



Municipal Zoning for Local Foods in Iowa:

A Guidebook for Reducing
Local Regulatory Barriers to
Local Foods



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Extension and Outreach

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Introduction

Background: Urban Agriculture and Municipal Zoning

The popularity of local foods has increased significantly in the last few decades, pushed along in recent years by a heightened interest of consumers in buying local and sustainably-grown foods. From 1997 to 2007 direct-to-consumer food marketing grew by 104.7 percent while total agricultural sales increased by only 47.6 percent. (Diamond and Soto, 2009). According to a recent report of the U.S. Department of Agriculture, 163,675 farmers sold an estimated \$6.1 billion in locally marketed foods in 2012. In 2014, there were 8,628 farmers markets operating across the nation, which represents a 180 percent growth in the number of markets since 2006 (Low et al, 2015).

Municipalities are increasingly recognizing the multiple benefits of urban agriculture. As the urban agriculture movement has advanced, many have recognized the role that local government policies and regulations play in either stifling or facilitating the production, processing and distribution of local foods. Land use regulations can intentionally or unintentionally impede the activities necessary for a local foods system to develop and thrive. For example, zoning ordinances can restrict homeowners and renters from raising chickens or bees, making agriculturally-productive use of open spaces and vacant plots, planting gardens in the front yards of their homes, or selling produce through means other than traditional retail establishments. Zoning has effectively excluded agricultural activities from many municipalities and, except for the backyard vegetable garden, has divorced agricultural production from residential neighborhoods.

The reasons for these regulations vary. Many restrictive zoning provisions simply have been in place, unchanged, since zoning was first created to separate and isolate incompatible land uses. Bans on raising farm animals within city limits, for example, date back to the health and sanitation concerns associated with “piggeries” in urban areas. In other jurisdictions, urban agricultural practices fall as the unintentional victims of neighborhood uniformity and aesthetic demands. Occasionally the zoning problem is a conscious policy choice to exclude agricultural activities from municipalities; however, these choices often are based on misunderstandings of the nature of the activities (“You mean the neighbors don’t need a rooster to get eggs from their hens?”) or the perceived (versus real) impacts on nearby landowners.

If zoning trends across the country are an accurate reflection of the politics of urban agriculture, the politics favor more urban agriculture, not less. Municipalities around the country, in fact, are rapidly adopting zoning regulations that promote urban agriculture practices. Because zoning regulations are designed to balance the competing interests in uses of land, they can be written in ways that facilitate urban agriculture while minimizing health, safety, and nuisance concerns.

About This Guidebook

This guidebook focuses on the intersection of local foods and municipal zoning. It is written to provide Iowa city officials information and sample code language for reducing the barriers to, and/or encouraging some of the most common production and sales activities associated with urban agriculture. In that context, it is divided into the following general categories:

- “Animal” Agriculture
 - o Hydroponics, Aquaculture, and Aquaponics
 - o Bees
 - o Chickens
 - o Goats
- Crop Agriculture
 - o Community Gardens
 - o Urban Farms
 - o Farming on Vacant Lots
 - o Front-yard Gardening
 - o Season Extenders
- Compost
- Urban Agriculture Districts
- Direct-to-Consumer Sales
 - o CSA Drop-sites
 - o Farm Stands
 - o Farmers’ Markets
- Food Trucks and Pushcarts

To prepare this guidebook the authors researched, evaluated, and categorized urban agriculture-related zoning code language from 84 municipalities across the United States. The authors also researched practice-oriented scientific publications from a variety of sources, such as the United States Department of Agriculture, the Environmental Protection Agency, and Cooperative Extension publications from several university Extension services. This was done to ensure that the sample code restrictions included in the guidebook address real, potential impacts of the agricultural activity in question, and are not arbitrary or based on unsubstantiated concerns. The zoning code provisions chosen for inclusion in the guidebook, therefore, represent the breadth of regulatory approaches taken by cities, and are also informed by agricultural science and production “best practices.”

Each chapter contains the following four sections:

- The **Introduction** provides a general description of the activity, and the science-based information on standards and best practices associated with the activity.
- The **Land-Use Concerns** section discusses the public health, safety and welfare concerns commonly associated with the activity. For example, noise and odor issues are common concerns attached to raising crops and rearing livestock in the city. Issues such as traffic, parking, signage, and lighting are also discussed in relation to other types of activities such as sales and distribution.
- The **Existing Regulations** section summarizes the commonalities found among municipalities’ codes. Depending on the activity, these may include the zoning districts where uses are commonly allowed, the types of operating standards and restrictions that are generally put in place, and the accessory or incidental activities generally allowed with the use.
- Finally, each chapter contains **Sample Code** language. These samples come from municipalities that vary both in size and location, and were selected to reflect the variety of regulatory approaches found across the nation. Code language is split up into topical subcategories when appropriate.

The Iowa Context for Zoning

This is a guidebook written for Iowa municipalities. As such, a basic understanding of the historical roots of zoning, and in particular the origin of zoning in Iowa is necessary to understand the usefulness of, and limitations to the sample code provisions from cities in other states included in this guidebook.

The most fundamental purpose of zoning is to separate incompatible land uses. The basic structure and procedures of zoning were established by the Standard State Zoning Enabling Act (SSZEA); model legislation first promulgated as a draft by the United States Department of Commerce in 1922. The SSZEA was eventually adopted by all 50 states. (Meck, 1996). In 1923 the Iowa legislature passed its version of the SSZEA, applicable to Iowa cities, which today exists as Chapter 414 of the *Iowa Code*. As was the case with most other states, the version enacted by the Iowa legislature varied little from the original model act and exists largely in its original form today, nearly one hundred years later.

Under local ordinances adopted consistent with the authority laid out in the SSZEA, zoning divides the community into districts and assigns compatible land uses to those districts, while at the same time separating incompatible land uses from each other. The number and types of districts vary greatly from community to community, but traditional zoning regulations have separated land uses into multiple residential, commercial, industrial, and agricultural classifications. The land uses that are permitted to take place in each district are subject to a common set of standards, such as minimum lot sizes, setbacks, and the number and type of accessory structures. Each district lists the uses that are permitted “by-right” (without special conditions) and those that are allowed only upon applying for, and receiving a special use permit (a.k.a. a conditional use permit or special exception) that may impose limitations beyond those specified by the district regulations. Each zoning ordinance also spells out the processes for obtaining the various types of permits necessary to initiate land use activities.

While the basic structure and processes of zoning are consistent across the vast majority of municipalities because of the nationwide adoption of the SSZEA, inconsistency in judicial interpretations of the SSZEA from state-to-state, differing grants of municipal authority by states (for example, differing grants of home rule powers), idiosyncratic local practices, and other factors mitigate against the wholesale adoption of code provisions from cities in other states. A number of unusual (if not unique) Iowa zoning practices have been dictated by Iowa courts’ interpretations of Iowa Code Chapter 414. For example, in most states special and conditional use permit applications are heard and decided by the city’s planning and zoning commission or elected body. The Iowa Supreme Court has ruled, however, that special use permits are the sole jurisdiction of a city’s zoning board of adjustment. Furthermore, local practice in Iowa has largely limited the role of the planning and zoning commission to – at least in the zoning context – one of an advisory body: conducting reviews and making recommendations to the elected body on rezoning requests and other amendments to the zoning ordinance and map.

In preparing this guidebook every effort has been made to exclude or modify code language that may be in conflict with Iowa law and practice. Still, it is imperative that users of this guidebook consult legal counsel before adopting any code provisions found herein, to ensure that the actions being considered are applicable and appropriate for your particular situation. *This guidebook is not intended as a substitute for legal advice.*

Hydroponics, Aquaculture, and Aquaponics

Introduction

Hydroponics is a system for growing plants without soil. The plant is grown in a container of water, or with more intricate forms of hydroponics, grown in a non-soil medium like gravel, sand, vermiculite, or even Styrofoam. Water and nutrients are thus delivered directly to plant root systems. Hydroponics offer several advantages: Soil-borne pests and diseases are not present and more plants can be grown in less space. As an indoor system (an advantageous approach in Iowa, given the harsh winter climate) plants can be grown year-round, and optimal growing conditions (light, temperature, fertilizer) can be created. Many people have found that hydroponic growing systems provide more options and greater flexibility than they can expect from traditional soil-based systems.

System Design

Hydroponic systems can be created using a variety of materials and set-up designs. Plants can either be suspended in a water system or supported with aggregate materials like clay, gravel, or sand.

Water systems include the nutrient film technique, aeroponics, and the aeration method. The nutrient film technique is best for home systems. Plants are suspended in plastic tubes through which a nutrient solution flows. The tubes are slightly angled so that gravity moves the solution down the system to a holding tank. Aeroponics uses a spray to mist the plant roots. The plants are placed along a sloped A-frame typically constructed of Styrofoam. The aeration method uses an aquarium air pump to send oxygen to the roots of plants. The plants are suspended above a nutrient solution in a mesh tray with an inert material such as gravel to support the plants.

Aggregate systems use inert materials to support the plants and retain nutrients. The plants and aggregate material are typically placed in a plan and water is either flooded into the system for a short amount of time or continuously trickle fed to the roots (Sorensen, 2009).



Figure 1-1. Iowa State University Aquaponic System; Ames, IA.
Photo courtesy of Allen Pattillo, Fisheries and Aquaculture Extension Specialist

Aquaculture is most commonly understood in Iowa to refer to “fish farming” – raising fish species in a controlled environment. Aquaculture can be carried on in an outdoor environment in ponds, lakes, rivers, or the ocean. For urban agriculture purposes, commercial aquaculture is generally conducted indoors in large greenhouse-like buildings or warehouses. Non-commercial aquaculture for home consumption is carried on in accessory buildings or even in the home.

Aquaponics is the hybrid between traditional forms of aquaculture and hydroponics. The two combine to form a closed-loop system that creates a relationship between plants and fish. The water used in the system is recycled through a process of filtration and recirculation. Effluent from the fish tanks is used to fertilize hydroponic beds. The plants in the hydroponic system take up the nutrients from the fertilizer and filter the water, thus providing a clean source of water that is then recirculated into the fish tanks (Diver, 2006). The potential products created from this system are fish, fish fertilizer, and edible plants such as leafy greens and herbs.

Aquaponic systems require six main elements: a fish-rearing tank, a settleable and suspended solids removal component, a biofilter, a hydroponic component, and a sump. Most of the fecal matter is removed in the form of settleable and suspended solids. The water then moves through a biofilter, composed of materials like gravel and sand, to remove additional ammonia and nitrate. The water then moves into the hydroponic component and the plants take up additional nutrients. In some systems, the biofilter and hydroponic component are combined, which further enhances system efficiency. Finally, the water is moved to a sump, where it is then pumped back into the fish-rearing tank (Rakocy et al, 2006).

All three systems (hydroponics, aquaculture and aquaponics) can be developed at a variety of scales, from large-scale commercial farming to small-scale non-commercial greenhouses or other accessory structures. They can even be scaled down for in-home growing, generally using compact tanks or tubs.

Management Concerns

Aquaculture

Tilapia is most commonly used in aquaculture systems, though other freshwater fish like cod are also used. The benefits of choosing tilapia for these systems include their high reproductive and growth rates, and their ability to thrive in crowded and low water quality conditions. Tilapia are not native to the United States, and the Iowa Department of Natural Resources requires proof that these fish will not escape into the natural environment (Morris).

Many fish require higher temperatures to survive, which can be a problem in Iowa. Tilapia, for example, require temperatures over 80° F to thrive and may perish below 50° F (Morris). Some form of heating system is therefore required to raise tilapia effectively in Iowa.

Aquaponics

The management approach for aquaponics is similar to that of aquaculture, but aquaponics gains some efficiency with the integrated plant and fish systems that work to cycle nutrients and keep the entire system in balance. Aquaponics thus generally require less monitoring. Aquaponics is an efficient small-scale system because it uses about 1% of the water used by traditional aquaculture (Rakocy, 1989). Fewer inputs are also required for growing plants, since the fish effluent provides fertilizer.

The nitrogen cycle plays a large role in maintaining a healthy aquaponic system. The ammonia in fish excrement is a rich source of nitrogen. In a typical aquatic ecosystem, the ammonia is diluted in large bodies of water, however, in closed aquaponic systems ammonia levels must be managed (Backyard Aquaponics). The plants in the system require nitrogen to grow, but too high a concentration of nitrogen can inhibit fish growth and damage tissues. During the process of biofiltration, ammonia is oxidized to nitrite and then to nitrate, which is least toxic and best for plant nutrient uptake.

No pesticides can be used in an aquaponic system because fish will not tolerate these chemicals.

Land-Use Concerns

Most hydroponic, aquaculture and aquaponic systems only cause concerns if poorly maintained. If water in tanks or raceways lies stagnant for too long it may attract mosquitos and other insects. Systems for fish propagation (aquaculture and aquaponics) have the potential for creating odor if not properly maintained, but except for large commercial systems the likelihood of the odors becoming offensive to anyone off of the property are small.

Existing Regulations Survey

Many people do not associate large-scale commercial hydroponic, aquaculture and aquaponic systems with the urban environment; however, cities such as Evanston, Illinois, Chicago, Minneapolis, Milwaukee, Boston and many others have provisions in their local zoning codes that permit these commercial activities, most often in industrial, manufacturing, and certain commercial districts.

It is more common to find the three systems regulated under a broader “urban agriculture” or “urban farming” ordinance (discussed elsewhere in this guidebook) than it is to find them singled out in their own provision(s) in the code. Many of the codes surveyed regulate commercial hydroponics, aquaculture and aquaponics by making the same restrictions applicable to all three.

Non-commercial, home aquaponic or aquaculture systems are usually carried on within accessory structures, and so are regulated as accessory uses on residential lots with specified limitations.

Iowa Code Chapter 481A requires anyone who, for commercial purposes, “rears or maintains live animals or plants for food, bait, or for stocking in waters of the state,” to obtain an aquaculture units license from the Iowa Department of Natural Resources.



*Figure 1-2. Iowa State University Aquaponic System; Ames, IA.
Photo courtesy of Allen Pattillo, Fisheries and Aquaculture Extension Specialist*

Code Language

Definitions (General)

Hydroponics – A method of growing plants using a mineral-nutrient solution, without soil. ([Somerville, MA §12.B](#)).

Aquaculture – The active cultivation (maintenance or production) of marine and freshwater aquatic organisms (plants and animals) under controlled conditions. (EPA, 2013).

Aquaponics – The symbiotic propagation of plants and fish in an indoor or outdoor recirculating environment that may result in the harvest of said plants and fish. ([Evanston, IL §56-O-14](#)).

Definitions (Commercial)

Aquaculture - the cultivation of aquatic animals in a recirculating environment to produce whole fish that are distributed to retailers, restaurants and consumers. ([Boston, MA §89-11](#)).

Aquaponics - The cultivation of fish and plants together in a constructed, re-circulating system utilizing natural bacterial cycles to convert fish wastes to plant nutrients, for distribution to retailers, restaurants and consumers. ([Boston, MA §89-11](#)).

General Restrictions (Commercial Operations)

Boston, Massachusetts

1. Aquaculture and Aquaponics.

(a) Aquaculture and Aquaponics Facilities as a Primary Use.

- i. Aquaculture and Aquaponics facilities as a primary use are allowed in Industrial Districts and Subdistricts, as well as in the following Commercial Districts and Subdistricts:
WC -Waterfront Commercial
- ii. Aquaculture and Aquaponics facilities as a primary use are conditional in Institutional, Large-scale Commercial (Exception: WC), and Small-scale Commercial Districts and Subdistricts.
- iii. Aquaculture and Aquaponics facilities as a primary use are forbidden in Residential Districts and Subdistricts.

(b) Aquaculture and Aquaponics Facilities Up To 750 Square Feet.

- i. Aquaculture and Aquaponics facilities up to 750 square feet are allowed in all Districts and Subdistricts with the following exceptions:
 - a. Freight Containers of any size are Conditional in Small-Scale Commercial Districts and Subdistricts.
 - b. Freight Containers of any size are Forbidden in Residential Districts and Subdistricts.

(c) Aquaculture and Aquaponics Facilities Greater Than 750 Square Feet.

- i. Aquaculture and Aquaponics facilities greater than 750 square feet are Allowed in Industrial, Institutional, and Large-scale Commercial Districts and Subdistricts.
- ii. Aquaculture and Aquaponics facilities greater than 750 square feet are Conditional in Small scale Commercial and Residential Districts and Subdistricts with the following exception:
 - a. Freight Containers of any size are Forbidden in Residential Districts and Subdistricts. ([Boston, MA §89-11](#)).



Figure 1-3. Iowa State University Aquaponic System; Ames, IA.
Photo courtesy of Allen Pattillo, Fisheries and Aquaculture Extension Specialist

Minneapolis, Minnesota

Aquaponics, aquaculture or hydroponics. Aquaponics, aquaculture or hydroponics shall be allowed accessory to an urban farm or accessory to indoor market gardens located in a commercial or downtown zoning district, subject to the following:

The operator shall maintain any required licensure through the Department of Natural Resources and the Department of Agriculture.

The tanks shall not be connected to the sewer system. ([Minneapolis, MN §537.110](#)).

Iowa Code Chapter 481A

“Aquaculture” means the controlled propagation, growth, and harvest of aquatic organisms, including, but not limited to fish, amphibians, reptiles, mollusks, crustaceans, gastropods, algae, and other aquatic plants, by an aquaculturist.

“Aquaculture unit” means all private waters for aquaculture with or without buildings, used for the purpose of propagating, raising, holding, or harvesting aquatic organisms for commercial purposes.

“Aquaculturist” means an individual involved in producing, transporting, or marketing aquatic products from private waters for commercial purposes.

481A.141 AQUACULTURE -- LICENSE REQUIRED.

1. A person shall not engage in the business of aquaculture until that person has applied for and has been issued an aquaculture unit license from the department. The application period extends from January 1, or the date of the application, through December 31. A license shall not be issued to operate an aquaculture unit on private or nonmeandered lakes and streams and ponds that may become stocked with fish from public waters or natural migration. A pond stocked by the department pursuant to section 481A.78 shall not be used for aquaculture purposes.
2. The following persons must obtain an aquaculture unit license:
 - a. A person who, for commercial purposes, rears or maintains live animals or plants for food, bait, or for stocking in waters of the state.
 - b. An owner or operator of a pond where guests or customers are allowed to fish for a fee, or allowed to take fish without regard to angling licenses, seasons, gear restrictions, or bag limits.
3. The cultivation and sale of tropical fish species or ornamental aquatic plants or animals, not utilized for human consumption or bait purposes, but maintained in closed systems and utilized by the pet industry or hobbyists are exempt from license requirements.

481A.142 LICENSED AQUACULTURE UNITS -- ACTIVITIES ALLOWED.

A holder of an aquaculture unit license may:

1. Possess, propagate, buy, sell, deal in, and transport the aquatic organisms produced from breeding stock legally acquired, including minnows.
2. Sell fish for stocking purposes within or outside the state. Fish which are nonindigenous to Iowa shall not be received or sold in the state unless the aquaculture unit has obtained an importation permit from the department. The department shall establish, by rule, requirements governing importation, and shall include a list of approved aquaculture species. Failure to comply with this subsection will result in loss of license and a violator is subject to the scheduled fine provided in section 805.8B.
3. Hold, feed, and sell carp, buffalofish, and other fish legally taken by commercial fishers.
4. Harvest aquatic life on land under control of the aquaculture unit with commercial devices without obtaining any permits for the devices.
5.
 - a. Sell bait, including minnows, frogs, and clams, propagated or raised within the licensed unit without having to obtain a bait dealer's license. However, aquaculture units wishing to take bait from areas other than their licensed units must also obtain a bait dealer's license.
 - b. A nonresident aquaculture unit licensee shall be limited to selling bait at wholesale unless the home state of the nonresident licensee allows residents of this state to sell bait at retail.
6. Take any gull, tern, or merganser within the bounds of the unit. An owner or operator of the licensed aquaculture unit, however, must first obtain a permit for this activity from the department or the United States fish and wildlife service. Each permittee shall file an annual report with the department which itemizes the birds taken during the period covered by the permit, and dispose of birds taken according to methods established by the department. The department shall not issue a subsequent permit to any person failing to file this report.

481A.143 LICENSED AQUACULTURE UNITS -- REQUIREMENTS.

1. Each licensed aquaculture unit shall prepare an annual report of all fish bought, sold, and shipped. The records shall include species name as well as the weight, volume, or count of fish involved. Reports shall be filed on or before December 31 of each year for the preceding year. The department may refuse to renew a unit license if the annual report is not provided.
2. Each licensed aquaculture unit shall secure its breeding stock from licensed aquaculture units or licensed aquaculturists in the state or from lawful sources outside the state. An aquaculture unit shall not secure stock in any other manner.
3. A shipment of fish must be accompanied by a duplicate of the sales invoice showing the name and address of the producer, date of shipment, the species being transported, the weight, volume, or count of each species being shipped and the name and address of the consignee. A duplicate of the sales invoice must be retained by the aquaculture unit or aquaculturist for one year following the sale.
4. A licensed aquaculture unit shall comply with all state laws pertaining to possession, taking, or selling of bait which it handles. The director may revoke the unit license of any person violating this subsection or a rule adopted by the department.
5. Minnow and bait boxes and tanks within licensed aquaculture units shall be open for inspection by the department at all times.
6. Aquaculture units shall not import live fish, viable eggs, or semen of any species of the salmonid family (trout, salmon, or char) and ictalurid family (catfishes and bullheads), including hybrids, unless the owner or operator possesses a fish importation permit. For the species listed in this subsection only, importation permits shall not be issued unless the fish, eggs, or semen have been inspected by the department and found to be free of disease detrimental to the state's fishery resources. The owner or operator of an aquaculture unit must provide a statement certifying the fish listed in this subsection or their eggs or semen to be disease free, and include the date of inspection. Certification is not required for other fish species, but the department may require inspection at any time. The department shall establish, by rule, those diseases detrimental to the state's fishery resources and the location of authorized certified pathologists for inspection.

Bees

Introduction

About the Honeybee

The honeybee, *Apis mellifera*, can be a valuable addition to the urban landscape. Honeybees account for approximately 80% of all insect pollination and are critical for plant productivity (Backyard Beekeepers Association). Actively managed colonies can be important pollinators in the city where native pollinator populations are small. They can help to pollinate municipal plantings, urban gardens, and other urban green areas. Bees also provide opportunities for keepers to produce products such as honey, and wax which can be turned into other products.

A group of bees is called a colony and consists of 20,000-90,000 bees (Drees and Jackson, 1991). A colony consists of three types of bees: a queen, workers and drones. Each type of bee has a specific function within the colony.

The queen is responsible for sexual reproduction and for producing pheromones that guide the hive. The queen lays both fertilized and unfertilized eggs. Unfertilized eggs contain drone bees. The pheromones that a queen produces helps to regulate and direct the colony, and her specific pheromones can influence the size and temperament of the entire colony.

The workers are females that build comb, guard the hive, and collect pollen. These bees are responsible for all the work involved in building and maintaining the hive. The worker bees also defend the hive, as females are the only bees with the capability to sting.

Drones are male bees responsible for fertilizing the queen bee. They play no other major role. They live a short lifespan-they either die upon mating or are forced out of the hive to die in the winter to conserve nectar (Collison and Frazier, 2004).



Figure2-1. Bees from Central College Organic Garden; Pella, Iowa. Photo courtesy of Paul Weihe

Behavior

Bees do not hibernate during the winter, but rather they will beat their wings to generate heat and fend off the cold. If the colony survives the winter, using this strategy called “overwintering”, they begin to be active in early spring, usually when the temperature stabilizes around 60 degrees Fahrenheit (Moore and Kosut, 2013).

As the temperature warms up, so does the activity of the hive. Honeybees must have access to the nectar and pollen found in flowering plants. In the city, this means that bees will find most of their pollen in flowering trees or urban plantings. In order to produce one pound of honey, a hive will have to visit about two million flowers (Moore and Kosut, 2013). Since there may not be enough pollen and nectar for the bees to subsist on in the wild, many keepers also provide a feeder filled with sugar syrup.

