Saint Louis University Journal of Health Law & Policy

Volume 10
Issue 2 *Innovations in Public Health*

Article 3

2017

Addressing Urban Health and Food Policy Through Resiliency Food Hubs: A Case Study from Washington, D.C.

Dwane Jones
University of the District of Columbia, dwane.jones@udc.edu

ADDRESSING URBAN HEALTH AND FOOD POLICY THROUGH RESILIENCY FOOD HUBS: A CASE STUDY FROM WASHINGTON, D.C.

DWANE JONES*

ABSTRACT

By 2050, the world's population is projected to exceed nine billion people. Most of this growth is expected to materialize in urban and urbanizing areas, potentially further increasing disparities amongst populations in these environments. Historically, urban environments have lacked ample opportunities for providing locally grown, community-operated, small-scale urban farms that help to minimize food insecurity. Similarly, urban environments have lacked resiliency respective to small-scale farm operations. As a result, many public health issues and related policies are either antiquated or non-existent when it comes to providing opportunities for food security and resiliency in urban environments.

This article suggests several key considerations for integrating health law and policy into practice in urban environments for the primary purpose of advancing urban agriculture and, consequently, access, positive health outcomes, and resiliency. This is achieved through understanding five primary needs: (1) need for policy changes, (2) need for profit, (3) need for performance, (4) need for proprietary technology, and (5) need for people. A Washington, District of Columbia, case study is used to illustrate these considerations.

* Director of the Center for Sustainable Development and Resilience; University of the District of Columbia, College of Agriculture, Urban Sustainability, and Environmental Sciences.

I. INTRODUCTION

Washington, District of Columbia (D.C.), like many other urban environments, is economically bifurcated. D.C. is divided into eight wards (or sections, primarily for purposes of elections).[1] Average annual income varies greatly across the wards. For example, the average annual income for Ward 3 exceeds $116,000.[2] Ward 3 also includes one of the most educated sectors of the city.[3] The average annual income for Ward 7 (the Ward to which the case study in this article refers) is less than $60,000.[4] Ward 7 also happens to have the highest incidences of poverty, the lowest percentage of access to fresh produce, and the greatest need for policies that catalyze urban agriculture.[5] It is from this context the University of the District of Columbia (UDC) and its partners birthed and developed the East Capitol Urban Farm (ECUF).

II. VACANT LAND

The ECUF is a multi-faceted, three-acre, urban agriculture-focused, community health project located at 5901 East Capitol Street Southeast, Washington, D.C. (Ward 7).[6] Back in 2014, the D.C. Housing Authority (DCHA) released a request for proposals for an entity to acquire several acres of vacant land in Southeast Washington, D.C.[7] The parcel was part of a larger planned development in which a Wal-Mart[8] was to be built.[9] A total of five

1. GOV'T OF D.C. OFFICE OF PLANNING, *Wards in the District of Columbia*, DC.GOV, https://planning.dc.gov/page/wards-district-columbia (last visited Mar. 14, 2017). *See also* D.C. CODE § 1-1011.01(c) (2016).

2. CHAYA MERRILL ET AL., CHILD. NAT'L HEALTH SYS., D.C. HEALTHY COMMUNITIES COLLABORATIVE, D.C. COMMUNITY HEALTH NEEDS ASSESSMENT 10 (June 2016).

3. GOV'T OF D.C. OFFICE OF PLANNING STATE DATA CTR., KEY DEMOGRAPHIC INDICATORS DISTRICT OF COLUMBIA AND THE UNITED STATES AMERICAN COMMUNITY SURVEY 5-YEAR ESTIMATES 2011-2015 (2016).

4. *DC 2012 Ward Profile – Well-Being*, NEIGHBORHOODINFO DC, http://www.neighborhoodinfodc.org/wards/Nbr_prof_wrdb7.html (last visited Mar. 6, 2017).

