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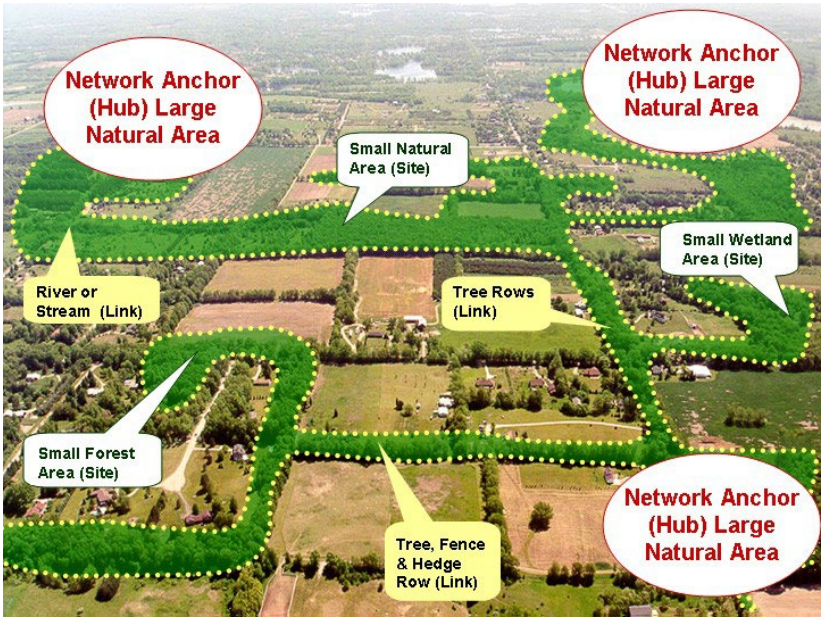
Chelsea, Sylvan, and Lima Green Infrastructure Session

May 9, 2018

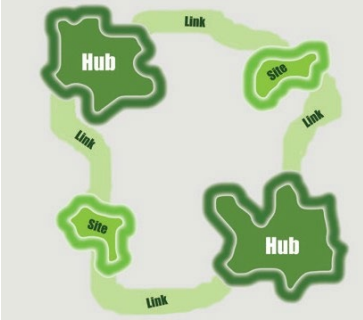


Huron River Watershed Council

- Introduction
- Background Resource Maps
- Process for Hands-on Assessment
- Draft Design Session Green Infrastructure Map
- Next Steps – Community Planning for Green Infrastructure
- References

Green infrastructure networks consist of the following components:

Hubs: Hubs anchor the network and provide an origin or destination for wildlife. Hubs range in size from large conservation areas to smaller parks and preserves. Hubs provide habitat for native wildlife and help maintain natural ecological processes.



Sites: Smaller ecological landscape features that can serve as a point of origin or destination or incorporate less extensive ecological important areas.

Links: The connections that hold the network together and enable it to function. Links facilitate movement

INTRODUCTION

Project Description

The Huron River Watershed Council (HRWC) and Chelsea and Sylvan and Lima townships have partnered to create this document.

What is Green Infrastructure?

Green infrastructure is the interconnected network of large natural areas, wildlife habitats, riparian corridors and areas that reflect key elements of our biological diversity. This network supports native species, maintains natural ecological processes, sustains air and water resources, and contributes to our health and quality of life. The Green Infrastructure outlined in this document is a proposed network to link the Huron River watershed's remaining ecologically valuable lands. The goal is to maximize the effectiveness of public and private land conservation efforts, and to ensure land development occurs in concert with Green Infrastructure.

What are the benefits of Green Infrastructure?

Green infrastructure provides a mechanism to identify and blend environmental and economic factors creating a multitude of social, economic, cultural and environmental benefits.

- Provides a sense of place and a unique identity
- Decreases cost of public infrastructure (e.g. stormwater management & water treatment systems)
- provides active and passive recreational opportunities
- Increases property values
- Helps preserve our unique quality of life
- Maintains naturally functioning ecosystems
- Helps to attract new businesses and well- qualified workers

What is in this document?

This document is a result of a workshop on May 8, 2018, at the Chelsea City Council Chamber. At the session, city and township officials, residents, and other stakeholders studied the maps shown on pages 7 - 12 and then created Hubs, Sites, and Links, drawing onto transparent mylar sheets laid over those maps (pages 13 – 15). HRWC took those sheets and created the Green Infrastructure Map (page 16).

Next steps

Page 17 lists next steps Chelsea, Lima, and Sylvan and their partners can undertake to ensure that the area's Green Infrastructure continues to provide habitat,

recreation, water quality, clean air, and other benefits.

Sylvan Township's Green Infrastructure

Mostly undeveloped

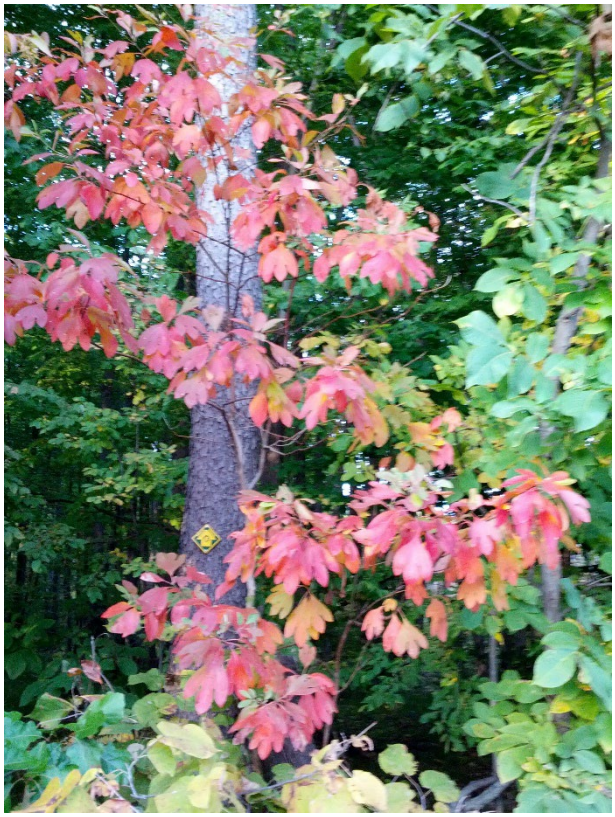
43% intact natural areas (“bioreserve” sites)

27% of natural area is publicly owned

Low impervious surface (2%)

(creeks and wetlands begin to become degraded in areas where impervious surfaces make up more than 10% of their watersheds)

78 species of threatened, endangered or special concern animals, plants and 11 ecosystems in Lima and Sylvan area.



Lima Township's Green Infrastructure

Mostly undeveloped

25% intact natural areas ("bioreserve" sites)

10% of natural area is publicly owned

Low impervious surface (5%)

(creeks and wetlands begin to become degraded in areas where impervious surfaces make up more than 10% of their watersheds)

78 species of threatened, endangered or special concern animals, plants and 11 ecosystems in Lima and Sylvan area.

Chelsea's Green Infrastructure

Mostly developed

12% intact natural areas ("bioreserve" sites)

2% of natural area is publicly owned

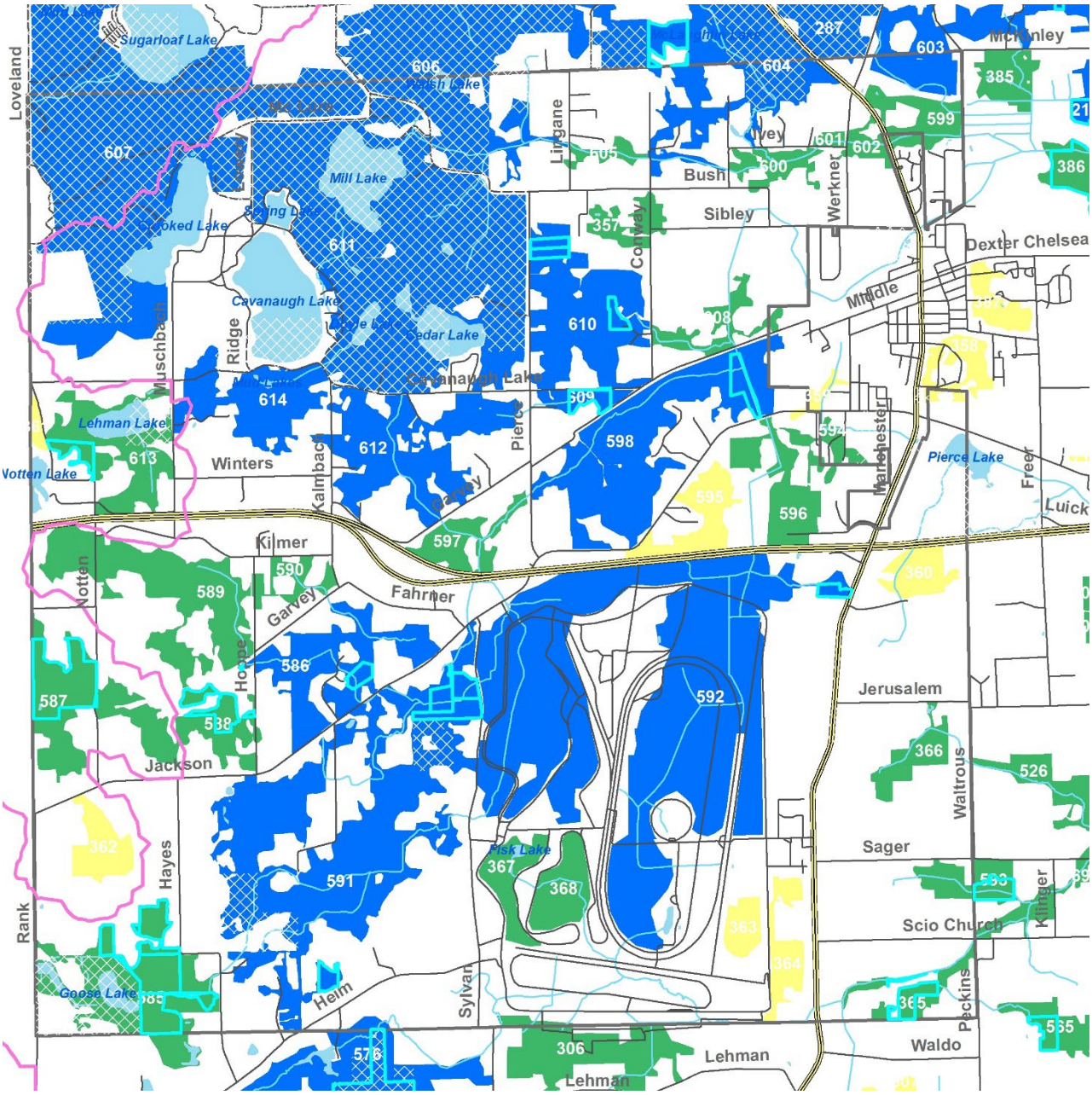
High impervious surface (42 - 58%)

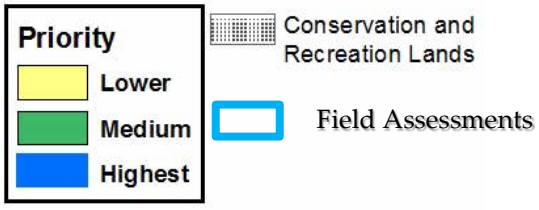
(creeks and wetlands begin to become degraded in areas where impervious surfaces make up more than 10% of their watersheds)

