

## APPENDIX I

### Existing examples of Food Production in Millennium Reserve

#### I.A. Growing Power – Altgeld Gardens Farm



Growing Power’s Altgeld Gardens farm sits on two acres of land leased from the Chicago Housing Authority. It was founded in the summer of 2010 with financial support from Recovery Act funds. In the past 4 years it has served as a summer and after-school (year round) youth internship site for over 600 young adults and 150 adults. It provides a source of fresh produce to the Altgeld Gardens community, which does not have stores that sell produce. Growing Power will begin mobile farmers market deliveries the summer of 2015 to service the Riverdale, Altgeld and Golden Gate communities, local to this farm and in other areas of South Chicago in the Millennium Reserve.



## I.B. Growing Power – South Chicago Farm



Growing Power's South Chicago farm is located on seven acres of land leased from the Chicago Park District. Four of these acres are in development as part of Growing Power's Farmers for Chicago program, in which several new farming entrepreneurs are working alongside one another to field-test their urban farming business models. As part of the program, participants pay tuition and receive classes on business development and farming skills, and share tools at the South Chicago farm site. One acre at the northwest corner of the site is being developed as a community garden, with plots available for neighboring residents. The park land to the north of the farm is a passive recreation facility.

The land sits just to the southwest of the former U.S. Steel site on lake Michigan, which is in the process of being converted over the course of several decades to a mixed-used residential and commercial development. Unlike much of the land in the area, USGS and EPA maps suggest this site was never filled with slag or other materials. In any event, the park district coordinated a full remediation of the site as part of its conversion to parkland. Additional resources for the Millennium Reserve project are being supported by topsoil from the IL EPA's rivers to soil program.

### I.C. Gotham Greens Rooftop Farm, Pullman



The new Method Soap factory in Pullman is an example of how urban agriculture can be integrated into the Millennium Reserve. It features a 75,000 square foot rooftop greenhouse, operated by New York-based company Gotham Greens. This will be Chicago's – and potentially the world's – largest rooftop greenhouse.

As the Millennium Reserve steering committee has noted, the Method project “fits under two Millennium Reserve priorities: implementing an industrial jobs work plan and catalyzing the redevelopment of brownfields.”

### I.D. Farms along Little Calumet River, south of Altgeld Gardens



On the north bank of the Little Calumet River, just south of Altgeld Gardens and just west of the Beaubien Woods forest preserve, urban farmers have several acres of land in agricultural production. Our interviews suggested that although this land has been in cultivation for years, the people who work the land do not own it, and have little security of tenure. A number of stakeholders are aware of this, and are working on potential solutions. Our research suggests that this should be a priority for conserving existing agricultural uses in the Millennium Reserve, and could potentially be expanded in the future to include the ComEd right of way extending to the northwest from these small farms (highlighted in red on the image above).

## APPENDIX II

### Models that might serve as examples for productive landscapes in Millennium Reserve

*During our discussions with stakeholders, a number of projects in other cities were discussed as potential places to look for inspiration in considering how urban agriculture might be part of the Millennium Reserve. Here we briefly mention a few of these.*

#### A. Growing Power Fifth Avenue Farm, Oak Creek, WI



Across the street from the Milwaukee Metropolitan Sewer District's water reclamation plant in Oak Creek, WI, Growing Power has a farm with 35 hoop houses. Construction began in the fall of 2010, and the farm became operational that winter. Produce from the farm is distributed to schools, supermarkets, and restaurants, as well as through Growing Power's market basket program. The land is owned by the sewer district, and is not available for other development because of the subsurface infrastructure of pipes.

## B. Tree for All Campaign – Portland, OR



David St. Pierre of MWRD called attention to the Tree for All campaign ([www.jointreeforall.org](http://www.jointreeforall.org)) developed by CleanWater Services, the wastewater and stormwater services agency serving the Portland area. Together with three dozen municipal, utility, and environmental partners, CleanWater Services rallied residents to plant two million trees in the Tualatin River basin in the first decade of the campaign, and one million more over the past year. The campaign stands as a model of civic and environmental engagement by a water sanitation agency.

