Genesee/Finger Lakes
Regional Planning Council

JOHN F. MARREN, Chair • ROBERT BAUSCH, Vice Chair • STEVEN M. LEROY, Treasurer • DAVID S. ZORN, Executive Director

Zoom Steering Committee Check-in
Model Intermunicipal Floodplain Overlay District Local Law Project

Monday, December 18, 2017
10 – 11:30am

This online meeting is optional for Steering Committee members. An opportunity to check-in and review Next Steps from the November 1st meeting:

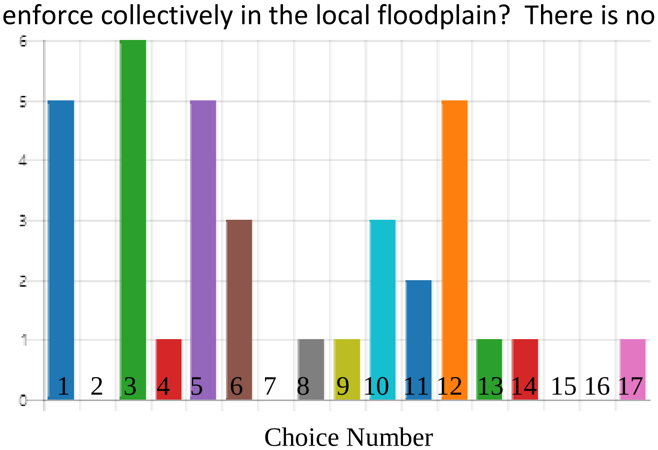
- Consider geospatial options for local floodplains: 1) use wide range of datasets or 2) description narrative?
- Towns of Greece and Parma and Village of Hilton to participate in the Minimum Standards Survey (e.g., what basic activities can we all agree on?)
- Consider language for the Monroe County Development Review Committee (DRC). If the Steering Committee were to suggest some additional language for the floodplain comment, DRC would be happy to review it.

Attendees

- ✓ John Gauthier, Greece Town Engineer
- ✓ Al Fisher, Greece Town Planning Board Chair
- ✓ John Caterino, Town of Greece
- ✓ Scott Copey, Town of Greece
- ✓ Kathryn Friedman, University at Buffalo
- ✓ Steve Olufsen, Monroe County Dept. of Planning & Development
- ✓ Dennis Scibetta, Parma Town Code Enforcement Officer
- ✓ Joe Bovenzi, Genesee Transportation Council
- ✓ Amanda Lefton, The Nature Conservancy
- ✓ Stevie Adams, The Nature Conservancy
- ✓ Mary Austerman, New York Sea Grant
- ✓ Jayme Thomann, G/FLRPC

Agenda & Minutes

1). Results of the Minimum Standards Survey (*see the full survey, attached*):
What are the most important minimum development standards that Greece, Parma, and Hilton can enforce collectively in the local floodplain? There is no limit on choices.



Out of 8 respondents,

5 votes to: Require that all improvements or repairs are counted cumulatively toward the substantial improvement requirement. This requirement, known as cumulative substantial improvement, ensures that owners do not evade flood protection measures by making many small improvements that eventually add up to a major or substantial improvement. (#1)

6 votes to: Add a definition for “critical facilities” and require that, to the extent possible, critical facilities be located outside of the Special Flood Hazard Area (SFHA), preferably outside of the 0.2% annual chance floodplain. (#3)

5 votes to: Maintaining floodplain storage by prohibiting fill or by requiring compensatory storage. Although floodway regulations preserve flood conveyance, they allow the flood fringe to be filled in. The resulting loss of storage can have a significant effect on downstream flood heights, especially in flat areas. (#5)

5 votes to: Eliminate walk out basements adjacent to streams and wetlands. (#12)

2). PowerPoint Presentation: *Representation of Floodplains*, Stevie Adams

Consider geospatial options for local floodplains:

- FEMA Flood Insurance Rate Maps (FIRMSs)
- SSBN North America Flood Hazard Maps
- Natural Heritage Program Variable Width Riparian Buffers
- TNC Eco-Hydrologically Active (EHAs) Areas

Discussion

Floodplain management ordinances are enacted by local government as a condition of NFIP participation. The NFIP has clear requirements for such ordinances, but they are minimum requirements that communities are free to enhance or exceed with stricter requirements of their own. Communities are free to undertake their own mapping and to use such techniques as future-conditions mapping to develop a more inclusive overlay district for the purpose.

