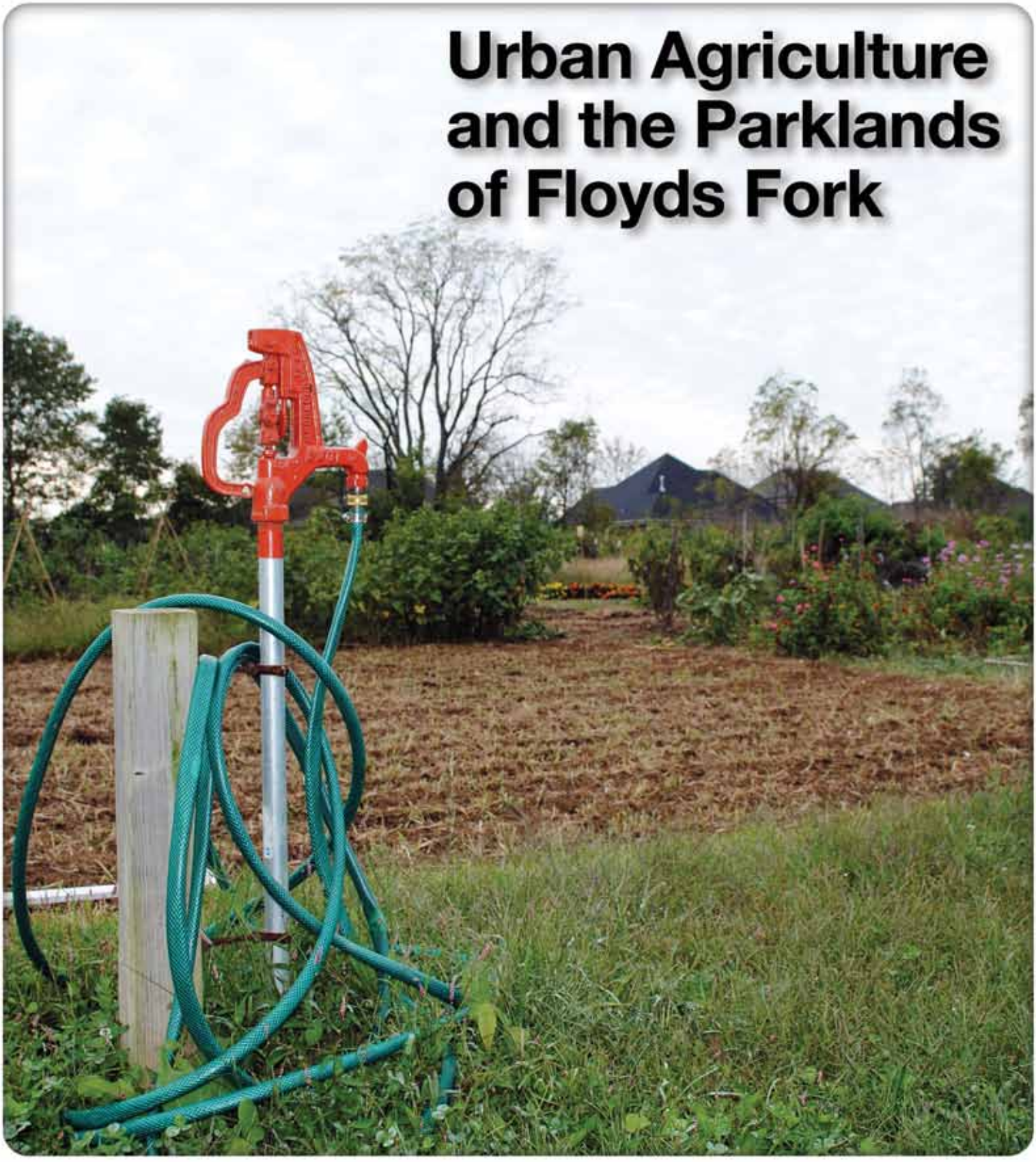
Urban Agriculture and the Parklands of Floyds Fork



CITY SOLUTIONS CENTER

Contents

I can think of no better form of personal involvement in the cure of the environment than that of gardening. A person who is growing a garden, if he is growing it organically, is improving a piece of the world.

- Wendell Berry

Introduction

The planning and development of the Parklands of Floyds Fork is occurring at a unique time in history as a renewed interest in agriculture and local food systems is taking hold in the United States. This movement is largely concentrated in urban areas where vacant lots and underutilized plots of land are being repurposed as community gardens or urban farms. Urban agriculture sites are also finding homes in parks and in other public or social spaces, where neighbors work together to grow food and build community. The Parklands of Floyds Fork, with its substantial size, variety of landscapes, and its mission to serve as a community resource, has a unique opportunity to both build on and support this momentum in the Louisville region by providing opportunities for agricultural practice, preservation, and education.

This report identifies best practices and provides recommendations on how to incorporate urban agriculture sites into the Parklands of Floyds Fork. The primary focus of the report is on community gardens and small-scale agricultural sites, rather than larger-scale commercial farming activities. Beyond community gardens, the report addresses forms of agriculture that are community-accessible, such as demonstration gardens, orchards, or heritage farms. The report will discuss and provide recommendations on developing and sustaining agricultural sites in the park, including location, management and governance, access, educational partnerships, and environmental issues to consider. Recommendations are discussed in detail throughout the report and summarized in the Recommendations section at the end of the report. The primary focus of the report is on examples of other urban agriculture initiatives in the U.S. that are located in publicly-accessible parks and park systems. These initiatives are distinct from other types of urban agriculture that are more commonly located on vacant lots in urban areas. Thus, our recommendations focus specifically on issues and strategies for sites located in publicly-accessible parks, as they provide particular benefits and pose unique challenges within the urban agricultural movement.

Why Urban Agriculture?

Urban agriculture is often defined as ***"the production of fruits and vegetables, raising of animals, and cultivation of fish for local sale and consumption."***[1] However, its reach is broader than simply food production, as it also addresses issues of food security, environmental sustainability, community development, land use planning, and farmland preservation, among others. While the term "urban" implies older, high-density neighborhoods, urban agricultural activities also take place in suburbs and on the edges of metropolitan areas. Urban agriculture provides numerous benefits to communities, including health (access to fresh foods), social (community involvement and social interaction), economic (employment opportunities, increases in neighboring property values), and environmental (reuse of contaminated land and environmental management). However, urban agriculture is not without risks. Urban, suburban, and rural areas all have the potential to be contaminated with pollutants, particularly heavy metals, from a current or previous use on (or near) the site. In addition, agricultural activities themselves may pollute surrounding areas if not managed properly with regard to fertilizers, composting, and animal noise and odors.[2] The Environmental Considerations section of this report directly addresses these concerns. Planning for these risks early in the development process can help to minimize their impacts and insure that the agricultural sites provide safe and sustainable benefits to gardeners, consumers, and the community as a whole.

Urban agriculture sites, such as the Miles Park Community Garden (pictured here), offer opportunities for social interaction and community involvement. *Photo: John Vick*

The Parklands of Floyds Fork

The Parklands of Floyds Fork is a roughly 4,000 acre park system located along the eastern edge of Louisville, Kentucky. The project is being developed by the non-profit 21st Century Parks as a public/private partnership with Louisville Metro Government. Development of the park will span five years, with funding coming from a combination of federal, state, and local public funds, as well as individual, corporate, and foundation contributions. The Parklands is comprised of four parks situated along the Floyds Fork creek linked by a park drive, an urban trail system, and a water trail. Each park includes a variety of amenities including, but not limited to, sports fields, canoe launches, event spaces, trails, educational centers, campsites, playgrounds, and community gardens. The Parklands also includes within its boundaries two public parks that pre-date the park system's development: William F. Miles Park and

1 K. Hodgson, M.C. Campbell, and M. Bailkey, *Urban agriculture: growing healthy, sustainable places*, Chicago: American Planning Association, 2011.

2 K. Hodgson *et al., op.cit*.

Floyds Fork Park. The responsibility for the ongoing operation, maintenance, and programming of both of these parks will be assumed by 21st Century Parks per an agreement with Louisville Metro Parks. The first phases of construction within the Parklands began in May 2011 and the entire system is scheduled for completion in 2015; it will be one of the largest park systems of its kind in the U.S.

Location of Agricultural Sites

The integration of urban agriculture and farming links directly to the Parkland's guiding principles of conservation, environmental sustainability, creation of a community resource, inclusivity, and a symbiotic relationship with its surroundings, all of which directly inform how agricultural practices should be integrated into the park.

The Parklands of Floyds Fork is comprised of four contiguous parks, each with its own unique features and uses: Beckley Creek Park, Pope Lick Park, Turkey Run Park, and Broad Run Park. Each of these parks includes agricultural land uses that predate the Parklands, including a community garden, a demonstration farm, and commercial agriculture.

