Tioughnioga River Urban Headwaters Action Plan

# Walkable Watershed

healthy waters : healthy communities

Kickoff Meeting
Cortland, New York
November 5, 2014

skeo SOLUTIONS

# Meeting Purpose

- Outline the goals and objectives of the NFWF grant
- Review existing conditions, related projects and investments
- Tour project area
- Identify potential green infrastructure opportunities

# Grant Objectives

- Identify potential **green infrastructure technologies** to store, treat and infiltrate stormwater runoff and reduce impacts in the Upper Tioughnioga River Watershed.
- Coordinate green infrastructure opportunities with **transportation and corridor investments** and with implementation of the local and regional initiatives.
- **Prioritize vacant and underused land** for transformation into public assets that can reconnect the community and watershed.
- Identify opportunities for **future acquisition of riparian corridors** to protect water quality.
- **Build capacity** across jurisdictions to advance green infrastructure solutions in the watershed.

# Integrated Planning Approach

A Walkable Watershed integrates the flow of **water** and **people** into a cohesive strategy to improve the overall health of a community and the surrounding watershed.

# Integrated Planning Approach

- Build on existing investments and initiatives
- Coordinate transportation and stormwater management investments
- Connect people to the river
- Address flooding  issues
- Explore potential public land acquisitions
- Identify specific locations for stormwater improvements

# Green Streets

- Enable **safe** access for all users (including pedestrians, bicyclists, motorists and transit riders of all ages and abilities)
- And enhance **water quality** by cleaning stormwater runoff.

# Safe Crossings

Stormwater treatment can be integrated with safe pedestrian crossings.


Mid-block Stormwater Bump-out

Corner Stormwater Bump-out


Source: City of Philadelphia Green Streets Design Manual

# Stormwater Flow – On Street

**Swales** are grassy or vegetated channels that safely hold and direct water from one place to another. They can be located adjacent to streets and parking lots to slow and clean the water before it flows to the creek.

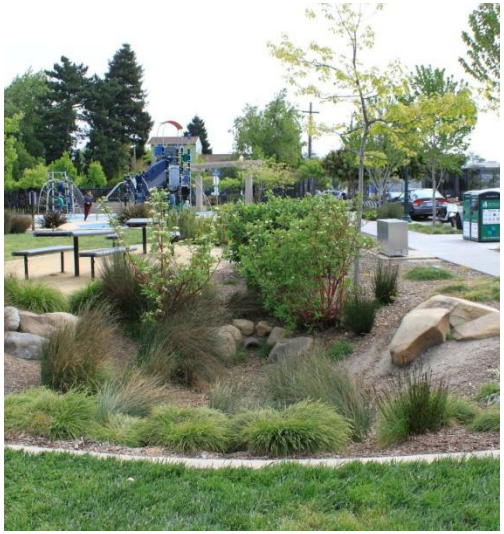
*Curb extension retrofit*

*Water-filled planted swale during 25-year storm event*

*Grassy swale*

# Stormwater Flow – Off Street

**Rain gardens** are planted areas that are sunk into the ground to collect rainwater runoff from impervious urban areas (such as roofs, driveways and parking lots). Rain gardens can be added to front yards, public spaces and vacant lots.



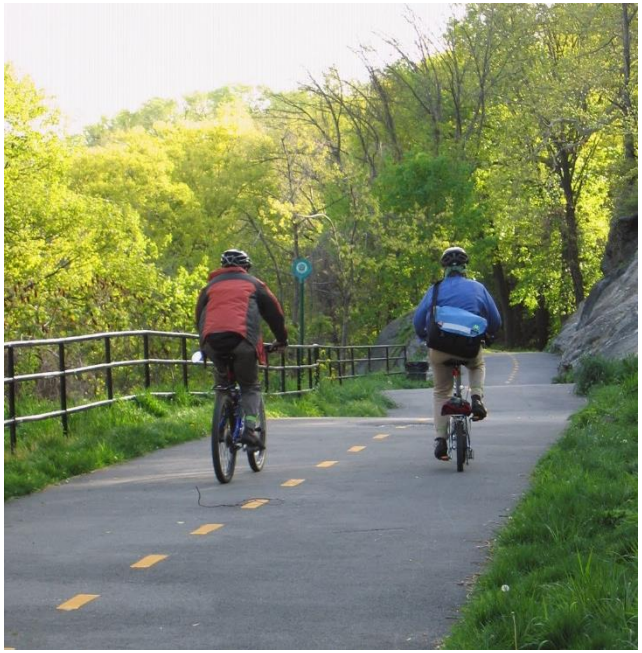
*Integrated into a community park*

*In public spaces with educational signage*

*Terraced rain gardens provide a visual attraction*

# Celebrating Connections

Celebrating and enhancing community connections to urban waterways and environment restoration provides multiple benefits.