Next Steps

- Stevie Adams to share data layers to those interested.
- Mary Binder to see whether any ACOE studies exist for Parma/Hilton. *Karis Manning was unable to find any other ACOE reports.*
- Share PowerPoint from December 18. *Attached.*

Adjournment

The next in-person meeting will be scheduled for late March. Town of Parma has volunteered to be the next meeting location. A Doodle Poll will be sent out to touch base before the March meeting via a Skype/Zoom call to review the draft Intermunicipal Floodplain Overlay District local law, and consider language for the Monroe County Development Review Committee (DRC).

Minimum Standards Survey

Towns of Greece and Parma, and the Village of Hilton: Vote on what “minimum” development standards are most important to be enforced across the jurisdictions in managing the upstream-downstream connection of communities. We will later define the boundaries of the floodplain or flood hazard area district.

Your response is anonymous.

1. What are the most important minimum development standards that Greece, Parma, and Hilton can enforce collectively in the local floodplain? **There is no limit on choices**.

- ☐ Require that all improvements or repairs are counted cumulatively toward the substantial improvement requirement. This requirement, known as cumulative substantial improvement, ensures that owners do not evade flood protection measures by making many small improvements that eventually add up to a major or substantial improvement.

- ☐ Using a threshold lower than 50% of the building’s value to determine when the substantial improvement requirement takes effect.

- ☐ Add a definition for “critical facilities” and require that, to the extent possible, critical facilities be located outside of the Special Flood Hazard Area (SFHA), preferably outside of the 0.2% annual chance floodplain.

- ☐ Add a definition for “hazardous materials” (consistent with Building Code) and require that, to the extent possible, use, storage, and disposal of hazardous materials be located outside of the SFHA, preferably outside of the 0.2% annual chance floodplain. If located within SFHA, require that hazardous materials be located above the flood protection level or stored/used in a manner that prevents pollution during a base flood (e.g., is resistant to hydrostatic and hydrodynamic loads or is subject to removal based on a flood emergency plan).

- ☐ Maintaining floodplain storage by prohibiting fill or by requiring compensatory storage. Although floodway regulations preserve flood conveyance, they allow the flood fringe to be filled in. The resulting loss of storage can have a significant effect on downstream flood heights, especially in flat areas.

- ☐ Prohibiting building enclosures below the Base Flood Elevation (BFE).

- ☐ Limit impervious surfaces in new and redevelopment on sites more than 1 acre to __% to maximize infiltration and reduce runoff.

- ☐ Adopt ___foot setback from impermanent and/or permanent streams to allow space for natural floodplains and to maintain existing riparian buffers.

- ☐ Require in-basin mitigation of non-jurisdictional wetland impact.

- ☐ Require floodway analysis for subdivisions and large developments (those that require determination of BFEs).

☐ Require road surfaces to be elevated to or above the BFE or allow only a nominal amount of water to flow over the road during the 1% annual chance flood event.

☐ Eliminate walk out basements adjacent to streams and wetlands.

☐ Adopt V Zone design and construction standards for Coastal A Zones.

☐ Use the vertical flood elevation and corresponding horizontal floodplain that result for adding two feet (three feet for critical facilities) of freeboard to the BFE and extend this level to its intersection with the ground.

☐ Use the vertical flood elevation and corresponding horizontal floodplain associated with the 0.2-percent annual chance flood.

☐ Use the vertical flood elevation and corresponding horizontal floodplain determined by a climate-informed science approach in which adequate, actionable science is available.

☐ Other:

Representation of Floodplains

STEVIE ADAMS, FRESHWATER SPECIALIST

THE NATURE CONSERVANCY

Options

- FEMA Flood Insurance Rate Maps (FIRMs)
- SSBN North America Flood Hazard Maps
- Natural Heritage Program Variable Width Riparian Buffers
- TNC Eco-Hydrolgically Active (EHAs) Areas

Mapping for Different Purposes

Flood Maps:

Need to include a relationship between precipitation and discharge (cfs), and between discharge and the flow of water over land and down the channel.

Floodplain Maps:

Can use less rigorous methods to delineate area of interest.

- Uniform or variable width riparian buffer - Transitional zone between upland and aquatic habitat. May include stream banks, floodplain, and wetlands, as well as sub-irrigated sites.
- Elevation as a proxy for groundwater/surface water interactions.

FIRMs

Benefits:

- Where there are Digital-FIRMs (DFIRMs), they use high resolution terrain and field collected data such as bridge opening measurements, etc. as geospatially referenced inputs to the model.
- Already have regulatory constraints.

