Links, Livestock, and Local Food: Challenges of Converting a Golf Course Into a Sustainable Local Food Operation
Founded in 1963, Openlands is one of the nation’s oldest and most successful metropolitan conservation organizations, having helped secure, protect, and provide public access to more than 55,000 acres of land for parks, forest preserves, wildlife refuges, land and water greenway corridors, and urban gardens.

Food:Land:Opportunity - Localizing the Chicago Foodshed is a multi-year initiative that aims to create a resilient local food economy that protects and conserves land and other natural resources while promoting market innovation and building wealth and assets in the Chicago region’s communities. Funded through the Searle Funds at The Chicago Community Trust, Food:Land:Opportunity is a collaboration between Kinship Foundation and The Chicago Community Trust.

Food:Land:Opportunity supports Openlands’ work testing new and innovative models that combine agriculture and land conservation, including the Plum Tree National project.

Published: August 2018
Developing a Land Access Model

As a non-profit conservation organization and land trust founded in 1963, Openlands has long held expertise in protecting land for open space, habitat, and recreational purposes. With the Plum Tree National project, Openlands identified two core goals related to land access.

The first was to support a grazier in purchasing this property with an approach that was appropriate to his long-term goals and financial capacity. Openlands’ role included negotiating with the landowner to enter into a purchase contract, performing due diligence responsibilities, and helping the grazier identify and work with farm-friendly loan servicing sources to provide the funding needed to buy the land. It was also anticipated that Openlands would facilitate or support the closing transaction.

The second goal was to provide financial support to implement the infrastructure that was required to make the business viable and profitable. With the assistance of Food:Land:Opportunity funding, Openlands set forth a plan that included

- Negotiate purchase contract for the site
- Undertake due diligence investigation
- Help grazier secure acquisition capital
- Document grazier-tenant financing and financial capacity
- Secure Openlands approval through board of directors resolution
- Support acquisition transaction
- Site preparation and infrastructure improvement; engagement regarding existing infrastructure financing mechanisms
- Commence functioning grazing operation
- Design, develop, and implement outreach and engagement plan.

An Innovative Vision

IN LATE 2017, Openlands identified a unique land protection and sustainable agriculture opportunity: the Plum Tree National property, an approximately 265-acre former golf course located in rural McHenry County, just outside the small farm town of Harvard, Illinois. Openlands hoped to convert the site to agricultural grazing to help increase opportunities for sustainable local food farming in northeastern Illinois. However, soil sampling conducted during the initial due diligence process found soil contamination that rendered the property unfit for a swift and economical transition into grazing use.
Fresh, organic, and grassfed beef has experienced a well-documented spike in popularity during recent years. Greater Chicago is becoming one of the nation’s largest demand centers for sustainably raised and butch-ered beef. Despite this already high and growing local demand, there are few sustainable grazing operations in Illinois to supply this market.

Meanwhile, commodity crop prices are experiencing significant volatility due to weather variability, foreign competition, and other uncertainties. This volatility has had a chilling effect on local production of corn and soybeans as well as agricultural land values. The combination of reduced viability of commodity crops and growing profitability of grassfed beef merits exploratory efforts to establish more sustainable grazing operations in greater Chicago.

### Challenges of Land Access

The most significant barrier to sustainable graziers and other food farmers alike is affordable access to farmland. Land access is a national problem for food farmers, who tend to be younger, own less capital, have less experience, and carry more debt than conventional operators. Additionally, farmland ownership trends have mirrored those in the agricultural industry at large by becoming increasingly concentrated within very large, industrial-sized operations. The consequence is that there is less land available for food farmers and what land is available is often unaffordable to them.

Regionally, land access for graziers is further complicated by high land prices and acreage needs of grazing operations. Land prices in greater Chicago are bolstered by competing demands from commercial, residential, and industrial developments. At the same time, grass-fed grazing requires 1-2 acres per cow-calf pair, which produces far less revenue than one acre planted in vegetables, fruit, or even commodity crops.
Overcoming these significant financial and operational barriers requires graziers to seek out below-market land access opportunities in order to locate in greater Chicago. Project partners identified the Plum Tree National property, which offers sufficient acreage and infrastructure, as a possible opportunity to convey below-market land access to a sustainable grazier.

**Sustainable Grazing: An Economic and Environmental Opportunity**

There is demand for grassfed beef that is not being met by American graziers. More than 75% of grassfed beef sold in the U.S. is imported from foreign markets, which accounts for at least $3 billion in annual sales (Stone Barns Center for Food & Agriculture, *Back to Grass*, 2017). New graziers in the Chicago region could make significant inroads into this market by supplying a fresher product than their foreign competitors. They may capture additional market share by capitalizing on prevailing consumer preferences for locally-grown and sustainably-raised products. We see the combination of these influences as a significant economic opportunity to expand environmentally-friendly grazing in the Chicago region.

Most available land in the Chicago region is in tracts too large for a vegetable producer’s business needs. While the available farm sizes are suitable for grassfed meat production, graziers need a large initial investment to establish appropriate pasture acreage with the necessary infrastructure for their operations, such as fencing, water sources, forage crops, and barns. Many new grazing operations are challenged to simultaneously raise substantial capital for these infrastructure improvements and start-up costs, along with the costs of buying land.