Community Garden Sites

We recommend that community garden sites be located near community parks or other features and facilities that would promote the successful use and maintenance of the gardens. The areas most suitable (and sustainable) for community gardens are those that allow for frequent community access since they will already have a number of features that make community gardens successful: parking, shade, restrooms, easy physical access, a water source, and visibility (for security and surveillance as well as discovery of garden sites). Locating community gardens and community-accessible agricultural sites in areas that provide these amenities is important to the sites' long-term success and viability.[3]

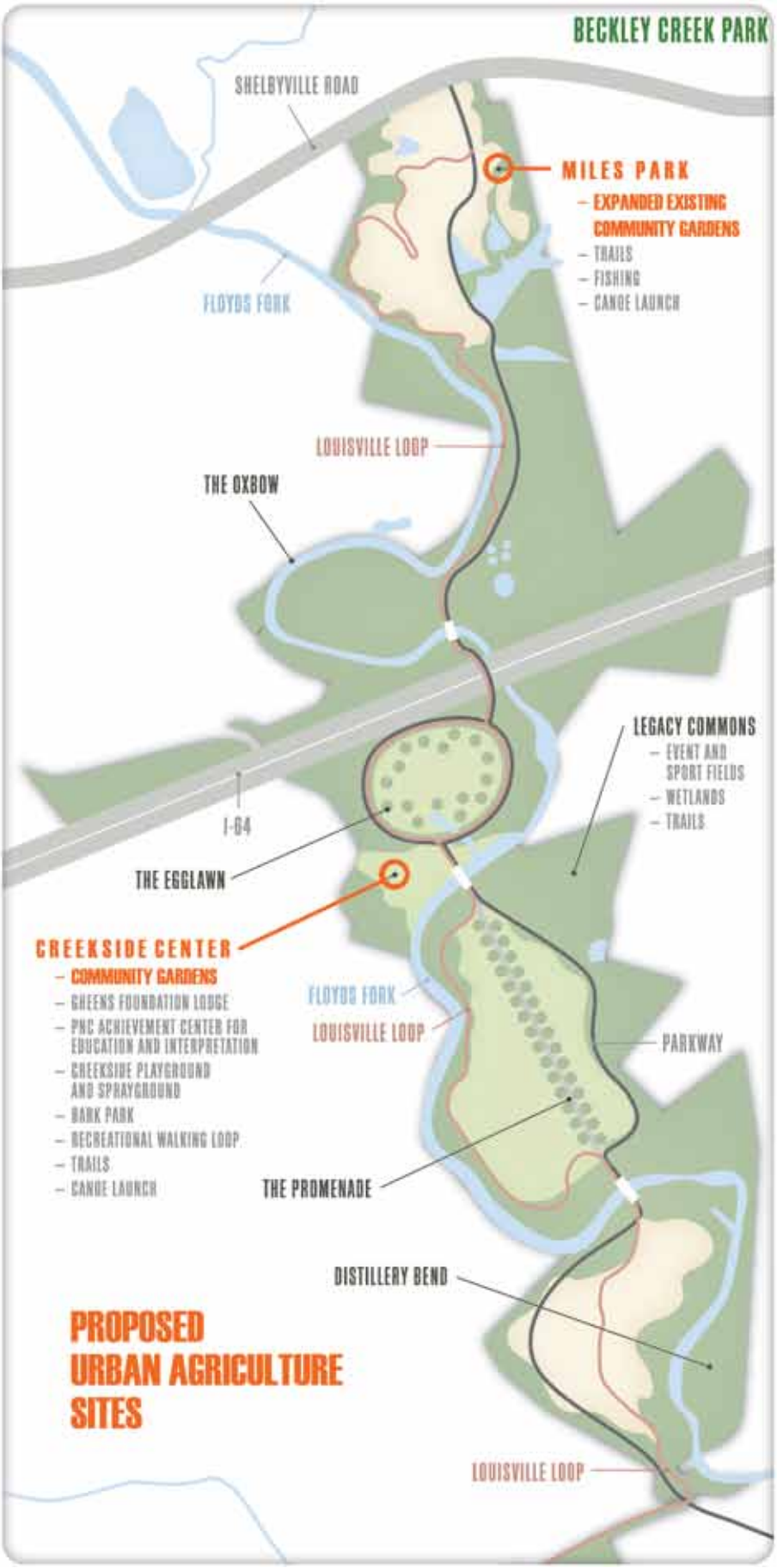
Due to its size, the Parklands is in a unique position to host several community gardens because there are a number of neighborhoods and residential nodes adjacent to the park areas. Garden locations should, in part, be determined by community interest. Certain neighborhoods or residential areas near the park may be more interested in participating in agricultural activities, and sites should be as close and accessible as possible to those communities that show the greatest interest or need. Evaluating community interest should be an ongoing project. Assuming that new residential or mixed-use neighborhoods will be developed around the perimeter of the park over time, a plan should be in place for Parklands staff to approach new neighbors to determine any interest in the development of a garden site within the Parklands to serve that need.

3 L. Harmon and L. Harrington, *Building a community garden in your park: opportunities for health, community, and recreation*, Ashburn, VA: National Recreation and Park Association, 2010.

Beckley Creek Park

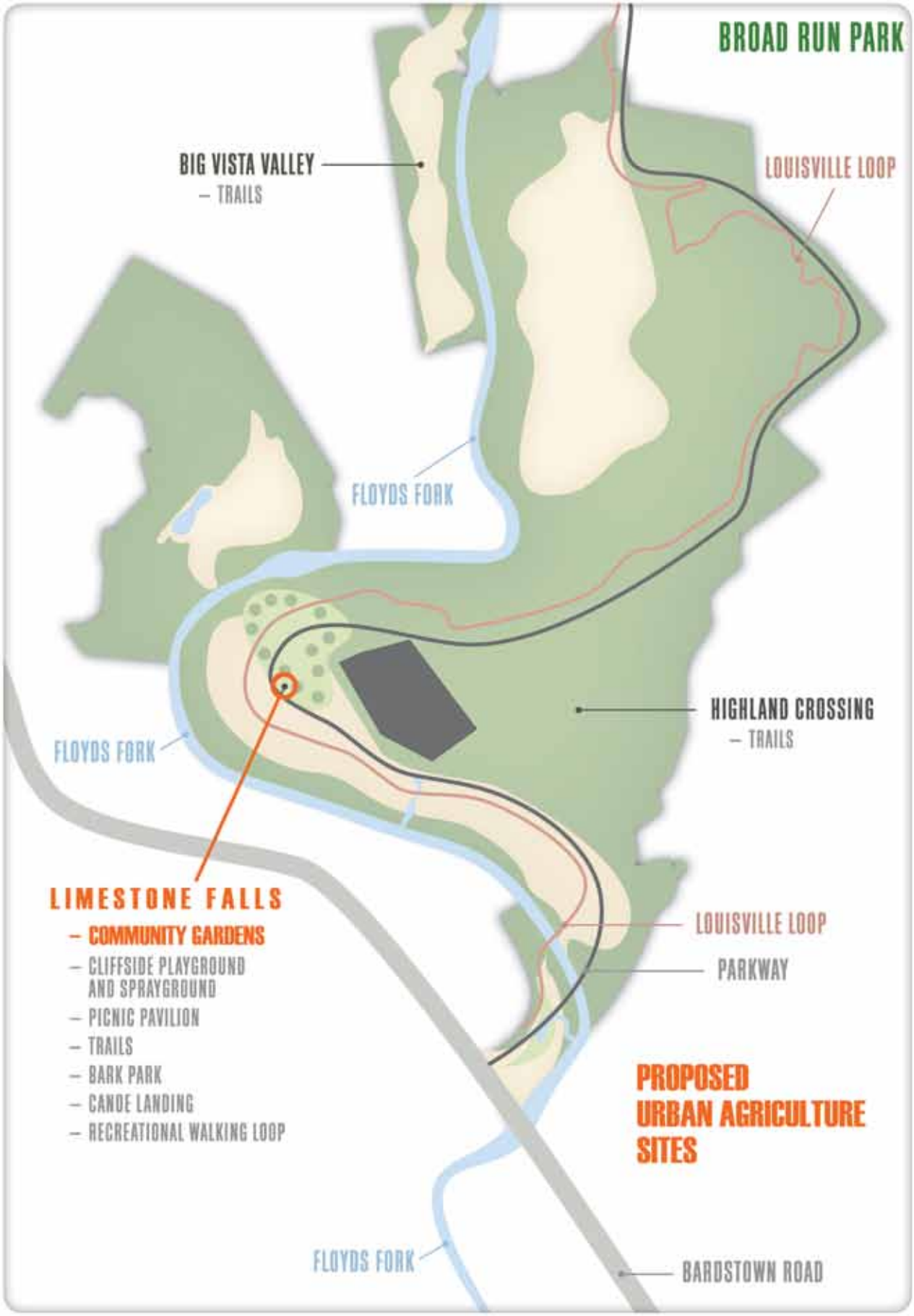
The Parklands already includes one community garden in William F. Miles Park, located within the Beckley Creek Park area. This garden is well-established and provides a model for a successful and sustainable garden site. We strongly recommend continuing the operation of the Miles Park Community Garden and using it as a model for any additional community gardens that are established within the Parklands. Since additional resources will be needed for each community garden that is established in the Parklands, we recommend that the Miles Park Community Garden be expanded if demand for plots grows. In general, fewer large garden sites would be more sustainable than a greater number of small sites scattered throughout the Parklands, as it would reduce both the cost and materials needed to construct and maintain the plots.

We also recommend establishing a community garden at the Creekside Center near the Egglawn. The area surrounding the Creekside Playground and Sprayground is an ideal location for a community garden or other community-accessible agriculture site. It already offers many of the amenities that make garden sites successful, such as a water source, shaded seating, restrooms, vehicular access and parking, and visibility. In addition, parents can garden while children play, or families can eat, play, and garden together all in one location. Locating agricultural sites near other family-oriented activities and amenities offers possibilities for children to become curious about, and involved in, food growing and education.


