contact the Assessor's Office directly for more information: http://www.richmondgov.com/Assessor/index.aspx.

The city of Richmond also has a Vacant Building Registry and is taking proactive steps to address vacant buildings in the city. If the lot you are interested in has a structure on it, it will be easy to find through the Vacant Building Registry at http://www.richmondgov.com/PlanningAndDevelopmentReview/PropertyMaintenance.aspx.

How do I adopt a city-owned lot?

Vacant lots can be adopted through the city's Adopt-a-Spot/Street/Gateway program for some community-managed activities, such as "Clean and Green" initiatives. For commercial Urban Farming and Community Garden initiatives, the city has an inventory of predetermined city-owned lots that are available for lease through the Richmond Grows Gardens program. Both programs have simple applications for adopting a lot or starting a commercial or not for profit garden, and both are temporary agreements with the city.
Instructions and forms for adopting and maintaining a lot can be found at http://www.richmondgov.com/CommissionCleanCity/AdoptSpot.aspx. For more information, contact the Clean City Commission at (804) 646-8325 or Darlene.mallory@richmondgov.com. Instructions, information and forms for any garden endeavors can be found at http://www.richmondgov.com/content/CommunityGarden/index.aspx.

What if the lot is not city owned?

For privately-owned nuisance lots, you can contact the city's Public Works Department which may cite the owner of the lot. If a city-owned lot needs attention, contact the Customer Care Center at 311 or report it through SeeClickFix Richmond online.

In cases in which private lot owners owe back taxes or the lot is unbuildable, the Richmond Redevelopment and Housing Authority may condemn the lot. The City would then take control of the lot, and sell it to a group such as Habitat for Humanity or the Better Housing Coalition. If a community group is interested in the future use of such a lot, they can contact RRHA or participate in the bidding process for the lot. It is worth noting that the bidding process can be difficult and time-consuming. Another option is for the lot to be put into a land trust.

Can I purchase a vacant lot?

City-owned or privately-owned, condemned vacant lots are put up for sale through a bidding

process. While anyone can bid on the property, typically organizations such as the Richmond Redevelopment and Housing Authority, Better Housing Coalition, and project: HOMES have an interest in buying such a lot. Other privately-owned lots may be sold through a typical real estate transaction.

For more information on the City's bidding process, contact the Department of Planning and Development Review, (804) 646-4169 or AskCommunityDevelopment@richmondgov.com.

How can I protect or preserve a vacant property that I already own?

If you own real estate in the City of Richmond and would like it to be protected from development and/or become available for public use, there are a few options. The Enrichmond Foundation works closely with the city's Department of Parks, Recreation, and Community Facilities to preserve parcels of land in the city for public use, such as a park. Enrichmond accepts gifts of real estate at fair market value. To accept a gift, Enrichmond conducts a qualified appraisal, an examination of any encumbrances on the property, and an analysis of the current state of the property, including an environmental evaluation. To make a gift of property to the Enrichmond Foundation, contact them at info@enrichmond.org.

Other options for preserving land in perpetuity from significant commercial development include placing the property into a land trust. A land trust ensures that land and water resources will be conserved and protected by permanently limiting future development. Landowners voluntarily place property under conservation easements, and qualifying easements are charitable donations that can provide state and federal tax benefits. The Capital Region Land Trust operates exclusively in the City of Richmond and the Counties of Chesterfield, Henrico, Hanover, Goochland, Powhatan, New Kent, and Charles City. More information can be found on their website: http://www.capitalregionland.org. The Virginia Outdoors Foundation is a larger trust that operates throughout Virginia: http://www.virginiaoutdoorsfoundation.org.

Are licenses or permits needed?

Yes – you need to fill out an agreement for the Adopt-a-Spot program, and you must apply for a permit for a community or commercial garden. Depending on the green strategy you are interested in, there may be additional city approvals required for temporary structures, improvements, or fences, particularly in the city's Old and Historic districts. Animals of any kind are not allowed in community gardens, but may be negotiated in the lease of a commercial garden. Additional permits may be required for water needs on garden plots, such as the installation of a new water service to the site.

The community garden group coordinator or commercial gardener must contact the city's Richmond Grows Gardens Coordinator to schedule Miss Utility to have the entire parcel marked for utilities before anyone can begin any digging, erection of fence posts or any excavation for the first time on any parcel. The Richmond Grows Gardens Coordinator can be contacted at RichmondGrowsGardens@richmondgov.com.

Are there time limitations and costs involved?

There is no cost to adopt a lot through the Adopt-a-Spot program, and a lot can be adopted for up to two years. Through the Richmond Grows Gardens programs, a community garden will pay an annual $25 renewal fee after the initial $50 fee for the first year, and the agreement can be ended at any time by the garden group or by the city. Depending on the garden group's desired access to water, additional costs for a community garden can be minimal to over $6,000. A commercial garden requires a negotiation for a lease between the applicant and the city. After submitting an application, the commercial applicant will be directed to appropriate contact in the City of Richmond's Economic and Community Development Department to negotiate the terms of the lease. The lease for a commercial garden can be up to five years, with renewals.

A sample Adopt-A-Spot agreement can be found in the Appendix, page __. Additional resources can be found at links to Adopt-a-Spot and Richmond Grows Gardens, above.

Do I need to have insurance?

As part of the Adopt-A-Spot agreement, the person or group adopting the lot agrees to take on liability for the property, and the City waives responsibility for any activities or damage that take place on the property. Any work that takes place on the property must agree to the Clean City Commission's terms, and the CCC can terminate the adoption agreement at any time.

For each community garden lot application, including renewals, the group or person applying will have to provide $250,000 of proof of insurance. The City has to be named as an additional insured and must be indemnified against any individual claimant. Government organizations can provide proof of self-insurance of the same amount, and does not have to indemnify the City. Anyone who participates in the community garden is required to complete a Release, Waiver of Liability, and Indemnification Agreement, and those documents need to be turned in within seven days of an individual agreeing to participate in the program. A commercial gardener will provide insurance to enter into the lease with the city.

How will the lot be maintained?

The city's Department of Public Works is responsible for mowing and maintaining vegetation in public rights of way and in public parks. They are also responsible for city-owned vacant lots, however, lots are not a high priority item. If there is an area in need of maintenance, call the city's Customer Care Center at 311 or report a nuisance lot to the city's Public Works Department. The Public Works Department will issue citations to owners of nuisance lots. SeeClickFix is a web-based tool through which Richmond residents can report local issues to the city, including nuisance lots. SeeClickFix for Richmond can be accessed at http://en.seeclickfix.com/enhanced_watch_areas/53, or through its mobile app.

When a lot is adopted through the City's Adopt-A-Spot program or Richmond Grows Gardens, the group or individual adopting or leasing the lot agrees to assume responsibility for maintenance of the lot. In selecting a lot to adopt and determining what improvements may be made to the lot, it is important to consider the time and resources that will be needed to maintain the lot. For the Adopt-a-Spot program, the group or individual should fill out a city-provided activity sheet each time maintenance is done on the lot.

The Department of Public Works' Clean City Commission can provide materials for neighborhood clean ups, including cleaning up vacant lots. An organizer should contact the Clean City Commission to schedule a clean up – or notify the CCC if materials are needed through the Adopt-a-Spot program – and the CCC can provide bags, gloves, and litter grabbers. Participants should bag trash/debris and leave items at collection points as designated by the Clean City Commission. Items not eligible to be collected are items weighing more than 50 lbs, broken glass, and building materials. Contact the CCC Liason at (804) 646-8325 or email at Darlene.Mallory@richmondgov.com with questions.

How do I access water for the lot?

There are several options for accessing water at your site: install a rain barrel, ask neighbors for access to outside water, use a portable water meter, and installing new water service. When considering what option to choose, it is important to keep in mind the amount of water you will need each month and what plants you are considering planting.

Effectiveness of a rain barrel will depend on whether or not there is a downspout near the site. If a rain barrel or cistern is possible, it is one of the most cost-effective option because it captures rain water for reuse. This option also helps reduce stormwater runoff and reduces the use of potable water for irrigation.

Some options, such a portable water meter, have associated costs and permits needed. Contact the City's Department of Public Utilities if you plan on using a portable water meter or installing new water service: http://www.richmondgov.com/PublicUtilities. Contact the Richmond Grows Garden program for more information about water access at community garden sites.

If your group does plan on beautifying the site with flowers and other plants, consider using native plants, which require little to no watering. For more information on native plants, see the "Urban Meadow" section.

Are the soils safe to dig in?

If you are planning to grow food for human consumption in the existing soil on your site, it's vital to know what contaminants may be present. Fortunately, through the Richmond Grows Gardens program, lots have been predetermined as safe to use for growing food, and the Richmond Grows Gardens Coordinator can provide further recommendations and considerations for specific lots, such as using raised beds or planting directly into the soil.

Even if you're planning a less-intensive use for your site, such as a sitting park, you may still wish to know the status of the soil quality. To find out more about the soil at your site, you can follow these steps:

Site Assessment
The Virginia Historical Society, located in the Museum District of Richmond, has many resources to help you find out about past uses of your site that could have caused contamination. To view maps and other documents, you will have to visit the Historical Society in person. Also

look at present characteristics of the site that might contribute to contamination, such as adjacent uses, slopes, soil erosion, and illegal dumping. Use resources such as the EPA's "Interim Guidelines for Safe Gardening Practices" (http://www.epa.gov/swerosps/bf/urbanag/pdf/ bf_urban_ag.pdf) to identify contaminants of concern.

City Hall also has a record of each block in the city. Each file on a block will have maps, previous plans for use of the land, and previous owners. The public can browse the City Hall files to find out previous uses for lots they are interested in developing.

Soil Testing and Analysis
Always test, at a minimum, for lead, arsenic, cadmium, and chromium, as these are common, and potentially harmful, contaminants found most commonly in urban soils. In addition, test for anything else that your site assessment identified as a likely contaminant. Do not use an at-home soil testing kit, as these can be inaccurate. Instead, send a sample of your soil to a reputable lab to be analyzed. Some low-cost options include the Department of Crop and Soil Environmental Sciences – Virginia Tech Soil Testing Lab (http://www.soiltest.vt.edu/index.html) and A&L Eastern Laboratories, Richmond location (http://www.al-labs-eastern.com/showpdf2.aspx?spdf=0). To understand the risks posed by any contaminants found in your soil, refer to Cornell University's "Guide to Soil Testing and Interpreting Your Results" (http://cwmi. css.cornell.edu/guidetosoil.pdf) or ask your soil testing service to explain the results.

Mitigation
Although the Richmond Grows Gardens program will provide information about the soil quality at your site, mitigation practices can be put in place to reduce the risk of contamination, such as gardening in raised beds, mulching pathways, wearing gloves while gardening, washing all produce thoroughly, peeling root vegetables, and using drip irrigation to avoid splashing soil onto leaves and fruits. Over time, soil quality can be improved by regularly adding compost. Refer to EPA's guidelines (link above) to identify the best mitigation practices for your site.

Is there an easy way to obtain trees for my site?

Yes – the City of Richmond has an Adopt-A-Tree (AAT) program that pairs appropriate species of trees to the site you plan to plant on. To participate, you first fill out an application/tree maintenance agreement, agreeing to care for the new tree(s). An arborist will then visit your site to determine what type(s) of trees are best suited for the site and best meet the needs of the City's urban forest objectives. You will then be sent a list of appropriate species of trees to choose from for you site. Each application approved is eligible for one tree, but depending on the project, more trees may be approved. Each tree costs $50, which must be enclosed with the application. Payment must be made by check and made out to the Enrichmond Foundation. Each payment is a tax-deductible donation to the foundation.

More information and the application form can be found here: http://www.richmondgov.com/PublicWorks/UrbanForestry.aspx

SIDEBAR: **How Do I Get Started?**

The steps for getting started vary, depending on where you are starting from and what your goals are. If you have identified a site that you want to green, you will need to go through the process of determining ownership of the site or applying to use the land, gaining access to or adopting the site, and evaluating the site conditions before developing a plan to green the site. If you have an idea for a greening project but need to find a site for your project, your process will likely include visiting similar projects to get ideas, identifying and evaluating potential sites, selecting a site, and securing access. The Parks & People Foundation has prepared a guide that includes much more detail on how to plan, design, and construct a greening project. The Guide to Greening Neighborhoods can be found at:
http://www.parksandpeople.org/files/resources/2577_Guide%20to%20Greening%20Neighborhoods.pdf

Additionally, there are several organizations that offer services that may be useful in undertaking your project. The Enrichmond Foundation can offer guidance on volunteer organization and provide contacts to successful groups, the Legal Aid Justice Center provides community organizing assistance regarding legal issues, and the Storefront for Community Design can provide assistance with design services and community engagement. For contact information and a more comprehensive list of the organizations and resources that may be helpful for your project, see the Appendix.

