Web-mapping and data visualizations for

Natural Resources

and other Cleveland Metroparks projects

Board Update Oct 30, 2014


Bank Erosion Hazard Index
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Welcome!
To the Bank Erosion Hazard Index reporting page for Cleveland Metroparks.
In 2013 Cleveland Metroparks began a Bank Erosion Hazard Index or BEHI study of streams throughout the reservations. Here you may find information about BEHI methods, documentation and our findings.
NEW
Click Here to view the new Cleveland Metroparks BEHI video.
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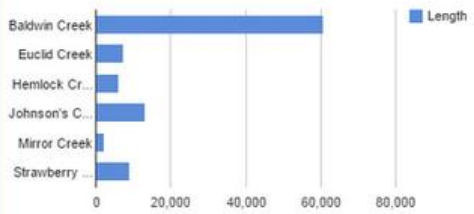
Select a stream Other Maps

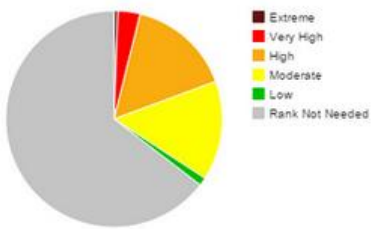
2014 BEHI Totals

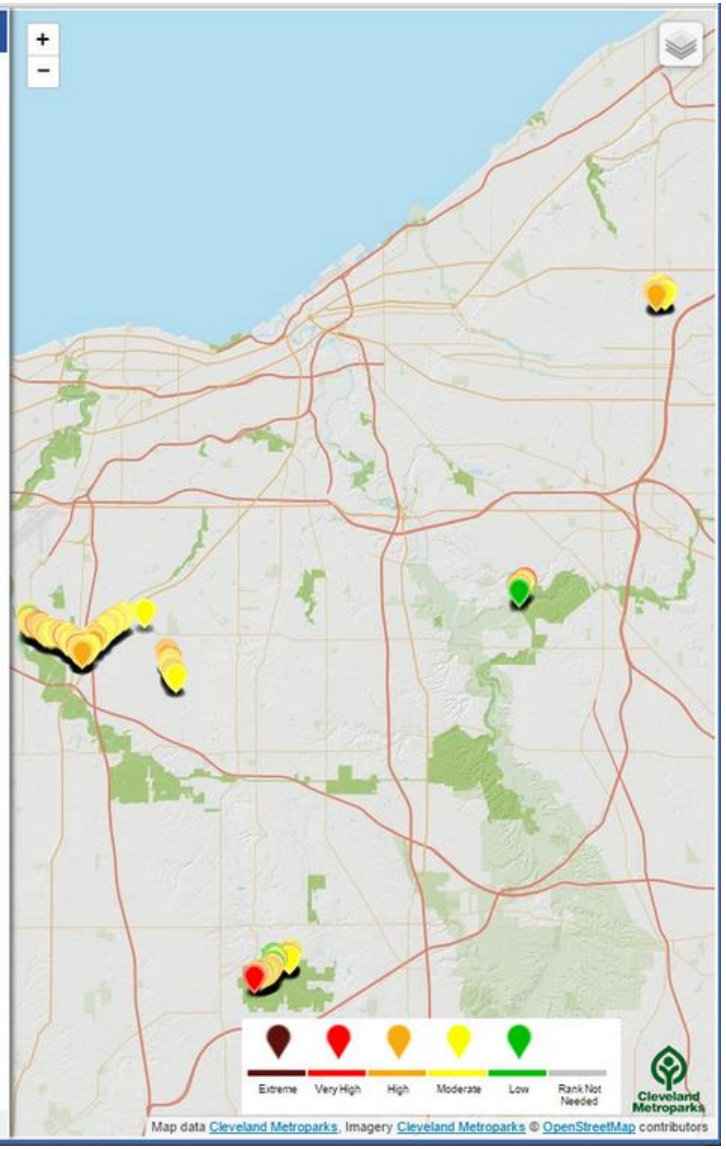
	Stream	Length (ft)	Banks Assessed
1	Baldwin Creek	60806.84	282
2	Euclid Creek (Acacia)	7358.27	57
3	Hemlock Creek	6062.84	26
4	Johnson's Creek	13111.19	88
5	Mirror Creek	2336.01	34
6	Strawberry Creek	9046.75	81
7	Total	98721.9	567

Length of Streams Assessed (ft)



