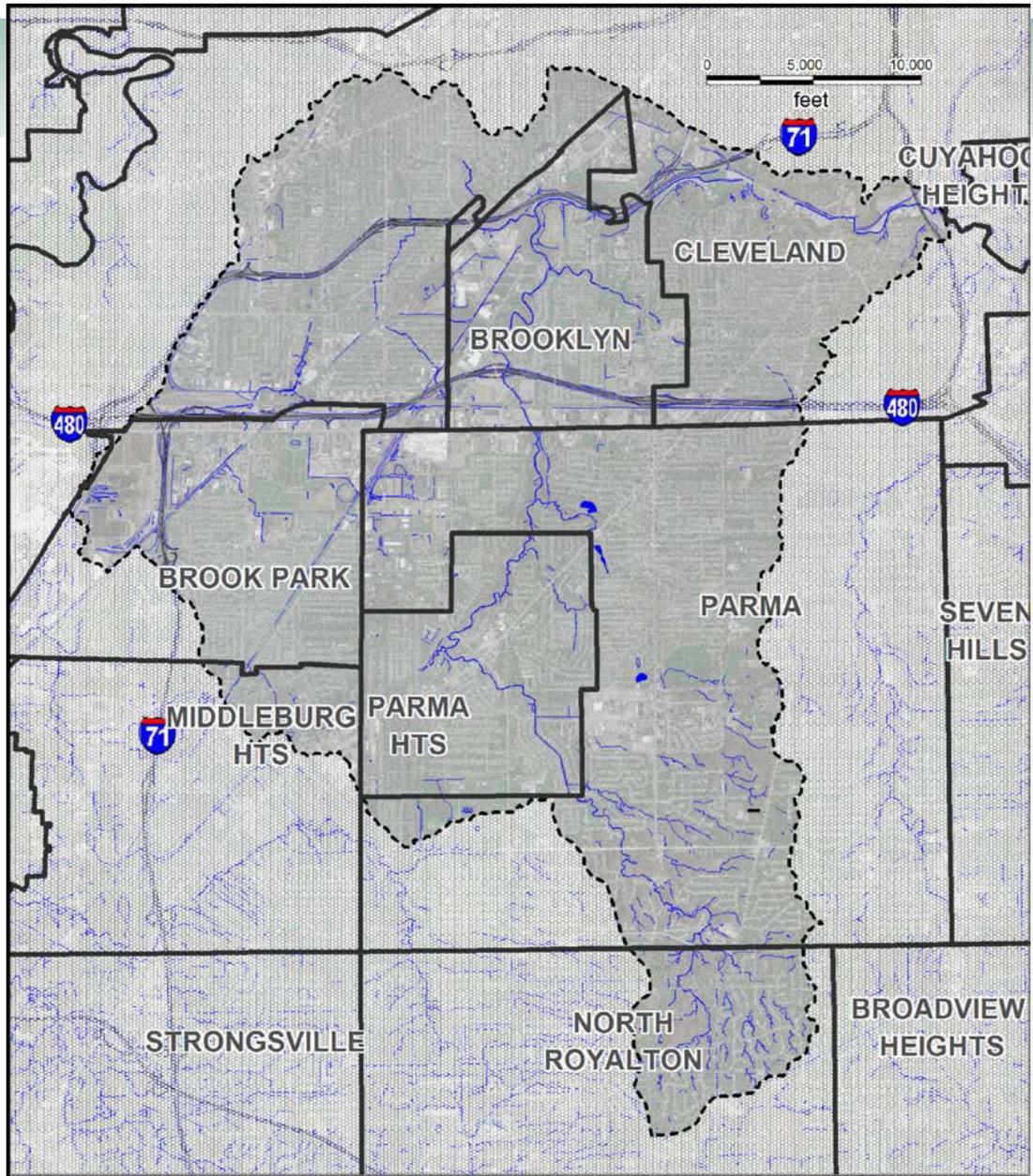




*Community-based greenway advocacy and watershed stewardship*

# Big Creek Watershed Balanced Growth Plan 5<sup>th</sup> Annual Partnership Meeting March 10, 2016 Cleveland





# Big Creek Watershed Balanced Growth Partnership

## Annual Meetings

4<sup>th</sup> - 2015 March

Brook Park



3<sup>rd</sup> - 2013 November

Parma Heights



2<sup>nd</sup> - 2012 October

Brooklyn



1<sup>st</sup> - 2011 November

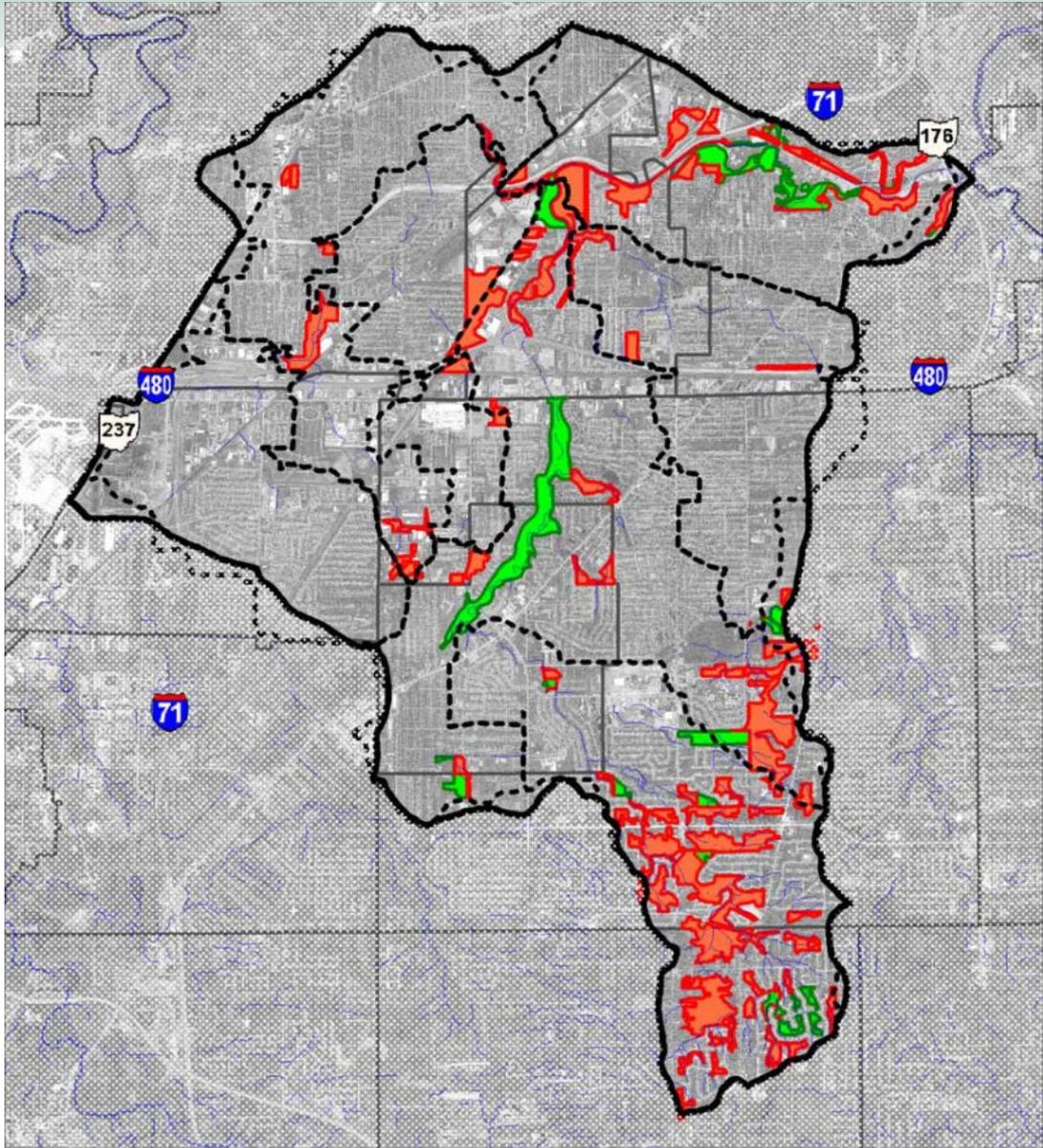
Parma



# Big Creek Connects

## Program Areas 2016 Budget

Watershed Action Plan & Balanced Growth Plan	31%
Stormwater Retrofits / Green Infrastructure	23%
Community Engagement & Education	15%
Preservation & Restoration	15%
Assist Communities - Regulations & Plans	9%
Trails, History, other	7%
Total Programs	100 %



Balanced  
Growth Plan

Priority  
Conservation  
Areas



## Big Creek – East Branch Conservation Project

September 22, 2015

The Honorable Richard H. Albier, Mayor of Brooklyn  
Brooklyn City Hall  
7619 Memphis Avenue  
Brooklyn, Ohio 44144

Dear Mayor Albier:

In the August 11, 2015 letter that Big Creek Connects submitted to the Army Corps of Engineers, we stated that if the IKEA project is to proceed, we would like to see mitigation directed towards sites close to the wetland area being impacted. We are willing however to give our support to the project as long as mitigation sites are sought anywhere in the Big Creek watershed. At the very least, they should remain within the Cuyahoga River watershed.