BECKLEY CREEK PARK
SHELBYVILLE ROAD
MILES PARK
– EXPANDED EXISTING COMMUNITY GARDENS
– TRAILS
– FISHING
– CANOE LAUNCH
FLOYDS FORK
LOUISVILLE LOOP
THE OXBOW
LEGACY COMMONS
– EVENT AND SPORT FIELDS
– WETLANDS
– TRAILS
I-64
THE EGGLAWN
CREEKSIDE CENTER
– COMMUNITY GARDENS
– GREENS FOUNDATION LODGE
– PNC ACHIEVEMENT CENTER FOR EDUCATION AND INTERPRETATION
– CREEKSIDE PLAYGROUND AND SPRAYGROUND
– BARK PARK
– RECREATIONAL WALKING LOOP
– TRAILS
– CANOE LAUNCH
FLOYDS FORK
LOUISVILLE LOOP
PARKWAY
THE PROMENADE
DISTILLERY BEND
PROPOSED URBAN AGRICULTURE SITES
LOUISVILLE LOOP

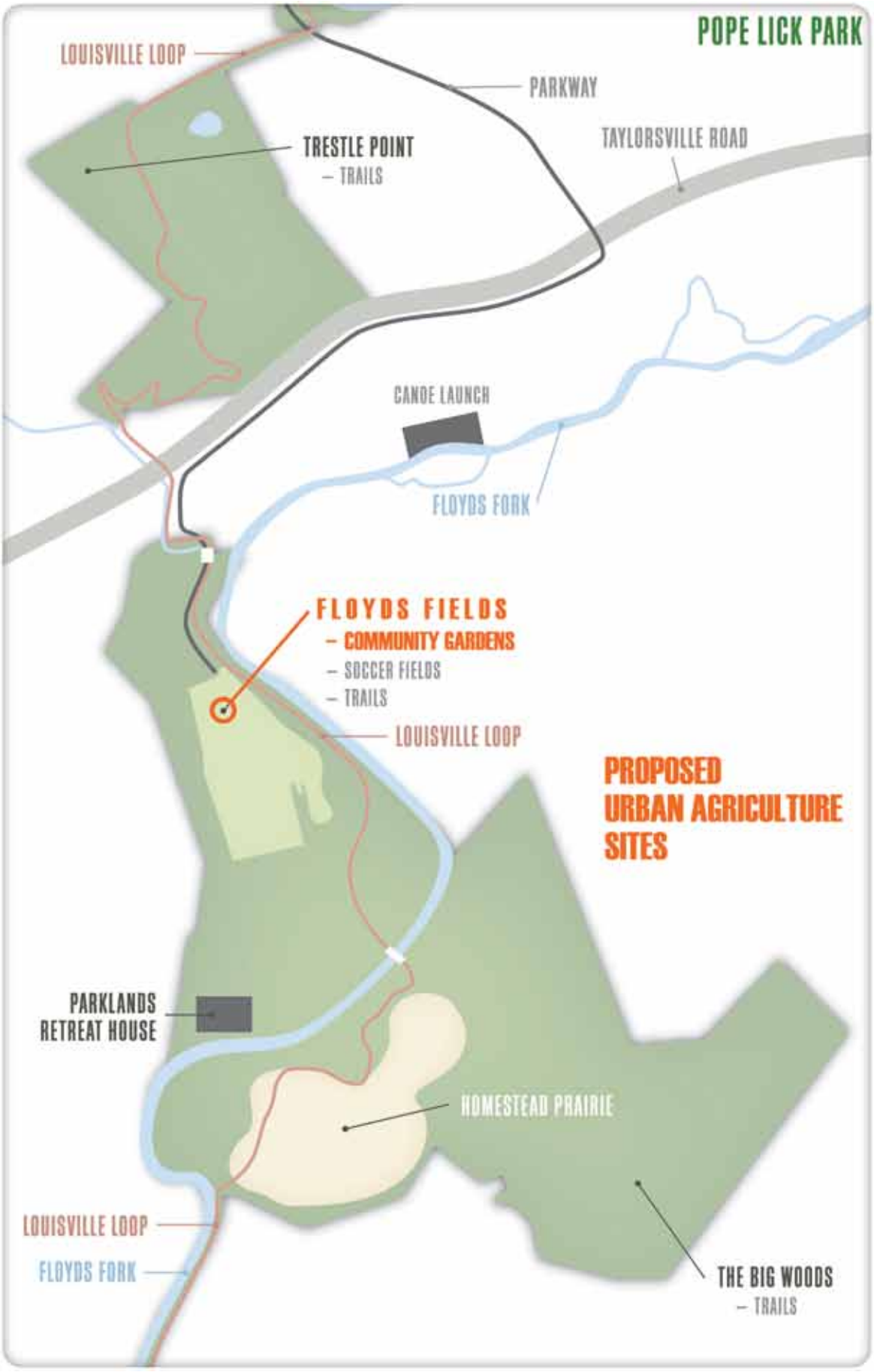
Broad Run Park

We recommend that a community garden or other community-accessible agricultural site be located at Limestone Falls. This location will already include a number of features and activities that can help make an agricultural site successful, including a picnic pavilion, playground and sprayground, dog park, and vehicle access and parking.


BROAD RUN PARK
BIG VISTA VALLEY
– TRAILS
LOUISVILLE LOOP
FLOYDS FORK
HIGHLAND CROSSING
– TRAILS
FLOYDS FORK
LIMESTONE FALLS
– COMMUNITY GARDENS
– CLIFFSIDE PLAYGROUND AND SPRAYGROUND
– PICNIC PAVILION
– TRAILS
– BARK PARK
– CANOE LANDING
– RECREATIONAL WALKING LOOP
LOUISVILLE LOOP
PARKWAY
PROPOSED URBAN AGRICULTURE SITES
FLOYDS FORK
BARDSTOWN ROAD

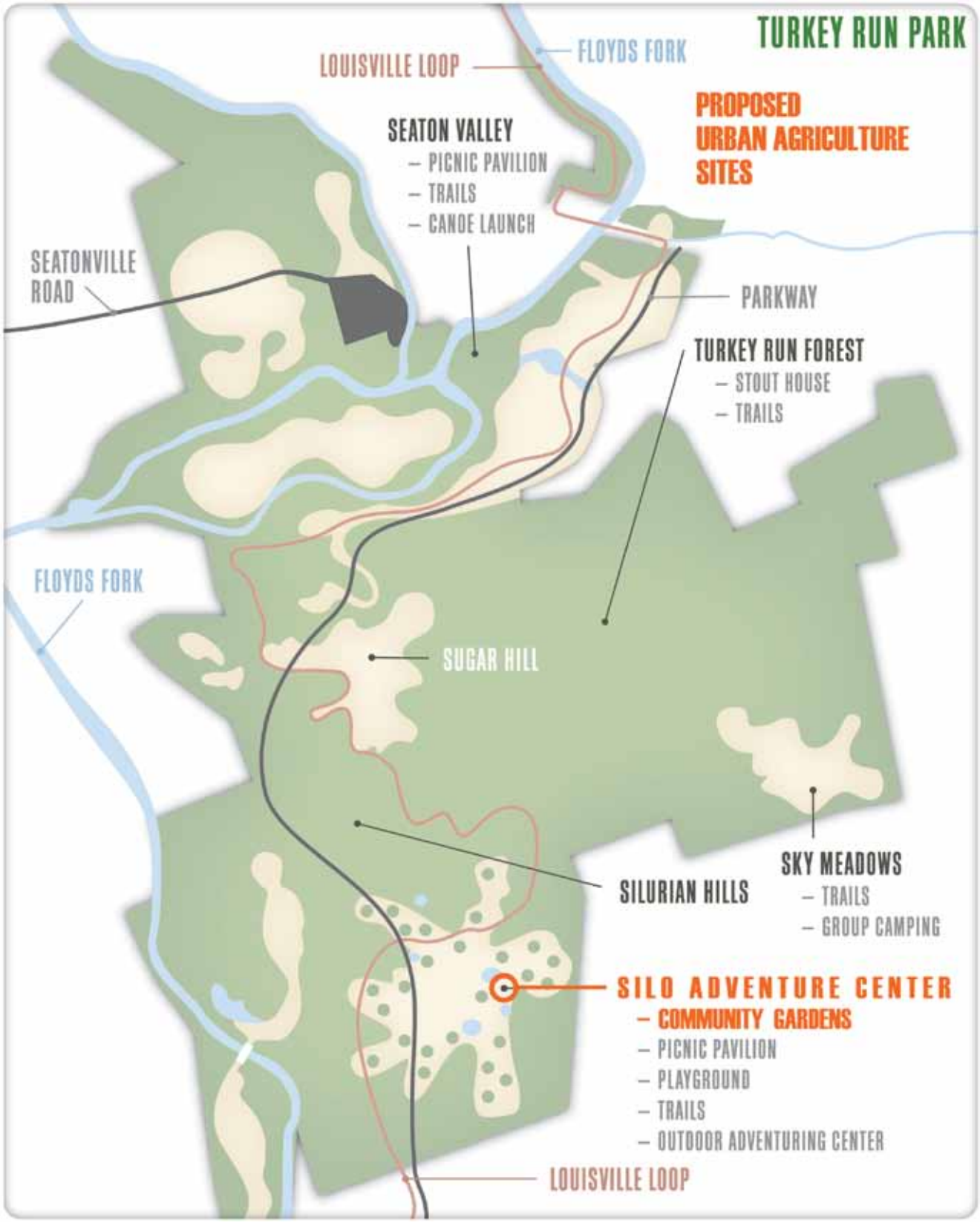
Pope Lick Park

Floyds Fields is an excellent example of a potential community garden site, as well as a potential site for a produce stand. In addition to having parking, a water source, restrooms, and sport activities, weekends often bring together the area's Hispanic community at Floyds Fields to play soccer, cook, eat, and socialize. Parklands staff has an opportunity to engage with the Hispanic community that already uses this location as a gathering space by offering garden plots for growing produce they can use for cooking or offer for sale at a produce stand.