Living Environment

For the aspiring apiarist, it is recommended that a beginner beekeeper start with two hives and expand in later seasons. Each hive can produce 50-110 pounds of surplus honey for the producer and requires at least an additional 60 pounds for the hive itself to overwinter (Nabors, 2000). Providing bees with enough honey is crucial for the viability of the hive, especially during Iowa’s long and cold winters. In a managed setting, it is best to have a hive with removable frames, not only for ease of care, but also because three to ten times more honey can be produced in these types of hives (Tew, 2004).

The typical hive design with removable frames is called a Langstroth hive. Bees are typically kept in ten frame hives of varying depths. These hives have several parts that serve different purposes. The frames are the foundations on which the comb is built. The brood chamber, or hive body, is where the young bees are raised. The hive body holds frames that contain mostly brood, or the developing honeybees. The excess honey is produced in supers. Supers come in different depths, they can be as large as the hive body or the keeper may choose to use several shallow supers for ease of handling (Tew, 2004). To keep the queen from laying her eggs anywhere but in the hive body, a piece of equipment called a queen excluder is placed between the hive body and the supers. This device contains holes that are small enough that only worker bees can fit through.

Additional elements to the hive provide protection from the elements and potential intruders. The hive should be placed on a stand, which could be bought or constructed using blocks or other available materials. The bottom of the hive is protected by a bottom board, which may include an entrance reducer. This device reduces the opening of the hive to prevent large pests from entering. On the top of the hive, an inner cover helps to insulate and the outer cover gives added protection.

Another popular hive design is the top-bar hive. These hives have a single story with bars placed on the top of the frame for the bees to build comb. These hives are easier to manage and less expensive, but don’t offer as much production potential (Chandler, 2009). Some keepers prefer top-bar hives because they better mimic how bees create hives in the wild. Harvesting the honey is as simple as removing a bar and cutting off the comb, which can then be mashed and strained to extract honey.

Land-Use Concerns

The primary concern about beekeeping in urban areas is the potential for stings. Fear of the angry, stinging honeybee seems pervasive, yet is mostly unfounded. Honeybees only sting when threatened or very agitated and are notable for their usually very docile character. Unlike most stinging insects, the honeybee’s stinger detaches from its body when it stings, which causes the honeybee’s death. Another concern is the potential for honeybees to swarm to a new location. Swarming results from environmental conditions that are inhospitable to the bees. Both stinging and swarming are easily preventable with proper caretaking. The best way to keep bees in the city or on small lots is to provide the insects with a spot that is shady and protected from the wind. Bees should also have a nearby water source, preferably on-site, and access to pollinating plants.

Existing Regulations Survey

Most codes surveyed allow beekeeping as an accessory use on residential lots with certain conditions. The size of the lot, and/or the number of hives is often regulated. Setback requirements are usually set to keep hives away from neighboring properties, streets and walkways. Some municipalities require that additional setbacks apply when a colony is located near a school, park, or public playground. Flyway barriers and a readily-available water source are also frequently required.

Some best practices suggested by the New Jersey Department of Agriculture involve establishing a flyway barrier that forces bees to fly up, fencing the hives in to prevent children and animals from disturbing the hive, and keeping hives at least 10 feet from the property line and 25 feet from public walkways and roads (NJ Dept of Ag.).

Code Language

Definitions

Fort Collins, Colorado, Evanston, Illinois

Apiary - a place where bee colonies are kept.

Bee - any stage of the common domestic honey bee, *apis mellifera* species.

Colony - a hive and its equipment and appurtenances, including bees, comb, honey, pollen and brood.

Hive - a structure intended for the housing of a bee colony. ([Fort Collins, CO §4-226-§4-237](#); [Evanston, IL §9-4-19](#)).

General Restrictions

Beekeeping. Beekeeping is permitted outright [in all zones] as an accessory use, when registered with the State Department of Agriculture [with conditions set forth below]. ([Seattle, WA §23.42.052](#)).

Madison, Wisconsin

In the Agriculture and Urban Agriculture Districts: Hives may be located only on lots with residential use unless the principal use of the lot is an agricultural use.

In the residential districts: Hives may be located only on lots with residential use. ([Madison, WI §28.151](#)).

Ann Arbor, Michigan

Bees. No person shall keep or possess an apiary containing more than 2 stands or hives of bees within the City of Ann Arbor. ([Ann Arbor, MI §9:39](#)).

Licensing

Note: Several cities' codes reference licensing schemes, either first requiring beekeepers to obtain state-required licenses or registrations before establishing colonies within city limits, or establishing their own city-managed licensing scheme. The state of Iowa does not have a state-level licensing or registration scheme for beekeeping. The code sections set forth below are those that establish city-managed beekeeping licensing.

Madison, Wisconsin

The owner, operator or tenant shall obtain a license [under city code]. The applicant for the license shall notify all residents of the property, and the owner or operator of the property if the applicant is not the owner or operator. Notification is not required for renewal of a license. ([Madison, WI §28.151](#)).

Evanston, Illinois

Annual Licensing: Beekeepers shall apply for a City beekeeping license upon bringing any colony into the City. For bee colonies existing within the City prior to the effective date of this Section, beekeepers shall have two (2) weeks from the date this Section goes into effect to apply for a City beekeeping license.... At the time of application for a City beekeeping license, the applicant shall:

1. Submit proof of registration of the colonies with the state of Illinois Department of Agriculture; and
2. Be in compliance with the other requirements of this Section; and
3. Pay a twenty five dollar (\$25.00) nonrefundable application fee.

The City beekeeping license shall be renewed each year....([Evanston, IL §9-4-19](#)).

Lot Size / Colony Densities / Setbacks

Seattle, Washington

No more than four hives, each with only one swarm, are allowed on lots of less than 10,000 square feet. Hives shall not be located within 25 feet of any lot line except when situated 8 feet or more above the grade immediately adjacent to the grade of the lot on which the hives are located or when situated less than 8 feet above the adjacent existing lot grade and behind a solid fence or hedge six (6) feet high parallel to any lot line within 25 feet of a hive and extending at least 20 feet beyond the hive in both directions. ([Seattle, WA §23.42.052](#)).

Madison, Wisconsin

In the Agriculture and Urban Agriculture Districts:

1. Hives may be located only on lots with residential use unless the principal use of the lot is an agricultural use.
2. No more than six (6) hives may be located on a lot unless the principal use of the lot is an agricultural use.

In the Residential districts:

1. Hives may be located only on lots with residential use.

[Regulations applying in Agriculture, Urban Agriculture, and Residential Districts]:

No hive shall exceed twenty (20) cubic feet in volume.

No hive shall be located closer than three (3) feet from any property line.

No hive shall be located closer than ten (10) feet from a public sidewalk or twenty-five (25) feet from a principal building on an adjoining lot.

A constant supply of water shall be provided for all hives.

A flyway barrier at least six (6) feet in height shall shield any part of a property line that is within twenty-five (25) feet of a hive. The flyway barrier shall consist of a wall, fence, dense vegetation or a combination thereof, and it shall be positioned to transect both legs of a triangle extending from an apex at the hive to each end point of the part of the property line to be shielded. ([Madison, WI §28.151](#)).

Tuscaloosa, Alabama

Honey bees or honey bee hives shall not be kept within one hundred fifty (150) feet of the boundary line of any property upon which is any school ground, public park or public playground in the city.

Honey bee hives shall be kept within ten (10) feet of the rear yard property line and facing away from the rear yard property line.

Honey bee hives shall not exceed one hive per one-half acre.

Honey bee hives shall be situated on the property so as to direct the flight pattern of the bees up and out from the hive. ([Tuscaloosa, AL §4-11](#)).

Dayton, Ohio

In Residential Districts, the following regulations shall apply:

No beehive shall be kept on a zoning lot less than 7,500 square feet in area. Additional hives may be added at the rate of one (1) hive for every additional 5,000 square feet of lot area.

No beehive shall be kept closer than ten (10) feet from any lot line and ten (10) feet from a dwelling or the permitted placement of a dwelling on another lot. No beehive shall be kept in a required front setback or corner side setback. No hive shall be placed within thirty (30) feet of any public sidewalk or roadway. The front of any beehive shall face away from the property line of the residential lot closest to the beehive.

A solid fence or dense living hedge at least six (6) feet in height shall be placed along the side or rear property line for any hive within ten (10) feet of the lot line. The solid fence or dense living hedge shall extend at least twenty (20) feet on either side of the hive. A "flyway barrier" consisting of solid fence or dense living hedge shall be required along the property line if the front of the beehive is located within twenty-five (25) feet from any lot lines. No flyway barrier shall be required for a beehive that is located on a porch or balcony at least ten (10) feet above grade, except if such porch or balcony is located less than ten (10) feet from a property line.

An adequate supply of fresh water shall be maintained in a location on the lot which is readily available to all bee colonies on the zoning lot throughout the day to prevent bees from congregating at other sources of water on nearby properties.

Colonies shall be maintained in movable frame hives with adequate space maintained in the hives to prevent overcrowding and swarming.

No Africanized bees may be kept in the City of Dayton.

In zoning districts other than residential districts, all regulations applicable in Residential Districts shall apply except that the number of beehives shall be limited to one (1) for each 1,000 square feet of lot area when not adjacent to a residential lot or zoning district. ([Dayton, OH §150.420.1](#)).

Pittsburgh, Pennsylvania

Agriculture (Limited) With Beekeeping:

For property with a minimum of two thousand (2,000) square feet in size, the property owner is permitted to keep two (2) beehives. For every additional two thousand (2,000) square feet of property, the owner is permitted two (2) additional beehives;

All structures necessary for and related to the housing of honeybees shall be subject to any required setbacks of the underlying zoning district, but shall in all cases be a minimum of ten (10) feet from any property line;

Ground mounted beehives shall be located no higher than six (6) feet from grade;

Ground mounted beehives shall be permitted in side and rear yards, and shall be provided an enclosed barrier along the property line six (6) feet in height consisting of a solid fence, dense vegetation or combination thereof, and in cases where there is ample yard-area, a flyway may be substituted for perimeter barriers, consisting of six-foot high barriers on both sides of the bee colony, creating a channel extending twenty (20) feet in each direction beyond each bee colony entrance. ([Pittsburgh, PA §911.04.A.2](#)).

Fort Collins, Colorado

It shall be unlawful to keep more than the following number of colonies on any tract within the City, based upon the size or configuration of the tract on which the apiary is situated:

One-quarter ($\frac{1}{4}$) acre or less tract size - two (2) colonies;

More than one-quarter ($\frac{1}{4}$) acre but less than one-half ($\frac{1}{2}$) acre tract size - four (4) colonies;

More than one-half ($\frac{1}{2}$) acre but less than one (1) acre tract size - six (6) colonies;

One (1) acre or larger tract size - eight (8) colonies; and

Regardless of tract size, where all hives are situated at least two hundred (200) feet in any direction from all property lines of the tract on which the apiary is situated, there shall be no limit to the number of colonies.

For each two (2) colonies authorized under colony densities, Subsection (a) above, there may be maintained upon the same tract one (1) nucleus colony in a hive structure not exceeding one (1) standard nine-and-five-eighths-inch depth, ten-frame hive body with no supers attached as required from time to time for management of swarms. Each such nucleus colony shall be disposed of or combined with an authorized colony within sixty (60) days after the date it is acquired. ([Fort Collins, CO §4-226-§4-237](#)).

Miscellaneous

Evanston, Illinois

Colony Densities: There shall be no more than eight (8) apiary sites in each ward in Evanston. For each two (2) colonies, there may be maintained one nucleus colony in a hive structure not exceeding one standard nine and five-eighths inch (9 5/8") depth ten (10) frame hive body with no supers attached as required from time to time for management of swarms. Each such nucleus colony shall be disposed of or combined with an authorized colony within thirty (30) days after the date it is acquired.

Fencing, Gates, And Signage: All hives shall be enclosed by fencing with a secure gate and prominent signage warning of the presence of a hive.

Water: Each beekeeper shall ensure that a convenient source of water is available at all times to the bees so that the bees will not congregate at swimming pools, bibcocks, pet water bowls, birdbaths or other water sources where they may cause human, bird, or domestic pet contact. The water shall be maintained so as not to become stagnant.

Maintenance: Each beekeeper shall ensure that no been comb or other materials that might encourage robbing are left upon the grounds of the apiary site. Upon their removal from the hive, all such materials shall promptly be disposed of in a sealed container or placed within a building or other beeproof enclosure.

Queens: In any instance in which a colony exhibits unusually aggressive characteristics by stinging or attempting to sting without due provocation, or exhibits an unusual disposition towards swarming, it shall be the duty of the beekeeper to requeen the colony. Queens shall be selected from stock bred for gentleness and nonswarming characteristics. ([Evanston, IL §9-4-19](#)).

Chickens

Introduction

About Chickens

The most obvious benefit to keeping chickens is being provided with fresh, nutritious eggs from a direct source, but chickens may also provide the owner with a source of amusement and relaxation. Chicken fertilizer is high in nitrogen and can create very good compost when combined with materials high in carbon (Seattle Tilth). Chickens are also useful in the garden because they eat pests.

Most backyard keepers raise birds for egg production rather than meat, in which case only hens are required. It is a common misconception that a keeper will require a rooster, since hens will lay eggs whether fertilized or not.

Many different breeds of chicken are suitable for the backyard farmer. The breed may be chosen depending on its size, temperament, egg production, or any other number of reasons. Breeds can be roughly separated into two major categories based on size. Bantams are small birds - typically one-fourth the size of a regular chicken - suitable for an urban environment since they require less feed and space. Bantam breeds can be dual-purpose, which means they can be produced for either eggs or meat. All other breeds are classified as large fowl breeds and are categorized depending on origin. The classes are: American, Asiatic, English, Mediterranean, Continental, and an Others category. The breeds within these classes may display specific characteristics, such as a certain egg color, a flighty disposition, or an ornamental aesthetic. (Akers et al, 2002).



Figure 3-1. Backyard Chickens; Ames, IA. Photo courtesy of Andrea Vaage

Behavior

Chickens are social creatures and an owner should have several chickens in their brood. Chickens establish a social hierarchy referred to as a pecking order. Hens do not fight as often or violently as males. Fighting often occurs when an unfamiliar hen is introduced to a flock (eXtension, 2012).

Management of chickens is relatively simple thanks to their innate homing instinct. The birds will return to a shelter, called a coop, every night. The coop provides a place for chickens to lay their eggs and offers protection from predators and weather. The birds need to be let out of the coop during the day and locked in during the night.

Hens will lay an egg almost daily, with most birds averaging about six eggs a week. Chickens will only lay eggs when exposed to sufficient daylight, which is generally at least twelve to fourteen hours per day. This means that peak production is during the summer, with production tapering off in fall when the hens begin to molt (replace their feathers)(Wieland and Nolden). Daylight can be artificially reproduced using a light-bulb in areas that do not receive sufficient sunlight.

Hens will begin to lay eggs by the first six months. The average egg production lifecycle for a hen lasts from five to ten years, however, the most productive years are within the first two years.

Living Environment

Chickens require an enclosure that protects the birds, offers shelter from the elements, and provides them with a place to lay their eggs. Though coop designs differ dramatically based on the needs and requirements of a specific situation, the general design requirements involve four walls, a roof, a place to perch and lay eggs, and a run or fenced-in area to provide access to the outdoors (Backyard Chicken Keeping, 2012). The coop should have adjustable ventilation to provide air movement in hotter months and reduced movement during the winter.

Three feet is the recommended floor space for each bird of a large size breed and one foot is recommended for bantams. The most sanitary and easiest to clean floor is concrete, but a simple layer of sand will suffice as well (Wabeck, 1992).

A natural instinct for chickens is to look for a higher elevation to roost on during the night in order to avoid most predators. Though it may not seem like there are many predators in an urban environment, even dogs and cats can pose a threat to a flock. Perches are simply wooden bars installed along the walls of the coop.

Laying boxes should be provided so that hens do not lay eggs on the floor of the coop. Only one nest is needed for every four to five birds. A wooden box lined with straw is the perfect laying nest. Nests should be placed off the ground and in an area of relative darkness (Wabeck, 1992).

The coop should have an entrance that is attached to a fenced-in area so the hens have access to the outdoors. Some ordinances allow for chickens to roam free in a backyard, but in this case fencing for the entire yard should be required.

Chicken feeders and water containers should be cleaned out often. The coop should be cleaned weekly; bedding should be replaced and manure hauled out of any area that the chickens access. Manure can be managed in several ways. Composting may be best for areas with limited space. Composting can be done in the coop by adding more bedding to the floor and turning it occasionally to speed up the decomposition process. Manure can also be added to the home compost pile as a source of nitrogen. Manure should not be applied directly to plants as the nitrogen content is too high and may burn the plants. In an area with a large yard, a portable coop can be moved around the yard and manure can be left to fertilize the yard. A final option would simply be to thoroughly clean out everything in the coop on a yearly basis (Wieland and Nolden).

Although chickens will eat insects in the yard and vegetable scraps provided by the keeper, it is important to have the bulk of the diet composed of a balanced feed. Birds that are fed entirely by feed will still exhibit foraging behavior by pecking and scratching. This is useful as birds can break apart manure piles or eat insects and larvae and keep down pest populations.

As with any other animal, chickens must be provided with a continuous, clean supply of drinking water. Water levels must be monitored carefully during the summer, when heat stress is more likely. Chickens do not sweat, rather they roll around in dust to remove oil and cool off. To reduce the possibility of heat stress the keeper should provide an area of bare earth for chickens to roll in. Diatomaceous earth is sometimes added to a dust bathing area to help prevent mite infestation (Backyard Chicken Keeping, 2012).

Land-Use Concerns

A common initial concern with keeping chickens involves noise levels. Hens, unlike roosters, are relatively quiet animals. One common misconception is that keeping chickens requires keeping a rooster. Chickens will still lay eggs, albeit unfertilized ones, without a rooster.

Odors are another source of concern. Most poultry odor is associated with ammonia produced in moist and poorly ventilated coops. The solution is properly ventilating the coop in order to keep bedding dry. Dehumidification may be necessary during times of frequent rains or high humidity.

Another issue is the potential for rodent and pest problems. These problems can be minimized or eliminated with proper care and maintenance of the coop and other areas. Again, proper ventilation to keep the coop and other areas dry greatly reduces flies and other insects that need moisture for larvae to develop. To avoid rodent problems the areas immediately surrounding the coop should be kept free of weeds and grass, and feed should be stored in rodent-proof containers.

There is some concern about the potential for chickens to transmit diseases to humans. This risk is extremely low, however, with a properly maintained clean environment. Salmonellosis is the most common concern. Salmonella is generally contracted from undercooked eggs or contaminated raw chicken meat, but infection may rarely result from contact with chicken manure. (Hady and Kean, 2011). This can be avoided by handwashing with soap after handling any chicken. Clean conditions and handwashing prevent other rare diseases such as psittacosis and histoplasmosis.

Because poultry and people are not closely related classes there is little risk of the spread of parasites such as mites and lice, which generally adapt to a specific class. Conscientious flock owners routinely monitor and treat birds for parasites.

Existing Regulations Survey

Regulations vary in permitting requirements. Many cities require a permit from an Animal Control, Public Health or similar department – separate from zoning - in order to lawfully keep chickens within city limits. In some cities such a permit is required only when a specified number of chickens is reached. For example, Portland, Oregon only requires a “special animal facility” permit in cases where more than three chickens, ducks, or fowl will be kept on a property.

Almost all regulations set forth a maximum number of chickens per lot; often stated as a ratio of chickens to lot square footage.



Figure 3-2. Backyard Chickens; Ames, IA. Photo courtesy of Andrea Vaage

A common stipulation is that the animals and structures must be kept at least 50 feet from property lines; however, proper care of flocks and their living environment makes such a large setback unnecessary, and will prevent those with smaller lots from owning fowl. In contrast, less restrictive ordinances specify that chickens must be located a specified distance (varying from 10 to 50 feet) away from adjacent residential structures.

Most regulations address the need for enclosed coops and fenced-in outdoor space. Almost all ordinances require that basic sanitary concerns are met (clean facilities, storage of food and waste, etc.) and that the owner takes measures to prevent the activity from becoming a nuisance.

Almost all regulations prohibit roosters.

Code Language

Definitions

Newly hatched chickens are called hatchlings. Female chickens are called hens, and young female birds that have just begun to lay eggs are referred to as pullets. Male birds less than a year old are cockerels and mature male birds are roosters.

General Restrictions

Portland, Oregon

A person keeping a total of three or fewer chickens, ducks, doves, pigeons, pygmy goats or rabbits shall not be required to obtain a specified animal facility permit. If the Director determines that the keeper is allowing such animals to roam at large, or is not keeping such animals in a clean and sanitary condition, free of vermin, obnoxious smells and substances, then the person shall be required to apply for a facility permit to keep such animals at the site. ([Portland, OR §13.05.015](#)).

Madison, Wisconsin

Keeping of up to four (4) chickens is allowed as an accessory use on lots with up to four (4) dwelling units. Keeping of up to six (6) chickens is allowed as an accessory use to a museum or school in the DC-Downtown Core district. ([Madison, WI §28.151](#)).

Licensing

Note: As with beekeeping, several cities' codes reference licensing schemes, either first requiring owners to obtain state-required licenses or registrations, or establishing their own city-managed licensing scheme. The state of Iowa does not have a state-level licensing or registration scheme for small flocks.

Portland, Oregon

[Applies to flocks of four or more chickens] Applications for specified animal facility permits shall be made upon forms furnished by the Director, and shall be accompanied by payment of the required fee.... Applications for a specified animal facility permit shall be accompanied by adequate evidence, as determined by the Director, that the applicant has notified all of the property owners and residents within 150 feet of the property lines of the property on which the specified animal facility will be located. ([Portland, OR §13.05.015](#)).

Ann Arbor, Michigan

Any person who keeps chickens in the City of Ann Arbor shall obtain a permit from the city prior to acquiring the chickens. No permit shall be issued to a person, by the city, and no chickens shall be allowed to be kept unless the owners of all residentially zoned adjacent properties...consent in writing to the permit and this consent is presented along with an application for a permit. Written statements waiving the distance requirement in subsection (3) below shall also be submitted at the time of application and become a part of the permit if issued. Application shall be made to the City Clerk and the fee for the permit shall be as determined by Council resolution.

Permits expire and become invalid 5 years after the date of issuance. A person who wishes to continue keeping chickens shall have obtained a new permit on or before the expiration date of the previous permit. Application for a new permit shall be pursuant to the procedures and requirements that are applicable at the time the person applies for a new permit. ([Ann Arbor, MI §9:42](#)).

Lot Size / Animal Numbers / Setbacks / Enclosures

Seattle, Washington

The keeping of small animals, farm animals, domestic fowl and bees is permitted outright in all zones as an accessory use to any principal use permitted outright or to a permitted conditional use [with conditions as set forth below]....

Domestic Fowl. Up to eight domestic fowl may be kept on any lot

On lots greater than 10,000 square feet that include either a community garden or an urban farm, one additional fowl is permitted for every 1,000 square feet of lot area over 10,000 square feet in community garden or urban farm use.

Roosters are not permitted.

Structures housing domestic fowl must be located at least 10 feet away from any structure that includes a dwelling unit on an adjacent lot. ([Seattle, WA §23.42.052](#)).

Fairfield, Iowa

Primary fixed dwelling for poultry, including domestic female chickens, turkeys, geese and ducks raised for home use, or as pets, within the city limits must be:

Located only in the back yard; compliant with side yard requirements for district.

Located on the side of the yard farthest from neighboring dwelling, if one neighbor only; and approximately equal distance from neighboring dwellings, if more than one neighbor....

Constructed consistent with the capabilities of the breed of poultry confined (i.e. domestic poultry with no capability of flight, or wings clipped may not require fencing of the same height, as more flight capable breeds requiring wire coverings to the top of their confinements.)

Limited to no more than ten (hens.)