However, not keeping them within the Big Creek watershed would do little towards affecting Big Creek's water quality, flow regimes and potential for aquatic habitat improvements. This is particularly so if fish passage upstream into the watershed is ever to be realized, as envisioned in the Big Creek/I-71 Relocation & Restoration Initiative, by bypassing the Brookside drop structure. Considering the few wetlands that remain in this watershed, our support for the project is a tough position for our organization to take. Although on-site stormwater control measures will help detain surface run-off volume, they will do little to mitigate the loss of the displaced wetlands.

The Big Creek Watershed Balanced Growth Plan balances economic growth with conservation of critical and valuable natural areas. However, balanced growth must take into account the potential greater impacts to the environment due to urban sprawl if the IKEA store were to be located outside of this urban core and into another Cuyahoga River or Lake Erie watershed.

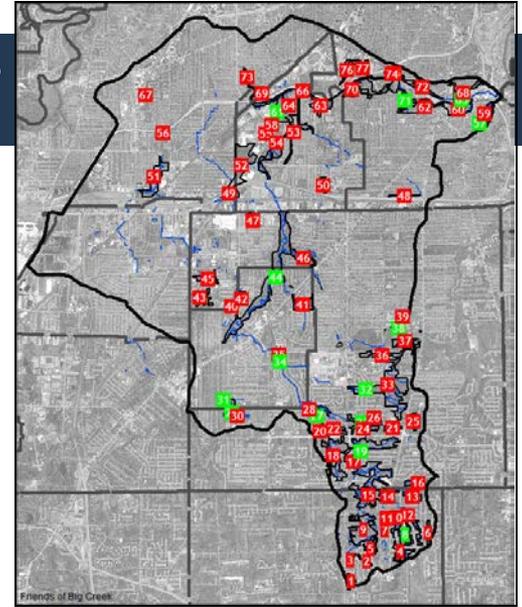
In a meeting with IKEA representatives August 27th, Bob was assured that there were no gray or brown-field sites they could make work for their project and



# STORMWATER RETROFIT RANKING PROJECT

## Phase 1

- ❑ Evaluated sites identified in the Plan through desktop and field analysis
- ❑ Evaluation and ranking system
- ❑ Developed conceptual plans and cost estimates



Technical Advisory Committee  
TetraTech consultant  
Staff and Intern

### Funding:

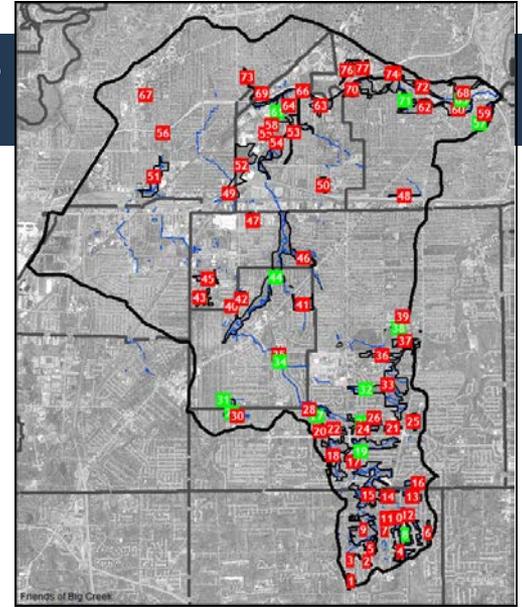
Northeast Ohio Regional Sewer District  
Ohio Lake Erie Commission  
Freshwater Future



# STORMWATER RETROFIT RANKING PROJECT

## Phase 2

- ❑ Additional field studies and conceptual design work
- ❑ New analysis of large roof areas
- ❑ New analysis of source control areas



Technical Advisory Committee  
TetraTech consultant  
Staff

### Funding:

Ohio Lake Erie Commission  
Northeast Ohio Regional Sewer District  
General Motors Foundation