POPE LICK PARK
LOUISVILLE LOOP
PARKWAY
TRESTLE POINT
– TRAILS
TAYLORSVILLE ROAD
CANOE LAUNCH
FLOYDS FORK
FLOYDS FIELDS
– COMMUNITY GARDENS
– SOCCER FIELDS
– TRAILS
LOUISVILLE LOOP
PROPOSED
URBAN AGRICULTURE
SITES
PARKLANDS
RETREAT HOUSE
HOMESTEAD PRAIRIE
LOUISVILLE LOOP
FLOYDS FORK
THE BIG WOODS
– TRAILS

Turkey Run Park

The Silo Adventure Center is recommended as the best-suited location for a community-accessible agricultural site within Turkey Run Park. Similar to the sites recommended in the other three parks, it will offer features and amenities that help make agriculture sites successful, such as a picnic pavilion, restrooms, a playground, vehicle access and parking, a water source, and, in this case, an adventure center.


TURKEY RUN PARK
LOUISVILLE LOOP
FLOYDS FORK
PROPOSED URBAN AGRICULTURE SITES
SEATON VALLEY
– PICNIC PAVILION
– TRAILS
– CANOE LAUNCH
SEATONVILLE ROAD
PARKWAY
TURKEY RUN FOREST
– STOUT HOUSE
– TRAILS
FLOYDS FORK
SUGAR HILL
SKY MEADOWS
– TRAILS
– GROUP CAMPING
SILURIAN HILLS
SILO ADVENTURE CENTER
– COMMUNITY GARDENS
– PICNIC PAVILION
– PLAYGROUND
– TRAILS
– OUTDOOR ADVENTURING CENTER
LOUISVILLE LOOP

Commercial Agriculture Sites

Our recommendations for commercial agriculture, heritage farms, and demonstration farms are more general than for community gardens. Since agriculture is a current use throughout the park, we recommend the conservation of existing agricultural sites as a reminder (and continuation) of the area's agricultural heritage. Unless there are particular circumstances that cause an existing agricultural operation within the Parklands to become undesirable or detrimental to the Parklands' mission, we recommend the preservation of all current agricultural activities. The Parklands is currently home to a demonstration farm and several commercial farms. Current agricultural sites within the Parklands are

- Miles Park Community Garden
- Distillery Bend
- Tyler Schooling
- Crenshaw Island
- Sunny Acres demonstration farm

Other sites within the Parklands that are the appropriate size for commercial agricultural activities include Ingram, Big Vista Valley, and the center of Broad Run Park. These sites should be considered if future expansion of agricultural activities in the Parklands is deemed to be appropriate or desirable.

Farmers' Markets and Produce Stands

There are numerous opportunities for produce stands or farmers' market sites within the Parklands. We recommend testing various sites within each of the four parks to gauge community interest. Ideally, produce stands and markets would operate on weekends near community gardens or other agricultural sites for the same reasons that make garden sites successful: vehicular access and parking, shaded seating, restrooms, a water source, visibility ("discovery" is particularly important for markets), and proximity to other amenities and activities. We recommend that the northernmost and southernmost parks, Beckley Creek Park and Turkey Run Park, receive priority for markets due to their proximity to major roadways. In addition, Sunny Acres demonstration farm may also be a successful location for a produce stand or market, as it already hosts a number of visitors who may be interested in purchasing fresh, local produce.

Agriculture sites should be located near restrooms, seating, shelters, a water source, and other amenities to insure their long-term success and viability. The facilities pictured here are at the Creekside Playground and Sprayground in Beckley Creek Park in the Parklands. *Photo: John Vick*

Land Use Zoning and Ordinances

Land use zoning and local ordinances must also be considered when choosing a location. Urban agricultural activities are often not permitted as a right on land zoned for residential or commercial use, and zoning can often exclude other agricultural activities such as beekeeping or raising certain types (or numbers) of livestock. Louisville Metro's Land Development Code is silent about urban agriculture and thus it is an allowed use in any zoning category.[4] It is important to note that this applies to gardens where individuals are growing food for their own consumption or donation, and rules about commercial gardens or agriculture are more context-dependent and those uses may not be allowed depending on the scale. Composting for on-site use is also allowed, although it is limited if being used for commercial purposes.[5] Also relevant is Chapter 91 of the local code of ordinances, which determines the number of various types of animals or livestock that can be present on a property.[6] There are no local restrictions on beekeeping, although there are state regulations that are applicable.[7] Due to the flexibility in land use zoning for Jefferson County, any site that is otherwise suitable for a community garden within the Parklands would not need a zoning change. However, agricultural sites that will include animals should consult the local ordinances to determine what animals are allowed and in what density for each proposed site.

Proximity to Neighborhoods

The urban planning profession is beginning to explore new ways of promoting urban agriculture. New planning frameworks are emerging that view agriculture and food

4 All of the land covered by the Floyds Fork Design Review Overlay is zoned Rural Residential (RR).

5 S. Sizemore, Louisville Metro Planning and Design Services, personal communication, April 11, 2011.

6 Louisville/Jefferson County Metro Government, Code of Ordinances, Title IX: General Regulations, retrieved on April 12, 2011, from http://www.amlegal.com.

7 Kentucky Department of Agriculture, Office of State Veterinarian, Regulations, retrieved on April 12, 2011, from http://www.kyagr.com/statevet/regulations/index.htm.

The successful Miles Park Community Garden in the Parklands is located within easy walking distance from homes backing up to the park. Several of the Miles Park Garden members live in this neighborhood. *Photo: John Vick*

networks as neighborhood infrastructure, just as integral as roads and sewers. Some newly-developed neighborhoods have integrated community gardens and small-scale agricultural activities (commercial, in some cases) into their design. The Parklands can build on this movement by offering land that is adjacent to new perimeter developments for agricultural uses by the residents, thereby aiding in the integration of agriculture into neighborhoods, supporting local food production, and building supportive relationships with the surrounding community.[8]

Management and Governance

Establishing an Agricultural Site

An agricultural site that will be managed by, or accessible to, the community should be carefully planned for long-term sustainability. Building a "garden community" is important for managing and maintaining the site, access to resources (labor, materials, and capital), and educational collaborations and opportunities.

The first step in building a garden community is to gauge interest in the development of a garden or agricultural site. Since the Parklands is located in a suburban and rural setting with little high-density residential development, the demand for garden plots may be minimal. In urban areas, community gardens are often attractive options for residents who do not have a yard or enough yard space to support a garden. However, community gardening is also a social activity and many residents participate for social reasons and the enjoyment of outdoor activity rather than a lack of space or access to fresh foods. It is important to gauge community interest in the areas being considered for urban agricultural activities and tailor the site to the community's needs and interests. Assuming that new residential or mixed-use neighborhoods will be developed around the perimeter of the park over time, a plan should be in place for Parklands staff to approach new neighbors to determine any interest in the development of an agricultural site within the Parklands to serve that need.

8 K. Hodgson *et al., op.cit*.

If interest appears to be strong enough to warrant further development of a garden or other agricultural site, the next step is to identify potential partners and collaborators. These individuals and organizations can aid in the design, funding, construction, maintenance, management, and decision-making for the site. Partners will differ depending on the nature and location of each site, but may include:

- Area residents and neighborhood or homeowners' associations
- Local businesses and business organizations and groups
- Jefferson County Public Schools officials, environmental coordinators, principals, teachers, and students
- Jefferson County Cooperative Extension Service
- Agriculture and farming organizations and local farmers
- Environmental groups and organizations
- Local government officials, including council members, area Louisville Metro Police Divisions, Metropolitan Sewer District, Louisville Metro Parks, and Louisville Metro Planning and Design Services

Once a list of potential partners has been compiled, a series of meetings should be held to discuss options for location, funding, management, and maintenance, as well as a timeline for tasks. In addition, it is important to determine the specific needs of the community and what resources (*e.g.*, financial, educational, and volunteer) each individual or organization can bring to the project. These meetings should be open to the public to encourage the broadest possible base of participation and support for the initiative.

