



Local Solutions to the State's Housing Crisis Webinar Series

Thank you to our partners

BEA

New Hampshire Department of
**BUSINESS AND
ECONOMIC AFFAIRS**



The Intersection of Development and Clean Water?



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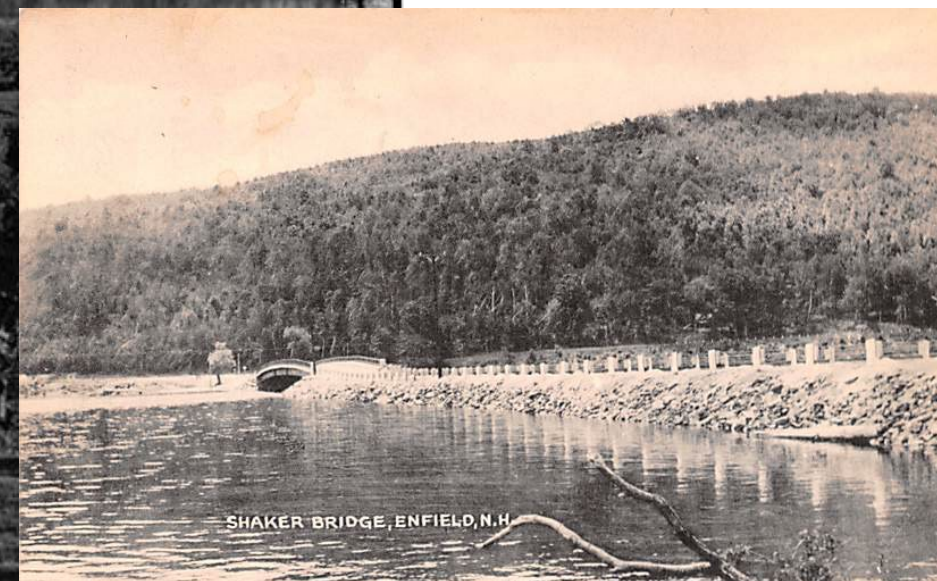
Smith Pond, Enfield, NH with Mascoma Lake in the Distance



Enfield's Historic Waterfront Uses



- Enfield Shaker Village
- Boston and Maine Railroad
- Agriculture
- Seasonal camps



Enfield's Pattern of Development



- Enfield Village
- Enfield Center
- Lakefront Lots
- Dirt Roads

Lakeview Condos,
NH Route 4A
Enfield, NH

Lower Shaker Village, Enfield, NH



- 75+ Lots with shared water rights and common land



Enfield has
4000+ Acres of
Permanently
Conserved
Land

- **NH Fish and Game- Wildlife Management Areas**
 - **Upper Valley Land Trust**
 - **Shaker Mountain/ Smith Pond**

Mascoma Lakeside Park, Main Street Enfield, NH



**3.1 Acres on
Mascoma Lake
with
1250+ ft of
Shoreline**



- Private Fundraising
- Northern Borders Grant
- LWCF Grant
- Scenic Byways Grant



Municipal services as they relate to development and clean water

- Water
 - Sewer
 - Highways, streets, and sidewalks
 - Lighting
 - Signage
 - Parks
-



Developments in Development for Enfield, NH

- **Increase in “R1” Density”**
 - **Two ADUs allowed by right on all SFH lots**
 - **Expansion of municipal services through TIF**
 - **Cyanobacteria**
 - **Major Storms**
 - **Possible big projects (308 Units Proposed in February 2024)**
-



New Regulations and Plans for Enfield, NH

- **NH HOP Zoning Re-Write Grant Project**
 - **Short Term Rental Ordinance**
 - **Master Plan Phase II**
 - **Septic system maintenance regs?**
-



Conclusions?



Local Solutions Webinar Series: The Intersection of Development and Clean Water – 2/22/24