Vacant Land in Richmond

A drive through Richmond's neighborhoods shows that each vacant lot has particular issues, including location, size, and configuration. Some are small corner lots or 'missing teeth,' others can be found on inner blocks where garages or alley houses were demolished, and some take up nearly an entire block and are made up of dozens of vacant properties.

While each vacant lot has unique characteristics, they are often found in the following six strategies:

Corner Lot
These tend to be small lots (1 to 4 properties) found on the corner of block. These lots are highly visible, which can make them good for creating flower gardens, neighborhood gateways, or art parks. In Richmond, corner lots are sometimes in a triangular shape. While their location makes them highly accessible they are also prone to trash accumulation and people cutting across the lot.
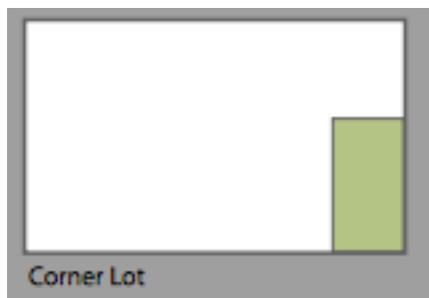

Corner Lot

Missing Tooth

This type of lot can be found mid-block and is the result of scattered demolition. Like the corner lot, these tend to be smaller lots: 1 to 4 properties. Missing teeth lots can be problematic because they are narrow (sometimes under 10 feet wide) and can get very little sun.


Missing Tooth
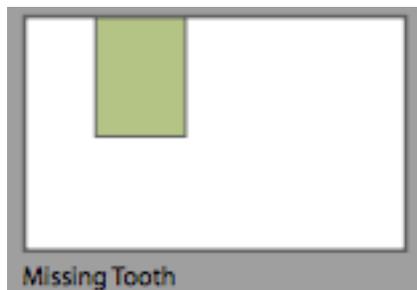
Inner Block

While not as common as corner and remnant lots – as inner block parcels are often already being used for parking – inner block lots can present a unique opportunity for a community-managed open space that helps define a neighborhood. Scuffletown Park in the Fan District is a perfect example of an inner block lot that has blossomed into a neighborhood gathering space, complete with an adjacent community garden.

Inner Block
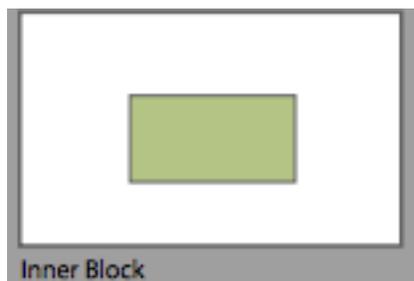
Remnant

Remnant lots are fairly common in Richmond and are often oddly-shaped lots due to angled street grids or being adjacent to railroads or parks that have irregular shapes. When these lots are at the edges of neighborhoods, they can make good candidates for urban forest buffers (especially if adjacent to railroads, highways, or streams). Many may already be wooded and need to simply be cleaned up and protected as a green space.


Remnant
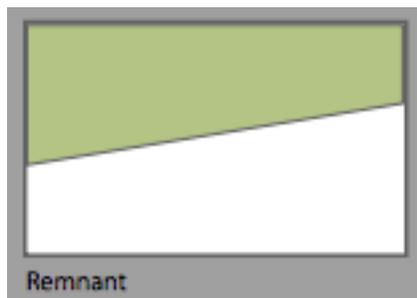
Vacant Block: Half Block/Full Block
This lot type is a large, developable plot of land, best suited for urban agriculture or neighborhood parks, or held for future economic redevelopment.
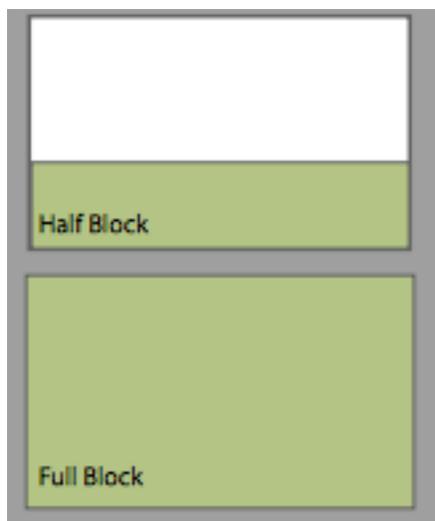
Swiss Cheese
These blocks contain many of the other vacant lot types, like corner lots, missing tooth, or inner block. While individual lots on the block might be adopted or used for green parking, this vacant land type as a whole is difficult to reuse because of the fragmented nature of the vacant lots. One approach to reusing fragmented lots could be a "Mixed Greens" approach, with different uses on different lots within a block as part of a coordinated plan.
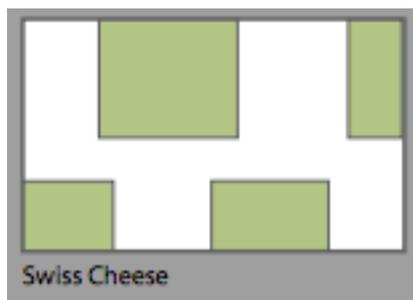
Reusing Vacant Land: Nine Strategies for Green Vacant Land Use

Clean and Green
"Clean and Green" is a temporary land-holding strategy: vacant land is kept free of trash and mowed on a regular basis—sometimes improved with new soil and grass, a few trees, and possibly a fence. Clean and green spaces are the first step in future redevelopment or a permanent open space like a neighborhood park. Vacant lots can be adopted to be cleaned and greened through the City's Adopt-a-Spot program.

While vacant lots offer opportunities for future redevelopment, there are often no plans for their use in the foreseeable future. Keeping vacant lots clean and green is an investment by the City and/or residents, showing that communities care about their neighborhoods and public spaces.

While the City does try to maintain vacant lots, neighborhood groups or private residents can make a significant impact by taking over clean up and maintenance efforts. Through the Adopt-a-Spot program, residents can clean and maintain their adopted lot on their own schedule. Groups may plant low maintenance, beautification plants on an adopted lot. When permitted, trees or fencing could be added along the perimeter of a lot.

The goal is for these lots to be maintained as an open lawn area, which reduces trash dumping, soil erosion, and stormwater runoff, as well as provides flexible space that can be used for passive recreation. Improved maintenance beautifies lots with minimal cost and increases the sense of pride and neighborhood identity.

Site Selection

City-owned and privately-owned lots can be any of the vacant lot types, and can be any size or shape. Every vacant lot that is not being maintained is an opportunity for neighborhood improvement, including increasing property value and providing open space for safe, outdoor activity.

Additionally, the following criteria should also be used when targeting attention and resources:

- Highly visible lots (such as those on major streets)
- Lots adjacent to other redevelopment or amenities (such as schools)
- Lots near the group caring for the lot (if adopted)

If the lots are being held for future development, it is important that the community is informed about the future use of the lot and potential development plans, and that these lots will be maintained as clean and green. The location of these lots, and the timeframe for redevelopment, is especially important because communities may have concerns that these sites will not be regularly cared for.

Site Preparation

Many existing vacant lots have highly compacted soils, rubble and fill at the surface, and very little grass growing. To make these lots clean and green, site improvements are needed, including:

- Removal of trash and debris to prepare the site for reseeding
- Soil amendments and the removal of buried bricks, building fragments, and tree stumps prior to seeding
- Prune and limb up the trees if they are already present on the site; prune the shrubs or other vegetation to improve the site's appearance and visibility of the area
- If any beautification planting is going to be done, water access will need to be considered

Site Layout and Implementation

While clean and green lots are characterized by open lawn and the occasional perimeter of trees, the following site factors should be considered:

- Trees planted along the perimeter of vacant lots help to reduce dumping, according to recent studies. However, communities may be concerned about visibility and safety if trees are included. If trees are to be planted, consider their location, spacing, and species in order to maintain visibility or deter dumping.
- Proximity of the lots to problem areas such as dumping sites may warrant fencing, especially along alleys and the back of lots.
- Ground cover other than grass might be considered, such as native plants or grasses, as long as it is maintained according to City guidelines (See Urban Meadows section, page __.)

Maintenance

The City of Richmond's Department of Public Works maintains city-owned lots, but not as a high priority item. The City does not maintain privately owned lots, and permission is required to go onto the lot. If a community group chooses to clean and maintain a vacant city-owned lot, they can adopt it through the Clean City Commission's Adopt-a-Spot program. The CCC has no preference as to the schedule of clean ups, as long as the group continues to report its progress. More information on the Adopt-a-Spot program can be found in the "Quick Tips" section.

Resources

For privately-owned nuisance lots, you can contact the city's Public Works Department which may cite the owner of the lot. If a city-owned lot needs attention, contact the Customer Care Center at 311 or report it through SeeClickFix Richmond online.

In cases in which private lot owners owe back taxes or the lot is unbuildable, the Richmond Redevelopment and Housing Authority may condemn the lot. The City would then take control of the lot, and sell it to a group such as Habitat for Humanity or the Better Housing Coalition. If a community group is interested in the future use of such a lot, they can contact RRHA or participate in the bidding process for the lot. Another option is for the lot to be put into a land trust.

The Department of Public Works' Clean City Commission can provide materials for neighborhood clean ups, including cleaning up vacant lots. An organizer should contact the Clean City Commission to schedule a clean up – or notify the CCC if materials are needed through the Adopt-a-Spot program – and the CCC can provide bags, gloves, and litter grabbers. Participants should bag trash/debris and leave items at collection points as designated by the Clean City Commission. Items not eligible to be collected are items weighing more than 50 lbs, broken glass, and building materials. Contact the CCC Liason at (804) 646-8325 or email at Darlene.Mallory@richmondgov.com with questions.

For design, clean-up, community outreach, or other landscaping assistance, Backyard Farmer is a local collective of contractors: http://www.backyardfarmer.us.

Land trusts include: Maggie Walker Community Land Trust, Capitol Region Land Conservancy, and Virginia Outdoors Foundation.

Local Examples:

TBD

Project Budget:
The cost and time required to clean and green a lot depends largely on the amount of debris to be removed as part of the "clean" process, as well as which "greening" options are chosen. Estimates are based on a 3,000 square foot estimated size of a typical residential lot in an urban area. The costs assume that project volunteers will have access to basic gardening and safety tools.

Staff time: 16 hrs
Volunteer time: 16-125 hrs

Total lawn mitigation materials for 3,000 sq feet = $350
      Low-Maintenance Fescue Seed Mix, 15 pounds of seed = $40
      Germination blankets (4 rolls, 8'x112.5') = $235
      Bio-Organics (1.5lbs, endomycorrhizal inoculant) = $50
Equipment rental (tillers, mulchers, etc) = $125-$300
Trash removal/waste disposal = $60-$200
Tree perimeter (1-3 trees avg.) = $160-480

Total budget = $50-$1,000

Other considerations:
Technical assistance, such as expert consultation
Water access

Community-Managed Open Spaces
"Community-Managed Open Spaces" (CMOS) are neighborhood spaces adopted, created, and cared for by community members or organizations. These spaces can be used for passive recreation, community gathering, public art, and growing flowers. The Enrichmond Foundation works with the City to help interested residents, community groups, or nonprofit organizations implement new public uses for vacant land. For low-maintenance projects, like a passive recreation area, land can be used through the City's Adopt-A-Spot program. Lots can also be purchased and placed into a land trust like the Capital Region Land Conservancy.

Communities often have open space needs that are not being met in the neighborhood—a safe place for kids to run around, beautification, or getting together with some neighbors. Community-managed open spaces are an opportunity for residents, churches, community associations, or nonprofits to adopt and use vacant land in ways that best serve their needs and imagination.

Vacant lots that are cared for by community groups beautify sites that might otherwise be weedy and trash-strewn. Adopting lots also fosters local pride, cooperation, and opportunities for engaging youth and seniors. Finally, studies show that community-managed open spaces stabilize property values of the surrounding properties and blocks.