5. MERRILL ET AL., *supra* note 2; ALEXANDRA ASHBROOK ET AL., WHEN HEALTHY FOOD IS OUT OF REACH: AN ANALYSIS OF THE GROCERY GAP IN THE D.C. 3 (2010). *See also* D.C. HEALTHY COMMUNITIES COLLABORATIVE, D.C. COMMUNITY HEALTH NEEDS ASSESSMENT 10 (June 2016).

6. Candace Y.A. Montague, *Five Reasons to Love the East Capitol Urban Farm*, CAPITAL CMTY. NEWS, http://www.capitalcommunitynews.com/content/five-reasons-love-east-capitol-urban-farm (last visited Mar. 6, 2017).

7. E. CAPITOL URBAN FARM, EAST CAPITOL URBAN FARM PROJECT: A UDC PARTNERSHIP EFFORT (2015), https://www.epa.gov/sites/production/files/2015-10/documents/ward_7_urban_farm_aquaponics_factsheet_final_august_2015.pdf. *See also Spring FY 2014 Consolidated Request for Proposals Documentation*, DEP'T OF HOUSING & CMTY. DEV., https://dhcd.dc.gov/node/807922 (last visited March 9, 2017). *See also infra* Figure 1.

8. *See infra* Figure 1 ("Mixed Use/Retail Development Site").

9. D.C. STATE DATA CTR. OFFICE PLAN., INDICES: A STATISTICAL INDEX TO DISTRICT OF COLUMBIA GOVERNMENT SERVICES 209 (17th ed. 2016).

acres of land was available for temporary urban farming across the street from the planned Wal-Mart site (under construction at the time of planning the ECUF).[10] Through a series of discussions, UDC and another entity were selected to "farm" the available land. UDC would farm the lower three acres of property[11] adjacent to the Capitol Heights metro stop.[12] Another entity would farm the upper two acres west of the UDC site. Together, these projects, each under a short-term lease of three years, would form the framework for community food access through the lens of urban agriculture.[13] This article will focus only on UDC's efforts in developing the three acres of vacant property.

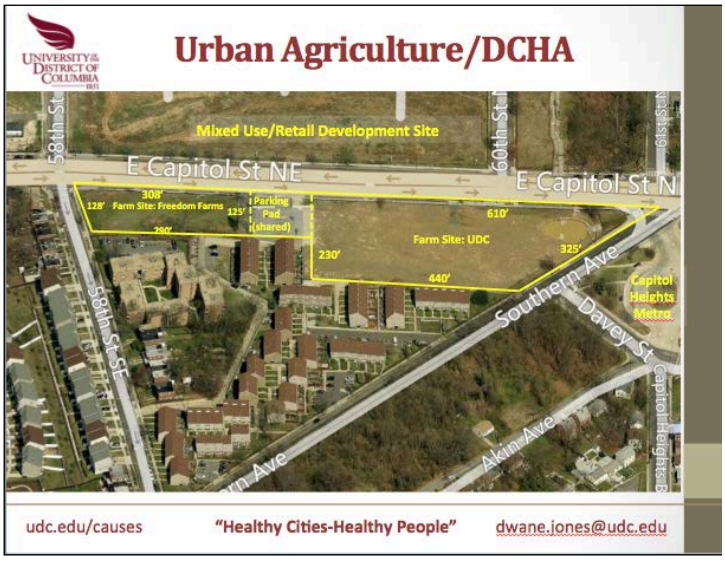

Figure 1: East Capitol Urban Farm (pre-development)

10. *See generally* Dottie Yunger, *The East Capitol Urban Farm—In the Heart of DC*, NEW WORLD OUTLOOK MAG. (May/June 2016), http://www.umcmission.org/find-resources/new-world-outlook-magazine/2016/may/june/0707heartofdc.

11. *See infra* Figure 1 ("Farm Site: UDC").

12. *Center for Sustainable Development*, UNIV. D.C., http://dev.udc.edu/college_of_urban_agriculture_and_environmental_studies/center_for_sustainable_development (last visited Mar. 29, 2017).