**Brandon Kernen, Administrator,
DWGB**

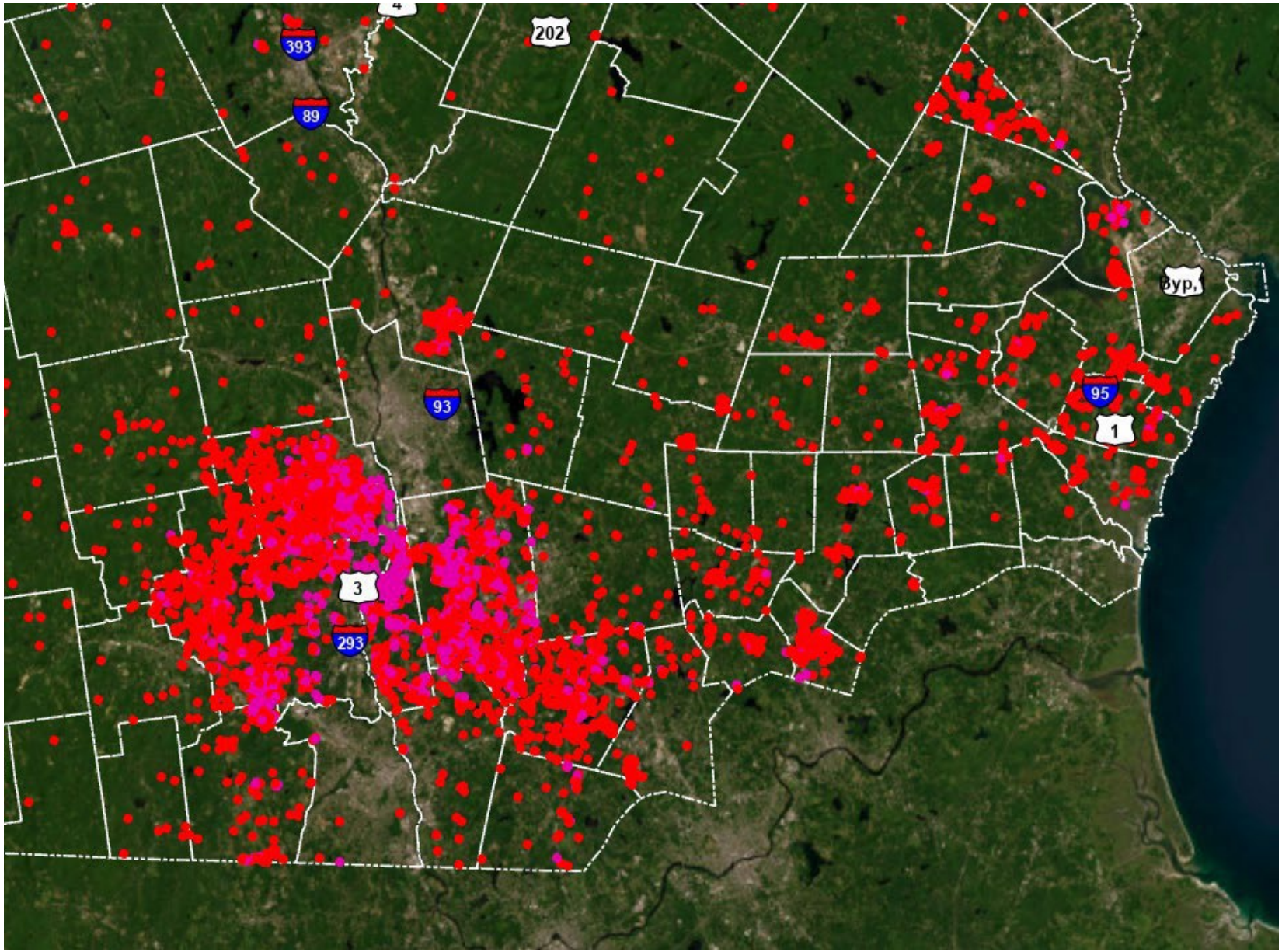
**NH Department of
Environmental Services**

Itinerary

- **Opening thoughts**
- **HB 1483**
- **Private wells in New Hampshire**
- **Water supply planning initiatives in New Hampshire**
 - **Southern New Hampshire**
 - **Seacoast New Hampshire**
 - **Concord Source Development Charge Study**
- **Source water protection**

A few opening thoughts

- Planning boards need to work closely with water and wastewater utilities to ensure there is capacity for new projects before they are approved. Too often, projects are designed, approved and then stalled due to the lack of water and wastewater capacity.
- PFAS contamination is impacting the ability to approve new small community water systems in southern NH and other locations



PRIVATE WELLS

PFOA (ppt)

- >4 and <12**
- >12**

HB 1483 – Clarifying Municipalities May Address Water Supply as part of the Subdivision Regulations

1 1 New Subparagraphs; Planning and Zoning; Subdivision Regulations; Water Supply. Amend
2 RSA 674:36, II by inserting after subparagraph (o) the following new subparagraphs:

3 (p) Require a water supply study in accordance with local regulations adopted by the
4 governing body. This provision shall not apply to community water systems or large groundwater
5 withdrawals regulated under RSA 485 and RSA 485-C.

6 (q) Include provisions to ensure there is an adequate water quantity to support existing,
7 proposed and reasonably anticipated future land and associated water uses and to ensure the
8 protection of water dependent natural resources. Such provisions shall be established and
9 administered in accordance with plans developed and approved in accordance with RSA 674:2. This
10 provision shall not apply to community water systems or large groundwater withdrawals regulated
11 under RSA 485 and RSA 485-C.