Limitations:

- They do not cover all streams.
- Can become outdated due to land use changes within the watershed, and updated methods based on new science and technology.
- Models are simulating incredibly complex storm events, the impacts of which are impossible to precisely predict with available models.
- They do not show worst case scenarios or account for storm drain systems

North America Flood Hazard Maps

Info:

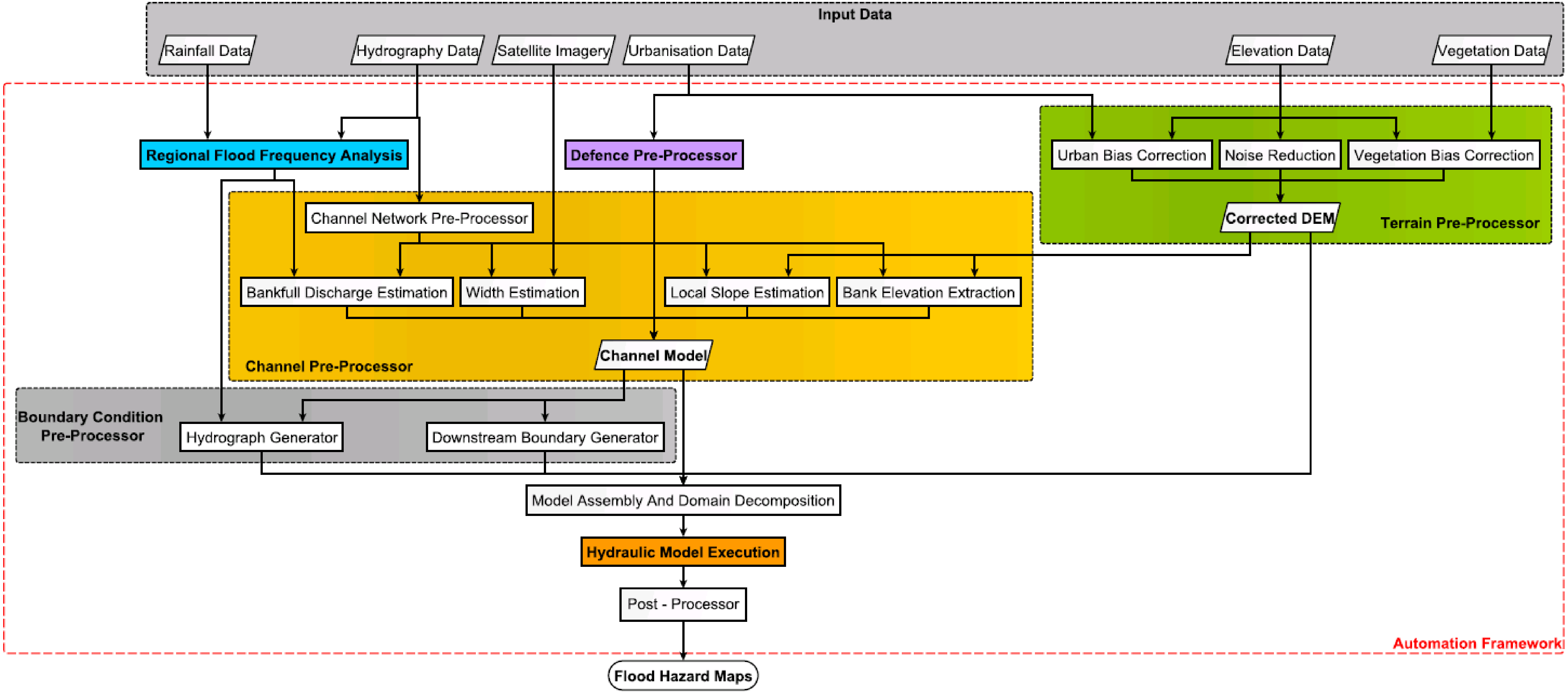
- Uses a sophisticated modeling technique that takes into account:
  - Terrain
  - Extreme flow
  - River network and geometry
  - Flood defenses
  - Hydraulics

Benefits:

- Cover all streams.
- Model can be re-run relatively easily with new topography, land use or other data.

Limitations:

- Use a 30m Digital Elevation Model (topography)
- Does not use field collected data like bridge opening measurements, etc.
- Models are simulating incredibly complex storm events, the impacts of which are impossible to precisely predict with available models.
- They do not show worst case scenarios or account for storm drain systems



Sampson, C. C., A. M. Smith, P. D. Bates, J. C. Neal, L. Alfieri, and J. E. Freer. 2015. A high-resolution global flood hazard model, Water Resour. Res., 51, 7358–7381, doi:10.1002/2015WR016954.

Variable Width Riparian Buffers

Info:

- Model uses:
  - Terrain
  - Estimate of the 50-year flood height in the area
  - Streams (high resolution NHD)
  - Wetlands (NWI)

Benefits:

- Cover all streams.
- Model can be re-run relatively easily with new data.