## **APPENDIX III**

### **Potential sites for productive landscapes for food production in Millennium Reserve**

*In the Millennium Reserve, there are thousands of acres of unused land. Much of this is a patchwork of former industrial sites, some of which are in the process of remediation, before industrial re-use, or conversion to conservation land or commercial sites. Much is also land dedicated to conservation. But there are many sites, often in the gaps between other pieces of land, where agriculture use could potentially create productive landscapes.*

*The following examples are not intended as a comprehensive survey of sites that might be appropriate for growing. Nor have they been vetted for potentially competing land uses, or tested for contamination. Instead they are offered as starting points for an ongoing discussion. What would the Millennium Reserve look like, and how would it serve the people who live within its boundaries, if these or other sites were activated for food production? What challenges might exist for turning sites like these into productive landscapes, and how might those challenges be overcome?*

*A number of factors are worth considering in evaluating sites that could be appropriate for urban or peri-urban agriculture. Among those we consider here are:*

- *Access to water, transportation, and potential markets*
- *Whether site has been covered with fill*
- *Whether site is currently in use for agriculture*
- *Complementary and competing uses*
- *Ownership of land and conditions on leasing and sub-leasing*

## II.A. Interstitial land east of Stony Island between 97<sup>th</sup> and 100<sup>th</sup> Streets



Just north of the CTA bus depot at 103<sup>rd</sup> Street, there is an unused and largely overlooked 23-acre triangle of land. The site is tucked away from residential areas, meaning machinery used for site preparation and farming operations would be unlikely to disturb neighbors. Yet it has easy access to potential markets via the Bishop Ford, Dan Ryan and \_\_\_ expressways. One could imagine opportunities for direct marketing to CTA employees and to students, faculty, and staff at Olive Harvey College. Unlike a number of the sites discussed in this appendix, this location has easy access to five CTA bus lines (15, 28, 106, 353, J14), and a nearby hydrant suggests a potential source of water for irrigation. The USGS/EPA map of infill in the Calumet Region suggests that construction debris lays beneath the prairie that is currently on the site.

Although the proximity to the Stony Island Avenue interchange with the Bishop Ford suggests the site may not be suitable for some other uses, one interviewee reported that the Chicago Police Department may be interested in building an outdoor shooting range at this site.



## II.B. MWRD Buffer Land on 130<sup>th</sup> Street, across from Altgeld Gardens



Along the southern edge of the MWRD water treatment facility, there are 28 acres of land that are used as a buffer along 130<sup>th</sup> Street, across from the Altgeld Gardens and Golden Gate neighborhoods. Because the land is used as a buffer, it is not suitable for uses other than open space. But our conversation with MWRD staffers suggested that it could be appropriate for urban agriculture, particularly if projects engaged and served the communities to the south that lack access to healthy food. For markets further afield, 130<sup>th</sup> street provides easy access for trucks.

The USGS/EPA maps list the land as filled in various parts with construction debris, ashes and cinders, and natural materials (such as sand and clay). Given its proximity to the water treatment facility, access to water could presumably be arranged. And our conversation with MWRD staff suggested that biosolids could be used to prepare the land, assuming that is appropriate for the crops or trees being grown.

## II.C. MWRD Biosolids drying facility



In our conversations with MWRD, we learned that the process for curing biosolids is in the process of being changed, meaning that some of the MWRD biosolid drying facilities may become available in the near future. There are a number of these in the Millennium Reserve. This one, located between 122<sup>nd</sup> Street and the Calumet River, is 113 acres of paved space which appears in the satellite image above to be used for a mix of biosolid drying and parking cars and truck trailers. This would be plenty of room for a larger growing operation that could involve facilities for distribution. MWRD leasing regulations, however, could mean that agricultural uses would be competing with other uses such as truck marshaling.

According to the USGS/EPA map, this land was filled in the past with a mix of biological sludge and natural materials (such as sand and clay). The fact that it has been covered by cement may make remediation more cost-effective – if, for example, a layer of wood chips and compost on top of the cement would separate crops from the fill below. One question in this location, as with other sites along the Calumet River, is whether clean water would be available for irrigation. This would depend on an analysis of contaminants in the river, and on whether hydrants are located near the site (which for this location we were unable to determine).