Finance

When establishing a community garden, the largest initial capital investment is typically the cost of purchasing or leasing the land. In the case of the Parklands, land is readily available and the only initial investment required is for materials, construction, and any utilities or infrastructure installation or upgrades. The Jefferson County Cooperative Extension Service of the University of Kentucky College of Agriculture is a valuable resource for establishing and managing community gardens or other non-commercial agricultural sites in the park. The extension service already manages the existing community garden in the Parklands, located in Miles Park, as part of its community garden program for the county. Assuming there is enough organizational capacity, the simplest and most cost-effective way to develop new garden sites would be for the extension service to establish or absorb additional community gardens into its program. Through the extension service, Louisville Metro government provides funding for garden soil tilling and cultivating, roads, signage, composting, and repair and maintenance of utilities. Funding may also be available

for the installation of new water lines, if necessary. As part of its management of the gardens, the extension service collects plot fees to cover administrative costs. The annual fee is $10 for city plots (10x20 ft.) and $20 for county plots (30x30 ft.). An exception to this fee structure is the Miles Park community garden, with plots that are approximately 20x30 ft. and currently cost $10 (the plot fee that was established prior to the extension service taking over management of the garden). The extension service employs paid part-time managers for the community garden program, and organizes a community advisory board that serves all of its 11 gardens.[9] While the extension service does not provide funding for plants or certain materials (such as wood to build raised beds), these are relatively minor expenses. Community members and local businesses often donate materials and volunteer to build raised beds or other basic structures. In addition, there are a number of grant programs that provide support for these initial investments.[10]

An agricultural site can also be managed as a non-profit commercial enterprise, where food is sold to the community and the profits are reinvested in the program to provide funding for operating expenses. This model is a practical and cost-effective option that is self-sustaining while still providing fresh locally-grown produce to the community. Loutet Park, a public park in North Vancouver, British Columbia, is home to an urban farm managed by a local non-profit organization. The goal of the farm is to create a socially, economically, and environmentally self-sustaining non-profit enterprise. Food is grown on the farm by two experienced organic farmers and sold to the community, with the proceeds paying for the farmers' salaries, tools, seeds, and other necessities. The City of North Vancouver is monitoring the project to develop a model for a non-traditional use in a public park that also serves as an educational opportunity for community members to learn about local organic food production and food security issues.[11]

Land Ownership

The *Floyds Fork Greenway Master Plan* states that land owners will retain ownership of the land that will comprise the Parklands, under the agreement that all parcels will be publicly accessible in perpetuity. However, the various organizations and entities that retain ownership may have regulations or liabilities related to activities that occur on their respective parcels that may influence what types of urban agriculture are best-suited for each site, or what types of arrangements, procedures, or legal contracts must be developed or adhered to for agricultural activities to take place there. There are four land owners in the Parklands: 21st Century Parks, Future Fund, Metro Parks, and the Metropolitan Sewer District. The specific regulations or potential issues that

9 W. Long, Jefferson County Cooperative Extension Service, personal communication, April 11, 2011.

10 The University of Louisville's Center for Environmental Policy and Management maintains a list of local, state, and federal grant programs for funding community gardens on its website: http://cepm.louisville.edu/.

11 Loutet Park Urban Agriculture Project, retrieved on May 28, 2011, from http://www.cnv.org/.

may need to be addressed for each are beyond the scope of this report, but detailed discussions and examinations of existing organizational rules and procedures should take place before attempting to plan for publicly-accessible agricultural activities on any site in the Parklands.

The Parklands of Floyds Fork is a project that is characterized by collaboration and partnerships. Parklands landowners may choose to form a partnership with an outside organization or non-profit that is in need of land for agricultural purposes. For example, the Kansas City Parks and Recreation Department formed a partnership with a local non-profit, the Kansas City Community Gardens (KCCG), to provide a 3-acre site for a community garden, a children's garden, and the organization's offices. KCCG provides self-help and education for low-income communities and children to help them grow their own food. Located in Swope Park in Kansas City, KCCG operates independently of the park district but park staff provides some general perimeter maintenance and mowing, as well as partnering on summer park programming activities for children.[12] These partnerships are useful in that they further the mission of the Parklands without a staff increase, as operations are managed by the partnering organization, and they allow an existing community need (food production for low-income families, education for children and community members) to be met through the provision of land.

Legal Contracts and Formal Agreements

A successful community garden will be characterized by a relationship of trust and open communication between the gardeners and the landowner or managing organization. However, for those instances where issues cannot be resolved through informal discussions, it is important to have legal agreements in place to help resolve disputes. Like most legal contracts, these are designed to address problems that will likely never occur. The types of legal agreements or contracts that are appropriate for the Parklands are dependent on who the landowner is (public vs. private) and whether 21st Century Parks will be the managing organization or the responsibility will be taken on by the Jefferson County Extension Service's community garden program. If 21st Century Parks will manage the garden, individual gardeners should sign an agreement with 21st Century Parks to follow official gardening rules and procedures, as well as waiving the right to sue in the unlikely event of injury. If the extension service is to be the managing organization, they would likely use the existing agreements in place the community gardens they already operate. The extension service program currently requires a signed contract from each gardener that outlines payment responsibilities and addresses basic liability issues. Each gardener in the program retains a document that identifies which community garden and plot number they may use, which they keep on hand while gardening.[13]

12 L. Harmon and L. Harrington, *op. cit*.
13 W. Long, *op. cit*.

The National Policy and Legal Analysis Network has developed the *Legal Toolkit for Community Gardens*,[14] which provides legal resources for establishing community gardens. The toolkit includes model legal contracts for a community garden lease, an individual gardener's agreement, community garden rules, and checklists for the managing or sponsoring organization that help to determine operating rules and responsibilities. Of these model contracts, the gardener's agreement may be particularly useful for the Parklands, as it is a sample contract between individual gardeners and a sponsoring non-profit organization. The model community garden rules and organizational checklists may also be of use for developing rules, procedures, and responsibilities. The toolkit is free and the model contracts it contains may be modified to fit an organization's specific needs and context.

Rules and Policies

One of the most effective ways to manage a community garden is to establish a Community Garden Advisory Board. This is a useful strategy for managing any agricultural site that involves shared responsibility for maintenance, funding, or access to foods. Advisory boards typically include the community gardeners, park staff, and other relevant stakeholders who are linked directly with the site's operations. The board's responsibilities include the management of daily operations, site maintenance, supervision of garden sites, collection of membership fees (if applicable), distribution of keys (if applicable), management of the wait list for plots (if applicable), payment of water or any other bills, and initiating programming or partnerships. Establishing an advisory board facilitates the long-term sustainability of the garden site, particularly through the development of a maintenance plan for the site since gardeners come and go, insuring the site's viability is not reliant on the efforts of one or two individuals.[15] The Jefferson County Extension Service has already established an advisory board for its community garden program. Thus, establishing a new advisory board would only be necessary if the extension service does not manage the garden sites within the Parklands.

In the case of the Victory Garden in Miami Beach, Florida, a group of local gardeners were growing vegetables in a vacant lot that was about to be turned into a parking lot. They formed a steering committee and began meeting with the local parks department to develop a set of gardening procedures and manage the initial plot reservation process. Area residents were involved in the design of the garden, as well as in the development of the policies, procedures, and rules for the garden. Residents continue to elect garden committee members and manage the garden's activities. The committee was also instrumental in establishing a second garden. The success of the efforts in Miami Beach, as well as numerous other urban agriculture initiatives, has depended on the involvement and support of the surrounding community. These relationships also have facilitated the donation of materials, labor, and funds for development of the agricultural sites by local businesses and organizations.[16]

14 National Policy and Legal Analysis Network to Prevent Childhood Obesity, *Ground rules: a legal toolkit for community gardens*, Oakland, CA: Public Health Law and Policy, 2011.
15 L. Harmon and L. Harrington, *op. cit*.
16 *Ibid*.

Access

It is important to establish policies early on in the development of the agricultural site that outline who has access to the site for various purposes. There are generally three types of access to consider: 1) educational, 2) gardening and farming, and 3) harvesting. Educational access most likely will include community members, organizations, school classes and groups, or other types of educational or demonstrational programming. Access for gardening and farming activities, including harvesting, will likely be restricted to members of the site, although some of these activities may be performed as part of the educational programming at the site. A specific list of the organizations and groups that have access to each site should be determined by their respective advisory boards. If the Jefferson County Extension Service is managing the garden sites, their advisory board would likely apply the same regulations in terms of access that apply to other garden sites within the program, although exceptions could likely be made if desired by the board or the landowner.

Location

Community gardens should be located close to existing areas where programming occurs or can occur. This allows gardeners or visitors to utilize amenities that are already in place, such as parking, restrooms, and shade structures. A water source is essential for any agricultural use, and can be a spigot, a natural water source (check with the U.S. Environmental Protection Agency for appropriate water quality in these cases), or collected from rain barrels off of the roofs of nearby shelters or shade structures. The site should be level with eight hours of direct sunlight throughout the day and should drain well (within 24 hours). It is also important for park or garden management staff to have easy access for maintenance, watering, and supervision. The location of any underground utilities should be noted to avoid damage or safety issues when disturbing the ground for planting or construction.[17]

To aid in the community garden site-selection process, the *Community Garden Location Checklist* will allow Parklands staff to determine those sites that are best-suited for a garden location based on proximity to existing infrastructure, accessibility, growing conditions, and safety. This checklist was developed from recommendations in the National Recreation and Parks Association's report on *Building a Community Garden in Your Park*.[18]

17 *Ibid*.
18 *Ibid* [?].

Community Garden Location Checklist

the parklands of floyds fork

Item	√	Notes
Is the site near a shelter, building or other area where other activities and programming occur?		
Is there a shaded seating area near the site?		
Is the site easily accessible to vehicles with parking available for cars, trucks, and bikes?		
Is the site ADA accessible (e.g. level, with solid-surface pathways to the site from parking areas)?		
Are there restrooms located nearby?		
Is the site level, with at least 8 hours of sunlight per day?		
Is there an existing water source (such as a spigot) or nearby water line?		
Does the site drain well and not remain soggy after a hard rain?		
Is the site free of underground utilities?		
Has the soil been tested for contaminants that may be harmful to human health?		

City Solutions Center, 2011

Accessibility

It is important to remember that accessibility is also *inclusivity*. The American Disabilities Act (ADA) currently does not have guidelines that apply specifically to community gardens. However, it is important to insure those with physical disabilities are able to reach the site and participate in gardening activities. A number of resources are available for addressing this need, including a set of guidelines for incorporating the principles of *Universal Design* into the development of community gardens in Madison, Wisconsin.[19] This approach advocates designs that allow the greatest number of individuals to use an area without "specialized" design features. The approach is also relevant for other publicly-accessible agricultural sites such as demonstration gardens and other educational sites. Based on the principles of Universal Design, there are a number of considerations and recommendations for addressing accessibility.

