Projected Bedrock Water Quality

RUTLAND

Uranium Probability

% Probability of Exceeding the Public Drinking Water Standard of 30 micrograms per liter (30 PPB)	City/Town Statistics Acres	Percent
<= 1.0%	5631.7	24.3
1.1% to 4.7%	13901.7	60
4.8% to 13.0%	0	0
13.1% to 25.4%	93.9	0.4
Granite/Pegmatite*	0	0
No Data	3540	15.3
Total	23167.3	

*Areas mapped as granite and pegmatite are located outside of the USGS SIR 2011-5013 study area. Although no precise uranium probability values exist for these bedrock units, these types of bedrock generally have an increased probability of containing naturally occurring radionuclides such as radium, uranium, or radon in well water at concentrations exceeding public drinking water limits.

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.

MassDEP GIS

Massachusetts Department of Environmental Protection

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

MAP LEGEND

- Reservoir
- Pond, Lake or Ocean
- Fresh Water Wetlands
- Cranberry Bog
- Salt Water Wetlands
- Perennial Stream; Shoreline
- Intermittent Stream
- Intermittent Shoreline
- Ditch/Canal
- Aqueduct
- Dam
- Active Rail Lines
- Pipeline
- Powerline
- 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

Contour Interval 3 Meters

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

Mass StatePlane NAD83 Coordinates shown in RED

N

Map Scale 1:26000

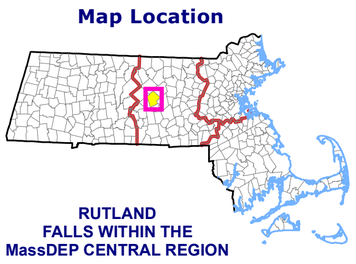
0 2,000 4,000 6,000 8,000 10,000 Feet

0 1 2 3 Kilometers

0 1 2 Miles

1 inch = 2,167 feet 1 inch = 660 meters

Map Location



RUTLAND FALLS WITHIN THE MassDEP CENTRAL REGION

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.

DATA SOURCES

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.

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

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

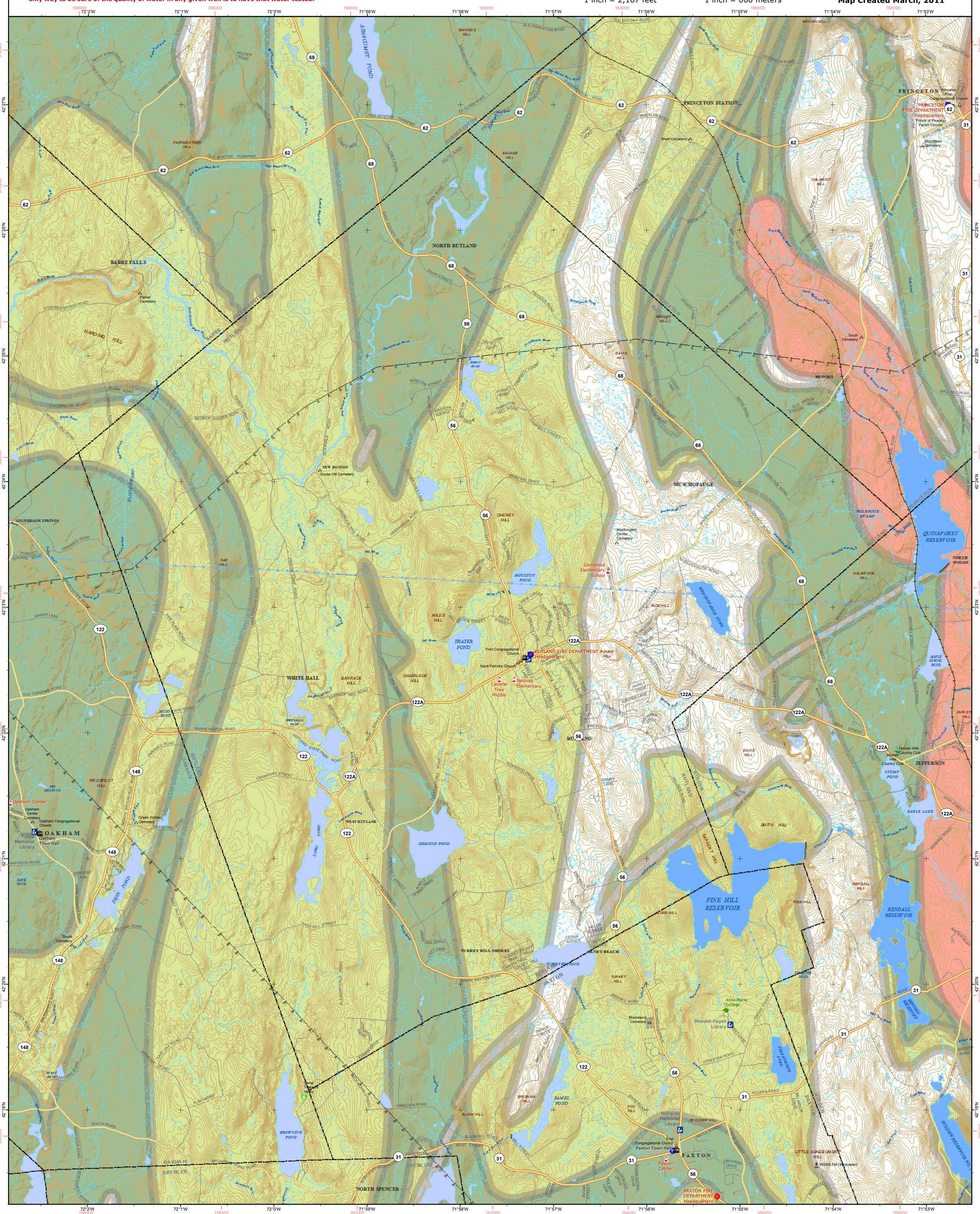
ROADS: Mass Department of Transportation 1:5000. Road centerlines aligned with 1:5000 OrthoPhotos. Attributes from DOT roads database.

