Welcome back to Dig In!

THE OHIO STATE UNIVERSITY

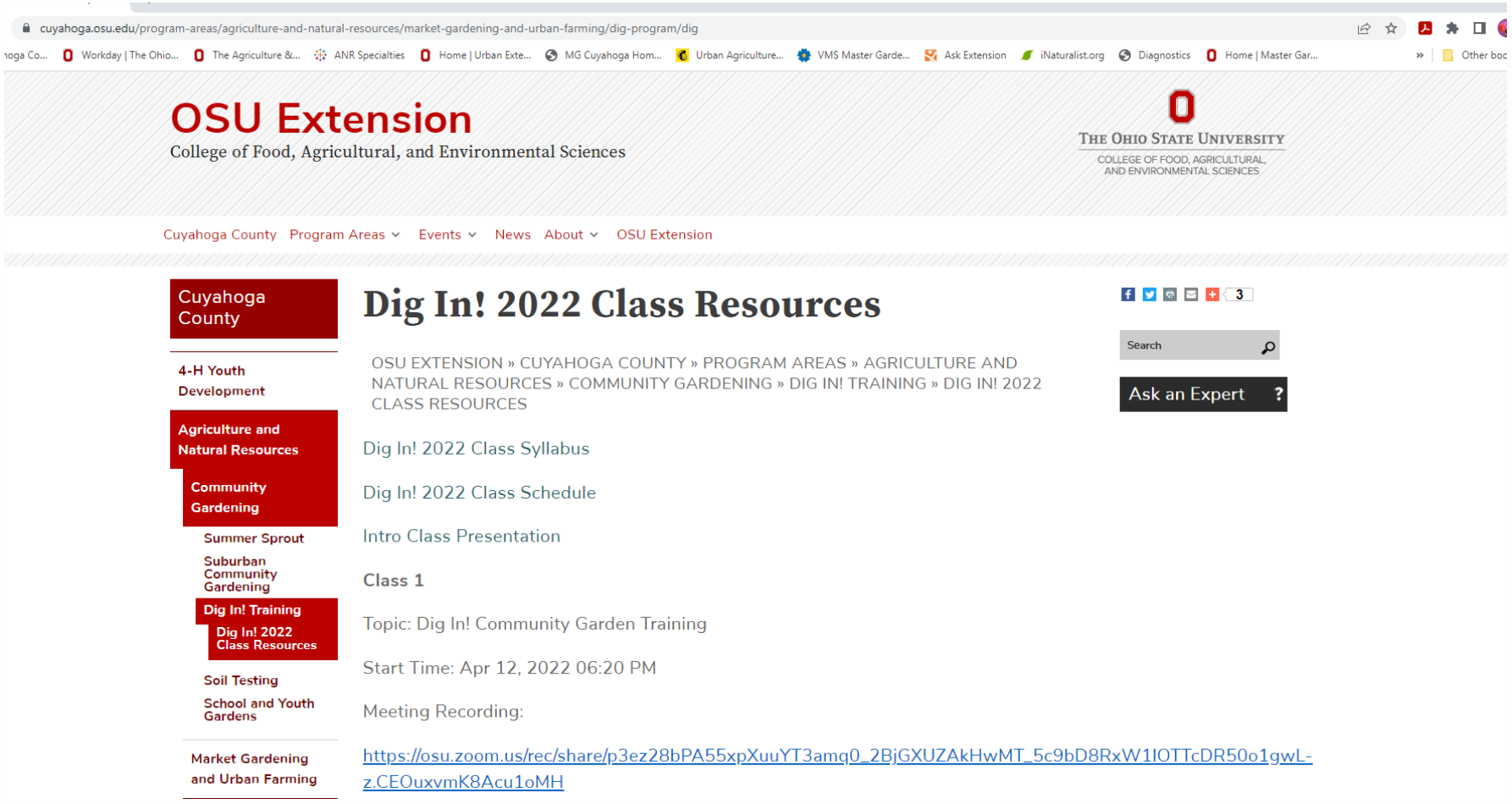
COLLEGE OF FOOD, AGRICULTURAL, AND ENVIRONMENTAL SCIENCES

CFAES

A few items to continue…

- Demographic Survey
- Everyone is paid and books are out!
- Zoom meeting link, explained, save in your calendar or see reminder email
- Website with Class Materials (did you bookmark it?)

CFAES



https://cuyahoga.osu.edu/program-areas/agriculture-and-natural-resources/market-gardening-and-urban-farming/dig-program/dig

Introductions, anyone new?

Finding Land for your Community Garden

Maggie Rivera
April 27, 2021

THE OHIO STATE UNIVERSITY
COLLEGE OF FOOD, AGRICULTURAL, AND ENVIRONMENTAL SCIENCES

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This presentation will cover…

- How to successfully find a gardening site
  - In Cleveland
  - In Cuyahoga County
- Urban Agriculture Site Checklist

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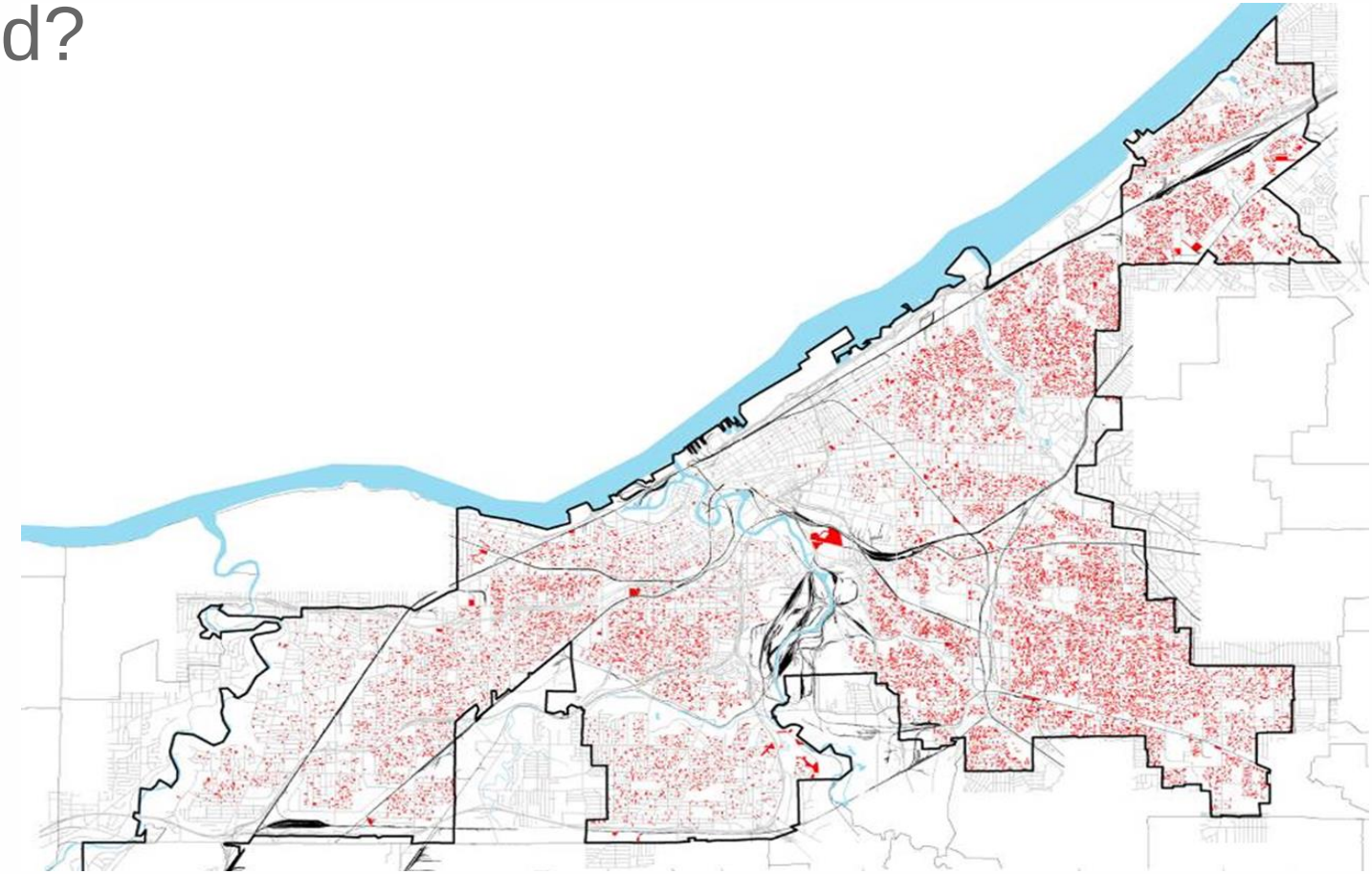
Quick Poll

How many acres of vacant land are in Cleveland?