Background Resource Maps

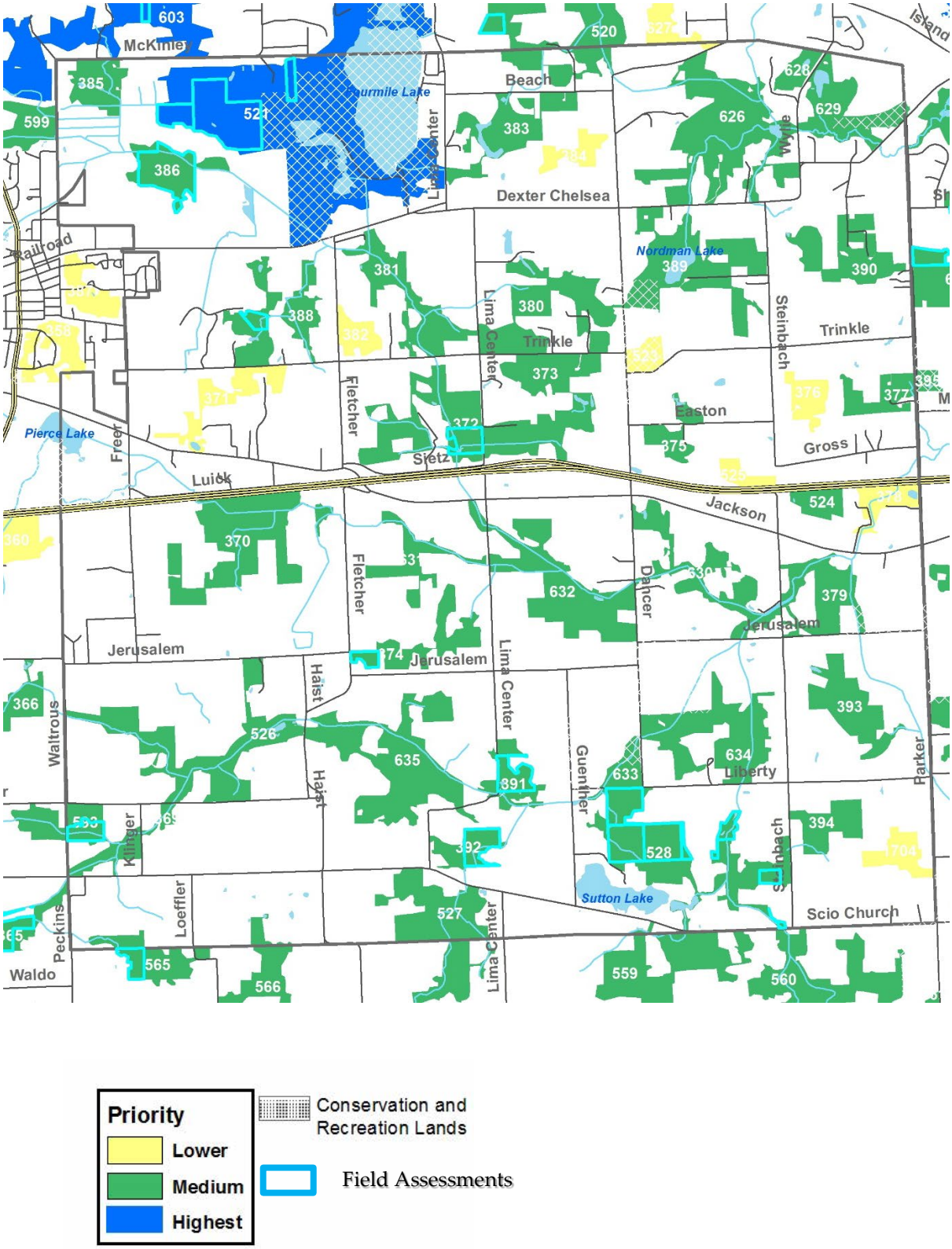
- HRWC Bioreserve Map
- Environmentally Sensitive Areas
- 2000 Land Use
- Topography
- Green Infrastructure Planning Map

Sylvan's Remaining Natural Areas





Lima's Remaining Natural Areas



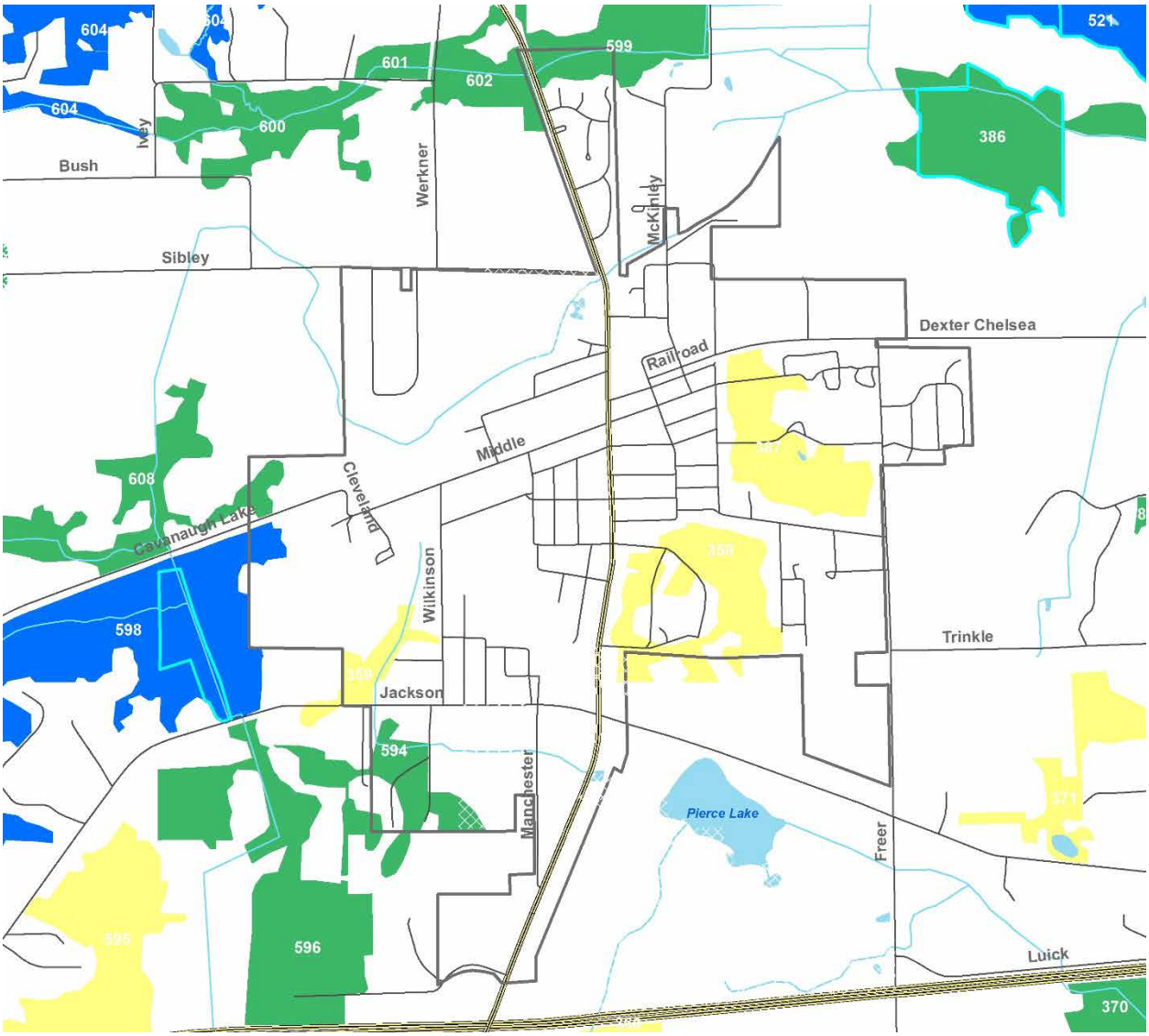
Priority

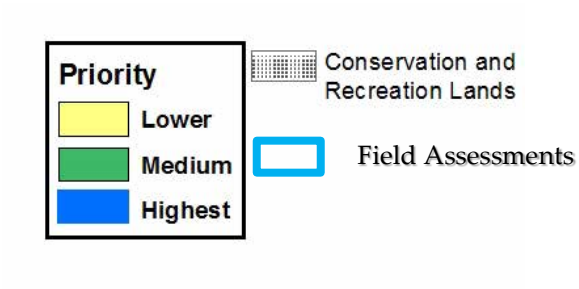
- Lower
- Medium
- Highest

Conservation and Recreation Lands

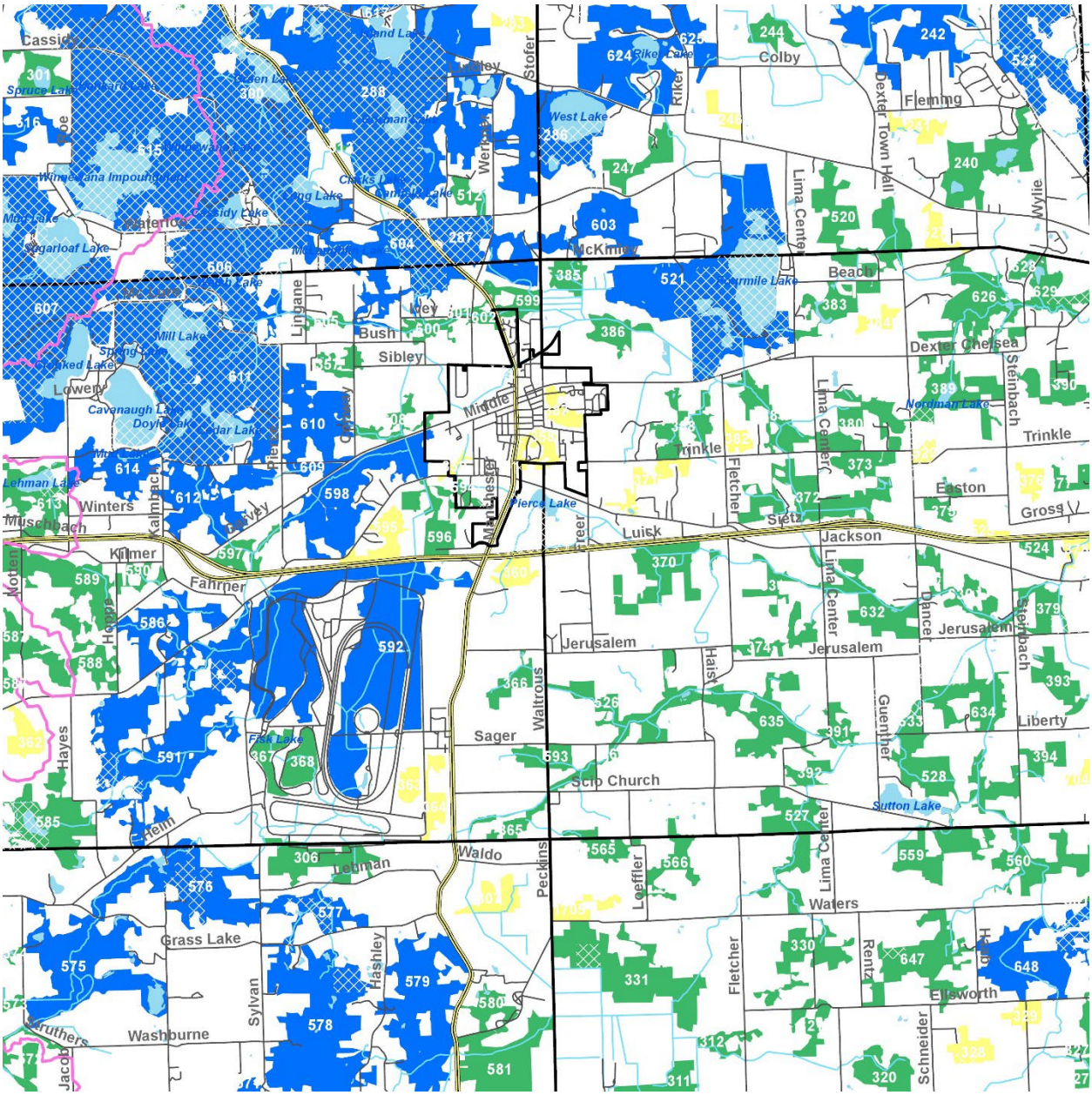
Field Assessments

Chelsea's Remaining Natural Areas

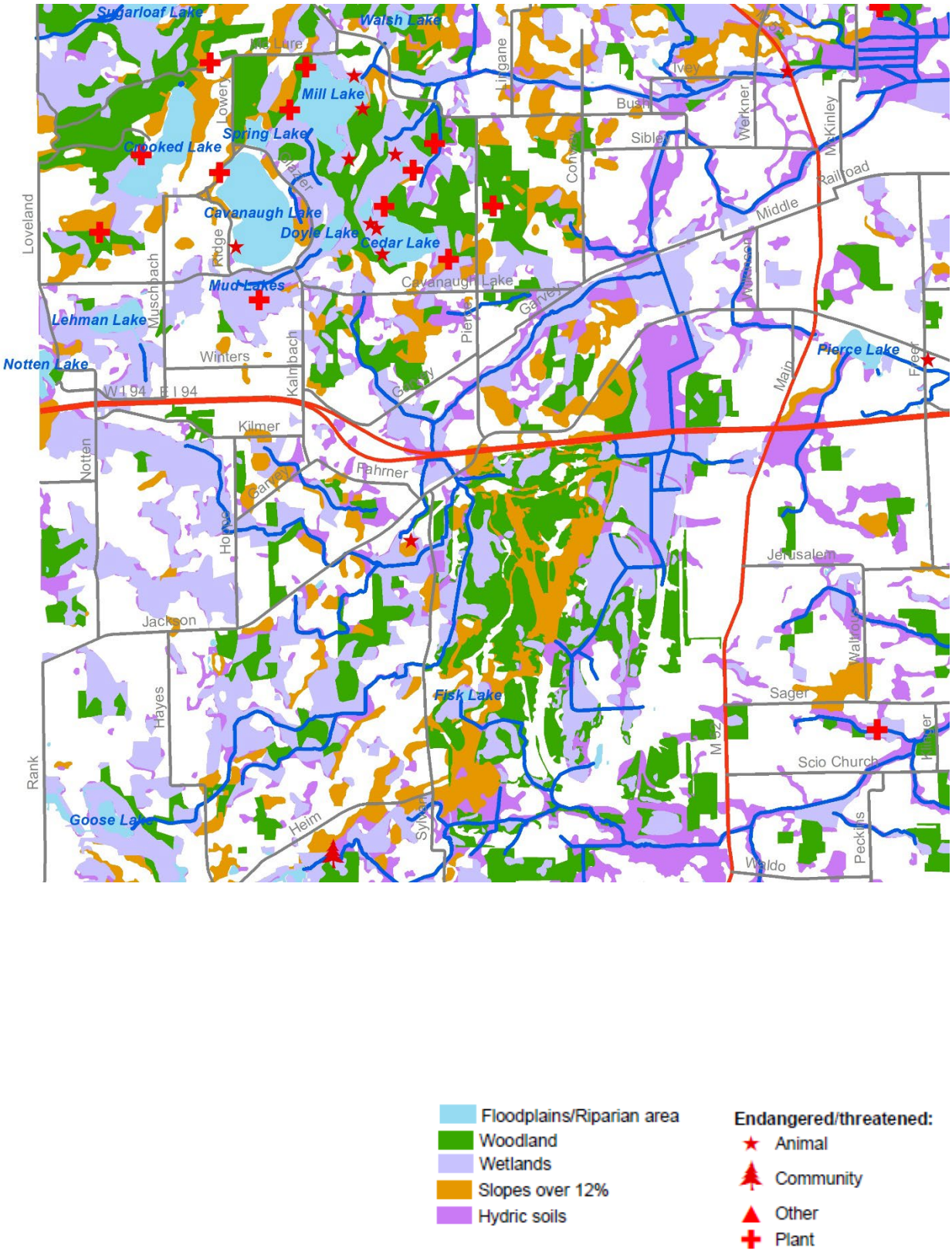



Priority
Lower
Medium
Highest
Conservation and Recreation Lands
Field Assessments