## Source Control Retrofit Conceptual Design

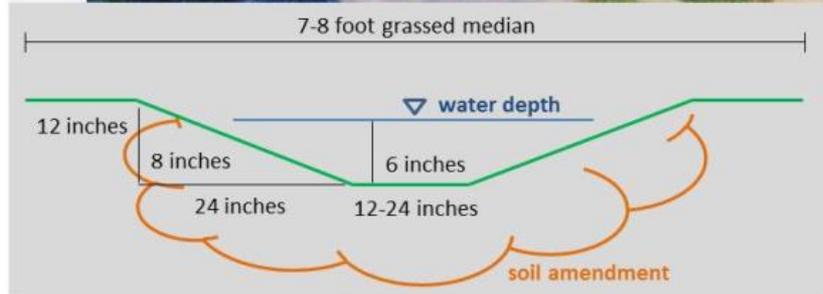


### Existing Conditions

Total site area – street and driveways draining to intersection (sq ft):	41,280
Imperviousness (%):	100
Pollutant loading (lbs of sediment/year):	379

**General Findings:** Residential streets are generally untreated in the watershed and they make up 10-15 percent of the total watershed imperviousness. Typical streets include 12 foot driving lanes and no on-street parking. Sidewalks are common, and tree lawns are 6-8 feet in width.

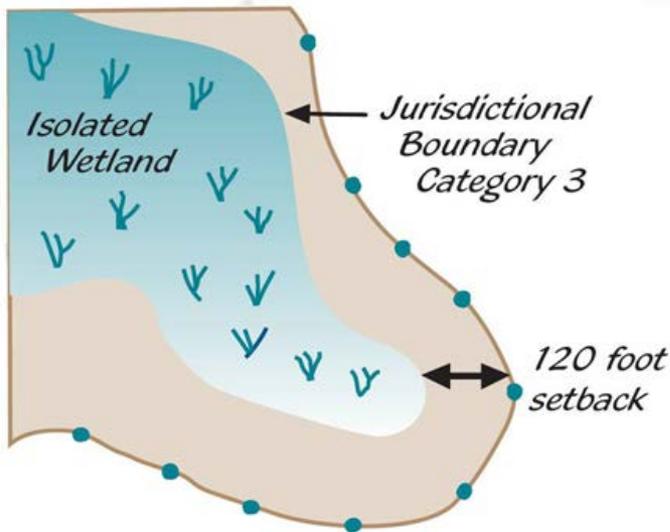
### Proposed Concept Design



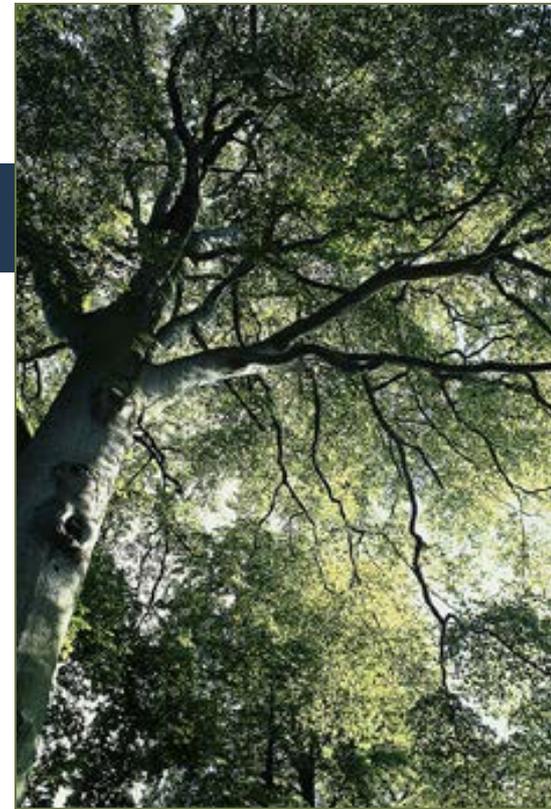
**Retrofit Description:** Bioswales are proposed to treat runoff from residential streets and driveways. Bioswales are approximately 7-8 feet in width, depending on available right of way with six inches of ponded water. Bump outs that add 2-3 feet of additional width to the swale are proposed at intersections with 9 inches of ponded water. Runoff will be routed to bioswales/bump outs through new curb cuts that will also serve as overflow structures. An average length of 50 feet is assumed. A planting plan that is prominently herbaceous native plants that are salt and water tolerant is recommended.

<b>Total area to be treated (per intersection) (sq ft):</b>	41,280	<b>Retrofit Cost Estimate:</b>	\$46,000 - \$54,000 per intersection
<b>Proposed storage volume (cubic feet):</b>	833		
<b>Percent of Ohio EPA water quality volume:</b>	36%		
<b>Additional flood control volume (cubic feet):</b>	0		
<b>Pollutant load reduction (lbs of sediment/year):</b>	110		

# LAND USE –TOOLS & PRACTICES



- Adopt Watershed Map for Community Guidance
- Conserve Streams and Riparian Corridors
- Conserve Wetlands and Setbacks
- Avoid Floodplains
- Avoid Steep Slopes
- Minimize Development on Critical Soils
- Low Impact Development
- Conservation Development
- Woodland / Tree Canopy Protection



# STEWARDSHIP ACTIVITIES



## Annual Spring Cleaning!

- ✓ RiverSweep 2016 – Sat., May 7
- ✓ 18<sup>th</sup> Annual Big Creek Watershed Cleanup – Sat., June 4, 2016

- ✓ 2016 RiverDay – Sat., May 21  
“Have fun. Learn something.”