12 (r) Prescribe minimum on-lot private well testing requirements as to assure an adequate
13 water supply. This provision shall not apply to community water systems or large groundwater
14 withdrawals regulated under RSA 485 and RSA 485-C.

15 2 New Paragraph; Planning and Zoning; Subdivision Regulations; Costs. Amend RSA 674:36 by
16 inserting after paragraph VI the following new paragraph:

17 VII. The planning board may, as part of its subdivision regulations, require an applicant to
18 pay all costs for notification of abutters and may provide for the assessment of reasonable fees to
19 cover the board's administrative expenses and costs of special investigation and the review of
20 documents and other matters which may be required by particular applications.

21 3 Effective Date. This act shall take effect 60 days after its passage.

Private Wells in New Hampshire

- Must be constructed by a licensed water well contractor.
- Pump must be installed by a licensed pump installer.
 - Location requirements
 - Construction requirements
- Well reports must be filed with NHDES.
- Water treatment industry does not require a license.
- No state standards for water quality in private wells.
- Municipalities can adopt well testing regulations and a definition of “Potable Water”. See [“Guidance to Refine the Potable Water Definition in New Hampshire Municipal Building Codes”](#).
- NH “Be *Well* Informed” – An online resource that provides:
 - Testing recommendations
 - Interpretation of testing results
 - Analysis of treatment options tailored to testing results