## II.D. Former industrial property at Cottage Grove Avenue and 142<sup>nd</sup> Street



At the northeast corner of Cottage Grove Avenue and East 142<sup>nd</sup> Street in Dolton, there is a former industrial site that includes an 11.5 acre building foundation that as of a visit in the fall of 2014 was being used for extensive fly dumping (see panorama above). The land is privately held and listed for sale, meaning any use for agriculture or other conservation uses would require some arrangement to purchase and conserve the parcel. This of course would require deciding whether to maintain the parcel in industrial use.

If the land were converted temporarily or permanently to agricultural use, the land could serve to link Lake Cottage Grove to the west and Needles Park to the east. It would also complete the buffer between the residential communities south of 142<sup>nd</sup> Street and the landfill along the Calumet River to the north.

## II.E. Fallow MWRD land in Ford Heights, at Cottage Grove Avenue and Joe Orr Road



MWRD owns 70 acres of land on the west bank of Deer Creek in Ford Heights, at the southeast corner of Cottage Grove Avenue and Joe Orr Road. The land is suitable for agriculture, but appears to have been fallow for several years, judging by the height of scrub trees growing on the land. (The panorama above was taken looking east from Cottage Grove Avenue, in June 2015.) This land is relatively easily accessible via Route 394, and unlike much land in the Calumet region of the Millennium Reserve, would not have to be remediated before being put into agricultural use. It is likely zoned for agricultural use, meaning that potential users might be likely to be able to lease it from MWRD for 6-10% of the fair market value as agricultural land – which would be significantly less than other MWRD sites that could be used for competing commercial or industrial uses.

Ders Anderson of Openlands suggested that fields around Ford Heights are good candidates both for long-term or permanent conservation, and for projects that could serve the historically disadvantaged population of Ford Heights and nearby south suburban communities. Among municipalities in suburban Cook county, Ford Heights has among the highest rates of unemployment and poverty, and a 2012 report on food noted that it lacked a full-service grocery store.

## II.F. Former Truck Farm in South Holland



Satellite image of former truck farm fields on parkland in South Holland. Current access to fields is from 170<sup>th</sup> Street, indicated by green line. Red star indicates location of hydrant.

Ders Anderson of Openlands identified these fields in South Holland as perhaps the most promising sites for agricultural use in the Millennium Reserve. They are former truck farms which are on floodplains to the east of Thorn Creek, just to the south of where it meets the Little Calumet River. The land is owned by the Calumet Memorial Park District. Anderson reported that the District is reluctant to further improve the land, beyond the small playground which is at the upper right (northeast) corner of the satellite image above.



**Panorama of north section of northerly farm field (taken from location indicated by red star in satellite image above)**

As of June 2015, the more northerly of the fields is planted with corn. The southerly field may also be in use. Access to the fields appears to be via 170<sup>th</sup> Street, where a curb cut allows machinery to approach the fields without driving through the residential neighborhood to the east. The fields are currently not irrigated, though as the panorama above shows, a hydrant is located on the east side of the northerly field, and could potentially be used for irrigating vegetable crops.

It is unclear at this time what arrangement the current farmer has with the park district, or whether the current production is conventional or organic. But the current use suggests that the District is open to leasing the fields, and it may be open to a proposal to return at least part of the fields to a more intensive use as a vegetable farm. If the neighboring community saw this more intensive use of the land as a benefit (potentially with access to produce via a farmstand) rather than a nuisance (as compared to corn and soy), that could sweeten the deal.

## II.G. Land along Grand Calumet River in Burnham



The parcel is highlighted in yellow. Approximate locations of railroad line indicated in orange, high-tension power line in red.



USGS/EPA map overlay on satellite image; section in oval has not been filled

Ders Anderson of Openlands suggested this piece of land in Burnham as a potential agricultural site. It is a floodplain on the west bank of the Grand Calumet river, east of the Burnham Prairie Nature Preserve. It appears to be several parcels of land, some of which are publicly owned, and at least one owned by ComEd as a right of way for high-tension power lines. The site recommends itself as a potential buffer between conservation land to the west, which could not be otherwise developed since it is a floodplain.