Limited to poultry not generally considered excessively noisy - chicken roosters, pea fowl and guinea fowl are expressly prohibited.

Located not closer than forty feet from any neighboring dwelling house(s). ([Fairfield, IA §6.10.020](#)).

Madison, Wisconsin

Keeping of up to four (4) chickens is allowed as an accessory use on lots with up to four (4) dwelling units.

Keeping of up to six (6) chickens is allowed as an accessory use to a museum or school in the Downtown Core district.

Keeping of roosters is prohibited.

Slaughter of chickens is prohibited on site.

The chickens shall be provided with a covered enclosure and must be kept in the covered enclosure or a fenced enclosure at all times.

The enclosure shall be located at least twenty-five (25) feet from any residential structure on an adjacent lot.

The owner, operator or tenant must obtain a [municipal license]. ([Madison, WI §28.151](#)).

Little Rock, Arkansas

Small animals such as rabbits and guinea pigs and fowl, such as chickens, guineas, turkeys and the like may be kept within the city limits, subject to the following provisions:

All such animals must be provided with adequate housing. Floor space in such houses shall be in accordance with the following minimum requirements....

For chickens and similar fowl, three (3) square feet per bird over four (4) months of age.

For bantams, three (3) square feet per bird over four (4) months of age.

Provisions of this section do not apply to pea fowl or ducks.

All pens or yards where such animals are kept shall be placed the following minimum distances from any business establishment or any residence...

Chickens or similar fowls must be kept at least five (5) feet from owner's residence as well as twenty-five (25) feet from the house of the nearest neighbor. ([Little Rock, AR §6-44](#)).

Fort Collins, Colorado

In those zone districts where the keeping of farm animals is not otherwise allowed, the keeping of chickens and/or ducks (poultry) shall be permitted subject to the following requirements and subject to all other applicable provisions of this Chapter:

The keeping of roosters or drakes (male ducks) is prohibited; only chicken or duck hens shall be permitted, and all references herein to poultry shall mean chicken or duck hens only.

Poultry may be kept in the following numbers:

On lots less than one-half ($\frac{1}{2}$) acre in size, up to eight (8) chickens and/or ducks may be kept;

On lots one-half ($\frac{1}{2}$) acre to one (1) acre in size, up to a total of twelve (12) chickens and/or ducks may be kept; and

On lots more than one (1) acre in size, up to six (6) additional chickens and/or ducks may be kept for every additional one-half ($\frac{1}{2}$) acre; provided, however, that if more than twelve (12) chickens and/or ducks, combined, are to be kept, all property owners abutting the parcel where the poultry will be housed must be notified in writing prior to obtaining a permit for said number of poultry.

If a lot has more than one (1) dwelling unit, all adult residents and the owners of the lot must consent in writing to allowing the poultry on the property.

The poultry must be provided with a covered, predator-resistant poultry house that is properly ventilated, designed to be easily accessed, cleaned and maintained, and must consist of at least four (4) square feet per chicken hen or duck.

During daylight hours, the poultry must have access to the poultry house and also have access to an outdoor enclosure that is adequately fenced to protect them from predators.

The poultry must be further protected from predators by being closed in the poultry house from dusk to dawn.

Neither the poultry house nor the outdoor enclosure may be located less than fifteen (15) feet from any abutting property line unless the owner or keeper of the poultry obtains the written consent of the owners of all abutting properties to which the enclosure is proposed to be more closely located, in which event the agreed-upon location shall then be deemed acceptable notwithstanding any subsequent change in ownership of such abutting properties.

The poultry must be sheltered or confined in such fashion as to prevent them from coming into contact with wild ducks or geese or their excrement. ([Fort Collins, CO §4.117](#)).

Ann Arbor, Michigan

A person shall not keep chickens in any location on the property other than in the backyard. For purposes of this section, "backyard" means that portion of a lot enclosed by the property's rear lot line and the side lot lines to the points where the side lot lines intersect with an imaginary line established by the rear of the single-family or 2-family structure and extending to the side lot lines.

No covered enclosure or fenced enclosure shall be located closer than 10 feet to any property line of an adjacent property.

All enclosures for the keeping of chickens shall be so constructed or repaired as to prevent rats, mice, or other rodents from being harbored underneath, within, or within the walls of the enclosure. A covered enclosure or fenced enclosure shall not be located closer than 40 feet to any residential structure on an adjacent property provided, however, this requirement can be waived as follows:

If the principal use of applicant's property is for a single-family dwelling, to obtain such a waiver the applicant shall present at the time of applying for a permit the written statements of all adjacent landowners that there is no objection to the issuance of the permit.

If the principal use of the applicant's property is for a 2-family dwelling, to obtain such a waiver the applicant shall present at the time of applying for a permit the written statements of all adjacent landowners and of the occupants of the other dwelling stating that there is no objection to the issuance of the permit. ([Ann Arbor, MI §9:42](#)).

Cedar Rapids, Iowa

The maximum number of chickens allowed is six (6) per tract of land regardless of how many dwelling units are on the tract.

Only female chickens (hens) are allowed.

Permits will be granted only for tracts of land located in residential districts as identified on the current Official Zoning Map on file with the City of Cedar Rapids.

A permit shall not allow the permittee to engage in chicken breeding or fertilizer production for commercial purposes.

Chickens must be kept in an enclosure or fenced area at all times. Chickens shall be secured within a henhouse or chicken tractor** during non-daylight hours.

Enclosures must be kept in a clean, dry, odor-free, neat and sanitary condition at all times.

Henhouses, chicken tractors and chicken pens must provide adequate ventilation and adequate sun and shade and must be impermeable to rodents, wild birds and predators, including dogs and cats.

Henhouses and chicken tractors shall be designed to provide safe and healthy living conditions for the chickens with a minimum of four (4) square feet per bird while minimizing adverse impacts to other residents in the neighborhood.

A henhouse or chicken tractor shall be enclosed on all sides and shall have a roof and doors. Access doors must be able to be shut and locked at night. Opening windows and vents must be covered with predator and bird proof wire of less than one (1) inch openings.

The materials used in making a henhouse or chicken tractor shall be uniform for each element of the structure such that the walls are made of the same material, the roof has the same shingles or other covering, and any windows or openings are constructed using the same materials. The use of scrap, waste board, sheet metal, or similar materials is prohibited. Henhouses and chicken tractors shall be well maintained.

Henhouses, chicken tractors and chicken pens shall only be located in the rear yard ... unless the setback requirements cannot be met in which case they may be kept in other yard but within the required setbacks.

Henhouses, chicken tractors and chicken pens must be located at least ten (10) feet from the property line and at least twenty-five (25) feet from any adjacent residential dwelling, church, school or place of business.

Any enclosed chicken pen shall consist of sturdy wire fencing. The pen must be covered with wire, aviary netting, or solid roofing. ([Cedar Rapids, IA §23A](#)).

** A chicken tractor is a movable chicken coop lacking a floor. It may or may not be on wheels, but is generally designed to be movable by one person.

Fort Collins, Colorado

Miscellaneous

Any person keeping poultry pursuant to these provisions must first have been issued a permit by the Humane Society and have received such information or training pertaining to the keeping of poultry as said agency deems appropriate. ([Fort Collins, CO §4.117](#)).

Cedar Rapids, Iowa

Odors from chickens, chicken manure or other chicken related substances shall not be perceptible beyond the boundaries of the permitted tract of land.

Noise from chickens shall not be loud enough beyond the boundaries of the permitted tract of land at the property boundaries to disturb persons of reasonable sensitivity.

The Permittee shall take necessary action to reduce the attraction of predators and rodents and the potential infestation of insects and parasites. Chickens found to be infested with insects and parasites that may result in unhealthy conditions to human habitation may be removed by a Cedar Rapids Animal Control Officer.

Chickens shall be provided with access to feed and clean water at all times. The feed and water shall be unavailable to rodents, wild birds and predators.

All stored manure shall be covered by a fully enclosed structure with a roof or lid over the entire structure. No more than three (3) cubic feet of manure shall be stored on the permitted tract of land. All other manure not used for composting or fertilizing shall be removed. The henhouse, chicken tractor, chicken pen and surrounding area must be kept free from trash and accumulated droppings. Uneaten feed shall be removed in a timely manner.

The Permittee shall not allow the Permittee's chickens to roam off the permitted tract of land. No dog or cat or other domesticated animal which kills a chicken off the permitted tract of land will be considered, for that reason alone, a dangerous or aggressive animal or the city's responsibility to enforce its animal control provisions.

The Permittee shall place and keep leg bands on all of his chickens showing the permit number. ([Cedar Rapids, IA §23A](#)).

Fairfield, Iowa

Nothing in this chapter shall be deemed to exempt the owner of poultry within the city limits from the enforcement of nuisance, or other laws regarding the keeping of poultry, and the maintenance of the poultry enclosure. ([Fairfield, IA §6.10.020](#)).

Introduction

Goats have been considered for addition to the urban agriculture scene primarily to provide dairy and wool fiber, and potentially meat. Many who raise goats mention that they have similar personalities to dogs and can provide a sense of companionship to the owner. Keeping goats, however, is a much more space and labor intensive endeavor than other forms of urban animal husbandry. Male goats are called bucks, castrated male goats are called wethers, female goats are does, and kids are young goats.

Breeds

Miniature breeds are best suited for urban spaces and are generally the only breeds allowed in urban areas because “traditional” breeds require too much land. Even most miniature breeds require a minimum of 135 square feet of open area per goat (Kooy). The breeds generally allowed by local regulations are Pygmy and Nigerian Dwarf (aka Dwarf).

Pygmy Goat

The Pygmy goat is a type of miniature goat that is particularly well-suited for an urban setting. Pygmy or other miniature goats may be the only breed allowed in some cities. Pygmy goats require much less space than other breeds and their diminutive size makes them easy to handle. An adult Pygmy goat stands at about 24 inches at the withers (shoulder). The body type is stocky and heavy-boned. (Oklahoma State, 1995).

Nigerian Dwarf Goat

The Nigerian Dwarf goat is another type of miniature goat. The ideal size for a doe is 17 to 19 inches at the withers. Nigerian goats were bred to look more like miniature dairy goats, and they have a much lighter structure than Pygmy goats. They can provide a surprising amount of milk for their size. They can give three to four pounds per day of 6 to 10% butterfat. (Oklahoma State, 1995)

Miniature Dairy Goats

Miniature dairy goats are actually a cross-breeding of a Nigerian Dwarf with any of a number of breeds that provide milk. It is common for urban keepers to cross breed Nigerian Dwarf goats with Oberhasli or Nubian breeds, since the resulting offspring produce more milk and require less living space than traditional dairy goat breeds.

Milk Production by Goats

In order for a doe to produce milk, she must be bred. Dairy goats usually breed in late summer to early winter, though Pygmy goats used for milk production can be bred any time of year. The gestation period is about five months long (Duffy and Calvert, 2010). Once the doe has kidded, she will produce milk for about ten months. Many cities allow the owner to keep the kid as it is being weaned – generally for a period of 12 weeks - even if the kid causes the keeper to exceed the number of animals allowed on the property.

Behavior

Goats are sociable animals that live in herds. Keepers will want to own at least two animals; single goats are more prone to exhibit destructive behavior. Herds much larger than two, however, are often prohibited by cities (Keen).

Goats are also a very active and intelligent creature. In small spaces, this can lead to boredom. Toys should be provided for entertainment; however, goats are a lot like children in that they like to mouth new items, but not necessarily consume them (Adams, 2000). Goats are prone to choking on whatever they decide to test out, so the owner should take care to keep the pen/yard area free of potentially hazardous objects.

Feed

Goats are ruminants. Their digestive system is different than that of people, dogs and cats. Goats stay healthiest when the main part of their diet is forage such as grass and hay. They should not have access to trash or refuse (Adams and Van Metre). Owners must take precautions to prevent the goat from eating beloved plants and bushes, especially those that could be toxic (Adams, 2000).

Maintenance

Goats that are kept in a backyard will need to have their horn buds removed when they are kids; a process called debudding. Goats also need to have their hooves trimmed every four to six weeks. If the hooves are not trimmed or worn down by a rough surface, health problems could occur. Finally, goats will require vaccinations and other veterinary care throughout their lifetime. Before purchasing goats, the potential owner should locate a good veterinarian and learn about the type of vaccinations needed and create a schedule for vaccination.

Shelter

Goats have the amazing ability to escape from any enclosure that is not well built and well maintained. If there is a gap in the fence, it is likely that a goat can get through it. The fence should be constructed of a tightly woven material and at least four feet high for miniature goats.

Goats will also require a shelter to protect them from the elements. The type of structure will depend largely on local building requirements and the specific requirements for keeping goats. The building should be well ventilated and have dry walls and bedding. A shed with windows will do much to add light and help dry out the building (Steevens et al, 1993).

Miniature goats require at least ten square feet of space per animal in a shelter, and larger goats will require even more space (Seniow). A gravel or concrete floor for the shelter is ideal.

A milking area should also be provided for those with dairy goats. This should be a concrete floor separate from the main housing area, with a platform for the goat to stand on. Additional equipment may be required depending on the size of the operation and the intended use of the milk (Steevens et al, 1993).

Sanitation

Deep bedding should be provided for goats. This should be dry and cleaned at least once a month, if not more frequently. Bedding can be composed of a variety of materials, including wood or pine shavings, straw, or other absorbent materials.



Figure 4-1. Dwarf Nigerian Milk Goat; Ames, IA. Photos courtesy of Practical Farmers of Iowa

Land-Use Concerns

An important issue to consider for urban goat-keeping is the potential damage to property. Goats are notorious for their ability to escape pens. Even securely-penned goats can damage their pens and destroy trees and shrubs in the pen.

Neighbors may complain of the aesthetics of having goats and also raise concern over noise and smell (Bleyer, 2011). Bucks have a very strong odor and can be aggressive, so they are usually not allowed in urban areas. Wethers are not as aggressive, but don't have much use on an urban farm other than for temporary brush clearing.

Well-cared-for does do not have an odor. Most goat-keepers will admit, however, that noise and odor from feces can be concerns (Jeanne, 2010). City councils often take these concerns into account when deciding on the feasibility of allowing goats in urban areas.

Existing Regulations Survey

Relative to bees and chickens, fewer cities have adopted regulations to allow goats in urban areas. Where adopted, such regulations only allow a certain number of animals within a minimum defined amount of space. As with other animal uses, setbacks are also required for the placement of pens and shelters. Another requirement may relate to the breed of goat. Cities may consider only allowing Pygmy, Dwarf or miniature dairy goats. These breeds are of similar stature to household pets such as dogs and so may be categorized as "small animals" rather than livestock in some ordinances.

Code Language

Seattle, Washington

The keeping of small animals, farm animals, domestic fowl and bees is permitted outright in all zones as an accessory use to any principal use permitted outright or to a permitted conditional use, in each case subject to the standards of this Section.

Up to three small animals may be kept accessory to each business establishment other than an urban farm, or dwelling unit on a lot, except

In single-family zones... up to four small animals are permitted on lots of at least 20,000 square feet; and one additional small animal is permitted for each 5,000 square feet of lot area in excess of 20,000 square feet.

Accessory structures, including kennels, for four or more animals must be at least 10 feet from any other lot in a residential zone.

Miniature Goats. The types of goats commonly known as Pygmy, Dwarf and Miniature Goats may be kept as small animals, provided that male miniature goats are neutered and all miniature goats are dehorned. Nursing offspring of miniature goats licensed according to the provisions of this Code may be kept until weaned, no longer than 12 weeks from birth, without violating the limitations of [this subsection]. ([Seattle, WA §23.42.052](#)).

Stamford, Connecticut

No person shall keep any live poultry, goats or cattle of the bovine species in any building or pen which is less than fifty (50) feet from any dwelling or apartment house in the city. ([Stamford, CT §111-3 – §111-6](#)).

San Diego, California

It is unlawful to bring or maintain, within a non-agricultural zone within the City, any cattle, bovine animals, goats, or sheep.... This section shall not apply to the following:

Any goats brought in temporarily, to privately-owned non-agricultural zones for the purpose of performing brush management.

The keeping of miniature goats on a premises zoned for a single dwelling unit or developed with a single dwelling unit consistent with the following requirements:

Miniature goats are those goats commonly known as Pygmy, Dwarf, and Miniature Goats.

All miniature goats shall be dehorned.

Male miniature goats shall be neutered.

No more than, and no less than, two miniature goats shall be kept on the premises, except that offspring may be kept onsite for up to twelve weeks from birth.

Miniature goats shall be housed in a shed designed to be:

Predator proof;

Thoroughly ventilated;

Easily accessed and cleaned;

Watertight and draft free;

A minimum of ten square feet of interior space; and

Located outside of all required setbacks

Direct access from the shed to an outdoor enclosure shall be provided with the outdoor enclosure designed to be:

Secured with a minimum five-foot tall fence;

A minimum area of 400 square feet;

Secured from the outside in a manner that prevents the miniature goats from escaping;

Free of objects that would enable the goats to climb out of the enclosure; and

Easily accessed and cleaned.

Goat's milk, goat's cheese, and other goat-related food products shall be for personal consumption only; sale of such products is prohibited.

Property owners shall remove and properly dispose of droppings from cattle, goats or sheep as needed to prevent accumulation, to avoid a health or sanitation problem, or the breeding of flies, and to prevent discharge into [storm sewers]. ([San Diego, CA §44.0307](#)).



Figure 4-2. Dwarf Nigerian Milk Goats; Ames, IA. Photos courtesy of Practical Farmers of Iowa

Fort Collins, Colorado

In zone districts where the keeping of farm animals is not otherwise allowed, two (2) pygmy or dwarf goats, plus any number of their offspring younger than twelve (12) weeks, may be kept on any lot in the City. The keeping of just one (1) pygmy or dwarf goat is prohibited. Only female or altered male Nigerian Dwarf or African Pygmy breeds of goats shall be permitted. No bucks or other breeds shall be allowed.

Except as prohibited above, goats may be kept subject to the following requirements:

Any person keeping goats pursuant to this provision must first have been issued a permit by the Humane Society, and must also have received such information or training pertaining to the keeping of goats as said agency deems appropriate, including, but not limited to, training on animal husbandry, care, disease prevention and management, and methods to minimize the risks of exposure to Q fever during the goat birthing process. Prior to the issuance of said permit, a site inspection shall be conducted by the Humane Society to verify compliance with the requirements of this Subsection.

If a lot has more than one (1) dwelling unit, all adult residents and the owners of the parcel must consent in writing to allowing the goats on the property.

On any residential zoned lot, the goats must be maintained in the rear fifty (50) percent of the lot. On any residential zoned corner lot, the rear fifty (50) percent of the lot shall mean that portion of the lot on the opposite side of the residence from the front lot line. The front lot line shall mean the lot line facing the primary entrance to the principal building on the lot.

The goats must be provided with a covered, predator-resistant shelter that is properly ventilated and designed to be easily accessed, cleaned and maintained.

During daylight hours, the goats must have access to the shelter and also have access to an outdoor enclosure that is adequately fenced to protect them from predators, which shall be in total at least one hundred fifty (150) square feet per goat in size.

The goats must be closed in the shelter from dusk to dawn.

Neither the shelter nor the outdoor enclosure may be located less than fifteen (15) feet from any abutting property line unless the owner or keeper of the goats obtains the written consent of the owners of all abutting properties to which the enclosure is proposed to be more closely located, in which event the agreed-upon location shall then be deemed acceptable notwithstanding any subsequent change in ownership of such abutting properties.

The goats may not be killed by or at the direction of the owner or keeper thereof except pursuant to the lawful order of state or county health officials, or for the purpose of euthanasia when surrendered to a licensed veterinarian or the Humane Society for such purpose, or as otherwise expressly permitted by law.

Any person who owns or keeps goats over twelve (12) weeks of age shall have such goats vaccinated against rabies when the goats become twelve (12) weeks of age, and shall continue to have the goats vaccinated by a veterinarian at intervals recommended by the veterinarian. ([Fort Collins, CO §4-121](#)).

Crop Agriculture in the Urban Environment

Introduction

Crop production in the context of urban agriculture encompasses a broad spectrum of activities, and although many terms being used to describe such activities seem at first glance to make meaningful distinctions, they are in fact often referring to closely related land use practices. It is important for regulatory purposes to define the distinctions because the land use implications of these activities vary dramatically. Although not a perfect system of classification, the discussion and regulations contained in this chapter are generally organized from least-intensive land uses to most intensive. They will be addressed in the following order:

- Front-yard gardening
- Private gardening on vacant lots
- Community gardens
- Market gardens
- Urban farms
- Season extenders

The code provisions for each are found at the end of the chapter.



Figure 5-1. Front-yard Garden; Ames, IA. Photo courtesy of Andrea Vaage

Land Use Activities

Front-Yard Gardening

Home gardening has been practiced since people have lived in homes! Owners of single-family detached residences have always been able to grow fruits and vegetables in their backyards largely unchallenged by zoning regulations. The increasing popularity of consuming home-grown produce, however, has expanded the backyard garden to the front yard. A homeowner may start front-yard gardening for a variety of reasons. It may simply be a desire to grow more produce. It may be the case that the quality of land on the lot is better in the front yard than in the back yard. Oftentimes, backyards are too shady for gardens and the front yard is the only reasonable location.

Front-yard gardening can bring additional benefits beyond increasing home produce production. Front-yard gardening can reduce the intensive fertilization and irrigation needed for a traditional lawn, and also add attractive plots and raised beds as edible landscape elements.

Land-Use Concerns

The seemingly inconsequential move of the backyard garden to the front yard has given rise to a host of zoning-related issues. Gardening in the front-yard does pose some public risks that are not present in backyard gardening. These concerns involve issues of safety and visibility for both pedestrians on the sidewalk and automobile users in the road, particularly if sweet corn or other tall-standing crops are being grown. In response, many cities have restrictive codes that only allow specific species and heights of plants (Kurutz, 2012).

Concerns over the aesthetics of front-yard gardening also are regularly voiced. Manicured lawns are the cultural norm, and produce gardens often appear overgrown and weedy compared to that cultural expectation. One person's sustenance can be perceived by others as a nuisance.



Figure 5-2. Front-yard Garden; Ames, IA. Photo courtesy of Andrea Vaage

Existing Regulations Survey

Most municipalities do not explicitly ban front yard gardening in their zoning code, though language on what is allowed in front yards may inadvertently restrict most typical garden vegetation. In fact, for many communities simply lifting such bans or broadening the definition of allowable vegetation (rather than adopting proactive enabling language) is all that is needed to allow front-yard gardening.

The land use concerns associated with front yard gardening are addressed in various ways. Several communities regulate the size of plants allowed in the front-yard. Kansas City, Missouri does not allow “row crops” in residential areas. This designation applies to plants that are greater than 24 inches in height and are grain, fruit, or vegetable plants. Edible plants less than 24 inches tall are therefore allowed.

Communities also limit the amount of front yard that can be planted to a garden and/or the location of the garden. Sacramento historically limited front-yard produce gardens to 30 percent of the required setback area, but lifted that cap in 2007. (Barth, 2014).

Many communities define a “sight triangle” for corner lots, and limit the height of, or prohibit altogether structures, gardens, or other plantings in that area. This is done to allow motorists unobstructed views of oncoming traffic. Communities should be attentive to the interplay between such regulations and any regulations concerning front yard gardens.

Form is also a consideration in order to meet aesthetic standards. In addition to the restrictions noted above, the front-yard fruit and vegetable plantings allowed in Kansas City are regulated in a way that they are an element of landscaping, rather than a garden. Other communities prohibit vining and creeping plants.

Private Gardening on Vacant Lots, Community Gardens, Market Farms, Urban Farms

In the context of this report, private gardening on vacant lots is meant to refer to the act of raising produce for personal consumption on a vacant lot owned or rented by a private household. Community gardens are shared cultivated spaces typically gardened and managed collectively by a group - either on undeveloped lots or on leased public lands - for private consumption (not for retail sale). Market gardens are similar in scale and location to community gardens, and may be owned by an individual or group. The primary characteristic that distinguishes market gardens from community gardens is that all or a portion of the harvest is offered for retail sale. Urban farms are for-profit agricultural operations conducted inside the city limits. Urban farms are distinguished from market gardens primarily by the scale of the operations and the variety of products grown or sold, although in many places the terms are synonymous.