13. *Causes-UDC – 2015 Sustainability Award Winner*, DEP'T ENERGY & ENV'T (2015), https://doee.dc.gov/page/causes-udc-2015-sustainability-award-winner.

III. VISION AND CHALLENGES

By this time, UDC had developed a *decentralized* model for urban food hubs consisting of the following components: (1) sourcing fresh produce in the urban environment; (2) food preparation in the urban environment; (3) food distribution in the urban environment; and (4) resource recovery in the urban environment.[14] UDC's food hub concept is distinctly different from a United States Department of Agriculture Food Hub in that the latter is a *centralized* model, where large quantities of food can be taken to a central facility that serves as a distribution hub.[15] UDC's decentralized food hub model is a four-pronged approach distributed across eight Wards in D.C., each Ward constituting its own self-supportive, yet networked hub.[16] The ECUF would become the first food hub.

Figure 2: UDC's Urban Food Hubs Concept

14. Sabine O'Hara, *The Urban Food Hubs Solution: Building Capacity in Urban Communities*, METROPOLITAN U. J., Winter 2017, at 69, 70, 74 [hereinafter *Urban Food Hubs Solution*].

15. *See* JAMES MATSON ET AL., U.S.D.A., THE ROLE OF FOOD HUBS IN LOCAL FOOD MARKETING 10 (2013) (defining a U.S.D.A. Food Hub as "a business or organization that actively manages the aggregation, distribution and marketing of source-identified food products," which includes providing a "range of centralizing and aggregating roles").

16. Sabine O'Hara, *Food Security: The Urban Food Hubs Solution*, SOLUTIONS J., Jan.–Feb. 2015, at 42, 44–45, 53 [hereinafter *Food Security*]. *See also supra* Figure 2.

Shortly after executing the lease agreement, UDC began engaging the Ward 7 community and partners. Primary partners included the D.C. Building Industry Association, the Urban Waters Federal Partnership, the D.C. Commission on the Arts and Humanities, DCHA, the D.C. Department of Energy and the Environment, American Forests, and Bradley Site Design.[17] Through many community meetings and team design and planning meetings, the ECUF—a model for temporary urban farming—was planned and constructed. The uniqueness of the model was evident:

- It was directly across the street from a metro stop;[18]
- It had a land tax value of over $5,000,000 (before the planned development across the street);[19]
- The ECUF was located in a food desert;[20]
- There was low buying power in the community;[21]
- The community had health challenges;[22]
- Urban agriculture in D.C. was not part of the mainstream employment base;[23]
- The ECUF was part of a larger, future development;[24]
- It had a temporary lease;[25] and
- There was an innovative approach using D.C. government policies and processes.[26]

The vision was to create a holistic, unique approach to implementing agriculture in the urban environment.[27] The product would be planned and

17. Press Release, Dist. Columbia Bldg. Indus. Ass'n, DCBIA Build Day: Hundreds of Volunteers to Create East Capitol Urban Farm: The City's Largest-Scale Urban Farm and Aquaponics Facility (Sept. 24, 2015), http://docs.udc.edu/causes/ecuf/DCBIA%20Build%20Day%20Press%20Release.pdf.

18. *See* Leslie R. Malone, *Ward 7's East Capitol Urban Farm & Food Hub Re-Opening Day*, JUST CAUSES BLOG: HEALTHY CITIES HEALTHY PEOPLE (Apr. 27, 2016, 8:36 AM), http://udc-causes.blogspot.com/2016/04/ward-7s-east-capitol-urban-farm-food.html.

19. Dr. Dwane Jones is the Director of the Center for Sustainable Development within the College of Agriculture, Urban Sustainability, and Environmental Sciences. He was one of the leaders who helped launch the East Capitol Urban Farm. This information is from his personal knowledge from planning and constructing the farm.

20. MERRILL ET AL., *supra* note 2, at 12.

21. *See id.* at 10.

22. *Id.* at 37, 49, 69.

23. *See May 2015 Metropolitan and Nonmetropolitan Area Occupational Employment and Wage Estimates: Washington-Arlington-Alexandria*, BUREAU OF LABOR STATISTICS, https://www.bls.gov/oes/current/oes_47900.htm (last visited May 29, 2017).