Brooklyn seventh graders learn about stream assessment in Big Creek

Mark Holan, Special to the Sun News  
September 28, 2014

BROOKLYN, Ohio -- The GM environmental team, Earth Force and the Big Creek Connects

organization teamed up for a stream assessment of Big Creek Sept. 26 in the Memphis picnic area.

The seventh graders from Brooklyn Middle School had fun stomping on something



**YEAR TWO | Stream Monitoring Nov. 2015:**  
Stickney Branch, Brooklyn Veterans Memorial Park

**BCC Partners:**  
Brooklyn Middle School, GM Green Team, Earth Force



4th Biennial  
**Greater Cleveland Trails & Greenways Conference**  
*Connecting Recreation and Transportation*

**Thursday, June 2, 2016**

Brecksville, Ohio

[GCTrails.org](http://GCTrails.org)

**Decision makers, planners, practitioners, trail advocates**

Share ideas, discover new tools, and set the stage to transform plans and concepts into successfully completed projects.

Explore emerging trends in design.

Build skills for funding and project success.

Understand how trails and greenways benefit the economy, environment, and health of thriving communities.

**Connecting the dots with Jay Walljasper**

Keynote session with popular speaker, award-winning writer and community consultant ([jaywalljasper.com](http://jaywalljasper.com)).

**Be a part of this day-long conference!**

**The 2016 Trails & Programs Showcase and Conference Reception are included.**

We welcome

**Session proposals**

**Trails & Programs Showcase project submissions**

**Sponsor and exhibitor inquiries**

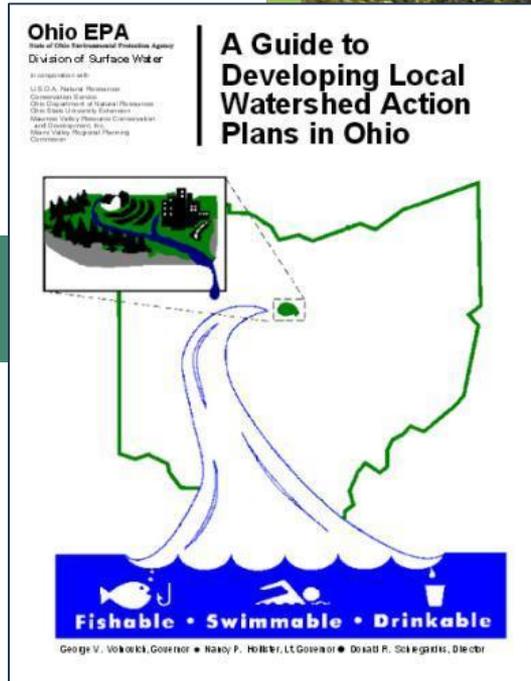
**CEUs available for various professions.**

Learn more as details become available at [GCTrails.org](http://GCTrails.org).