Remember...these are temporary spaces unless they are purchased or put into a land trust.

Types of Community Spaces

What a community chooses to do on an adopted lot is only limited by their imagination. The following are relatively simple options for community-managed open spaces. These options can always be combined as well, keeping in mind space limitations and maintenance requirements. Other, more complex, types of community-managed spaces are covered in the "Urban Agriculture" and "Urban Meadow" sections.

Flower Gardens

A flower garden is an aesthetically-focused open space that provides a natural setting for residents to see and enjoy. These spaces often suit a smaller lot, and may include simple landscaping, flower beds, even a path and/or sitting area. These gardens can also be used to reduce stormwater runoff (see "Stormwater Management" section) and to attract pollinators (see "Urban Meadow" section and Appendix for more information on native and pollinator-friendly plants).

Passive Recreation and Picnic Areas

These spaces are best when tailored to a neighborhood's particular needs or desires for recreational space. These can be simple spaces – grass, a few trees, a picnic bench – to provide space for community gatherings, pick up games, or dog walking. Depending on the neighborhood, residents might want to consider including more seating, a barbeque area, or simple lawn game set ups.

Art and Educational Spaces

These can be places for displaying public art, whether created by an arts organization or by school children. They can also be places to teach kids about nature; if adjacent to a school or church they can function as reading gardens or outdoor classrooms. A "Garden of the Senses" can include aromatic plant species and edible plants, like berry bushes. A "Children's Garden" is scaled to be accessible to small children, and should feature hands-on elements. A green space, potentially with artwork or written elements, could also be used to teach about a historic or cultural event that took place in that community.

Dog Park
Dog parks are often one aspect of a larger park, however, if a neighborhood has a common need for this space, a smaller lot could function well as a stand-alone dog recreation area. A dog park should be a fenced in area with trash cans available. Preferably, a dog park would have some seating area, clean up bags, posted rules and guidelines, and a special gate entrance to ensure dogs' security in the area.

Site Selection

There are two key selection criteria to consider when creating a community-managed open space: 1) the time, skills, and interest in the group adopting the lot; and 2) its proximity to the residents or community-based organization maintaining the lot. The following issues should also be considered:

- Property ownership (see the section regarding non-city-owned lots in "Quick Tips", page __)
- Size of the space should match your ability to maintain it
- Flat or gently sloping sites
- Sites that require minimal clearance and/or grading
- Water access (see below and page __)
- Former use of the site and condition of the soil and land (debris, contaminants, etc)
- Adjacent uses, pedestrian movement, safety, and security

Agreements and Permit

While individuals and groups can create a CMOS through the Clean City Commission's Adopt-a-Spot program, any changes to the lot must be minimal and low maintenance. Simple plantings or non-permanent structures are the extent of what is allowed through Adopt-a-Spot. Depending on your plan for the lot, you may want to seek a more permanent agreement with the City. For more information on Adopt-a-Spot, see the "Quick Tips" and "Clean and Green" sections.

The Enrichmond Foundation can facilitate agreements between the city and community groups interested in using city-owned vacant land, as well as provide information as to what additional permits may be required. Permits may be required to erect structures such as fences, depending on the location of the fence. The use of rain barrels is encouraged for water access where possible, but other options are available and may require permits, as described below under "Site Layout and Implementation". For more information on how to partner with Enrichmond, visit www.enrichmond.org.

If you would like to use your CMOS for a special event or festival, you must submit a Special Events Conditional Use Permit to the City's Special Event Planning Department. You must apply for a permit if your CMOS is public property (ie city-owned land) and if it meets certain criteria, such as high attendance. For more information and to apply for a special event permit, visit: http://eservices.ci.richmond.va.us/APPLICATIONS/SPECIALEVENTS/Default.aspx

See the Appendix for more information.

Site Layout and Implementation

How one lays out or designs a CMOS will depend on the use. However, the following general factors should be taken into consideration:

- **Solar orientation**—Is the site shady? Sunny? How might this affect flower gardens or where trees are planted?
- **Location on a block**—If a flower garden is to be put on a larger vacant lot, these should be located to one end of the lot, not in the middle.
- **Visibility**—Make sure that landscaping, trees, or structures do not block views into or out of the site.

Access to water is important to consider if flower gardens and landscaping are involved. There are several options for accessing water at your site: install a rain barrel, ask neighbors for access to outside water, use a portable water meter, and installing new water service. Effectiveness of a rain barrel will depend on whether or not there is a downspout near the site. Some options, such as using a portable water meter, have associated costs and permits needed. Contact the City's Department of Public Utilities if you plan on using a portable water meter or installing new water service: http://www.richmondgov.com/PublicUtilities.

If your group does plan on beautifying the site with flowers and other plants, consider using native plants, which typically do not require watering. For more information on native plants, see the "Urban Meadow" section.

Before beginning any project, the soil should be tested. See page __ in the Quick Tips section for more information on soil testing. If the soil has unacceptable levels of toxins or lead, then use imported, clean soil or develop a remediation plan.

Maintenance

Maintenance is the responsibility of the community group that has adopted the site. It is important to match your group's ability to maintain a space (experience in gardening, number of volunteers, etc.) with the types of gardens or plants chosen (lawn, flowers, etc.). Sites connected to an active neighborhood association or local institution, such as a house of worship or school, will often have a broader base of volunteers to tap for care and maintenance.

Resources (see Appendix for more detail)

There are several local and statewide organizations that provide funding and resources for CMOS:

- Enrichmond Foundation (fiscal sponsorship for small, local community groups) - http://enrichmond.org.
- Chesapeake Bay Trust grants - http://www.cbtrust.org/site/c.miJPKXPCJnH/b.5368633/k.BDEA/Home.htm.

Additonally, these organizations can provide design resources and other assistance:

- Storefront for Community Design (design assistance) - http://www.storefrontrichmond.org.
- Enrichmond Foundation/City of Richmond (tree adoption)
- Richmond Tree Stewards (assistance with care for newly planted trees and tree selection) - https://richmondtreestewards.org.
- Legal Aid Justice Center (community organizing assistance) - https://www.justice4all.org.
- Backyard Farmer (design, installation, community outreach and landscaping assistance) - http://www.backyardfarmer.us.

Local Example:

TBD: possibly Sydney Park/Friends of Sydney Park

Urban Agriculture

"Urban Agriculture" is the growing of vegetables, herbs, and fruits in fields or hoop houses. It can also involve aquaculture, tree nurseries, and the cultivation of flowers or other plants. In Richmond, the "Richmond Grows Gardens" program is the primary resource for starting a Community or Commercial Garden if using city-owned land. Cultivating, processing, distributing, and marketing locally grown food increases access to healthy foods, provides jobs and educational opportunities for youth and adults, and improves the health of city residents and local economies.

The "Richmond Grows Gardens" (RGG) program is one component of the RVAgreen Initiative, begun by the City of Richmond to achieve goals of sustainability, an improved quality of life for residents, a healthy environment, and enhanced economic development and job creation opportunities. The city recognizes that community gardens provide economic benefits, increase social equity, strengthen our community, and promote environmental stewardship. The Richmond Grows Gardens is a city-administered program created to foster those benefits.

Richmond Grows Gardens defines a community garden as: *A portion of city owned property used to grow fruits, vegetables, flowers, herbs, wood products, native or ornamental plants for non-commercial purposes, i.e. where there is no exchange of goods for monetary value.* The program offers city property for community gardens to incorporated organizations, unincorporated organizations and governmental organizations via an online application process. These Garden Groups are encouraged to engage with individual gardeners by creating their own policies to rent plots or otherwise let individuals use their parcel.

Richmond Grows Gardens also supports commercial gardens. They define a commercial garden as: *A portion of city owned property leased from the City of Richmond and used by the lessee to grow fruits, vegetables, flowers, herbs, wood products, native or ornamental plants to exchange for monetary value off-site.* RGG offers city property for commercial gardens to eligible applicants who must negotiate a lease with the city's Department of Economic and Community

Development. The lease also requires approval by City Council.

Site Selection

For commercial and community garden initiatives, the city has an inventory of predetermined city-owned lots that are available for lease through the Richmond Grows Gardens program. When planning to grow food for human consumption, it's vital to know what contaminants may be present at your site. Fortunately, the inventory of lots has been researched, assessed and tested by the City of Richmond before being offered for use as a garden site. The Richmond Grows Gardens Coordinator can provide further recommendations and considerations for specific lots, such as using raised beds or planting directly into the soil.

Water accessibility is an important consideration for any garden site. The various options for water access at your site is discussed on page ___.

Leases and Permits

Only incorporated organizations, unincorporated organizations and government organizations may apply for a Community Garden. A Community Garden requires a permit between the organization (Garden Group) and the City. Only an authorized representative of a Garden Group may submit an on-line application for the permit at www.richmondgov.com/communitygardens. The city will process Garden Group applications on a first come, first served basis. A waiting list will be maintained for applicants when no parcels are available.

The permit between the City and the Garden Group is revocable and terminable at will for any reason, upon due notice, by either the City or the Garden Group, and it is for the annual use of city property for a period not to exceed 12 months from the date of any such issuance. There is a non-refundable fee of $50.00 for the first year. This fee covers administrative costs from January 1 through December 31 of the calendar year. There is a non-refundable annual renewal fee of $25. In addition to the fees, the Garden Group applying for a permit must meet the following requirements: provide proof of insurance in the amount of $250,000; provide an original signed Release, Waiver of Liability, and Indemnification Agreement; designate a Coordinator to be responsible for its Community Garden; demonstrate that it adequately informed the neighborhood of its plans to create a Community Garden on a case by case basis as determined by the Richmond Grows Gardens Coordinator; and provide an original signed Release, Waiver of Liability, and Indemnification Agreement from each individual who participates in the community garden.

A Commercial Garden requires a lease between the applicant and the City. First submit an on-line application at www.richmondgov.com/communitygardens. After your application has been reviewed, you will be referred to the appropriate contact in the City of Richmond's Economic and Community Development Department where you will be able to negotiate the terms of your lease which includes a commercial insurance requirement. The lease may be up to five years with renewal periods.

No pets, animals or livestock are allowed on any Community Garden. Livestock or animals may only be allowed on a Commercial Garden if permitted under applicable City code provisions and the terms of the lease.

Garden Groups and commercial gardeners may use non-permanent (movable) structures such as sheds with non-permanent foundations, fences, raised beds, trellises, and deck box containers. Gardeners must maintain any structures in good repair. The building and maintenance of fences and other structures must adhere to the Richmond Grows Gardens Rules and Guidelines and building code requirements where applicable.

Site Layout and Implementation

The size of the lot, its shape and dimensions, the amount of sun it gets, and access and visibility are some of the factors to be considered when creating an urban garden. The preselected lots available through the city have been determined to be appropriate and safe places for gardening for consumption. Richmond Grows Gardens has prepared clear guidelines for changes that may be made to the site, which can be found at: http://www.richmondgov.com/content/CommunityGarden/RulesAndGuidelines.aspx.

Some of the site design and implementation factors to consider include:

- All parcels and plots are rented in their existing condition.
- All gardening activities on all parcels must be contained within the plot boundaries established by the Richmond Grows Gardens Coordinator.
- It is illegal to cut down or remove any trees on city property.
- Compost bins should be located to the rear of the garden parcel. Avoid locating compost bins near pedestrian pathways and adjacent property lines.
- Gardeners may use non-permanent structures such as sheds with non-permanent foundations, fences, raised beds, trellises, and deck box containers. Gardeners must maintain any structures in good repair.
- The building and maintenance of fences and other structures must adhere to building code requirements where applicable and the Richmond Grows Gardens Rules and Guidelines. The Richmond Grows Gardens Coordinator will confirm proof of compliance with applicable building code requirements.
- Mulches such as gravel, stone, pavement, carpet and artificial turf are prohibited.
- Plant heights must adhere to the Richmond Grows Gardens Rules and Guidelines. Gardeners shall not plant crops or build structures that shade or interfere with another plot.
- Gardeners should not block garden paths, aisle ways or public access areas with equipment, structures, debris or vehicles.
- Fences up to 6 feet tall are permitted, but not required. The gardener supplies the materials and labor. Any fencing or building must meet yard (setback) requirements of the zoning district in which it is located. The Garden Group or gardener must obtain any necessary city approval for placement and/or construction of any fencing or improvement construction.