**Framing a Vision to Transform Land from Golf to Grazing**

The Plum Tree National sustainable grazing project sought to achieve two goals. The long-term goal was to increase sustainable local food farming on publicly and privately-owned lands in northeastern Illinois by creating a cadre of active sustainable graziers, improving supply-chain efficiencies, and developing a network of expertise and resources supporting affordable and secure land and infrastructure access.
The short-term goal was to tap into the legacy of grazing in McHenry County (at one time the third largest milk-producing county in the nation) by creating a physical demonstration site. The project was intended to serve as a showcase for a modern, environmentally-sustainable, and profitable grazing operation and as a catalyst for subsequent new operations.

Exploring the Suitability of the Plum Tree National Property

Openlands saw great potential to transform the unused Plum Tree National golf course property into a model of sustainable grassfed meat production for the regional market. Use of the property as a golf course ceased nearly a decade ago and the property largely consists of vacant open space with the infrastructure common to a golf course still in place. With the land lying fallow for at least seven years, Openlands noted that this created an opportunity to more rapidly convert the site into certified organic agriculture, as compared to a site where golf course or conventional agriculture uses had taken place more recently. Shortening the multi-year timeframe needed to obtain organic certification would help a grazier command a higher price in the market much sooner, thus making the operation more economically viable in the crucial first years of establishing the business.

Upon ceasing golf course operations, the property had been purchased by its current owner who attempted to use it for special events such as weddings, concerts, and festivals. Ultimately this approach was not viable due to issues like permitting, complaints from nearby landowners, and low profitability. These circumstances led to the owner’s interest in selling the property.

Plum Tree National had many features that made it particularly attractive for grazing besides its possible suitability for quick organic certification. The site was comprised of large expanses of rolling, undeveloped open space along the greens and fairways of the golf course and other fields on the property. These areas could easily be converted into pasture. Several ponds also offered a readily accessible surface water source for grazing animals.

The existing golf course infrastructure presented an intriguing chance to give a grazier a head start on establishing an operation, with several essential elements for a viable grazing business already in place. The existing infrastructure included access paths and roads leading throughout the property, an irrigation system that was used to maintain turfgrass, several wells providing access to plentiful groundwater, and various small sheds and outbuildings. These features supported an easy conversion into grazing uses that is not usually present to this extent on other agricultural land in northeastern Illinois.

In addition, the property also had a large barn with attached workshop and living quarters. While the barn required some repairs and upgrades, it was structurally sound and of sufficient size and design to comfort-
ably accommodate both animals and seasonal housing for farm staff. The property also featured a clubhouse with a commercial kitchen, office, and gathering space, which provided opportunities for complementary activities that could be run alongside a grazing operation and help to generate additional interest and income. Some examples included a shared kitchen for small value-added local food production, classroom space for educational programs, studio space for local artists and photographers, short- or long-term storage for area businesses, and perhaps a farm-to-table restaurant.

Access to affordable land and financing for start-up costs represent two major barriers to farmers in northeastern Illinois. Openlands felt that the existing features of the Plum Tree National property would reduce the large initial expense and effort usually required to install similar infrastructure for a start-up or transitional grazing operation.

**Building a Strong Partnership in the Grazing Community**

While Openlands had the transaction and land protection expertise for this project, ensuring the viability and profitability of a sustainable grazing operation meant an experienced operator was needed to bring a solid business plan and clear goals into the conversation.

A grazier partner was recruited to explore the project site. The grazier had a degree in Agricultural Economics and Farm Management from Purdue University, along with five years of demonstrated success in establishing and operating pastured animal operations involving cattle, chickens, goats, sheep, and swine. Upon seeing the potential in the Plum Tree National property, he was excited at the possibilities it presented for grassfed beef, lamb, and mutton production. His perspective helped Openlands better understand the dynamics required to establish a successful grazing operation, such as infrastructure and early capital needs, and the project began to take shape. He developed a strong 3-year business plan proposal for redeveloping the Plum Tree National property and included his profitability projections and infrastructure needs.

With the grazier partner on board, Openlands began negotiations with the seller and due diligence on the property to explore the condition of the site and move towards a purchase contract.

**Critical Concerns Raised Through Due Diligence**

The due diligence activities initiated by Openlands included building inspections, a Phase 1 environmental assessment, and soil testing on the greens and fairways of the former golf course area. Due diligence revealed a variety of routine concerns and repair recommendations, but the soil testing uncovered an unknown and critically important condition that ultimately changed the trajectory of this project: soil levels of chromium and mercury were high enough to present significant concern for any agricultural uses of the property.

The heavy metal soil contamination was found in two out of three samples taken. It is possible these residues originated with application of herbicides, fertilizers, and fungicides common to golf course maintenance. It is also possible that they are the result of a sewage sludge application, which was once practiced in rural McHenry County for soil amendment purposes. The extent of contamination across the full 265-acre site is still unknown.