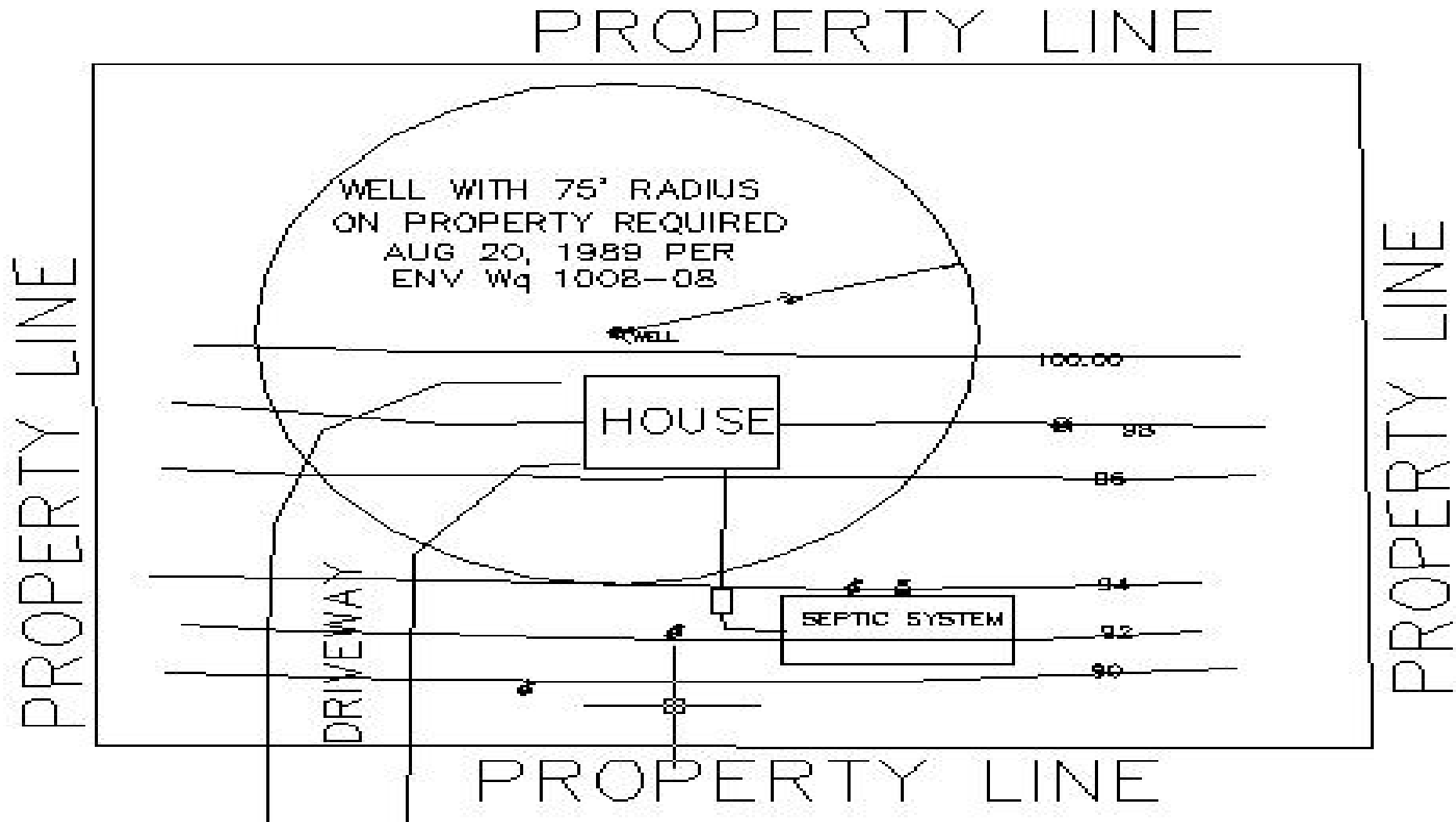
Private Well Setbacks

- Well Siting needs to align with SSB approval
- Frequent site feature conflicts
- Small lots, steep slopes, surface water, etc.
- Reductions are conditionally allowed

RESIDENTIAL DRINKING WATER WELL LOCATION SETBACKS	
Entity	Setback (feet)
Effluent Disposal Area (leach field/bed)	75 ¹
Septic Tank	75 ²
Property Boundary	75
Livestock Pen	75 (100 for dug wells)
Automobile Salvage Yard	75
Underground Storage Tanks (containing gasoline fuel)	250
Storage of Regulated Substance (except gasoline fuel)	75
Solid Waste Disposal Site	75
Bulk Storage of Material (ex. fertilizer, manure, salt)	75
Stump Dump	75 ³
State Highway Right-of-Way	50 ⁴
Sewer Component	50 ⁵
Surface Water / Swamp	50 ⁶
Public Road Surface	75 ⁷
Other Sources of Contamination	75

Protective Well Radius

RSA 485-A:30-b



Water Supply Planning Initiatives

1. South/Central NH Regional Water Supply Study
2. Merrimack River Crossing
3. Lake Massabesic Water Level Study
4. Londonderry PFAS Response
5. Southern NH Regional Water Project Phase 2
6. Seacoast
7. Concord Source Development Charge Study
 - Potential source of water to address contamination in nearby communities