- Any structure (including but not limited to fences, wall, and sheds) visible from the public right of way in a City Old & Historic District requires approval from the Commission of Architectural Review.
- Gardeners are encouraged to use rain barrels for their garden sites where effective. More information on water access options can be found at: http://www.richmondgov.com/content/CommunityGarden/RulesAndGuidelines.aspx.

Maintenance

The Garden Group coordinator or commercial gardener must contact the city's Richmond Grows Gardens Coordinator to schedule Miss Utility to have the entire parcel marked for utilities before anyone can begin any digging, erection of fence posts or any excavation for the first time on any parcel. The Richmond Grows Gardens Coordinator can be contacted at RichmondGrowsGardens@richmondgov.com.

Garden Groups and commercial gardeners are responsible for maintaining the entire parcel in good condition. Maintenance is defined as: regular mowing of parcel, attention to encroaching Bermuda grass and other weeds and grasses within the plot, and 2' of bordering pathways, and regular harvesting and removal of dead/dying plants and rotting vegetables. Gardeners must keep all organic gardening debris, non-organic debris, trash and litter cleaned from their plot, as well as from adjacent pathways and fences.

Gardeners must maintain their plot throughout the growing season with active planting, harvesting and weeding. Year round gardening is encouraged. Plots should be prepared for planting no later than May 1. Plots should be cleaned-up no later than December 1. If gardeners don't have something planted in their garden by May 1 and keep it planted all summer long, then their plot will be given to the next person on the waiting list.

Gardeners must maintain any structures in good repair. The building and maintenance of fences and other structures must adhere to building code requirements where applicable and the Richmond Grows Gardens Rules and Guidelines.

Resources (see Appendix for more detail)

Resources available through local organizations include:

- Richmond Grows Gardens homepage - http://www.richmondgov.com/content/CommunityGarden/index.aspx
- 17th St. Market - www.richmondgov.com/FarmersMarket/
- Central Virginia Nursery & Landscape Association - www.vnla.org/index.html
- Central Virginia Waste Management Authority (CVWMA) - www.cvwma.com/recycling_programs/yard_waste.wbp
- Lewis Ginter Botanical Gardens - www.lewisginter.org/
- Tricycle Gardens - http://tricyclegardens.org/
- Enrichmond Foundation – www.enrichmond.org
- Backyard Farmer (design, installation, and community outreach assistance) -

http://www.backyardfarmer.us

Other Resources

Garden advice resources:
- How To Garden Advice - www.howtogardenadvice.com/vegetables/veggie_a_index.html
- Mother Earth News What to Plant Now: Mid-Atlantic - www.motherearthnews.com/Organic-Gardening/What-To-Plant-Now/Mid-Atlantic-Gardening-Region.aspx
- Organic Gardening - www.organicgardening.com/
- Veggie Gardening Tips; Growing Organic Fruits and Veggies in Virginia - www.veggiegardeningtips.com/growing-organic-fruits-and-veggies-in-virginia/.
- American Community Garden Assocation - https://communitygarden.org/resources/category/community-garden-management/.

Garden suppliers resources:
- Backyard Gardener - www.backyardgardener.com/
- NexTag Comparison Shopping Raised Garden Beds - www.nextag.com/raised-garden-beds/products-html?nxtg=19060a1c051f-C091B5D74EDD8A01
- Southern Exposure Seed Exchange - www.southernexposure.com/stores.p.html#virginia
- Clean Air Gardening Compost Bins - www.cleanairgardening.com/accessories.html

Funding

IOBY provides a crowdfunding resource for green causes: https://www.ioby.org.

The National Sustainable Agriculture Coalition provides some grant opportunities for Community Food Projects: http://sustainableagriculture.net.

Some farmers may qualify for assistance from the U.S. Department of Agriculture. You can search for grants at: https://nifa.usda.gov/grants.

Local Examples:

Examples of urban farms and gardens in Richmond include:

- Tricycle Gardens
- Humphrey-Calder Community Garden (Museum District)
- An Access in Food Community Garden (Manchester)
- Owl Orchard Community Garden (Southside – Forest Hill)

Local Success:

TBD

Stormwater Management
Rain gardens, bioretention areas, and grass swales are all forms of "green Stormwater Management." Richmond is required by law to improve the quality of the contaminated stormwater that enters directly into our waterways. Utilizing green space and plantings, in addition to "grey" techniques like piping, not only filters rainfall back into the soil naturally but also beautifies neighborhoods and provides new community spaces. These spaces can also be used as mitigation sites for new development, which can help to revitalize surrounding blocks.

According to the 2010 Green Infrastructure Assessment, 32% of Richmond's land area is impervious surface, such as roofs, streets, and parking lots. When it rains, the runoff from these surfaces drains into stormwater sewers, washing pollutants and contaminants along with it. Like many older, mid-Atlantic cities, a portion of the city has a combined sewer system. In a combined sewer system, both stormwater runoff and wastewater from homes and businesses are directed into a treatment facility before being released back into the river. However, the combined system has an overflow function, and in the event of a high volume of rain, the system releases a combination of stormwater and untreated wastewater into the river. In Richmond, approximately 16,791 acres of the city drains to a combined sewer system, while the other 23,240 acres drains to a small Municipal Separate Storm Sewer System (MS4). An MS4 means that stormwater is not mixed with sewage, and is also never treated before entering waterways. Because of Richmond's combined sewer system and small MS4, it is important for residents to be aware of the impacts that uncontrolled stormwater runoff has on the health of the James River and other waterways.

Stormwater management is needed to remove pollutants from rainwater entering Richmond's waterways. Additionally, stormwater management can provide opportunities to include trees and landscaping in neighborhoods with very little green space, and possibly new community spaces and nature experiences.

Stormwater management can be used on any of the vacant lot types, although larger lots are best since it is important to keep rainwater away from adjoining houses or structures.

Types of Stormwater Practices

There are various types of green stormwater techniques that can be employed to reduce and treat runoff. Stormwater management practices can range from simple to complex and expensive. It is important to consider what practice an individual, group, or larger organization can afford and maintain. In this section, stormwater practices that may be manageable for individuals and community groups will be identified as Low Impact Design options, or LID.

Bioretention
Bioretention is the most commonly used landscape practice for stormwater management. It uses a bed of sand, soil, and plants to filter contaminants and pollutants from stormwater runoff. Although water may briefly pond during heavy rain events, bioretention areas are designed to be dry most of the time. The filtered stormwater is either returned to a storm drain through an

underdrain or partially infiltrated into the soil. Bioretention areas are greater than 2,000 square feet in size and require engineering or design drawings, as well as stormwater plans and permits.

Rain Garden (LID)
A rain garden is a shallow, excavated landscape feature that temporarily holds runoff. Plantings can include shrubs, grasses, and flowers. Rain gardens are typically smaller and simpler than a bioretention practice. They are less than 2,000 square feet in size and do not include an underdrain. Rain gardens are best used to treat runoff from small impervious areas.

Vegetated Swale or Filter Strip (LID)
Swales are channels that collect, filter, and slow down the flow of stormwater. These can be simple grass swales or bioswales (with an underdrain) that can include shrubs, perennials, or trees. Swales are often used along the edges of lots, especially if the space is narrow or if there will be some other use on the site.

Landscape Infiltration
Landscape infiltration includes impervious cover removal, tree planting, soil remediation, or landscape areas to capture, store, and treat stormwater runoff. While these green spaces can be simple grass spaces with trees, it is best that they treat drainage areas less than 10,000 square feet. Successful application is dependent upon soil type.

On-Site Stormwater Storage – Rain Barrel or Cistern (LID)
Rain barrels are a great way to collect and store runoff water from roofs for future use. Water that would otherwise end up going down a storm drain can be used for washing cars or watering plants, saving many gallons of water over time and saving homeowners money on their water bill.

Permeable Surfaces for Parking or Permeable Pavers
Two other types of stormwater management practices, permeable pavement and reinforced turf, are covered in Green Parking (page __).

SIDEBAR: **Seek Professional Help:** Almost any type of green space—grass, gardens, trees—is beneficial for reducing stormwater runoff. However, to treat the stormwater, and to make sure that the runoff being collected and infiltrated does not cause flooding problems, it is important to plan and design the green space properly. Green infrastructure practices, or BMPs (best management practices) are engineered stormwater management facilities that are sized, designed, permitted, and constructed to properly handle the stormwater that they are intended to treat. If you need a Bobcat to construct your facility, please seek professional engineering assistance.

Site Selection

Stormwater facilities require technical expertise to ensure that they function properly and do not cause inadvertent problems of runoff or flooding. Thus, in selecting stormwater management sites, it is important to consider the following:

- Minimum size is 1/8th acre

- Site's low point is within 20 feet of a stormwater inlet, or site with soils that will allow for infiltration (unless soil amending is planned)
- Impervious surfaces, such as rooftops, streets, or parking lots, are nearby from which runoff can be captured
- Amount of stormwater that can be collected and treated is adequate
- Sites near corner stores or liquor stores should be avoided, as these tend to generate trash

Because of the investment required to install stormwater management practices, the vacant lots should either be purchased or designated a permanent green space by the City.

Site Layout and Implementation

Stormwater projects should be undertaken by or with an agency or organization that has experience implementing such practices. Other than a few LIDs, such as rain barrels or small rain gardens, such projects are typically too costly for community groups to fund and implement on their own. (see Resources, page __).

However, resident involvement is important when selecting the location of the stormwater management facility, as well as the selection of plants. This will encourage community acceptance and avoid cases where well-meaning neighbors remove or mow plants, thinking they are weeds. People may also be concerned about standing water or local flooding, visibility and safety (if tall plants are included), and maintenance.

Because vacant lots are usually made up of some type of compacted fill, soil maps may not be accurate. Soils need to be surveyed and tested to determine their ability to infiltrate. Projects undertaken on sites with poor soil conditions may require soil amendments or replacement, or the construction of an underdrain system to allow the facility to function as intended. Where an underdrain system is planned, an outfall to the existing storm drain system is needed.

To maximize their benefit, stormwater facilities need to be located so that runoff from impervious surfaces, such as nearby pavement or buildings, can be collected and directed into the facility.

Permits and Agreements

Depending on the size and technical considerations involved in the project, technical plan reviews may be required, especially erosion and sediment control and stormwater management plans (see page__ in the Appendix). Project planning should allow several months for the review process if permits are needed.

Maintenance

Stormwater management projects should not be implemented unless maintenance responsibilities have been identified and agreed upon by the groups implementing and maintaining the project. Regular maintenance is required for stormwater facilities to function as designed. Depending on

the project, maintenance may include mulching, weeding, pruning vegetation, and removing trash and debris.

As of this publication, the most complex stormwater management projects in the City have been implemented by the Department of Public Utilities as part of RVA H2O. This means that the City selects and maintains the sites, and has all the necessary resources to do so. Virginia Commonwealth University has also installed various stormwater management BMPs on their campus. When selecting a stormwater management practice, it is important to consider what resources your organization will need to maintain the site.

Groups that are implementing stormwater projects should not assume that City agencies will perform maintenance activities unless such an agreement has been made in writing. For most projects of this type, a community maintenance memorandum of understanding (MOU) will be created by the agency controlling the property.

Resources (see Appendix for more detail)

Several local and state organizations provide funding for stormwater projects, including:

- The Chesapeake Bay Trust - http://www.cbtrust.org/site/c.miJPKXPCJnH/b.5368633/k.BDEA/Home.htm
- Virginia Department of Environmental Quality (Stormwater Local Assistance Fund provides grants for Virginia localities, other programs provide loans) - http://www.deq.virginia.gov
- Virginia Department of Forestry, administered through the Green Infrastructure Center in Charlottesville, VA - http://www.dof.virginia.gov/index.htm, http://www.gicinc.org/index.htm
- National Fish and Wildlife Foundation - http://www.nfwf.org/Pages/default.aspx

The City of Richmond may find funding for Stormwater BMPs through the Clean Water State Revolving Fund and EPA Nonpoint Source- Related Funding Opportunities.