Answer: ~1,548 acres

(~14,000 vacant lots)

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Ways you find land…

- Walk Your Neighborhood
- Bike Your Neighborhood
- Drive Your Neighborhood
- Talk to local stakeholders/Institutions
- Web-based resources

Web-Based Resources

- Google Maps
- City of Cleveland GIS
- County MyPlace

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Step #1:

Find a vacant lot and get an address or a nearby intersection

Step #2:

Find out who the owner of the lot is

Step #3

Contact land bank, community leaders & professionals

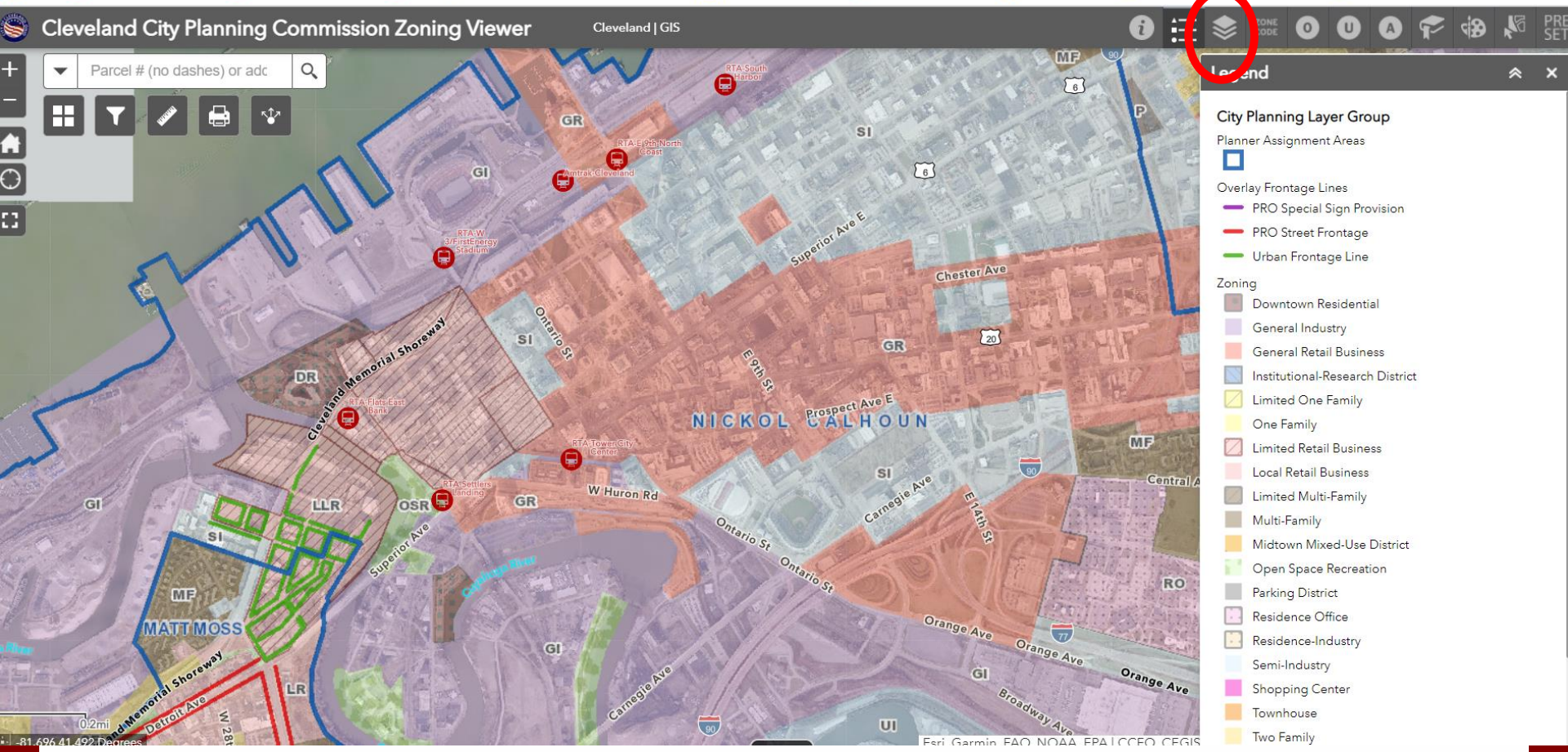
In the City of Cleveland…

- City of Cleveland Planning Commission Geographic Information Services (GIS)

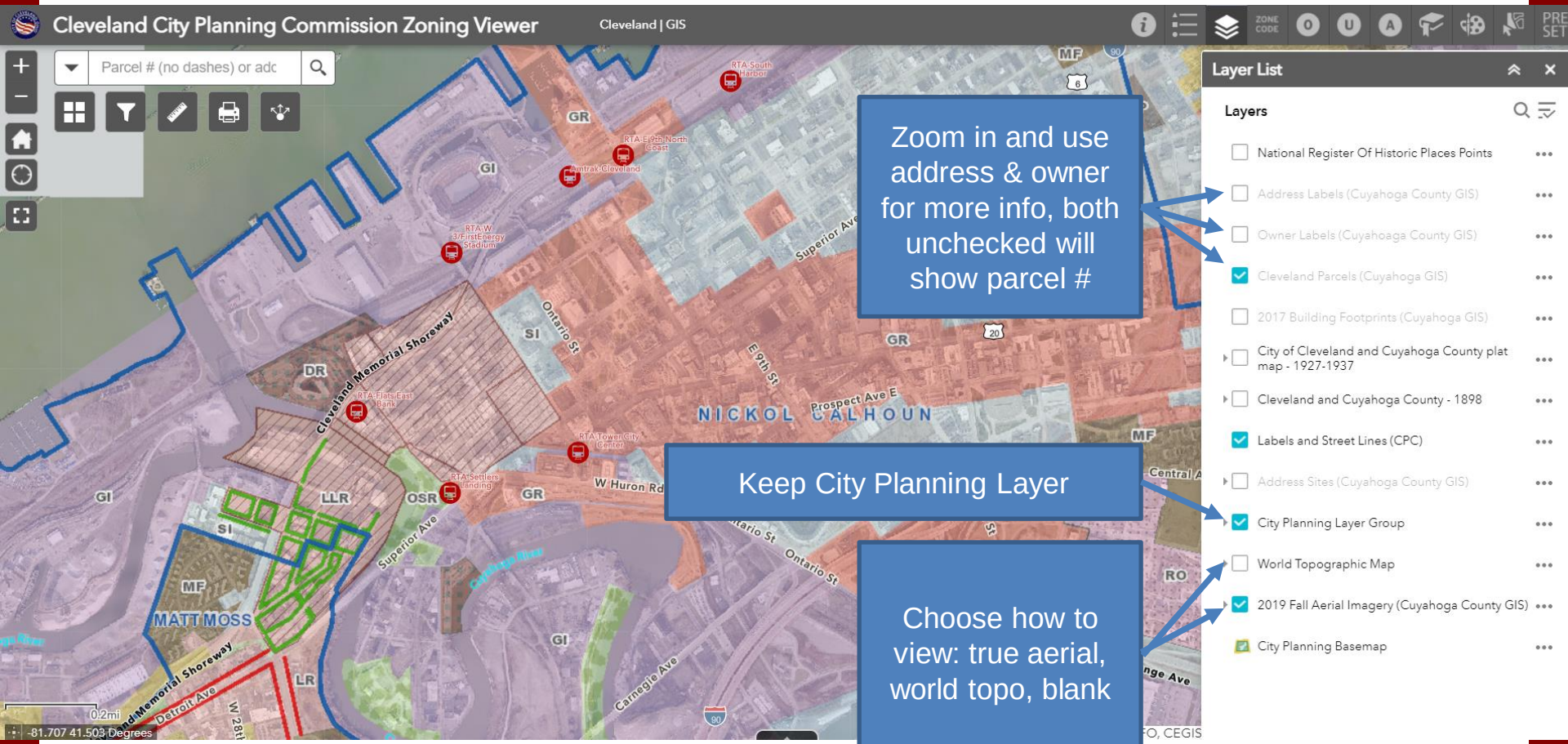
  https://clevelandgis.maps.arcgis.com/home/index.html