Length Assessed by Rank





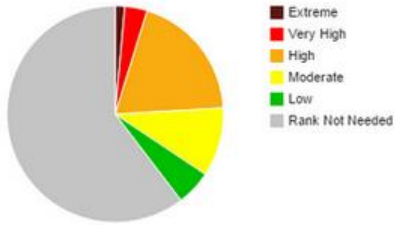
Select a stream Other Maps

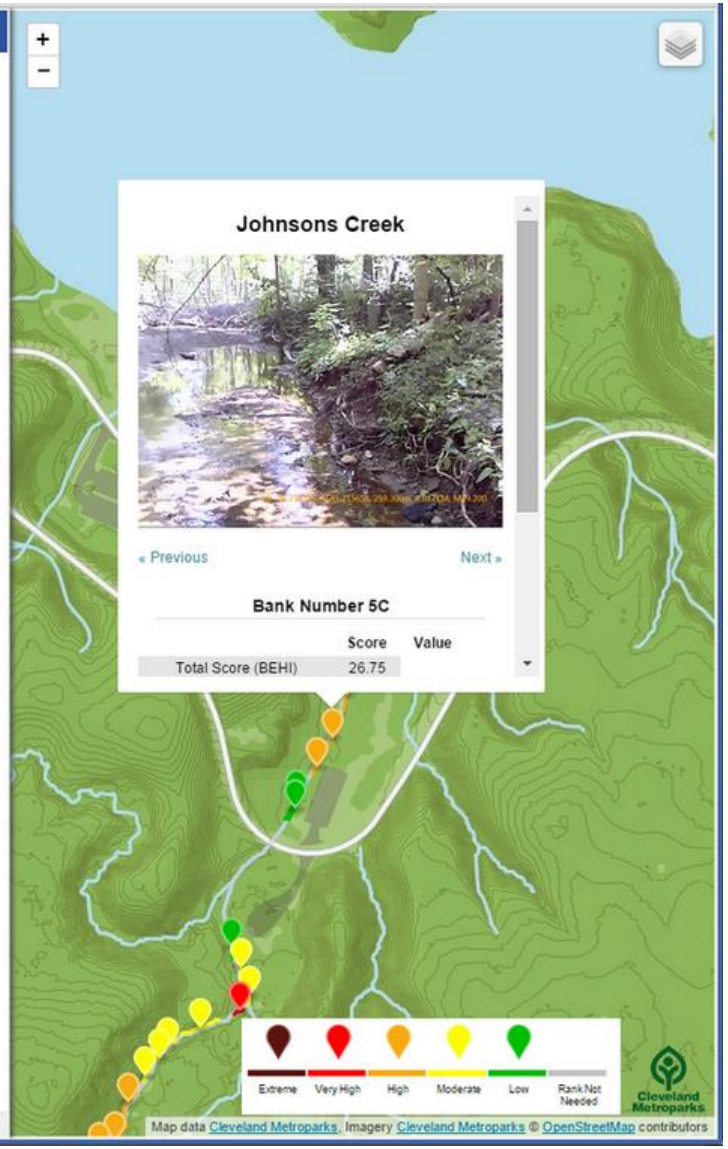
Johnson's Creek

Total Length Assessed	13,111.19 ft

	Rank	Length (ft)	Percent (%)
1	Extreme	186.29	1.4%
2	Very High	440.89	3.4%
3	High	2530.73	19.3%
4	Moderate	1346.16	10.3%
5	Low	690.67	5.3%
6	Rank Not Needed	7916.45	60.4%

Length by Rank





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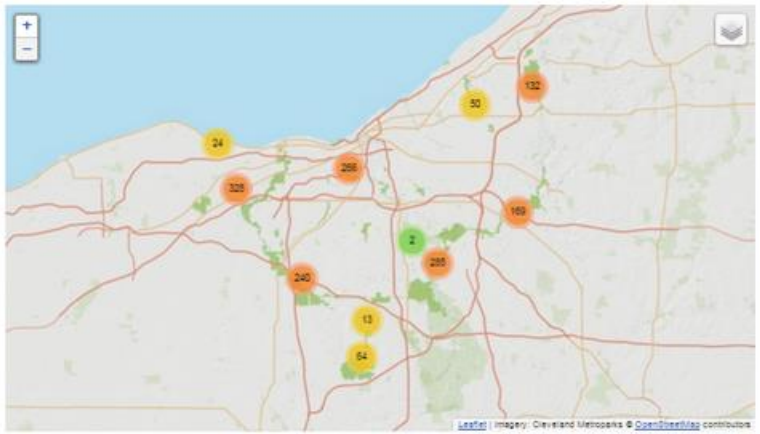
Cleveland Metroparks Invasive Plant Atlas

Invasive Plant Map



THIS IS THE LIST OF ALL POSITIVELY IDENTIFIED INVASIVE PLANT SPECIES THROUGHOUT CLEVELAND METROPARKS. NEW SPECIES WILL BE ADDED ONCE FOUND AND IDENTIFIED.