Limitations:

- Use a 10m Digital Elevation Model (topography)
- Does not use field collected data like bridge opening measurements, etc.

Conley, A.K., T.G. Howard, and E.L. White. 2016. Great Lakes Basin Riparian Opportunity Assessment. New York Natural Heritage Program, State University of New York College of Environmental Science and Forestry, Albany, NY

Abood, S. A., A. L. Maclean, and L. A. Mason. 2012. Modeling Riparian Zones Utilizing DEMS and Flood Height Data. Photogrammetric Engineering & Remote Sensing 78:259–269.

EHAs

Info:

- Model uses:
  - Terrain
  - Stream network
  - Relative slope

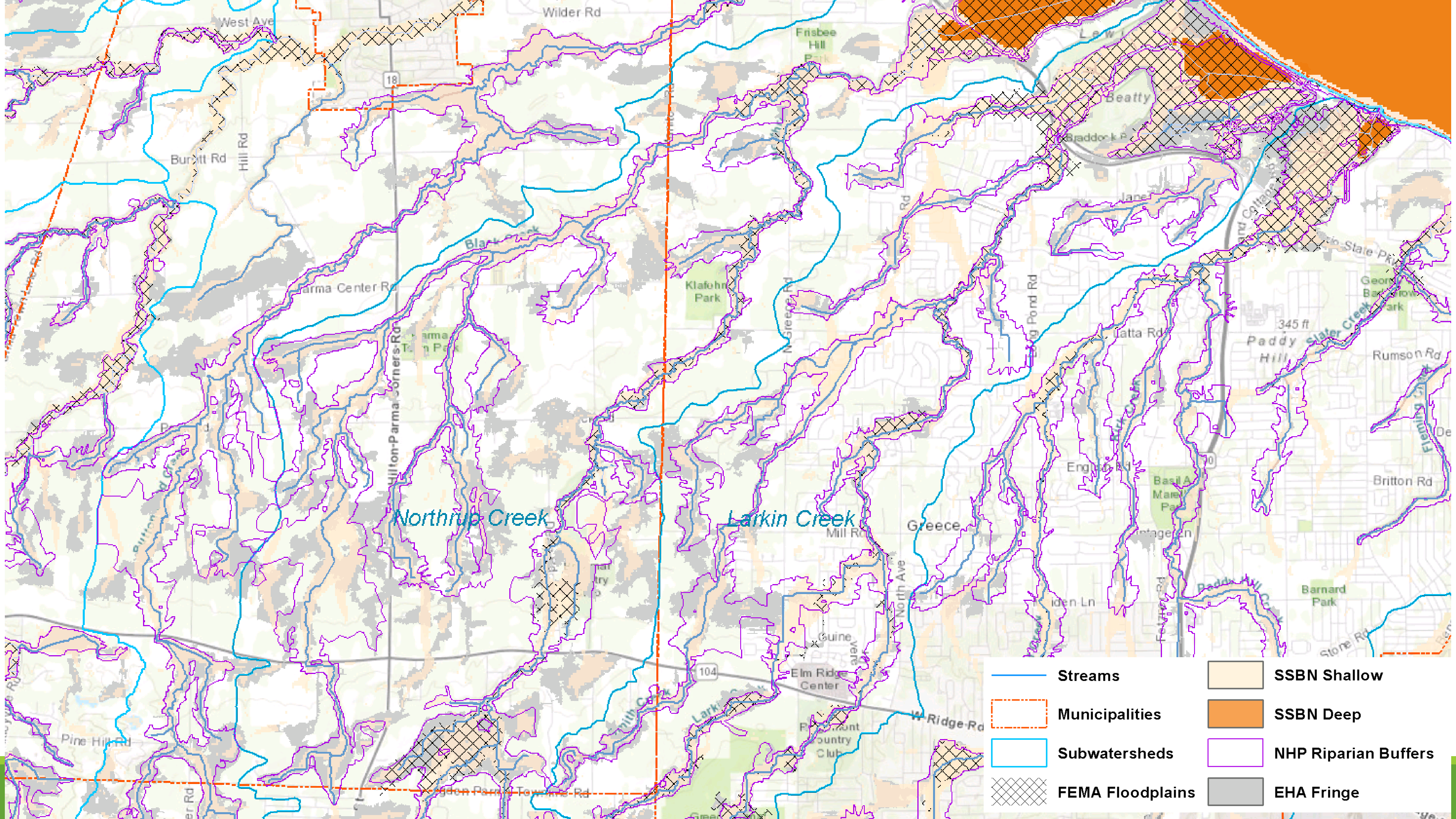
Benefits:

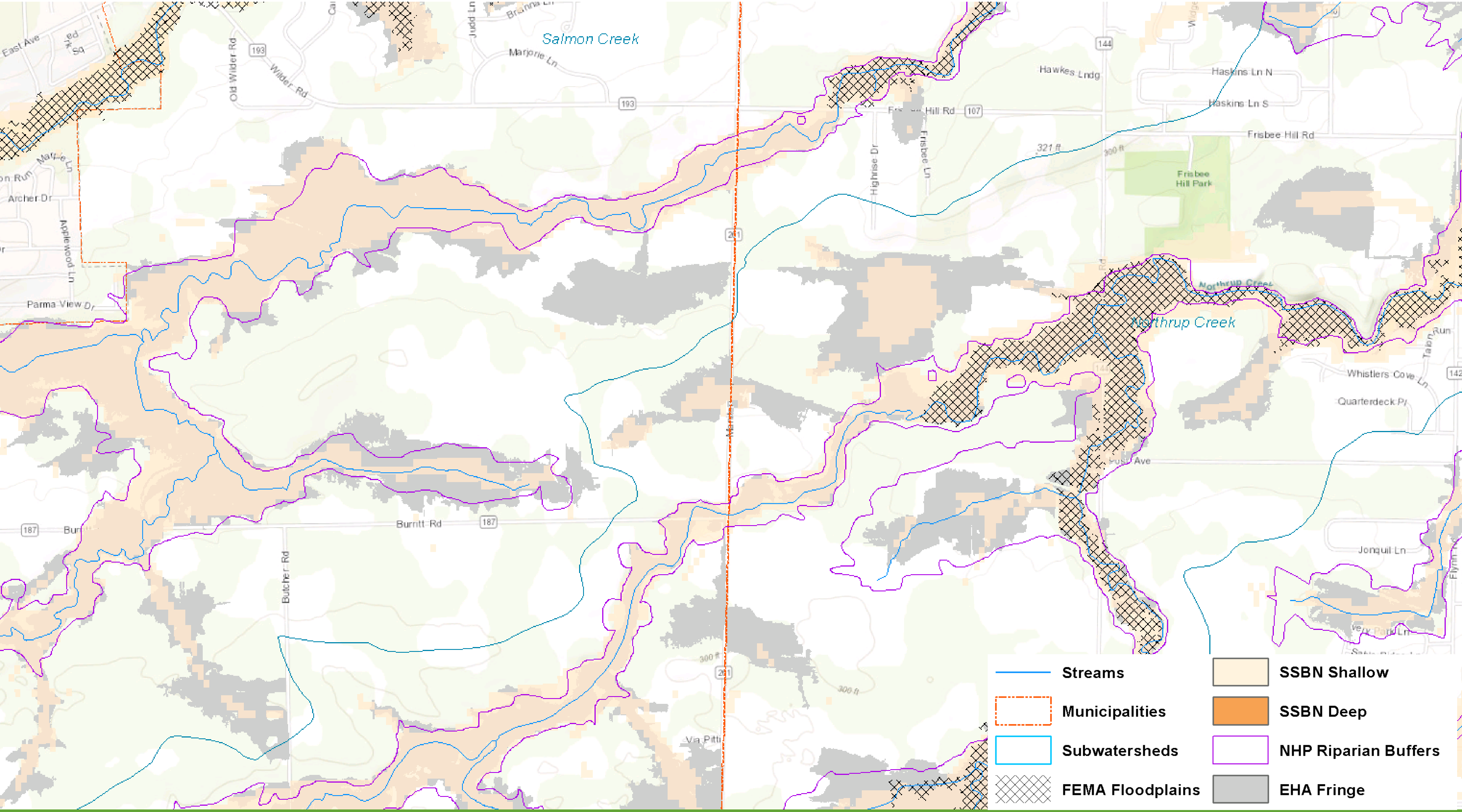
- Cover all streams.
- Models uses LiDAR – very high resolution.

Limitations:

- Does not use hydrology or hydraulics – ie strictly elevation based.
- Does not use field collected data like bridge opening measurements, etc.