- Community Development Corporations

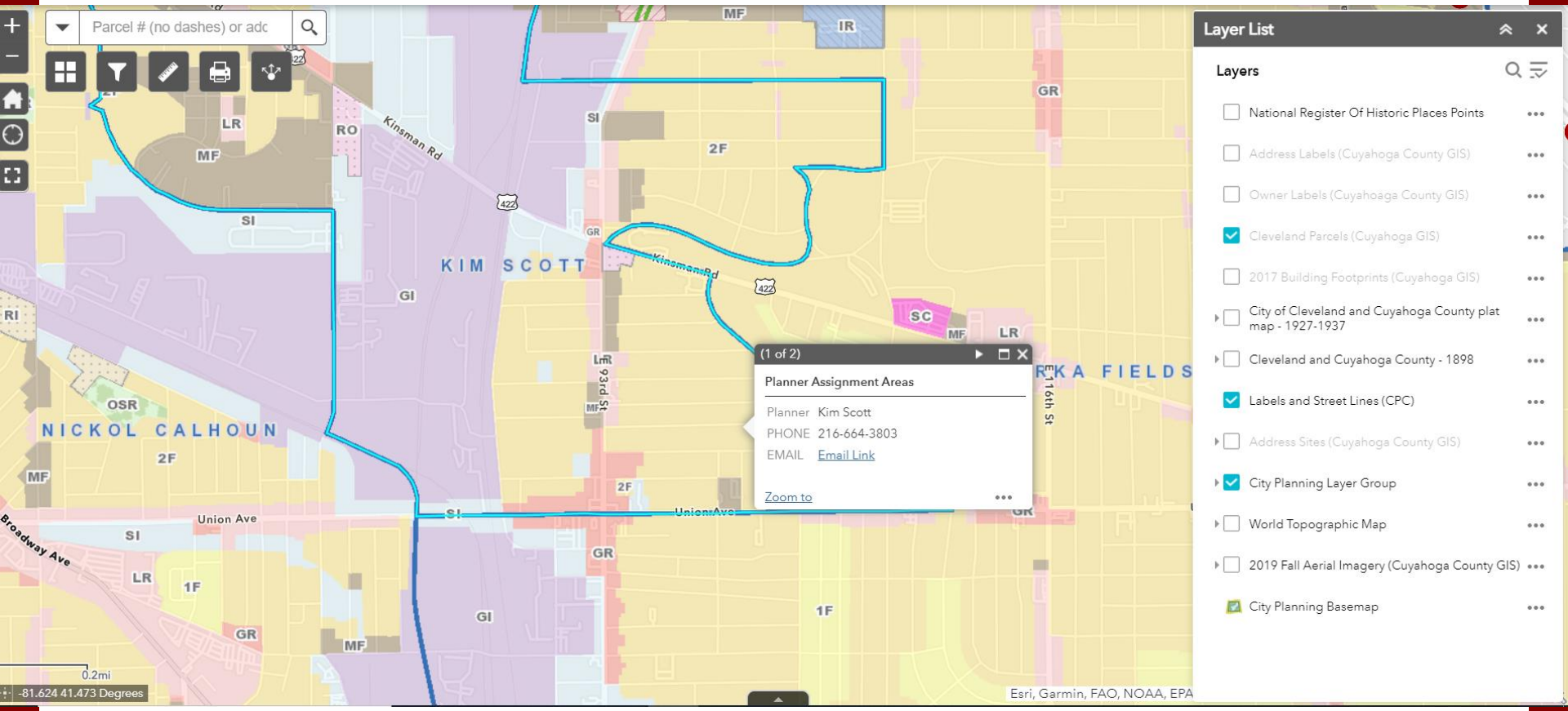
  http://www.clevelandnp.org/cleveland-cdcs/


Cleveland City Planning Commission Zoning Viewer
Cleveland | GIS
Parcel # (no dashes) or adc
Legend
City Planning Layer Group
Planner Assignment Areas
Overlay Frontage Lines
PRO Special Sign Provision
PRO Street Frontage
Urban Frontage Line
Zoning
Downtown Residential
General Industry
General Retail Business
Institutional-Research District
Limited One Family
One Family
Limited Retail Business
Local Retail Business
Limited Multi-Family
Multi-Family
Midtown Mixed-Use District
Open Space Recreation
Parking District
Residence Office
Residence-Industry
Semi-Industry
Shopping Center
Townhouse
Two Family
NICKOL CALHOUN
MATT MOSS
Cleveland Memorial Shoreway
Superior Ave E
Chester Ave
Ontario St
E 9th St
Prospect Ave E
W Huron Rd
Carnegie Ave
E 14th St
Orange Ave
Broadway Ave
Detroit Ave
Esri, Garmin, FAO, NOAA, EPA | CCEO, CEGIS

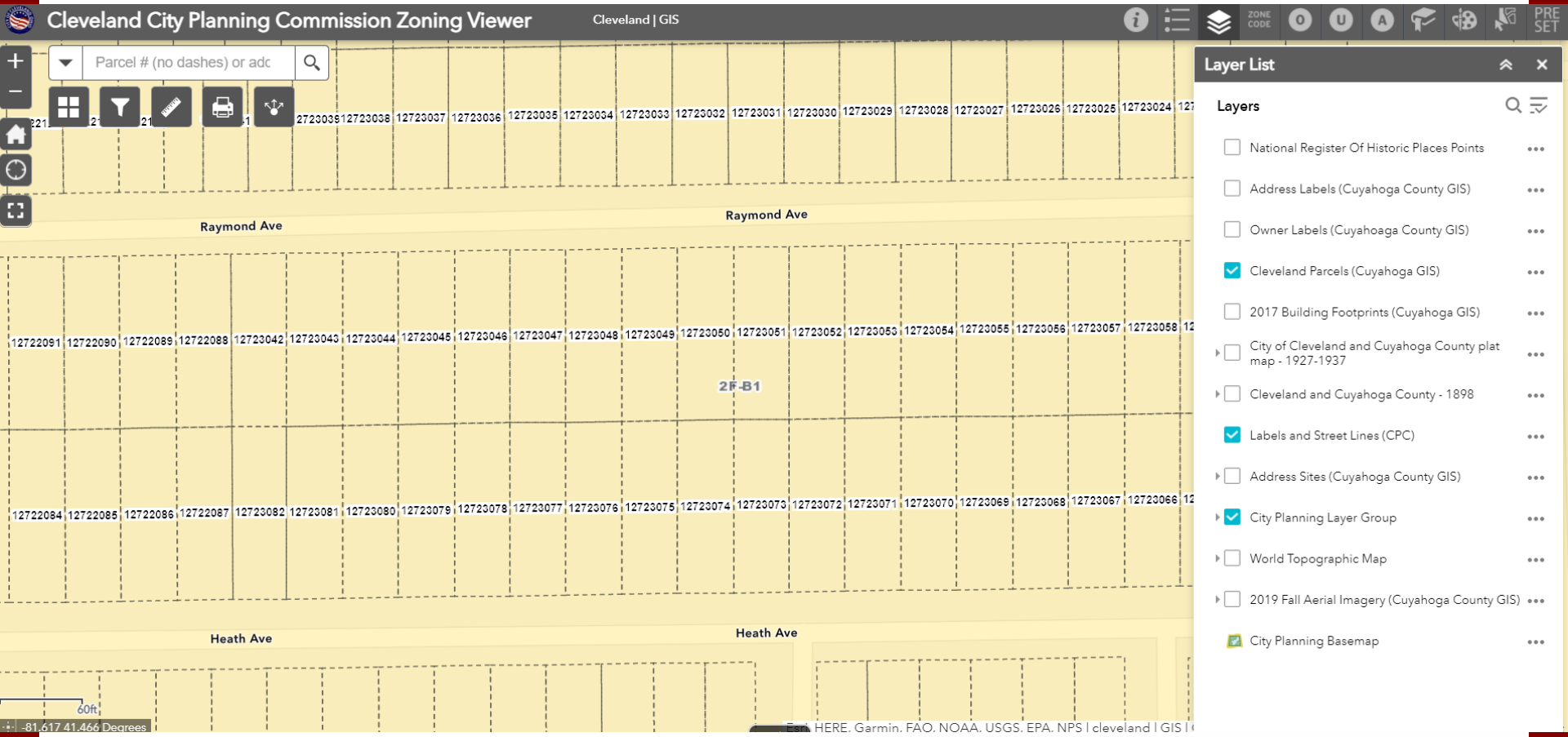
CFAES


Cleveland City Planning Commission Zoning Viewer
Cleveland | GIS
Parcel # (no dashes) or adc
Layer List
Layers
National Register Of Historic Places Points
Address Labels (Cuyahoga County GIS)
Owner Labels (Cuyahoga County GIS)
Cleveland Parcels (Cuyahoga GIS)
2017 Building Footprints (Cuyahoga GIS)
City of Cleveland and Cuyahoga County plat map - 1927-1937
Cleveland and Cuyahoga County - 1898
Labels and Street Lines (CPC)
Address Sites (Cuyahoga County GIS)
City Planning Layer Group
World Topographic Map
2019 Fall Aerial Imagery (Cuyahoga County GIS)
City Planning Basemap
Zoom in and use address & owner for more info, both unchecked will show parcel #
Keep City Planning Layer
Choose how to view: true aerial, world topo, blank
NICKOL CALHOUN
MATT MOSS
Cleveland Memorial Shoreway
Superior Ave
Ontario St
E 9th St
Prospect Ave E
W Huron Rd
Carnegie Ave
Detroit Ave
Central Ave
-81.707 41.503 Degrees