The agricultural site's location should be level, easy to get to, near parking, and in an area that is not prone to flooding. Entryways to the site should be level or ramped, constructed using pavers or a solid pathway surface, and wide enough for wheelchair access and turnaround. Water should be available on-site and spigots or hoses should be easy to reach and maneuver. Seating, restrooms, and tool storage should also be available on-site or nearby. For gardening activities, raised beds provide easy access for gardeners in wheelchairs, children, and the elderly who may need to sit while gardening. Guidelines for constructing accessible raised beds are plentiful and can be found on some agricultural extension service websites.

The Zapata Park and Fremont Park Community Gardens include a number of Universal Design features, including wide, level, solid surface walkways. Both gardens include ADA-accessible raised beds. *Photos courtesy of City of Sacramento Department of Parks and Recreation (http://www.cityofsacramento.org/parksandrecreation/parks/community_garden.htm)*

19 Community Action Coalition for South Central Wisconsin, *Madison's inclusive community gardens*, Madison, WI: Community Action Coalition for South Central Wisconsin, 2011.

Membership

The question of who should be eligible for membership in a community garden is a relatively straightforward one: membership should be determined primarily by the purpose of the garden. If the purpose is to provide a space for the surrounding community to garden for recreational, educational, or social purposes, then membership should be open to all members of the community (not just adjacent neighborhoods, although those who live close to the site will be the most likely to garden there). If the demand for plots is greater than the number available, a wait list should be instituted and managed by the Community Garden Advisory Board or other managing entity. Some community gardens are established with a mission to educate or provide fresh foods for low-income individuals and families. In these cases, membership should be limited to those in need, defined either by income level or residence in a neighborhood that is "food-poor." For these gardens, since many low-income families may live in other parts of the Louisville area, transportation arrangements should be made to provide access for those gardeners without a vehicle. Other "specialized" gardens may include those established specifically for the elderly, children, or persons with physical or mental disabilities. The institution of membership fees will also depend on the purpose of the garden. For most community gardens located in parks, plot fees are charged annually and cover the costs of management and maintenance (this is also the case for the Jefferson County Extension Service Community Garden Program). Many gardens that serve low-income individuals and families do not charge plot fees, but for those gardens that serve multiple income levels the fees should be waived or reduced to the extent possible for those in need.

Unauthorized Use

It is not uncommon for individuals who are not members of a community garden or who do not have approved access to an agricultural site to engage in unauthorized harvesting of crops. Unauthorized harvesting generally falls into three categories: 1) need-based, 2) vandalism, and 3) profit. The strategies for dealing with this problem should be different for each category. These should be proactive when possible and reactive when necessary.

Need-Based

Some people may be harvesting crops because they cannot afford to buy food. This type of unauthorized harvesting is called need-based, because it is not motivated by profit but by hunger. This is most likely to occur in areas that do not have ready access to fresh fruits and vegetables. The best way to determine if need-based harvesting is occurring is to consult the neighbors and gardeners. There are three strategies for dealing with this problem. The first is to simply allow it, as the food is going toward someone in need and their actions are not with malicious intent. The second is to partner with a local food bank to provide some or all of the food grown at the site for individuals in need. The third strategy is to designate a well-marked "free area," where crops grown can be harvested (on the honor system) by those in need.

Vandalism and Profit

One of the typical ways that urban agricultural sites defend against vandalism and the theft of crops for profit is to install a fence with a locked gate, and garden members or other staff members are provided with keys. However, one of the most effective (and cost-effective) ways of deterring vandalism and theft is to build relationships with neighbors who can provide "eyes on the street" to help keep watch and notify police about suspicious activity.[20]

Educational Partnerships

Urban agriculture sites provide valuable opportunities to educate communities about growing food, food systems, health and nutrition, environmental stewardship and safety, and natural ecology. There are different levels of educational involvement for community members, including observation of growing techniques and growing cycles, hands-on participation in the growing and harvesting of foods, or teaching other community members and students about agricultural practices.

Community Garden Demonstration Plots

The expertise of community garden members varies widely. While some community gardeners may be experienced, others may be beginners or simply want to learn more about increasing crop yields or pest control. We recommend the managing entity for community garden sites within the Parklands develop a demonstration plot at each garden site and hold regular workshops for gardeners to educate them on issues such as pest control, fertilizing, soil safety, and any other relevant maintenance tips. Workshops can be led by the Jefferson County Cooperative Extension Service, agriculture or farming organizations that provide education as part of their mission, or experienced gardeners. Such workshops are also an opportunity for the managing entity to obtain feedback from gardeners on issues or concerns that may need to be addressed.

Schools and Universities

Urban agriculture sites can be valuable teaching tools for students of all ages. When sites are made available for educational purposes, students can learn important lessons about food systems, ecology, plant biology, soil safety, healthy eating, and environmental stewardship. In addition, students of any age can be involved in all phases of developing a community garden or agricultural site, including planning, design, fundraising, implementation, and maintenance. For sites accessible to young

20 L. Harmon and L Harrington, *op. cit*.

children, recreation should also be integrated into the area, including common spaces and places where children can get their hands dirty.[21]

Publicly-accessible urban agriculture sites often form partnerships with area schools for education and demonstration purposes. An example is Real Food Farm, located in Clifton Park in Baltimore, Maryland, which has partnered with a local high school to develop the HoopVillage project. The project includes three hoophouses that provide experiential education and demonstration of agriculture. One hoophouse serves as an educational space where math, science, and English lessons are taught through learning about soil and food. The second hoophouse hosts entrepreneurial after-school programs for high-school students, and the third hoophouse grows food that is sold to local restaurants, residents, and educators. The partnership facilitates a community-based project that also teaches students about systemic food issues.[22] Another example is Kilbourn Park in Chicago, which operates an organic greenhouse and urban orchard for teaching purposes, and offers numerous family-oriented greening programs and environmentally-themed projects and workshops for a nominal fee.[23]

In addition, partnerships with local and regional universities can be mutually beneficial. Agricultural sites of all types can be opportunities for research in a variety of disciplines, including horticulture, ecology, biology, environmental studies, public health, urban planning, economics, and the social sciences. As service learning, applied research, and community outreach become an increasing part of higher education, collaborations with students, faculty, and other researchers can offer valuable resources and expertise. Class projects can provide no-cost research services for park initiatives as well as community education programs.

Community Groups and Organizations

Partnerships with community groups and local organizations can also enhance the Parkland's ability to educate the community about food systems and sustainable agriculture. A number of local organizations and networks are focused on various aspects of sustainable and urban agriculture practices, and may wish to establish a site that furthers their mission or simply offer programs at existing agricultural sites within the park. Organizations such as Louisville Grows, Breaking New Grounds, and 15,000 Farmers offer workshops and programs as part of their mission to educate community members and promote sustainable agricultural practices, and may have an interest in developing sites or programs within the Parklands.

21 *Ibid*.
22 Real Food Farm, HoopVillage, retrieved on May 23, 2011, from http://real-food-farm.org/.
23 Chicago Park District, Kilbourn Park, retrieved on May 23, 2011, from http://www.chicagoparkdistrict.com/.

Demonstration and Heritage Farms

Demonstration gardens and farms are either privately- or publicly-owned agricultural sites that educate the community about agricultural practices.[24] They typically donate their harvest to food banks, homeless shelters, schools, or other organizations that provide food to individuals or families in need. Heritage farms are a type of demonstration farm that are generally operated for the same educational purpose but have the additional mission of preserving particular crops or farming practices that are part of a region's agricultural history. In the Floyds Fork region these crops would include corn, tobacco, hay, wheat, and soybeans. The Parklands is already home to a demonstration farm, Sunny Acre Farm, which is privately-owned and operated but offers field trips that teach children about farm life and caring for farm animals.[25]

Publicly-owned demonstration farms operate somewhat differently in that they typically have an explicit educational mission to teach potential growers about growing food and sustainable agricultural practices. These publicly-operated farms may be operated by city staff or through a partnership with a local non-profit. One example is Zenger Farm in Portland, Oregon. The non-profit Friends of Zenger Farm operates the farm on land owned by the city's Bureau of Environmental Science. Zenger Farm provides experiential learning opportunities for youth, farmers, and families in sustainable agriculture, wetland ecology, food security, healthy eating, and local economic development. The farm uses sustainable agricultural practices to grow fruits and vegetables, as well as raising hens and turkeys and keeping bees. Zenger hosts numerous events, including hands-on "work parties," workshops on beekeeping and chicken raising, a farmers market, field trip programs for children, and apprenticeship programs for aspiring farmers. The farm also has a farm-share program and supplies produce to numerous local restaurants.[26] Other demonstration farms, such as the North Beach Community Garden in Miami Beach, Florida, and the County CROPS farm in Troutdale, Oregon, donate their harvest to local food banks or other food outreach organizations.[27] In addition, the Jefferson County Cooperative Extension Service provides education for community members about growing food and safe soils. Community gardens operated by the extension service's program have reserved demonstration plots used by program staff in educational workshops for members of the garden.[28]

24 K. Hodgson *et al., op. cit*.
25 Sunny Acre Farms, retrieved on April 12, 2011, from http://www.sunnyacresfarmky.com/.
26 Zenger Farm, retrieved on April 12, 2011, from http://www.zengerfarm.org/.
27 L. Harmon and L. Harrington, *op. cit*.
28 W. Long, *op. cit*.