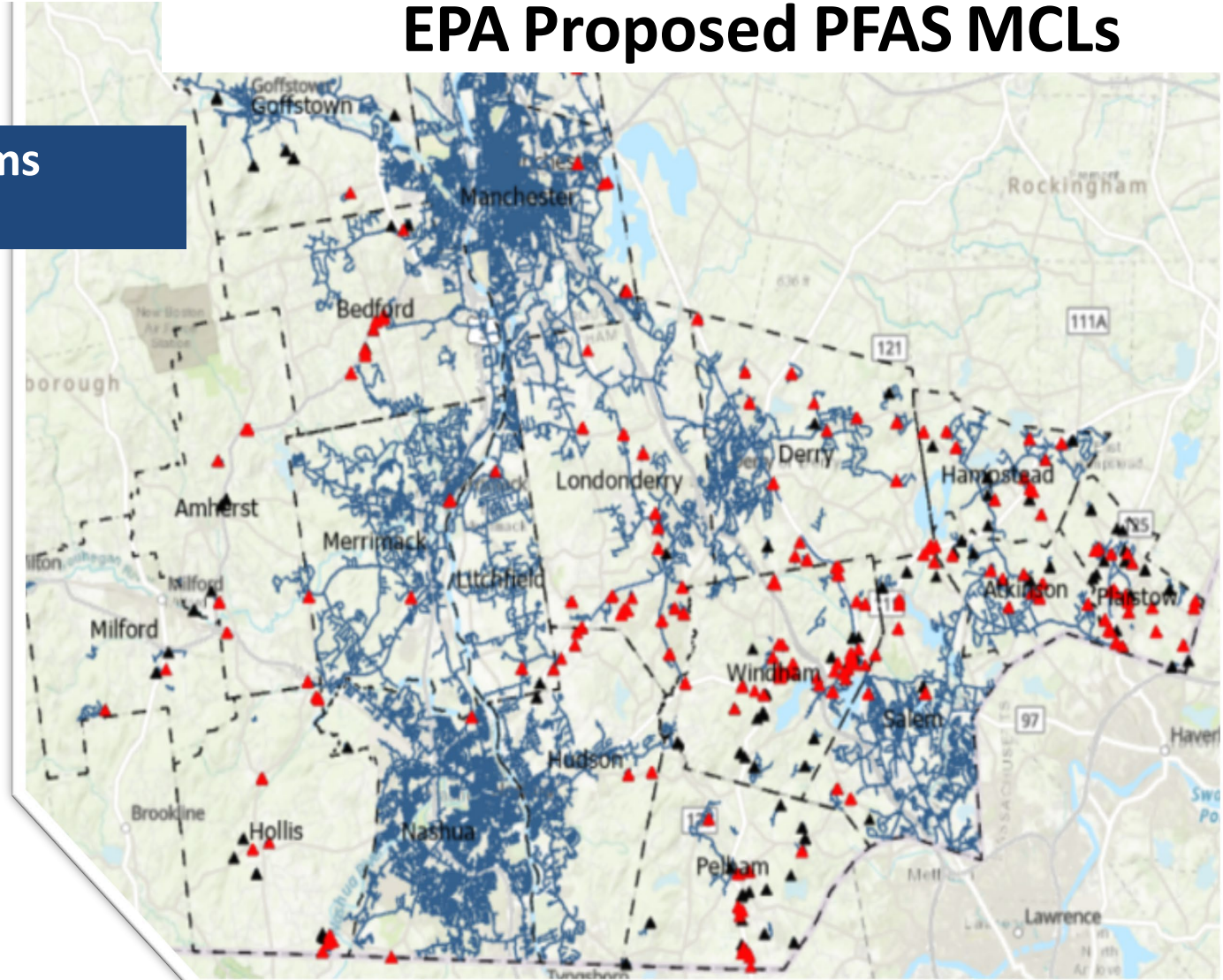
South-Central NH

Regional Water Supply Study



Study Update - EPA Proposed PFAS MCLs

Small Community Water Systems
with wells PFOA > 4 ppt



Legal Framework for Source Protection

- Federal Safe Drinking Water Act
- State:
 - New Hampshire Safe Drinking Water Act (RSA 485)
 - Groundwater Protection Act (485-C)
- Local:
 - RSA 674:21, Innovative Land Use Controls
 - RSA 36-A:4-a Conservation Commissions – Optional Powers
 - RSA 147 Nuisances (public health)



Innovative Land Use
Planning Techniques

A HANDBOOK FOR SUSTAINABLE DEVELOPMENT

Source Protection Involves...

- Adopting Local Zoning to Protect Groundwater
- Land Conservation and Buffering
- Improving stormwater management
- Inventory of Harmful Substances
- Limiting contaminant releases
- Effective Emergency Response
- Public Education
- Developing Source Protection Plans

The Long View:

- ✓ Maximize clean recharge
- ✓ Prevent release of contaminants from land use activities
- ✓ Ensure long-term availability of drinking water

