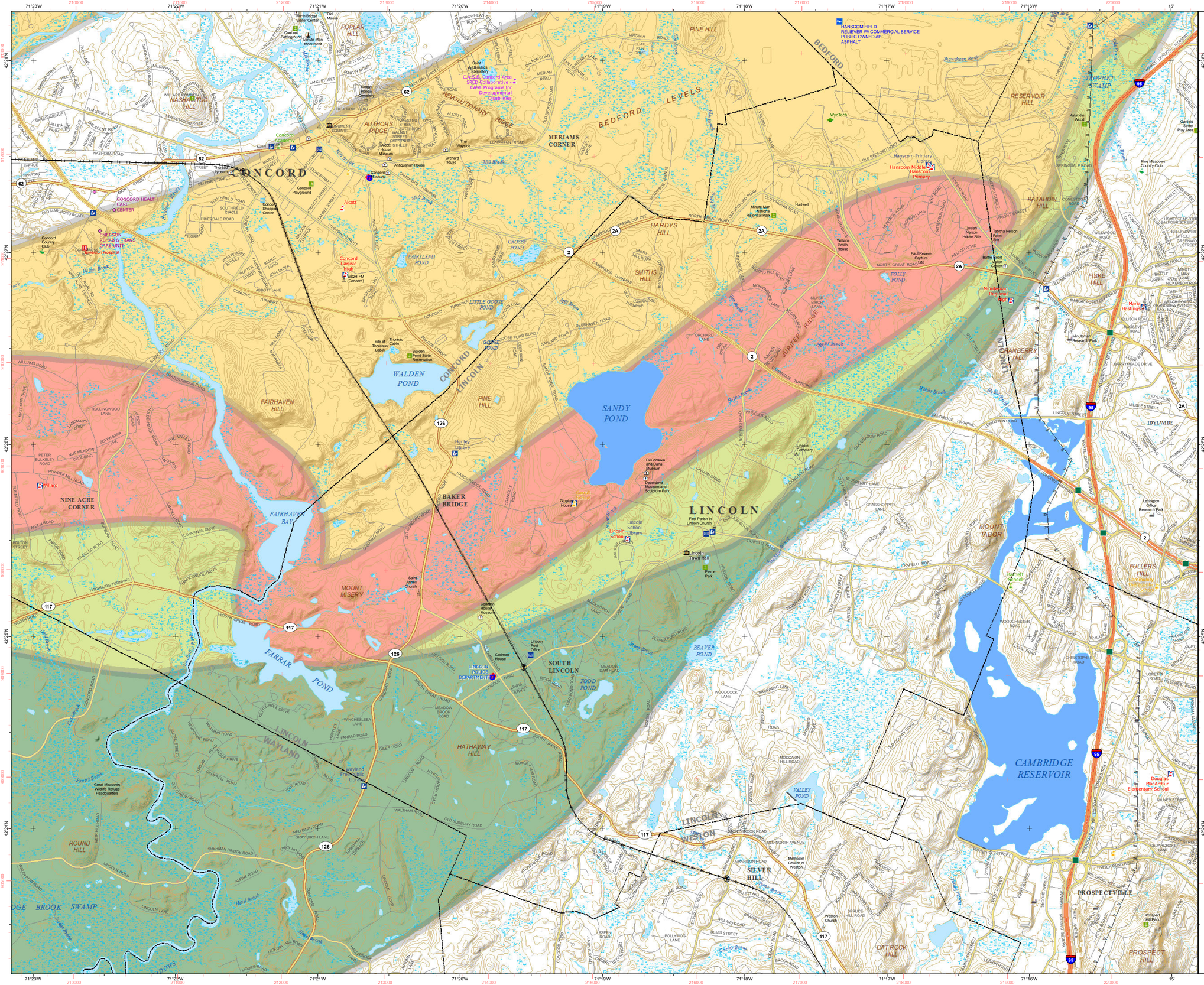

Bedrock Water Quality Map

LINCOLN

Arsenic Probability

This map is intended to compliment the USGS Scientific Investigations Report 2011-5013, Arsenic and Uranium in Water from Private Wells Completed in Bedrock of East-Central Massachusetts: Concentrations, Correlations with Bedrock Units, and Estimated Probability Maps. That report presents the results of a statistical study of bedrock water quality based primarily on 478 samples from private wells. This is a relatively small number of samples for such a large and diverse study area. The confidence intervals around probabilities used here are broad. Users are urged to carefully read the original report.