Private gardening on vacant lots. In many cities, a large number of residential lots have been vacant for years. One way to utilize these lots is to allow the owners to utilize them for gardening. Utilizing vacant lots for cultivation greens neighborhoods and can prevent illegal garbage dumping (Maloney, 2013, pg. 112). Zoning acts as a barrier to gardening on vacant lots when agricultural activities are not allowed as principal permitted uses on lots in residential or commercial zones. Under these codes the garden can only be accessory to a principal permitted structure, such as a house, on the same lot. Thus property owners who own vacant lots and community garden groups are prohibited from putting vacant lots to use to raise gardens. The simple solution employed by many cities, of course, has been to revise their codes to allow for gardening as a principal permitted use on lots in residential or commercial zones.



Figure 5-3. Garden on Vacant Lot; Des Moines, IA. Photo courtesy of Linda Gobberdiel

Community gardens and market gardens. Community gardens are a similar solution to a similar set of problems. Allowing groups to cultivate vacant lots in urban areas can increase property values, help build a sense of community, and provide community members with affordable access to food. Many cities are finding that the open lands found in public parks, public institutions such as schools, and other public areas are ideal for community gardens. Allowing on-site sales of all or part of the harvest (market gardens) also generates income for the individuals or group managing and cultivating the land.



Figure 5-4. Neighborhood Church Community Garden; Cedar Rapids, IA. Photo courtesy of Andrea Vaage

Urban farms. An American Planning Association report defines an urban farm as:

“Typically larger than market gardens, and include larger-scale production of food-producing or ornamental plants, bees, fish, poultry, or small to medium sized farm animals for commercial purposes using a variety of horizontal and vertical growing techniques including in-soil, container, hydroponic, and aquaponic growing systems. End products are typically sold on- or off-site at a stand, market, or store....” (Hodgson et al, 2011).

Most urban farms are privately run by an individual or a group. A common type of urban farm is a Community Supported Agriculture (CSA) farm, where individuals not associated with the operation pay for a share of the farm’s output and receive produce each week during the growing season.



Figure 5-5. Matthew 25 Urban Farm; Cedar Rapids, IA. Photo courtesy of Neo Mazur

Land-Use Concerns

All of the obvious attributes of crop agriculture – nuisance concerns, aesthetics, security, etc. – are relevant to developing land use regulations. Generally speaking, moving along the continuum from gardening on vacant lots, to community and market gardens, to urban farms increases the intensity of the potentially negative attributes of these activities. Each step along the way adds another dimension that must be considered:

- Community gardens are usually larger than private gardens on vacant lots, and bring additional people and activity to the site.
- Market gardens bring retail consumers to the site. This adds parking, lighting, and signage issues, and accessory buildings or farm stands where retail trade is conducted.
- Urban farms are more intense and potentially more complex operations. Operators may wish to use larger equipment (for example, tractors versus walk-behind tillers), chemical pesticides or herbicides, and may wish to include beekeeping, aquaculture or animal agriculture in their businesses.

Existing Regulations Survey

While the distinctions among types of crop agriculture set forth above for this report are clear, the existing codes regulating these activities are far less so. Definitions of these (and similar) terms found in local codes are not consistent; nor are the activities allowed and disallowed under each. For example, many cities allow on-site sales at “community gardens,” while others disallow any retail sales even from sites meeting the definition of an “urban farm.” Regulations addressing accessory structures, hours of operations, the use of heavy equipment, and other activities also vary significantly in terms of the types of operations to which they are applied. A variety of examples are provided below. Rather than take one of the sample code sections and adopt it wholesale, local officials will be best-served by making policy choices regarding the types of activities to allow and creating regulations that address the fundamental land use concerns associated with those activities:

- Size of parcel being cultivated – Many communities distinguish among types of operations based on the size of the parcel used for production, assuming that the intensity of the operation increases as parcel size increases. While an easy-to-implement bright line, this method only indirectly (and imprecisely) addresses the underlying activities of the operation.
- Number of individuals involved in the operation – In the case of community gardens, market gardens, and urban farms – which all have the potential to have many people working the land at the same time, some communities limit the hours that people can be working on-site.
- Types of accessory structures necessary for the operation – Temporary types of season extenders (discussed in detail below) are generally excluded from the calculations of number or square footage of accessory structures allowed on site. Buildings used for retail sales, however, are usually closely controlled.
- Retail sales – When on-site retail sales are allowed, issues of parking, signage, hours of sales, buildings or other structures where transactions occur, ADA compliance, and soil testing are among the many that are addressed in current codes.
- Types of equipment and chemicals necessary for the operation - Some communities restrict farm equipment to only those used for home use or only small walk-behind equipment, while others only require equipment be kept within a certain noise range. Codes restricting pesticide use usually limit the type of pesticides to those marketed for home use or require those using pesticides for urban agriculture to report the use upon submittal of a management plan.

When municipal policies have been adopted to allow gardens on public land, it is important for some type of licensing/permitting scheme to be implemented to determine who will be allowed to undertake the activity, and on which public lands. Licensing schemes from Des Moines, Iowa and Hartford, Connecticut are provided.



Figure 5-6. The Fairfield Millennium Green and Community Orchard. Fairfield; IA. Photo courtesy of Andrea Vaage



Figure 5-7. Matthew 25 Urban Farm; Cedar Rapids, IA. Photo courtesy of Neo Mazur

Season Extenders

Season extenders refer to any method of protecting crops from the elements in order to extend the length of the growing season. The growing season is defined as the average length between the last spring frost and the first autumn frost and is approximately 162 days in most of central Iowa (NOAA). Season extenders use a covering to protect plants from wind and other elements and to capture sunlight and retain heat. They may be used by homeowners for their own gardens, by community gardeners, or by commercial urban farmers.

The types of season extenders are numerous. A plastic tarp that covers individual plants or a row of plants is a season extender, as is a commercial greenhouse complete with heating and ventilation systems. The greatest regulatory challenges are those posed by structures that fall in between these extremes.

Cold frame. Cold frames are typically wooden boxes with transparent lids made of glass or plastic film (DeLong, 2001). The lids can be raised during the day for venting. Cold frames are used in small garden beds and do not use an active energy source. They are the smallest and least intrusive season extenders. As such, they do not pose regulatory problems and are not further addressed in this chapter.

Low Tunnel, Hoophouse and High Tunnel. Low tunnels, hoophouses and high tunnels are light-weight, typically temporary structures. Coverings such as tarps or spun-bonded polyethylene are pulled over hoops formed by sticking the ends of PVC pipe or other similarly stiff, flexible rod into the ground on both sides of the bed being covered, or by using stakes that pipe ends will fit over. The covering may also be fastened by attaching straps to the sides of raised beds. Low tunnels are small; just large enough to cover the crops being protected. The terms “hoophouse” and “high tunnel” are used interchangeably by most; however, sometimes “hoophouse” is used to refer to a structure that is large enough to walk through, while “high tunnel” may refer to a structure large enough to drive through. These structures are taken down before winter unless they have solid end walls. None of these structures incorporate active (mechanical) venting.

Greenhouse. Greenhouses are large, usually permanent structures that provide the greatest amount of climate control. These structures typically include ventilation and heating systems. Greenhouses come in a variety of materials.



Figure 5-8. Matthew 25 Urban Farm; Cedar Rapids, IA. Photo courtesy of Neo Mazur

Land-Use Concerns

The primary land use concern with season extenders is the sturdiness of the structures. Will this structure stand up in high winds, or will it become a hazard as it blows down the street and through yards in inclement weather? The other obvious land use concern is, again, aesthetics. Many neighbors do not wish to see large plastic tarps covering unknown materials when they look out of their kitchen window.

Existing Regulations Survey

The regulatory challenges communities seek to address with regard to season extenders are (1) how to determine where they should be allowed to locate, (2) the safety and sturdiness of the design of temporary structures, and (3) the point at which to classify any given season extender as a permanent structure. Other than (1), the other issues are generally addressed through local building codes.

Because the term season extender applies to a continuum of structures it is difficult to summarize their treatment in current codes. Broadly speaking, the movement along the continuum from low tunnels to greenhouses increases the level of regulatory attention. The line between hoophouses (generally temporary structures) and greenhouses (permanent structures) is significant for regulatory treatment. Hoophouses are often excluded from calculations of maximum site coverage and maximum number of buildings on a lot while greenhouses are treated as any other permanent structure. Many codes pertaining to season extenders, other than cold frames and low tunnels in home gardens, allow them only in areas that already permit agricultural uses such as community and market gardens, or urban farms, or in Urban Agriculture Districts (discussed in a later chapter).

Code Language

Front-Yard Gardening

General Restrictions

Kansas City, Missouri

[A home garden is] a garden maintained by one or more individuals who reside in a dwelling unit located on the subject property. Food and/or horticultural products grown in the home garden may be used for personal consumption, and only whole, uncut, fresh food and/or horticultural products grown in a home garden may be donated or sold on-site within a reasonable time of its harvest. The sales may only take place during the period of May 15 through October 15.

Row crops are not permitted in the front yard of a residentially zoned and occupied property, except property zoned R-80, if whole, uncut fresh food and/or horticultural products grown in the home garden are donated or sold onsite. "Row crops" shall be defined as grain, fruit or vegetable plants, grown in rows, which are 24 inches or more in height. "Row crops" shall not mean cultivated or attended trees, bushes, or shrubbery less than 6 feet in height, or trees in excess of 6 feet in height, and shall not include grain, fruit or vegetable plants that are part of the front yard's borders, that extend no more than 5 feet from the side property lines or from the front of the principal building. A home garden is an accessory use to a principal residential use, and must comply with the lot and building standards for its zoning district. On-site sales made in accordance with this section shall not be considered to be commercial activity under this Code, and shall not be subject to the restrictions for home occupations. Any area of land that is managed and maintained in a manner that fits within the description of Community Supported Agriculture ... cannot be considered to be a Home Garden. ([Kansas City, MO §88-312](#)).

North Redington Beach, Florida

Front yard gardens. Front yard gardens will be allowed by calendar-year yearly permit upon application to the town clerk and adhering to the following regulations:

- Gardens shall be no more than 120 square feet;
- No plants taller than 32" shall be allowed;
- There shall be no exposed soil (ground between plants must be covered with some other material);
- No vining plants, tomatoes or corn shall be allowed;

If any resident with a front-yard garden receives three violations of these restrictions within one permit year, the permit shall be canceled and the garden removed. ([North Redington Beach, FL §30-57\(f\)](#)).

Northbrook, Illinois

The guidelines are applicable to all garden areas established in front yards in the Village of Northbrook. The guidelines are applicable to all types of gardens, not just vegetable gardens.

- The term front yard shall be as defined in the Northbrook Zoning Code.
- All gardens must comply with the existing standards in Sec. 19-57 of the Northbrook Municipal Code that prohibit any change in existing grade that would create drainage or erosion problems.
- All gardens must be properly maintained so as not to become a public nuisance as defined in ... the Municipal Code. In particular, gardens must not cause problems (mud, water, icing, etc.) for nearby public sidewalks.

Nothing in the guidelines shall be deemed permission to violate the limitations on the height of grasses for lawn areas established in ... the Municipal Code. ([Northbrook, IL Front Yard Gardening Guidelines](#)).

Orlando, Florida

Front Yard. At least 40% of the pervious area of the front and street sideyards shall be landscaped with shrubs and groundcovers, or a combination thereof. The remainder may be planted with turfgrass, annuals and vegetable gardens, up to a maximum of 60%. ([Orlando, FL §60.223](#)).

Gardening on Vacant Lots – Community Gardens

Definitions

Detroit, Michigan

Urban Garden. A zoning lot, as defined in this article, up to one acre in land, used to grow and harvest food or non-food crops for personal or group use. The products of an urban garden may or may not be for commercial purposes.

Urban Farm. A zoning lot, as defined in this article, over one acre, used to grow and harvest food or non-food crops for personal or group use.... The products of an urban farm may or may not be for commercial purposes. ([Detroit, MI §61-16-124](#)).

Kansas City, Missouri

Community Garden. An area of land managed and maintained by a group of individuals to grow and harvest food and/or horticultural products for personal or group consumption or for sale or donation. A community garden area may be divided into separate garden plots for cultivation by one or more individuals or may be farmed collectively by members of the group. A community garden may include common areas (e.g., hand tool storage sheds) maintained and used by the group. ([Kansas City, MO §88-312](#)).

Chicago, Illinois

Community Garden. A neighborhood-based development with the primary purpose of providing space for members of the community to grow plants for beautification, education, recreation, community distribution or personal use. Sites managed by public or civic entities, nonprofit organizations or other community-based organizations that are responsible for maintenance and operations. Processing and storage of plants or plant products are prohibited on site. Gardening tools and supplies may be stored within an accessory building that is in compliance with Section [17-9-0103.5-B](#) of the Municipal Code. ([Chicago, IL §17-17-0103-F](#)).

El Cajon, California

Community Garden means a property used for food crop cultivation by individuals or a collective group of individuals or organizations, which may be divided into multiple individual garden plots. ([El Cajon, CA §17.105.020](#)).

Long Beach, California

Community Garden means a plot of land where flowers, fruits, herbs, or vegetables are cultivated by individuals of a neighborhood (noncommercial activity). ([Long Beach, CA §21.15.605](#)).

Philadelphia, Pennsylvania

Community Garden. An area managed and maintained by a group of individuals to grow and harvest food crops or non- food crops (e.g., flowers) for personal or group consumption, for donation, or for sale that is incidental in nature. A community garden area may be divided into separate garden plots or orchard areas for cultivation by one or more individuals or may be farmed collectively by members of the group. A community garden may include common areas (e.g., hand tool storage sheds) maintained and used by the group. Community gardens may be principal or accessory uses and may be located on a roof or within a building. ([Philadelphia, PA §14-601\(11\)](#)).

Austin, Texas

City-Supported Community Garden means eligible city land controlled under a license agreement or non-city land controlled under a land control document which is issued a garden permit and located in the city corporate limits or extraterritorial jurisdiction by a non-profit organization that:

is used by a group of four or more participating gardeners either on separate plots or farmed collectively by the group to grow, produce and harvest food crops for personal or group use, consumption or donation by the non-profit organization or cooperatively for the benefit of its members;

is operated in a manner that includes water conservation, and in the case of eligible city land includes composting, non-polluting, and integrated pest management practices that promote a sustainable garden, and is cultivated solely for the production of organic produce;

may include common areas maintained and used by the group for non-food, ornamental crops;

is platted as a legal lot or exempted under Section 25-4-3 (Temporary Exemption from Platting Requirements); and

has a community garden zoning use classification. ([Austin, TX §14-7-1](#)).

Portland, Oregon

Market Garden. A site where food is grown to be sold. The food may be sold directly to consumers, restaurants, stores, or other buyers, or at farmers markets. ([Portland, OR §33.910.030](#)).

Philadelphia, Pennsylvania

Market or Community-Supported Farm. An area managed and maintained by an individual or group of individuals to grow and harvest food crops or non-food crops (e.g., flowers) for sale or distribution that is not incidental in nature. Market farms may be principal or accessory uses and may be located on a roof or within a building. ([Philadelphia, PA §14-601\(11\)](#)).

Harrisonburg, Virginia

Business Garden. A home occupation, where areas of a parcel are managed and maintained by individuals residing on the same parcel or adjoining parcels under the same ownership, used to cultivate fruits, vegetables, herbs, or flowers for sale purposes. This definition does not include cultivation only for personal consumption or use. ([Harrisonburg, VA §10-3-191](#)).



Figure 5-9. Preparing Garden on Vacant Lot; Des Moines, IA. Photo courtesy of Lina Gobberdiel

General Restrictions

Fitchburg, Wisconsin

Community gardens shall be allowed in all zoning districts subject to the following:

Gardens shall be limited to the cultivation of fruits, vegetables, herbs, plants and flowers.

Gardens shall be run by a nonprofit entity, community group, or neighborhood group acting as a garden coordinator. The garden shall be served by a water supply sufficient to support the cultivation practices on the site. A small storage shed, 100 square feet or less, shall be permitted, but it shall meet the front setback for the respective district, shall be at least four feet from a side or rear lot line and shall not be greater than 15 feet in height.

Greenhouses and/or hoopouses associated with a community garden require a conditional use permit (except within the R-D Rural Development and A-X/A-T Agricultural Districts where they are permitted) and those structures shall follow the dimensional standards of the zoning district. ([Fitchburg, WI §22-6](#)).

Safety Harbor, Florida

Community gardens are allowed as principle uses by-right in all zoning districts except the Flex Business/Industrial district in the city of Safety Harbor, Florida subject to the following regulations:

No gardening activities may take place between the hours of 9:00 p.m. and 6:00 a.m.

The use of hand tools, and domestic gardening tools and equipment is encouraged; the use of small power equipment such as gas-powered tillers and edgers are allowed; however, gas-powered equipment of greater than 10 horsepower is prohibited.

The property owner(s) on which the community garden is located shall be responsible for maintaining the property so that it does not become overgrown with weeds, infested by exotic plants or vermin, a source of erosion or stormwater runoff, polluted by fertilizer or pesticide, insecticide, herbicide, or other agricultural-use chemicals, or does not become a public nuisance.

Application of fertilizer, pesticide, insecticide, herbicide, and/or agricultural use chemicals shall be consistent with the manufacturer's instructions.

The property owner on which the community garden is located shall ensure that the garden complies with all applicable standards as set forth [in] the Pinellas County Code of Ordinances.

The produce and horticultural plants grown in a community garden shall not be offered for sale on the premises or sold for profit.

In cases where a community garden is located within ten (10) feet of a residential structure, screening ... is required in a manner determined to be acceptable by the Planning and Zoning Director.

Community gardening shall not occur in the front yard of a developed lot that is residentially zoned. ([Safety Harbor, FL §41.00](#)).

Belding, Michigan

Community gardens are allowed as principle uses by-right in all zoning districts in the city of Belding, Michigan subject to the following regulations:

Size limitation. A community garden may not be greater than four (4) acres in size.

Setback. All garden plots and any permitted structure shall meet the setbacks of the zoning district except as follows:

Except in the B-1 district, the setback from any lot line in a residential district shall be no less than the zoning district requirement or twenty-five (25) feet, whichever is greater.

In the B-1 district, the setback from any lot line in a residential district shall be fifteen (15) feet. The buffer [set forth in the code] shall not be required.

Permitted structures. Only the following structures will be permitted in a community garden:

Greenhouses, storage sheds, shade pavilions, planting preparation sheds and hoopouses; however, hoopouses shall not be permitted in the B-1 district.

Height. No building or other structure may be greater than fourteen (14) feet in height.

Maximum coverage. The combined area of all buildings, excluding hoopouses, shall not exceed three hundred (300) square feet.

Hoopouse coverings must be maintained and kept intact. The coverings must be removed during non-growing seasons.

Fences. Fencing shall be subject to [the fence regulations of the code] except for the following:

In the B-1 district, an opaque six-foot fence on or near the property line or landscaping no less than six (6) feet in height that completely obscures the garden site shall be placed within the garden property along any adjacent residential lot line.

Barbed wire shall not be permitted.

A fence within the front yard shall not exceed six (6) feet in height. No fence located in a front yard shall be more than sixty (60) percent opaque.

Above ground water tanks, or tanks mounted to trailers or skids, provided that no tank shall not have a capacity greater than one thousand (1,000) gallons.

Benches, picnic tables, trellises, arbors and garden art.

Planting beds raised up to three (3) feet above grade.

Compost bins and rain barrel systems, which may not be located within the required setback or within ten (10) feet of a property line, whichever is greater.

Walkways. Walkways shall be unpaved and covered with mulch, gravel or other aggregate treated to control dust.

Signs. Each community garden shall have one (1) sign indicating the name of the community garden and the contact information of the principal operator, including the name and current telephone number. The sign may not exceed six (6) square feet in area nor exceed six (6) feet in height.

Trash receptacles shall be provided on site and emptied in a timely manner.

Parking. Except in the B-1 district, a designated parking area with a minimum of one (1) parking space per each three (3) garden plots (as designated on the approved site plan) shall be provided. Parking areas shall be maintained as a grass area and kept in a dust-free manner. A community garden in the B-1 district is not required to provide off-street parking.

Noise. The use or operation of power tools, mechanical equipment or agricultural implements used outdoors in a community garden adjacent to land in a residential zone district is prohibited before 8:00 a.m. and after 8:00 p.m. The use of hand tools and domestic gardening tools is encouraged.

Organic gardening is encouraged. Measures shall be implemented to prevent chemical and water runoff onto adjacent properties.

Except for sales of plants produced within the community garden, there shall be no retail sales on the site.

Use of land in the B-1 [Community Business] district. In the B-1 district, a community garden shall be considered a transitional use until a different allowed use can be established on the property. The required land use agreement shall contain a clause that allows for termination of the community garden at the end of the current growing season if a suitable commercial or mixed use allowed in the district is found for the site. ([Belding, MI §2.30](#)).

Peoria, Illinois

Community gardens are permitted as principal uses by-right in all residential districts, and as an accessory use in the C-1 General Commercial district in Peoria, Illinois subject to the following regulations:

Purpose. Throughout residential districts in the City of Peoria, there exists vacant lots which must be mowed and otherwise maintained. Community gardens have been found to be a viable use of vacant land for the cultivation of crops by community groups and individuals. The purpose of this ordinance is to ensure that urban garden areas are appropriately located and protected to meet needs for local food production, community health, community education, garden-related job training, environmental enhancement, preservation of green space, and community enjoyment on sites for which urban gardens represent the highest and best use for the community.

Size. Community gardens shall be limited to two acres or less.

Setbacks. Planting area and accessory structures must meet the applicable residential district setback requirements.

Accessory structure. Accessory structures/storage structures including trellises, raised planting beds, benches, covered trash receptacles, hoop houses limited to three feet in width and three feet in height, one greenhouse (limited to 120 square feet), one seasonal farm stand (limited to 120 square feet), and one storage shed (limited to 120 square feet) shall be permitted on the site.... No zoning certificate is required for those structures which are temporary and taken down at the end of the season. Hoop houses shall not be placed on the garden site before March 1st of each year and must be taken down by June 1st. Accessory structures and storage buildings may not occupy more than ten percent of the community garden site.

Fences. Fences shall not exceed four feet in height, shall be 50 percent open in design, and shall meet the same required setbacks as the planting area. If the community garden use is abandoned, the fence must be removed.

Accessory structure. Accessory structures/storage structures including trellises, raised planting beds, benches, covered trash receptacles, hoop houses limited to three feet in width and three feet in height, one greenhouse (limited to 120 square feet), one seasonal farm stand (limited to 120 square feet), and one storage shed (limited to 120 square feet) shall be permitted on the site.... No zoning certificate is required for those structures which are temporary and taken down at the end of the season. Hoop houses shall not be placed on the garden site before March 1st of each year and must be taken down by June 1st. Accessory structures and storage buildings may not occupy more than ten percent of the community garden site.

Fences. Fences shall not exceed four feet in height, shall be 50 percent open in design, and shall meet the same required setbacks as the planting area. If the community garden use is abandoned, the fence must be removed.

Signage. One non-illuminated sign not exceeding four square feet in area and five feet in height shall be permitted. The sign face shall be located parallel to the front property line and shall not be located in the front yard area. The content of the sign shall be limited to identification of the site as a community garden, sponsorship contact information and rules/guidelines for the community garden.

Composting. Must be in an enclosed container, limited only to the materials generated on site and must be used on site.

Animals or livestock or bees. The keeping of animals, livestock, or bees is prohibited.

Maintenance. The garden shall be properly maintained throughout the year with weekly mowing of grassy areas, weekly removal of weeds and grasses from the garden, weekly collection of rotting vegetables and fruit from the garden area, and weekly collection of all garbage and debris deposited on the site. At the end of each growing season annual vegetation shall be cut down to a height of not more than six inches above ground level. ([Peoria, IL §3.20](#)).