24. *See* D.C. STATE DATA CTR. OFFICE PLAN., *supra* note 9, at n. 22.

25. E. CAPITOL URBAN FARM, *supra* note 7.

26. *Id.*

27. *Id.*

operated through a comprehensive plan for education, research, and capacity building. The ECUF would include aquaponics, walking trails, raised community gardening beds, a community-operated farmers market, integration of green infrastructure and urban agriculture, water efficiency strategies, a nature and discovery space for kids, a community plaza, and public art.[28] Overall, the ECUF would be a model for launching a food policy initiative as well as community development. Five "needs" guided or resulted from the ECUF and are explained in the following sections.

Figure 3: East Capitol Urban Farm (as built)

IV. NEED FOR AGRICULTURE POLICY AND ENVIRONMENTAL PERFORMANCE

UDC, as an educational institution, has a large population of international students.[29] Many of these students take undergraduate and graduate courses in urban sustainability and environmental sciences.[30] Invariably, students are

28. *Id*. *See also supra* Figure 3.

29. UNIV. D.C., UNDERGRADUATE VIEWBOOK & APPLICATION 5 (Jan. 2007), http://www.udc.edu/admission/undergrad_viewbook.pdf.

30. *See College of Agriculture, Urban Sustainability and Environmental Sciences*, UNIV. D.C., http://dev.udc.edu/college_of_urban_agriculture_and_environmental_studies/college_of_agriculture_urban_sustainability (last visited Mar. 30, 2017) (providing an overview of the urban sustainability and environmental science academic programs that students may do coursework in).

asked each semester about their perception of Washington, D.C., before their first visit. The typical responses included items such as monuments, the nation's capital, the seat of international power, and politics.[31] Responses have yet to include items involving agriculture, farming, community health and policy. In like manner, D.C. policies did not directly address or guide agricultural projects in Washington, D.C.

As the ECUF was planned, questions swirled regarding how to bring about this change in the community:

- What environmental testing, if any, was needed?
- Were stormwater permits needed for urban agriculture?
- Were building permits needed for urban agriculture projects?
- What health policies, if any, governed urban agriculture in D.C.?
- What enforcement mechanisms existed?
- What business policies, if any, governed agro-economics (i.e. entrepreneurial opportunities in agriculture)?[32]

The responses would govern not only whether the farm was a viable undertaking, but also the extent to which the project would address community needs—socially, environmentally, and economically.

Strong partnerships and internal resources supported the effort by understanding the proposed benefits and potential health outcomes expected from this project. First, UDC tested the soil and water for contaminants through the nationally accredited lab in the Water Resources Research Institute.[33] Secondly, Washington, D.C., agencies were unsure whether stormwater or building permits were needed. Following a discussion with representatives from the Environmental Protection Agency, UDC decided to err on the side of caution by obtaining a stormwater permit and review because the farm exceeded 5,000 square feet in potentially disturbed area due to urban farming.[34]

Even so, UDC asked what precedent would be set, particularly in urban areas where localized access to urban agriculture was most needed. Engineering fees and permitting costs exceeded $20,000.[35] Building permits

31. *See* UNIV. D.C., *supra* note 29, at 6.

32. The author took part in the planning of the ECUF and the questions contained in this list were questions that arose during the planning stages of the urban farm.

33. *Sustainability Initiative*, UNIV. D.C., http://www.udc.edu/sustainability/ (last visited Mar. 8, 2017).

34. U.S. ENVTL. PROT. AGENCY, GUIDANCE FOR FEDERAL LAND MANAGEMENT IN THE CHESAPEAKE BAY WATERSHED 3-7 (May 12, 2010); Jeff Corbin, *A Really Good Day: Building the East Capitol Urban Farm*, EPA CONNECT (Oct. 8, 2015), https://blog.epa.gov/blog/2015/10/a-really-good-day-building-the-east-capital-urban-farm/.