*Greenways provide access to waterways and recreational areas*

*Signage celebrates a community's legacy and connection to waterways*

# Promoting Learning

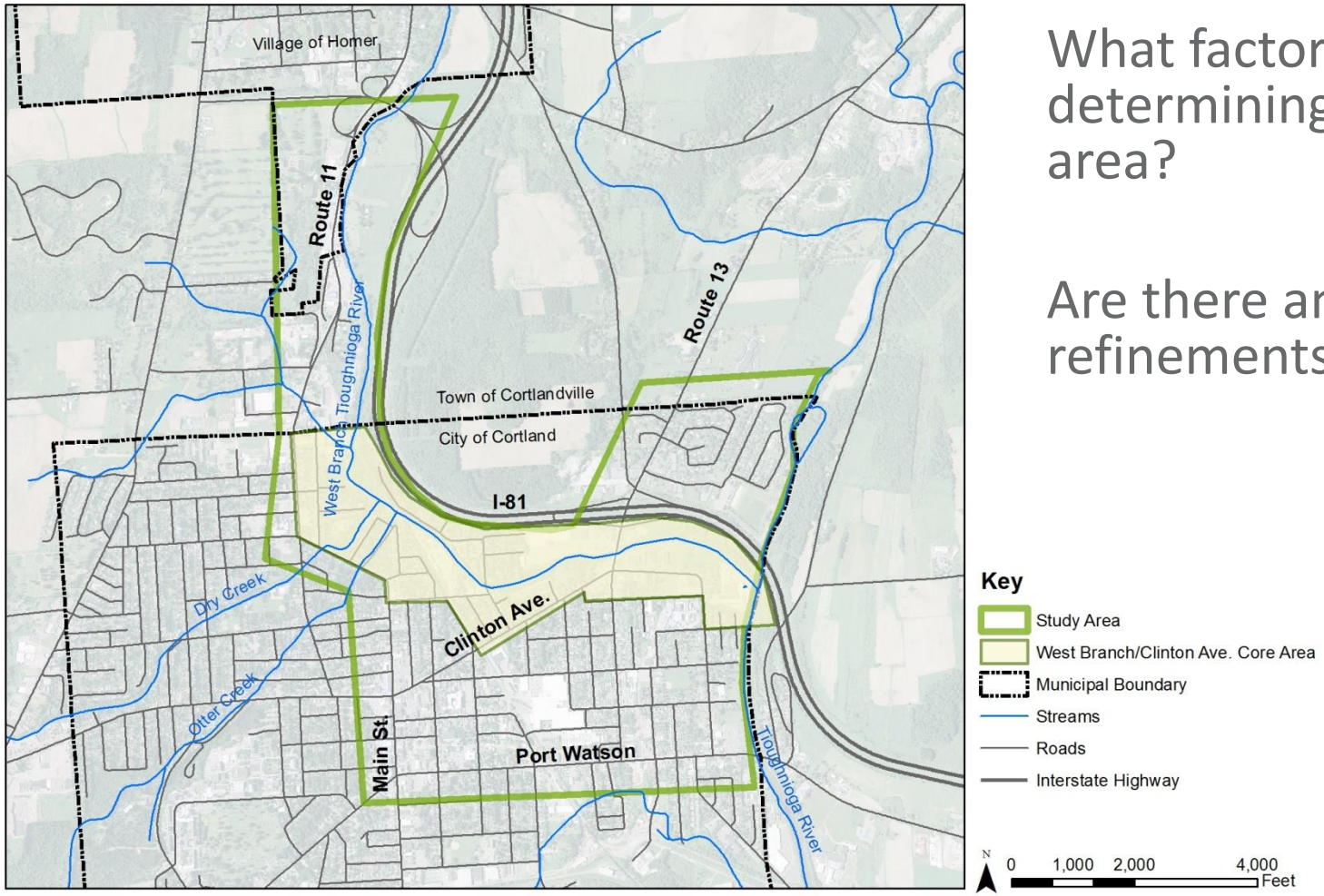
Stormwater strategies can be designed to highlight how rainwater flows through the community to the river. Features such as bridges, splash blocks, storm drain inlets can be designed to celebrate the watershed.