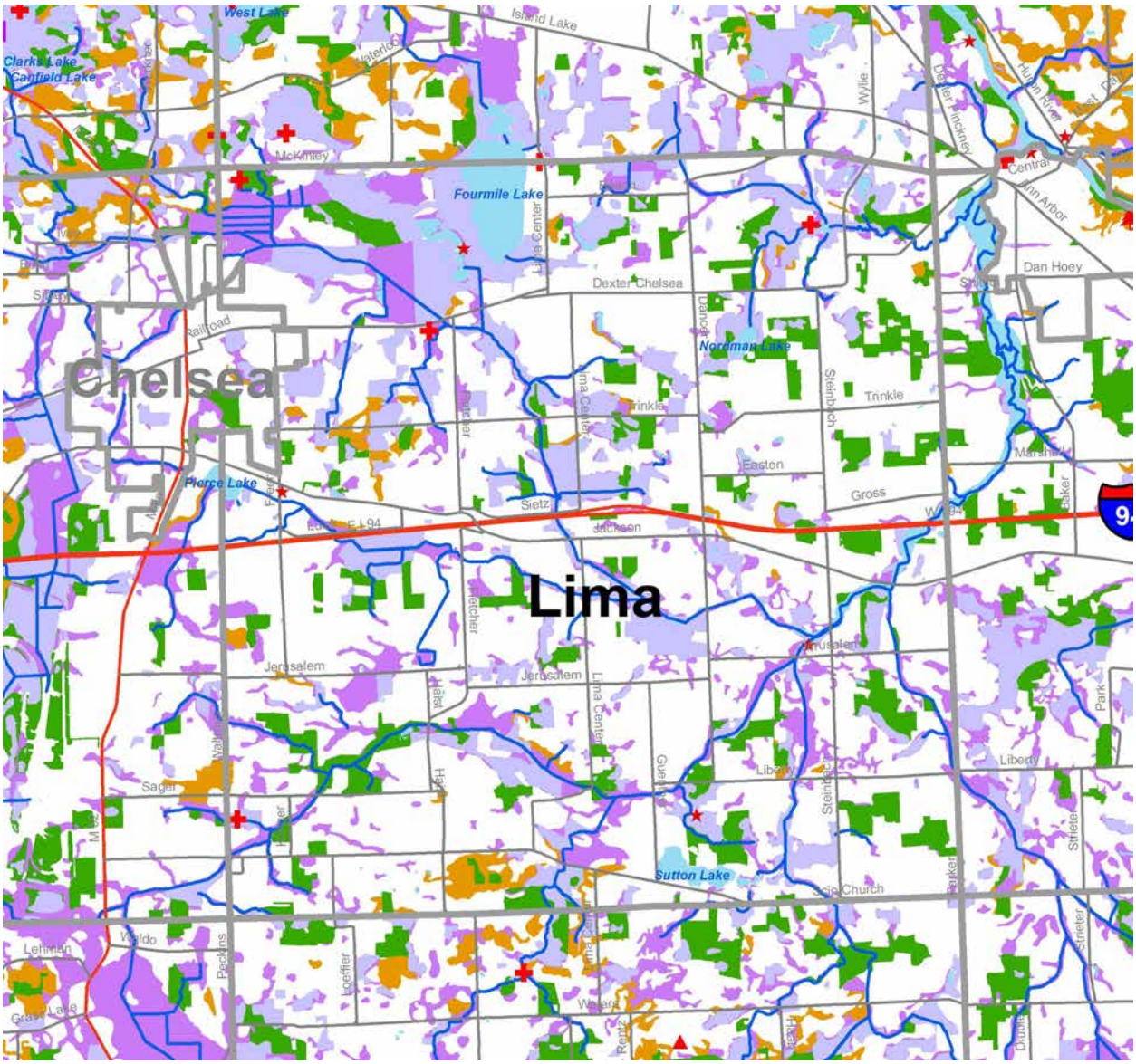
Chelsea Area's Remaining Natural Areas



Sylvan's Environmentally Sensitive Areas



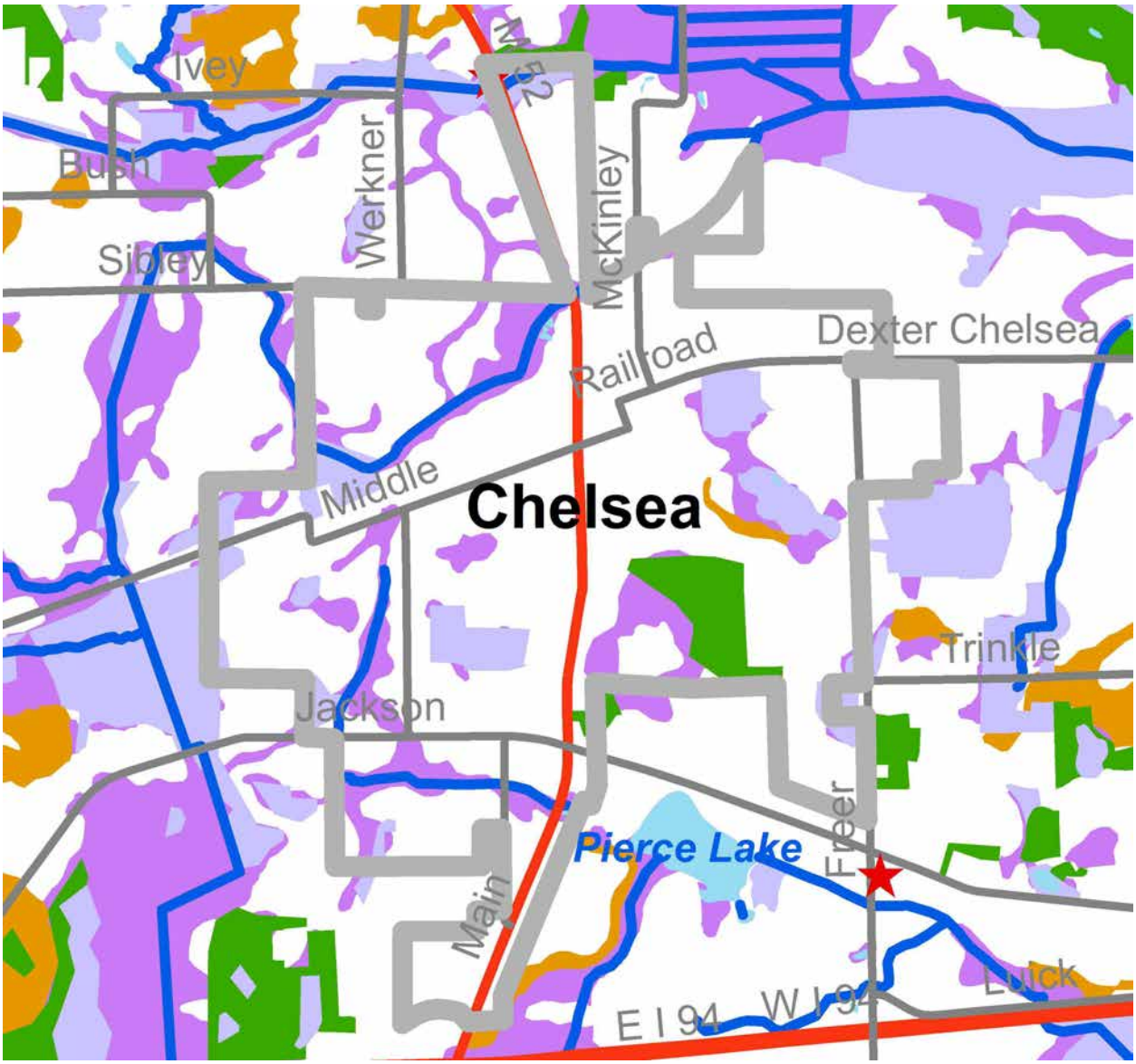
Lima's Environmentally Sensitive Areas



Floodplains/Riparian area
Woodland
Wetlands
Slopes over 12%
Hydric soils

Endangered/threatened:
Animal
Community
Other
Plant

Chelsea's Environmentally Sensitive Areas



Floodplains/Riparian area
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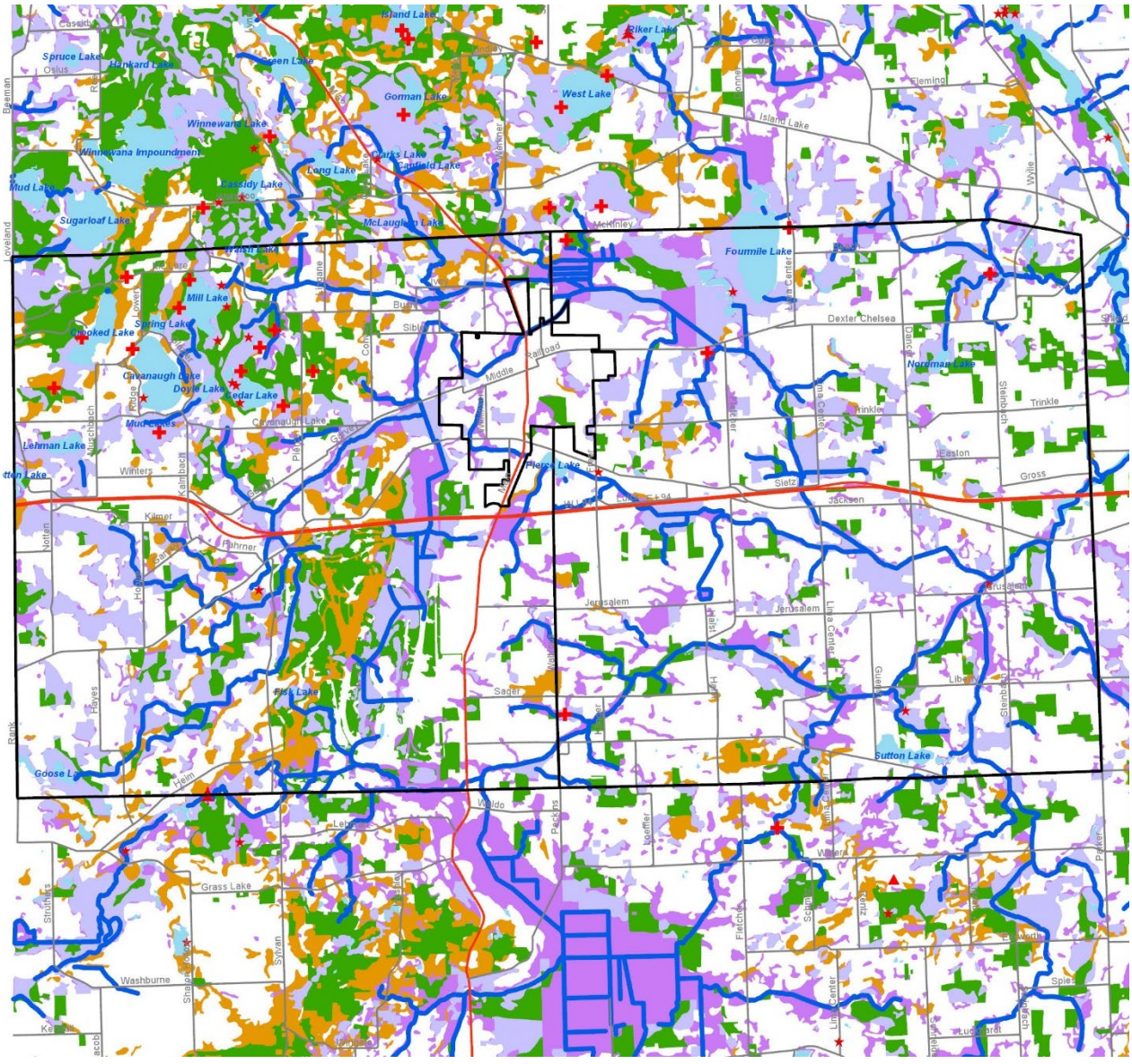