Invasive Plant List

Scientific Name	Common Name	Tier
Acer platanoides	Norway Maple	Tier 2
Aegopodium podagraria	Bishop's Goutweed	Tier 2
Ailanthus altissima	Tree of Heaven	Tier 2
Alliaria petiolata	Garlic Mustard	Tier 4
Alnus glutinosa	European Alder	Tier 2
Ampelopsis brevipedunculata	Porcelain Berry	Tier 2

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photo: Cleveland Metroparks

Hydrilla (*Hydrilla verticillata*)


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FORM:

Submerged, aquatic perennial herb that can grow from depths of 20'. The plants have both a monoecious and a dioecious form.

LEAVES:

The leaves of the plants are 0.07-0.15" wide (down to 0.04") on monoecious plants) and are 0.2-0.8" long. The leaves are whorled around the stem, with 3-8 leaves per whorl. There can be "sharp" spines of variable size along the margins of the leaves, giving them a toothed appearance. The leaves have a midrib which is reddish in color. This plant has various methods of reproduction.

FLOWERS:

The monoecious form of the plant produces female flowers that have three translucent petals that may contain a few red streaks. These flowers are 0.4-2" long and 0.15-0.3" wide. There are also three sepals that are white in color. The flowers are attached to the axils of the leaves by a long hypanthium. The male flowers also have three petals that are around 0.07" long and are colored anywhere from white to red. There are three white, red or brown sepals. These flowers are short stalked, detaching from the plant and floating to the water surface. The dioecious plants in the U.S. so far are female (however the hydrilla collected in Connecticut did not have flowers present).

FRUITS & SEEDS:

Another reproductive structure which makes these plants a successful invaders are the stem tubers (turions). The stem tubers are bud-like structures that are produced along the stems of the plant, and can vary in color from dark green, to grey to whitish. They are 0.25" long and often appear spiny. These structures can break off of the plant and survive the winter in the sediment at the bottom of waterbodies. Tubers are also another way in which these plants spread. These tubers form at the end of the rhizomes of the plant and are 0.2-0.4" long and white or yellow in color.

SIMILAR SPECIES:

Brazilian waterweed (*Egeria densa*) non-native

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Image 4 of 5

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SIMILAR SPECIES:

Emerald Ash Borer Report

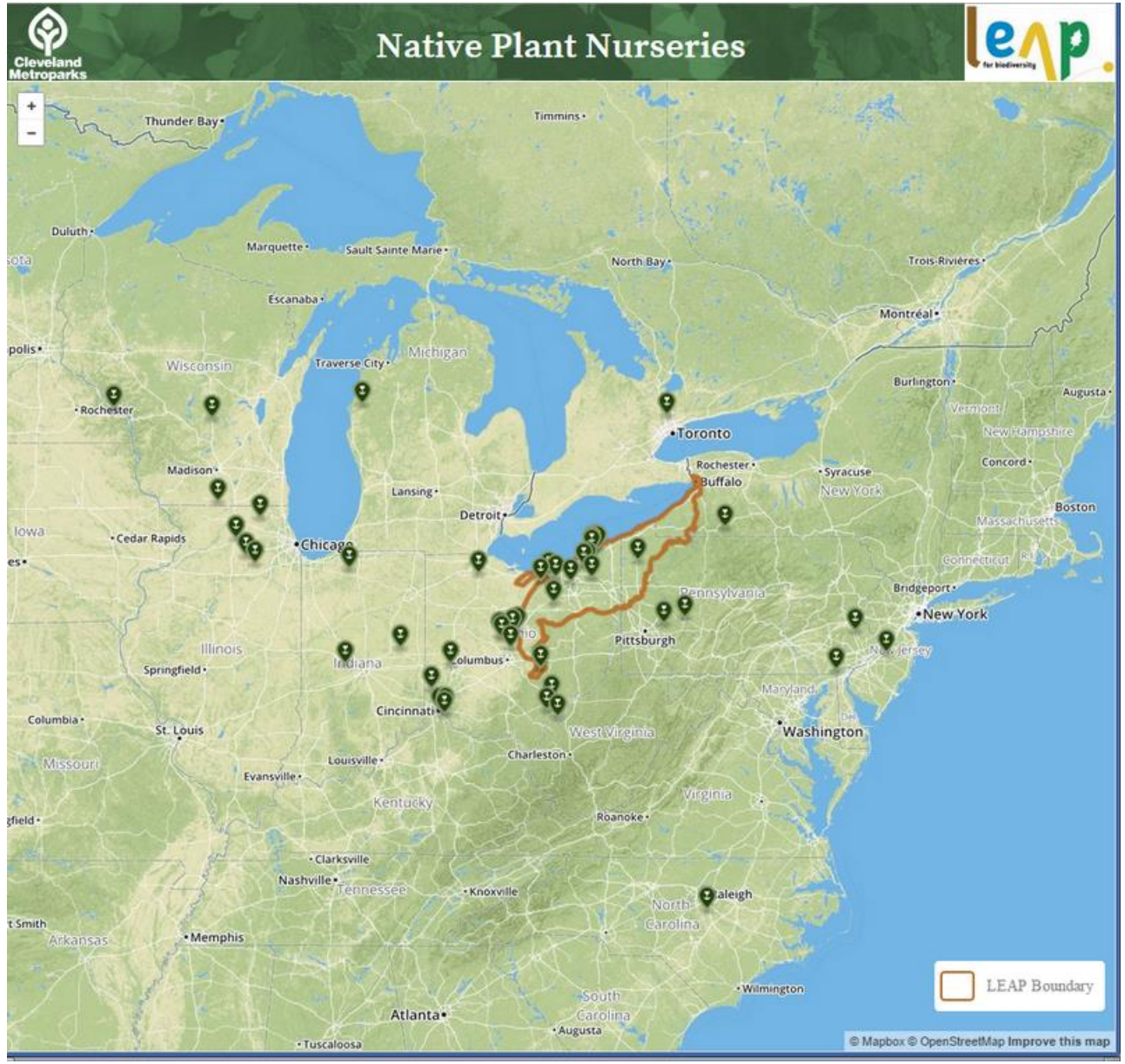
WHAT IS THE EMERALD ASH BORER?