The Phase 1 Environmental Assessment consultant made several recommendations related to the soil con-
tamination issues, including ordering additional testing to determine the extent of contamination, eliminating grazing activities in suspected contaminated areas to reduce the risk of bioaccumulation in vegetation and grazing animals, and taking preventative measures to reduce or eliminate water runoff from contaminated areas. Openlands also obtained a remediation proposal and consulted with numerous colleagues and partners experienced in soil science, biology, ecology, and grazing. Their feedback supported the conclusion that the contamination affects soil, groundwater, and surface water health and was detrimental to agricultural uses like grazing.

**Exploring New Options**

The unexpected discovery of soil contamination was a turning point in the Plum Tree National project for Openlands and the grazier. The professional opinion of the consultant who did the remediation plan was that after identifying the extent of the contamination across the property, remediation of the contaminated areas would likely be possible at significant expense and effort. Options for remediation included removing and disposing of the contaminated soils and bringing in clean soil to rebuild the areas, implementing a vegetation plan that uses plants to uptake and sequester the contaminants over time, and potentially amending the contaminated soil, such as by adding gypsum, to bind or reduce the toxicity of the contaminants.

Openlands shared the soil testing results with the owner and the owner’s lenders, who were willing to drop the price only a small amount. With the soil contamination issues complicating the original plan for the project, Openlands ultimately determined that this property was not suitable for the proposed grazing project or other agricultural uses. Several factors contributed to this decision, among them:

- Unknown extent of heavy metal contamination in soil and water sources on the property.
- Anticipated prohibitive costs required to implement a remediation plan.
- Likely delays to obtaining organic certification as a result of the remediation needs.
- Landowner’s disinterest in further negotiations after soil contamination was discovered.
- Openlands’ capacity to pursue a project that proved to be more complex and costly than initially understood.
- Grazer’s ultimate decision to pursue land elsewhere with a more certain outcome and timeline.

Passive open space use may ultimately be a more feasible use for the property and Openlands is exploring other options to protect the land for these purposes.
Lessons Learned

Abandoned golf courses typically feature vacant or naturalized areas, substantial acreage, and existing infrastructure that could support a logical transition from golf course use to agricultural operations. These features make golf course properties an attractive option for farmers looking for large tracts of land. As golf courses trend towards closure and sale across the U.S., more such properties will become available in the coming years.

Openlands’ experience with the Plum Tree National property suggests that golf course properties may present other unique challenges. These may ultimately be specific to a particular site but should be considered as part of a larger due diligence strategy for determining whether a golf course property is feasible for sustainable agriculture. These include:

- The presence of contaminants on the site, including in the soil and in wells, surface water, and ground water, resulting from typical golf course maintenance activities or soil amendments.
- The extent of necessary repairs or modifications to existing infrastructure so that it usable for agricultural activities. This may include identifying appropriate on-site housing for the farmer and family, as well as housing for long-term, seasonal, or temporary workers. In the case of the Plum Tree National property, a portion of the funding secured from the Food:Land:Opportunity grant was intended to bridge gaps between existing infrastructure, such as the irrigation system, and other necessary infrastructure that needed to be installed, such as perimeter fencing.
- The substantial financial outlay required to properly test for contaminants and remediate contaminated areas if such action is possible.
- The time required to adequately remediate and rest contaminated areas in order to qualify for organic certification if such certification is desired by the farmer.
- The presence of local support or opposition, including any associated developments alongside golf courses with residents who may be wary or opposed to sustainable agriculture operations in their backyards, particularly when animals are involved in those operations.
- Asking prices for abandoned golf courses may be high. In the case of the Plum Tree National property, the asking price was over $1 million. Sellers may be unable or unwilling to negotiate at lower prices to ensure they recoup their investment costs.

Farmers who are considering golf course land for new farming operations may face their own challenges in this process, including:

- Waiting for indeterminate periods while negotiations, due diligence, and other transactional work takes place.
- Remaining flexible in order to account for site-specific nuances, challenges, or delays that may be revealed in the course of due diligence.
- Planning for adequate soil and water testing and anticipating that remediation may be needed if contaminants are identified. Remediation activities may delay obtaining organic certification if this is desired by the farmer.
Moving Forward: Supporting Land Trusts Pursuing Land Access Projects

Organizations and land trusts attempting to assist in providing land access opportunities for local food farmers need additional support to facilitate these complex transactions.

Examples of support needs include:

- Technical assistance providers with expertise in soil health, contamination and remediation processes
- Access to funding for the appropriate level of soil and water quality testing in normal due diligence
- Access to funding to support direct land acquisition if appropriate, e.g. if loan funding is unavailable for the farmer
- Capacity support to manage the administrative and overhead costs of the many complex tasks associated with projects of this scale and scope

Conclusion

Although the project to create a local grazing operation on the former Plum Tree National golf course property did not come to fruition, Openlands remains hopeful about the possibilities of such land use conversions in the future. The lessons learned in this project, significantly the necessity of remediation needs even for a property that has not been used as a golf course in years, can inform other opportunities. This understanding will help to frame expectations for the land trust, the grazier, and the funders.

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