Environmental Considerations

Sustainable Agricultural Practices

Sustainability is a core principle of the Parklands, which the master plan defines as "environmental and cultural stewardship; social equity through universal access and the provision of diverse recreational amenities; creation of community gathering spaces; and economic sustainability through viable programming and revenue generating features."[29] The term has become a buzzword in recent years, and as a result what is "sustainable" in terms of agricultural practice is not always clear or agreed upon. The Parklands master plan references the National Park Service's definition of sustainable agriculture, which "advocates an increase in farms, small scaled farm operations, using biological and mechanical alternatives to traditional agricultural chemicals, grass-based, free-range livestock, and limited credit use and capitalization."[30] While this is a useful working definition for how to structure agricultural activities within the park and consider them, it is also important to consider agriculture in terms of the broader food-systems context. Applying a *community-based food systems approach* goes a step further, addressing issues of food security, public health, social and environmental justice, ecological health, and local economic development.[31] A community-based food systems approach emphasizes the importance of the relationship between food growers and consumers, as well as processing and distribution. This approach defines what a local food system strives to be:

- **Place-based**: promoting networks of stakeholders, linking urban and rural issues, engaging residents, and creating a sense of place
- **Ecologically sound**: using environmentally sustainable methods for producing, processing, distributing, transporting, and disposing of food and agricultural by-products
- **Economically productive**: bolstering development capacity and providing job opportunities for farmers and community residents
- **Socially cohesive**: facilitating trust, sharing, and community building across a diverse range of cultures and addressing the concerns and needs of marginalized groups, including minority and immigrant farmers and farm laborers, financially struggling small farmers, and underserved inner-city and rural residents

29 WRT, *The Fork: The Floyds Fork Greenway Master Plan*, report prepared for 21st Century Parks, 2008.
30 *Ibid*.
31 K. Hodgson *et al., op. cit*.

- **Food secure and literate**: providing equitable physical and economic access to safe, nutritious, culturally appropriate, and sustainably grown food at all times across communities and fostering an understanding and appreciation of food, from production to disposal

These principles provide a useful framework for developing and managing sustainable agricultural activities in the Parklands, of which urban agriculture and community gardens can be an integral part. Community gardening (when done organically without pesticides or chemical fertilizers) and educational activities (including food literacy and job training) directly address most of the aforementioned principles.

The Parklands should apply a community-based food systems approach to its agricultural activities, addressing issues of food security, public health, social and environmental justice, ecological health, and local economic development. *Photo: John Vick*

Environmental Safety

Before establishing a community garden or farm it is essential to insure that the soil and any other materials on the site are safe for growing food. Suburban and rural land is not exempt from these concerns. While soil contamination is typically associated with gardening on vacant lots or on former industrial properties in urban areas, suburban and rural areas that were previously (or still are) home to farms may have soil contamination from pesticides and fertilizers, and those areas near highways may have lead or other heavy metal contamination from automobile traffic (left from the days of leaded gasoline). Contamination is a potential problem for both gardeners and consumers of the food grown on the site, particularly for children. As part of gardening and the hands-on learning process for those sites used for educational purposes, children will dig, explore, and play in the soil. If crops produced at the Parklands are to be used in local schools, sold in local markets, or donated to food banks or other charitable organizations, it is imperative that the soil is tested and, if necessary, the contamination remediated to avoid potentially serious human health or safety issues.

Soil Contamination[32]

Soil contamination can pose a substantial health risk to both gardeners and consumers of food grown in the garden. While soil may be contaminated from a previous use on the site, contaminants can also arrive from neighboring or nearby properties by way of air particulates, water runoff, or groundwater running beneath the soil. In addition, soil that is brought in from off-site is not always safe. All soil to be used for agricultural activities, regardless of its origin, should be tested and, if necessary, remediated to avoid potentially serious health problems. In order to determine whether the soil is safe it is important to research the history of the site, test the soil, and then proceed to remediate the soil if necessary.

Site history

Researching the past uses of a site can be important in determining the probability and type of soil contamination. For example, many suburban and rural areas must pay particular attention to lingering herbicides and pesticides that might have been used on former farmland. A site that was previously industrial or home to a type of business that used chemicals or pollutants—such as a dry-cleaner, gas station, auto repair shop, or garbage dump—should be examined carefully. Attention must also be directed to neighboring or nearby properties, which can also affect the soil. Soil contaminants can travel through the air, in water runoff above ground, or in water moving below ground from other properties in the area. Determining what types of contaminants may potentially exist in the area can help determine what types of soil tests are most appropriate for the site. Surrounding property owners and neighbors are valuable sources of information for site history, and including them in this research process is a way to build relationships between the Parklands staff, gardeners, and the surrounding community.

Soil testing

Soil should always be tested on sites where agriculture is to be developed (or is already underway). Even in community gardens where raised beds are to be used, soil imported from off-site is not necessarily safe and should still be tested. Generally, soil testing involves a process of selecting and mapping soil sampling sites, collecting and packaging the soil samples, and sending them to a laboratory for testing. The cost of soil testing varies and is dependent on the number of samples and what contaminants are being tested for. Most areas have local or regional soil testing laboratories, such as the University of Kentucky Soil Testing Labs and Microbac Laboratories Inc. in Kentucky. The University of Kentucky Agricultural Extension Service Jefferson County Office can assist with soil testing procedures, questions, or funding. In addition, the University of Massachusetts Extension Service is a respected and affordable testing resource, offering a standard soil test for $10.

32 A.H. Turner, *Urban agriculture and soil contamination: an introduction to urban gardening*, Practice Guide #25, Louisville, KY: Environmental Finance Center, EPA Region 4, University of Louisville, Winter 2009.

Soil remediation

If soil testing reveals levels of contamination that are considered unsafe, there are a number of remediation options depending on how the site will be used. The strictest standards are for sites used to grow food. While there is no single measure for what levels of contamination are considered safe, many institutions and states, as well as the U.S. Environmental Protection Agency, have their own guidelines for determining what levels are acceptable. Remediation options are numerous and particular to the needs of a specific site depending on the type of contamination, what the areas will be used for, and what is cost-feasible for the project. All of the options for remediation of seriously contaminated sites should be performed in consultation with an environmental contamination specialist.

Capping: Creating a barrier to the soil is possible depending on the type of contamination. If the contaminant is not mobile and will not travel with water, then putting some sort of barrier with an appropriate layer of new soil can provide protection from exposure.

Soil Mending: This technique allows for the removal of contaminants from the soil, essentially cleaning or "mending" it. Soil is typically removed from the site and "washed" off-site or at a plant. Once the soil is clean it is returned to the site. This process can be expensive and requires the appropriate disposal of the chemical residue following washing.

Composting: Compost can be added to the soil, which is a quick and inexpensive fix but generally does not remove the contaminants. For some contaminants this is appropriate because it reduces the *bioavailability* of the contaminant (the ability of plants to absorb it) by diluting its presence in the soil. This technique can also be used in creating raised beds, where plants can grow in the compost without the roots entering into the contaminated soil below.

Phytoremediation: This is a process where plants are used to extract or transform contaminants in the soil. It must be done carefully with consideration for what will be done with the plants used in the process.

An important point to note is that the current state of research about uptake in plants and bioavailability of contaminants in general is not conclusive. There remains debate about what levels of exposure to a variety of contaminants are safe, what to do with plant material used in phytoremediation, the extent of exposure routes, and efficacy of composting as a remediation tool and how necessary testing really is for all sites. Despite this uncertainty in the research community, it remains important to continue to ask questions about the soil safety and quality of each site and not to take safety for granted.

Environmental Education Opportunities

Community gardens and agricultural sites (via demonstration farms or other teaching opportunities in the Parklands) offer a valuable opportunity for community education about environmental safety and sustainability. For schoolchildren, early discussions about environmental contamination can be an important part of lessons in biology, food systems, and health. While some community members may be aware of potential contamination issues, they often do not know what questions to ask about safe practices when starting a garden of their own. Lessons and discussions around these issues should include solutions, both site-specific and systemic. Environmental safety procedures should be included in the rules and regulations for community gardens, in any contracts developed for larger-scale agriculture or farming, and in any educational curricula developed for use in the Parklands to facilitate these discussions and promote environmental stewardship and safety.

Educational activities within the Parklands offer an opportunity to engage community members in discussions about safe soils, food literacy, and sustainable agricultural practices. *Photo: John Vick*

Recommendations

This section provides an outline of the recommendations for integrating urban agricultural sites into the Parklands of Floyds Fork. The recommendations are organized according to five topics: location, management and governance, access, educational partnerships, and environmental considerations. This is a general list and is not exhaustive, as other specific recommendations are woven throughout the report. Broadly speaking, the integration of urban agriculture should be informed by the Parklands guiding principles of conservation, environmental sustainability, creation of a community resource, inclusivity, and a symbiotic relationship with its surroundings.

General

- Develop community gardens and other small-scale community-accessible agriculture sites throughout the Parklands to promote agricultural practice and education, food security, community and economic development, and environmental sustainability.
- All current agricultural uses and sites within the Parklands should be preserved for both land preservation and cultural heritage preservation.

Location

- Locate publicly-accessible agricultural sites in areas that already include features and facilities that make agricultural sites both successful and sustainable.
- Locate at least one community garden in each of the four parks that comprise the Parklands (see maps in this report for specific recommended locations). Maintain and expand (if warranted by plot demand) the successful Miles Park Community Garden.
- The number of community gardens, number of plots, and plot size should be determined individually for each park and garden site based on community interest and need.
- Gauge community interest and locate gardens in proximity to the greatest interest or need. The process of evaluating community interest and need should be ongoing as new residences are developed around the perimeter of the Parklands.