General resources include:

- Richmond Department of Public Utilities - http://www.richmondgov.com/PublicUtilities/
- Alliance for the Chesapeake Bay (educational outreach services) - https://allianceforthebay.org
- Civil and Environmental Services, LLC (engineering services) - http://www.sustainable-sites.com
- Backyard Farmer (design and installation) - http://www.backyardfarmer.us

For more information on stormwater management and potential funding sources:

- Virginia Municipal Stormwater Association - http://www.vamsa.org
- Water Environment Federation - http://www.wef.org
- Environmental Protection Agency (EPA) - https://www3.epa.gov

- Virginia Department of Conservation and Recreation (DCR) - http://www.dcr.virginia.gov
- National Association of Clean Water Agencies - https://www.nacwa.org
- Virginia Association of Municipal Wastewater Agencies - http://www.vamwa.org

Local Examples:

- RVA H2O Green Alleys project- St. Christopher's Street and Church Hill Green Alley Project (permeable pavers)
- Chimborazo School Rain Garden Project
- Greening Virginia's Capitol (Capitol Square, downtown Richmond)
- VCU's Rainwater Management program includes: vegetated roofs, porous pavement, cisterns, retention ponds, bayscaping, a rain garden, and a 2,500-square-foot bioretention area

SIDEBAR: **Stormwater Mitigation Credits:** Information on Richmond's stormwater credits for residential, non residential and multi-family residences…

Green Parking
"Green Parking" differs from traditional asphalt lots by incorporating permeable paving materials, tree planting, and rain gardens that capture stormwater runoff and shade surfaces, thus improving water quality and cooling the parking areas. Green parking provides residents, churches, and businesses additional parking that cannot otherwise be accommodated on the street or one's property.

Finding a parking space can be difficult in Richmond's neighborhoods and commercial areas due to the number of residents and visitors, as well as the narrowness of some streets. Although the City's goal is to reduce the frequency of and need for automobile travel, there are instances where vacant lots can be used to meet parking needs while also providing benefits such as filtering stormwater, reducing the heat island effect, and using recycled and repurposed materials.

Types of Green Parking

Green parking can include permeable paving, parking strips, or stormwater management practices.

Permeable Paving
Permeable pavements typically consist of porous surfaces with an open stone base or sand drainage system over soils with a high infiltration rate. Stormwater drains through the surface, is captured in the drainage system, and infiltrates into the surrounding soils. The materials commercially available include porous bituminous asphalt, pervious concrete, and permeable interlocking pavers.

Reinforced Turf
Reinforced turf consists of interlocking structural units with gravel or grass in between. These systems are best for lightly used parking areas and only where vehicles will be parking, not for travel lanes. Reinforced turf is best in areas that receive direct sun.

Parking Strips
These are 3 feet wide concrete or brick strips, set in grass, that allow cars to park on the strips rather than the turf. Parking strips minimize the amount of impervious surfaces, provide a hard surface for car tires, and protect the grass from compaction.

Stormwater Management
Because of the nature of urban soils, as well as demolition practices, the soils of vacant lots are often highly compacted, which can make permeable paving unfeasible. If this is the case, a better option is to use a stormwater management practice such as bioretention or bioswales (see the Stormwater Management section on page__).

Site Selection

City-owned inner block vacant lots (those on small alley streets) are attractive to faith-based groups, developers, and community members to use as parking because of the proximity to churches and houses. Corner or missing tooth vacant lots may be of interest to adjacent residents for private parking.

An interested community group may not have the resources to purchase a lot, but can partner with organizations or businesses within the city. Larger organizations, such as a church or business, may be interested in buying an adjacent lot and/or partnering with the City to turn the lot into a green parking area. In either case, groups should contact RVA H2O to begin the process. RVA H2O is a partnership between the City's Department of Public Utilities and various residents and community groups that is working to install permanent stormwater management systems in the City, such as permeable pavers in alleys. Interested community groups can also contact the Enrichmond Foundation to become a Friends group and receive administrative support throughout the project. See the "Quick Tips" section for information on purchasing a vacant lot from the City.

When considering sites for green parking, the following factors should be taken into consideration:

- The number of parking spaces desired will guide the size of lot needed.
- Parking is most effective when it is adjacent to whomever will be using and managing the parking area. Inner block lots are typically best because they are the least desirable for infill development but can be used by multiple residents or a church. In commercial areas, corner lots provide easy access.
- Because parking areas are often used in the evening, they should be located on lots with good visibility, whether from the street or houses.

Other criteria include:

- Sites with less than 5 percent slope
- Sites with minimal existing tree cover

Finally, the type of soil that is on the lot is critical to the green parking practice that is used. Because vacant lots are made up of some type of compacted fill, soil maps and surveys may not be accurate. Soils need to be surveyed and tested to determine their ability to infiltrate, especially if permeable paving or reinforced turf is to be used.

Site Layout and Implementation

Each green parking practice mentioned in the Green Lots Guidebook provides stormwater management, except for parking strips. This means that permeable paving, reinforced turf, and bioretention are engineered stormwater management facilities that need to be sized, designed, permitted, constructed, and maintained so that they properly handle the stormwater that they are intended to treat.

New paved surfaces should be created only where needed to minimize both costs and stormwater runoff. Existing paved areas in good condition could be repurposed as space for parking.

In general, sites should be graded to capture stormwater runoff and sediment so as not to create additional sources of untreated runoff. For pervious parking surfaces to function properly, the underlying soils must allow for drainage or an underdrain system must be included in the design to allow for proper drainage.

A clearly defined edge for parking surfaces will help deter people from parking in areas not intended as parking. The location of trees, shrubs, and planted bioretention areas should maintain visibility and eliminate hiding areas. Lighting may be needed for safe nighttime use.

Permits and Zoning

Depending on the size and technical considerations involved in the project, permits may be required, especially erosion and sediment control and stormwater management plans (see Appendix page__). Project planning should allow several months for any permit approvals. Depending on the location of your parking, zoning variances or conditional use permits may be needed. Refer to the City of Richmond zoning code for specific information.

SIDEBAR: **Does Gravel Reduce Runoff?** Gravel is often suggested as a parking surface because it is less expensive than concrete or asphalt. However, gravel alone is not considered a pervious surface…

Maintenance

Green parking should only be used where regular maintenance can be performed. Maintenance agreements need to be in place and should clearly specify how to conduct routine tasks to ensure long-term performance. Maintenance routines will vary according to the green parking practice.

Permeable pavements should be swept and vacuumed twice a year with a wet-dry shop-vac to reduce sediment accumulation that can clog the surface pores. Drainage pipes, edge drains, or other structures should be cleaned out at regular intervals. De-icing agents should be used in moderation, and snow plowing should be done carefully with blades set 1 inch above normal.

Reinforced turf and parking strips should be mown regularly and clippings removed. Additionally, trucks and other heavy equipment can damage interlocking paving or parking strips; these vehicles should be prevented from parking in these areas. Finally, for reinforced turf, drainage pipes, edge drains, or other structures should be cleaned out at regular intervals.

Parking areas created on City-owned vacant lots will be the responsibility of the City. An associated Friends group may help maintain the area, but the extent of maintenance and improvement should be agreed upon by the City and the associated group. Permeable paving and reinforced turf surfaces are discouraged for parking areas to be maintained by the community because of the degree of technical knowledge required to ensure proper upkeep.

Resources

RVA H2O should be contacted to find out more information on how to enlist City help and involvement in a project.

Richmond Redevelopment and Housing Authority (RRHA) is a good resource to contact if you are interested in purchasing or using a property for parking. You can also contact the City's Planning and Development Department for information on buying vacant property.

The Chesapeake Bay Trust provides grants for stormwater projects, including removing impervious surfaces: http://www.cbtrust.org/site/c.miJPKXPCJnH/b.5368633/k.BDEA/Home.htm.

The National Fish and Wildlife Foundation has provided RVA H2O with grants for permeable paving: http://www.nfwf.org/Pages/default.aspx.

SIDEBAR: **Green Parking and Zoning**…

Local Examples:

- RVA H20 Green Alleys
- VMFA?

Urban Forests and Buffers

SIDEBAR: **Did You Know?** Richmond's five most abundant street tree species are sugar maple, willow oak, crape myrtle, red maple, and pin oak.
One of the most noxious pests threatening Virginia's street trees is emerald ash borer, an insect introduced from Asia that has killed millions of native ash trees in the United States. Fortunately,

native ash species comprise just 3.03% of Richmond's street trees and account for only 3.91% of the street tree canopy cover.

Urban Forests and Buffers
An "Urban Forest" is the system of trees and vegetation in and around a community. Wooded parks, street and yard trees, orchards, forested buffers or corridors, remnant forest patches, and landscaped boulevards are all part of an urban forest, providing critical green infrastructure for the city. Planting extensive areas of trees can buffer undesirable views, reduce erosion and stormwater runoff, cool surrounding blocks, create habitat for native species, provide publicly accessible fruits and nuts, and offer new green spaces in neighborhoods often lacking trees—as well as help the City meet its goal of increasing its tree canopy. Vacant land adjacent to existing wooded parks, streams, and rail corridors offer great opportunities for incorporating urban forests.

The City administration has committed to the annual planting of nearly 2,000 trees in an effort to replenish the urban forest (Roadmap to Sustainability, 2011). While parks, private properties, and streets are typically seen as locations for planting trees, vacant lots offer multiple opportunities for growing and protecting our urban forest. This can be done by planting trees on neighborhood lots, creating buffers on vacant land along railroads, highways, and streams, and preserving forest patches on vacant land.

Trees and urban forests reduce erosion and stormwater runoff, provide neighborhoods with green space, and create new community spaces and nature experiences.

Urban forests and buffers should be treated as permanent green space; they should be located on city-owned vacant lots that will not be sold or that can be put under a forest conservation easement. Urban forestry projects, depending on the type of planting design, can be located on any of the vacant lot types. However, some project types work best on certain types of lots. Single trees and rows can be appropriate for any type of lot, while groupings of trees are more appropriate for larger vacant lots such as remnant, one side, or whole block sites. Buffers are best suited for remnant sites.

The City of Richmond has implemented programs to encourage citizens to plant and maintain urban trees. In partnership with the Enrichmond Foundation, the City's Adopt-A-Tree program pairs interested citizens with an appropriate and city-approved tree for planting on public property. More information about the Adopt-A-Tree program can be found in the Quick Tips section, page__. Also, any Richmond resident may plant a tree on public property after submitting an application for approval. The City's Urban Forestry Division, under the Department of Public Works, is the resource for these programs. The application for planting a tree on city property can be found at:
http://www.richmondgov.com/PublicWorks/forms/applicationNewStreetTreePlanting.pdf.

The following are different ways that vacant lots can be used to increase the City's tree canopy.

Urban Forestry Project Types

To increase and maintain the tree canopy, new trees must be planted and protected as they develop. Planting can be done singly, in groupings and groves, or as buffers to shield railroads or protect streams.

Single Trees and Rows
The planting of one tree helps increase our tree canopy. Trees planted along the perimeter of a lot can be a sign of investment in a Clean and Green lot, fruit trees could be planted in a Community Managed Open Space or help shade a green parking lot.

Open Grove / Tree Park
These are larger groupings of trees and differ from forest patches in that they are planted less densely and maintained with grass or low ground cover so that they are visually open and accessible. Groves and tree parks can act like mini-parks. They can also be used to expand existing wooded areas when adjacent to parks.

Orchard or Food Forest
These are larger groupings of trees planted for food production, and could stand alone or be part of an urban farm site. Orchards are usually planted as formal rows of trees. Food forests are modeled after natural forests, and may include informal groupings of nut trees, fruit trees, and fruit-producing shrubs, as well as herbs, vegetables, or mushrooms.

Buffer
These are linear plantings of trees that can be used to create buffers between a neighborhood and rail lines, highways, industrial properties, or to protect streams and waterways. Buffers can also be used to connect existing forest patches.

Forest Patches
These are what most people would consider forest—areas (10,000 square feet or greater) with large trees, understory plants, and a "floor" of vegetation and decomposing leaves. A forest patch can be an existing wooded area or newly planted.

Site Selection

Because it takes years or decades for a tree to reach maturity, urban forests should be designated as permanent green spaces. Thus, they should be planted on city-owned vacant lots, land held in a trust, or land managed by the Enrichmond Foundation. While any type of vacant lot can be used for tree planting, the following criteria should be considered:

- Minimum size of 10,000 square feet for forest patches; smaller areas might be used for buffers
- Preference for sites containing steep slopes or adjacent to an existing forest, streams, or rail corridors
- Neighborhoods with few trees that are in need of green space

Agreements/Protection/Easements

Community groups, faith-based organizations, and nonprofits that are interested in planting trees on vacant land should contact the Enrichmond Foundation. Enrichmond can assist in communication with the city and adoption of trees. Fruit trees can also be planted through the City's Richmond Grows Gardens community garden program (see "Urban Agriculture" section, page __).