*Bridge reflects skeleton of native fish*

*Splash pad with fish imprint is a reminder that rain water flows to local waterways and fish habitat*

*Educational signage*

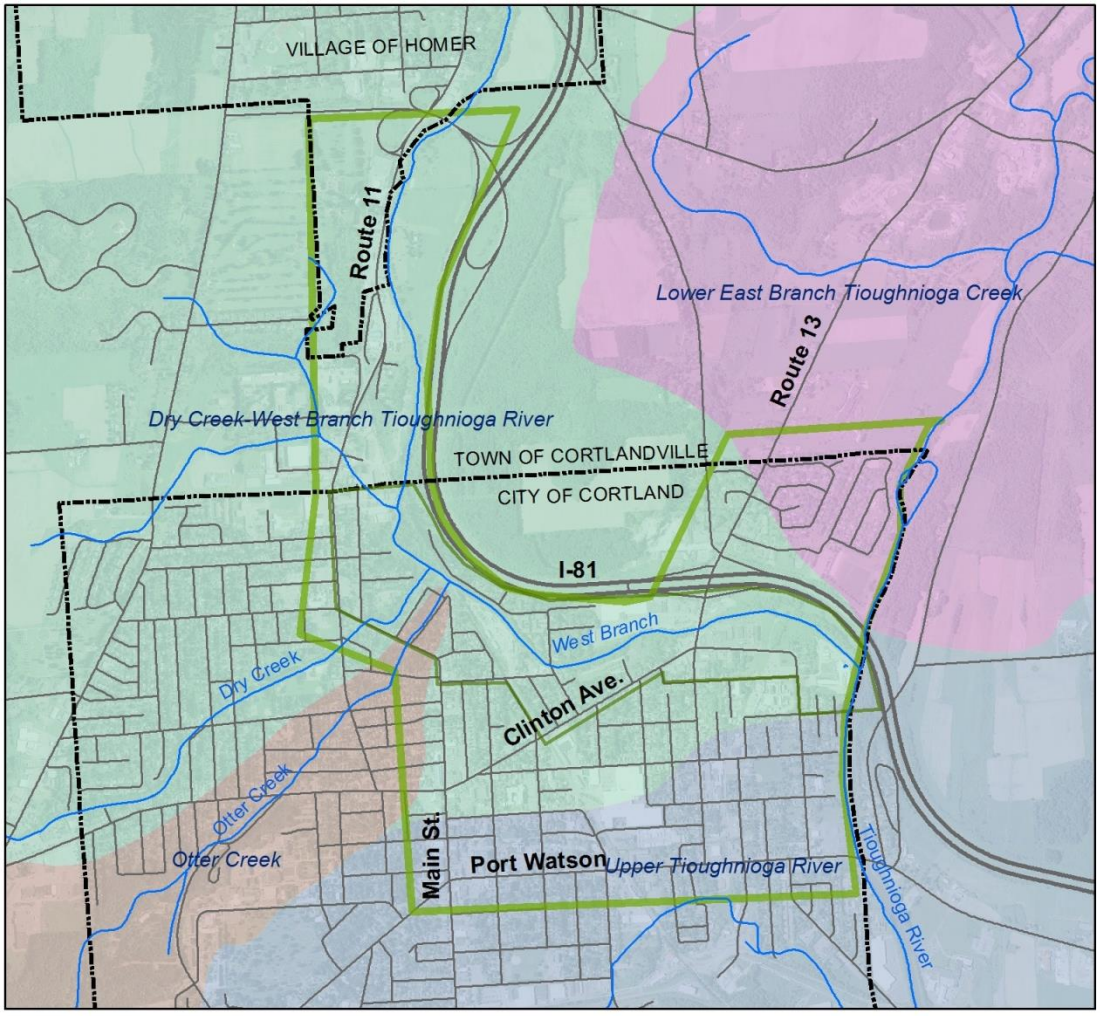
# Context




What factors went into determining the study area?

Are there any refinements to consider?