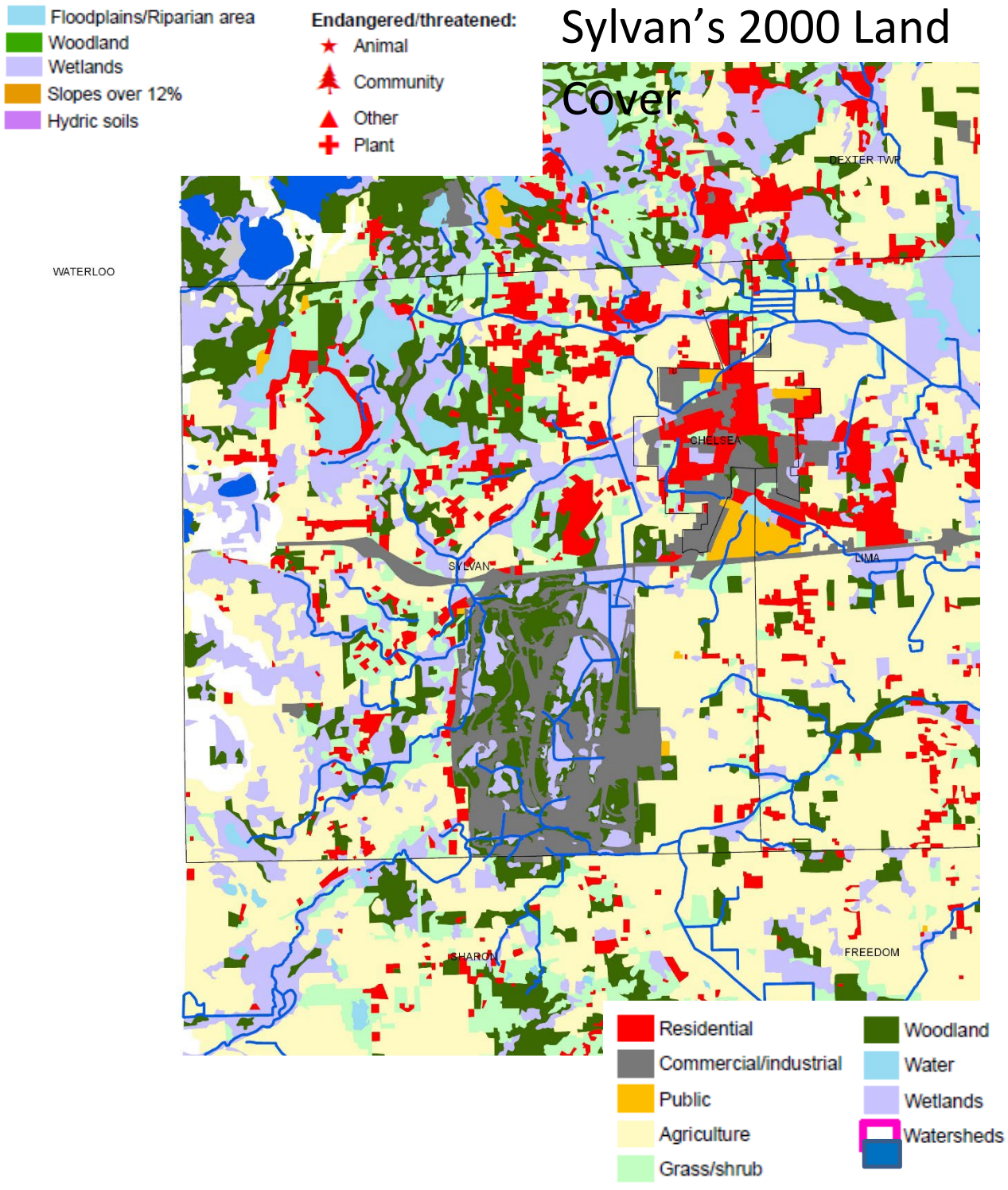
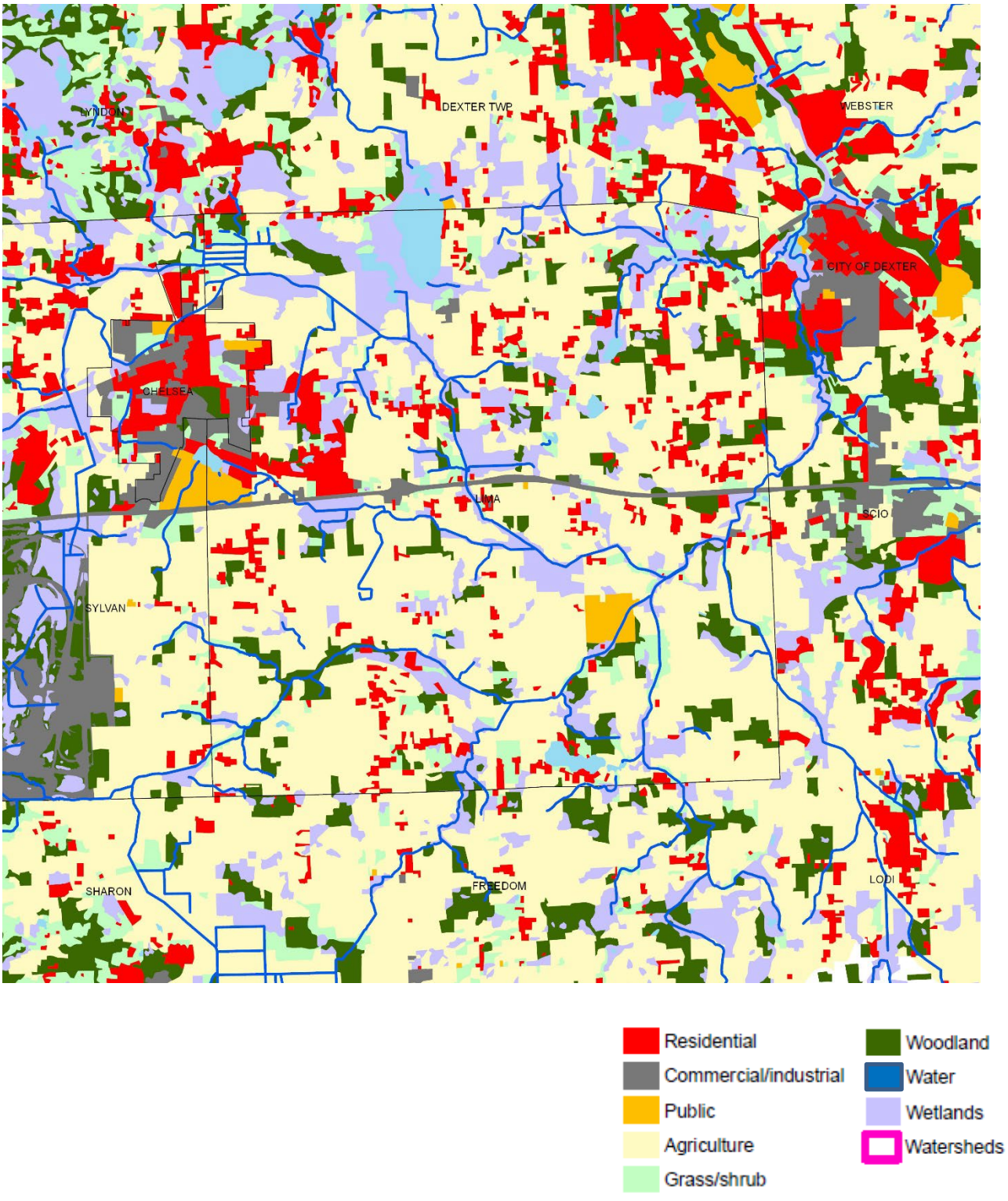
Chelsea area's Environmentally Sensitive Areas

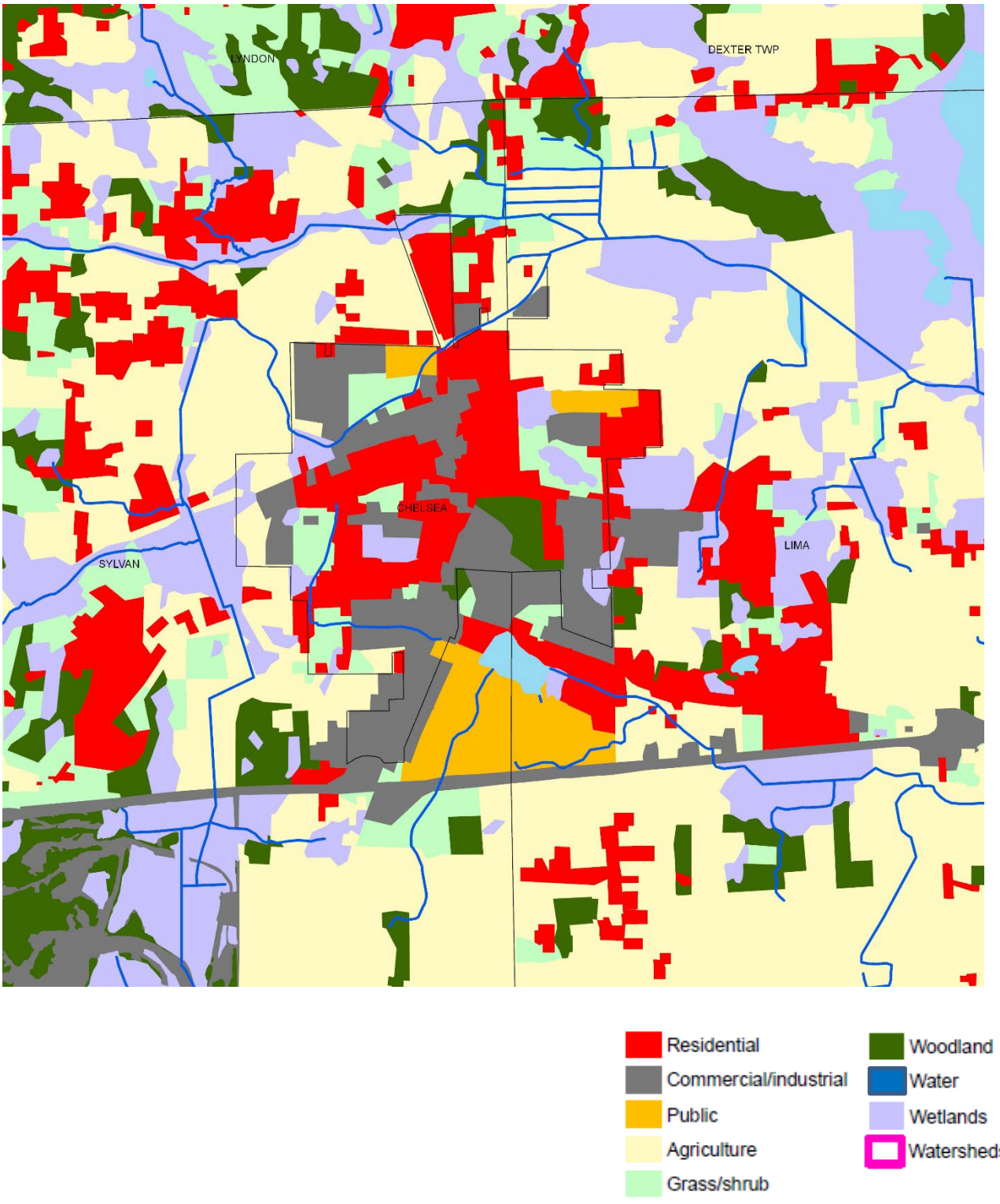



Floodplains/Riparian area
Woodland
Wetlands
Slopes over 12%
Hydric soils
Endangered/threatened:
Animal
Community
Other
Plant
Sylvan's 2000 Land Cover
WATERLOO
DEXTER TWP
CHELSEA
SYLVAN
LIMA
SHARON
FREEDOM
Residential
Commercial/industrial
Public
Agriculture
Grass/shrub
Woodland
Water
Wetlands
Watersheds