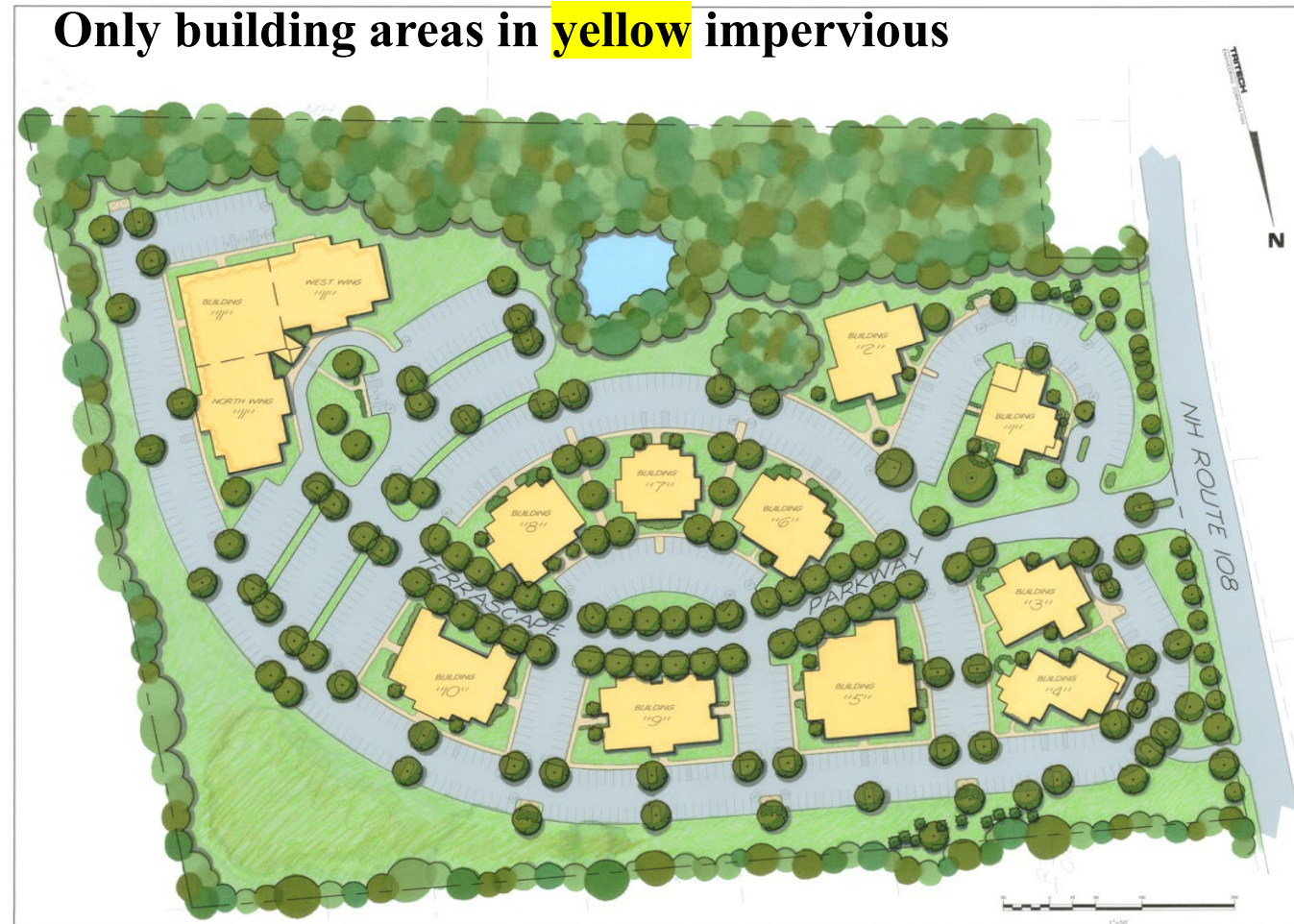


Photo Credit:

<http://www.ence.umd.edu/~apdavis/bioreten-wet.jpg>

Low Impact Development: Somersworth, NH

- ❑ A total of 125,000 sq. ft of office /business space
- ❑ 719 parking stalls using porous asphalt
- ❑ Allowed runoff from RT 108 (State owned highway) into drainage system



Improve Stormwater Treatment

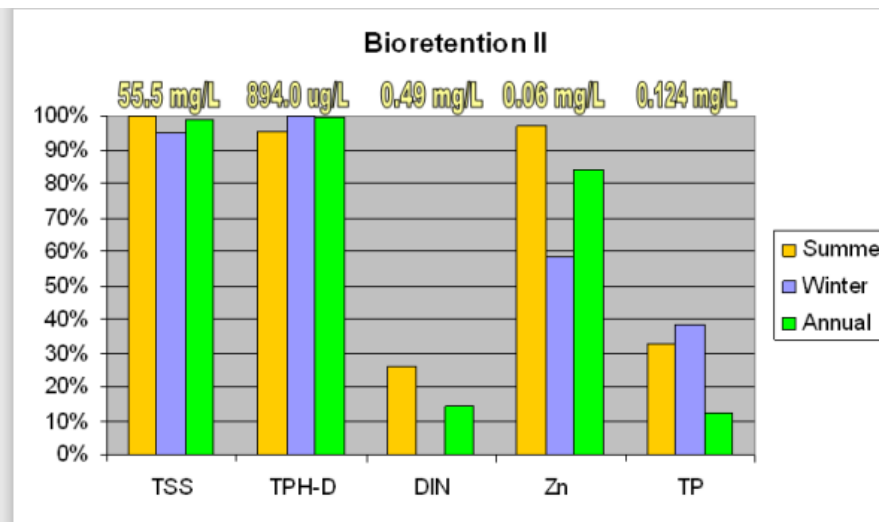


Goal:

Improve water quality by reducing stormwater velocity, precipitating suspended solids and infiltrating runoff

Outcome:

- Functioning vegetated bioretention basin that reduces polluted runoff
- Highly visible site provides perpetual educational model



Source: [Stormwater BMP Test Facility \(neiwpc.org\)](http://stormwaterbmp.testfacility.net/wpc.org)

Parking Lots

General Requirements

YES

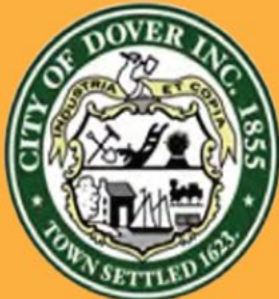


Existing vegetation and natural features of special interest shall be preserved wherever possible.