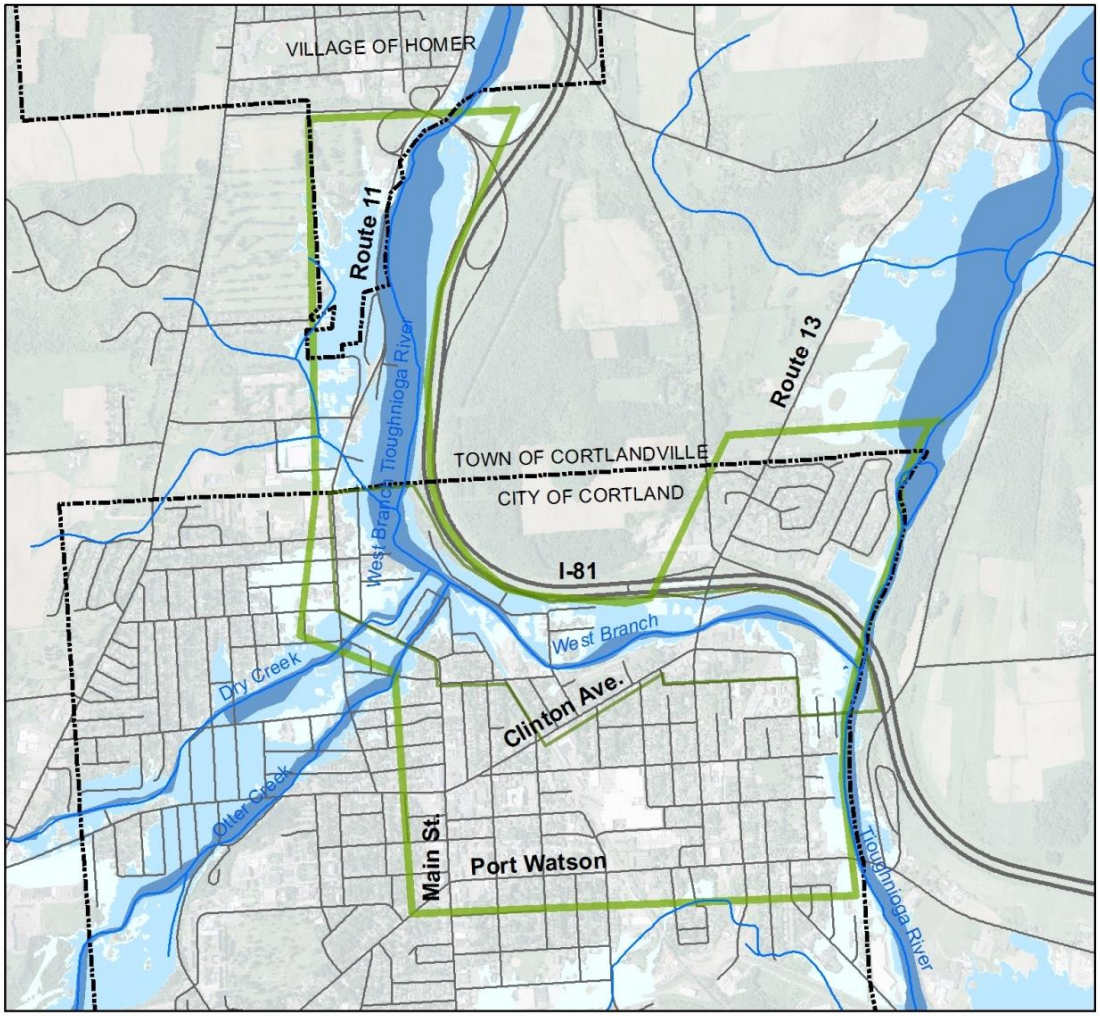
# Watershed



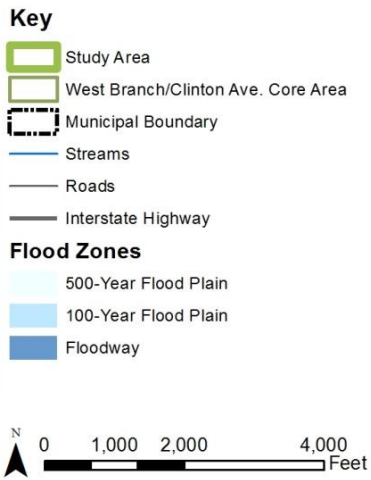

Where do people go to access and view the river or creek?

What are people's associations with the creek?