- Use the *Community Garden Location Checklist* (in this report) to determine the best garden sites.
- The Land Use Code allows (non-commercial) agriculture as a use in any zoning category, but consult Chapter 91 of the Local Code of Ordinances for the regulations on numbers and types of animals. Review state regulations for beekeeping restrictions.

The area surrounding the Creekside Playground and Sprayground in Beckley Creek Park in the Parklands is an ideal location for a community garden or other community-accessible agriculture site. It already offers many of the amenities that make garden sites successful, such as a water source, shaded seating, restrooms, vehicular access and parking, and visibility. Parents can garden while children play, or families can eat, play, and garden all in one location. *Photo: John Vick*

Management and Governance

- Build a "garden community" of stakeholders that will help manage and maintain the site, provide access to resources, and offer educational collaborations and opportunities. Hold a series of open public meetings to build support and engage community members in decision-making about location, funding, management, and maintenance of the site.
- Partner with the Jefferson County Cooperative Extension Service to incorporate new garden sites in the Parklands into its community garden program. If the extension service does not

have the capacity to incorporate new sites into its program, assemble a Community Advisory Board to develop rules and regulations and manage the site, and develop legal "gardener's agreements" with individual gardeners.

- Explore the possibility of a non-profit commercial agricultural enterprise that provides food to the community and is financially self-sustaining.

Access

- Garden sites should be designed according to the principles of *Universal Design* to provide access for the greatest number of individuals without "specialized" design features. Sites should accommodate the needs of those with physical disabilities, children, and the elderly.
- Membership should be determined by the purpose of the site. For those sites that have a specific mission to provide food and education for low-income individuals and families, membership should be limited to those most in need.
- In the event of unauthorized harvesting, determine whether it is need-based (due to hunger), vandalism, or for profit. If need-based, offer a clearly-marked "free-area" where crops can be harvested by those in need. Construct fencing with a locked-gate to prevent vandalism and theft, and partner with the surrounding community to watch for and report suspicious activity.

Educational Partnerships

- Develop a demonstration plot at each community garden site and hold regular workshops for gardeners to educate them on issues such as pest control, fertilizing, soil safety, and other maintenance tips.
- Involve students of all ages (preschool through university) in decision-making about sites, including planning, design, fund-raising, implementation, and maintenance.
- Partner with area schools and local organizations with an agricultural mission to develop educational sites and programs for students of all ages.
- Partner with area university faculty, staff, and students for research, community outreach, and service learning projects.

- Explore the possibility of establishing a publicly-owned and operated demonstration farm with an explicit educational mission to teach potential growers about food and sustainable agriculture.

Environmental Considerations

- Define *sustainable agricultural practice* as one that follows a *community-based food systems approach*, which considers the broader food-systems context by addressing issues of food security, public health, social and environmental justice, ecological health, and local economic development.
- Insure that the soil and any other materials on agricultural sites are safe for growing food. Determine whether soil is contaminated by researching the site history, testing the soil, and remediating the soil, if necessary.
- Use the environmental testing process and results to educate students and community members about environmental safety, particularly as it relates to agriculture.

Resources

Community Gardens

Breaking New Grounds: *http://breakingnewgrounds.org*

A neighborhood-based community food organization with on-site verma-composting and a community garden, offering a variety of educational opportunities for community members and schoolchildren.

University of Louisville Garden Commons: *http://louisville.edu/culturalcenter/garden*

Designed by the City Solutions Center, Garden Commons provides an example for the design of future community garden sites in the Parklands.

Jefferson County Community Gardens Program, Jefferson County Branch of the University of Kentucky Cooperative Extension Service: *http://ces.ca.uky.edu/jefferson-files/Horticulture/Community_Gardens/Garden_locations.pdf*

The Jefferson County Community Gardens Program provides examples of both community garden design and management that can be adapted for sites in the Parklands.

Community Garden funding opportunities, Center for Environmental Policy and Management, University of Louisville: *http://cepm.louisville.edu/*

A list of local and state funding opportunities for establishing or enhancing community gardens, updated regularly.

Kentucky Farmers Markets

***Building Louisville's Local Food Economy*, report to Louisville Metro Economic Development Department:** *http://www.farmlandinfo.org/documents/37121/FarmersMarketFeasibilityStudyFINAL.pdf*

A report that provides strategies for increasing Kentucky farm income through increasing food sales, including the expansion of farmers markets, in Louisville.

Kentucky Farmers Market Association (KFMA): *http://www.kentuckyfarmersmarket.org*

The KFMA serves as a resource for farmers market sellers and managers in Kentucky to share information and support.

Kentucky Proud Statewide Farmers Market Directory: *http://www.kyagr.com/marketing/farmmarket/2011FarmersMarketDirectory.htm*

Hosted by the Kentucky Department of Agriculture, the directory provides farmers market listings by county, and includes locations, season dates, hours, and contact information for farmers markets across Kentucky.

Kentucky Online Food Trader: *http://www.kyfoodtrader.org*

A virtual farmers market that connects Kentucky farmers with local consumers. Farmers can also use the site to donate excess produce to nonprofits.

Agriculture Education Resources

Community Farm Alliance (CFA): *http://www.communityfarmalliance.org*

CFA promotes the preservation and restoration of sustainable farming practices in urban and rural communities. It serves as a resource for education and networking about sustainable agriculture issues.

15,000 Farmers: *http://www.15thousandfarmers.com*

Seeks to create, empower, and inspire community members to grow their own food at home or in community gardens by providing educational workshops, instructional materials, information sharing, and other resources.

Louisville Grows: *http://www.louisvillegrows.org*

A small non-profit organization the provides sustainability consultation to local communities.

Brightside: *http://www.louisvilleky.gov/Brightside/*

Brightside offers environmental education programs for youth and provides small grant funding for community garden and outdoor classrooms.

Stone Soup Louisville: *http://www.stonesoupky.org*

A non-profit that promotes cooking with healthy, fresh, local food through cooking demonstrations and education.

Kentucky Women in Agriculture: *http://www.kywomeninag.com*

Promotes the inclusion and empowerment of women in agriculture in Kentucky through education, involvement, and action.

Intervale Center, Burlington, VT: *http://www.intervale.org*

A sustainable agriculture center that manages 350 acres of farmland, trails, wildlife corridors, a native plant nursery, and a compost production. The center conducts a variety of activities, including educational programs, consulting, research, and the promotion of community involvement in local food production, farmland conservation, and environmental protection.

National Sustainable Agriculture Information Service: *http://www.attra.org*

A website with a substantial collection of sustainable agriculture resources, including publications, webinars, and technical assistance.

Environmental Resources

Center for Environmental Policy and Management/Environmental Finance Center, Serving EPA Region 4, University of Louisville: *http://cepm.louisville.edu*

CEPM/EFC4 provides technical assistance, education, and expertise on environmental issues, including sustainable development, urban agriculture and community gardens, water and air quality, and urban ecosystem development and protection.

Jefferson County Branch, University of Kentucky Cooperative Extension Service: *http://ces.ca.uky.edu/jefferson/*

The Jefferson County Extension Service Branch offers resources for soil testing resources to test soil quality, including testing for both nutrient content and heavy metals contamination.

Jefferson County Soil and Water Conservation District (SWCD): *http://www.jeffcd.org/index.cfm?i=1*

The SWCD provides technical assistance to reduce harmful landuse impacts on land and water resources in Louisville.

University of Massachusetts Extension Service, Soil and Plant Tissue Testing Laboratory: *http://www.umass.edu/soiltest/*

Provides inexpensive and easy to understand soil testing and technical assistance with soil sampling and, if necessary, soil remediation. This resource is available to both individuals and organizations.

Farmland Preservation

Kentucky Purchase of Agricultural Conservation Easement program: *http://www.kyagr.com/marketing/farmland/index.htm*

The program authorizes the state of Kentucky to purchase agricultural conservation easements in order to ensure that lands currently in agricultural use will continue to remain available for agriculture and not be converted to other uses.

American Farmland Trust: *http://www.farmland.org*

Provides educational information and resources on farmland preservation, environmental protection, and access to healthy foods.

Legal Resources

National Policy and Legal Analysis Network, *Legal Toolkit for Community Gardens*: *http://www.nplanonline.org/sites/phlpnet.org/files/CommunityGardenToolkit_Final_Web_20110207_0.pdf*

The toolkit provides legal resources for establishing community gardens on vacant or underutilized parcels of land, including sample legal forms, contracts, and checklists.

Agritourism

Kentucky Farms Are Fun: *http://www.kentuckyfarmsarefun.com*

Provides information and resources related to agritourism in Kentucky.

Sunny Acres Farm: *http://www.sunnyacresfarmky.com/Farm/*

An agritourism demonstration farm located within the Parklands that provides education for schoolchildren and community members, festivals, and a roadside market.

Urban Agriculture and the Parklands of Floyds Fork

November 2011

This report was written by John W. Vick of the University of Louisville's City Solutions Center. Maps by Michael McCoy and John W. Vick. Report layout by Patrick Piuma. Photos by John W. Vick unless otherwise indicated.

CITY SOLUTIONS CENTER

City Solutions Center

Formed in 2008, the University of Louisville's City Solutions Center extends U of L's urban mission across Kentucky by providing hands-on consulting to help communities engage citizens to define challenges, develop buy-in for solutions, and create implementation plans for measurable results. The Center draws upon existing faculty, staff, and student expertise throughout the University of Louisville to provide resources to assist Kentucky's communities. The City Solutions Center is housed at U of L's Urban Design Studio.

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For more information about the City Solutions Center visit our website at: http://citysolutions.louisville.edu or contact:

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2011