Click on area to get city planner contact information

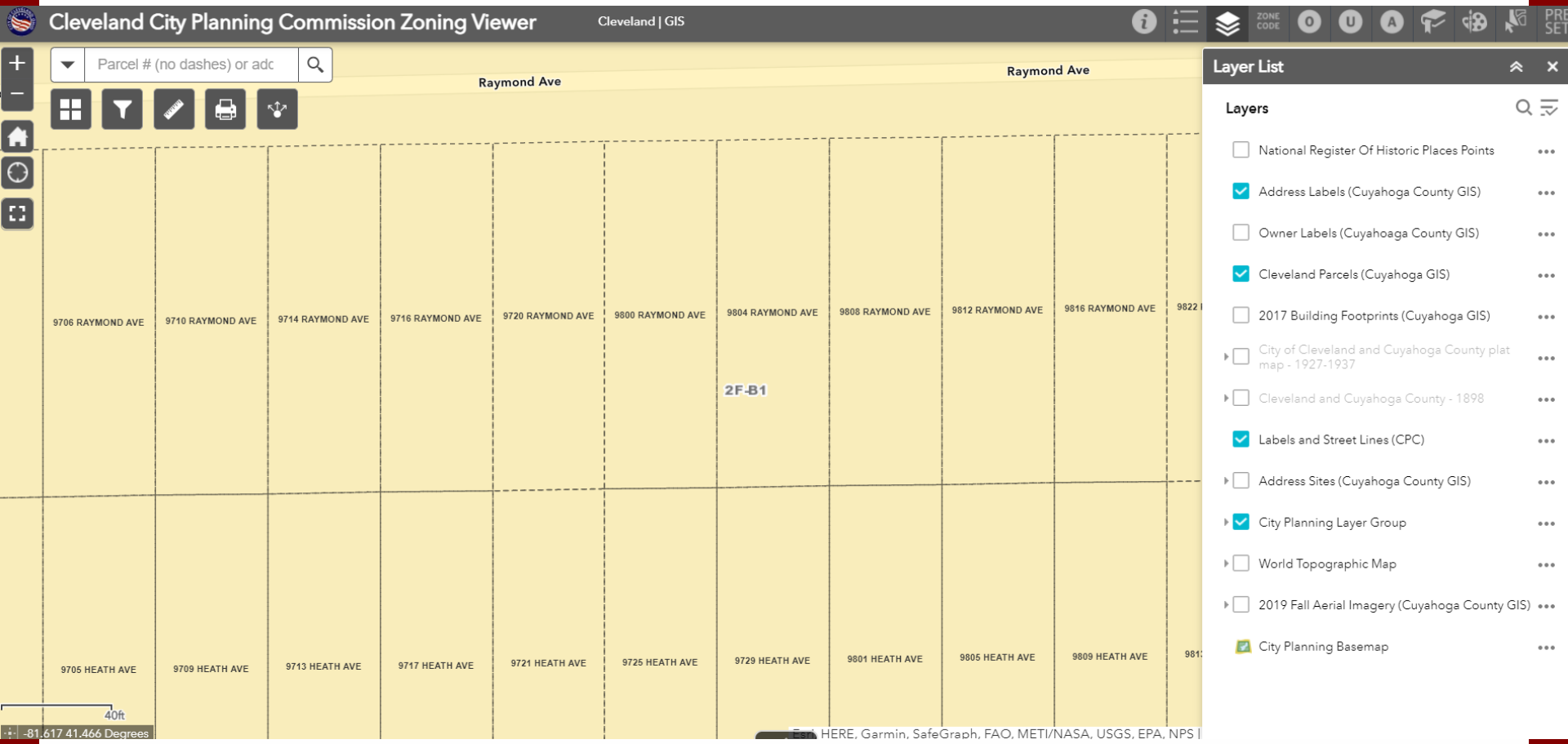


Zoom in to see parcel #s, then toggle between address & owner

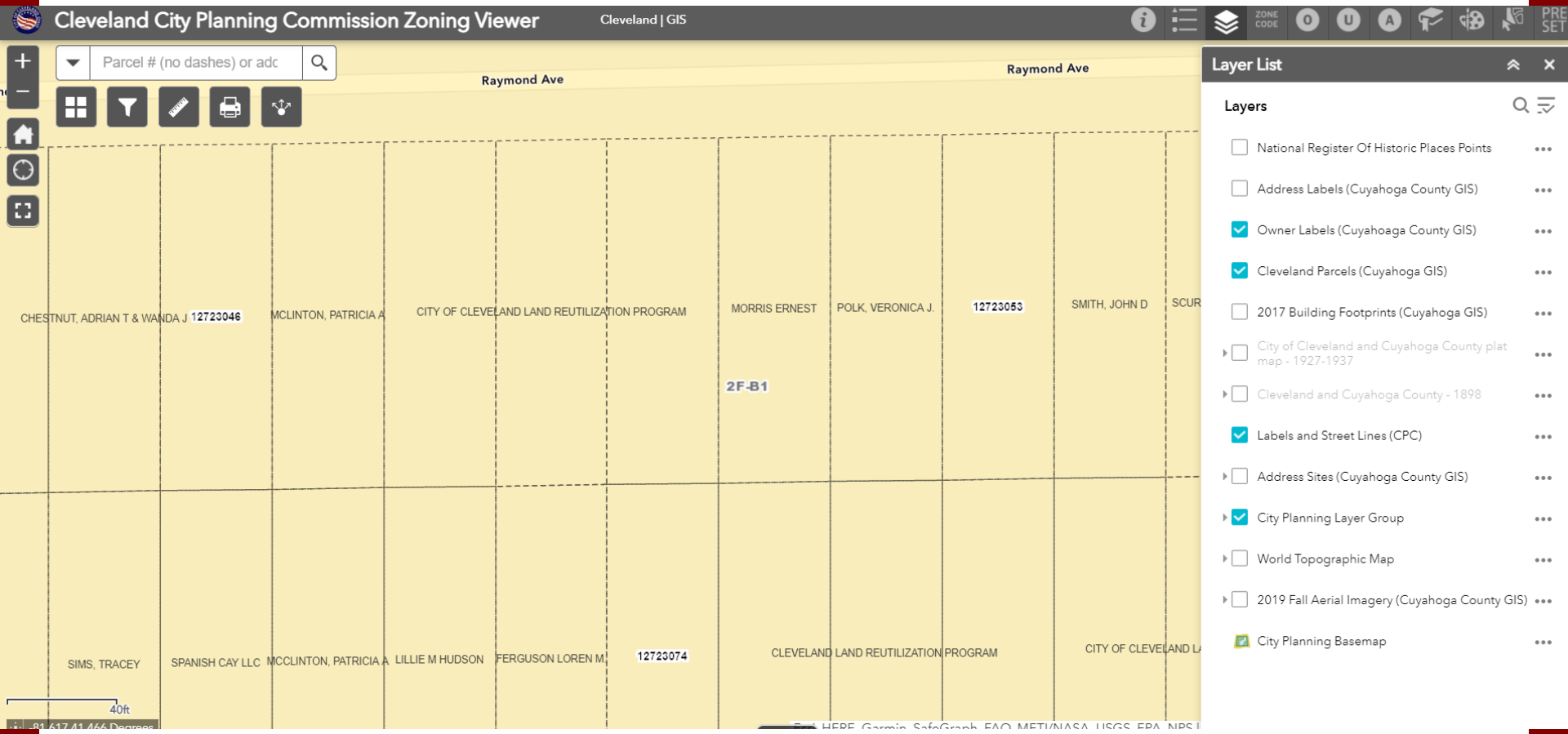


CFAES

Address



Owner


Cleveland City Planning Commission Zoning Viewer
Cleveland | GIS
Parcel # (no dashes) or adc
Raymond Ave
Raymond Ave
CHESTNUT, ADRIAN T & WANDA J
12723046
MCLINTON, PATRICIA A
CITY OF CLEVELAND LAND REUTILIZATION PROGRAM
MORRIS ERNEST
2F-B1
POLK, VERONICA J.
12723053
SMITH, JOHN D
SIMS, TRACEY
SPANISH CAY LLC
MCCLINTON, PATRICIA A
LILLIE M HUDSON
FERGUSON LOREN M.
12723074
CLEVELAND LAND REUTILIZATION PROGRAM
CITY OF CLEVELAND LA
40ft
Layer List
Layers
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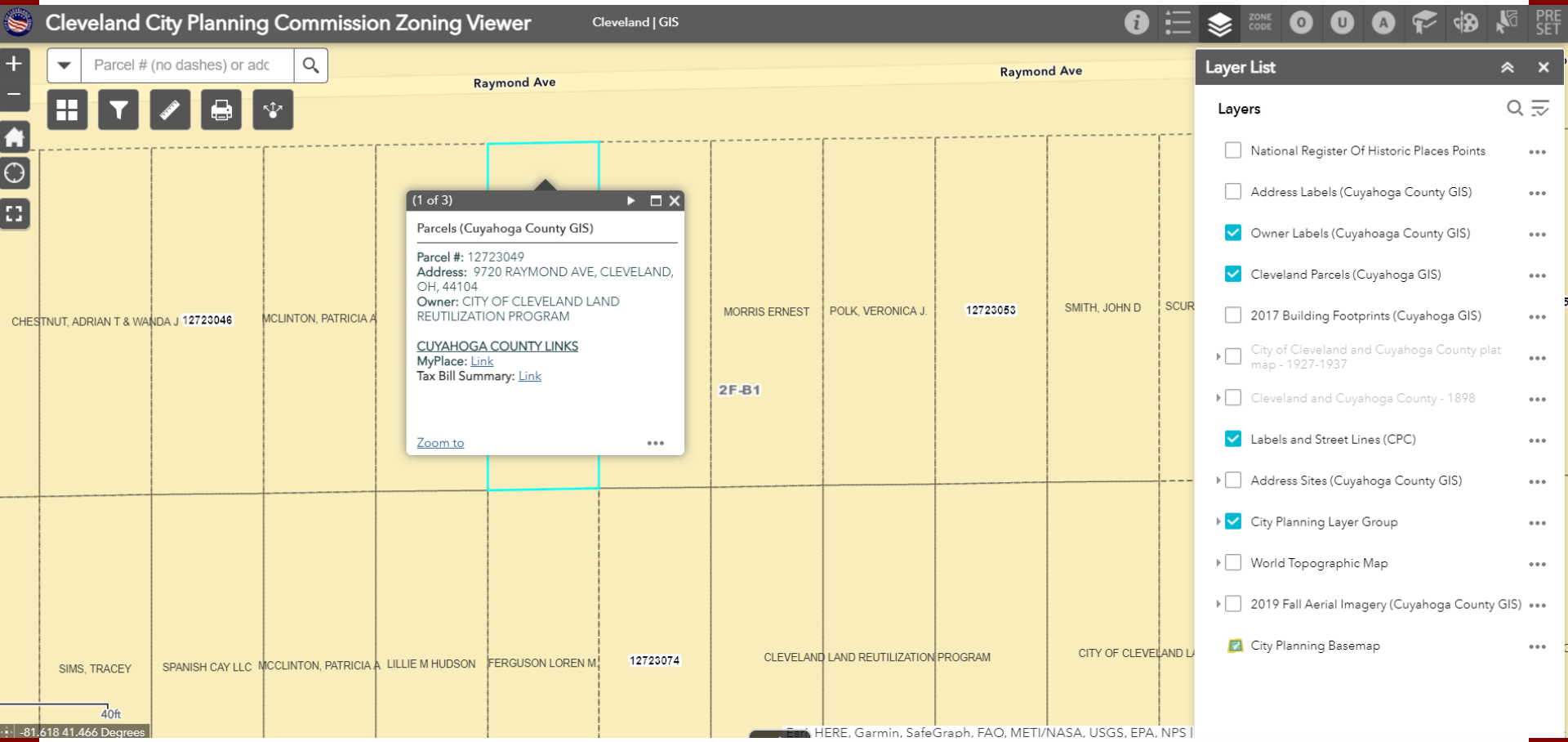
City Planning Basemap