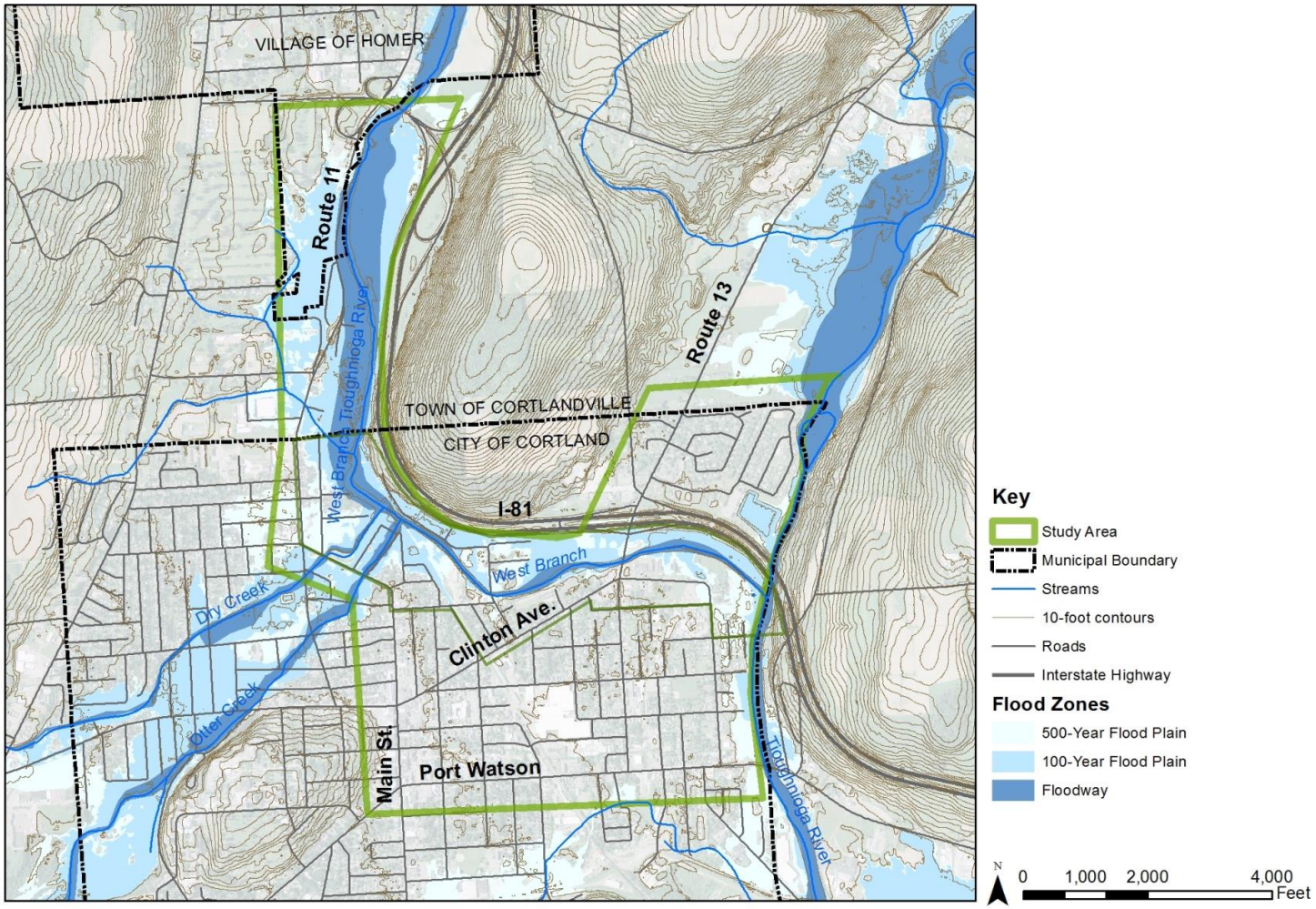
# Flood Zones




Are there particular areas that are known to flood?