The Emerald ash borer (EAB) (*Agrilus planipennis*) is a wood-boring beetle that completes its lifecycle inside ash trees (*Fraxinus spp.*). Native to Asia, this beetle was first identified killing ash trees in the Detroit, Michigan area in 2002. EAB likely arrived to the United States as a result of an accidental introduction of infested shipping pallets originating from China.

WHY IS EAB A PROBLEM?

Adult EAB lay their eggs on the bark of ash trees and once the larvae hatch they burrow into the cambium (area between the bark and wood) of the tree. Here the larvae bore "S"-shaped patterns or galleries into the tree as they feed. This feeding process is what damages the ash tree by destroying the tissues that bring water and nutrients from the base to the canopy. As the adult beetles emerge they bore distinctive "D"-shaped holes in the trunk.

Since being identified, EAB has killed tens of millions of ash trees throughout the U.S. and Canada. The first EAB record for Cuyahoga County was in 2006 along I-71 near Middleburg Heights. Effective October 2006 Cleveland Metroparks modified public policy to prohibit the transportation of firewood through Cleveland Metroparks. Significant EAB infestations were documented in 2008 along Big Creek Parkway and in Brecksville Reservation.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Native Plant Nurseries
leap for biodiversity
Thunder Bay
Timmins
Duluth
Marquette
Sault Sainte Marie
North Bay
Trois-Rivières
Escanaba
Montréal
Wisconsin
Michigan
Traverse City
Burlington
Augusta
Rochester
Vermont
New Hampshire
Toronto
Concord
Madison
Rochester
Buffalo
Syracuse
New York
Lansing
Detroit
Boston
Massachusetts
Iowa
Cedar Rapids
Chicago
Connecticut
Bridgeport
Pennsylvania
New York
Pittsburgh
Illinois
Indiana
Columbus
Springfield
Maryland
Cincinnati
Columbia
St. Louis
West Virginia
Washington
Missouri
Louisville
Charleston
Evansville
Kentucky
Virginia
Roanoke
Clarksville
Nashville
Tennessee
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South Carolina
Atlanta
Augusta
Tuscaloosa
LEAP Boundary
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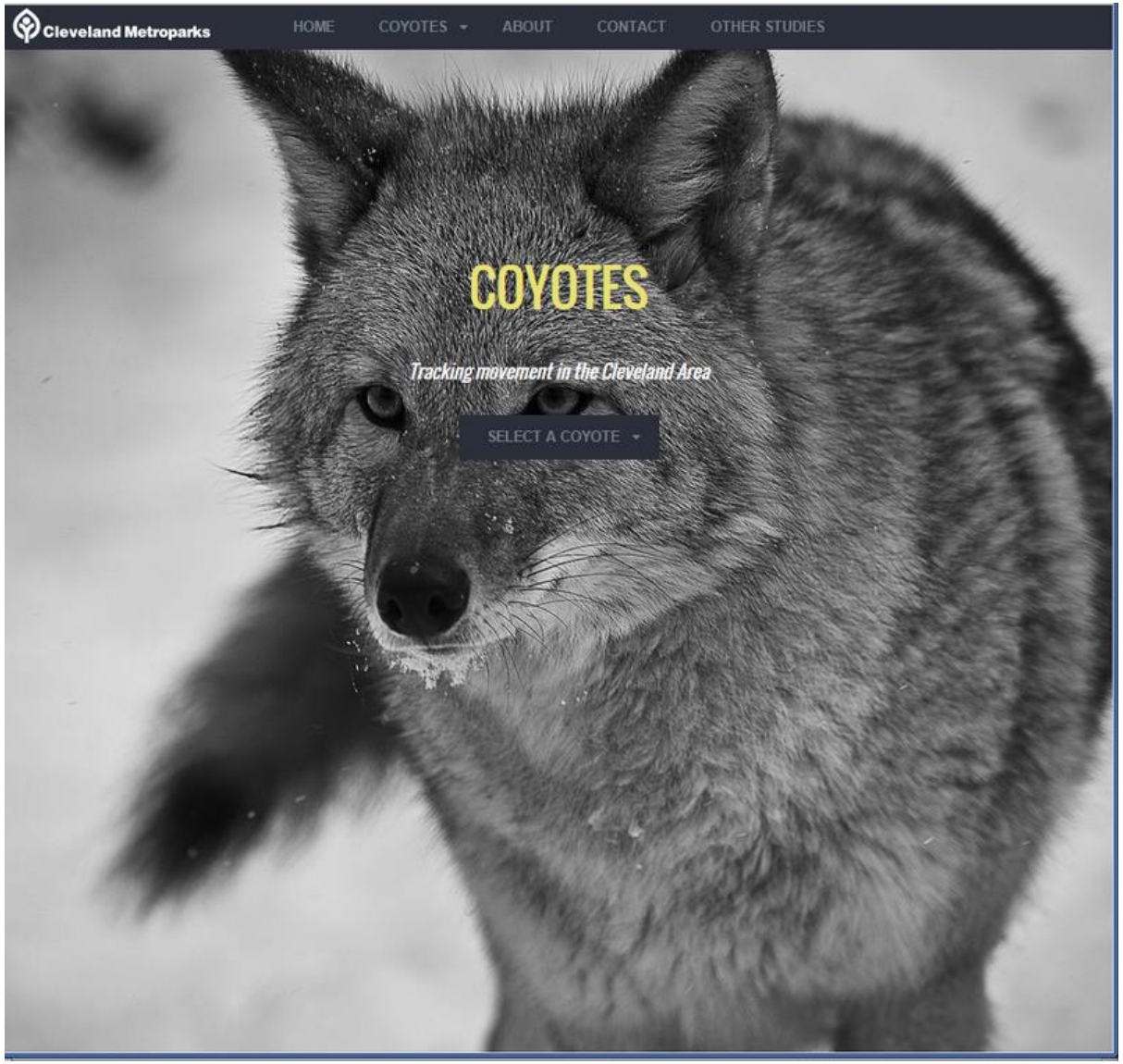
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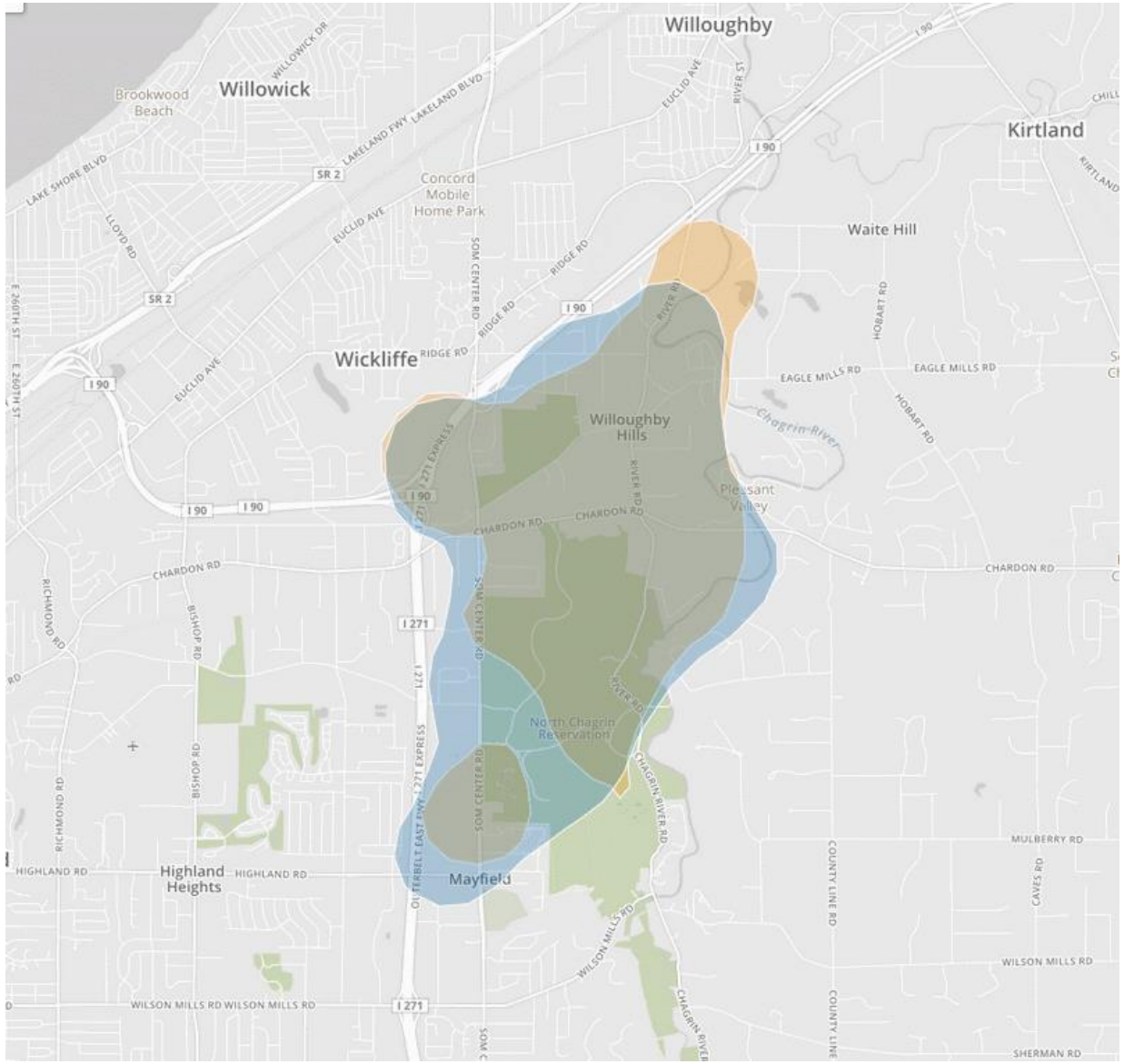
Tracking movement in the Cleveland Area
SELECT A COYOTE


