

# Water Access for Urban Agriculture

## *Essential Farming for Communities*

### *Overview – Urban Farming’s Importance*

Fresh produce is vital for a community’s health and nutritional needs. Oftentimes, the vast majority of produce is imported into urban and suburban areas, and that additional travel time can leave food with less nutritional value. That’s where urban farming steps in, offering a fresh, sustainable alternative.

Urban farming offers numerous benefits to communities, such as attempting to reduce food deserts. Food deserts are typically defined as areas that have low income and low access to grocery stores or other fresh food sources. Particularly in urban areas that qualify as a food desert, some households only have close and reliable access to fast food restaurants or convenience stores, which often cannot meet their nutritional needs.



When urban farms are able to establish themselves in or near a food desert, they have the opportunity to provide essential services to communities. From hosting educational programs to farmer’s markets, urban farms can engage community members with agriculture in a way that some of them may not have considered before.

In Northern Indiana, food deserts are primarily located in the Calumet region, as well as areas around Michigan City and South Bend. Nationwide, the USDA estimates that 23.5 million people live in areas with unreliable food access, and 15.8 million children face food insecurity.

### *Water Access Challenges*

Crops need water to grow, but some urban farmers face roadblocks trying to access enough water for their agricultural needs. City permits or other legal challenges may prevent growers from operating their farms until they have approval.

When an urban farmer needs additional water or has no preexisting water connections on their property, they have a few options for their source. They can access water hookups by connecting to fire hydrants, catching rainwater or borrowing existing water lines from neighbors.

In Chicago, a popular water source for urban growers is fire hydrants, which have seasonal permits but allow for increased water access. However, getting hydrant access is a major hurdle to get over for many urban farmers. The permit process is strenuous and costly. Organizations such as Advocates for Urban Agriculture strive to support urban farmers in Chicago to ensure that the city does not try to ignore or deceive the growers.

While not directly related to water access, the Environmental Quality Incentives Program (EQIP) within the 2018 Farm Bill offers advanced funding for farmers who qualify as historically underserved in order to support material costs, which could include accessing a reliable water source. A farmer is considered historically underserved if they are a U.S. veteran, a beginner, socially disadvantaged or have economically limited resources. EQIP may benefit urban farmers seeking additional financial support to fully invest in their farm.

## *Urban Farming Methods*

Many urban farms are adopting sustainable growing practices such as aquaponics and hydroponics. These methods are typically designed to use less water in the growing process — up to 90% less water than traditional farming methods!

In aquaponics, plants are fed by water filled with nutrients from fish excrement. The fish live in a tank that carries their water through a filter and into a separate tank with the plants. The cycle then continues as the water filters back into the fish tank.

Hydroponics uses a water-based nutrient solution instead of soil; however, there are no fish involved unlike aquaponics. While both methods have relatively high start-up costs, a hydroponics system is preferable for smaller spaces, which may be more common on an urban farm compared to a rural farm.

## *Urban Farming in Action*

At Purdue University, the Engineering Projects in Community Service (EPICS) program offers undergraduate students the opportunity to explore their interests through volunteer work. During the 2022–23 academic year, the Urban Farming team was one EPICS group out of several dozen for students to choose from. Their initial goal was to work on rooftop gardens with an urban farm in Gary, In.; however, technical issues led them to redirect their efforts toward creating an aquaponics system for Jovial Family Farms in the Broad Ripple neighborhood of Indianapolis.

Jovial Family Farms offers fresh food and educational programs to senior citizens and the surrounding community. Co-founders Drs. Brian and Bobbie Jellison identified during the COVID-19 pandemic that many senior citizens faced isolation from their friends, family and community in order to protect them from getting sick. Therefore, the Drs. Jellison established the farm as a way for senior citizens to reconnect with their community while learning new skills.

To support the farm, the Purdue EPICS team worked to develop an aquaponics system alongside a community outreach initiative to educate the community about aquaponics and urban farming as a whole.

In Indiana, most urban farms are located in Gary/the Calumet area, Indianapolis and South Bend. The organization Urban Farm Collective offers a [search engine](#) that locates urban farms and gardens in your preferred city.

## *Notes/References*

### [Urban Ag Water Access Resources](#)

Special thanks to 2022-23 EPICS Urban Farming Financial Officer Carly Kuva for sharing information about her team's work



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July 2023  
Version 1