CFAES

Click on the parcel to view all info and get link to MyPlace



CUYAHOGA COUNTY, Ohio
MyPlace

Search
City: Entire County
Search By: Owner | Parcel | Address
12723049

Search Results

PROPERTY DATA

- General Information
- Transfers
- Values
- Land
- Building Information
- Building Sketch
- Other Improvements
- Permits
- Property Summary Report

TAXES

- Tax Bill
- View/Pay Tax Bill

View Map

PROPERTY DATA

- General Information
- Transfers
- Values
- Land
- Building Information
- Building Sketch
- Other Improvements
- Permits
- Property Summary Report

TAXES

- Tax Bill
- View/Pay Tax Bill

LEGAL RECORDINGS

- Get a Document List

ACTIVITY

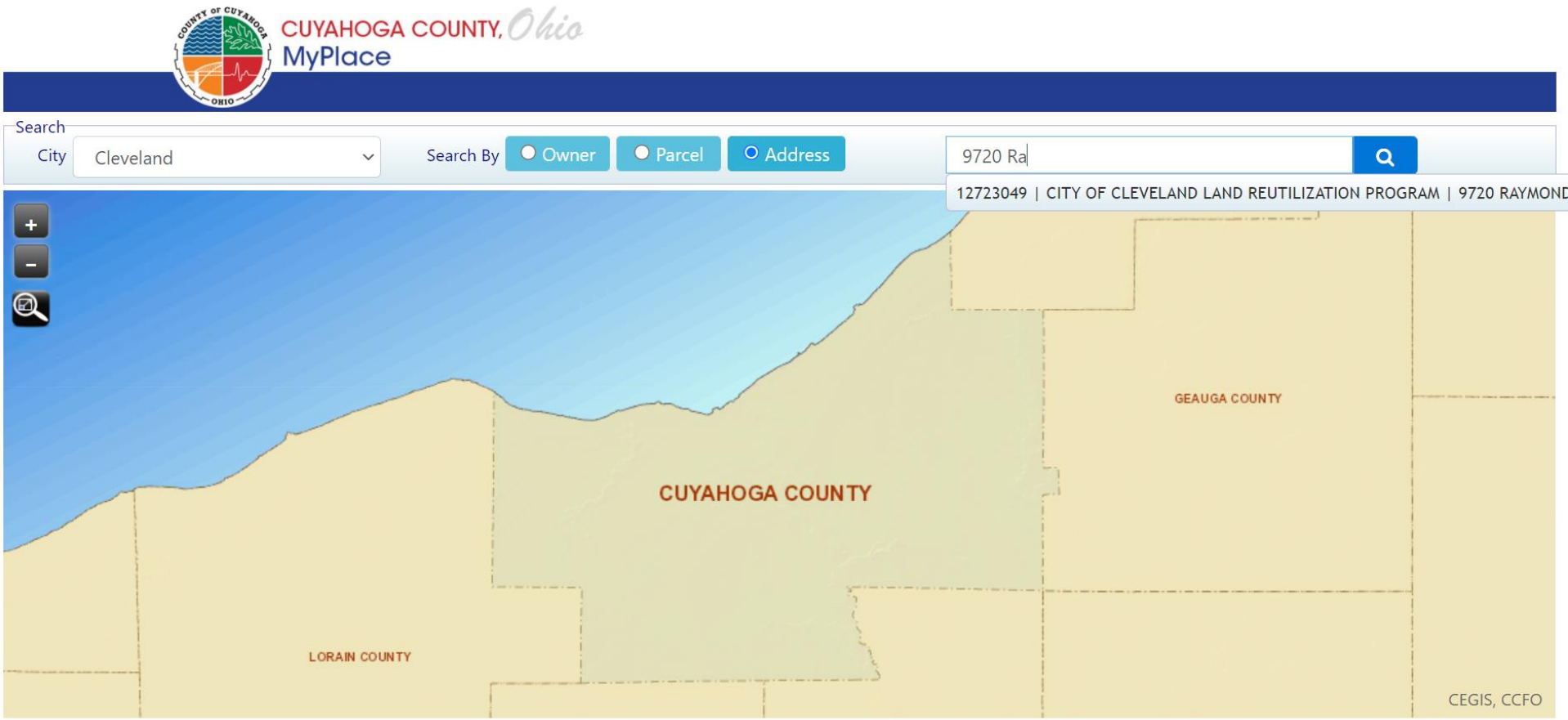
- Informal Reviews
- Board of Revisions Cases

127-23-049
CITY OF CLEVELAND LAND REUTILIZATION PROGRAM
9720 RAYMOND AVE
CLEVELAND, OH. 44104

Transfer History

- Transfer Date: 09/01/2015
- Transfer Date: 02/18/1997
- Transfer Date: 07/30/1996
- Transfer Date: 07/30/1996
- Transfer Date: 09/25/1987
- Transfer Date: 09/10/1985
- Transfer Date: 05/18/1977
- Transfer Date: 05/03/1977
- Transfer Date: 05/12/1976
- Transfer Date: 05/12/1976
- Transfer Date: 01/01/1975

View Map


CUYAHOGA COUNTY, Ohio
MyPlace
Search
City
Cleveland
Search By
Owner
Parcel
Address
9720 Ra
12723049 | CITY OF CLEVELAND LAND REUTILIZATION PROGRAM | 9720 RAYMOND
GEAUGA COUNTY
CUYAHOGA COUNTY
LORAIN COUNTY
CEGIS, CCFO

In the City of Cleveland #3: get your guidance & “endorsements”

City of Cleveland Land Bank

Community Development
Division of Real Estate Room 325
601 Lakeside
(216) 664.4126

Your City Councilmember

Your Community Development Corporation

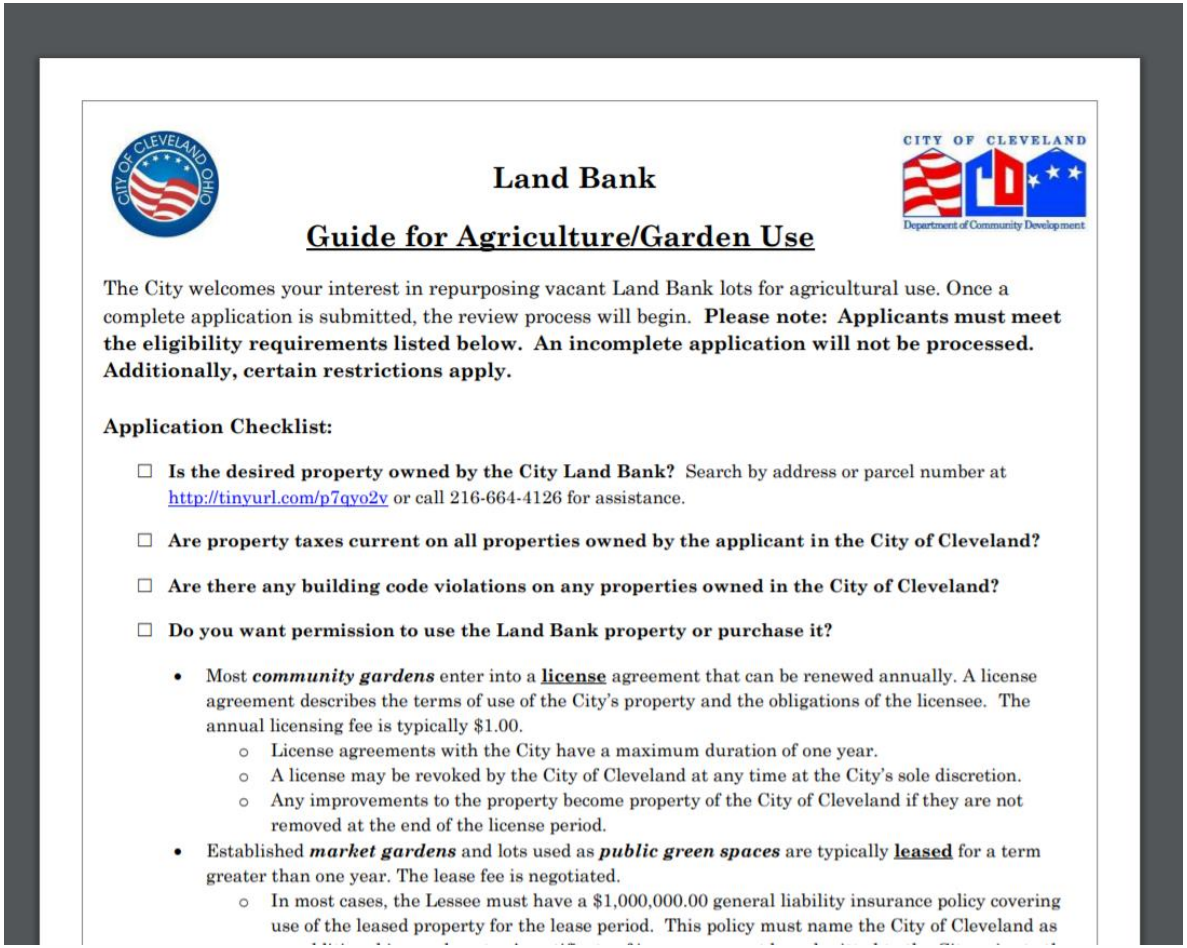
http://www.clevelandnp.org/cleveland-cdcs/