The geologic map underlying this work is at a scale of 1:250,000 or about 4 miles per inch. Although presented on a two dimensional map, bedrock geology is a three dimensional phenomenon. Contact zones almost never go straight down. Because this town map is at a much larger scale than the original, the necessity of presenting 3D geology in only two dimensions, and the wide confidence intervals in the statistical analysis, users should interpret this map as a general indicator of expected water quality. The only way to be sure of the quality of water in any given well is to have that water tested.

% Probability of Exceeding the Public Drinking Water Standard of 10 Micrograms per liter (10 PPB)	City/Town Statistics Acres	Percent
< 1.0%	2048.6	21.4
1.0% to 4.0%	956.8	10
5.0% to 10.0%	1734.1	18.1
10.0% to 25.0%	2272.1	23.7
No Data	2579.5	26.8
Total	9591.1	

MAP LEGEND

- Pond, Lake or Ocean
- Reservoir
- Fresh Water Wetlands
- Cranberry Bog
- Salt Water Wetlands
- Perennial Stream; Shoreline
- Intermittent Stream
- Intermittent Shoreline
- Ditch/Canal
- Aqueduct
- Dam
- Pipeline
- Powerline
- Active Rail Lines
- Limited Access Highway
- Multi-lane Hwy, Not Limited Access
- Other Numbered Highway
- Major Road, Collector
- Minor Road, Ramp
- MA Town Boundary
- MA Interstate Boundary
- County Boundaries
- DEP Region Boundary

N

Cultural Features

- Town Halls
- Fire Stations
- Local Police Station
- State Police Station
- County Sheriff Station
- Public School
- Private School
- Charter School
- Collaborative Program School
- Special Education School
- Private College
- Public College
- Libraries
- Hospital with ER
- Hospital
- Nursing Home
- Rest Home
- MBTA Station
- Airports
- Prison
- Camp
- Campground
- Cemetery
- Convention Center
- Court House
- Field - Playground
- Fish Hatchery
- Golf Course
- Industrial Park
- Lighthouse
- Marina
- Monument
- Museum
- Park
- Parking Lot
- Pier - Wharf
- Places of Worship
- Post Office
- Public Pool
- Shopping Center
- Ski Area
- Sports Facility
- Theater
- Tower

Contour Interval 3 Meters

Mass StatePlane NAD83 Coordinates shown in RED

Map Created March, 2011

LINCOLN FALLS WITHIN THE MassDEP NORTHEAST Region

Map Location

Deval Patrick
Governor
Richard K. Sullivan Jr.
Secretary of Energy and Environmental Affairs

MassDEP
GIS
Massachusetts Department of Environmental Protection

Map Scale 1:17000

0 1,000 2,000 3,000 4,000 5,000 6,000 Feet

0 1 Miles

0 1 2 Kilometers

1 inch = 1,417 feet

1 inch = 432 meters

DATA SOURCES

TOPOGRAPHIC CONTOURS: MassGIS, 1:5,000. 3 Meter contour elevations, generated from digital ortho DTMs.

WETLANDS: UMass Resource Mapping Project (RMP)/USGS/MA DEP/MassGIS, Source Scale 1:12,000 to 1:40,000. Wetland information shown on this map consists of several wetlands datasets, including DEP Orthophoto Wetlands (1:12,000) and USGS Hydrology wetlands (1:25,000).

GEOGRAPHIC FEATURES: USGS/MassDEP: USGS Geographic Names Information System(GNIS) features matched to parcel data or orthophoto. Hydrography names taken from USGS NFD features and placed using Maplex.

HYDROGRAPHY: USGS/MassGIS, 1:25,000 or less. Hydrography from the USGS National Hydrography Database except within public water supply watersheds where the resolution is approximately 1:10000.

POLITICAL BOUNDARIES: MassGIS. This political boundary dataleyer jas been created from latitude and longitude coordinates found in the 68 volume harbor and Lands Commission Town Boundary Atlas

ROADS: Mass Department of Transportation 1:5000. Road centerlines aligned with 1:5000 OrthoPhotos. Attributes from DOT roads database.

TRAINS AND TRANSLINES: Mass Department of Transportation Trains @ 1:5000 Pipelines and Powerlines @1:25000

This map is for illustrative purposes only. It represents the best statewide data available at the date of printing. There are other important natural resources that are not shown on this map because the digital spatial data do not exist.

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