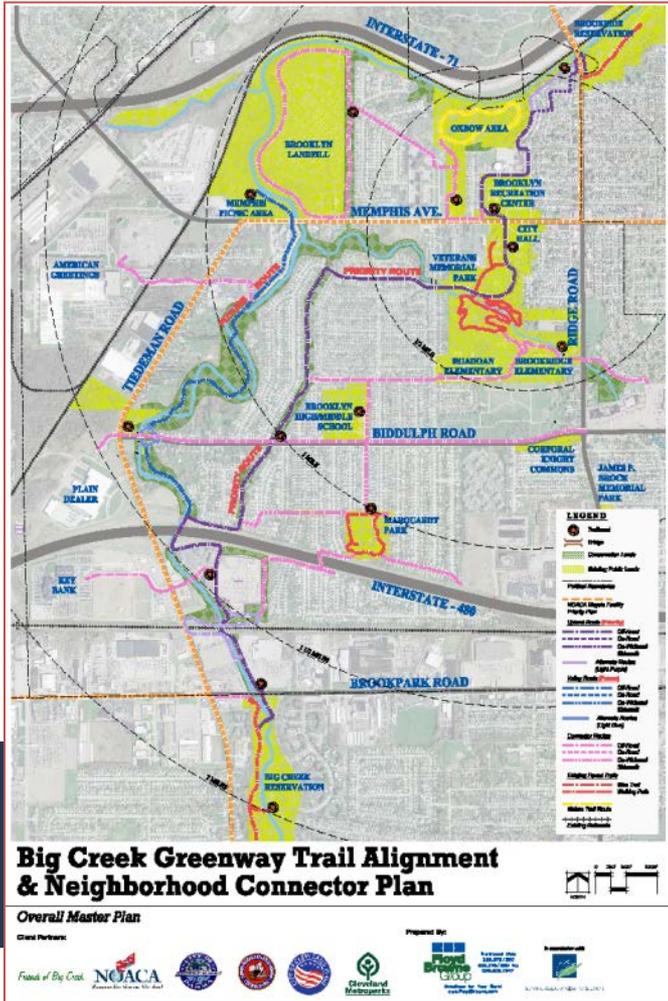


# Stream signage



# Watershed Action Plan

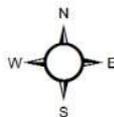
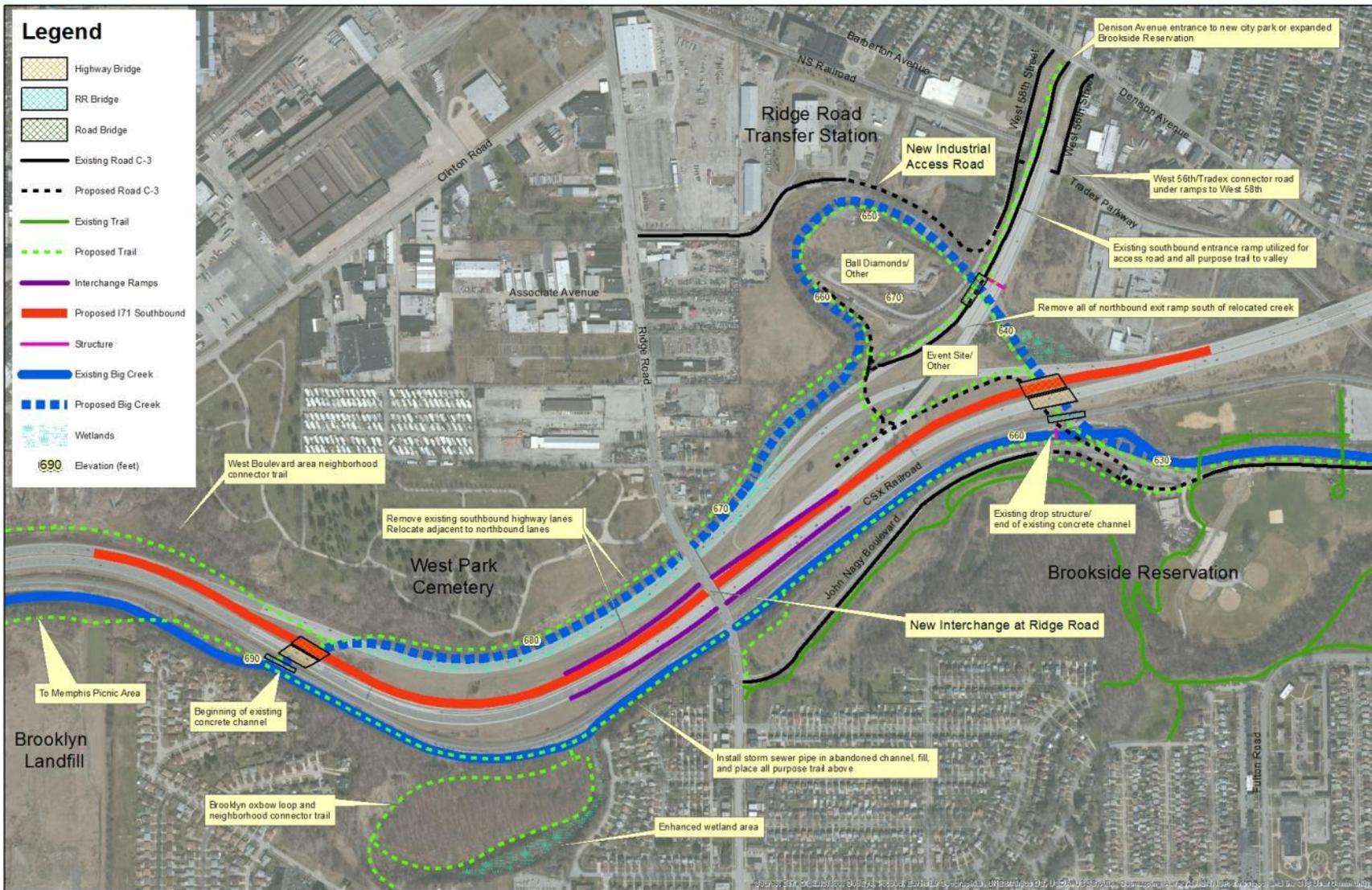