Area City Planner (Cleveland GIS)

So, you found a COC LB lot that will work, you have civic leader endorsement,

LB application for Community Garden, Market Garden or Purchase for Garden Use.

http://www.cleveland.oh.us/sites/default/files/forms_publications/LandBankAgricultureGardenApplication_0.pdf



CITY OF CLEVELAND
Department of Community Development

Land Bank

Guide for Agriculture/Garden Use

The City welcomes your interest in repurposing vacant Land Bank lots for agricultural use. Once a complete application is submitted, the review process will begin. **Please note: Applicants must meet the eligibility requirements listed below. An incomplete application will not be processed. Additionally, certain restrictions apply.**

Application Checklist:

- ☐ **Is the desired property owned by the City Land Bank?** Search by address or parcel number at http://tinyurl.com/p7qyo2v or call 216-664-4126 for assistance.
- ☐ **Are property taxes current on all properties owned by the applicant in the City of Cleveland?**
- ☐ **Are there any building code violations on any properties owned in the City of Cleveland?**
- ☐ **Do you want permission to use the Land Bank property or purchase it?**

  - Most ***community gardens*** enter into a **license** agreement that can be renewed annually. A license agreement describes the terms of use of the City's property and the obligations of the licensee. The annual licensing fee is typically $1.00.
    - License agreements with the City have a maximum duration of one year.
    - A license may be revoked by the City of Cleveland at any time at the City's sole discretion.
    - Any improvements to the property become property of the City of Cleveland if they are not removed at the end of the license period.
  - Established ***market gardens*** and lots used as ***public green spaces*** are typically **leased** for a term greater than one year. The lease fee is negotiated.
    - In most cases, the Lessee must have a $1,000,000.00 general liability insurance policy covering use of the leased property for the lease period. This policy must name the City of Cleveland as

City of Cleveland Greenspace Training

Vital Neighborhoods Working Group, contact Marka Fields to be added to an interest list MFields@clevelandohio.gov

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Other places in Cuyahoga County

Cuyahoga County GIS

https://myplace.cuyahogacounty.us/

Cuyahoga County Land Bank

http://www.cuyahogalandbank.org/properties.php

Cuyahoga County Planning Department

http://planning.co.cuyahoga.oh.us/

Cuyahoga County Step #2 & #3: Find Owner and Contact Civic Leaders

- City Hall
- Planning
- Land Bank (Euclid, E. Cleve., S. Euclid, Cleve. Hts.)
- Private Landowners
- Non-Profit Organizations

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Poll Break

Now that you have a site in mind how do you make sure it's the right sight for gardening?

Urban Agriculture Site Assessment Check List

The observable things to consider outside of the garden…

1. Community/businesses nearby
2. Who lives nearby?
3. Safety and security (lighting, neighborhood watch groups)
4. Land use history

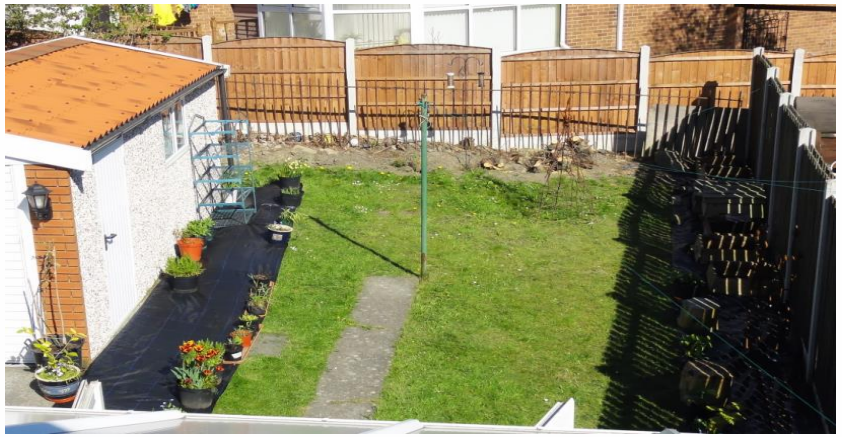
Tip: Seek out already established community groups to help promote and introduce your project to the community (block clubs, neighborhood watch, etc.)

The observable things to consider inside the garden…

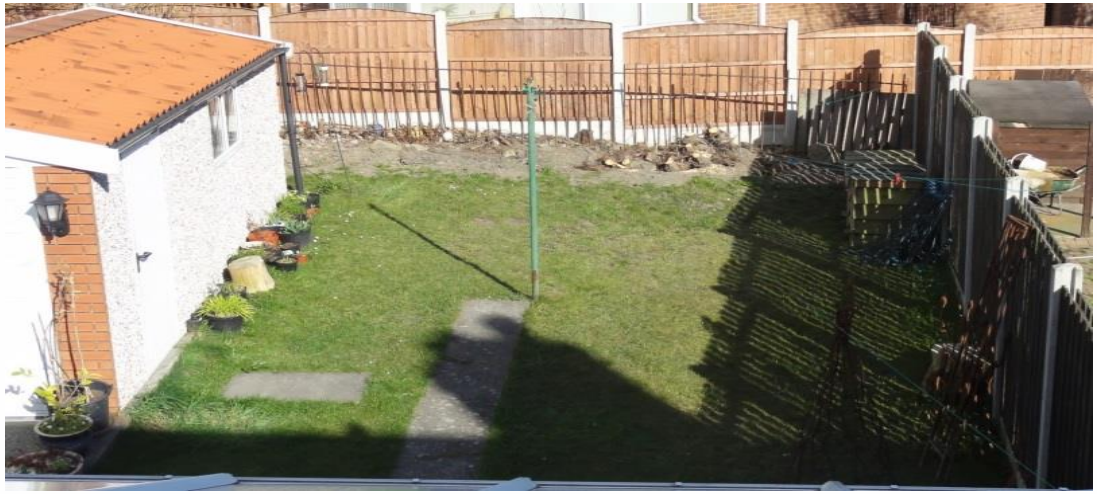
1. Existing structures and shading
2. Access to water
3. Soil (what's already growing?)
4. Landscape (slopes, depressions, tree roots)

Tip: Visit your site at different times of the day to see how much sunlight is available. Also visit after a rain to see if puddles collect.

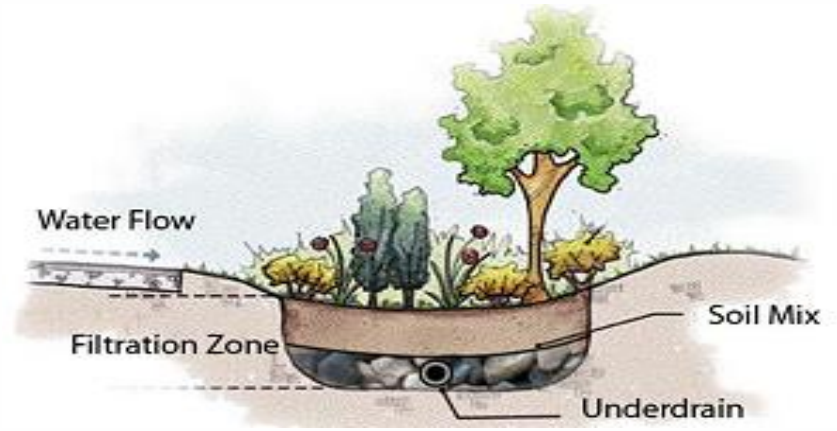
Nearby Structures



Selecting a Garden Site



Soil – Slope & Drainage



Water Access

- Water – Is it within reach?