35. This information comes from the author's personal knowledge and experience in planning and constructing the ECUF. Figures regarding fees and costs are on file with the author.

were obtained for the greenhouse structures, but at a much lower cost than the stormwater permits.[36] While UDC fully supports and often leads the way in environmental protection and human safety, it questioned the social impact of such fees on communities where income levels are low and residents cannot afford the fees. UDC offered, and is partnering with Washington, D.C., to develop best practice guidelines for community-oriented urban agriculture.[37] These guidelines will also provide information for entrepreneurial opportunities supported by urban agriculture, including the sale of community produce at D.C. farmers' markets.[38]

V. NEED FOR PROFIT

As of the writing of this article, there are over fifty farmers' markets in operation in Washington, D.C.[39] UDC operates two farmers' markets in D.C.: one at Van Ness Avenue (4340 Connecticut Avenue Northwest) in Ward 3 on the main campus of the university, and the second is at the ECUF (5901 East Capitol Street Southeast) in Ward 7.[40]

The Van Ness market was launched in 2009 and revamped in 2011.[41] Located almost directly across the street from a major supermarket chain,[42] this market thrives. It is self-supporting because of the local culture and strong community support to buy local products.

The East Capitol Market was launched in the summer of 2016.[43] Through a grant received from the Wells Fargo Foundation, UDC incentivized farmers to both vend at and commit to the market for an extended time period.[44] The results of the first season in 2016 were less than ideal as the level of

36. This information is from the author's personal experience in planning the ECUF.

37. *See* Causes Workshops, *Center for Sustainable Development and Resilience*, JUST CAUSES BLOG: HEALTHY CITIES HEALTHY PEOPLE (Dec. 28, 2016, 12:18 PM), http://udc-causes.blogspot.com/2016/12/center-for-sustainable-development-and.html.

38. *Id.*

39. Emily Chow et al., *Farmers Markets in the Washington Area*, WASH. POST (March 6, 2017), https://www.washingtonpost.com/graphics/food/dc-farmers-markets-interactive-map/.

40. *UDC Farmers Market*, FOREST HILLS CONNECTION (July 30, 2016), http://www.foresthillsconnection.com/event/udc-farmers-market/2016-07-30/; E. CAPITOL URBAN FARM, *supra* note 7.

41. UNIV. D.C., COLL. AGRIC., URBAN SUSTAINABILITY & EVNTL. SCIS., UDC FARMERS' MARKET MANUAL 1 (2014), http://www.udc.edu/docs/causes/fm/Farmers%20Market%20Manual-4.9pdf.pdf.

42. *See* GOOGLE MAPS, https://www.maps.google.com/ (search in search bar for "UDC Van Ness Market") (showing the location of the Van Ness Farmers Market in relation to the supermarket).

43. *See* UNIV. D.C., EAST CAPITOL URBAN FARM FARMERS MARKET (2016), http://www.udc.edu/docs/Farmers_Market_Flyer.pdf.

44. This information is from the author's personal knowledge and experience in planning, creating, and launching the ECUF.

commitment and other, more profitable opportunities in Washington, D.C., caused the fledgling market to struggle the entire season.[45] Simultaneously, UDC's goal was to offer opportunities for persons in the community to support their income by selling at the market. The community consumed much of what was grown the first season (which is a good thing), but this did little to support the local market or directly support their income.

The heart of the ECUF, as well as the Urban Food Hubs concept, is a "highly efficient food production system that utilizes bio-intensive production methods" in the form of aquaponics.[46] "Aquaponics refers to a food production system that combines growing fish (aquaculture) and growing vegetables without soil (hydroponics). By using the excrement from the fish as fertilizer for vegetable production, aquaponics systems eliminate the need to add fertilizer."[47] UDC's aquaponics system is uniquely designed for urban environments because it uses a patented aerator that "emulsifies atmospheric oxygen with the water that circulates through the aquaponics system."[48] This technology is called Flo-Vex and is discussed next.