Warrensburg, Missouri

Community gardens are permitted as principle uses by-right in all residential districts and in the Neighborhood Business district, and as a conditional use in the Central Business district in Warrensburg, Missouri subject to the following regulations:

Purpose and intent. The purpose of the community garden regulations are to ensure that community gardens are appropriately located and protected to meet needs for local food production, community health, community education, environmental enhancement, preservation of green space, and community enjoyment.

Accessory uses and structures. The following uses and structures are considered accessory uses and structures to a community garden use:

Greenhouses, hoophouses, cold-frames, and similar structures used to extend the growing season.

Benches, bike racks, signs, drinking fountains, raised planting beds, trellises, compost bins, picnic tables, fences, garden art, rain barrel systems, walking trails.

Tool sheds, equipment sheds, shade pavilions, rest-rooms facilities.

Off-street parking areas and sidewalks.

General requirements.

Accessory structures shall meet the height and setback requirements of the underlying zoning district in which they are located.

Regardless of the underlying zoning district designation, a sign shall be allowed per the requirements of [the sign provisions of this code pertaining to residential districts: one (1) sign per premises, nonilluminated, limited to four (4) square feet in surface display area].

Fences shall meet the requirements of [the fence provisions of the Code].

The community garden and accessory uses and structures shall meet the [the site triangle requirements of this code: “Nothing shall be erected, placed, planted, or allowed to grow in such a manner as to materially impede vision between a height of two (2) feet and eight (8) feet above the street grade at the back of the curb of the intersecting streets, within the triangular area formed by the right-of-way lines and a line connecting them at points ten (10) feet from the point of intersection or at equivalent points on private streets.”]

Light standards are allowed no closer than fifteen (15) feet to any lot line and at points of ingress and egress are allowed no closer than two (2) feet from any street right-of-way. All exterior lighting fixtures shall be shaded so that no direct light is cast upon any adjacent property or upon the street right-of-way.

The hours of operation shall be limited to one-half hour before sunrise until one-half hour after sunset daily.

The city’s stormwater, sediment and erosion control standards shall apply.

No use shall emit an odor that creates a nuisance per [the Code].

The site shall be maintained in accordance with [the Code] including maintaining the site free of weeds, grass and poisonous or harmful vegetation to a greater height than twelve (12) inches on the average.

All uses shall operate in accordance with the noise standards contained in [the Code].

Porta potties or equivalent portable restrooms are allowed for a duration of forty-eight (48) hours at any one (1) time. ([Warrensburg, MO §27-243](#)).

Bloomington, Indiana

Community gardens are allowed as principle uses by-right in all zoning districts in the city of Bloomington, Indiana. When located in a residential district a community garden is subject to the following regulations:

Structures utilized for the storage of gardening materials shall be permitted subject to the accessory structure requirements of this ordinance. The combined area of all structures shall not exceed fifteen percent (15%) of the community garden site lot area.

On-site storage containers, compost bins, and other material storage areas shall be located in the rear building setback area, and shall be at least five (5) feet from rear and side property lines. Trash shall be removed from the community garden site at least once a week.

Retail sales shall be prohibited on the community garden site, except for the sale of produce grown in the community garden. Such sales shall be in compliance with [this code: requires temporary permit, one permit per calendar year, maximum of 60 consecutive days].

Hours of operation shall be restricted to between 5:00 a.m. and 11:00 p.m. daily. Community Gardens shall adhere to the noise standards in ... the Bloomington Municipal Code.

Cultivated areas shall not encroach onto adjacent properties.

The community garden site shall be maintained free of high grass in compliance with ... the Bloomington Municipal Code.

Any community garden site with a lot area greater than fifteen thousand (15,000) square feet shall provide one (1) on-site parking space per two thousand (2,000) square feet of lot area above fifteen thousand (15,000) square feet.

One permanent sign shall be permitted. Such sign shall be limited to four (4) square feet in area per side and four (4) feet in height. ([Bloomington, IN §20.05.097](#)).

St. Paul, Minnesota

The principal use of land for production of food or horticultural crops to be harvested, sold, or donated is allowed by-right, except as noted below, in all residential and business districts in the city of St. Paul, Minnesota.

Standards and conditions.

Approval of a site plan showing the location of all growing plots, sheds, structures, and fencing, with contact information for a site manager. A soil lead test showing that lead levels are less than one hundred (100) parts per million shall be submitted to the zoning administrator with the site plan or raised planting beds with soil barriers and clean, imported soil will be required.

In residential, traditional neighborhood, and business districts, an agriculture use having an area greater than one (1) acre requires a conditional use permit.

The use shall be subject to the minimum property maintenance standards and noise regulations ... of the city.

Keeping of any animals other than bees is prohibited, except residents of the property may keep animals, subject to city permit requirements.

The use shall be conducted in a manner that controls odor, dust, erosion, lighting, and noise and is in compliance with city standards so as not to create a nuisance. This requirement may be enforced through [the nuisance provisions of the city code].

Any tools, equipment, and material shall be stored and concealed within an enclosed, secured structure.

When an agriculture use has been discontinued, the property shall be restored with grass or planted ground cover to control erosion, dust, and mud. All structures accessory to the agriculture use shall be removed. This requirement may be enforced through [the nuisance provisions of the city code].

Standards and conditions in residential and traditional neighborhood districts for an agriculture use with an area of less than one (1) acre:

On-site sales shall be limited only to products grown on the site. Sales shall be limited to no more than three (3) sales in any calendar year and may take place only between the hours of 7:00a.m. and 7:00 p.m. Sales shall be held on property occupied either by seller's dwelling unit or on property owned, rented, leased, or otherwise lawfully occupied by a charitable, institutional, or political organization. Sales shall not take place on the public sidewalk or boulevard.

Gardening equipment shall be limited to that which is commonly used for household gardening.

Accessory buildings shall not exceed an area greater than ten (10) percent of the parcel or one thousand (1000) square feet, whichever is greater. Temporary structures, not exceeding one hundred eighty (180) days per year, such as hoopouses, cold frames, and similar structures located above gardening plots and being used to extend the growing season are permitted. A building permit is required for any temporary structure covering an area greater than one hundred twenty (120) square feet.

One identification sign is permitted, not to exceed six (6) square feet. ([St. Paul, MN §65.771](#)).

Cedar Rapids, Iowa

Urban agriculture uses are allowed as principle uses by-right in all residential zoning districts in the city of Cedar Rapids, Iowa subject to the following regulations:

Intent

The purpose of this Section is to provide requirements and conditions relating to the establishment and operation of urban agricultural operations as a primary use. The location of urban agricultural operations in established residential neighborhoods should be carefully considered and reviewed to ensure compatibility and reduce potential land use conflicts.

Regulations

Urban agricultural uses shall be limited to the cultivation of plants and produce. Animal husbandry, livestock, and bees shall not be considered urban agricultural uses.

Parcels used for urban agricultural uses shall be situated, equipped, operated and maintained so as to minimize to the maximum extent possible, using the best available methods, any impacts on, or interference with other land uses and activities in the general area, or the public health, safety and general welfare. Specific requirements include:

Odor control;

Debris control;

Rodent and pest control; and

Secure, enclosed, rodent-proof storage of all seed, fertilizer, and other chemical products used in operations.

Only walk-behind mechanical farm equipment shall be used.

Pesticides, insecticides, fertilizers and other chemical products used in urban agricultural operations must be designed for household use. Pesticides, insecticides, fertilizers and other chemical products designed for commercial agricultural operations shall not be permitted.

Excess stormwater runoff shall be detained on site in connection with any new construction, development, redevelopment or land use change related to urban agricultural operations.

Minimum setbacks of five (5) feet shall be maintained in the front, side and rear yards of any parcel used for urban agricultural uses.

No fence, wall, vegetation or combination of such items exceeding a height of three (3) feet above ground level shall be erected within the required front yard in any district unless a higher screening is required by [the city code]. No encroachments shall be permitted in Corner Visual Clearance Areas required by [the city code].

An annual permit shall be required. ([Cedar Rapids, IA §32.04.030.A.44](#)).

San Francisco, California

“Large scale agriculture uses” are allowed as principle uses by-right in Commercial; Industrial; and Production, Distribution, and Repair districts, and as a conditional use in all other districts in the city of San Francisco, California. “Neighborhood agriculture” uses are allowed as principle uses by-right in all zoning districts.

Large-Scale Urban Agriculture. The use of land for the production of food or horticultural crops to be harvested, sold, or donated that occur: (1) on a plot of land 1 acre or larger or (2) on smaller parcels that cannot meet the physical and operational standards for Neighborhood Agriculture.

Neighborhood Agriculture. A use that occupies less than 1 acre for the production of food or horticultural crops to be harvested, sold, or donated and comply with the controls and standards herein. The use includes, but is not limited to, home, kitchen, and roof gardens. Farms that qualify as Neighborhood Agricultural use may include, but are not limited to, community gardens, community-supported agriculture, market gardens, and private farms. Neighborhood Agricultural use may be principal or accessory use. Limited sales and donation of fresh food and/or horticultural products grown on site may occur on site, whether vacant or improved, but such sales may not occur within a dwelling unit. Food and/or horticultural products grown that are used for personal consumption are not regulated. The following physical and operational standards shall apply to Neighborhood Agriculture:

Compost areas must be setback at least 3 feet from dwelling units and decks;

If the farmed area is enclosed by fencing, the fencing must be: (A) wood fencing, (B) ornamental fencing as defined [in the code], or (C) chain-link or woven wire fencing if over half of the fence area that borders a public right-of-way will be covered by plant material or other vegetative screening within three (3) years of the fence installation;

Use of mechanized farm equipment is generally prohibited in residential districts; provided, however, that during the initial preparation of the land heavy equipment may be used to prepare the land for agriculture use. Landscaping equipment designed for household use shall be permitted;

Farm equipment shall be enclosed or otherwise screened from sight;

Sale of food and/or horticultural products from the use may occur between the hours of 6 a.m. and 8 p.m.;

In all districts, sales, pick-ups, and donations of fresh food and horticultural products grown on-site are permitted. In every district except “Residential Districts,” value-added products, where the primary ingredients are grown and produced on-site, are permitted.

Water Conservation.

Any plot of land that exceeds 1,000 square feet and is newly established for Neighborhood Agriculture or Large-Scale Urban Agriculture use shall comply with the applicable water use requirements of [the city administrative code].... ([San Francisco, CA §102.35](#)).

Harrisonburg, Virginia

Business gardens are allowed as a principle use by-right in all residential zoning districts in the city of Harrisonburg, Virginia subject to the following regulations:

Business garden: A home occupation, where areas of a parcel are managed and maintained by individuals residing on the same parcel or adjoining parcels under the same ownership, used to cultivate fruits, vegetables, herbs, or flowers for sale purposes. This definition does not include cultivation only for personal consumption or use.

Individuals operating business gardens shall apply for a home occupation permit.

The residential character of all parcels involved shall be maintained.

All transactions shall occur off-site.

No on-site advertising is permitted.

Apiculture or other animal husbandry is prohibited.

Areas shall be maintained in a healthy growing condition, free of refuse, debris, overgrown weeds, and dead or spent plant materials. Such areas are subject to [the code section addressing] weeds, etc. on lots.

Compost shall be used only to support onsite operations.

Area and yard restrictions. Land used for business gardens shall be no larger than fifty (50) percent of the area of the parcel involved including areas of multiple, adjacent parcels under the same ownership. Cultivation in accessory structures such as hoopouses, green houses, cold frames, etc., and areas used for exterior activities such as storage, compost and disposal areas shall be included in the allowable area. Activities on or within principal buildings including covered and uncovered porches and decks, enclosed accessory storage structures, upon rooftops, and vertical growth areas are exclusive of the allowable area.

All areas used for business gardens shall maintain at least a five-foot separation from all property lines unless such areas are enclosed with a wall or fence of at least three (3) feet in height.

Accessory structures. Accessory structures shall be governed by section 10-3-114, accessory buildings of this chapter.

All structures shall be securely affixed to the ground.

Storage and screening. Storage of equipment, materials, and compost and disposal areas shall be inside a principal or accessory structure or screened.

Abandonment. Business gardens which have ceased permanent operation or been abandoned shall be cleared, all structures removed and the area re-vegetated no more than thirty (30) days after the date of discontinued operations unless otherwise specified by the zoning administrator not to exceed ninety (90) days. ([Harrisonburg, VA §10-3-191](#)).

Seattle, Washington

Urban farms are permitted as an accessory use in residential zones and as a primary or accessory use in commercial and industrial zones in Seattle, Washington subject to the following regulations:

All Urban Farms in Residential Zones. In all residential zones all urban farms are subject to the following provisions:

Mechanical equipment. Only mechanical equipment designed for household use may be used.

Sales. Retail sales and all other public use of the farm shall begin no earlier than 7:00 a.m. and end by 7:00 p.m. every day of the week.

Deliveries. Commercial deliveries and pickups are limited to one per day. On-site sales are not considered commercial pickups.

Motor vehicles. No more than two motor vehicles, each with a gross vehicle weight of 10,000 pounds or less, may be used for farm operations.

Location. The farm shall be located on the same lot as the principal use to which it is accessory or on a lot where the planting area is within 800 feet of the lot where the principal use is located.

Signs. One identification sign is permitted, not exceeding 64 square inches in area.

Structures. On a lot with no principal structure:

The total gross floor area of all structures for urban farm use may not exceed 1,000 square feet.

Structures for urban farm use may not exceed 12 feet in height, including any pitched roof.

Structures for urban farm use are also subject to the development standards that would apply to an accessory structure in the zone.

Urban Farms Requiring Conditional Use Permits in Residential Zones [those with over 4,000 square feet of planting area].

Management Plan. The applicant shall provide a proposed urban farm management plan that addresses any probable impacts of the type described in this subsection 23.42.051.B and includes any proposed mitigation measures. The plan shall include, without limitation:

a site plan;

description of the type of equipment necessary or intended for use in each season and the frequency and duration of anticipated use;

disclosure of any intent to spray or otherwise apply agricultural chemicals or pesticides, frequency and duration of application, and the plants, diseases, pests or other purposes they are intended for;

disclosure of whether the operation of the farm would involve 750 square feet or more of land-disturbing activity, or would otherwise require drainage approval under Chapter 22.800 et seq.; and

a proposed sediment and erosion control plan.

Potential Impacts and Mitigation. The Director, in determining whether to approve, approve with conditions or deny the application, shall consider the potential impacts and mitigation, including:

Water Quality and Soils. Impacts of irrigation run-off on adjacent properties, water bodies and environmentally critical areas, and proposed sediment and erosion control measures.

Traffic and Parking. Impacts related to the number of staff onsite during work hours, and the number of potential visitors regularly associated with the site.

Visual Impacts and Screening. Visual impacts relating to the proposed nature, location, design, and size of proposed features, structures and activities, including the location of composting activities and planting areas, and any existing or proposed screening.

Noise and Odor. Impacts related to the location on the lot of the proposed urban farm, any trash or compost storage areas, any farm stand or additional accessory structure, and any other noise-generating or odor-generating equipment and practices.

Agricultural Chemicals. Impacts related to the use of chemicals, including any fertilizer and pesticide.

Mechanical Equipment. Impacts related to the operation of equipment, including noise, odors, and vibration.

Conditions of Approval. Conditions of approval may include, without limitation:

measures such as landscaping or fences to mitigate potential visual impacts on adjacent property and public areas;

measures such as landscaping, sound barriers or fences, mounding or berming, adjustments to location of parking or yard standards, structure design modifications, and limited hours of operation for facilities or activities, to mitigate potential noise and/or odor impacts; and

measures related to operation of the urban farm consistent with some or all of the provisions of the urban farm management plan, with any amendments required or permitted by the Director.

Odors or Fumes. In all zones, no odors or fumes from an urban farm shall be allowed to escape into the open air in such amounts as to be detrimental to the health of any individuals or the public; or noticeable, discomforting or disagreeable so as to offend the sensibilities of a reasonable individual at a distance of more than 200 feet from an urban farm. ([Seattle, WA §23.42.051](#)).

Application Requirements

Belding, Michigan

An application for [administrative][site plan] [special land use] approval must be submitted to the zoning administrator along with the following documentation:

Notarized letter signed by the property owner giving permission for use of property as a community garden.

A site plan, drawn to scale, showing the property size with dimensions.

The site plan shall show the location of all existing structures on the property as well as on adjacent properties.

The plan shall show the location and setback of all proposed structures and garden plots, including any area or structure proposed for the sale of plants grown on the site.

The plan shall show the proposed maximum division of garden plots, by area.

The plan shall include proposed fencing and screening, if required.

The plan shall indicate the area reserved for parking and the number of parking spaces provided, if required.

The plan shall identify the source of water that will be used for irrigation purposes. ([Belding, MI §2.30](#)).

St. Paul, Minnesota

Approval of a site plan showing the location of all growing plots, sheds, structures, and fencing, with contact information for a site manager. A soil lead test showing that lead levels are less than one hundred (100) parts per million shall be submitted to the zoning administrator with the site plan or raised planting beds with soil barriers and clean, imported soil will be required.

In residential, traditional neighborhood, and business districts, an agriculture use having an area greater than one (1) acre requires a conditional use permit.

The use shall be subject to the minimum property maintenance standards ...and noise regulations ... of the city. ([St. Paul, MN §65.771](#)).

Community Gardens on Public Lands

Hartford, Connecticut

Municipal garden program. The Parks and Recreation Advisory Commission is hereby empowered to develop and administer a program to encourage the use of vacant public land owned by the City for gardening purposes by the general public. This Commission may:

- (1) Maintain an inventory of vacant public lands owned by the City;
- (2) Establish and administer a procedure for selection of persons to use public lands for gardening purposes; and
- (3) Adopt regulations governing the use of vacant public lands for gardening purposes.

The Commission shall obtain the permission of the appropriate department, agency, officer or board charged with the lawful responsibility to manage and control the vacant public land prior to using the property for the municipal garden program. Nothing in this section shall limit the right of the City to enter and take control at any time those public lands being used for the municipal garden program; nor shall the City be limited by any of the actions of its employees or officers from ejecting and denying access to these public lands to any and all individuals when the City deems it desirable and in the best interests of the City.

The City shall be held harmless and indemnified by all participants and persons in the municipal garden program from all suits, claims of liability of each name and nature arising out of or in consequence of the use of public land in the municipal garden program.

The Commission may recommend a schedule of user fees to the Council to cover the administrative costs of the municipal gardens program. Those fees shall reflect the actual cost of administering and maintaining the municipal garden program. ([Hartford, CT § 26-15](#)).

Des Moines, Iowa

Garden leases. Persons or entities desiring to plant or place flowers, plants, or shrubs in a permanent structure on any city right-of-way or city real property shall execute a garden lease which identifies all areas of the proposed planting or placement, and shall abide by the terms of such lease, including insurance and indemnification responsibilities, if any, established by the city risk manager. Persons or entities executing a garden lease shall be exempt from the permit requirements ... of this Code.

The garden lease shall be denied if such plantings or placement is likely to create a public danger or nuisance or would be harmful to existing trees, shrubs, flowers, plants or facilities, as determined by the city engineer.

For purposes of this article, city right-of-way means the surface and space above and below any public street, boulevard or sidewalk, but does not include the border area as defined in...this Code....

Persons or entities desiring to maintain city property that abuts their property or is located on neighboring property shall execute a lease which shall set forth the duties associated with the use of the property. ([Des Moines, IA §74-201](#)).

Season Extenders

Definitions

Cleveland, Ohio

Greenhouse means a building made of glass, plastic, or fiberglass in which plants are cultivated.

Hoophouse means a structure made of PVC piping or other material covered with translucent plastic, constructed in a “half-round” or “hoop” shape.

Coldframe means an unheated outdoor structure consisting of a wooden or concrete frame and a top of glass or clear plastic, used for protecting seedlings and plants from the cold. ([Cleveland, OH §336](#)).



Figure 5-10. Cold Frames; Des Moines, IA. Photo courtesy of Linda Gobberdiel

Wheat Ridge, Colorado

Hoophouse. A structure not exceeding 1,000 square feet in floor area with a maximum six mils thick poly film roof and wall covering installed over rounded structural members in which there is no storage of solvents, fertilizers, gases or other chemicals or flammable materials. Structures not complying with all of the specifics set forth in the definition above shall be defined in accordance with adopted code and standard practice. Hoop houses exceeding 1,000 square feet in size shall be defined as greenhouses for the purpose of determining applicability of adopted codes and regulations.

Hoop houses as defined [above] that do not exceed 400 square feet in floor area, that are not occupied by the general public, and that do not contain mechanical or electrical devices, equipment or systems [are exempt from the building code]. ([Wheat Ridge, CO §5-76](#)).

General Restrictions

Cleveland, Ohio

Accessory uses. Only the following accessory uses and structures shall be permitted in an Urban Garden District:

Greenhouses, hoophouses, cold-frames, and similar structures used to extend the growing season.

Location. Buildings shall be set back from property lines of a Residential District a minimum distance of five (5) feet.

Height. No building or other structure shall be greater than twenty-five (25) feet in height.

Building Coverage. The combined area of all buildings, excluding greenhouses and hoophouses, shall not exceed fifteen percent (15%) of the garden site lot area. ([Cleveland, OH §336](#)).



Figure 5-11. Hoophouse, Louise's Prairie Roots Farm; Pella, IA. Photo courtesy of Jim Zaffiro



Figure 5-12. Low Tunnel, Matthew 25 Urban Farm; Cedar Rapids, IA. Photo courtesy of Neo Mazur

Belding, Michigan

Permitted structures. Only the following structures will be permitted in a community garden:

Greenhouses, storage sheds, shade pavilions, planting preparation sheds and hoophouses.....

Height. No building or other structure may be greater than fourteen (14) feet in height.

Maximum coverage. The combined area of all buildings, excluding hoophouses, shall not exceed three hundred (300) square feet.

Hoophouse coverings must be maintained and kept intact. The coverings must be removed during non-growing seasons. ([Belding, MI §2.30\(D\)](#)).

Peoria, Illinois

No zoning certificate is required for those structures which are temporary and taken down at the end of the season. Hoophouses shall not be placed on the garden site before March 1st of each year and must be taken down by June 1st. ([Peoria, IL §3.20](#)).

Residential Districts – Accessory Structures

Milwaukee, Wisconsin

Principal Building Required. No accessory building shall be located on a lot not containing a principal building, unless the principal use of the lot is for the raising of livestock, a community garden or a commercial farming enterprise. If a principal building on a lot is removed, any accessory building on the lot shall also be removed within 60 days and the premises made compliant with this code....

Permitted Structures. The following accessory structures supporting the raising of livestock, a community garden or a commercial farming enterprise shall be permitted:

Sheds.

Large agricultural structures.

Hoop houses.

Maximum Number. Not more than one shed and one large agricultural structure may be located on a single lot. The number of hoop houses on a single lot is unlimited.

Lot Coverage. The total lot coverage of all sheds, large agricultural structures and hoop houses on a single lot shall not exceed 70% of lot area. The total lot coverage of sheds and large agricultural structures on a single lot shall not exceed 15% of lot area.

Setbacks.

The minimum front setback, side street setback or rear street setback for a shed, large agricultural structure or hoop house shall be the average plus 5 feet.

The minimum side setback or rear setback for a shed, large agricultural structure or hoop house shall be 5 feet.

Maximum Height.

The maximum height of the sidewall of an agricultural accessory structure shall be 8 feet for a shed, 10 feet for a large agricultural structure and 14 feet for a hoop house.

The maximum overall height of an agricultural accessory structure shall be 10 feet for a shed, 14 feet for a hoop house, 14 feet for a large agricultural structure on a vacant lot, and 24 feet or the height of the principal building for a large agricultural structure on a lot containing a principal building. ([Milwaukee, WI §295-505-3](#)).

Compost

Introduction

Composting can be a useful way for urban gardeners to manage vegetable waste, leaves and grass clippings. Lawn and garden materials cannot be disposed of in landfills in most communities, so turning these materials into compost can be cost-saving, and can produce nutrient rich organic matter.