NO



Designs that have not incorporated any interior landscaping are not encouraged

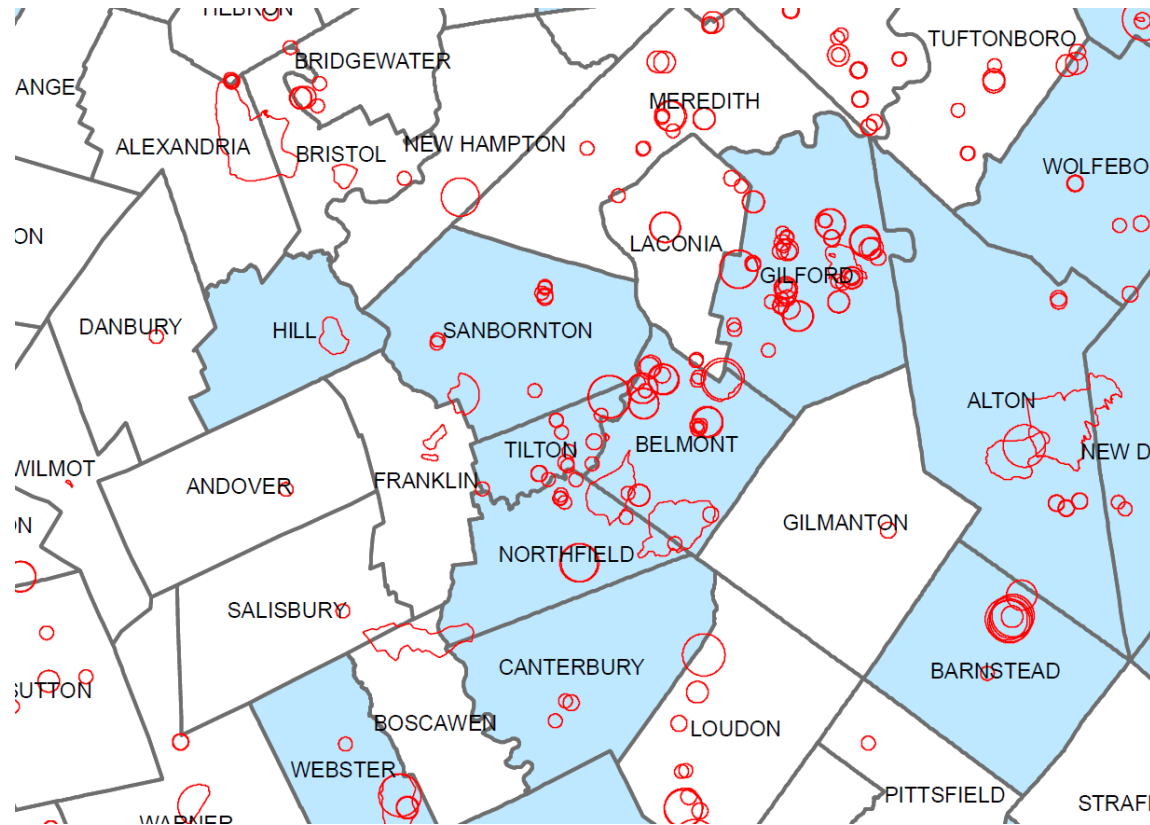


Revised Landscaping Regulations

NHDES Model Groundwater Zoning



Local Regulations Must Be Supported by Master Plans – 111 Municipalities Now have GW Protection Zoning



Search “Model Groundwater Protection Zoning” for NHDES Model

Model Ordinance: Local Authority

- ✓ RSA 674:2 (natural resource plan) and 674:17,1 - local authority to protect groundwater
- ✓ RSAs 31:39 and 147 give broad authority to towns to protect health, welfare and public safety.
- ✓ Model cites authority under RSA 674:16 relative to innovative land uses