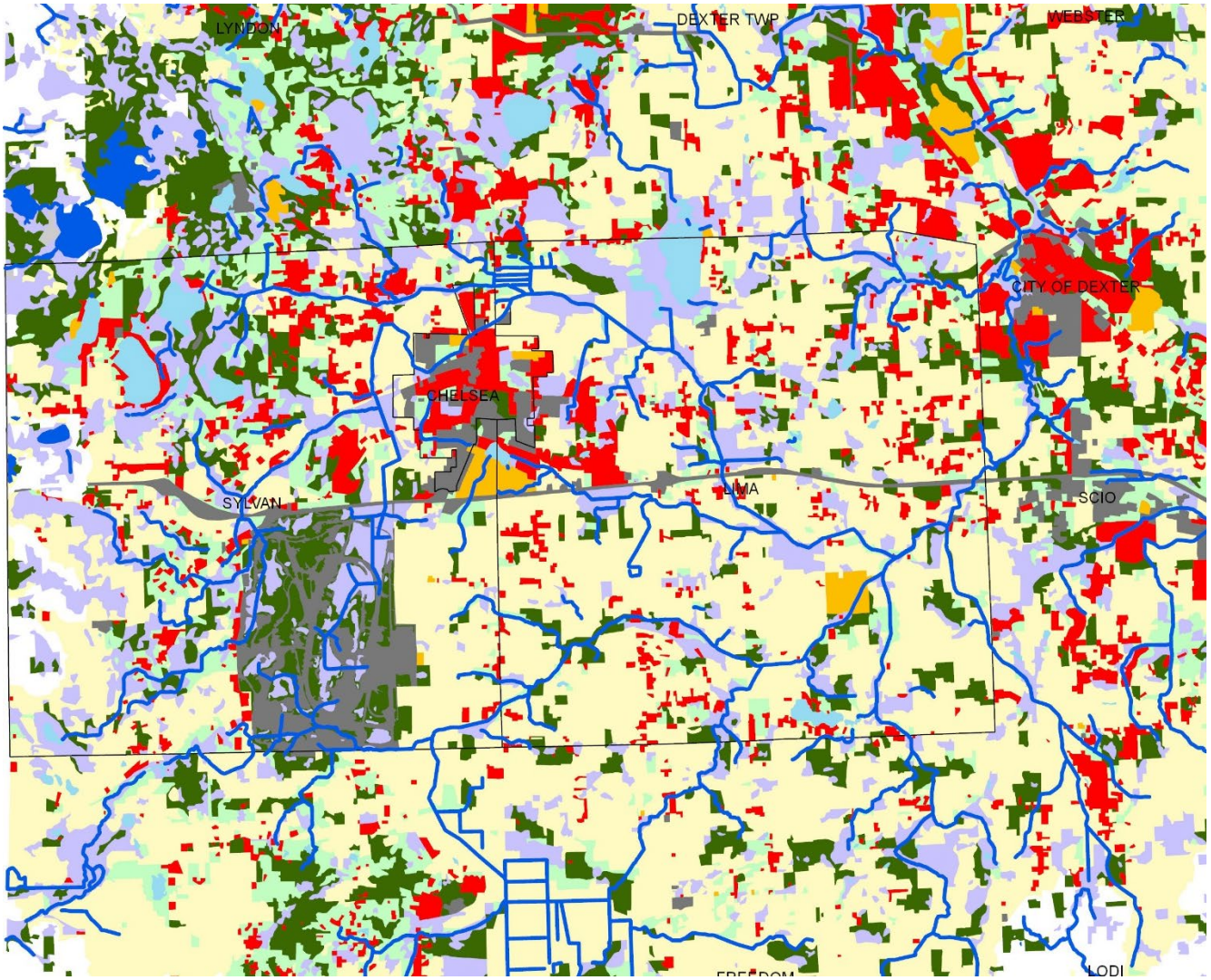
Lima's 2000 Land Cover



2000 Land Cover

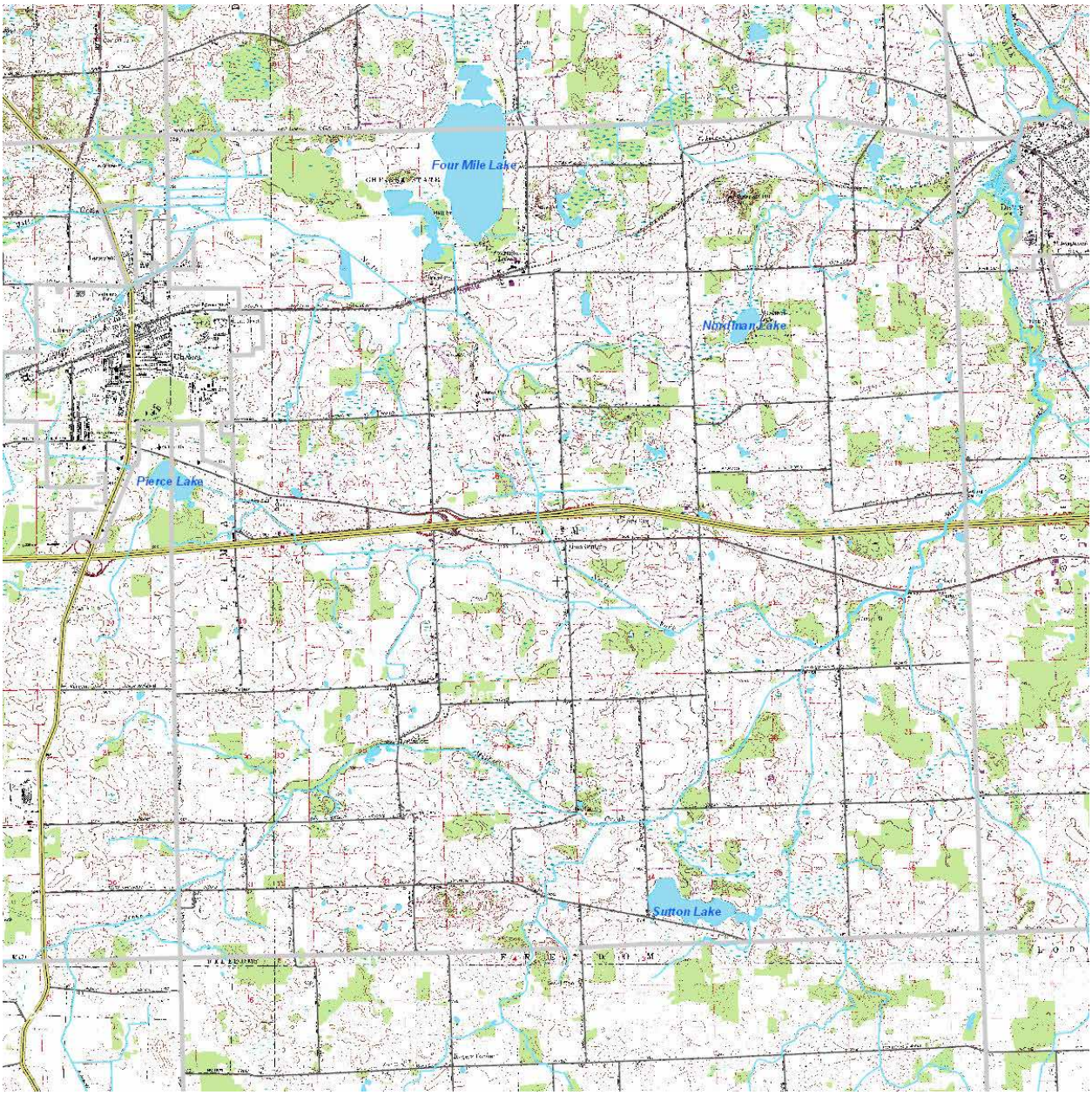


Chelsea Area 2000 Land Cover



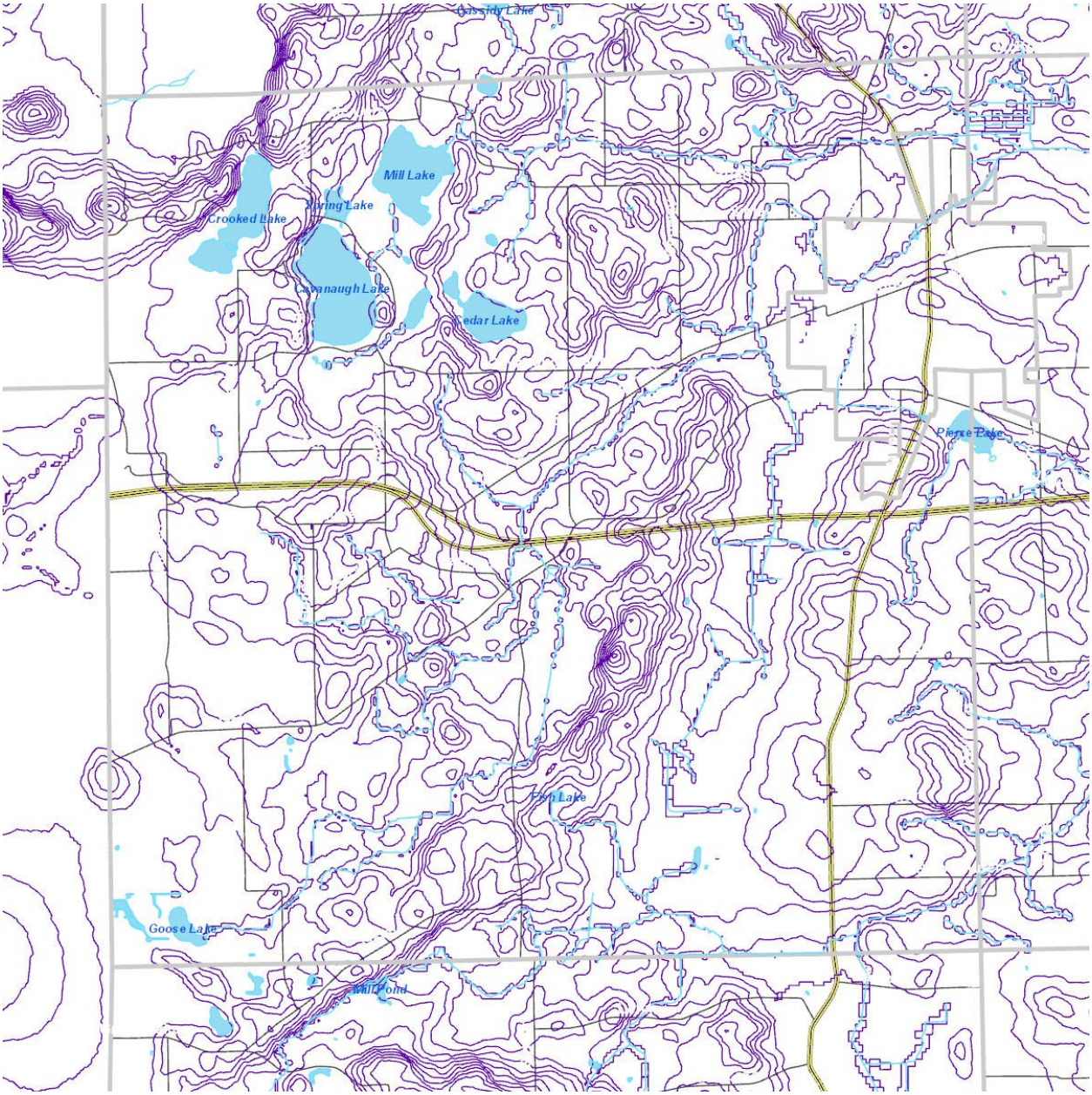
U.S.G.S. Topography: Sylvan

U.S.G.S. Topography: Lima

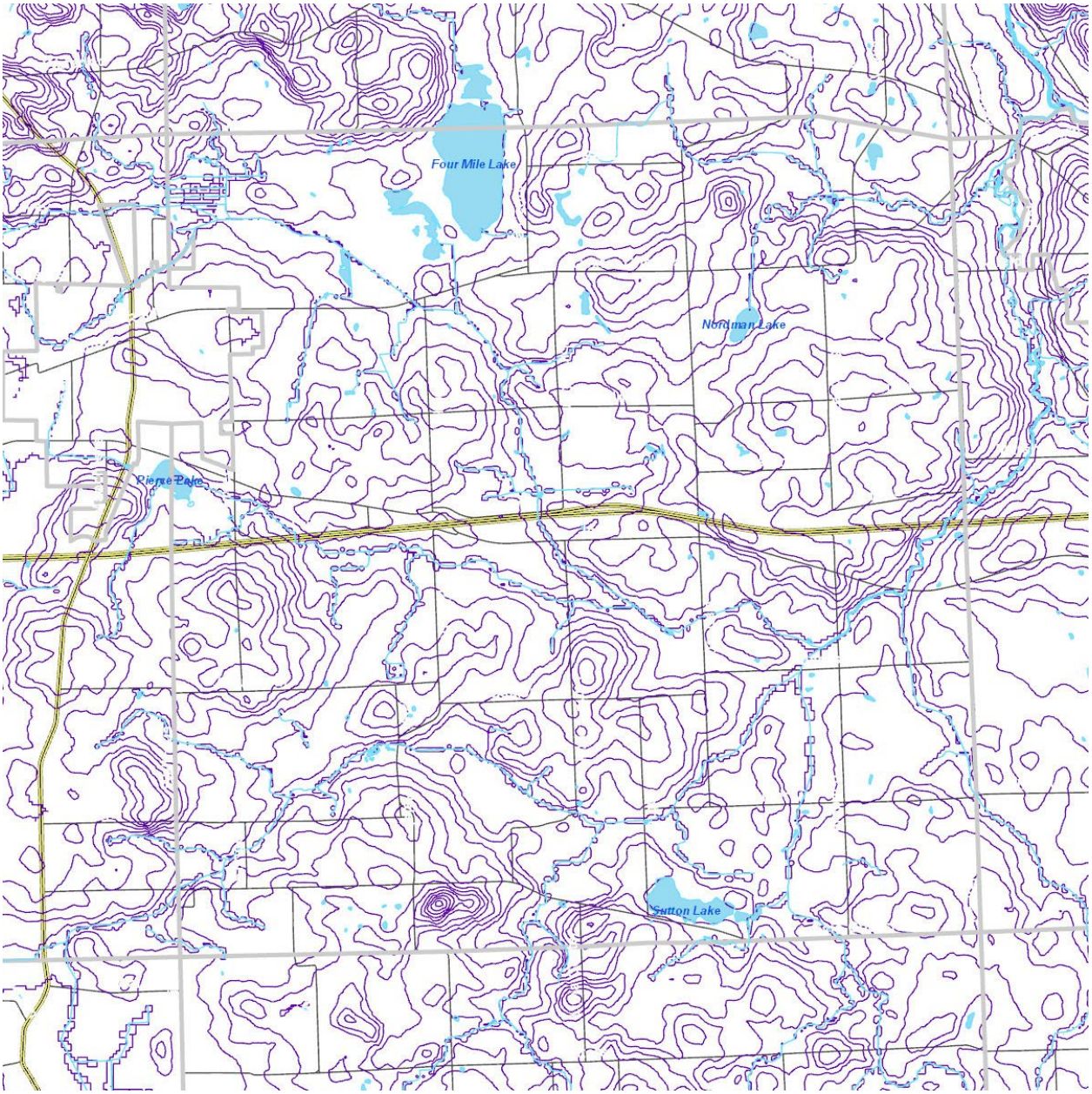