Compost piles work by creating an environment conducive to microbial growth. Aerobic bacteria - bacteria that oxidize organic matter - are likely the most important organism in the compost pile (Smith et al). As these bacteria flourish they feed on the compost materials and break them down into organic matter.

These organisms need specific conditions to function optimally. These conditions include:

- Proper aeration - The bacteria and organisms that exist in the pile require oxygen to perform the functions of decomposition. A compost pile will create some circulation as the pile warms and heated air is forced upward; however, as the composting process advances, the space between particles in the pile decreases (Smith et al). To ensure uniform, rapid decomposition, the pile must be turned regularly to provide oxygen. The more frequently the pile is turned, the more rapidly the heat builds (Jauron, 2013).
- Adequate moisture - Moisture levels also affect the speed at which compost decomposes. Oversaturation may cause odor and slow the decomposition of the pile. Piles that are too dry will cause the activity of microorganisms in the pile to slow or cease altogether. Compost piles should have a moisture content between 40-60% (Smith et al). The material should feel like a damp sponge – a drop or two of water should drip out when tightly squeezed (Jauron, 2013).
- Particle size - Items going into a compost bin should be smaller than 2 inches (Rosen et al). For bulkier items, it is recommended to cut, shred, or mulch these items before placing in the bin. Porosity can be affected by materials that are too small, however, so balance should be maintained between the size of materials added to the compost pile.
- Carbon/nitrogen ratio - The ideal carbon-to-nitrogen ratio in compost piles is 30:1. Materials with large amounts of carbon are thought of as 'brown' materials. These include woody materials, leaves, and straw. Materials that contribute nitrogen to a pile are 'green' materials. These include vegetable waste, coffee grounds, grass clippings, and manure from poultry. Since carbon-to-nitrogen ratios are very high in woody materials, a good rule of thumb would be to mix two parts 'brown' material to one part 'green' material (Starbuck, 2010).
- Temperature - All the factors previously mentioned influence temperature. The heat of the pile will ultimately determine how quickly the composting process occurs. The temperature of the pile should be between 90-140 degrees Fahrenheit (Smith et al.). The temperature can be monitored using a thermometer specifically for compost piles or by simply feeling if the internal temperature of the pile feels warmer than air temperature.

Home Composting Methods

Many types of composting systems exist. The most common types of composting structures used in an urban context are holding units, turning units, and heaps.

Holding units are containers or bins that hold yard and garden materials until composting is complete. Plastic holding units can be purchased, or they can be easily built from almost any type of material, including wire fencing and snow fence. Holding units are the least labor intensive to manage. They are good for small compost amounts of yard wastes; however, unless the unit allows for a way to aerate the material they are also the slowest way to compost.

Turning units allow organic material to be turned on a regular schedule. A turning unit is generally either a series of bins, or a horizontally mounted rotating barrel. With a substantial input of labor, a large volume of yard waste can be composted in a relatively short time (3 weeks to 6 months). Turning bins can require a greater expense to buy or effort to build.

No structure is required for heap composting; it is simply a pile (heap) of composting material. The size of the pile should be at least one cubic yard in the Midwest to retain heat, although homes located on lakes or in windy areas may want to consider piles measuring 4 feet x 4 feet x 4 feet (Smith et al). Heaps are the least expensive way to compost as no physical structure is needed; however, heaps may not appear as neat and tidy as using holding or turning units. Some municipalities prohibit composting heaps for aesthetic reasons or to minimize pest attraction.



Figure 6-1. Three-Bin Backyard Compost; Ames, IA. Photo courtesy of Andrea Vaage

Land-Use Concerns

Concerns about composting in urban areas are minimal and usually involve aesthetics, odors, or attracting insects or animals. The proper mix of materials in itself will do much to reduce the potential for odors and pests. Issues with odors or pests only arise if a pile is poorly managed. Food scraps from the kitchen may attract flies, so they should be covered up with other yard plant materials. Animal fats and bones are inappropriate for compost piles because they do not break down easily and may attract animals and insects (Jauron, 2013). Though compost piles do not need to be in a structure to work, in municipalities it is generally required for aesthetic and health concerns, and it may even help speed the decomposition process.

Existing Regulations Survey

There is little variation in most local composting regulations. Home composting is generally distinguished from off-site and/or commercial composting operations using some measure of size or volume of material used, or source of material (on-site household materials versus materials brought from other properties). Home composting is usually classified as an accessory use but rarely requires a special permit as long as certain criteria are met. Those criteria usually include the requirement for some type of composting bin(s) or barrel(s), and focus on its size, its location on the lot, and acceptable composting materials. Ordinances may also contain language about preventing nuisances, although nuisances are often regulated in other sections of the municipal code.

The State of Iowa also has administrative regulations, found in Chapter 105 of the Administrative Code, that apply to composting operations. IAC 567-105 regulates composting activities in the state, but also states that the following types of composting are exempt from state regulation:

- Yard waste or household organic waste composted and used on the same premises where it originated.
- Yard waste, household organic waste, and agricultural waste generated, composted together in any combination and used on the same premises where they originated.

Other composting activities that do not meet these criteria may be subject to state oversight by the Iowa Department of Natural Resources.

Code Language

General Restrictions

Chicago, Illinois

- (1) Any composting operation which meets the qualifications of paragraphs (3) or (4) ... of this section shall be exempt from the permit requirements of [this Code].
- (2) General composting standards. All composting operations which meet the qualifications of paragraphs (3), (4) or (5) shall promote proper conditions for composting and shall operate under the following standards, in addition to all applicable local, state and federal laws, rules and regulations:
 - (a) Nuisance. In no event shall any composting activities be conducted in a manner which creates an odor, litter, dust or noise nuisance, or attracts vectors or pests.
 - (b) Rat and other vector control. The presence of insects, rodents, birds and other vectors or pests shall be controlled through specific measures. These specific measures may include grinding the ingredients, providing screens or netting, or conducting the composting operation in-vessel.
 - (c) Surface water. The composting operation shall be located or designed and constructed to prevent the composting material and compost from sitting in ponded surface water.
 - (d) Mixing. Composting material shall be mixed or turned at regular intervals as conditions mandate to re-mix ingredients, distribute moisture, rebuild porosity and aid in physical breakdown until composting is complete.
 - (e) Moisture level. The moisture level of the composting material shall be maintained within a range of 40% to 60% moisture.
 - (f) Sewage restriction. The composting material shall not contain sewage, sludge, septage or catch basin waste....
- (3) Garden compost operation. A composting operation that composts only landscape waste shall be exempt from the permit requirements of [this Code] if it meets the following criteria:
 - (a) Ingredients. The composting operation composts only landscape waste.
 - (b) Noncommercial. The composting operation is not engaged in commercial activities related to composting, the acceptance of landscape waste or commercial landscaping.
 - (c) Size. The composting operation contains no more than a total of 10 cubic yards of landscape waste, composting material and end product compost on-site at any one time, unless express written authorization has been issued by the commissioner of streets and sanitation allowing a greater volume, not to exceed 25 cubic yards.
- (4) On-site organic waste composting operation. A composting operation that composts food waste and/or non-hazardous carbonaceous waste, whether or not landscape waste is added to the composting mixture, shall be exempt from the permit requirements of [this Code] if it meets the following. criteria:
 - (a) Ingredients. The composting operation composts only organic waste that is generated on-site.

- (b) In-vessel requirement. Any composting of food waste and/or non-hazardous carbonaceous waste is conducted in-vessel. This requirement also applies to mixtures of landscape wastes with these wastes.
- (c) Size. The composting operation contains no more than a total of 5 cubic yards of landscape waste, composting material and end product compost on-site at any one time, unless express written authorization has been issued by the commissioner of streets and sanitation allowing a greater volume
- (d) Compost use. All generated compost is used on-site. ([Chicago, IL §7-28-715](#)).

Dayton, Ohio

Compost materials must be contained in a defined area or bin through the use of brick or cement block; wood and/or wire mesh; or bins or drums made of plastic or metal.

Compost structures shall be located in rear yards only.

Compost structures shall be set back at least five feet from all property lines.

Maximum height for a compost structure shall be five feet.

The composting area shall not exceed 250 cubic feet in volume.

Composting may not include woody yard waste (limbs or branches 1/3 inch diameter or greater), logs, Christmas trees, meat, bones, fat, oil, whole eggs, dairy products, weeds heavily laden with seeds, plastics, lumber, synthetic fibers, human or pet wastes, or diseased plants.

Standard composting practices are required, including providing adequate air circulation and moisture to prevent combustion and objectionable odors to adjacent properties. Composting that results in objectionable odors and/or includes prohibited material is considered to be a public nuisance. ([Dayton, OH §150.420.1.5](#)).



Figure 6-2. Compost Piles, Central College Garden; Pella, IA. Photo courtesy of Paul Weihe

Cincinnati, Ohio

Yard waste shall either be incorporated into the soil, household composted, converted into mulch or removed.

Household compost may consist of ground, shredded, or chopped yard waste, including, but not limited to, grass clippings, shrub trimmings, wood chips, leaves, herbaceous garden waste, brush, and other such plant-derived materials.

No person shall create or maintain a household compost pile in such a manner that it becomes a rodent or insect harborage, or that it produces offensive and noxious odors, or that it causes any form of surface or groundwater pollution.

Household compost piles shall be located:

- (a) a maximum practical distance from any occupied structure;
- (b) five (5) feet from any auxiliary structure;
- (c) fifty (50) feet from any private water supply system;
- (d) five (5) feet from any lot line;
- (e) ten (10) feet from any roadway, alley, or other public right-of-way;
- (f) twenty (20) feet from any natural watercourse;
- (g) a household compost pile shall not be constructed in a natural wetland.

Household compost piles shall be maintained in a safe and sanitary manner. Household compost piles that produce offensive odors or that harbor insects or rodents shall be removed. Household compost piles shall have adequate natural drainage, such that any liquids generated by the decomposing yard waste shall be absorbed into soil. ([Cincinnati, OH §00053-7](#)).

Grand Rapids, Michigan

Residential composting is only permitted on the premises of an occupied, residential dwelling.

The compost may not contain animal waste, meat, bones, grease, oils, fats, or cooked foods of any kind.

The compost must be completely contained in a fully enclosed compost receptacle, with a tightly fitted lid.

The compost receptacle must be located in the rear yard of the residential dwelling.

The compost receptacle must be kept tightly covered except when opened for deposit or removal of compost materials.

The compost receptacle shall have a capacity of no greater than 63 cubic feet.

The compost receptacle shall be constructed of rigid and durable materials, which shall not include any of the following: burlap, tarp, vehicle tires, wire mesh, chicken wire, flexible fencing material of any kind, or any substantially similar materials. ([Grand Rapids, MI §9.108](#)).

Iowa City, Iowa

COMPOST PILE: A collection of yard waste, such as grass, leaves, trees, brush and garden residue, and also including raw and uncooked kitchen food wastes but specifically excluding bones, meat, fat, grease, oil, raw manure and milk products, which collection is screened from the street view, is located in a confined area, is no larger than twenty five (25) square feet in area, is located more than twenty feet (20') from a habitable structure and at least five feet (5') from a property boundary line, is located more than five feet (5') from any wood structure, excluding fences, is not located in a natural drainageway and is not located in the area between any building and the street right of way and is collected for reuse as a soil amendment. ([Iowa City, IA §6-1-1](#)).

Ames, Iowa

Notwithstanding any other Sections in this Chapter, the following materials may be included in composting piles:

- (a) Yard waste including leaves, grass clippings, straw and hay, sawdust, and finely chopped or shredded tree and shrub prunings;
- (b) Kitchen scraps including fruit and vegetable trimmings (including rhubarb leaves), coffee grounds, and eggshells;
- (c) Shredded newspapers;
- (d) Wood ashes (no more than 1 cup per bushel of compost).

The following materials shall not be included in composting piles:

- (a) Human or animal feces;
- (b) Diseased plant material or weeds that have gone to seed;
- (c) Kitchen scraps that include animal meat, bones or fat;
- (d) All other materials not listed in Section 1 above.

All composting shall comply with the state regulations contained in Chapter 105 of the Iowa Administrative Code. ([Ames, IA §10.26](#)).

Iowa Administrative Code

567—105.2(455B,455D) Exemptions. The following projects are exempt from this chapter. This exemption is not a defense to a nuisance action brought pursuant to Iowa Code chapter 657.

105.2(1) Yard waste or household organic waste composted and used on the same premises where it originated.

105.2(2) Composting facilities involving agricultural waste, excluding dead animals, and clean wood waste which is necessary as bulking agent and which is free of coatings and preservatives. Use of any other materials as bulking agent shall require prior approval by the department. If agricultural waste is mixed with other wastes including dead animals for the purpose of composting, then this chapter shall apply unless the other wastes have been preapproved by the department as necessary as bulking agent.

105.2(3) Yard waste, household organic waste, and agricultural waste generated, composted together in any combination and used on the same premises where they originated.

Urban Agriculture Districts

Introduction

Unlike the previous chapters of this report, which review different agricultural practices and then offer zoning code provisions enabling those practices, this chapter is itself about a particular type of zoning provision. Urban agriculture districts (UADs) are zoning districts created for the specific purpose of protecting land in urban areas for the production of local foods.

In many cities with thriving urban food systems the lands placed into production have been vacant, neglected spaces with low market value for other uses. A challenge has been keeping these lands in agricultural production as the market for other uses increases and property values rise. Many landowners and local officials simply view urban agriculture as a temporary activity until a “better offer” comes along. UADs are the most direct method of protecting tillable land in urban areas from conversion to residential, commercial or industrial use. While allowing community gardens, market gardens, and urban farms as permitted uses in other zoning districts is a positive promotion of urban food production, those lands can still easily be converted to other uses permitted in those districts with little involvement of the city or the public. The typical A-1 Agricultural districts found in many city codes allow low- or very low-density residential development by-right without a rezoning or conditional use permit. UADs, in contrast, limit permissible uses to agriculture and related activities. Since a rezoning from UAD to another classification is necessary to convert a parcel from agriculture to another use the public at least is given an opportunity to comment on the loss of urban agricultural land and its effect on the local food system. The adoption of a UAD is a signal that city officials place urban agriculture and its value to the local food system on par with other land uses.

Land-Use Concerns

UADs could be used to zone small parcels or large tracts of undeveloped land for agricultural purposes. The same concerns over crop agriculture and animal husbandry highlighted in previous chapters apply to activities in UADs. In addition, if food processing and product sales are to be allowed in a UAD the code should be written to keep those uses accessory to agricultural production so that they do not transform the area to industrial or retail over time.

Existing Regulations Survey

UADs are not yet widely used. We include two communities’ UADs – Cleveland, Ohio and Madison, Wisconsin – in their entirety. The activities regulated by these UADs are similar to those found in provisions for community gardens and urban farms. A community could choose to mix and match with provisions from any other chapters in this report. If a community wants more precise regulatory language concerning beekeeping in its UAD, for example, language from Chapter 2 can be incorporated.

Boston, Massachusetts allows for the designation of Open Space (OS) districts which can be applied to public lands, or to private property with landowner consent. The OS designation can be used in conjunction with one of nine OS subdistrict designations to allow limited types of uses on OS lands. Community Garden is one of the nine subdistricts. The Community Garden subdistrict allows for the “production, cultivation, growing, and harvesting of any agricultural, floricultural, or horticultural commodity” on any size parcel of land.

Code Language

Cleveland, Ohio

Purpose. The Urban Garden District is hereby established as part of the Zoning Code to ensure that urban garden areas are appropriately located and protected to meet needs for local food production, community health, community education, garden-related job training, environmental enhancement, preservation of green space, and community enjoyment on sites for which urban gardens represent the highest and best use for the community.

Definition

Community garden means an area of land managed and maintained by a group of individuals to grow and harvest food crops and/or non-food, ornamental crops, such as flowers, for personal or group use, consumption or donation. Community gardens may be divided into separate plots for cultivation by one (1) or more individuals or may be farmed collectively by members of the group and may include common areas maintained and used by group members.

Market garden means an area of land managed and maintained by an individual or group of individuals to grow and harvest food crops and/or non-food, ornamental crops, such as flowers, to be sold for profit.

Greenhouse means a building made of glass, plastic, or fiberglass in which plants are cultivated.

Hoophouse means a structure made of PVC piping or other material covered with translucent plastic, constructed in a “half-round” or “hoop” shape.

Coldframe means an unheated outdoor structure consisting of a wooden or concrete frame and a top of glass or clear plastic, used for protecting seedlings and plants from the cold.

Permitted Main Uses

Only the following main uses shall be permitted in an Urban Garden District:

Community gardens which may have occasional sales of items grown at the site;

Market gardens, including the sale of crops produced on the site.

Permitted Accessory Uses

Only the following accessory uses and structures shall be permitted in an Urban Garden District:

Greenhouses, hoophouses, cold-frames, and similar structures used to extend the growing season;

Open space associated with and intended for use as garden areas;

Signs limited to identification, information and directional signs, including sponsorship information where the sponsorship information is clearly secondary to other permitted information on any particular sign, in conformance with the [supplemental regulations below];

Benches, bike racks, raised/accessible planting beds, compost bins, picnic tables, seasonal farm stands, fences, garden art, rain barrel systems, chicken coops, beehives, and children’s play areas;

Buildings, limited to tool sheds, shade pavilions, barns, rest-room facilities with composting toilets, and planting preparation house, in conformance with the [supplemental regulations below];

Off-street parking and walkways, in conformance with the [supplemental regulations below].

Supplemental Regulations

Uses and structures in an Urban Garden District shall be developed and maintained in accordance with the following regulations.

Location. Buildings shall be set back from property lines of a Residential District a minimum distance of five (5) feet.

Height. No building or other structure shall be greater than twenty-five (25) feet in height.

Building Coverage. The combined area of all buildings, excluding greenhouses and hoopouses, shall not exceed fifteen percent (15%) of the garden site lot area.

Parking and Walkways. Off-street parking shall be permitted only for those garden sites exceeding fifteen thousand (15,000) square feet in lot area. Such parking shall be limited in size to ten percent (10%) of the garden site lot area and shall be either unpaved or surfaced with gravel or similar loose material or shall be paved with previous paving material. Walkways shall be unpaved except as necessary to meet the needs of individuals with disabilities.

Signs. Signs shall not exceed four (4) square feet in area per side and shall not exceed six (6) feet in height.

Seasonal Farm Stands. Seasonal farm stands shall be removed from the premises or stored inside a building on the premises during that time of the year when the garden is not open for public use.

Fences. Fences shall not exceed six (6) feet in height, shall be at least fifty percent (50%) open if they are taller than four (4) feet, and shall be constructed of wood, chain link, or ornamental metal. For any garden that is fifteen thousand (15,000) square feet in area or greater and is in a location that is subject to design review and approval by the City Planning Commission or Landmarks Commission, no fence shall be installed without review by the City Planning Director, on behalf of the Commission, who may confer with a neighborhood design review committee, if one exists, so that best efforts are taken to ensure that the fence is compatible in appearance and placement with the character of nearby properties. ([Cleveland, OH §336](#)).

Madison, Wisconsin

Purpose. The purpose of [the Urban Agriculture District] is to ensure that urban garden and farm areas are appropriately located and protected to meet needs for local food production, and to enhance community health, community education, garden-related job training, natural resource protection, preservation of green space, and community enjoyment. Because urban agriculture will typically exist in close proximity to residential and other uses, concern will be given to ensuring compatibility between uses.

Permitted and Conditional Uses [partial list]

Permitted uses	Conditional uses
Some forms of cultivation	Some forms of cultivation
Some community events	Some community events
Some public utility and public service uses	Some public utility and public service uses
Some outdoor cooking operations	Some outdoor cooking operations
Community garden	Farmers' market
Market garden	Animal husbandry
Composting	Clear-cutting
Keeping of honeybees	Greenhouse, nursery
On-site farm stand	
Selective cutting of timber	
Mobile grocery store	
Solar energy systems	
Transit stops	
Composting	

Dimensional Requirements, Permitted and Conditional Uses. Requirements represent minimums unless otherwise noted. Dimensions are in feet unless otherwise noted.

Lot area sq. ft.	15,000 Lot area of less than 15,000 square feet may be allowed as a conditional use
Lot width	50
Front yard setback (structures)	15 or the setback of the adjacent district, whichever is greater
Side yard setback (structures)	6 or the setback of the adjacent district, whichever is greater
Rear yard setback (structures)	20 or the setback of the adjacent district, whichever is greater
Maximum height	25
Maximum lot coverage (buildings and paved areas)	15% (excluding greenhouses and hoopouses)

([Madison, WI §28.093](#)).

Boston, Massachusetts

Open space subdistricts may be established by the Zoning Commission only on land within an OS zoning district. An open space subdistrict designation imposes land use restrictions... which augment the basic use restrictions pertaining to OS districts.... An open space subdistrict may be established on any land contained within one or more open space districts, provided that such land is:

owned by a Public Agency, including but not limited to the City of Boston, the Boston Conservation Commission, the Boston Parks and Recreation Department, the Boston Redevelopment Authority, the Boston School Department, the Massachusetts Department of Environmental Quality Engineering, the Massachusetts Port Authority, the Metropolitan District Commission, the Boston Public Facilities Department, the Boston Real Property Department, or the Boston Water and Sewer Commission; or

owned by a private person, entity, or conservation trust, such as the Boston Natural Areas Fund, which consents in writing to the establishment of an open space subdistrict on such land.

Any property owner, or property owner representing a Planning and Zoning Advisory Committee or Neighborhood Council, or the Boston Redevelopment Authority, or the Boston Conservation Commission may petition the Zoning Commission to establish or to substantially change the use of an open space subdistrict within an open space (OS) district.

There shall be no minimum land area requirement for an open space subdistrict.

Community Garden Open Space Subdistrict

Community Garden open space (OS-G) subdistricts shall consist of land appropriate for and limited to the cultivation of herbs, fruits, flowers, or vegetables, including the cultivation and tillage of soil and the production, cultivation, growing, and harvesting of any agricultural, floricultural, or horticultural commodity; such land may include Vacant Public Land.

[\(Boston, MA §33\)](#).

Direct-to-Consumer Sales: CSA Drop-Sites, Farm Stands, Farmers' Markets

Introduction

Direct-to-consumer sales - when consumers buy agricultural products directly from farmers – have enjoyed explosive growth over the past twenty years. According to a recent report of the U.S. Department of Agriculture, 163,675 farmers sold an estimated \$6.1 billion in locally marketed foods in 2012. (Low, et al, 2015). Farms with local food sales represent 7.8 percent of U.S. farms, and while local food sales account for only 1.5 percent of the value of U.S. agricultural production, the growth of direct-to-consumer food marketing has far exceeded the growth of total agricultural sales. According to the 2007 Census of Agriculture, from 1997-2007 direct-to-consumer food marketing grew by 104.7 percent while total agricultural sales increased by only 47.6 percent. (Diamond and Soto, 2009). Direct-to-consumer sales activities can bring fresh produce into areas where access to nutritional food is not readily available, and more generally bring agricultural products to food deserts.

The Regulatory Dilemma

Naturally, growth of direct-to-consumer agricultural sales of the magnitude described above has created regulatory challenges in many communities. While municipal zoning codes often contain agricultural districts that permit growing crops and produce, and may allow some agricultural production in residential districts, many codes prohibit the commercial sale of such products from the land where they are grown. Direct-to-consumer sales are generally defined as commercial activities that are only allowed to take place in commercial zoning districts. Direct-to-consumer sales of many types of agricultural products are occasional or seasonal. Purchasing land in commercial zoning districts to carry out sporadic sales activities is cost prohibitive for most urban producers.

Three common areas where direct-to-consumer sales and municipal zoning intersect are Community Support Agriculture (CSA) drop-sites, farm stands, and farmers markets.