Authority

Purpose

Definitions

District Boundary

Applicability

Perform. Standards

Permitted Uses

Prohibited Uses

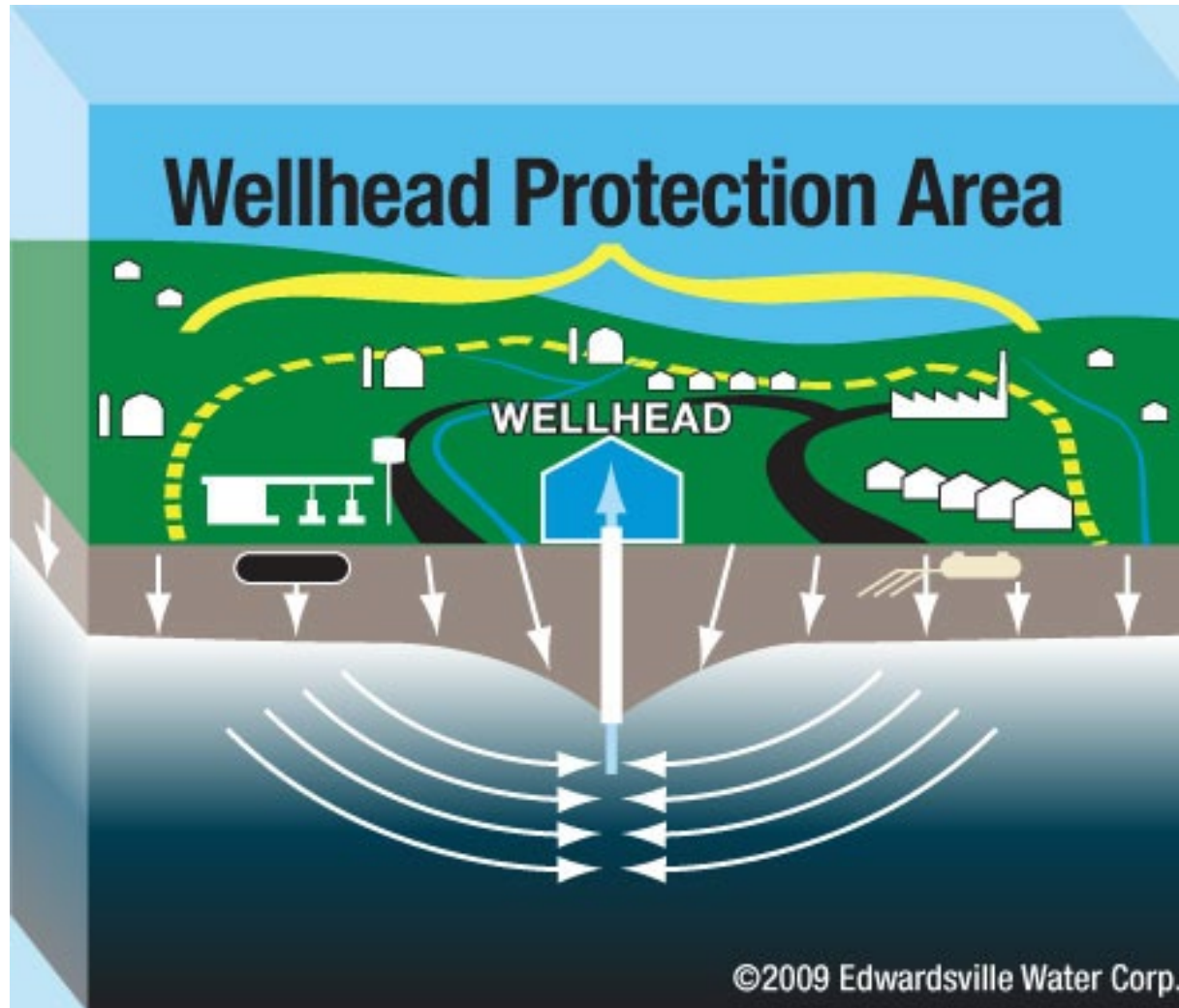
Conditional Uses

Non-Conforming

Exemptions

Maint. & Inspection

Where to focus Zoning protection?



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Model Ordinance: Performance Based BMPs

✓ "Source Controls" are design and operational practices that keep contaminants from entering groundwater.

✓ Stormwater plan when > 15% or >= 2,500 sq ft of impervious area created.

✓ Prohibits infiltration through contaminated areas.

✓ Requires Env-Wq 401 Groundwater Protection BMPs. (e.g., containment structures for tanks)

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Existing Non-Conforming

Exemptions

Maintenance & Inspection

Conservation Funding: Drinking Water and Groundwater Trust Fund

Annual grant funding

Proposals are accepted each summer. Grants are capped at \$500,000 per project. The SWP program will fund up to 50% of total project costs to permanently protect “High-Priority Water Supply Lands,” which contain one of the following:

- Wellhead Protection Areas (WHPA).
- Hydrologic Areas of Concern (HAC).
- High-Yield Stratified Drift Aquifers classified as GA2.
- Land that the Advisory Commission has determined will likely benefit a future public or community public water system.

<https://www.dwgtf.des.nh.gov/funding-programs/source-water-protection-grant-program>

Reducing Salt Use Reduces Na, Cl in Groundwater

- Calibration, calibration, calibration
- Training – experience
- Tracking, AVL, data analysis
- Live edge plows
- Mechanical versus chemical treatment
- Brine -- Pre-wetting, Pre-treatment
- Snow policy – LOS, weather data, RWiS
- Client expectations!
- Culture of reducing salt use



Water Use Efficiency

- NHDES model water efficient landscaping regulation for municipalities
 - Limit turf areas
 - Topsoil requirements
 - Irrigation efficiency requirements
- Model regulations to limit residential lawn watering during a drought.
 - Can apply to the entire town or targeted areas
 - Apply to homes on a private well or public water system



Local Solutions to the State's Housing Crisis Webinar Series

Please Join Us for these Upcoming Webinars

[February 29 - YIMBYism: A Different Approach to Development](#)

[March 7 - Transfer of Development Rights 101: A Primer](#)

[March 14 - Attracting Developers](#)

[WEBINAR DESCRIPTIONS AND LINKS](#)