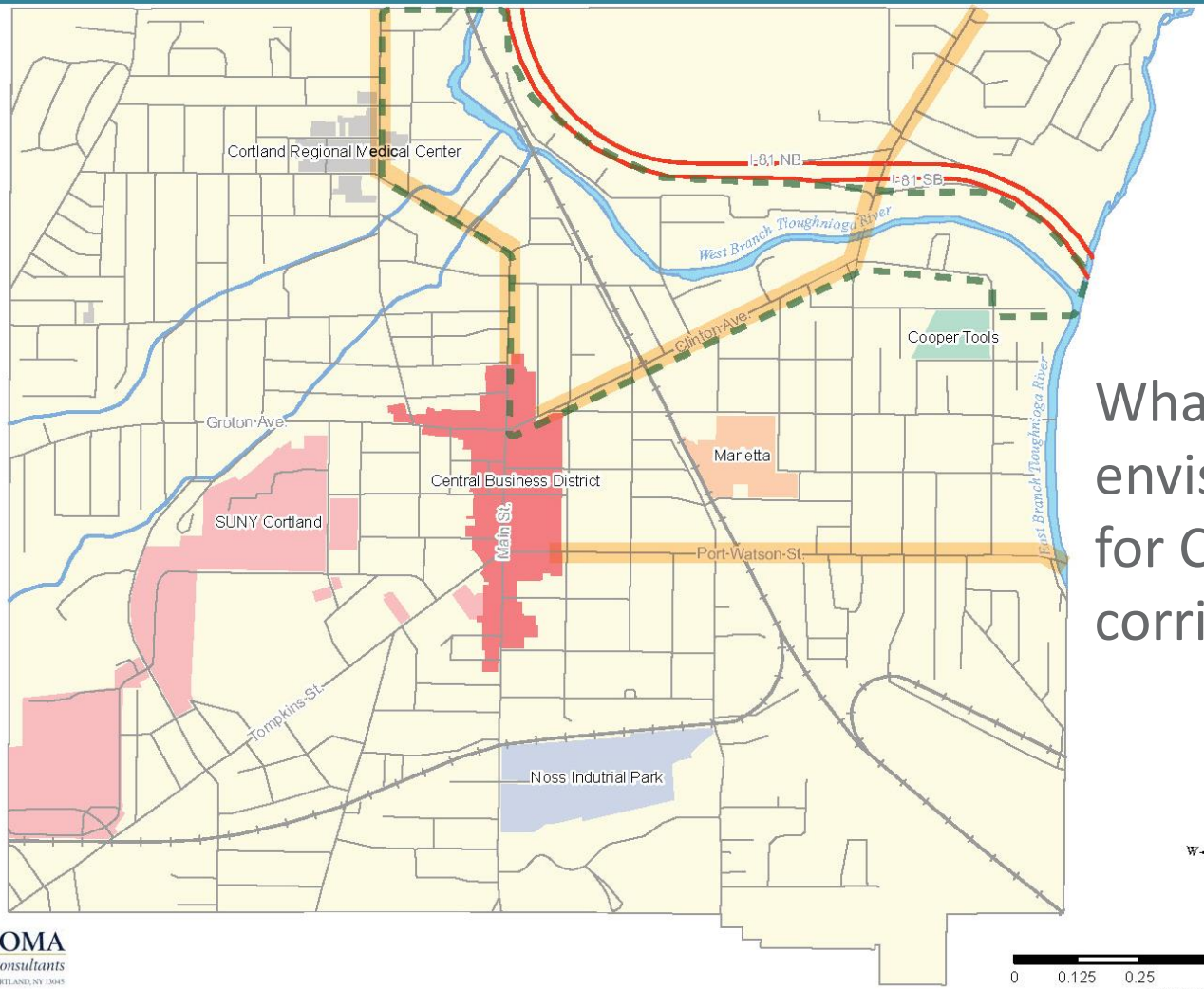


# Topography


VILLAGE OF HOMER
Route 11
West Branch Tioughnioga River
TOWN OF CORTLANDVILLE
CITY OF CORTLAND
Route 13
I-81
West Branch
Dry Creek
Clinton Ave.
Otter Creek
Main St.
Port Watson
Tioughnioga River
Key
Study Area
Municipal Boundary
Streams
10-foot contours
Roads
Interstate Highway
Flood Zones
500-Year Flood Plain
100-Year Flood Plain
Floodway
N
0
1,000
2,000
4,000
Feet

# Core Area: Gateway Corridors

## Map 9: Economic Development Drivers




What improvements are envisioned/planned for Cortland's gateway corridors?

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# Core Area: Stormwater Infrastructure


What are some common issues with the stormwater system?

Are there stormwater capital improvements planned for gateway corridors?