Community Supported Agriculture - CSA Drop-Sites

CSAs have become a popular way for consumers to buy local, seasonal food directly from a farmer. In a CSA, a producer offers a certain number of “shares” to the public. The shares consist of a percentage of the farm products grown by the producer. Interested consumers purchase a share (aka a “membership” or a “subscription”) and in return receive seasonal produce each week throughout the farming season. The notion of shared risk is fundamental to the operation of CSAs: in most CSAs, shareholders pay up front for the whole season and the farmers do their best to provide an abundant share of produce each week, but without guarantees of specific amounts. For example, due to yearly variations in weather or other factors, members may see a bumper crop for one vegetable, but a lousy harvest for another.

The majority of CSA farms are located outside the city limits, and so the distribution of products to shareholders that takes place on-farm is not a concern of municipal zoning. Depending on how the CSA operates, however, shares may be distributed at a designated off-site communal distribution point (“drop-site”) in the city, closer to the shareholders (DeMuth, 1993). The regulatory problems occur when municipal zoning is written or interpreted to prevent the location of drop-sites in residential areas, or areas such as parks, parking lots, or vacant lots in other locations in the city.



Figure 8-1. Turtle Farm and CSA Residential Drop-Site; West Des Moines, IA. Photo courtesy of Ben Saunders

Farm Stands

Though the farm stand may be a common site in rural areas, they are a newer feature in urban areas. Farm stands have historically been on-site structures where produce from the farm is sold. This is still the case for farm stands selling from urban farms. Increasingly, however, producers from rural areas are looking to bring their products closer to consumers via temporary, seasonal stands located off-site (away from the farm) in nearby cities.

Farm stands differ from CSA drop-sites in that sales transactions are not prearranged, but rather buyers and the producer conduct a traditional retail transaction at the stand. They differ from farmers' markets in that a farm stand is a single producer, not a collection of producers. Again, the regulatory problems occur when the commercial activity of the farm stand is prohibited in residential areas, or when such commercial activity is required to be a single primary use on a lot in a commercial zoning district.

Farmers' Markets

Farmers' markets are temporary markets where several farmers and other vendors are allowed to sell goods such as fresh produce, meat, dairy, eggs, and other products. A farmers' market is defined by the USDA as "a multi-stall market at which farmer-producers sell agricultural products directly to the general public at a central or fixed location, particularly fresh fruit and vegetables (but also meat products, dairy products, and/or grains)" (USDA, 2014). Farmers' markets are often a festive affair, offering local musicians and other entertainment; food and drink for sale; and vendors selling crafts, jewelry, and other merchandise.

These markets are unique from most other forms of direct-to-consumer sales in that SNAP benefits, coupons, and vouchers are allowed as forms of payment for produce in participating markets, thus increasing access to fresh food for those who need it most (Wooten and Ackerman, 2013).



Figure 8-2. Des Moines Farmers Market; Des Moines, IA. Photo courtesy of Downtown Community Alliance

Municipalities or not-for-profit organizations usually operate farmers' markets. Most farmers' markets are run by a manager and possibly a Board of Directors. Farmers' markets usually adopt a set of bylaws or list of rules and regulations. In order to fund the market, fees are assessed to each vendor to rent a space in the market.

Farmers' markets can also be operated on different types of land. Common sites for farmers' markets include public parks, institutions such as schools or churches, and in downtown areas where streets can be blocked off during the market. Some communities will specify which lots or locations a farmers' market is allowed, while others simply will allow the market in certain zoning districts.

Farmers' markets operate periodically – typically once or twice per week – for a limited number of hours. They are usually operated during the local growing season, but can run year-round.

Early farmers' markets found that their activities did not fit neatly into existing zoning regulations for the same reasons as described above for CSA drop-sites and farm stands. As their popularity has increased around the country, however, many municipalities have created code language to accommodate farmers' markets and the land use characteristics they bring to a location.

Land-Use Concerns

Direct-to-consumer sales that occur via CSA drop-sites, farm stands and farmers' markets create common land use concerns: traffic, noise, and parking issues. CSA drop-sites in residential areas can create problems between neighbors if parking and traffic are disrupted. Farmers' markets are often held on public streets and so traffic must be diverted during market times.

As with food trucks and pushcarts, temporary vendors such as farm stands and farmers' markets were at one time perceived to have an unfair competitive advantage over brick-and-mortar grocers and other food retailers. This perception has been largely dispelled, with stationary retailers recognizing that best way to get shoppers to a retail area is to offer attractions in that area. The competition offered by a farmers' market that is open 20 to 30 days a year to a retail store that is open 365 days a year is a non-issue.

Existing Regulations Survey

To address the most common land use concerns, most controls over direct-to-consumer sales operations address hours of operation, days of operation, and parking requirements. Farm stand controls often identify the number of structures permitted and specific setback distances from road rights of way. Off-site farm stands are often treated as temporary uses, and regulated through those provisions of the zoning code.

The regulation of farmers' markets is more extensive. These ordinances not only include licensing requirements and restrictions on hours, day and months of operation, but also usually identify the specific location of the market or the specific zoning districts in which markets can operate. It is often stipulated, either through the licensing process or the zoning ordinance itself, that a certain percentage of vendors must sell produce or other agricultural products, including meat and dairy, to qualify as a farmer's market. Other guidelines may include giving priority to vendors that are local and are producers of the products they are selling. Many require the market to identify a contact person that will be on-site during the market's open hours.

Code Language

CSA Drop-Sites

Portland, Oregon

Delivery Days. Delivery Days are days when deliveries of food or other goods are made to Food Membership Distribution Sites for later pick-up by members of Food Buying Clubs or Community Supported Agriculture Organizations.

Food Membership Distribution Site. A site where items ordered through a Food Buying Club or Community Supported Agriculture Organization are picked up by the members. Food Buying Clubs are membership organizations. The members, as a group, buy food and related products from wholesalers, distributors, growers, and others. All products are pre-ordered and pre-paid, and at least 70 percent of the products are food.

Community Supported Agriculture Organizations are membership organizations. Individuals or households become members by purchasing a share or a specified amount of an agricultural producer's output in advance. Members receive food items from the producer on a regular schedule.

Use. Food Membership Distribution is accessory to most use categories, but not a primary use on a site.

Residential zones. The regulations of this subsection apply to sites in residential zones that are not in Institutional use.

1. The maximum number of members who may come to the site to pick up items delivered on one delivery day, and the number of delivery days that are allowed in a calendar year are specified in Table 237-2. If a site fits into more than one cell, the more restrictive requirement applies.
2. The operator of a site must select a maximum number of delivery days and maximum number of members who may come to the site, and is responsible for compliance with the regulations that apply to the combination of delivery days and maximum number of members who may come to the site. This may require limiting the number of members who may participate in each order, or moving some deliveries to other locations.
3. Members may pick up items at the site only between 7 AM and 9 PM.

4. Truck deliveries are allowed between 8 AM and 5 PM.

5. Exterior activities, except delivery and pick up, may not occur in the area between the primary building and any street lot line. ([Portland, OR §33.237.200, §33.910](#)).

Table 237-2 (edited)

Maximum members visiting site per delivery day	Delivery days per calendar year				
	Up to 5	6 to 26	27 to 52	53 to 104	>104
Up to 12	Allowed	Allowed	Allowed	Allowed with neighbor notification	Not allowed
13 to 56	Allowed	Allowed with neighbor notification	Allowed with neighbor notification	Allowed with neighbor notification	Not allowed
57 to 100	Allowed	Allowed with neighbor notification	Allowed with neighbor notification		Not allowed
>100	Not allowed	Not allowed	Not allowed	Not allowed	Not allowed

Farm Stands

South Windsor, Connecticut

Roadside stands of a temporary and removable nature on a farm for the sale and display of crops grown on the premises shall be allowed, provided that such stand is removed after no more than 120 days of use in each calendar year.

Roadside stands of a temporary and removable nature other than on a farm, for the display and sale of farm produce grown in South Windsor shall be allowed provided the following conditions are met:

- a. These roadside stands shall be allowed only during the growing season, and for not more than 120 days of use in each calendar year.
- b. They shall be located not less than 20 feet from a street line and not less than 50 feet from any street intersection.

An applicant shall apply to the Zoning Enforcement Officer for a Zoning Permit for uses permissible under this section. ([South Windsor, CT §3.2.1\(D\)](#)).

Nolensville, Tennessee

Farm stands operating as a temporary use shall be open for no more than six (6) months per year. All temporary signs shall be affixed to the stand and, when added together, shall not exceed 35 square feet in area. The sign(s) may contain the name of the stand but shall only contain advertising that pertains to the produce sold at the stand. This type of sign will not require the issuance of a sign permit.

The stand shall neither block nor be located within any right-of-way and shall be a minimum of ten (10) feet from the paved surface of the road. When located at intersecting roads, the stand shall conform to clear-view distance requirements [found elsewhere in the code]. ([Nolensville, TN §4.1.3\(E\)](#)).



Figure 8-3. Des Moines Farmers Market;
Des Moines, IA. Photo courtesy of Downtown Community Alliance

Cleveland, Ohio

Agricultural uses in Residential Districts shall be subject to the following regulations

Farm Stands and Sale of Produce. The sale of produce and the placement of farm stands shall be permitted only in accordance with the following regulations:

Sale of Produce. Where such sales have been permitted by the Board of Zoning Appeals, agricultural products, plants, eggs and honey grown or produced on a property or within one thousand (1,000) feet of the subject property may be sold on the premises of an agricultural use in a Residential District if the agricultural use is the only use of the subject property or occupies at least seventy-five percent (75%) of the property or at least four thousand (4,000) square feet. In addition, foods prepared on site or off site may be sold if the principal ingredients are grown or produced on the subject property or within one thousand (1,000) feet of the subject property. No sales shall be made before 8:00 a.m. or after dusk. Food sales shall be licensed by the Cleveland Department of Public Health if such licensing is required in the City's Codified Ordinances.

Farm Stands. Where a farm stand has been permitted by the Board of Zoning Appeals, any such farm stand located in a required front yard area in a One-Family or Two-Family District shall be removed from the front yard or stored inside a building on the premises during that time of the year when the garden or farm is not open for public use. Farm stands shall not occupy more than two percent (2%) of the subject property's land area and, in One-Family and Two-Family Districts, farm stands also shall not exceed two hundred (200) square feet in area on the subject property. A farm stand shall be set back at least eighteen (18) inches from any lot line.

Board of Zoning Appeals Approval. No agricultural produce or related products may be sold from the property of an agricultural use and no farm stand for the sale of such products may be located on the property unless the Board of Zoning Appeals determines, after public notice and public hearing, that the farm stand and sales will meet a community need without adversely affecting the neighborhood. In making this determination, the Board shall consider, among others, the following factors:

- A. The nature of nearby uses of land with respect to their sensitivity to the activity associated with farm stand sales;
- B. The proximity of the farm stand to one (1) family and two (2) family houses;
- C. Traffic volumes on the street on which the subject property is located;
- D. The availability of off-street or on-street parking to serve the farm stand use;
- E. The proximity of other farm stands serving the immediate area; and
- F. The maintenance of a substantially unobstructed view in the set back area which shall include a clear view through the farm stand above a height of three (3) feet.
([Cleveland, OH §337.25](#)).

Minneapolis, Minnesota

Farmstands shall be allowed accessory to a community garden, market garden or urban farm, subject to the following:

The farmstand shall only sell products of the farm or garden occupied and cultivated by the same producer within the City of Minneapolis.

The farmstand shall not exceed a duration of seventy-five (75) days in one (1) calendar year.

Sales shall be limited to between 7:00 a.m. and sunset.

Farmstands must be removed from the premises or stored inside a structure when not in operation.

Only one (1) farmstand is permitted per zoning lot.

One (1) sign may be displayed during the growing season but must be removed from the premises or stored inside a structure at other times of the year. The growing season is considered to be the months of April through October. ([Minneapolis, MN §537.110](#)).

Farmers' Markets

Missoula, Montana

Farmers markets may be established in the city limits, within the following zoning districts; CBD, C, C-1, C-11, D, I-1, I-11 or in a specifically designed or designated city park as authorized by the city council.

A farmers market may not be established in any manner that impedes or impairs emergency fire service ingress and egress to any fire hydrant or building. No farmers market vendor or any vehicle shall be located within fifteen feet (15') of any fire hydrant.

The commodities sold at a farmers market established pursuant to this chapter shall be limited to farm and garden produce, including meat, poultry, fish and dairy products, from within the area of western Montana; Any other commodity must be approved for sale at any table, booth or stall pursuant to the adopted by-laws for the farmers market.

The farmers markets shall be open only as designated by the city council.

...[D]uring the hours of operation of any city approved farmers market or street market operation, no street vending operations on public property or public right-of-way may conduct business within a minimum of three hundred feet (300') of a farmers market or street market boundary, and as specified in the resolutions creating the farmers market or street market unless operating as part of another city approved farmers market or street market operation. Participating members of any farmers market or street market must keep their vending operations within the city council approved boundaries of the street market during the operating hours of the farmers market or street market.

When established, such markets shall operate only during the months of May, June, July, August, September and October of each year.

Each farmers market and each individual stand or booth selling produce, baked goods, meat, poultry, fish, dairy products, or anything else that may be a health concern shall operate according to the rules and regulations of the City of Missoula, the city-county health department and the State of Montana.

A farmers market is generally described as an open space, public or private, or a building with tables, booths and stalls for the various sellers where there is a gathering of people for the purpose of buying and selling things especially items related to farm and garden products. Any person or entity desiring to establish a farmers market shall request an enabling resolution from the city council stipulating the purpose, boundary, days and hours of operation of the farmers market.

A current copy of the by-laws or other operational documents pertaining to the operation of any farmers market shall be placed on file with the city clerk's office and shall be available for public review and inspection. ([Missoula, MT §8.20](#)).

Salem, Ohio

"Farmers Market" means a location where producers congregate in a temporary open air market to offer one or more of the following food items for sale:

Fresh unprocessed fruits or vegetables, and/or
Products of a cottage food production operation as defined by [Ohio statutes].

"Producer," for purposes of this chapter, means a person who raises agricultural products on land owned or leased by themselves.

A "temporary open air market" shall be defined as any retail or wholesale vendor or vendors set up on a one time or recurring basis in any space or location on City property not specifically under the control of any City board or commission, that does not otherwise have a permanent structure designed or permanently modified for retail or wholesale marketing purposes.

A special event Farmers Market shall be established for the sale of seasonal produce, related products and plants. Said Market shall be open only to producers of their own farm produce, plants and products. Organizations may contract with the City of Salem for the purposes of coordinating a Farmers Market subject to all rules and regulations of the Service and Safety Director, City ordinances and applicable state laws.

The location of a Farmers Market shall be at 568-600 East State Street subject to the approval of the City Service and Safety Director in accordance with all local, state and federal laws.

A Farmers Market may be held weekly at 9:00 a.m. to 5:00 p.m. from April 1 through October 30 of each calendar year subject to the approval of the City Service and Safety Director.

An organization responsible for coordinating a Farmers Market shall provide to the City Service and Safety Director a list of vendors who will be participating in a Farmers Market. The list shall contain the name, address, and contact number of each producer or other vendor, products to be sold, dates of participation in a Farmers Market and any other information required by the City Service and Safety Director. Along with the above referenced list, the City Service and Safety Director must be provided a copy of any required food service licenses or other applicable licenses for each producer or other vendor.

Rules and regulations governing the operation of and participation in a Farmers Market shall be established by the City Service and Safety Director and shall be provided to vendors participating in a Farmers Market.

A Farmers Market is limited to the sale of food and food products with the exception of plants and flowers. Incidental services may be offered where the vendor is participating as a “producer” as defined in this Chapter.

Any item sold must meet all federal, state, county and local health codes.

No person shall purchase in a Farmers Market any produce or items for the purpose of reselling the same again in the market or elsewhere in the City during market hours.

The City Service and Safety Director, or his or her designee may prohibit the participation of any producer or other vendor if there is an infraction of the City Health Code, if there is any health, safety or welfare issue as determined by the City Service and Safety Director or his or her designee, if the vendor is selling products or articles expressly prohibited in this Chapter or by regulation, or if the documentation required by this Chapter have not been properly filed with the City Service and Safety Director.

No person shall bring onto or place into any trash receptacle of the City, any garbage, litter or filth not associated with the immediate operation of an authorized vendor’s booth, stall or space at the Farmers Market. Failure to remove the same to the extent that it accumulates at any market space assigned to an authorized vendor may result in the immediate or future revocation of authority to participate in the Farmers Market. ([Salem, OH §727](#)).

Wichita, Kansas

Farmer’s markets, as defined by this Code, shall be allowed as an accessory use in the following zoning districts within the City of Wichita: LC, OW, GC, IP, CBD, LI, GI. The Zoning Administrator may authorize farmer’s markets only in allowed zoning districts, subject to the following restrictions and limitations:

A farmer’s market must be operated by a designated “market operator” who shall obtain a license or licenses as may be required, including Sec. 3.94 of the Code of the City of Wichita. Generally, sales of agricultural, farm, garden aquacultural products, or fruits grown within the State of Kansas by producers or growers and their agents are exempt from licensing under Section 3.95 of the Code of the City of Wichita.

Prior to issuance of required licenses, the market operator shall provide the Zoning Administrator with a site plan that clearly identifies: the approximate dimensions of the area being used, the proximity to buildings, parking lots, right-of-ways or other such areas, and a description of any structure, implement, stand, display prop, or other such items used for the farmer’s market, including signs, banners or other attention getting devices. The Zoning Administrator shall approve the site plan prior to the issuance of required licenses.

A farmer’s market shall not occupy any part of the required off-street parking space for the principal use unless such is indicated on the site plan and approved by the Zoning Administrator.

Vendors whose goods are primarily fresh produce, grains, fruits, garden aquacultural products or other agricultural products, including meat and dairy products shall account for no less than fifty percent of the total number of vendors in any single farmer’s market.

Farmer’s markets are temporary in nature and may operate no more than five (5) calendar days per month only Monday through Friday during the months of April through October and only between the hours of 6 a.m. and 9 p.m., with the exception of farmer’s markets operated on city-owned property.

There shall be no permanent storage allowed upon the site, other than that approved for the principal use.

No additional lighting, other than that approved for the principal use, shall be allowed.

No additional signage, other than that approved for the principal use, shall be allowed; except, as shown in the site plan approved by the Zoning Administrator.

Proposed farmer's markets located within a Community Unit Plan, Protective Overlay or any other approved special district that does not allow the uses of the "LC" Limited Commercial zoning district or more intense shall not be licensed, except as authorized by way of Administrative Adjustment or applicable amendment.

Activities of such nature as to be considered an amusement ride, ride device, circus, carnival, rodeo or wild animal show per the Code of the City of Wichita shall be permitted only when so licensed by applicable governing agencies.

All electrical connections, erections of temporary structures/tents, etc. shall be in compliance with applicable codes and regulations and shall be permitted/licensed as applicable. ([Wichita, KS §III-D.6.jj](#)).



Figure 8-4. Des Moines Farmers Market; Des Moines, IA. Photo courtesy of Downtown Community Alliance

Portland, Oregon

Farmers Markets are allowed ... on a site with an institutional use, and on sites in the IR, R1, and RH zones. The Market may be open up to 70 days per calendar year.

Vendors. [The following] calculations are based on the number of vendors, rather than linear or square footage. Those who do not sell any products or services, such as community groups and music areas, are not included in these calculations.

Category One: Agricultural Producers. At least 50 percent of vendors must be farmers, ranchers, and other agricultural producers who sell food, plants, flowers, and added-value products, such as jams and jellies, they have grown, raised, or produced from products they have grown or raised.

Category Two: Other Food. Up to 50 percent of market vendors may be those who sell food, but do not fit into the first category. This includes sales of wild-caught fish, freshly made food available for immediate consumption on site, cheesemakers who do not raise their own animals, and the like.

Category Three: All Other. Up to 20 percent of market vendors are not required to be related to agriculture or food. For example, a market may have 50 percent of vendors in Category One, 30 percent in Category Two, and 20 percent in Category Three. Another market may have 70 percent of vendors in Category One, 10 percent in Category Two, and 20 percent in Category Three. A third may have 60 percent of vendors in Category One, 35 percent in Category Two, and 5 percent in Category Three.

The market cannot obstruct a path that is part of a required pedestrian circulation system.

A sign in a prominent location that reads “Questions about organic certification? Contact market manager,” and that also includes a phone number for the market manager. ([Portland, OR §33.296.030\(A\)\(3\)c](#)).

Gainesville, Florida

Permit. The city manager or designee is authorized to issue a revocable permit to allow the operation of a farmers market on public or private property for one year at a maximum of two days a week.

Requirements. The applicant for the permit must provide a scaled plan of the proposed site showing the location of any tents in relation to rights-of-way, sidewalks, businesses, entryways to businesses, and any other features that affect accessibility to the site. The plan shall show any tables, display areas, or other equipment that will not be under tents. Tents and other structures or objects associated with the farmers market, such as chairs, tables, or displays, must be located a minimum of five feet from the curb and so positioned as to not obstruct pedestrian passage on any sidewalk. They shall not be positioned within five feet of any crosswalk or fire hydrant or block ingress or egress from any building entrance or emergency exit. They shall be a minimum of 25 feet from any intersection.

Grant or denial. The city manager or designee shall review the documentation provided by the applicant and shall grant or deny the permit within ten days of receiving a completed application. The permit shall be denied if the location and accessibility to the site pose a public safety concern or if the applicant fails to file a complete application and documentation.

Revocation. In the event a permit holder has been found to be in violation of any of the regulations of this section, or of any other city, county, state or federal regulations concerning the operation of the farmers market, including, but not limited to, state or local health requirements, the city manager or designee may, after notice and opportunity for a hearing, revoke the permit. No applicant who has had a permit revoked shall be able to get another permit for one year after the revocation date.

Tents. A tent permit must be obtained from the building official prior to the tent being constructed. A new tent permit must be obtained each year at the time of application for a farmers market permit. Any tent located on public property must be taken down, and the area cleaned, each night, even if sales will occur the next day.

Amplified sound. The farmers market must comply with the [Gainesville noise ordinance] concerning prohibited noise and procuring special permits for noise.

Signs. The farmers market must meet the sign requirements established for special events or sales set forth [in the Gainesville City Code]. Individual tents may have temporary banners, provided the banners extend no wider than the tent and are high enough to allow adequate clearance for people to pass under.

Bond. The city manager or designee shall require the operator of the farmers market to provide a bond for cleanup of the sales area for any farmers market located on public property. The amount of the bond will be determined by the square footage of area used by the market.

Non-members. Sales by individuals who are not members of the farmers market group are considered “peddling” and not permitted under this section. ([Gainesville, FL §30-115](#)).



Figure 8-5. Des Moines Farmers Market; Des Moines, IA. Photo courtesy of Downtown Community Alliance

Food Trucks and Pushcarts

Introduction

Pushcarts (a.k.a. food carts) and food trucks continue to grow in popularity throughout the country. Food trucks and pushcarts may sell prepackaged food or food cooked in a commercial kitchen, while some food trucks offer fare cooked from scratch in an on-board kitchen. These are not your father's hot dog wagons. The latest styles of food trucks, for example, include large vehicles with restaurant-grade cooking equipment and sanitation systems for preparing gourmet selections. High-end food trucks can cost as much as \$300,000 when purchased new and fully equipped. (National League of Cities; Gall and Kurcab, 2012).

Food trucks have seen amazing growth across the nation. They are seen as part of a rapidly-emerging culinary scene in many of America's largest cities, and contribute to the image of these cities as vibrant urban environments. Food trucks and pushcarts can bring food options to areas lacking restaurants, including business parks, apartment complexes and some retail areas. Such retail areas receive the added benefit of drawing new customers to the stores. They can also bring fresh produce and other grocery-type items to areas that are considered "food deserts." They also provide opportunities for entrepreneurs who may not be able to afford the start-up costs of a traditional restaurant. Contrary to the myth that mobile vending poses a threat to public health, modern street vendors generally must meet the same public health standards as brick-and-mortar establishments. (Morales and Kettles, 2009).

