

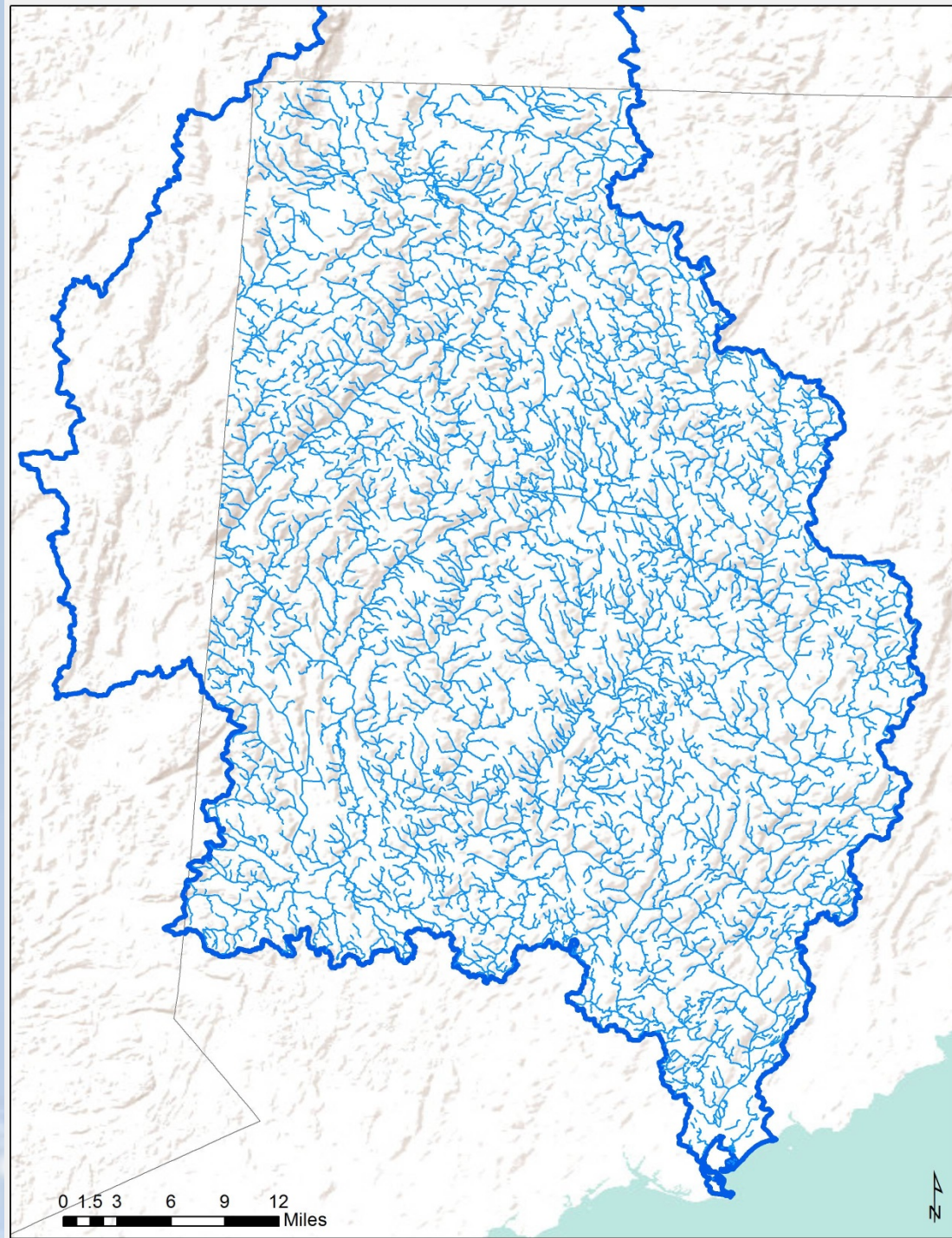
Planning for Flood Resilient and Fish Friendly Road-Stream Crossings in CT's Northwest Hills