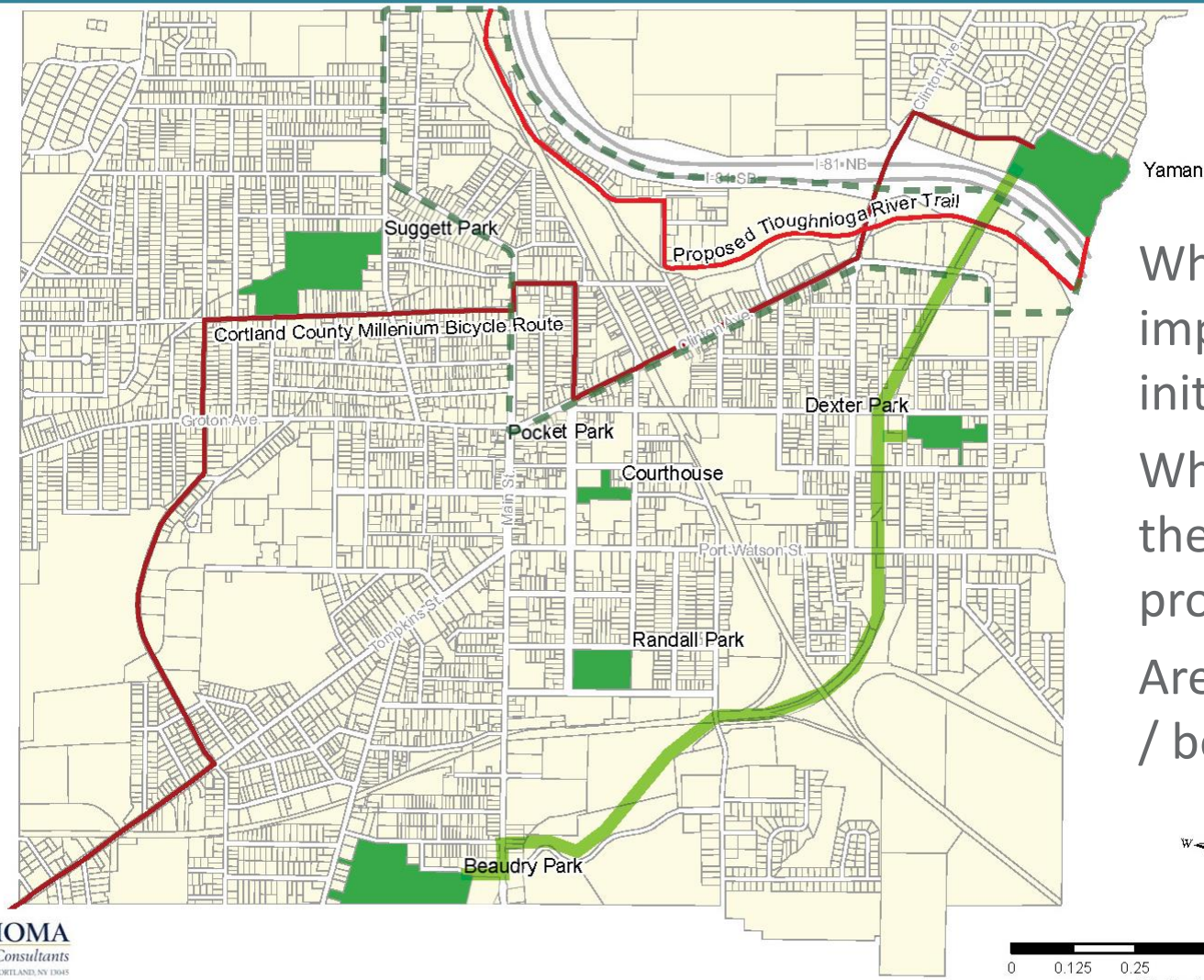
**Key**

- Municipal Boundary
- West Branch - I-81 Gateway Study Area
- Streams
- Storm Sewer Lines
- Storm Drains
- Parcels

N 0 1,000 2,000 4,000 Feet

# Core Area: Parks and Trails

## Map 15: City Parks and Trails




What park improvements or initiatives underway?

What is the status of the trail and greenway projects?

Are there local fishing / boating spots?