Boomer et al, *in prep*


Wilder Rd
West Ave
Frisbee Hill Park
Beatty
Braddock
Burritt Rd
Hill Rd
Jane
Black Creek
Parma Center Rd
Klafehn Park
Parma Town Park
Hilton-Parma Corners Rd
Long Pond Rd
Latta Rd
345 ft
Paddy Hill
Slater Creek
Rumson Rd
Britton Rd
Basil A Marella Park
Northrup Creek
Larkin Creek
Mill Rd
Greece
North Ave
Barnard Park
Stone Rd
Elm Ridge Center
W Ridge Rd
Pine Hill Rd
Streams
Municipalities
Subwatersheds
FEMA Floodplains
SSBN Shallow
SSBN Deep
NHP Riparian Buffers
EHA Fringe



Salmon Creek
Northrup Creek
Burritt Rd
Frisbee Hill Rd
Frisbee Hill Park
Haskins Ln N
Haskins Ln S
Hawkes Lndg
Whistlers Cove Ln
Quarterdeck Pl
Jonquil Ln
Butcher Rd
Old Wilder Rd
Wilder Rd
Marjorie Ln
Parma View Dr
Archer Dr
Applewood Ln
East Ave
Highrise Dr
Frisbee Ln
Via Pitti
Streams
Municipalities
Subwatersheds
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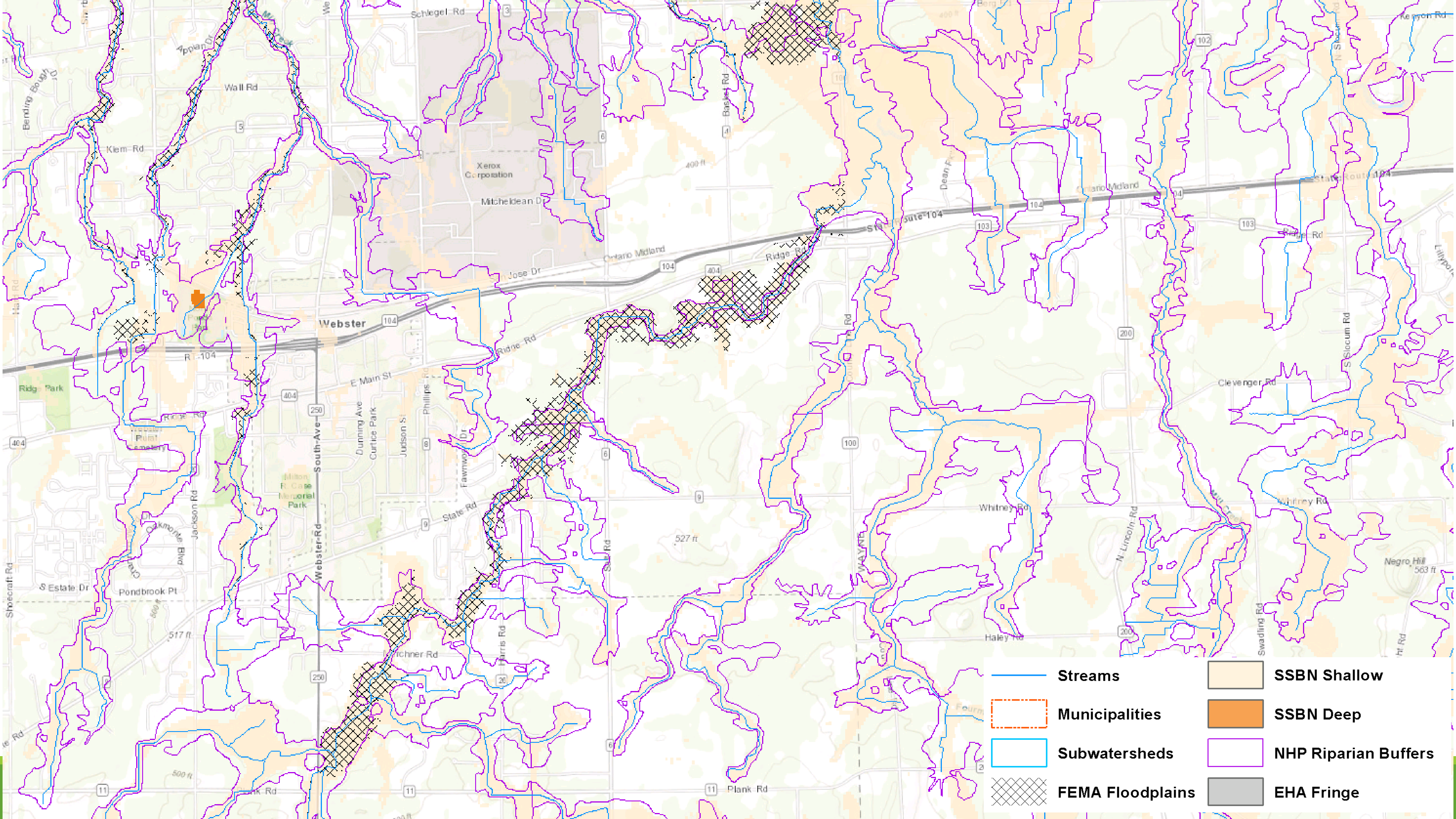
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Municipalities
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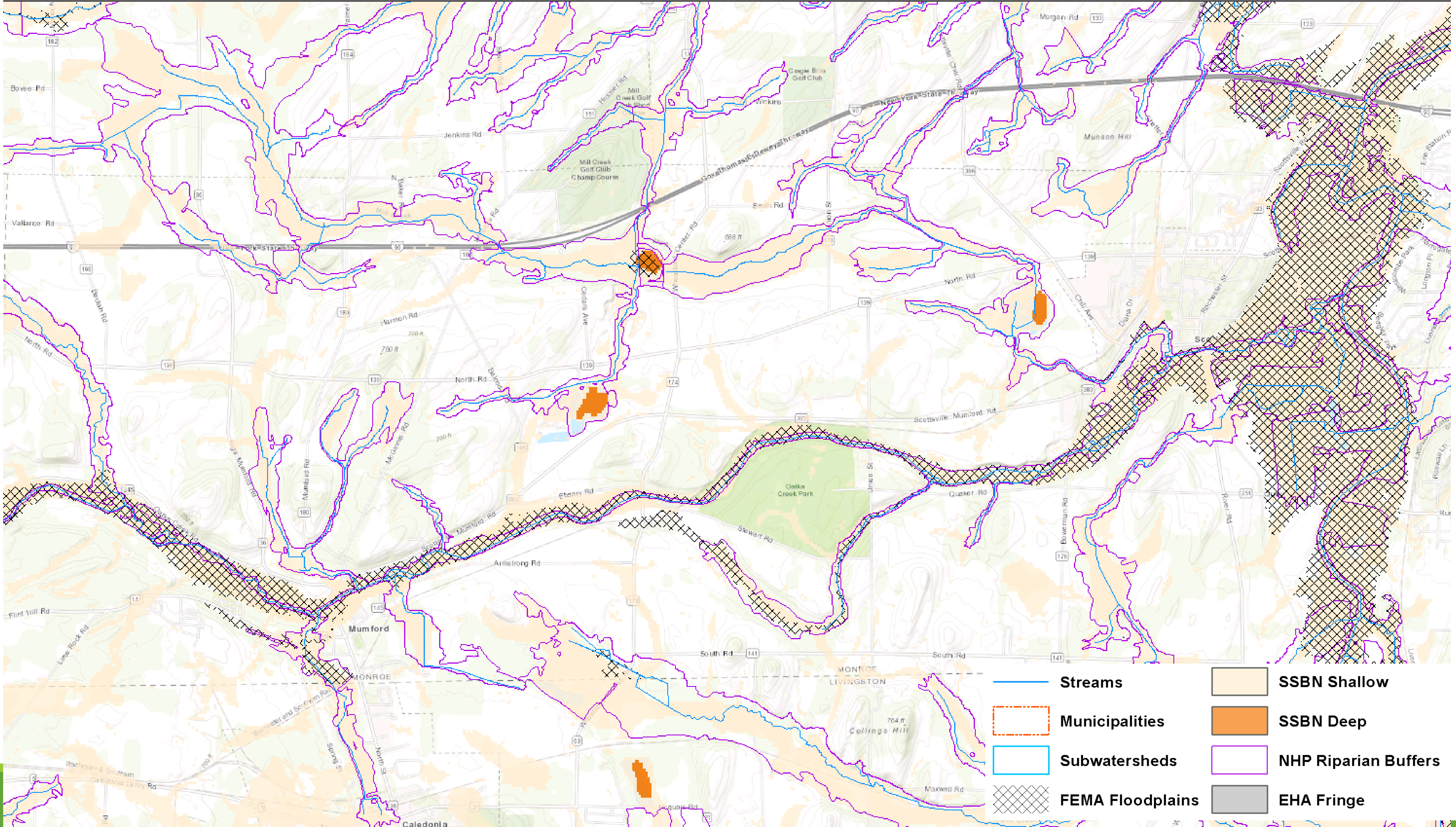
SSBN Deep
NHP Riparian Buffers
EHA Fringe
Webster
Xerox Corporation
Schlegel Rd
Wall Rd
Klem Rd
Appian Dr
Mitcheldean Dr
Jose Dr
Ontario Midland
State Route 104
Ridge Rd
E Main St
South Ave
Webster Rd
State Rd
Jackson Rd
Phillips Rd
Dunning Ave
Curtice Park
Judson St
Fawnwood Dr
Harris Rd
Kirchner Rd