U.S.G.S. Topography: Chelsea Area

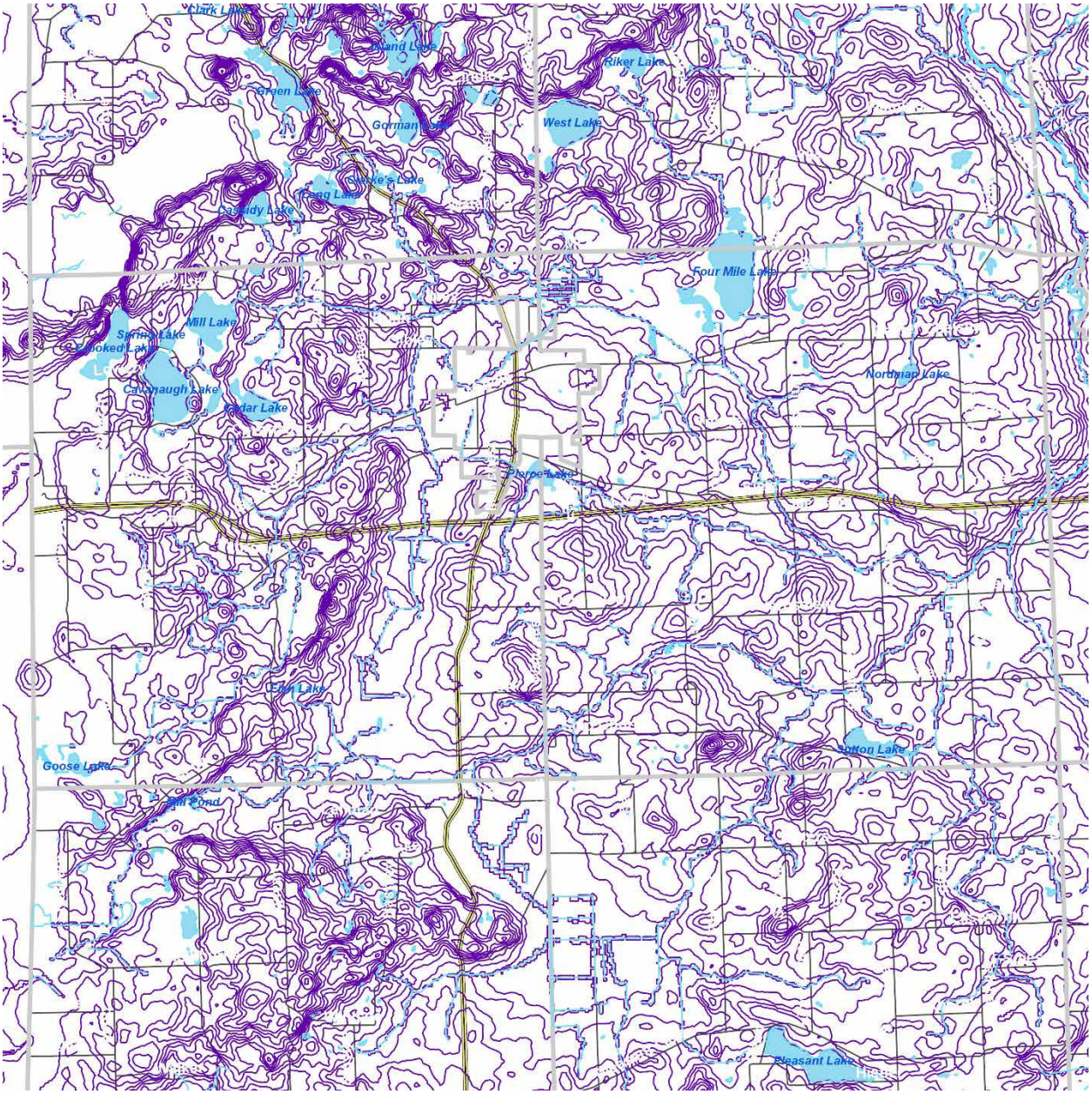
Sylvan Topography: Lines (10 ft)



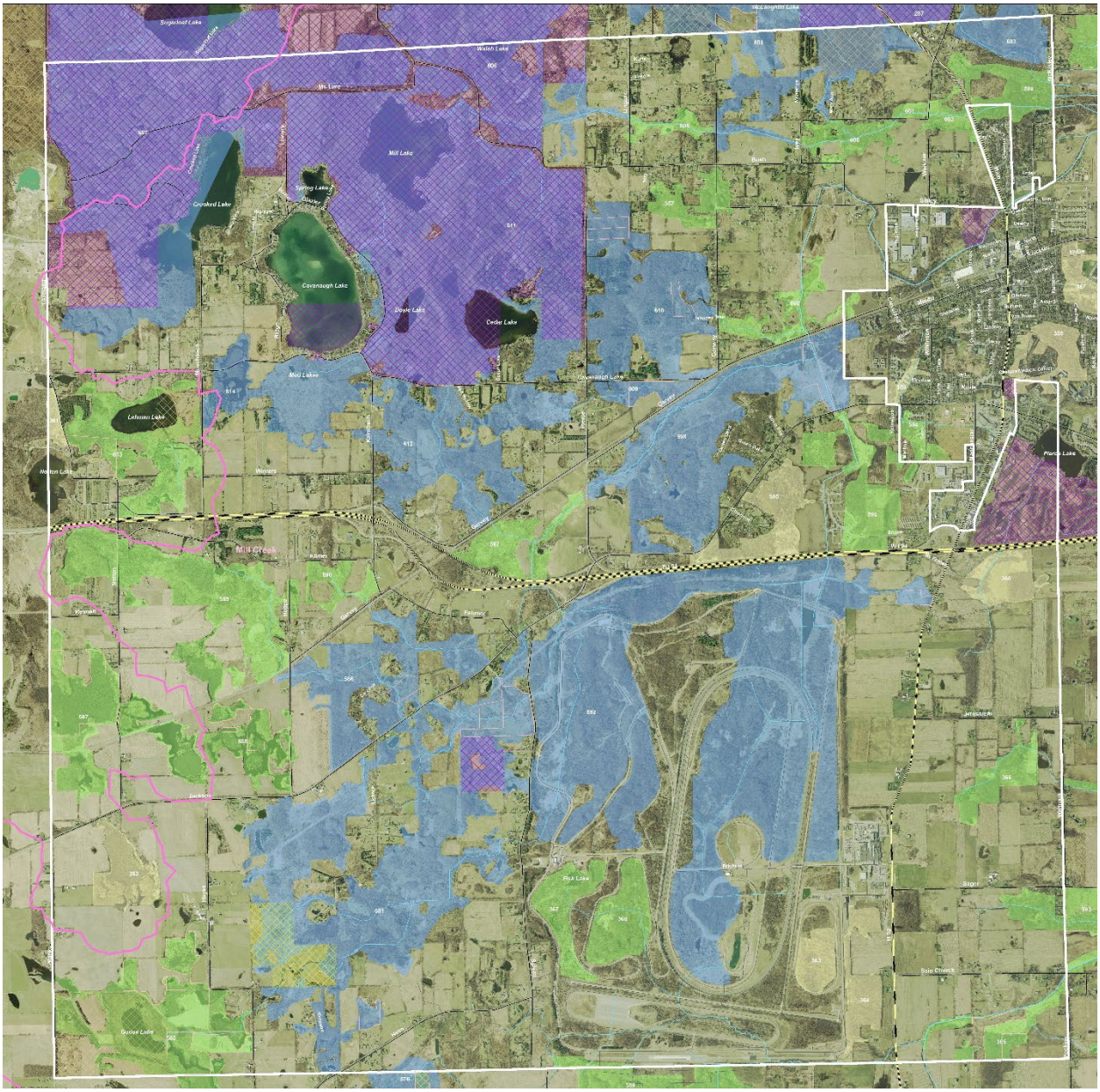
Lima Topography: Lines (10 ft)



Chelsea Area Topography: Lines (10 ft)



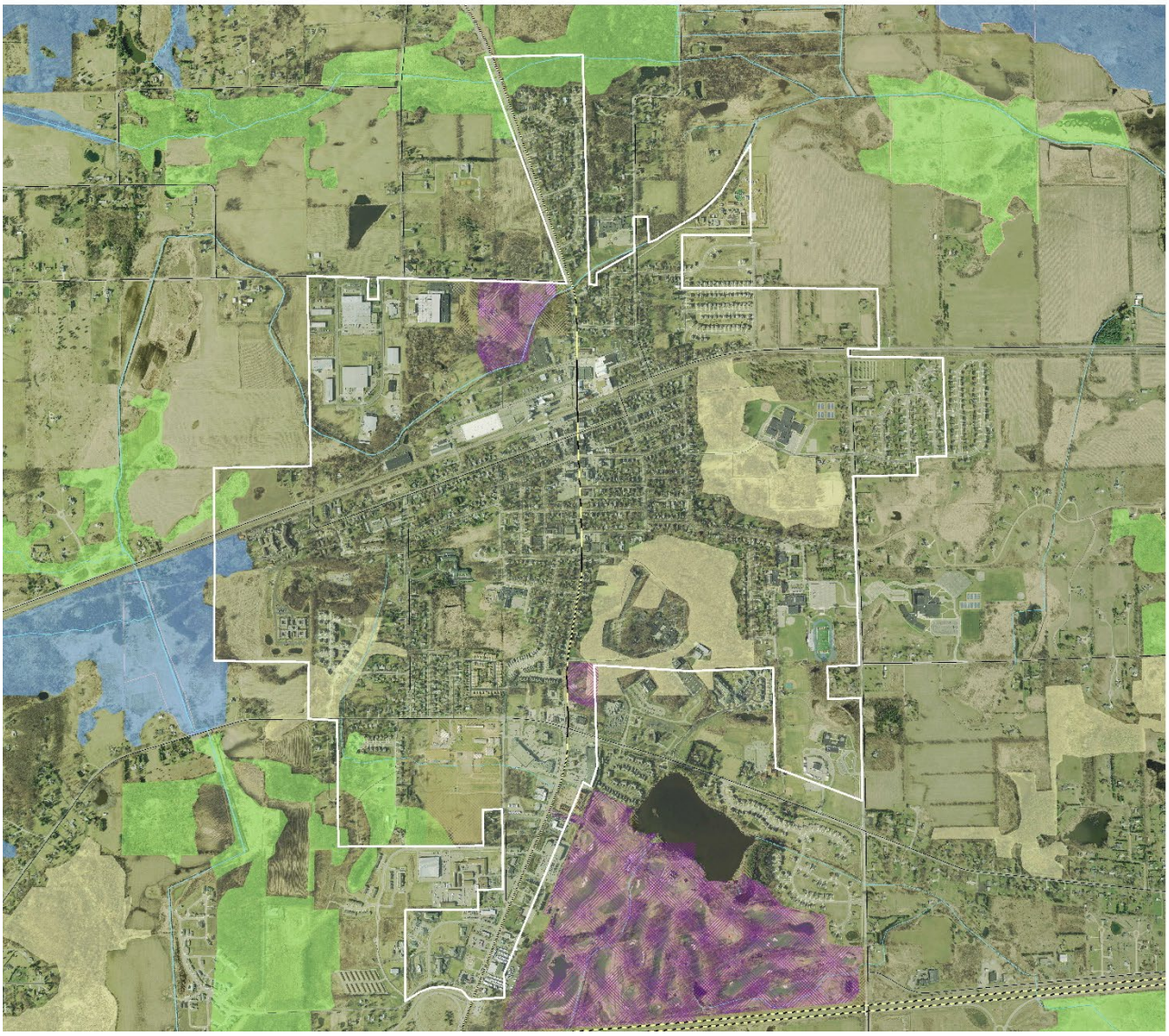
Green Infrastructure Planning Map: Sylvan