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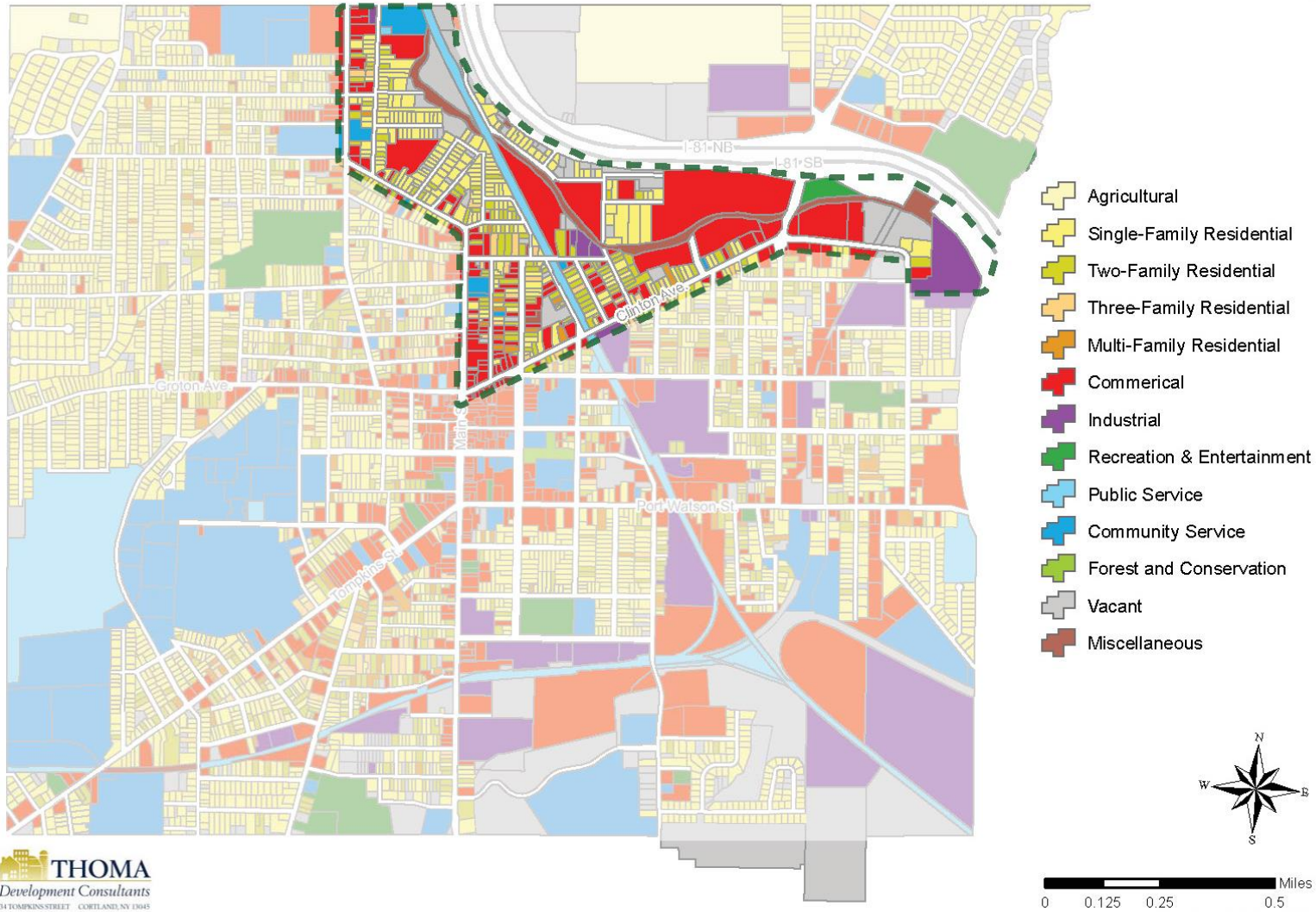
# Core Area: Land Use

## Map 17: Existing Land Use

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# Core Area: Potential Connections

## Map 2: City of Cortland Orientation


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# Types of Opportunities

- Build on existing investments and initiatives
- Coordinate transportation and stormwater management investments
- Connect people to the river
- Address flooding  issues
- Explore potential public land acquisitions
- Identify specific locations for stormwater improvements

# Next Steps

- Skeo to develop draft green infrastructure strategies based on November 5 meeting outcomes
- Refine draft strategies and discuss prioritization, partnerships and fundingin opportunities at 2nd working session
- Develop action plan
- Share outcomes at regional forum

# Contact Information

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Tioughnioga Urban Headwaters Action Plan website:

http://www.walkablewatershed.com/cortland/