Depending on the parcel of land, forest patches might also be transferred into city ownership or from one city department to another, such as from the Department of Public Works to the Department of Parks and Recreation. Parks and Recreation must accept a parcel of land before they will take over maintenance for it. If a group owns vacant land, they can place it into a land trust to be preserved as a green space.

Site Layout and Implementation

Whether planting a few trees, creating a tree park, or preserving a forest patch, visibility and access are concerns for residents. The community needs to be consulted to determine how the site might be used. If the site will have limited or no access, or will be used as a buffer, then denser plantings are warranted. If community access is encouraged (with features such as a path) then less dense tree spacing is called for.

Other considerations prior to planting include safety and the potential for the site to be used for dumping, especially if it's along railroad track or streams. It is important to provide clear sight lines into a wooded area, especially as a forested patch matures.

Edges along sidewalks and roads need to be given special consideration, such as a well-maintained grass edge or fencing (consider wrought iron or wood rail). If understory planting is desired or exists, choose plants that would require minimal maintenance.

If new trees are to be planted, determine the condition of the soil. Sites with poor soil conditions may require soil amendments as well as the removal of buried bricks, building fragments, and tree stumps.

Maintenance

How the site will be maintained, as well as who is providing the maintenance, will determine the density of planting, types of trees, and whether there is an understory or ground cover. If the site will be mowed, 20- foot spacing between trees is recommended. In the initial years, tree maintenance, pruning of the lower branches to enhance visibility, and removing any dead trees is needed. Ground covers that require minimal maintenance, such as clover, can be used, with "no mow" areas as options in later years. Also, it is important to make sure that there is a plan for removing trash and litter; wooded areas are attractive locations for dumping. Removal of invasive species and vines may also be needed.

If the vacant land is in a public right of way, park, or school, it is maintained by the Department of Public Works. The Department of Parks and Recreation also maintains and improves public green space. In addition to city maintenance, the Richmond Tree Stewards is a citizen volunteer

group that promotes and improves the health of city trees. The Tree Stewards train volunteers to provide maintenance and care for young trees, and work closely with the Urban Forestry division of the Department of Public Works. The Tree Stewards are a great resource for assistance with maintaining and caring for newly planted trees. Newly planted trees need regular watering, so the responsibility for watering the trees in their early years needs to be determined by the groups involved in the tree planting initiative.

Resources

The following organization and agencies can provide financial assistance for tree planting projects:

- Chesapeake Bay Trust grants
- Alliance for the Bay (the Richmond Urban Tree Canopy Initiative grant) - https://allianceforthebay.org/wp-content/uploads/2015/07/2015-Richmond-Area-UTC-RFP.pdf.
- Department of Public Works, Urban Forestry Division and Enrichmond Foundation (tree adoption) - http://www.richmondgov.com/PublicWorks/UrbanForestry.aspx.

Other Resources

There are several organizations that provide additional resources:

- Richmond Tree Stewards (training and new tree care) - https://richmondtreestewards.org.
- Enrichmond Foundation (volunteer support, Adopt-A-Tree program)
- James River Park Association
- City of Richmond, Department of Parks and Recreation
- Capitol Region Land Conservancy (land trust)
- Maggie Walker Community Land Trust
- Virginia Outdoors Foundation (land trust)

Local Examples:

TBD

SIDEBAR: Information on Richmond's street trees and/or tree canopy development

Neighborhood Parks

SIDEBAR: **AGREEMENTS** Community groups and Community Development Corporations (CDCs) may be interested in adopting lots or turning recently demolished buildings into neighborhood parks. If so, the Enrichmond Foundation can help establish a partnership with the CDC and act as a liaison to the city to facilitate the transition of the site into a public use space.

Neighborhood Parks

Richmond residents enjoy the city's various parks and sites along the river. However, many of Richmond's neighborhoods can still benefit better access to green spaces. Vacant land is an opportunity to create public spaces that provide new amenities for residents and can attract new development. Parks are permanent green spaces and recreational facilities and can be phased in over several years. These spaces can be maintained as clean and green while the properties are being assembled and plans developed for determining park uses and layout.

The creation or maintenance of neighborhood parks serves Richmond's goals as a city and a community in several ways. One of the goals of the City of Richmond's RVAGreen Sustainability plan is to increase residents' access to parks and spaces for outdoor recreation. The Enrichmond Foundation supports the City's parks through support of park maintenance, preservation, and recreational resources. Neighborhood parks are an essential ingredient for the development of healthy, active lifestyles in an urban environment. Creating new neighborhood parks are attractive to developers, providing an amenity for new housing along a park perimeter. Parks can also be used for stormwater management with the addition of rain gardens or to improve infiltration if grass fields are used.

Types of Neighborhood Parks

Unlike Richmond's major parks, such as the James River Park System or Byrd Park, neighborhood parks are smaller and meet the needs of nearby residents. Options for neighborhood parks include:

Passive Recreation
These are spaces that have a more traditional park look and use—lawn with scattered trees and possibly a walking path. As open spaces, they can accommodate informal ball play, space to run around, or picnicking. They can also include flower gardens and seating.

Athletic Fields
These include soccer fields, football fields, and baseball fields. Because they need to accommodate regulation sports, the lots should be flat and sized appropriately.

Play Spaces
Play spaces can include formal play equipment, basketball and tennis courts, or alternative play areas such as earth mounds, sand areas, or tricycle paths. Play spaces can also include gathering or sitting areas.

Site Selection

While any of the vacant lot types can become a neighborhood park, whole and half-block vacant lots are best because they provide more space for recreation and activities.

Neighborhood parks are permanent public spaces. Thus, it is important to choose sites that will not impede future development or that are not already adopted. Because neighborhood parks will

ultimately be the responsibility of the Department of Parks and Recreation, lots that are entirely or majority city-owned are preferable. Other factors to consider for site selection include:

- Minimum 1-acre lot (about 1⁄2 block in size) for parks including athletic fields or active recreation
- Minimum 1/8-acre lot for passive parks and play spaces
- Sites with less than 5 percent slope
- Sites with minimal existing tree cover (if athletic fields are to be included)
- Contiguous vacant parcels preferred (to minimize conflicts with streets and alleys)

It is important to work with the local community and police to identify concerns regarding visibility, safety, access, and potential dumping. Because a future neighborhood park may take years to be developed, it should be maintained as clean and green in the meantime.

The Enrichmond Foundation can help groups claim city-owned vacant land to turn into public use space. See next section for more information.

Site Layout and Implementation

Parks are public green spaces and will either be the responsibility of the city's Department of Parks and Recreation and/or the group adopting the lots. Because of the capital costs for developing a park, phased development should be considered; a park may begin as Clean and Green or as a CMOS while waiting for funding. Thus, it is important that the local community be consulted to determine how the park will be used.

While neighborhood parks can be open lawns with trees, they can also include athletic fields and play equipment. Thus, the following should also be considered:

- Accessibility to the neighboring community.
- Proximity of the lots to problem areas such as dumping sites. Fencing may be needed, especially along alleys and the back of lots.
- Visibility and safety, especially if trees are planted. Make sure that trees are spaced at least 20 feet apart to allow for mowing.
- Edges along sidewalks and roads need to be given special consideration; a well-maintained grass edge, signage, fencing, or lighting might be considered.

A park might also provide stormwater management or include tree planting. See the sections on Stormwater Management (page __) and Urban Forests and Buffers (page __) for examples, and the Quick Tips section for information on the city's Adopt-A-Tree program (page__).

The Enrichmond Foundation, through its Partners program, can fiscally sponsor a "Friends of…" community group that is interested in transforming a vacant space into a park. Depending on the site, Enrichmond may be able to enlist the city's Public Works Department help perform maintenance, such as mowing. In order for a site to become a city owned and operated park, the Department of Parks and Recreation must first accept it. Parks and Recreation will then be responsible for regular maintenance. However, a "Friends of…" group may still maintain

responsibility for park clean ups and improvements, and will benefit as a Partner by being able to accept donations using the Enrichmond Foundation's nonprofit status. This is especially useful for groups whose projects may include more permanent improvements such as fencing for a dog park, art installations, or picnic areas.

Maintenance

Maintenance may eventually be the responsibility of the Department of Parks and Recreation, although in the interim it should be maintained by the initiating group or the Department of Public Works. If funding is not available for a community group or organization to fully transform the site into a functioning park, the site should be maintained as Clean and Green/CMOS until the necessary funding is obtained, or until the Department of Parks and Recreation accepts the site as a city park. As described above, an interested community, or "Friends of…", group may consider becoming a Partner through the Enrichmond Foundation to obtain funding and volunteer support to maintain the site. While the park is being established, fencing may be needed to deter dumping; consider wrought iron or wood rail fencing.

Resources (see Appendix for more detail)

Large parks, such as Byrd Park, can include paths, exercise equipment, and water features. City capital improvement funds and state bond bills are funding sources as well, however, it is often a long and difficult process to obtain such funds.

For smaller parks, such as Scuffletown Park or Sydney Park, grants are sources for funding, and the Enrichmond Foundation's Partners and HandsOn Greater Richmond are sources for volunteers.

Other resources include:

- Storefront for Community Design (design and planning assistance) - http://www.storefrontrichmond.org.
- Department of Parks and Recreation (guidance in taking on a site as a public park) - http://www.richmondgov.com/parks/.
- Urban Forestry Division, under the Department of Public Works (guidance in tree planting and maintaince and the Adopt-A-Tree program) - http://www.richmondgov.com/PublicWorks/UrbanForestry.aspx.
- Backyard Farmer (design, installation, community outreach and landscaping assistance) - http://www.backyardfarmer.us.

Historical context: Richmond's Cemeteries as Parks

To be written

Local Success:

TBD Allen Ave Park - was a public right of way, transferred from one department to another

Urban Meadow

There are two primary purposes for an urban meadow: providing habitat and resources for pollinators and other wildlife, and to reduce maintenance costs. Planting a native wildflower habitat is one of the most effective strategies to promote healthy populations of wild bees and managed pollinators. Native plants used in habitat restoration efforts have many benefits – particularly in an urban setting – including providing habitat for wildlife, improving water infiltration, and storing carbon. Wildflower meadows are scalable and easy to maintain, making them an ideal project for any size group.

Reference: Xerces Society -
http://www.xerces.org/wpcontent/uploads/2013/12/EstablishingPollinatorMeadows.pdf

Site Selection

City-owned vacant lots should be considered for pollinator fields, since they are an environmentally beneficial green space that can take a few years to be established. Vacant spaces that need habitat restoration, or that can assist with water infiltration and filter runoff, are the best candidates for urban meadows. Spaces to consider may include vacant land that is near the river or streams, and can be maintained as a pollinator field as well as to slow down the flow of stormwater into a waterway. If the lots are being held for future development, it is important that the community is informed about the future use of the lot and potential development plans, and that these lots will be maintained.

When considering a site for an urban meadow, a key consideration is its proximity to housing areas and how it will be received by the community. Since urban meadows are not regularly mowed, a neighborhood may consider the area "overgrown" and become concerned about pests, such as mice, living close to housing development. It will be important to ask for community input if planning an urban meadow near a densely populated area.

Other options for urban meadow sites that may reduce community concern are areas on the sides of roadways or areas in pre-existing parks. Since the edges of roadways have significant mowing requirements, a meadow land could be a useful solution to reducing maintenance costs. Within pre-existing parks, it is important to take into account the original concept and current uses for the park. If, for example, an area of a park is often used as an outdoor event space, it would be best to maintain it as a mowed lawn. If a park has a particular design or aesthetic aspect, an urban meadow may not fit or distract from the original purpose.

(Xerces):
Most native wildflowers and flowering shrubs need full sunlight to thrive. Choose open sites that receive full sun throughout most of the day. Level ground is best; however, gentle slopes are suitable as long as erosion is controlled during the establishment process.