Willoughby
Willowick
Brookwood Beach
Kirtland
Waite Hill
Concord Mobile Home Park
Wickliffe
Willoughby Hills
Pleasant Valley
North Chagrin Reservation
Highland Heights
Mayfield
I 90
I 271
SR 2
EUCLID AVE
LAKELAND FWY
LAKELAND BLVD
LAKE SHORE BLVD
LLOYD RD
WILLOWICK DR
RIDGE RD
SOM CENTER RD
HOBART RD
EAGLE MILLS RD
CHAGRIN RIVER
CHARDON RD
RICHMOND RD
BISHOP RD
HIGHLAND RD
WILSON MILLS RD
COUNTY LINE RD
MULBERRY RD
CAVES RD
SHERMAN RD
CHAGRIN RIVER RD
OUTERBELT EAST FWY

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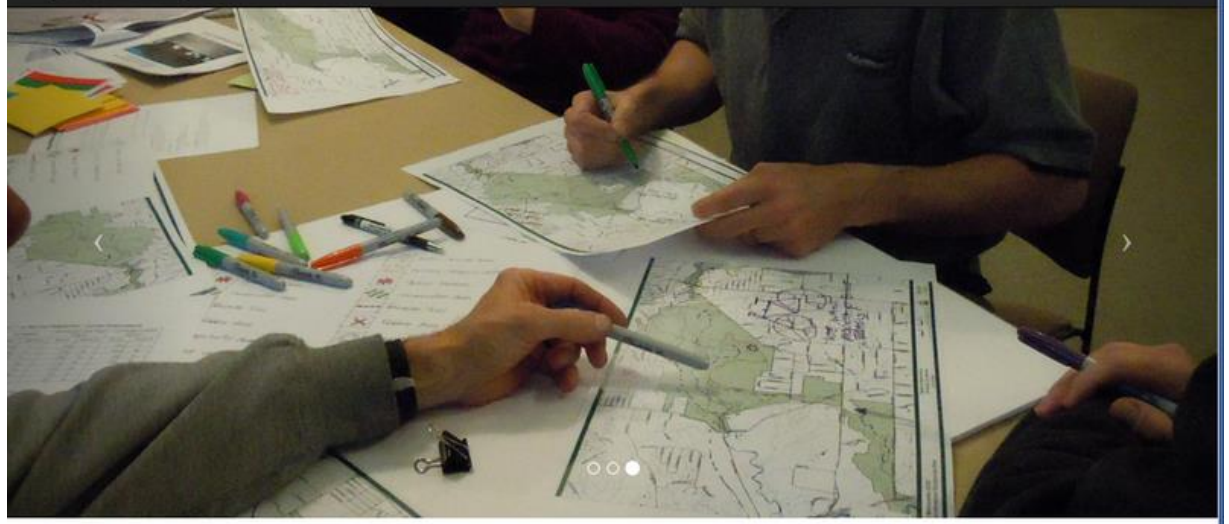