Bioreserve Sites

- Lower priority
- Higher priority
- Highest priority

Green Infrastructure Planning Map: Chelsea



Bioreserve Sites

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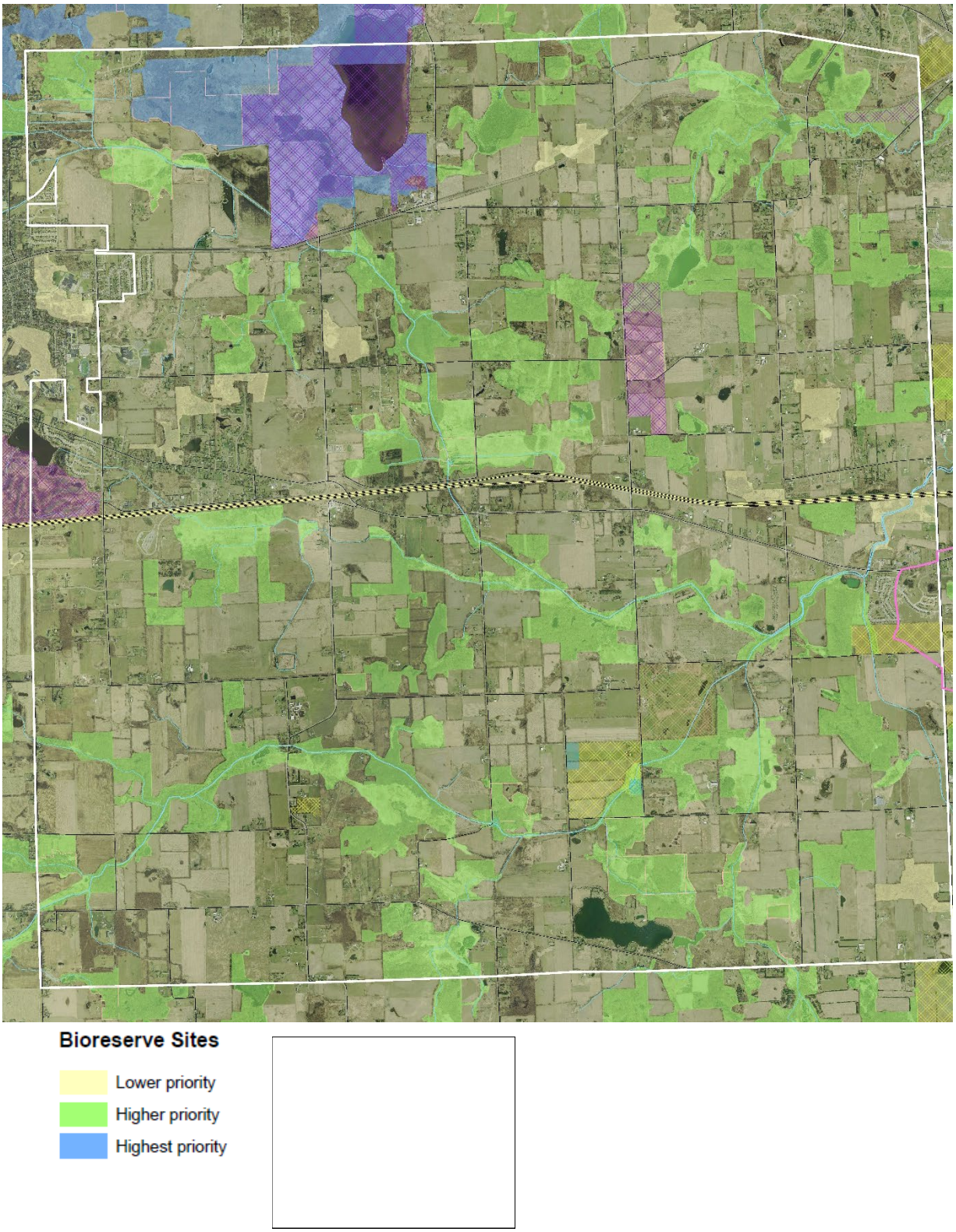
Green Infrastructure Planning Map: Lima



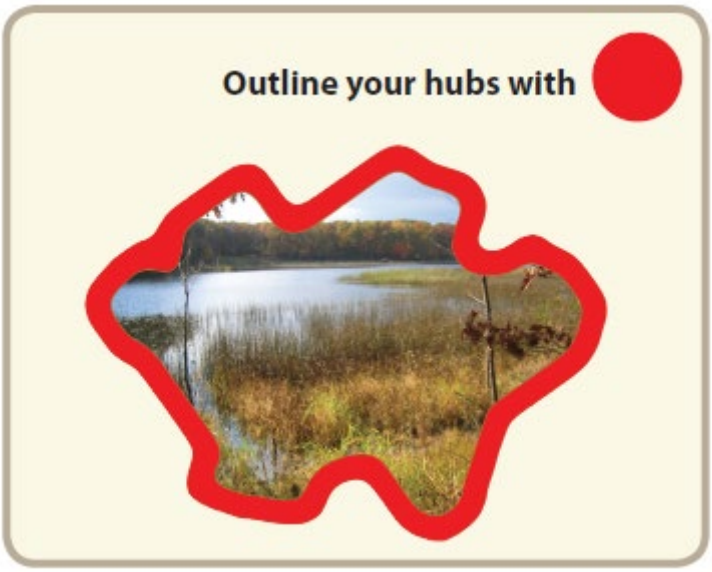
Process for Hands On Assessment

1. Examine Maps

2. Determine habitat hubs, and outline on map with red ink.

Hint

Hubs anchor the network and provide an origin or designation for wildlife. The Bioreserve Map provides a good place to

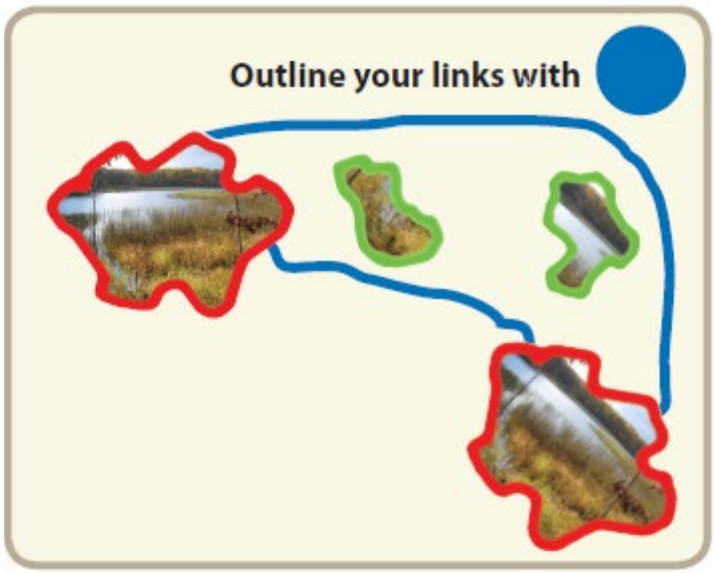


3. Identify smaller ecological landscape features (sites) that can serve as a point of origin or detination or incorporate less extensive ecologically important areas.

~Hint~

Look for lower ranked Natural Areas (Priority Two or Priority Three) along with smaller woodlots and wetlands.

4. Create the best possible connections between hubs using the smaller ecological landscape features (sites) as stepping stones. Use riparian linkages whenever possible.



~Hint~

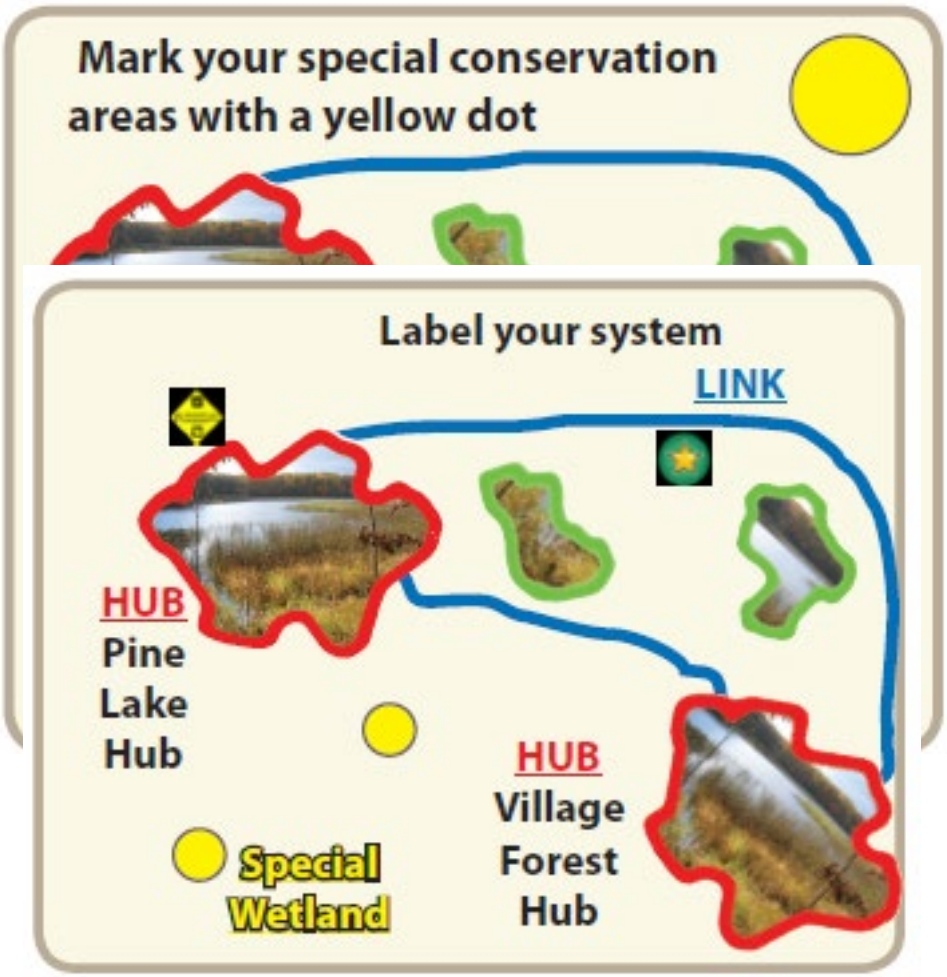
In general, the wider the corridor the better and the longer the corridor the wider it should be.

5. Identify Special Features that fall outside the system or have unique connection or importance within the community.

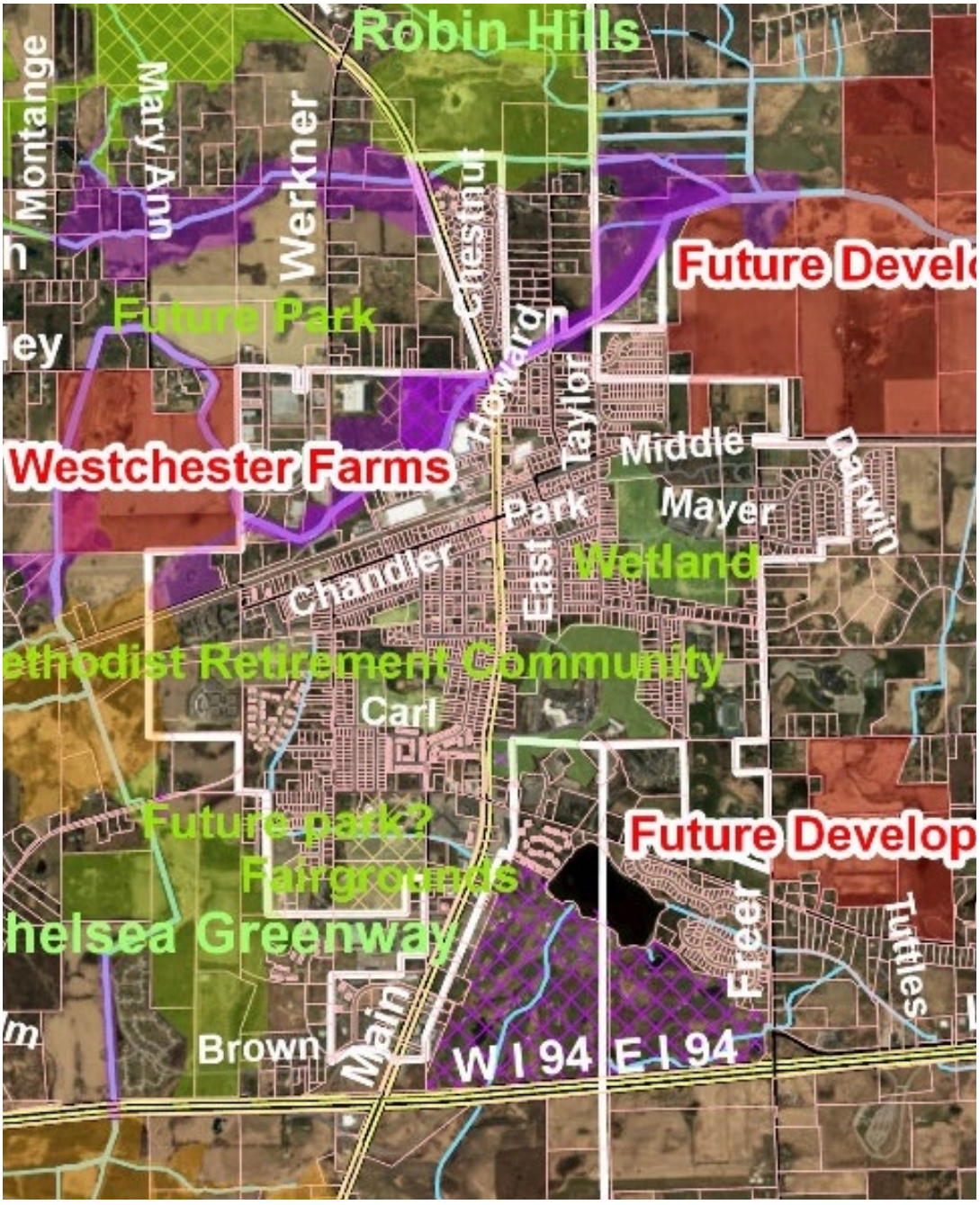
~Hint~
Appropriate areas may be a wetland, pond, woodlot stream or wildflower patch known only to local residents.

that help identify the site locally.