Mike Jastremski
Watershed Conservation Director

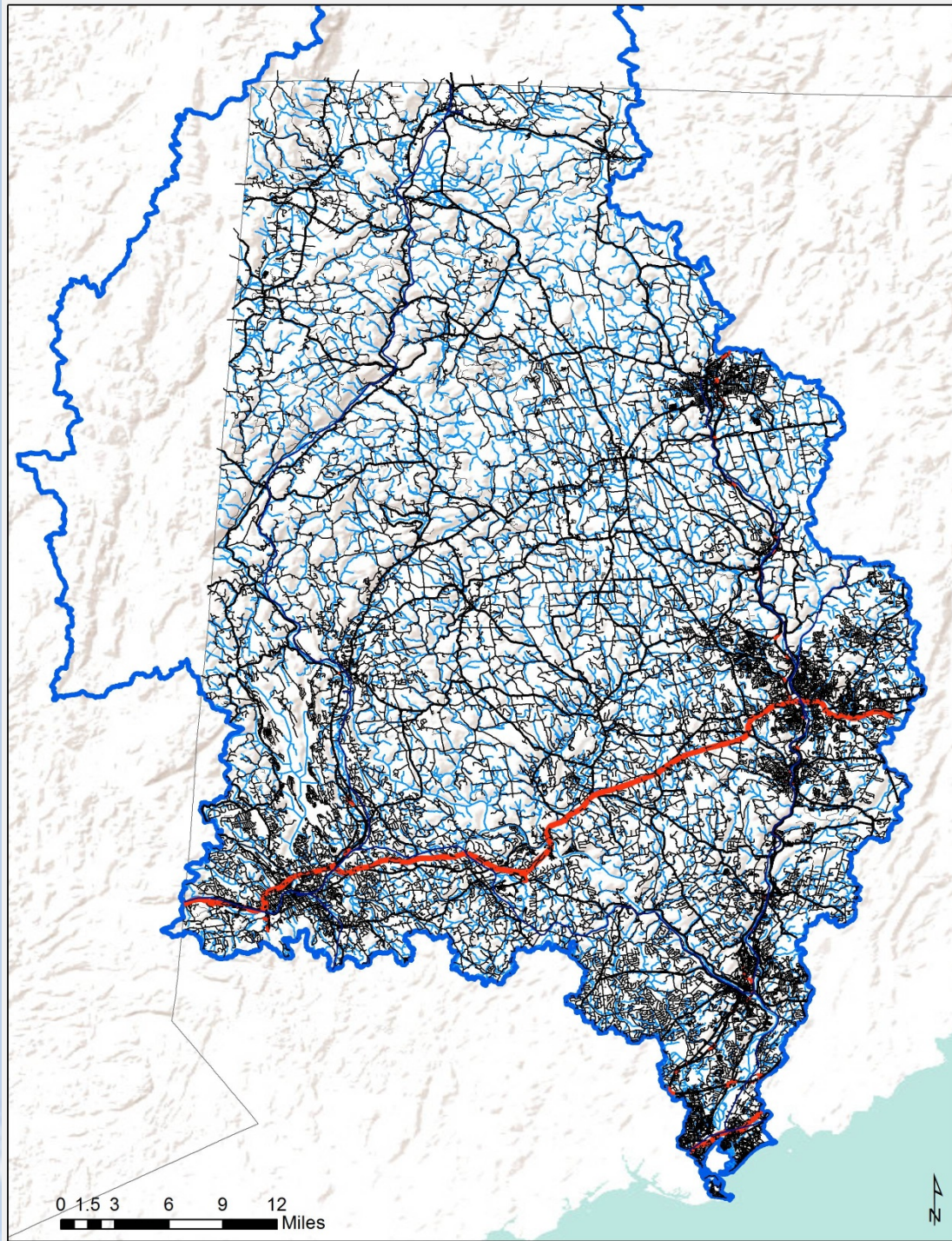
Housatonic
streams in CT

About 2100
miles



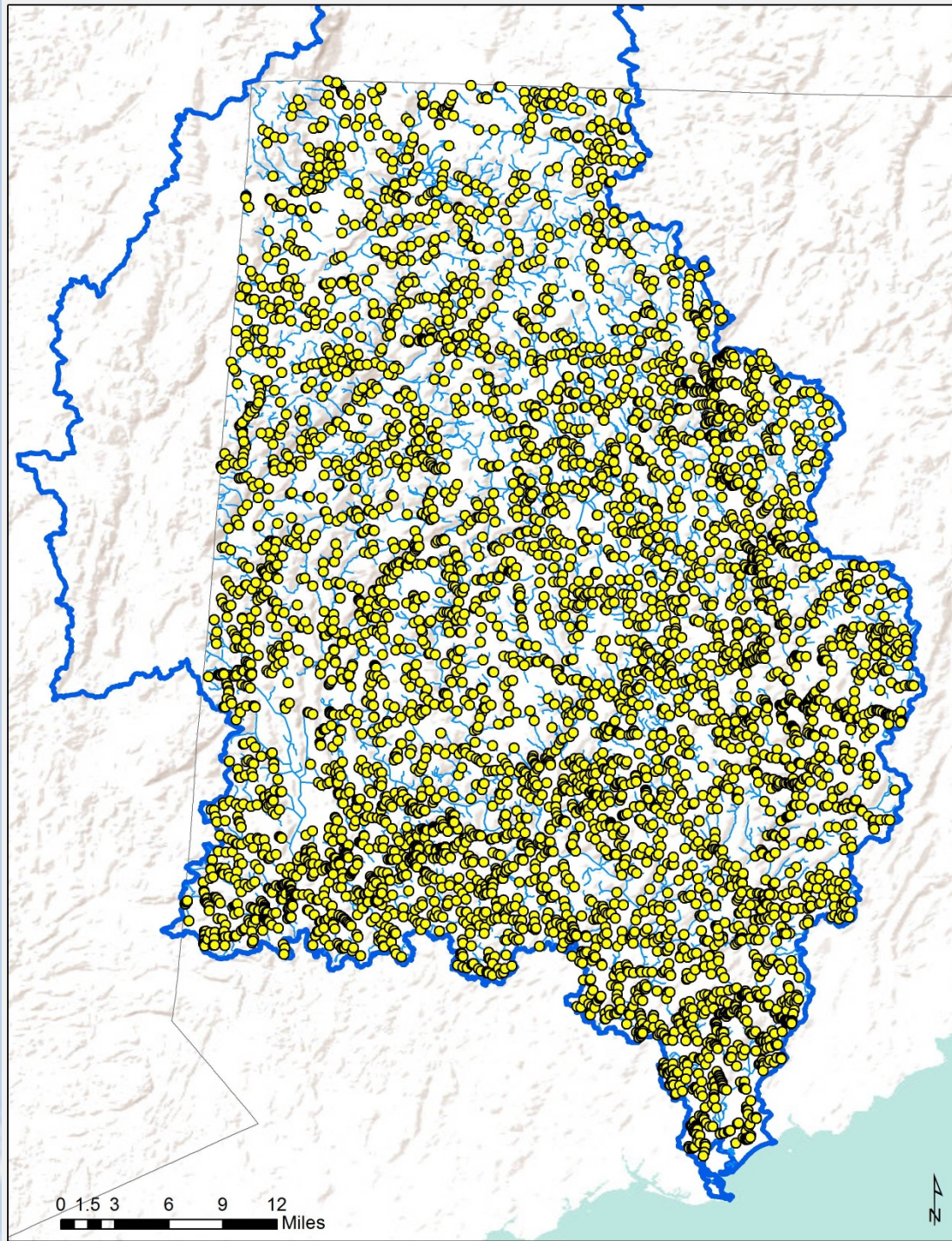
Roads and railroads

About 7600 miles



Road-stream Crossings

6000 - 7000



Increased flood risk at culverts



Housy Flood Risk Modeling

Recurrence of Interval Failure	Number of Culverts	Percentage
2-Year	11	3%
5-Year	9	3%
10-Year	17	5%
25-Year	49	16%
50-Year	33	10%
100-Year	23	7%
200-Year	26	8%
Passing	147	47%

Of 315 assessed culverts, 86 failing in the 25-year flood or smaller

29%

Housy Barrier Status

Barrier Evaluation	Number of Culverts	Percentage
Severe barrier	154	24%
Significant barrier	59	9%
Moderate barrier	149	24%
Minor barrier	205	33%
Insignificant barrier	62	10%
No barrier (full passage)	0	0%

