Vacant Land Prioritization for Green Infrastructure in Lucas County

Greening Urban Landscapes Workshop
May 26, 2015

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The Issues

- Toledo has a vacancy problem
- The Toledo Region has a water quality problem
- Stormwater pollution is a primary urban cause of impairment to our waterways
Stormwater Pollution

Natural Ground Cover:
- 40% evapotranspiration
- 25% shallow infiltration
- 25% deep infiltration
- 10% runoff

75%-100% Impervious Cover:
- 30% evapotranspiration
- 10% shallow infiltration
- 5% deep infiltration
- 55% runoff
Common Stormwater Pollutants

- Trash
- Heavy Metals
- Nutrients
- Road Salt
- Hydrocarbons
- Sediment
Some neighborhoods in Toledo experience vacancy rates of over 40%

Vacant lots are nuisances
- Overgrown grass and weeds
- Attract rodents and undesirable wildlife
- Illegal dumping
- Crime
- Blight begets more blight
Greening vacant land addresses both water quality and blight
Residential Rain Garden

Ideal for:
• single family homes
• vacant side lots

Manages rainwater from:
• roof
• sidewalk
• driveway
Bioretention Areas - Large Rain Garden

Ideal for:
• Commercial property
• Community spaces
• Apartment complexes

Manages rainwater from:
• roof
• sidewalk
• parking lots
• streets
Bioswales

Ideal for:
• green spaces along streets
• moving water from one place to another

Manages rainwater from:
• Street
• Sidewalk
Permeable Pavements

Ideal for:
- parking lots
- Sidewalks
- Some streets

Manages rainwater from:
- Street
- Sidewalk
Green Roofs and Green Walls

Ideal for:
• Occupied buildings

Manage rainwater that falls directly on roof
Trees

Ideal for:
• Parks
• Community spaces
• Large vacant lots
• Stream banks

Manages rainwater from:
• Surrounding land uses
Restore Nature

Ideal for:
• Parks
• Large vacant lots
• Stream banks

Uses:
• Manage stormwater naturally
• Provide home to wildlife
Benefits of Greening

Green Stormwater Infrastructure

- Promotes infiltration/reduces runoff
- Treats pollutants
- Can prevent flooding

It can also:

- Provide beautiful spaces to live work and play
- Encourage economic reinvestment
- Provide educational opportunities
- Provide job opportunities
Great! But where do we start?

- 25,000+ “vacant” parcels in Lucas Co.
- 600+ building demolitions in 2015–2016
- Need to determine where greening is feasible and necessary
  - GIS spatial analysis
  - Lake Erie Protection Fund grant
  - Form advisory group of stakeholders and technical experts
Advisory Group

- Land Bank
- City of Toledo
- Ohio EPA
- NRCS
- University of Toledo
- Non-profits
- Consulting firms

Provided guidance on site selection criteria
Imperviousness by Block Group
Group A. Soils having a high infiltration rate
Group B. Soils having a moderate infiltration rate
Group C. Soils having a slow infiltration rate
Group D. Soils having a very slow infiltration rate

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.
Future Land Use – Toledo 20/20 Plan
Green Corridors – Toledo 2020 Plan

[Map showing green corridors in Toledo with different colors representing parks, golf courses, riparian areas, and trails.]

Legend:
- Pink: Park/Golf Course
- Blue: Riparian
- Green: Trail
Parks
Flooding Complaint Clusters
First Cut selection based on parcel characteristics

AREIS parcel Data (coded vacant)

Prioritize based on:
- Public ownership
- Lot size

Potential opportunities for greening

Land Bank Demos
How suitable is the land?

- Hydrologic Soil Group
- Future Land Use (2020 Plan)
- Green Corridors
- Green Spaces/Parks
- Flooding Complaint Clusters
- Catch Basin 200 ft Buffer
- 100 yr Floodplain

Block Group Summary Data
- Imperviousness
- Vacancy Density

Most Suitable Areas
Highest priority sites

The best parcels within The most Suitable Areas

Highest Priority Sites

Online Mapping for Decision-making and Public Participation
Green Infrastructure uses analyzed

- **Small Scale** – side lot rain gardens, downspout redirection

- **Medium Scale** – Bioretention areas and Bioswales, stormwater wetlands

- **Large Scale** – Reforestation, Restoring Nature
Results: Best lots for Rain Gardens

[Map showing priorities with color coding]

- Green: Lowest priority
- Yellow: Medium priority
- Orange: High priority
- Red: Highest priority
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Results: Best lots for Restoring Nature
High Scoring public parcels: Best opportunity for Restoring Nature
Example: Extension of Sterling Field
Vacant Land Greening can be incorporated into:

- Redevelopment plans
- Community revitalization
- Infrastructure improvement
- Parks and trails
Moving Forward

- Strong Partnerships
- Planning
- Design
- Community Participation
- Education
More information available soon on the Stormwater page at tmacog.org

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