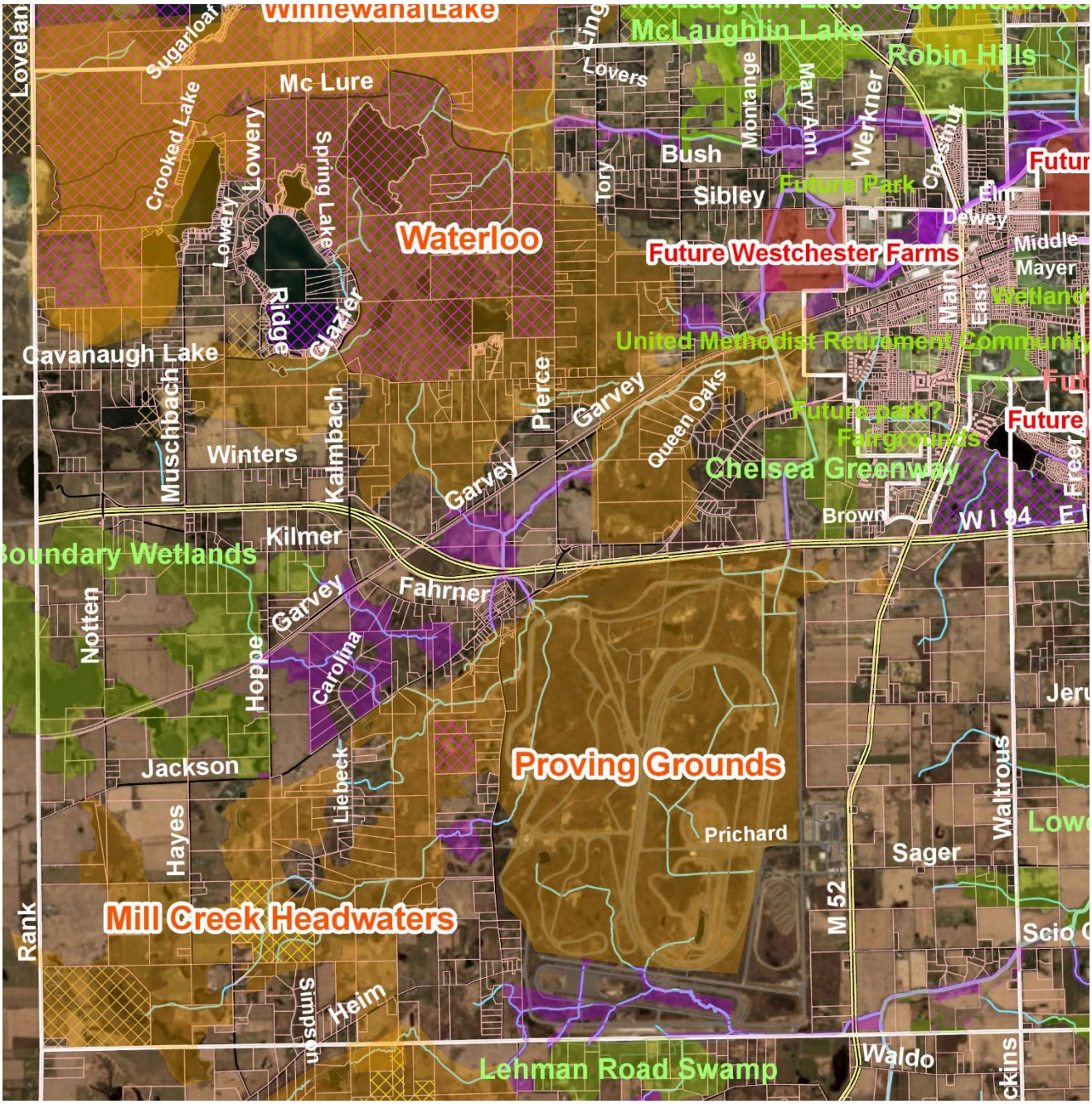
6.Label your system (hubs and links) and add names



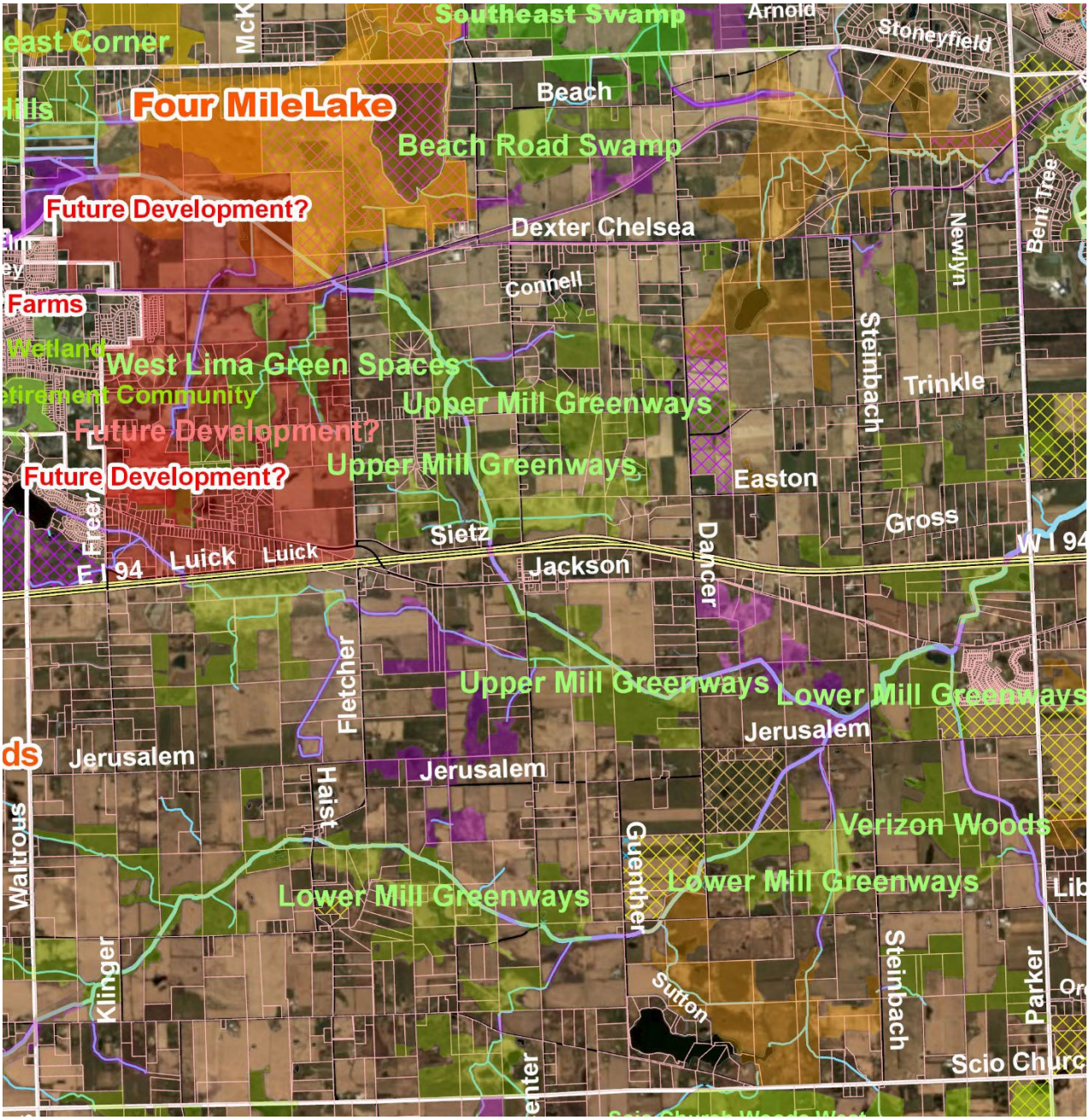
Chelsea Draft Green Infrastructure Map



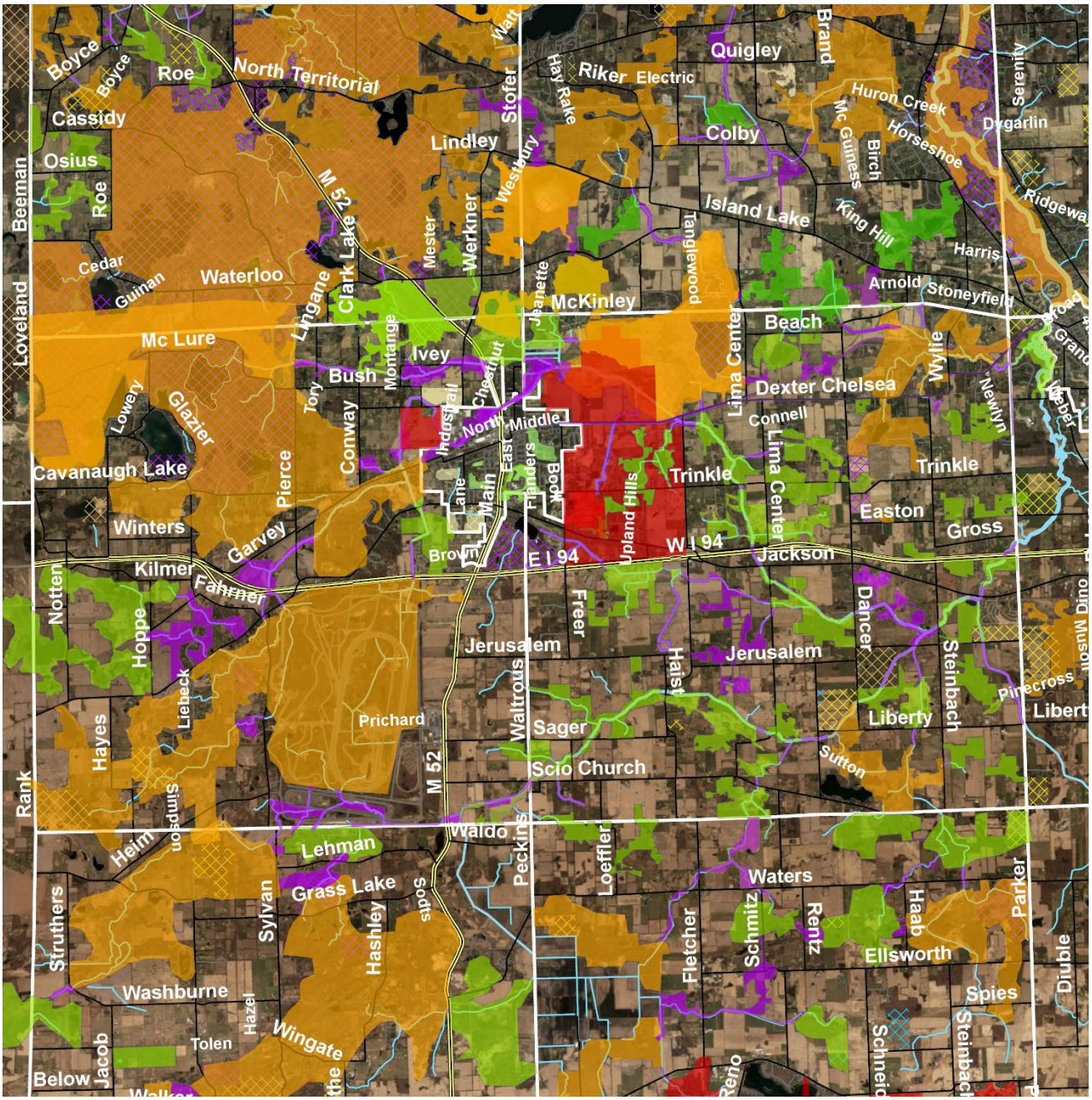
Sylvan Draft Green Infrastructure Map



Lima Draft Green Infrastructure Map



Lima Draft Green Infrastructure Map



Next Steps – Community Planning for Green Infrastructure

• Verify the draft Green Infrastructure Vision Map

• Determine best land management tools

• Review master plans, ordinances, and related planning documents

• Establish conservation goals, funding options, and tracking mechanisms

• Amend Master Plans to favor preservation of green infrastructure, and encourage green development proposals and better site design

• Adopt Local Ordinances for Resource Protection; e.g., woodland, wetland, riparian, stream, and floodplain ordinances

• Revisit community Regulations & Development Standards for lot sizes, setbacks, parking and street standards, drainage regulations

• Offer Incentives to developers to integrate green development design density compensation, buffer averaging, stormwater credits, transferable development rights, etc.

• Adopt regulations and policies that guide development within a framework of ecological structure and function.

• Educate home buyers & community residents about the open space conservation concept

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