Of 629 assessed culverts, 362 are Moderate or worse barriers

58%

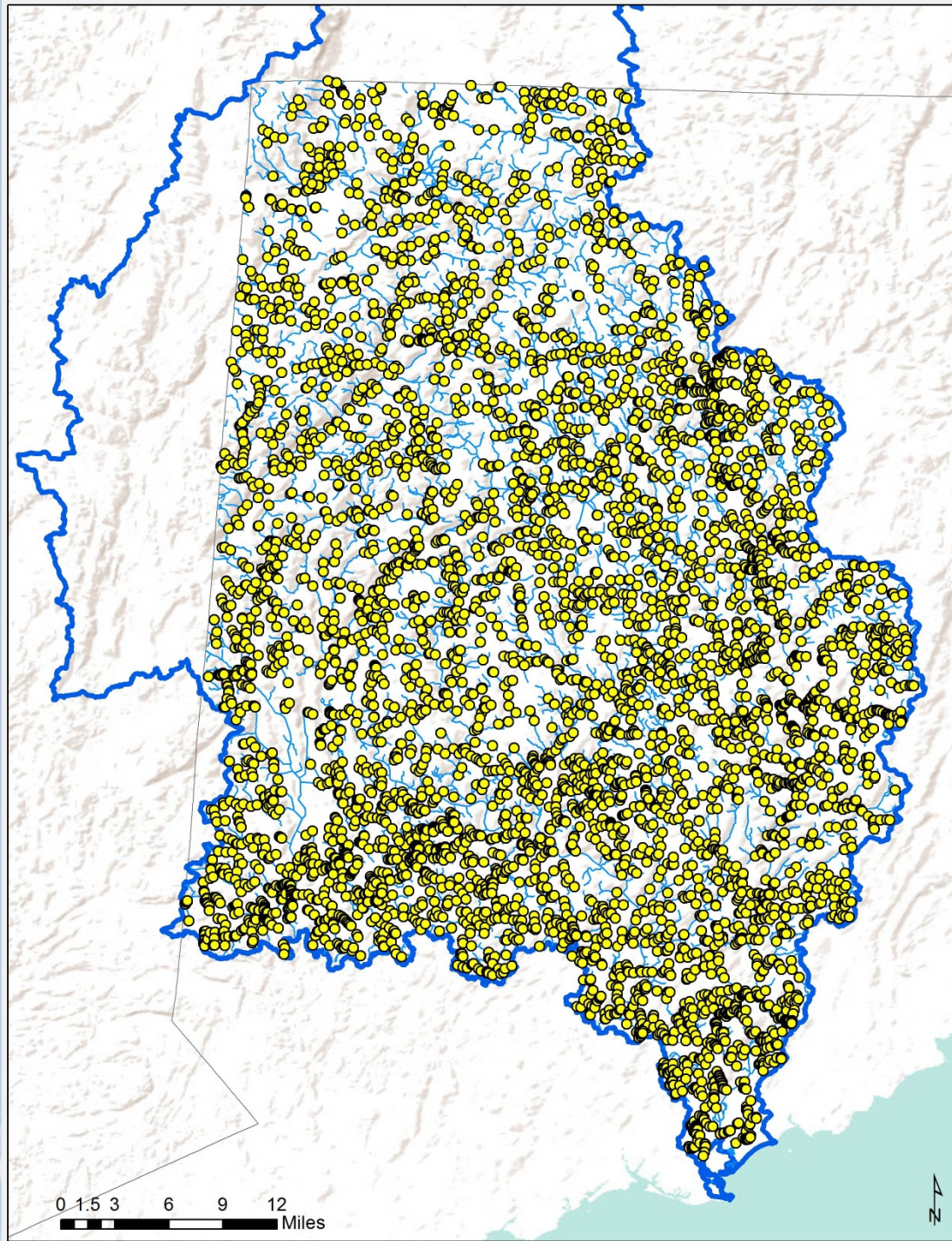
Importance of Movement

- Increasing water temperatures, contracting cold-water habitat



Road-stream Crossings

6000 - 7000



Town-Scale Management Plans

Strategically address climate threats

- Identify replacement projects that both reduce flood risk and reconnect important habitat
- Build local capacity to take advantage of every opportunity to replace problem culverts
- Combine modelling with local knowledge
- Encourage widespread adoption of Best Management Practices

Town-Scale Management Plans

- **Comprehensive field assessment**
- **Evaluate flood risk and conservation value of replacement**



Town-Scale Management Plans

Create Road-Stream Crossing Inventory documents:

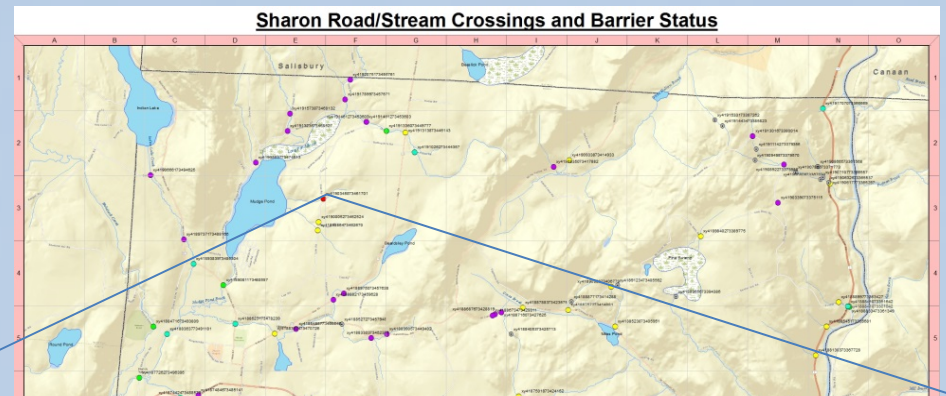
- Detailed mapping
- Field data, photos etc.
- Results of UCONN flood risk analysis
- Results of barrier evaluation