Soil is also an important consideration when selecting a site. Some wildflowers prefer rich, clay soils, while others prefer dry, sandy, and rocky soils. Know your soil type before you start. If

there is a history of pre-emergent herbicide use, you may wish to have the soil tested by a local University soil lab for chemicals like atrazine and trifluralin which will inhibit seed germination.

Finally, keep neighboring weeds in mind when selecting your planting location. If aggressive weed species are present on adjacent lands, they may colonize the site through either seed dispersal or the spread of underground rhizomes. Colonizing weeds can present a persistent problem if they are not frequently controlled. Competition from weeds for sunlight, water, and nutrients is the biggest challenge to successful wildflower establishment. Depending on the abundance of weeds or weed seed at your site, one to two years of site preparation may be needed.

Site Preparation

Unfortunately, existing vacant lots may have highly compacted soils, rubble and fill at the surface, and very little grass growing. To make these lots into meadows, site improvements are needed, including:

- Removal of trash and debris to prepare the site for reseeding
- Soil amendments and the removal of buried bricks, building fragments, and tree stumps prior to seeding
- Prune and limb up the trees if they are already present on the site; prune the shrubs or other vegetation to improve the site's appearance and visibility of the area
- Taking measures to control weed infiltration

(Xerces):
Before planting you will need to eliminate existing vegetation, reduce the amount of weed seed in the soil, remove plant debris, and create a smooth surface to insure good seed to soil contact. The importance of proper site preparation cannot be overemphasized. More time preparing the site at this stage will result in greater success.

Site Layout and Implementation

Urban meadows provide several benefits over turf, including reduced mowing and maintenance costs, increased stormwater infiltration, and increased plant and animal biodiversity.

Native plants and flowers that are ecologically beneficial can also look like weeds. If landscapes other than turf are created, the following should be considered:

- Trees planted along the perimeter of vacant lots help to reduce dumping, according to recent studies. However, communities may be concerned about visibility and safety if trees are included. Other perimeter markers to consider are large stones, bushes, or fencing.
- Proximity of the lot to problem areas such as dumping sites may warrant fencing, especially along alleys and the back of lots.
- Meadows should be mowed once per year, during the winter, to least disrupt the wildlife present.

- Consider maintaining a mowed grass edge to the meadow. A formal edge will show that the plantings are intentional.
- Taller grasses and plants can be trash collectors; additional cleaning may be needed.
- Make sure that the adjoining neighbors and surrounding community understand what is being done with the lot to avoid 311 calls and complaints. Erecting signage informing people that the lot is being maintained as a meadow or wildflower garden may also help educate neighbors and reduce concerns.

(Xerces):
In preparing your seed mix, take several points into consideration:

Floral diversity
Select a diversity of plants with different flower sizes, shapes, and colors, as well as varying plant heights and growth habitats, to support the greatest numbers and diversity of pollinators.

Different bee species are active at different times of the year. Therefore, it is important to provide a continuous source of pollen and nectar throughout the growing season. At minimum, strive for three species to be blooming at any one time; the greater diversity the better. It is useful to include flowers that bloom early in the spring to provide food for newly emerging bumble bee queens. Similarly, it is important to provide flowers that bloom in late summer and fall to support new bumble bee queens for overwintering. The exact mixture of wildflowers however is a matter of personal preference and individual goals. For example, if you would like to attract butterflies, consider including the larval host plants for the species that occur in your area. Alternatively, if you'd like the meadow to function as a rain garden, choose plants that are tolerant of wet soils.

Importance of Grasses
Though grasses do not offer nectar or high quality pollen, it is often useful to include at least one native bunch grass or sedge in your seed mix. Short, clump-forming grasses are preferable to large, spreading, or sod-forming grasses. Native bunch grasses should not comprise more than 25% of the mix by seed per square foot. Grasses and sedges are larval host plants for some butterflies, and also provide nesting and overwintering sites for some bumble bees and other insects.

Native Plants
It's important to plant native species in order to create the most successful and sustainable biodiversity in the urban meadow. Native wildflowers are usually the best sources of nectar and pollen for native pollinators. Compared to nonnative plants, native plants are more likely to attract native bees and to support a high diversity of butterflies and moths.

Maintenance

Depending on the partners involved in implementing the meadow, one or more groups may be responsible for ensuring that the urban meadow remains free of trash and invasive infiltration. Although urban meadows do not require mowing, it is important to identify who will be responsible for periodically surveying the site, arranging any clean up efforts, and improvements as necessary.

Since meadows will grow above the City's 12" length of grass requirement, an MOU agreement with the City is required so that the site will be exempt from regular mowing. For example, if the site is on land owned by Public Works, a simple MOU (memorandum of understanding) could state that Public Works continues to own the lot, but an entity such as the Parks Department and/or other responsible groups would maintain it as a meadow.

(Xerces):
Unless you are experiencing drought conditions, it is usually not necessary to water your seedbed. If inadequate rainfall is received following seed germination, irrigation may be needed to ensure seedling survival. Once established, native plants typically do not need supplemental irrigation and irrigation may favor the growth of weed species. With or without supplemental water, many perennial wildflower seeds germinate slowly, and may even take several seasons to germinate. Although this seems like a drawback, it actually works in your favor because any fast growing plants in your perennial seed mix during the first year are likely weeds that can be more easily identified and removed before they crowd out natives.

Resources

Resources to find native wildflowers, grasses and sedges, and other plants to consider:

- Virginia Department of Conservation and Recreation, Native Plants for Conservation, Restoration and Landscaping brochure: http://www.dcr.virginia.gov/natural-heritage/document/pied-nat-plants.pdf
- Ladybird Johnson Wildflower Center, Native Plant Database: http://www.wildflower.org/plants/
    o Recommended Virginia Native Plants: http://www.wildflower.org/collections/collection.php?collection=VA
- US Fish and Wildlife Service – Chesapeake Bay Watershed, Native Plants for Wildlife Habitat and Conservation Landscaping: https://www.nps.gov/plants/pubs/chesapeake/toc.htm
- North American Pollinator Protection Campaign and the Pollinator Partnership, Regional Guide for Selecting Plants for Pollinators: http://pollinator.org/PDFs/CentralAppalachian.rx4.pdf
- National Audubon Society, Plant Lists for Birds and Beneficial Insects: http://web4.audubon.org/bird/at_home/Plants.html
- Albemarle County, Native Plant Database: http://albemarle.org/nativeplants/
- Prince William Conservation Alliance, Photos of Native Flowers: http://www.pwconserve.org/plants/index.html

For nuisance lots, you can contact the city's Public Works Department which may cite the owner of the lot. If a city-owned lot needs attention, contact the Customer Care Center at 311 or report it through SeeClickFix Richmond online.

The Department of Public Works' Clean City Commission can provide materials for neighborhood clean ups, including cleaning up vacant lots. An organizer should contact the Clean City Commission to schedule a clean up and the CCC can provide bags, gloves, and litter

grabbers. Participants should bag trash/debris and leave items at collection points as designated by the Clean City Commission. Items not eligible to be collected are items weighing more than 50 lbs, broken glass, and building materials. Contact the CCC Liason at (804) 646-8325 or email at Darlene.Mallory@richmondgov.com with questions.

For design, clean-up, community outreach, or other landscaping assistance, Backyard Farmer is a local collective of contractors: http://www.backyardfarmer.us.

Local Examples

Meadows in Richmond are currently located throughout the parks system, and were a Parks Department initiative to provide habitat and reduce maintenance costs. There are approximately seven meadow lands, particularly at the Reedy Creek, Wetlands, and Pony Pasture locations in the James River Park System. These meadows were established over 15 years ago, and are currently part of the Parks Department plan to rehabilitate areas that have significant invasive plant infiltration. The meadows are mowed once per year in winter to be least disruptive to wildlife using those areas for food and shelter.

<u>Mixed Greens</u>
"Mixed Greens" are sites that can accommodate more than one green space type, such as a community-managed open space with stormwater management attributes. While these sites tend to be larger vacant lots, or clusters of vacant lots, they can be of any size. Accommodating multiple uses provides both flexibility in reclaiming and greening vacant land while also providing new partnerships for implementation, use, and maintenance. In particular, mixed greens are an opportunity to phase in new uses to clean and green sites.

The previous eight green strategies are ways to think about how we can reuse vacant land in positive and productive ways. While we can envision and use these strategies singularly, they often overlap and complement one another. Because mixed greens is where more than one green strategy is used, the benefits of each strategy, when used in combination with one another, can help to achieve multiple goals for neighborhood improvement and greening while encouraging multiple partners and resources.

Site Selection

The selection of a site will vary depending on the mix of green space types (see location criteria for other greening types). Larger vacant lots—inner block lots, half and whole blocks—often work best, but smaller lots can be appropriate when including community-managed open spaces. It is important to understand who owns the lots, especially if utilizing any strategies that require permanent green space.

Site Layout and Implementation

See the guidelines for individual green space types. In addition, the compatibility of the mix of uses (implemented and in the future) should be considered.

Maintenance

Maintenance of a mixed greens site is the responsibility of the group owning or adopting the lots (whether a community group, nonprofit, church, or City agency). See maintenance recommendations for individual green space types.

Resources

As with site selection, layout, and maintenance, the resources available for mixed greens will vary depending on the mix of green space uses.

Local Example:

TBD – possibly Riverview Park

APPENDIX

<u>**Definitions**</u>

Adopt-A-Spot: A formal agreement that allows an individual or group to use a city-owned vacant lot as a community-managed open space.

Agency: A government entity or department, such as the Department of Planning and Development, U.S. Fish and Wildlife Service, etc.

BMP (best management practice): A stormwater management facility, such as a rain garden or bioretention area, that collects and treats stormwater runoff.

Commerical Agriculture: An income-generating activity and business enterprise (whether for-profit or nonprofit), in which crops are grown primarily for sale or distribution to others, rather than primarily for one's self and family.

Community Development Corporation (CDC): A neighborhood-based nonprofit, typically with full- time staff, often developing affordable housing and/or neighborhood programming.

Community-managed open space (CMOS): A community space that is under an Adopt-A-Spot agreement, awaiting further resources to become a neighborhood park, or protected by a land trust.

Conditional use: Requires approval, as in the zoning code. It differs from "Permitted Use", which is allowed by the zoning code.

Food forest: Modeled on a natural forest, but including plants that produce fruits, nuts, herbs, and mushrooms.

Forest patch: A forested area that is at least 10,000 square feet in size.

Hoop house: An outdoor greenhouse made of polyethylene, usually semi-circular and elongated in shape.

Impervious: A surface that does not let water infiltrate, such as concrete or asphalt.

License: A legal agreement that allows a particular use, like a vendor license.

Lease: A longer-term agreement for the use of a property. Generally includes some type of fee.

Mitigation: The act of making a condition or situation less severe, like improving contaminated soil.

Memorandum of Understanding (MOU): A formal agreement between two or more parties.

Nongovernmental Organization (NGO): Nonprofit organization

Nuisance abatement: Removing a nuisance from a vacant lot, like cleaning up trash or mowing.

Off-street parking: Parking that is not along a street, such as a parking lot or driveway.

Permit: An official document giving someone authorization to do something, such as erect a fence or hold a special event.

Pervious: A surface that allows for water infiltration, such as grass or garden plantings.

Richmond Grows Gardens Program: The City of Richmond offers city property for use for community gardens and urban agriculture.

Stormwater management (SWM): The practice of diverting, collecting, treating, and/or reusing rain water that runs off of impervious surfaces.

Vacant lot: An unoccupied property that has no structure.

Vacant property: An unoccupied property with a structure.

Zoning code: The legal regulation of buildings and structures in in accordance with their structure and the nature of their use.