Plank Rd
Pondbrook Pt
Estate Dr
Shoecraft Rd
Bending Bough Dr
Ridge Park
Milton R. Case Memorial Park
Basket Rd
Dean Pkwy
Clevenger Rd
Whitney Rd
Haley Rd
N Lincoln Rd
Swadling Rd
N Slocum Rd
Kenyon Rd
Negro Hill
563 ft
527 ft
517 ft
500 ft
400 ft
Wayne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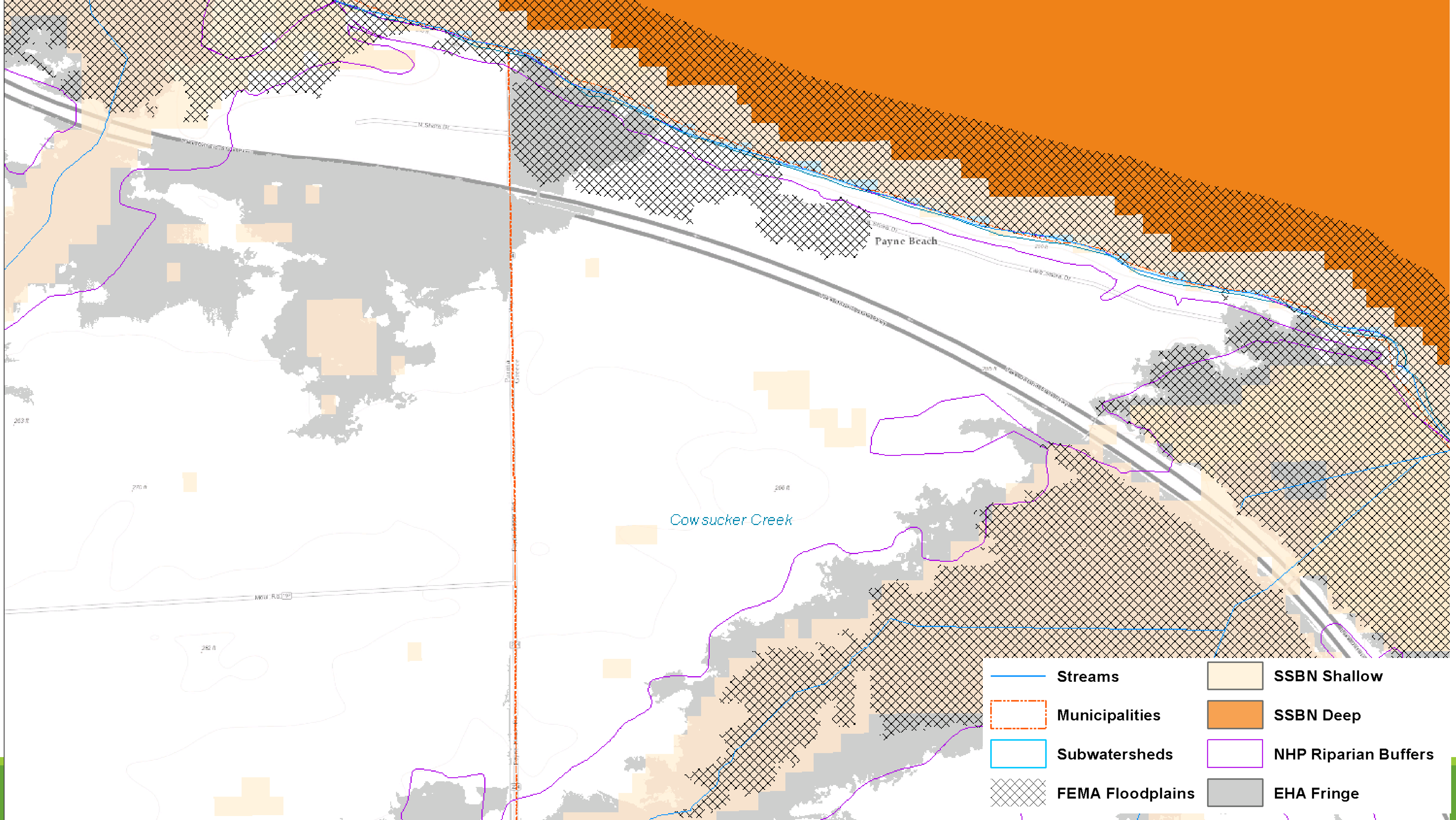
NHP Riparian Buffers
EHA Fringe
Mumford
MONROE
LIVINGSTON
Oatka Creek Park
Mill Creek Golf Club Champ Course
Munson Hill
Collings Hill
Caledonia
Jenkins Rd
North Rd
South Rd
Quaker Rd
Armstrong Rd
Scottsville Mumford Rd
Vallance Rd
Flint Hill Rd
Bovee Rd
Maxwell Rd


Payne Beach
Cowsucker Creek
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