Selecting a Garden Site

Water Access

Rain Barrels

City of Cleveland's
Summer Rain Barrel Program
https://www.sustainablecleveland.org/rainbarrelprogram2020

Soil & Water Conservation District
https://cuyahogaswcd.org/programs/rain-barrels

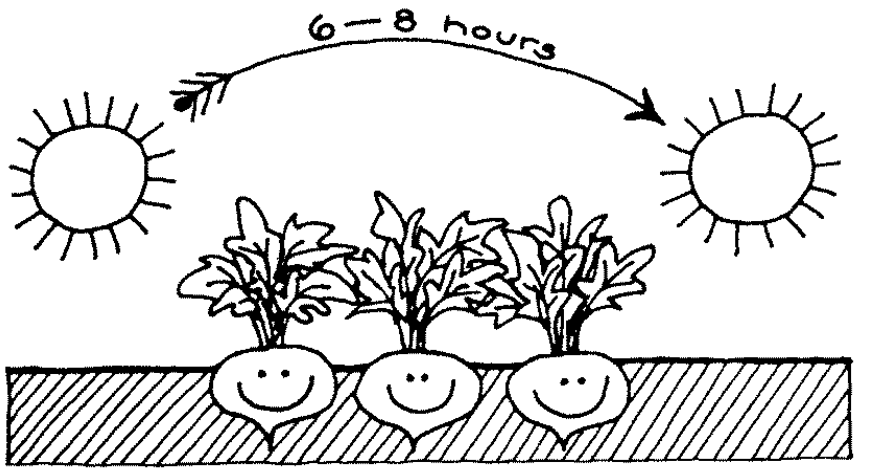
Water Access

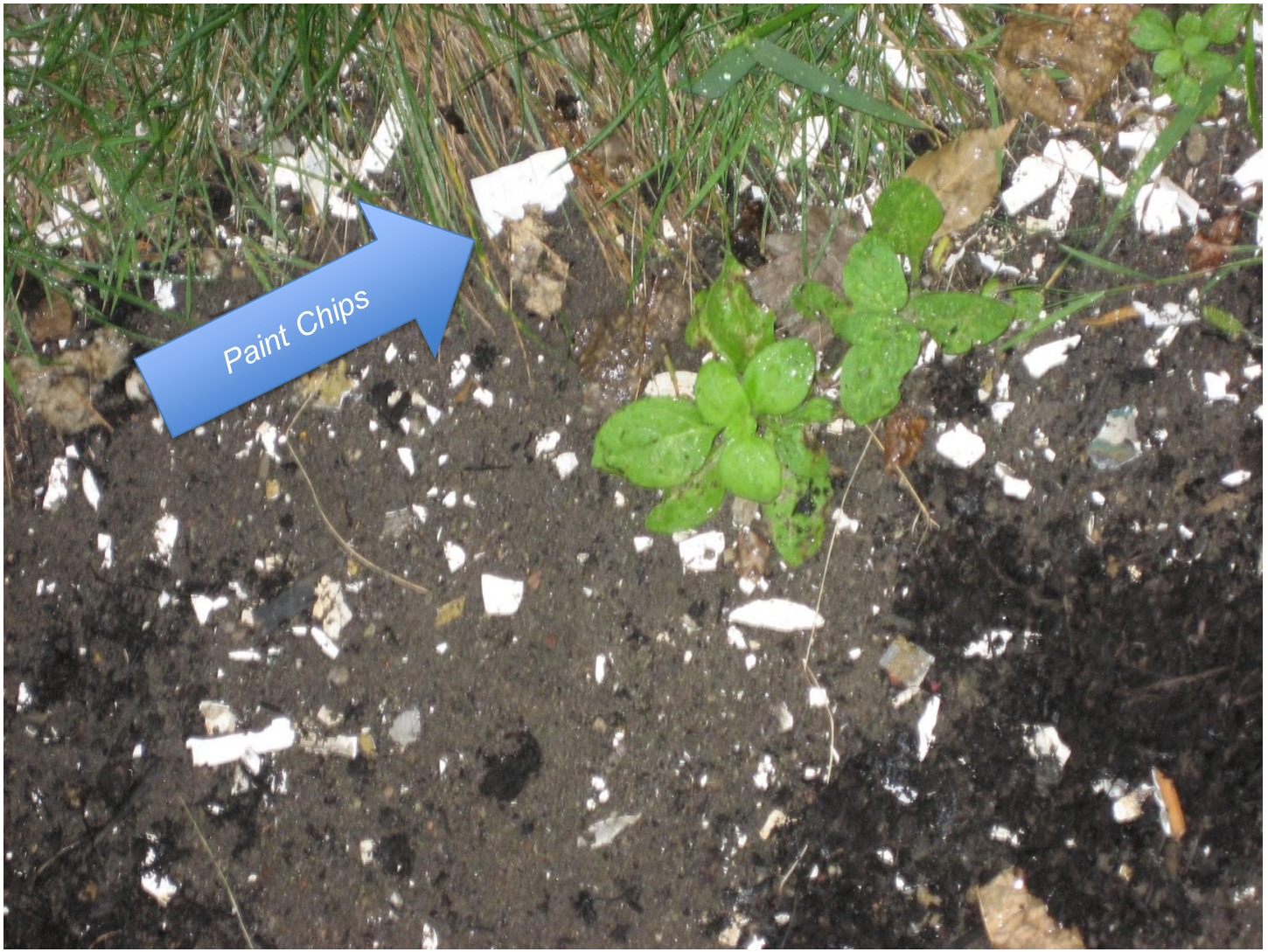
Hydrant Access

May-Oct (Mar-Nov)

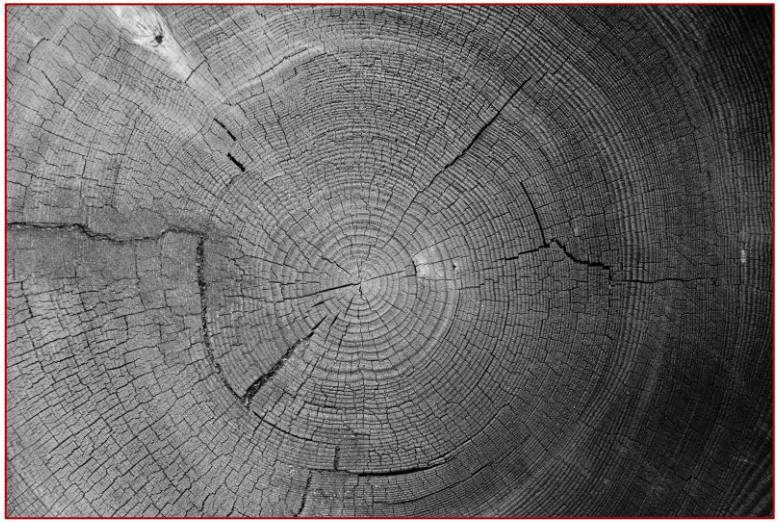
Other considerations…

- Slope
- Shade
- Sun exposure
- Drainage
- Plant growth
- Construction debris
- Paint chips

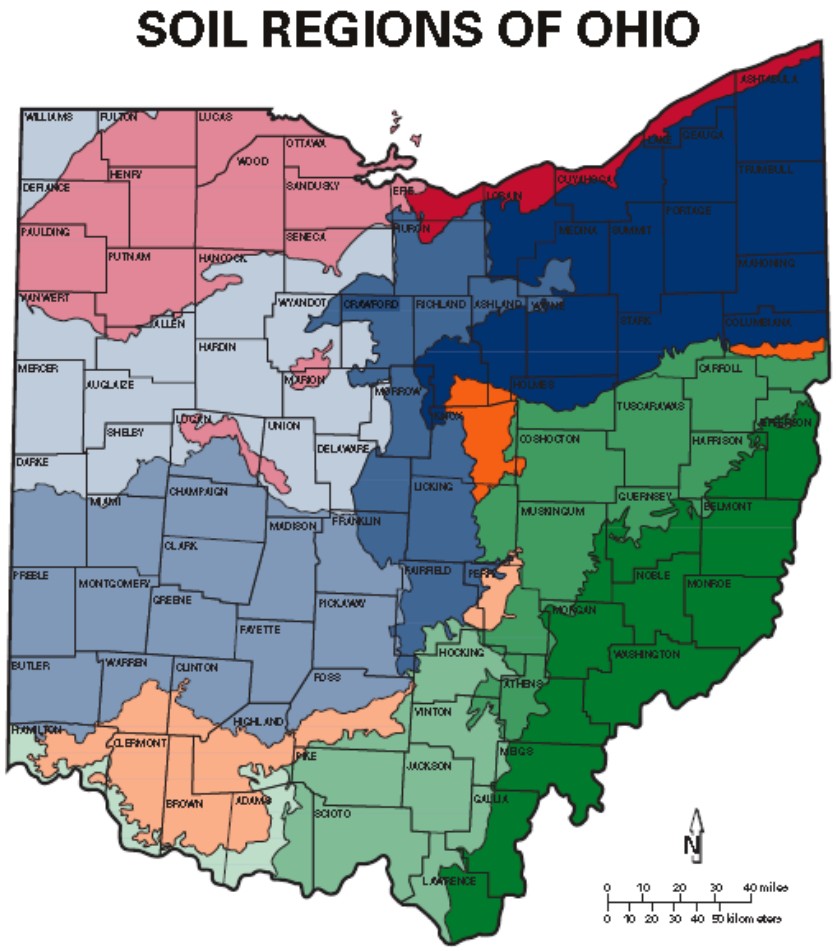



Paint Chips


Dead Zone



The unobservable things to consider inside your garden…under the surface and in the past.



http://www.dnr.state.oh.us/tabid/9073/default.aspx

Why are soils not all the same?