**Northern section of parcel, viewed from RR bridge crossing Grand Calumet River**



**ComEd gate regulating access at Burnham Ave**

Access is via Burnham Avenue, an entry currently regulated by ComEd, which operates a substation to the south of the area indicated in the map above. USGS/EPA maps indicate that this particular piece of land was never filled with slag or other materials, and thus could potentially be used without need for capping or remediation. (The land on the banks of the river just south/upstream from this parcel were filled with construction debris.)

A site visit to the northern edge of the parcel in June 2015 suggests, judging by current vegetation, that the land may be too low-lying and wet to be suitable for agricultural use.



**Panorama of northern part of parcel, looking to the south and east from the rail line that runs along the western side of the parcel.**



## II.H. Park 576 – Between Bishop Ford and Little Calumet River



Parcel of land on Park No. 576, highlighted in yellow. Green lines indicate paved access roads from 130<sup>th</sup> Street (to the north of map); orange lines indicate potential access via Bishop Ford expressway. Red lines indicate locations of locked gates.

Two interviewees discussed a piece of land east of the Bishop Ford expressway and west of the Little Calumet River as a potential agricultural site. The area highlighted in yellow in the satellite image above is about 70 acres. It is owned by MWRD, and currently leased on a long-term basis to the Chicago Park District, which has designated the site as Park No. 576. From the park district perspective, the site is isolated and not suitable for recreational use, since it is blocked to the west by an active Waste Management recycling facility, and is bordered to the south and north by capped landfills.

Site access is possible from the north via a road (indicated in green in the image above) that runs south from 130<sup>th</sup> Street along the river to the Thomas J. O'Brien lock, and then west (as 134<sup>th</sup> Street) along the northern edge of the area in question. From 134<sup>th</sup> Street, another paved

road leads south into the site; access is currently limited by a locked gate (photo below). A visit in June 2015 suggests the site is used for fly-dumping, a problem that might be mitigated by bringing the area into productive use.



**Gate limiting access to site  
(looking south from 134<sup>th</sup> Street)**



**Fly dumping along site access road at 134<sup>th</sup> Street**

USGS/EPA maps indicate that the land in question was filled with dredging spoil. This could require remediation. Unlike some of the other areas discussed in this Appendix, this piece of land falls within the coastal zone, and thus federal funding might be available for remediation.

## APPENDIX IV

### Realizing visions of a healthy and resilient Chicago through community based food systems in the Millennium Reserve

*Pursuing community-based food systems in the Millennium Reserve would advance not only the existing priorities of the Reserve, but also goals stated in the city and regional plans created by other agencies:*

#### **Recipe for Healthy Places Food Plan**

- Recommendation 2.1 is to “create a system of public open spaces for large-scale food growing, job training and food-related education activities.”
  - This includes three existing models for developing space for community food systems:
    - **Public-private partnerships** – The City of Chicago, through a joint venture with a community organization (or land trust like NeighborSpace) and an urban grower, will develop City-owned vacant land.
    - **Farms in parks** – The Chicago Park District will work with organizations to identify space in existing or planned parks to be dedicated for food production by an urban grower or via a system of allotment gardens.
    - **Urban agriculture districts** – The City of Chicago will work with local communities with large amounts of vacant property to identify districts focused on growing and producing food. These districts may include multiple farm operators and uses on adjacent or scattered sites.
- **Recommendation 2.1.1. Identify spaces for large-scale urban agriculture through community land-use plans.**
  - “The development of large-scale urban agriculture projects requires coordination with neighbors and community-based organizations. HED will work with residents and community organizations to identify land in neighborhoods that can be prepared for commercial-scale food production through a local planning process. The process will involve finding suitable vacant land, willing community partners and an organization to maintain and operate the site.”
- **Recommendation 2.1.2. Develop City land for urban farms.**
  - “HED and the Chicago Park District will assess the environmental condition of City-owned sites, implement remediation plans and prepare the site for management by partner organizations. Preparations may include the installation of an engineered barrier, site improvements (e.g. fencing, sidewalks, vegetation, parking lots) and water infrastructure. Once the site is prepared, the City will lease or grant access to the land or convey the land to NeighborSpace or the Chicago Park District.”