# Implementation of Big Creek Greenway plans

# Big Creek / I-71 Relocation & Restoration Initiative

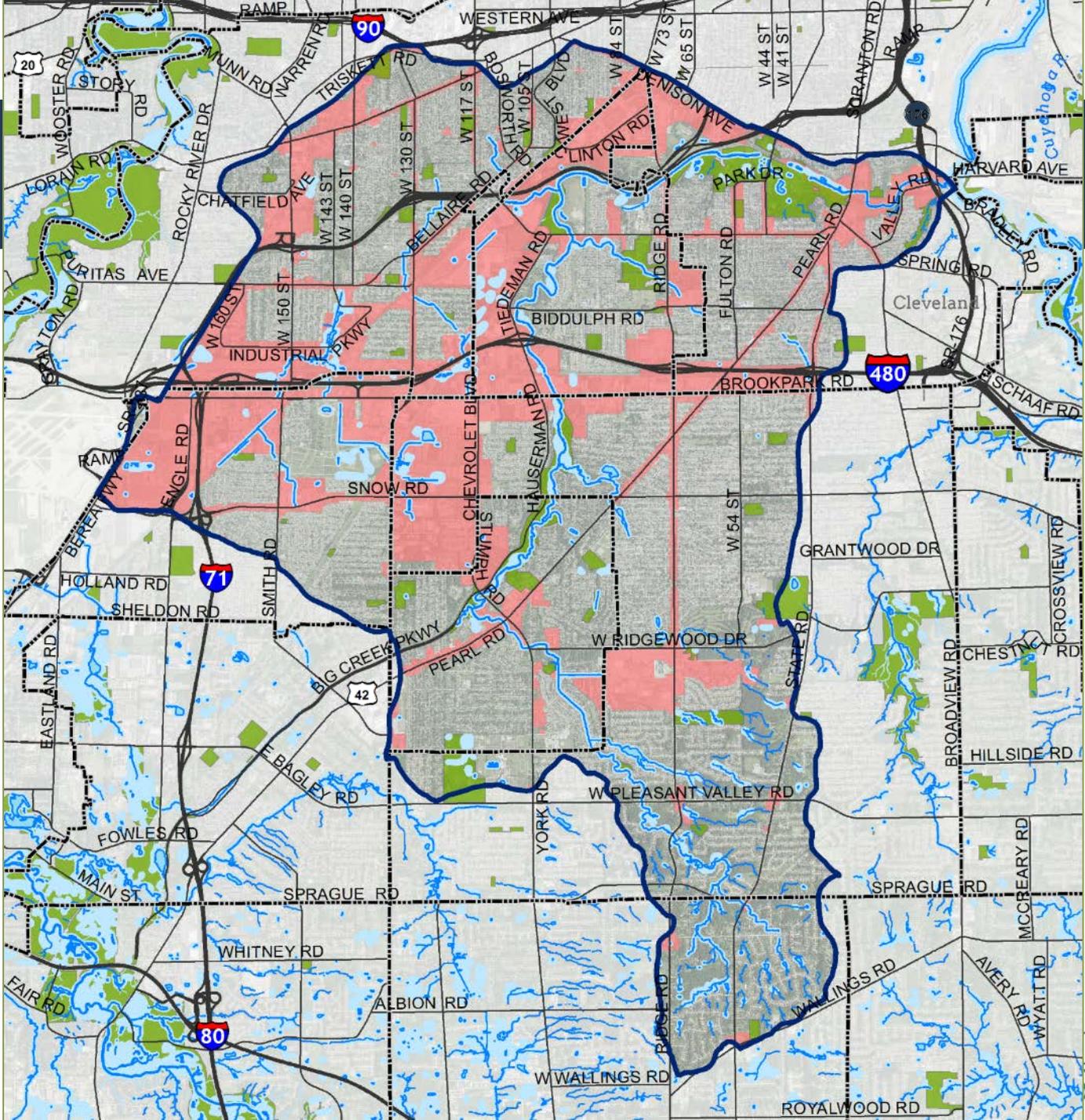
## Concept Plan C-3





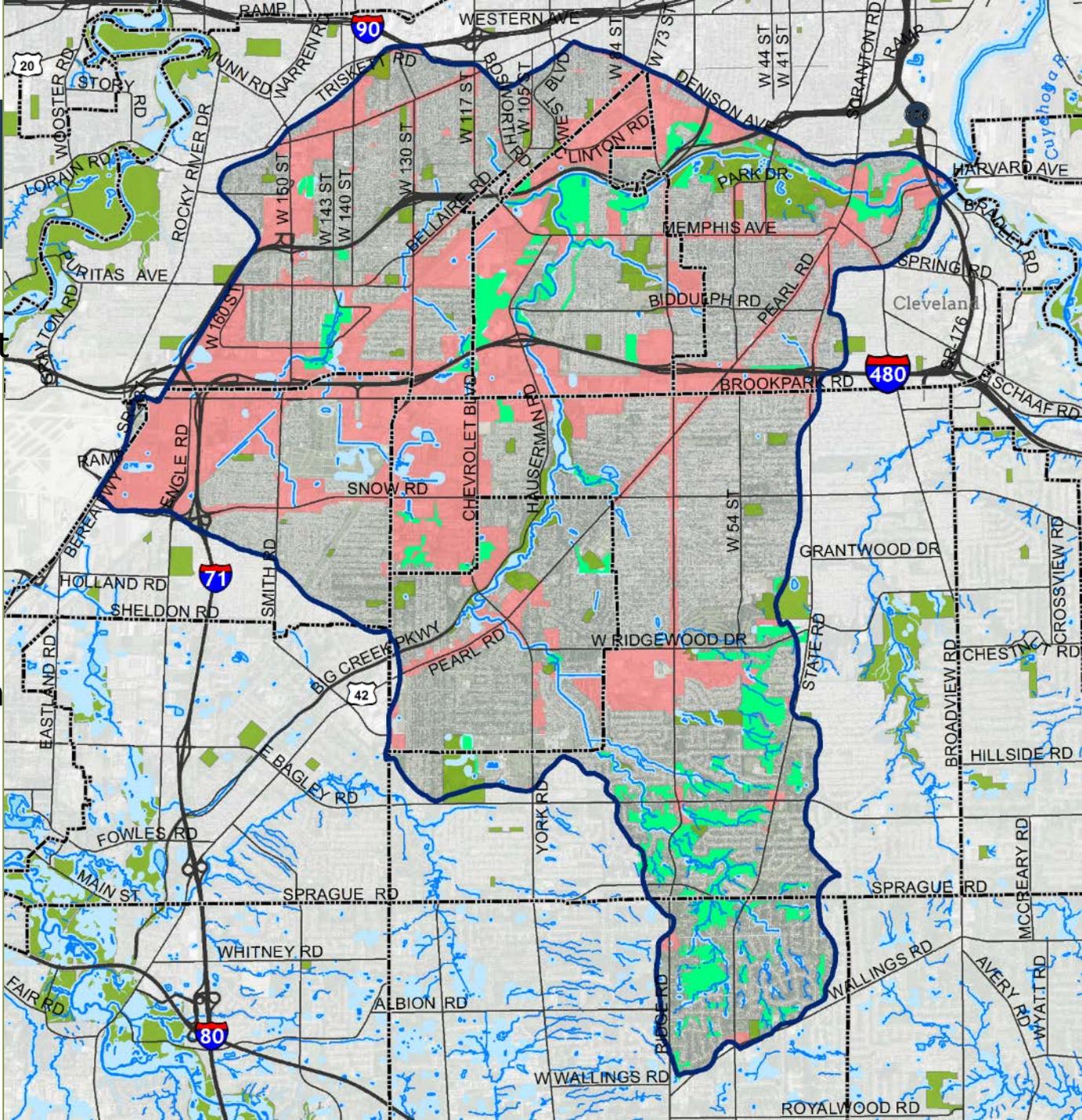
# BIG CREEK WATERSHED

- Priority Development Areas (PDA)
  - High Density Zoning



# BIG CREEK WATERSHED

- Priority Development Areas (PDA)
  - High Density Zoning
  - Outside of Riparian Zones
- Priority Conservation Areas (PCA)
  - Unprotected Open Lands









*Thank you for your interest!*

**BigCreekConnects.org**

Contact:

**Bob Gardin, Executive Director**

216-661-7706 office

216-269-6472 mobile

[bgardin@bigcreekconnects.org](mailto:bgardin@bigcreekconnects.org)

BCC is generously supported by  
 **Northeast Ohio  
Regional Sewer District**  
*Your Sewer District: Keeping our Great Lake great*