Most codes have not been updated to reflect the current realities of mobile food vending. These laws, when drafted, were specifically aimed at ice cream trucks and hot dogs carts. At the time the response was simply to severely restrict mobile vending, or prohibit it altogether. For example, several cities' existing regulations prohibit food trucks from stopping at a location unless there are one or more customers waiting. For the rolling restaurants that many food trucks have become, it takes time to set up before serving customers, and time to break down once the last customer leaves.



Figure 9-1. Powered by Fries Food Truck; Des Moines, IA. Photo courtesy of Zachary Mannheimer

Land-Use Concerns

Several criticisms are often leveled at food trucks and pushcarts. One common criticism is that they cause congestion on sidewalks and in parking areas where trucks are located. While it is true that it is usually necessary for customers of mobile vendors to line up on sidewalks and in other public areas, anyone who has watched customers of food trucks queue to place their order will notice that they almost always form a single-file line along the edge of the sidewalk or in other areas to allow pedestrians to pass. It is also in the interest of mobile vendors to see that sidewalks don't become congested, in order to maintain good relations with businesses and customers. In this case, common sense trumps the need for regulation.

Another common concern is that mobile vending results in litter problems as customers discard wrappers and napkins after consuming their food. Most municipalities, however, require mobile vendors to provide trash receptacles. Moreover it is again in the interest of the vendor to maintain good relationships in neighborhoods they frequent, and so most make special efforts to leave an area at least as clean as it was when they arrived.

Perhaps the most often cited reason for restrictive regulations is that mobile vendors are perceived to have an unfair competitive advantage over brick-and-mortar restaurants and grocers, resulting in long-term harm to those businesses. In *Seven Myths and Realities About Food Trucks*, Gall and Kurcab (2012) list several disadvantages that mobile vendors face that offset their perceived advantages. They include:

- Mobile vendors are at the mercy of the weather;
- Seating cannot be provided by mobile vendors;
- With no fixed location, customer loyalty is more difficult to build;
- By necessity, mobile vendors must offer a much smaller selection;
- Mobile vendors can serve only a fraction of the customers of a restaurant.

Comparing mobile vendors to brick-and-mortar restaurants is an apples vs. oranges comparison. They appeal to different clientele, generally in different locations, with different offerings. In fact, restaurateurs in many cities have started their own food truck businesses in order to market their restaurants, or to experiment with new offerings to reach different customers.

Existing Regulations Survey

All regulations surveyed subject food trucks and pushcarts to a licensing scheme.

The Iowa Court of Appeals recently upheld Iowa City's system for issuing mobile vending cart licenses. The city offers a limited number of permits to operate downtown, and uses a matrix to score applications on several criteria, including successful experience working in other communities. *Browne v. City of Iowa City*, 846 N.W.2d 529 (Iowa App. 2014).

Other common provisions include:

- Mobile food vendors are often limited to doing business on specific streets or in defined geographic areas of the city.
- Some cities require the mobile vendor to locate on a lot that has a principle use in place (if locating on private property); in other words, the mobile vendor cannot be the only existing use of the lot.
- Permissible hours of operation are generally specified, and mobile food vendors are often allowed to remain in a single location only for a specified period of time.
- Mobile food vendors are generally required to locate a specified distance away from restaurant entrances and driveways.

- Mobile vendors must not impede either pedestrian or vehicular traffic.
- Use of signage separate from what may appear on the side of the cart or truck itself is generally prohibited.
- Use of sound systems for any purpose is generally prohibited.
- Trash receptacles must be provided by the vendor.
- Liability insurance is generally required as part of the licensing scheme.

Code Language

Food Trucks

Definitions

Raleigh, North Carolina

Food Truck. A licensed, motorized vehicle or mobile food unit which is temporarily stored on a premise where food items are sold to the general public. ([Raleigh, NC §6.4.10 \(D\)](#)).

Oakland, California

Vehicular food vending. The sale of ready-to-consume prepared foods from trucks located on private property on a semi-permanent basis during hours of operation. Vehicular food vending generally has the following characteristics:

1. Food is ordered and served from a take-out counter that is integral to the catering truck;
2. Food is paid for prior to consumption;
3. Catering trucks from which the food is sold typically have a take-out counter and space for customer queuing;
4. Food and beverages are served in disposable wrappers, plates or containers; and
5. Food and beverages are prepared and sold for off-site consumption.

Vehicular food vendor - A person who is engaged in “vehicular food vending. ([Oakland, CA §8.09.010-§8.09.030](#)).

Greensboro, North Carolina

Mobile food unit. A vehicle-mounted, vehicle-towed, or vehicle-carried, food service establishment designed to be readily moved and which is defined in [North Carolina Administrative Rules].

Mobile food vendor. A person or persons that prepare or serve food and/or beverages for sale to the general public on a recurring basis from a vehicle-mounted, vehicle-towed or vehicle-carried food service establishment designed to be readily moved and shall be either a motorized mobile food vendor, pushcart mobile food vendor, nonprofit on-premises mobile food vendor, or a nonprofit off-premises mobile food vendor.

Motorized mobile food vendor. A person or persons that prepare or serve food and/or beverages for sale to the general public on a recurring basis from a “mobile food unit” as defined in [North Carolina Administrative Rules]. ([Greensboro, NC §26-231](#)).

Licensing

Greensboro, North Carolina

The permit required shall be issued only after the issuance of an appropriate license in accordance with... this Code. Application shall be accompanied by payment of a fifty-dollar permit fee annually for each mobile food vendor, motorized or mobile food vendor, pushcart for which the permit is sought.

The application for a permit shall include:

The name, home and business address of the applicant, the name and address of the owner of the vending business, or of the pushcart to be used in the operation of the vending business if other than the applicant;

A description of the types of food and beverages to be sold;

A description (including the size) and a photograph of any pushcart, trailer, or vehicle to be used in the operation of the business, including, if applicable, the license and registration number of any vehicle used in the operation of the business to restock or transport a pushcart;

Two (2) prints of a full-face photograph, taken not more than thirty (30) days prior to the date of the application of any person who will sell or offer for sale any food or beverage within the city;

A copy of any approval required by the Guilford County Health Department pursuant to the rules governing the sanitation of restaurants and other food handling establishments... and any other approval required by a governmental unit for the preparation and service of food;

Proof of an insurance policy, issued by an insurance company licensed to do business in the State of North Carolina, protecting the permittee and the city from all claims for damages to property and bodily injury, including death, which may arise from operations under or in connection with the permit. Such insurance shall name the city as additional insured and shall provide that the policy shall not terminate or be canceled prior to the expiration date without thirty (30) days' advance written notice to the city. Such insurance shall afford minimum limits of one hundred thousand dollars (\$100,000.00) per person bodily injury, three hundred thousand dollars (\$300,000.00) per occurrence bodily injury, and twenty-five thousand dollars (\$25,000.00) per occurrence property damage.

All items listed in the permit application are required annually for renewal of permit. ([Greensboro, NC §26-231 -§26-243](#)).

Locational Restrictions

Oakland, California

Streets. Vehicular food vending shall be permitted on private property located on Fruitvale Avenue and High Street between Interstate 880 to the west and Foothill Boulevard to the east, Foothill Boulevard between 19th Avenue to the north and MacArthur Boulevard to the south, International Boulevard between First Avenue to the north and 105th Avenue to the south, and San Leandro Street between Fruitvale Avenue to the north and 98th Avenue to the south. East 12th Street between 4th Avenue to the west and 23rd Avenue to the east, 14th Avenue between East 11th Street in the south and East 19th Street in the north. Within the program permitted area, vehicular food vendors shall be required to locate on private property with an address on and visible from the above-listed public streets.

Zoning Districts. On the streets listed above, vehicular food vending shall be permitted only in the C-20 Shopping Center Commercial, C-28 Commercial Shopping District, C-30 District Thoroughfare Commercial, C-40 Community Thoroughfare Commercial, M-20 Light Industrial, M-30 General Industrial, and M-40 Heavy Industrial zoning districts. Vehicular food vending shall not be permitted in any other zoning district.

No vehicular food vending use shall be located or maintained on public property inconsistent with any other city of Oakland regulations. ([Oakland, CA §8.09.010-§8.09.030](#)).



Figure 9-2. The Spot Food Truck at Des Moines Social Club; Des Moines, IA. Photo courtesy of Ben Norris

Raleigh, North Carolina

Food trucks can only be located on a lot containing a principal building or use and the maximum number of food trucks per lot is limited as follows:

- Maximum of 2 food trucks on lots of one-half acre or less;
- Maximum of 3 food trucks on lots between one-half acre and 1 acre; and
- Maximum of 4 food trucks on lots greater than 1 acre.

Food trucks must be located at least 100 feet from the main entrance to any eating establishment or similar food service business, 100 feet from any outdoor dining area and 50 feet from any permitted food vending cart location, as measured from the designated location on the lot accommodating the food truck. In the event that one or more of the aforementioned uses locates within the minimum separation requirement subsequent to food truck location being approved, nothing shall prohibit the property owner from continuing to operate at the approved location until the food truck permit has expired.

Food trucks must be located at least 5 feet from the edge of any driveway or public sidewalk, utility boxes and vaults, handicapped ramp, building entrance, exit or emergency access/ exit way, or emergency call box and must not locate within any area of the lot that impedes, endangers, or interferes with pedestrian or vehicular traffic. Food trucks must be located a minimum distance of 15 feet in all directions of a fire hydrant. ([Raleigh, NC §6.4.10\(D\)](#)).

Greensboro, North Carolina

No vendor selling from a mobile food unit shall:

Vend within three hundred (300) feet of any church, while such church is holding a religious service.....

Vend on any paved or traveled portion of a street or on any sidewalk where vending is otherwise prohibited or located in any city-owned parking space, or any handicapped space, fire lane, or loading area; or any grass or landscaped area....

Vend within fifty (50) feet of the main entrance of a restaurant during the restaurant's business hours, unless the restaurant gives written permission to the vendor.

Vend within five (5) feet from any driveway, sidewalk, utility box or vault, handicapped ramp, building entrance or exit or emergency call box.

Vend within ten (10) feet of any fire hydrant or fire escape.

Pour waste products, (including hot water and drainage from coolers) down a storm drain. ([Greensboro, NC §26-231 -§26-243](#)).

General Restrictions

Raleigh, North Carolina

Food trucks and associated seating, if any, must not occupy parking spaces required to fulfill the minimum requirements of the principal use, unless the principal use's hours of operation do not coincide with those of the food truck business.

Food trucks and associated seating, if any, must not occupy parking spaces that may be leased to other businesses and uses to fulfill their minimum parking requirements.

Food trucks must not occupy any handicap accessible parking space.

No free-standing signage or audio amplification is allowed as part of the food trucks vending operation. Outdoor seating areas associated with a food trucks vending operation are only permitted on lots 2 acres or greater in size.

Hours of operation are limited to the hours between 6 AM and 3 AM unless the designated location on the lot accommodating food truck is located within 150 feet of the property line of a single-unit or two-unit dwelling in which case the hours of operation are limited to the hours between 7 AM and 10 PM.

The food truck operator or their designee must be present at all times except in cases of an emergency.

Food trucks and associated outdoor seating must be removed from all permitted locations during impermissible hours of operation and must not be stored, parked, or left overnight on any public street or sidewalk.

The food truck vendor is responsible for the proper disposal of waste and trash associated with the operation. City trash receptacles are not to be used for this purpose. Vendors must remove all waste and trash from their approved location at the end of each day or as needed to maintain the health and safety of the public. The vendor must keep all areas within 5 feet of the truck and any associated seating area clean of grease, trash, paper, cups or cans associated with the vending operation. No liquid waste or grease is to be disposed in tree pits, storm drains or onto the sidewalks, streets, or other public space.

Under no circumstances can grease be released or disposed of in the City's sanitary sewer system. With the exception of allowable outdoor seating areas, all equipment required for the operation must be contained within, attached to or within 3 feet of the food truck and all food preparation, storage, and sales/distribution made in compliance with all applicable County, State and Federal Health Department sanitary regulations.

A zoning permit must be obtained by the property owner (as listed in the Wake County tax records) for any lot proposed to accommodate one or more food trucks. If at any time evidence is provided that the lot is being used other than in compliance with these regulations, the zoning permit will be rendered null and void, and the owner punished for the violation. This zoning permit must be required to be renewed annually.

A food truck permit must be obtained for food truck business and all required Wake County and City permits and licenses must be clearly displayed on the food truck. A copy of the approved food truck permit and zoning permit shall be kept in the food truck. The approved food truck as shown on the food truck permit shall be clearly delineated on the improved surface. Prior to the issuance of the food truck permit, the vendor must provide evidence of having obtained a City Business License, NC Sales and Use Certificate for collecting and paying the proper sales taxes and prepared meals taxes, a Wake County Environmental Services –Vending Permit and a means for the disposal of grease within an approved grease disposal facility. This food truck permit is required to be renewed annually. If at any time evidence of the improper disposal of liquid waste or grease is discovered, the food truck permit will be rendered null and void and the food truck business will be required to cease operation immediately. The operator of the food truck business will be punished for the violation.

If at any time, Wake County revokes or suspends the issued food vending permit, the City permit for the food truck business will be revoked or suspended simultaneously. ([Raleigh, NC §6.4.10\(D\)](#)).

Chapel Hill, North Carolina

Temporary connections to potable water are prohibited. All plumbing and electrical connections shall be in accordance with the State Building Code.

Grease must be contained and disposed of in an approved grease receptacle located at the associated commissary.

Grey water must be contained and disposed of in the sanitary sewer at the associated commissary. Food trucks must have the following fire extinguisher on board during hours of operation: minimum Class 2A, 10B, and C rated extinguisher. If food preparation involves deep frying, a Class K fire extinguisher must also be on the truck. Fire extinguishers shall be maintained pursuant to National Fire Protection Association (NFPA) standard 10.

A food truck vendor shall not operate the food truck as a drive-in window.

The noise level from the food truck motor and generator must comply with the town's noise ordinance.

A trash receptacle shall be provided for customers.

If the food truck is proposed to operate after dark, the food truck vendor shall provide appropriate lighting.

No signage shall be allowed other than signs permanently attached to the motor vehicle and a portable menu sign no more than six (6) square feet in display area on the ground in the customer waiting area. ([Chapel Hill, NC §§10-66—10-73](#)).

Greensboro, North Carolina

No mobile food vendor shall:

Vend between the hours of 3:00 a.m. and 7:00 a.m. of the following day.

Leave any pushcart or mobile food unit unattended on a city right-of-way or street.

Store, park or leave any pushcart or mobile food unit overnight on any right-of-way or sidewalk.

Sell food or beverages for immediate consumption unless the vendor has available for public use their own, or a public, litter receptacle which is adequate and available for the vendor's patron's use and being no more than ten (10) feet distant from the pushcart or mobile food unit.

Leave any location without first picking up, removing and disposing of all trash or refuse including products spilled on the sidewalk within twenty (20) feet of the push cart location.

Allow any items relating to the operation of the vending business to be placed anywhere other than in, on or under the pushcart except that pushcart mobile food vendors may place hand-squeezed lemonade/orangeade manufacture and sales on the top surface of a single cooler.

Set up, maintain or permit the use of any table, crate, carton, rack, or any other device to increase the selling or display capacity of the pushcart.

Solicit or conduct business with persons other than pedestrians.

Sell anything other than that which the vendor is licensed to vend.

Sound or permit the sounding of any device which produces noise, or use or operate any loudspeaker, public address system, radio, sound amplifier or similar device to attract the attention of the public. All mobile food vendors shall be subject to and comply with the standards of the City of Greensboro Noise Ordinance, "Offenses of Unreasonable or Disturbing Sound", the City of Greensboro Outdoor Lighting Ordinance and other applicable City of Greensboro rules and regulations. ([Greensboro, NC §26-231 -§26-243](#)).



Figure 9-3. The Spot Food Truck at Des Moines Social Club; Des Moines, IA. Photo courtesy of Ben Norris

Code Language

Pushcarts

Definitions

Mobile Vending Cart - A nonmotorized structure on wheels that is easily moved and is used for vending. ([Iowa City, IA §9-4-16](#)).

Pushcart - A piece of vending equipment with a maximum length of eight feet, maximum depth of six feet, and a maximum height of eight feet. Pushcarts are intended to store all materials and merchandise related to the vending activity, and are easily moved by a person or vehicle.

Pushcart food vendor - a person who owns and operates a business vending from a pushcart. No vendor shall be issued more than one city of Oakland Pushcart Food Vending Permit.

Vending - The business of selling or causing to be sold any of the following items: produce, prepared foods and beverages, prepackaged foods and non-alcoholic beverages.

Vending equipment - Includes but is not limited to any materials, merchandise, tools, carts, tables, or other items owned by, in the possession of, or associated with both the city of Oakland and the licensed pushcart food vendor. ([Oakland, CA §5.49](#)).

Pushcart - Any mobile piece of equipment or vehicle from which a pushcart mobile food vendor conducts sales and is defined in North Carolina Administrative Code. ([Greensboro, NC §26-231 -§26-243](#)).

Pushcart – a mobile piece of equipment or vehicle which serves hot dogs or foods which have been prepared, pre-portioned, and individually pre-wrapped at a restaurant or commissary (North Carolina Administrative Code).

Licensing

Oakland, California

The building division shall issue up to sixty (60) permits. Permit issuance will be prioritized as follows:

Holders of Alameda Health Agency, Environmental Health Services Health Permits will be given priority for available permits.

Permit applications shall be accepted and deemed complete on a first-come, first-served basis.

Upon issuance of sixty (60) permits, the Building Division will accept applications on a first-come, first-served basis for entry onto a permit waiting list. Should a permit be revoked or otherwise become available, the first applicant on the permit waiting list shall be contacted immediately and offered the available permit.

At no time shall more than sixty (60) permits be active.

The permit applicant shall obtain the permit within fourteen (14) days of permit availability or said permit application shall expire. ([Oakland, CA §5.49](#)).

Location Restrictions

Oakland, California

Pushcart food vending shall only occur in the following geographic areas of Oakland:

Sidewalks. Pushcart food vending shall be permitted on public sidewalks located on Fruitvale Avenue and High Street between Interstate 880 to the south and Foothill Boulevard to the east, Foothill Boulevard between 19th Avenue to the west and Macarthur Boulevard to the east, International Boulevard between First Avenue to the west and 105th Avenue to the east, San Leandro Street between Fruitvale Avenue to the north and 98th Avenue to the south, East 12th Street between 4th Avenue in the west and 23rd Avenue in the east, 14th Avenue between East 11th Street in the south and East 19th Street in the north. Vendors may transport pushcart vending equipment throughout the city of Oakland. However, vending, including selling, offering for sale, or soliciting offers to purchase food, is restricted outside of the streets and zones identified in this section.

Zones. Along the street sections described above, pushcart food vending shall be permitted in the C-20 Shopping Center Commercial, C-28 Commercial Shopping District, C-30 District Thoroughfare Commercial, C-40 Community Thoroughfare Commercial, M-20 Light Industrial, M-30 General Industrial, and M-40 Heavy Industrial zoning districts.

Vendors may vend at any location within permitted zones and along permitted sidewalks. However, vendors shall maintain a one hundred (100)-foot distance between one another while selling, offering for sale, or soliciting offers to purchase food.

The pushcart food vendor shall not locate within two hundred (200) feet of any primary or middle school or public park.

Pushcart food vendors shall not vend or locate equipment adjacent to on-street parking spaces reserved for disabled access, driveways, entries and exits from buildings or facilities, or adjacent to street intersections where equipment may obstruct vehicle and pedestrian sight distance.

Pushcart food vendors may vend at assemblies within two blocks of the permitted locations.

Pushcart food vendors may travel along any public right-of-way within the city of Oakland. However, vending shall be limited to the permitted locations. Pushcart food vendors shall not be allowed to vend, expose or otherwise advertise merchandise, solicit sales, or loiter outside of the permitted locations. ([Oakland, CA §5.49](#)).

Greensboro, North Carolina

No vendor selling from a pushcart shall:

Vend within ten (10) feet of an entranceway to any building or fifty (50) feet from an open business.

Vend within fifty (50) feet of any driveway entrance to a police or fire station, or within ten (10) feet of any other driveway or of any alley.

Vend within ten (10) feet of the crosswalk at any intersection.

Vend within twenty (20) feet of any bus stop sign.

Vend within ten (10) feet of any fire hydrant or fire escape.

Allow the pushcart or any other item to rest upon, against or hang from any building or structure lawfully placed on public property, without the owner's permission.

Vend within one hundred (100) feet of any other pushcart.

Vend within fifty (50) feet of a sidewalk café that is open.

Pour waste products, (including hot water and drainage from coolers) down a storm drain.

Leave less than five (5) feet of unobstructed sidewalk for pedestrian passage. All applicable regulations pursuant to the Americans with Disabilities Act must be met. ([Greensboro, NC §26-231 -§26-243](#)).

General Restrictions

Oakland, California

Vending shall only occur within the hours of seven a.m. to ten p.m. Monday through Friday, and eight a.m. to ten p.m. Saturday and Sunday. The city of Oakland may require additional restrictions to abate nuisances.

All pushcart food vendors shall adhere to designated time and day requirements and shall be allotted one hour set-up and one hour breakdown and travel time before and after stated selling hours.

No pushcart food vendor shall sell, offer for sale, or solicit offers to purchase from any automobile or truck.

Pushcart food vendors shall engage in their activities in designated areas of the city of Oakland in such a manner that at all times there shall remain an open pedestrian passage of at least six feet in width, as measured from the line perpendicular to the pushcart food vending activity and end of walkway, and consistent with the Americans with Disabilities Act.

Vending equipment and merchandise shall occupy the pushcart only and shall not be stored, displayed or otherwise placed in the public right-of-way or on public property.

Vending equipment shall be regulated in the following manner:

The pushcart food vending permit shall be affixed to the pushcart in a readily visible location at all times.

Vending equipment, merchandise offered for sale or otherwise associated with the pushcart food vendor shall not block, impede or in any way hamper ingress or egress for parked vehicles, pedestrian movement or cause or allow to cause any hazard to pedestrians.

Vending equipment shall be easily moved and shall be self-supporting; at no time shall vending equipment be attached, tied or locked to trees, hydrants or any other permanent vertical structure or bench.

Any vending equipment shall have the maximum length of eight feet, maximum depth of six feet and a maximum height of eight feet.

Up to two signs may be attached to the pushcart, with a maximum aggregate display surface of five square feet per sign.

The pushcart vending equipment shall be entirely self-sufficient in regards to gas, electricity, water, and telecommunications.

No tables, chairs, fences or other site furniture (temporary or otherwise) are permitted in conjunction with the pushcart vending equipment. ([Oakland, CA §5.49](#)).

Raleigh, North Carolina

Vendors shall maintain their sales location in a clean, hazard-free condition; failure to do so and failure to clean the vending location of waste shall be cause for revocation or suspension of permit.

Vendors shall agree to defend, indemnify and hold harmless city, its offices and employees from any and all damages or injury to persons or property proximately caused by any act or omission of the vendor or any hazardous or negligent conditions maintained at their sales location.

Vendors shall not discharge materials onto the sidewalk, gutters, or storm drain. ([Raleigh, NC §6.4.10\(D\)](#)).

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https://www.municode.com/library/nc/greensboro/codes/code_of_ordinances?nodeId=COOR_CH26STSI_ARTVIIISESTSI_DIV2MOFOVE

Oakland, CA §5.49 and §8.09.010-§8.09.030

http://library.municode.com/HTML/16308/level2/TIT8HESA_CH8.09VEFOVE.html

Portland, ME §§19-1—19-45

<http://portlandmaine.gov/DocumentCenter/Home/View/1085>

Raleigh, NC §6.4.10(D)

<http://www.raleighnc.gov/content/extra/Books/PlanDev/UnifiedDevelopmentOrdinance/#!/153/>

Wilmington, NC §18-340(c)(8)

https://www.municode.com/library/nc/wilmington/codes/code_of_ordinances?nodeId=PTIITECO_CH18LADECO_ART6SUDERE_DIVIITEUS



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