Town-Scale Management Plans

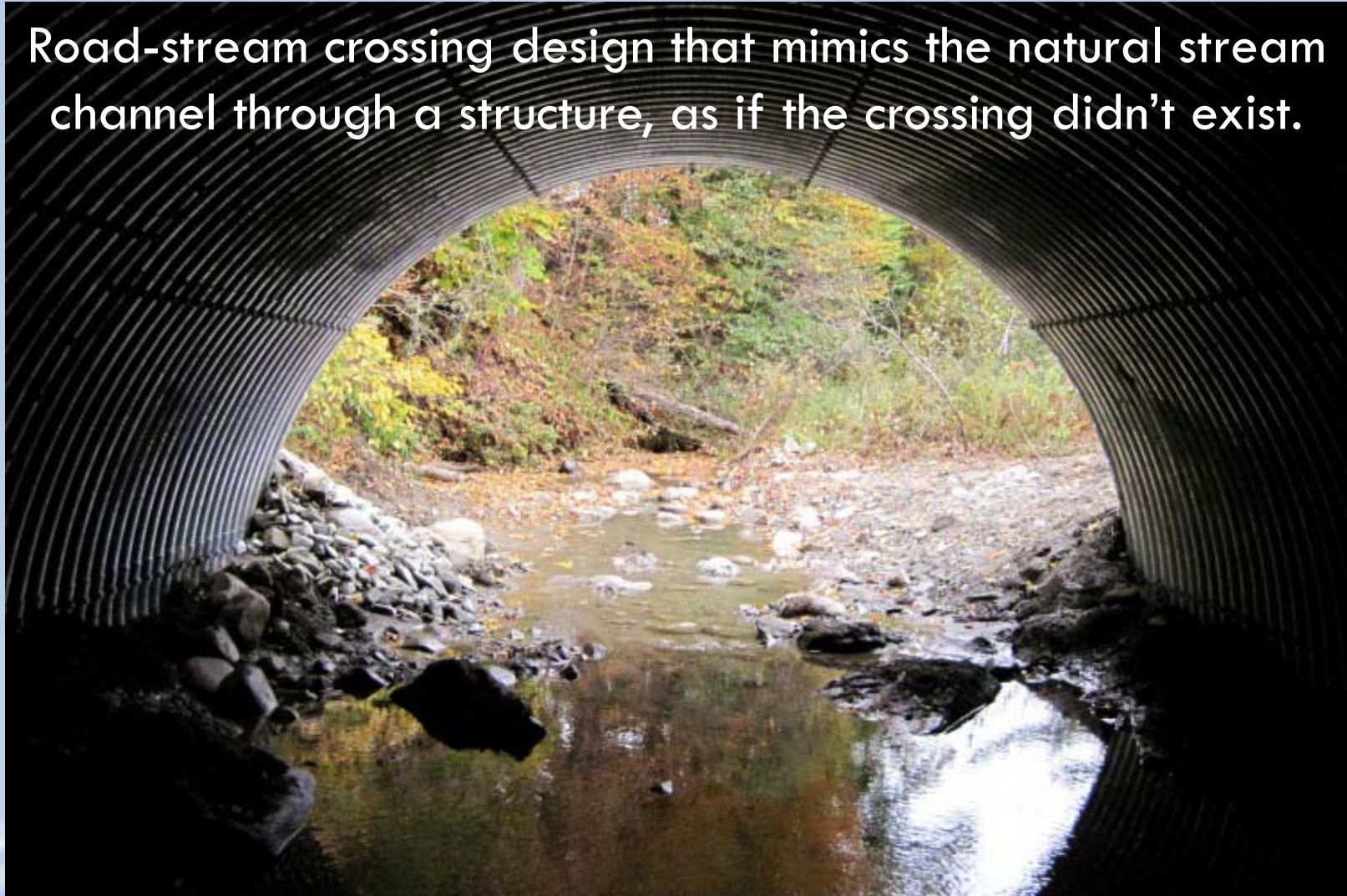
Use Inventory to set priorities:

- Flood risk
- Conservation value
- Maintenance need



Prelim. Designs: Stream Simulation

Road-stream crossing design that mimics the natural stream channel through a structure, as if the crossing didn't exist.