VI. NEED FOR PROPRIETARY TECHNOLOGY AND PLACE (FLO-VEX)

Flo-Vex is proprietary technology invented and patented by UDC Professor Dr. Thomas Kakovitch.[49] "Proprietary technology is the most substantive advantage a company can have."[50] In partnership with Kakovitch Industries, UDC has launched a community-oriented aquaponics technician certification program to train residents of Washington, D.C., to maintain these systems, which in turn becomes a qualifying mechanism to become leaseholders of the systems.[51] Leaseholders can form entrepreneurship teams. Only UDC's license to the technology and relationship to Professor Kakovitch allow it to scale the aquaponics systems in such a way to benefit the community.

Additionally, UDC is constructing business kitchen incubators and currently has a food truck—both of which are designed to serve the community by providing economic opportunities through start-ups and training.[52] Building an urban agriculture system that offers entrepreneurial opportunities requires

45. This is from Dr. Jones's personal memory of working on the East Capitol Urban Farm during the first season in 2016.

46. *Food Security*, *supra* note 16, at 45.

47. *Id.*

48. *Id.* at 46.

49. *Urban Food Hubs Solution*, *supra* note 14, at 76.

50. PETER THIEL & BLAKE MASTERS, ZERO TO ONE: NOTES ON STARTUPS, OR HOW TO BUILD THE FUTURE 48 (2014).

51. *Urban Food Hubs Solution*, *supra* note 14, at 82–83.

52. *Id.* at 77.

extensive training and public education.[53] As UDC fronts the capital (primarily through grant funds), the public has a place to launch start-ups with a strong support system for education and technical assistance.

VII. NEED FOR PEOPLE (COMMUNITY ENGAGEMENT AND EDUCATION)

Washington, D.C., has one of the most educated populations in the nation.[54] However, educational attainment does not apply to all people in D.C. nor does such attainment directly apply to accessing employment or entrepreneurial opportunities in urban agriculture.[55] UDC is an urban, land-grant, and historically Black college and university tasked with providing on-campus and community-based education to residents of Washington, D.C.[56] It strives to improve well-being and create economic opportunities for residents of D.C. by providing the capital to launch or gain employment in for-profit businesses and by building capacity through public education.

VIII. SUMMARY

As populations in urban areas increase, so will the need for locally sourced, fresh produce and the need to reduce income disparities within these environments. Addressing these unique needs is essential to improving community health. Local governments will need to amend and develop policies and practices to support these initiatives. This article suggests several key policy and practical considerations to this end. Resiliency food hubs may serve as a means of minimizing food insecurity, as well as providing entrepreneurial opportunities.

53. *See* Jerry Kaufman & Martin Bailkey, *Farming Inside Cities: Entrepreneurial Urban Agriculture in the United States* 60 (Lincoln Inst. of Land Policy, Working Paper No. WP00JK1, 2000), http://www.urbantilth.org/wp-content/uploads/2008/10/farminginsidecities.pdf.

54. Valerie Strauss, *Most Educated City in U.S.? Data Says It's Washington, D.C.*, WASH. POST (Jan. 20, 2016), https://www.washingtonpost.com/news/answer-sheet/wp/2016/01/20/most-educated-city-in-u-s-data-says-its-washington-d-c/?utm_term=.350808b3c5d1.

55. *See* Jillian Gordon, *Why I'm Telling Some of My Students Not to Go to College*, PBS NEWSHOUR (Apr. 15, 2015, 1:23 PM), http://www.pbs.org/newshour/updates/im-telling-students-go-college/; *see also, e.g.*, Ariella Cohen, *Pioneer of Urban Farm and School Learns Lessons of His Own, Hopes Struggles Lead to Success*, LENS (Aug. 18, 2011, 11:30 AM), http://thelensnola.org/2011/08/18/pioneer-of-urban-farm-and-school-learns-lessons-of-his-own-hopes-struggles-lead-to-success/.

56. *UDC's History*, UNIV. D.C. (2016), http://www.udc.edu/about/history-mission/.