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Select Reservation

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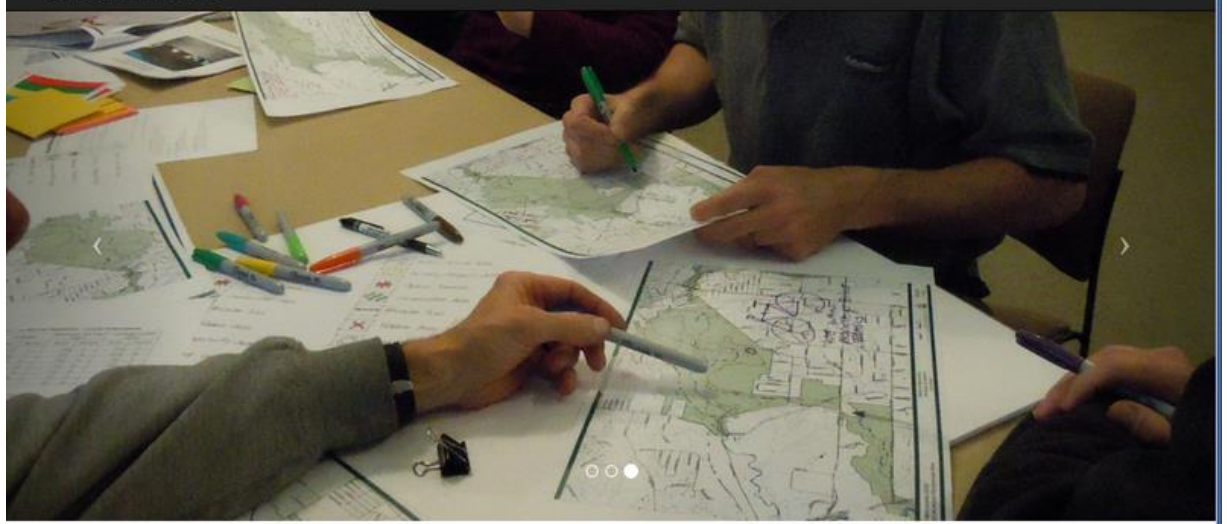

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Select Reservation

Lakefront Reservation

Name	Size	Link
Recent Acquisitions	0.8 mb	download
East 55th	14.6 mb	download
Edgewater	18.2 mb	download
Edgewater Detour	0.6 mb	download
Euclid Beach	13.3 mb	download
Lakefront All	0.2 mb	download