Town-Scale Management Plans

Combine:

- Inventory
- Collaborative Prioritization
- Conceptual designs
- Supporting information
- Adopt as part of Hazard Mitigation Plan

TOWN OF SHARON
HAZARD MITIGATION PLAN

MARCH 2014
MMI #3843-04

Prepared for the:
TOWN OF SHARON, CONNECTICUT

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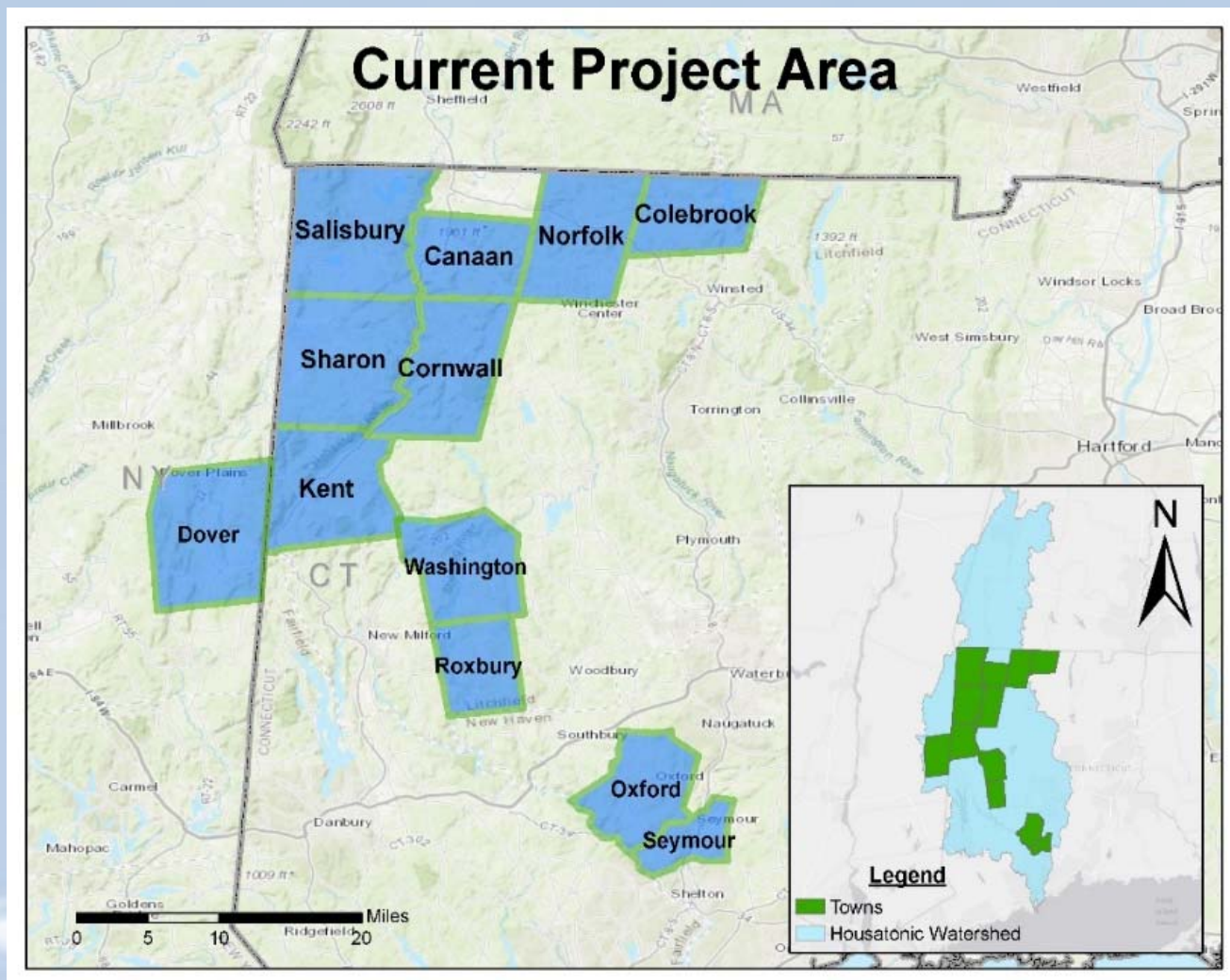
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Project Status



Regional results