Charts:

- **Vacant Lot Types Suitable for Green Strategies**
- **Resources Required for Implementation**
- **FAQs and Resources for Green Strategies**– showing green space type, organization to consult, info source, resource, who would use
    - Needs to be completed once all of the page numbers are set

Contact Information

Local Nonprofit Organizations/Community Groups:

Alliance for the Chesapeake Bay

https://allianceforthebay.org
612 Hull Street, Suite 101C

Richmond, Virginia 23224
(804) 775-0951

Capital Region Land Conservancy

http://www.capitalregionland.org
(804) 745-3110

Enrichmond Foundation

http://enrichmond.org
100 North 17th Street
Richmond, Virginia 23219
(804) 646-0954

Green Infrastructure Center

http://www.gicinc.org
P.O. Box 317
Charlottesville, VA 22902
(434) 244-0322

Friends of the James River Park

http://www.jamesriverpark.org/be-a-friend/
P.O. Box 4453
Richmond, VA 23220

James River Association

http://jrava.org
4833 Old Main Street
Richmond, VA 23231
(804) 788-8811

James River Outdoor Coalition

http://jroc.net

Lewis Ginter Botanical Garden

http://www.lewisginter.org
1800 Lakeside Avenue
Richmond, Virginia 23228
(804) 262-9887

Maggie Walker Community Land Trust

Robert J. Adams
HD Advisors
bob@hdadvisors.net

National Recreation and Park Association

http://www.nrpa.org/default.aspx
22377 Belmont Ridge Road
Ashburn, VA 20148
(800) 626-6772

project: HOMES

http://www.projecthomes.org
88 Carnation Street
Richmond, VA 23225
(804) 233-2827

Reedy Creek Coalition

https://reedycreekcoalition.org
reedycreekcoalition@gmail.com

Richmond Tree Stewards

https://richmondtreestewards.org

Storefront for Community Design

http://www.storefrontrichmond.org
205 East Broad Street
Richmond, VA 23219
(804) 322-9556

Virginia Native Plant Society

http://vnps.org
400 Blandy Farm Lane, Unit 2
Boyce, Virginia 22620
(540) 837-1600

Virginia Nursery and Landscape Association

http://www.vnla.org

(540) 382-0943

Virginia Outdoors Foundation

http://www.virginiaoutdoorsfoundation.org
600 E. Main St., Suite 402
Richmond, VA 23219
(804) 786-0801

Local/State/National Government Organizations:

Better Housing Coalition

http://www.betterhousingcoalition.org
23 West Broad Street, Suite 100
P.O. Box 12117
Richmond VA, 23241
(804) 644-0546

National Fish and Wildlife Foundation

http://www.nfwf.org/Pages/default.aspx
1133 Fifteenth St., N.W., Suite 1100
Washington, DC 20005
(202) 857-0166

RVA H2O

http://www.rvah2o.org
730 East Broad Street, Sixth Floor
Richmond, VA 23219

Richmond Office of Sustainability

http://www.richmondgov.com/Sustainability/index.aspx
730 E. Broad St., 8th Floor
Richmond, VA 23219
(804) 646-7000

Richmond Department of Parks, Recreation and Community Facilities

http://www.richmondgov.com/parks/
1209 Admiral Street
Richmond, VA 23220
(804) 646-5733

Richmond Department of Public Works and the Urban Forestry Division

http://www.richmondgov.com/content/PublicWorks/index.aspx
900 E. Broad St., Suite 704
Richmond, VA 23219
(804) 646-7000

Richmond Department of Public Utilities

http://www.richmondgov.com/publicutilities/
900 E. Broad St, Room 115
Richmond, VA 23219
(804) 646-7000

Richmond Redevelopment and Housing Authority
http://www.rrha.com
901 Chamberlayne Parkway
Richmond, VA 23220
(804) 780-4200

Virginia Department of Conservation and Recreation

http://www.dcr.virginia.gov
600 East Main Street
Richmond, VA 23219
(804) 786-6124

Virginia Department of Envrionmental Quality

http://www.deq.virginia.gov
629 E Main St
Richmond, VA 23219
(804) 698-4000

Virginia Department of Forestry

http://www.dof.virginia.gov
900 Natural Resources Drive
Charlottesville, Virginia 22903
(434) 977-6555

Resources – chart connecting strategy type to specific documents/web landings

Chart of potential funding sources – shows various foundations/organizations and the green space type that they would be interested in funding

Green Strategy/Funding Source	C&G	CMOS	Urban Ag	Stormwater Mng	Green parking	Forests	Parks	Mixed Greens
Virginia Department of Environmental Quality Citizen Water Monitoring Grants Annual Awards in three categories with a maximum of $10,000 Provides information on other citizen monitoring grant opportunities, up to $100,000				x	x			
National Fish and Wildlife Foundation Variety of grants in different program areas, including the Chesapeake Bay				x	x	x	x	x
Chesapeake Bay Trust Restoration Grants Annual Awards range from $5,001 to $25,000	●	●	●		●	●	●	●
Chesapeake Bay Trust Green Streets - Green Jobs - Green Towns Grants Annual Awards in three categories with maximum of $250,000	●			●	●	●	●	●
Chesapeake Bay Trust Community Engagement and Restoration Mini-Grant Ongoing until funds are	●			●	●	●	●	●

exhausted Up to $5,000								
National Recreation and Park Association Periodically posts information regarding grants available for park and recreation agencies.							x	
CultureWorks Grants to support community development, specifically through arts programming Annual Award amounts vary depending upon the project	x							

Plant Resources

What are native plants and why should I use them?

Native plants are the trees, shrubs, perennials and other types of plants that have evolved and occur naturally within the local area or region. Native plants are often better adapted to local conditions, including temperature, rainfall, and soil conditions compared to species that have been brought to the area from other regions or countries, and therefore require less water, fertilizers, and pesticides to maintain. Native plants are also better sources of habitat and food for local wildlife, including birds and pollinators.

Where can I find more information about which plants are native to our area? What factors should I consider when selecting plants?

There are many sources for native plant lists. Some of these lists refer to geographic regions. Species from either the Piedmont or Coastal Plain regions are appropriate for use in Richmond. The following resources may serve as a starting point for identifying native plants for your project:

- Native Plants for Wildlife Habitat and Conservation Landscaping: Chesapeake Bay Watershed (U.S. Fish and Wildlife Service) - https://www.nps.gov/plants/pubs/chesapeake/pdf/chesapeakenatives.pdf
- Chesapeake Bay Native Plant Center - http://www.nativeplantcenter.net

When selecting plants, consider the conditions of your site (light, soil conditions, access to water) and compare them against the sun and water needs of the plants you are considering. Also consider the mature height and spread of each species and where you plan to locate it, so that you don't use plants that will grow too large for your space or create problems with visibility.

Where can I buy native plants?

There are several nurseries in and around Richmond city that sell native plants. If there are particular plants you are interested in, call and ask if they have them available or can order them.

The U.S. Fish and Wildlife Service also maintains a list of native plant nurseries in Virginia and other mid-Atlantic states: http://www.fws.gov/chesapeakebay/bayscapes/bsresources/bs-nurseries.html.

What are invasive species and why should I avoid using them?

Invasive plant species are plants that have the ability to spread aggressively outside their natural range. Invasive plants can become a problem when they damage or crowd out other plants and compete for resources such as water and light. Some invasive species, such as Tree-of-Heaven, spread on their own and frequently pop up in alleys and on vacant lots. Other invasive species, such as English Ivy and Purpleleaf Wintercreeper, are planted by gardeners and can be kept in check if well maintained, but can spread and damage other plants if not contained. To minimize maintenance, these and other invasive species should be avoided when greening vacant lots.

The National Park Service and U.S. Fish and Wildlife Service publication, "Plant Invaders of Mid-Atlantic Natural Areas" contains information and pictures of many invasive plant species: https://www.nps.gov/plants/alien/pubs/midatlantic/midatlantic.pdf.

Other Resources

The Richmond Urban Forestry Division, under the Department of Public Works can provide information as to the trees appropriate for street tree plantings in Richmond, as well as trees that should not be planted - http://www.richmondgov.com/PublicWorks/UrbanForestry.aspx.

The University of Maryland Extension's website offers resources and information for many types of gardening including conservation landscapes and edible gardens - http://extension.umd.edu/topics/gardening.

Chart – Permits, Approvals and Agreements

<u>Permits, Approvals, and Agreements</u>

Permit/Agreement/Regulation: Adopt-A-Spot License
Responsible Agency: Clean City Commission
Key Information:
- No fee required; mail in application, form is available online.
- Permit allows group to adopt a lot for at least one year, with further renewals possible.
- The agreement may be terminated at any time by the Clean City Commission.
- No permanent structures; limited permission for temporary structures.

Permit/Agreement/Regulation: Enrichmond Partner Agreement
Responsible Agency: Enrichmond Foundation
Key Information:
- Only groups are eligible to apply to be a Partner.
- Partner status is dependent upon Enrichmond's acceptance of a Partner application, available on the Enrichmond website (enrichmond.org).
- Enrichmond will send a Memorandum of Agreement with the terms of contract if a group's application is approved.
- There is a one-time 5% fee on all donations and contributions.
- The Applicant must agree to provide due diligence in record-keeping and recording of monies raised and spent.

Permit/Agreement/Regulation: Community Garden Permit
Responsible Agency: Richmond Grows Gardens
Key Information:
- Non-refundable fee of $50.00 for the first year, then a non-refundable annual renewal fee of $25.
- Only incorporated organizations, unincorporated organizations and government organizations may apply for a Community Garden.
- An online application is available.
- The permit is revocable and terminable at will for any reason by either the City or the Garden Group.
- The permit allows annual use of city property for a period not to exceed 12 months from the date of any such issuance.
- Gardeners may have non-permanent structures such as sheds with non-permanent foundations, fences, raised beds, trellises, and deck box containers.
- No pets, animals or livestock are allowed on any Community Garden.

Permit/Agreement/Regulation: Urban Agriculture Lease
Responsible Agency: Richmond Grows Gardens/Economic and Community Development Department
Key Information:
- A Commercial Garden requires a lease between the applicant and the City.
- The initial online application is available through Richmond Grows Gardens.

- The term of the lease includes a commercial insurance requirement.
- The lease may be up to five years with renewal periods.
- All details of a Commercial Garden lease must be negotiated with the City's Economic and Community Development Department.

Permit/Agreement/Regulation: Special Events Conditional Use Permit
Responsible Agency: Special Events and Film Production Site Coordination
Key Information:
- Applications for a permit must be completed and submitted at least 45 days prior to the event.
- Permit fees are set and charged according to City Ordinance.
- The City may revoke a permit or stop a special event use in progress if the user fails to comply with Federal, State or City ordinances. Permit may also be revoked if the terms of the permit are violated, or if the user has not secured the permit.
- The organizer is responsible for obtaining the necessary food and beverage licenses, if applicable.

Permit/Agreement/Regulation: Fencing Permit
Responsible Agency: Planning and Development Review/Commission of Architectural Review
Key Information:
- Permits are valid for six months from the date of issuance. Every time there is an inspection on the property, the permit is extended for another six months.
- Fences and walls not exceeding six feet (6') in height do not require a building permit.
- Erecting or placing an accessory building or structure (fence or wall) on properties located within City historic areas also require Commission of Architectural Review (CAR) approval.

Permit/Agreement/Regulation: Land Disturbance Permit
Responsible Agency: Planning and Development Review
Key Information:
- General land disturbing permit that indicates that a project will comply with the City's Erosion and Sediment Control Plan.
- The City must be notified two working days in advance when work commences, is suspended, is restarted, and when the project is completed.
- Other work (grading, excavation, construction) on the project shall not commence until the sediment controls are in place.
- A Permit may be denied any applicant, and all permits issued by the City may be revoked.

Permit/Agreement/Regulation: Water permit?
Responsible Agency:
Key Information:

Sample Adopt-a-Spot Agreement:

City of Richmond

Clean City Commission

Adopt-a-Spot/Street/Gateway Agreement

Adopting Group Name: _____

Address: _____

_____

E-mail Address: _____

Phone: _____

To: Date: _____

Clean City Commission 3506 N. Hopkins Rd. Richmond, VA 23224 Fax: 804.646.8068

In order to enhance the environment and the appearance of our community, the undersigned adopting group requests permission to Adopt-a-Spot/Street/Gateway at the following location for at least (1) one year.

Address and/or boundary description:

_____
_____
_____
_____

Said work will be performed under and in accordance with the Clean City Commission terms attached hereto and incorporated herein by reference.

Adopting Groups with whom agreements are signed shall at all times indemnify and save harmless the Members of the Clean City Commission, the City of Richmond and all employees, agents and officers of the City, from responsibility, damage or liability arising fro the exercise of the privileges granted under this agreement.

This agreement may be terminated by the Clean City Commission at any time the adopting group does not comply with this agreement or at any time the adopting group's work effort is considered unsafe. The Clean City Commission reserves the right to revise or discontinue this program at its discretion.

Chart – Maintenance Needs/Requirements – shows which groups are responsible for maintenance for which green project type

Flow Chart – Steps for getting started