5 main factors:

- Climate
- Organisms
- Parent material
- Landscape
- Time

Research lot history

- Talk with neighbors
- Resources available from public libraries and city government
- Councilperson
- Observation

- Digging into Your Site's History

Why bother with historical information?

- The previous use of the site can point you towards possible contaminants present.
- Gain a sense of the surrounding area to further inform your decision about utilizing a specific site.

Site History and Property Research Tools

Cuyahoga County MyPlace

https://myplace.cuyahogacounty.us/

Site History and Property Research

Cleveland State Cleveland Historic Maps, https://www.arcgis.com/apps/View/index.html?appid=ddb0ee6134d64de4adaaa3660308abfd

"A Checklist for Property Research in Cleveland & Cuyahoga County"

Cleveland Public Library, History and Geography Dept., *work with a librarian to help you!*

CPL Map Collections

- **Hopkins Plat Maps (1912-1957)**
- **Sanborn Fire Maps (1874-1973)**
- **Other aerial maps**
  - **Info on changes to property over time, date buildings**
  - **Some available online www.cpl.org, RESEARCH, Digital Image Gallery**
- **Realty Atlas Tax Maps**

Why bother with historical information?

Land Use	Common Contaminants
Agriculture, green space	Nitrate, pesticides/herbicides
Car wash, parking lots, road and maintenance depot, vehicle services	Metals, PAHs, petroleum products, sodium, solvents, surfactants
Dry cleaning	Solvents
Existing commercial or industrial building structures	Asbestos, petroleum products, lead paint, PCB caulks, solvents
Junkyards	Metals, petroleum products, solvents, sulfate
Machine shops and metal works	Metals, petroleum products, solvents, surfactants
Residential areas, buildings with lead-based paint, where coal, oil, gas or garbage was burned	Metals, including lead, PAHs, petroleum products creosote
Stormwater drains and retention basins	Metals, pathogens, pesticides/herbicides, petroleum products, sodium, solvents
Underground and aboveground storage tanks	Pesticides/herbicides, petroleum products, solvents
Wood preserving	Metals, petroleum products, phenols, solvents, sulfate
Chemical manufacture, clandestine dumping, hazardous material storage and transfer, industrial lagoons and pits, railroad tracks and yards, research labs	Fluoride, metals, nitrate, pathogens, petroleum products, phenols, radioactivity, sodium, solvents, sulfate

(Adapted from Boulding and Ginn, 2004)

What are the sources of many common contaminants?

From EPA's BROWNFIELDS AND URBAN AGRICULTURE: Interim Guidelines for Safe Gardening Practices Spring 2011

Most Common Soil Contaminants

- Lead (Pb)
- Cadmium (Cd)
- Nickel (Ni)
- Chromium (Cr)
- Copper (Cu)
- Zinc (Zn)

Are commonly tested for by University Labs

- Arsenic (As)
- Mercury (Hg)
- pesticide residue levels
- PCBs
- hydrocarbons levels

Can be tested for by other labs

Key Point: you have to know what you are looking for to test for it.

Exposure to soil contaminants

1. Soil→Human

Direct ingestion or inhalation of soil; skin contact

From hands, dust, surface of fruits and vegetables

2. Soil→Plant→Human

Ingestion of plants that have taken up contaminants

Depends on type of plant, part of plant, type of contaminant, soil pH and organic matter content

In general, plants do not absorb or accumulate lead very well*

*Leafy vegetables and surfaces of root crops are more of a concern than fruiting parts

Soil – Testing and Digging

- Always have your soil tested by an accredited lab
- Call before you dig! Be ready with address, parcel number and/or nearby intersection

811
Know what's **below.**
Call before you dig.

Sampling your Soil

1. Goal: send a sample that is representative of the area
2. Timing
   - Stable climate
   - No recent disturbances, such as immediately post-harvest or fertilization
3. Identify and isolate any unusual spots for separate tests
   - Dead grass, bare spots, drastic differences in soil composition, topography, drainage, or type of crops grown
4. Combine multiple samples taken randomly throughout the growing area
5. Follow the soil testing lab's instructions to send

What to look for in your results:

Soil pH

Lead value

Macro-nutrient ranges

UMass Extension
CENTER FOR AGRICULTURE

Soil and Plant Tissue Testing Laboratory
West Experiment Station
682 North Pleasant Street
University of Massachusetts
Amherst, MA 01003
Phone: (413) 545-2311
e-mail: soiltest@umass.edu
website: soiltest.umass.edu

Soil Test Report

Prepared For:
N Wright
OSU Extension
9127 Miles Ave
Cleveland, OH 44105

wright.1128@osu.edu
216-429-8200 x249

Send Copy To:
,

Sample Information:
Sample ID: WE

Order Number: 801
Lab Number: S130725-130
Area Sampled:
Received: 7/25/2013
Reported: 7/29/2013

Results

Analysis	*Value Found*	*Optimum Range*	*Analysis*	*Value Found*	*Optimum Range*
Soil pH (1:1, H2O)	7.5		**Cation Exch. Capacity, meq/100g**	27.7	
Modified Morgan extractable, ppm			**Exch. Acidity, meq/100g**	0.0	
Macronutrients			**Base Saturation, %**		
Phosphorus (P)	51.8	4-14	Calcium Base Saturation	90	50-80
Potassium (K)	135	100-160	Magnesium Base Saturation	8	10-30
Calcium (Ca)	5005	1000-1500	Potassium Base Saturation	1	2.0-7.0
Magnesium (Mg)	281	50-120	**Scoop Density, g/cc**	1.01	
Sulfur (S)	55.2	>10			
Micronutrients *					
Boron	1.4	0.1-0.5			
Manganese (Mn)	8.4	1.1-6.3			
Zinc (Zn)	7.5	1.0-7.6			
Copper (Cu)	0.5	0.3-0.6			
Iron (Fe)	2.7	2.7-9.4			
Aluminum (Al)	6	<75			
Lead (Pb)	2.4	<22			

* *Micronutrient deficiencies rarely occur in New England soils; therefore, an Optimum Range has never been defined. Values provided represent the normal range found in soils and are for reference only.*

Soil Test Interpretation

Nutrient	Very Low	Low	Optimum	Above Optimum
Phosphorus (P):				
Potassium (K):				
Calcium (Ca):				
Magnesium (Mg):				

Phosphorus is excessive!!!

1 of 2

UMass Extension

CENTER FOR AGRICULTURE

Soil and Plant Tissue Testing Laboratory
West Experiment Station
682 North Pleasant Street
University of Massachusetts
Amherst, MA 01003
Phone: (413) 545-2311
e-mail: soiltest@umass.edu
website: soiltest.umass.edu

Recommendations for Home Vegetable (mixed) *Sample ID: WE* *Lab Number S130725-130*

Limestone (Target pH of 6.5)	Nitrogen, N	Phosphorus, P2O5	Potassium, K2O
	lbs / 100 sq ft		
0	.25 - .3	0	0.1

Comments:

Soil test values for phosphorus are above optimum. Do not add additional phosphorus at this time
Avoid overfertilization. In addition to threatening water quality, excessive nutrient applications can compromise plant health and contribute to insect and disease proble
See Reference "Fertilizing Guidelines" (below) for information regarding fertizer use in home gardens, lawns and landscapes.
The lead level in this soil is LOW. For more information about lead levels in soil, see our Soil Lead Fact Sheet.
When pH is greater than 6.8, Cation Exchange Capacity (CEC) tends to be overestimated.

References:

Soil Lead: Testing, Interpretation & Recommendations	http://soiltest.umass.edu/fact-sheets/soil-lead-testing-interpretation-recommendations
Fertilizing Guidelines	http://ag.umass.edu/fact-sheets/home-lawn-garden/fertilizing-guidelines
Home Lawn and Garden Information	http://ag.umass.edu/home-lawn-garden-information

General References:

Interpreting Your Soil Test Results	http://soiltest.umass.edu/fact-sheets/interpreting-your-soil-test-results

What is pH?

- A measure of acidity or alkalinity

HIGH
H+
Acidic

LOW
H+
Alkalin
e

Most plants prefer a soil pH between 5.5 - 7.5

UMass Soil Testing Lab guidance

Lead Level	Extracted Lead	*Estimated Total Lead
	---------- mg/kg or ppm ----------	
Low	less than 22	less than 299
Medium	22 to 126	300 to 999
High	127 to 293	1000 to 2000
Very High	greater than 293	

"The screening test offered by the UMass Soil Testing Lab is only meant to identify areas where lead contamination may be a concern. Soils that are known to be contaminated with higher levels of lead, should be tested for Total Sorbed Lead (using EPA method 3050 or 3051) with appropriate actions taken."

http://soiltest.umass.edu/fact-sheets/soil-lead-testing-interpretation-recommendations

Questions & Announcements

Neighborhood Connections for community gardens and farmers markets

Here's more info on the grants: https://neighborupcle.org/garden/

Projects can request $250- $1500 for almost anything related to a community gardening project or farmers market in Cleveland and East Cleveland. Applications will be reviewed on a rolling basis starting May 1st through June 15th.