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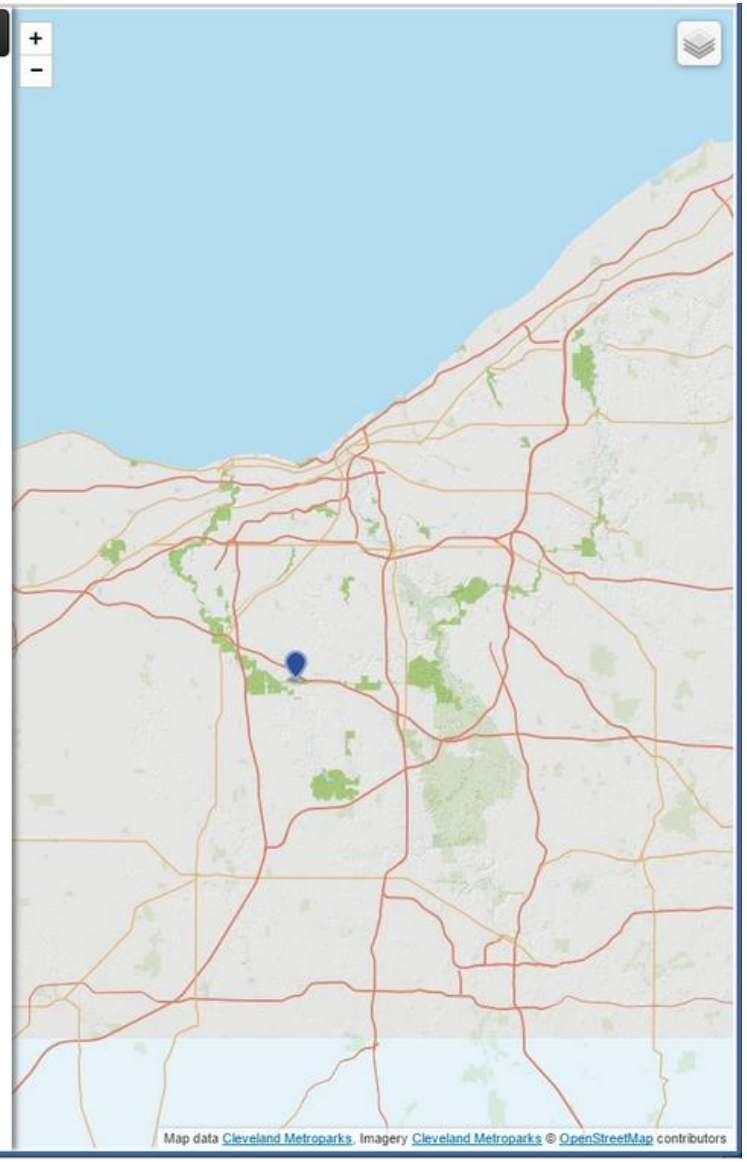
Capital Projects

A map of capital projects budgeted for 2015



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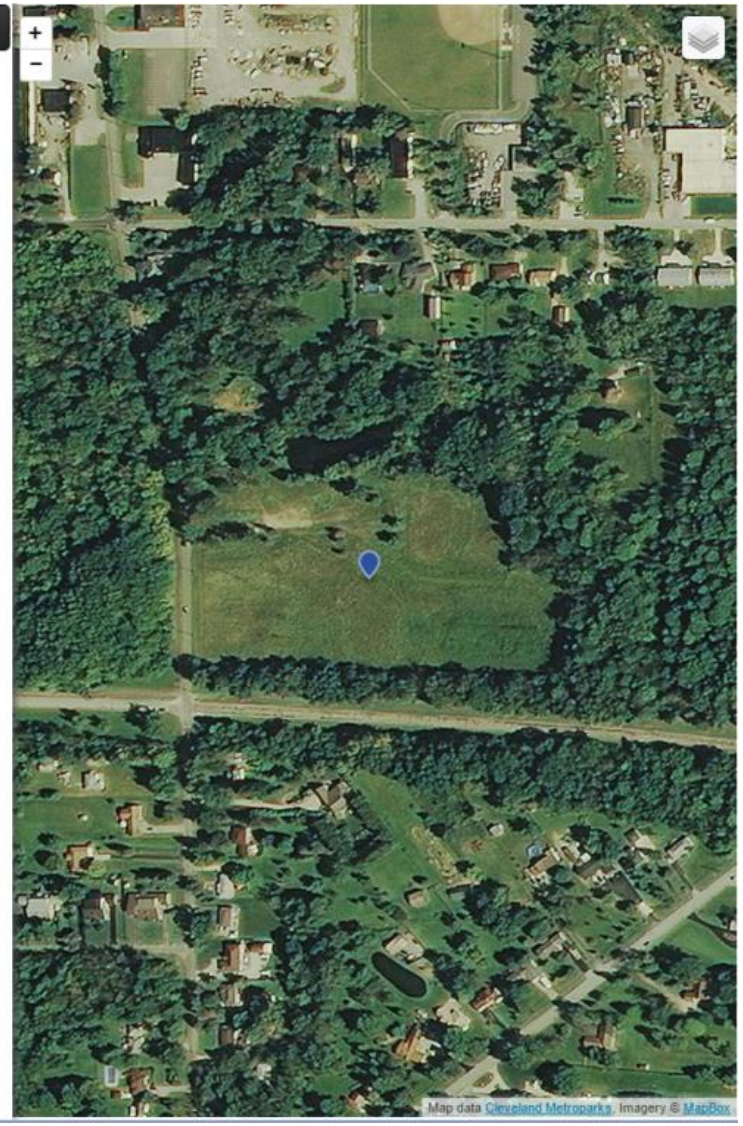
Auckerman Park

Converting an old farm into a park and picnic Area

Reservation:	Brecksville
Start Date:	1/1/2015
Est. Completion Date:	9/1/2015



Questions?

Brandon Garman
bdg1@clevelandmetroparks.com

Sites Link:
http://Cleveland-metroparks.github.io/sites