### CMAP GOTO 2040 Comprehensive Plan

- CMAP highlighted the importance of urban agriculture in the GOTO 2040 plan, which recommended the promotion of sustainable local food. Integrating community-based food systems in the Millennium Reserve would help achieve this recommendation, by advancing each of the three sub-goals outlined by CMAP:
  - “The region should strengthen the sustainability of its local food system by:
    - “Facilitating sustainable local food production and processing in our region by supporting urban agriculture and farmland protection and helping to develop a market for local foods, and increasing the profitability of all kinds of agricultural enterprises.
    - “Increasing access to safe, fresh, nutritious, and affordable foods, especially for those residents in food deserts, and linking anti-hunger programs to local food production.
    - “Raising awareness by providing data, research, training, and information for public officials, planners and residents, and increasing data and research efforts to understand and support investments in sustainable local food.”



### Cook County Land Bank Authority

- The CCLBA has noted that urban agriculture is a potential use for land cleared of nuisance buildings. Such land “provides opportunities for urban agriculture and community-based food system practitioners to secure the access to land that is so essential to nurturing local food systems.” (CCLBA application for Land Acquisition for Neighborhood Development Funds)
- CCLBA commissioner Emy Brawley, of Openlands, has noted that much vacant land is adjacent to existing community gardens, and has suggested that CCLBA land could help in the creation of an urban nursery that could grow trees for planting around the city, while creating jobs. (*Chicago Tribune*, 29 Jan. 2015)



### Calumet Stormwater Collaborative

- A number of interviewees discussed the potential for community food systems to play a role in stormwater mitigation, which is a priority of the CMAP-convened Calumet Stormwater Collaborative. Other cities such as Minneapolis are studying the role that urban agriculture might play in green infrastructure for absorbing storm water.

**APPENDIX V**  
**Community Meeting at Altgeld Gardens**



**Michael Howard, then the acting DNR deputy director for the Millenium Reserve, speaks to participants.**



Census  
Skill sets

"People Registration  
Drive"  
who does what?  
How to work together  
towards positive  
results.

Network more!

**\*NEXT MEETING\***



Participants took part in activities designed to indicate preferences for use of Millennium Reserve land around Altgeld Gardens.



Participants in the community meeting

**APPENDIX VI**  
**Urban Agriculture Checklist**

	Some elements to consider	Checklist and Notes
<b>Sites and potential spaces</b>	<ul style="list-style-type: none"> <li>1 City block = 5 acres</li> <li>1 acre = 48,000 sq. feet</li> <li>1 City lot= average 40'x 120'</li> <li>Multiple sites</li> <li>Park land/unused paved space</li> <li>Community Garden space</li> <li>School garden</li> <li>Rooftop</li> <li>Containers</li> </ul>	
<b>Plants</b>	<ul style="list-style-type: none"> <li>Vegetables and edibles</li> <li>*annual and or perennials?</li> <li>Fruit Trees</li> <li>Fruiting vines and berries</li> <li>Nut Trees</li> <li>Trees, shrubs, ornamentals</li> <li>Bulbs</li> <li>Native Plants</li> </ul>	
<b>Soil</b>	<ul style="list-style-type: none"> <li>Soil testing and remediation</li> <li>Fertility inputs and amendmets</li> <li>Raised beds</li> <li>Containers</li> </ul>	
<b>Water</b>	<ul style="list-style-type: none"> <li>Irrigation system</li> <li>Rain barrels</li> <li>Ponds</li> <li>Fire hydrants</li> </ul>	
<b>Labor</b>	<ul style="list-style-type: none"> <li>Volunteers</li> <li>Seasonal labor</li> <li>Youth involvement</li> </ul>	
<b>Liability and Policy</b>	<ul style="list-style-type: none"> <li>Insurance coverage</li> </ul>	



	Zoning for the area
	Farm stand sales/tax or no tax?
	Security and site access
<b>Livestock</b>	Worms
	Chickens
	Goats
	Bees
	Rabbits
	Fish
<b>Structure</b>	Storage Shed
	Market Stall
	Hoop Greenhouse
	Livestock shelters
	To fence or not to fence
	Solar panels
	Anaerobic Digester
Community food security	<b>Responsibility and relationships to local residents</b>