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

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

WETLANDS: UMass Resource Mapping Project/USGS/MassDEP/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).

Map Created March, 2011


PRINCETON
PRINCETON STATION
NORTH RUTLAND
BARRE FALLS
MUSCHOPAUGE
QUINAPOXET RESERVOIR
PINE HILL RESERVOIR
KENDALL RESERVOIR
HOLDEN RESERVOIR NO. 1
OAKHAM
WEST RUTLAND
PAXTON
JEFFERSON
RUTLAND FIRE DEPARTMENT Headquarters
Glenwood Elementary School
Naquag Elementary
Central Tree Middle
Devereux School
Oakham Center
Paxton Center
PAXTON FIRE DEPARTMENT Headquarters
Princeton First Congregational Church
PRINCETON FIRE DEPARTMENT Headquarters
Prince of Peace Parish Church
Woodlawn Cemetery
West Cemetery
South Cemetery
Parker Cemetery
Goose Hill Cemetery
Worthington Center Cemetery
First Congregational Church
Saint Patricks Church
Oakham Center Cemetery
Oakham Congregational Church
Oakham Town Hall
Oakham Memorial Library
Green Hollow Cemetery
South Cemetery
Mooreland Cemetery
Anna Maria College
Mondor-Eagen Library
Holden Hills Country Club
Richards Memorial Library
First Congregational Church
Paxton Town Hall
Paxton Center
Camp Treasure Valley
WSRS-FM (Worcester)
ASNACOMET POND
MIDDLE POND
DEMOND POND
THAYER POND
MOULTON POND
MISCOPOAGE POND
LONG POND
DEAN POND
BROWNING POND
TURKEY HILL POND
EAMES POND
ASHUMASKIT POND
STUMP POND
EAGLE LAKE
KENDALL POND
MAPLE SPRING POND
COLDBROOK SPRINGS
HOLBROOK SWAMP
BROWN HILL
SIMONDS HILL
SAVAGE HILL
CALAMINT HILL
CHENEY HILL
MILES HILL
CHARNOCK HILL
BARRACK HILL
WHITE HALL
HARDING HILL
PROSPECT HILL
OAK HILL
RICE HILL
HOLBROOK HILL
SMITH HILL
SARGENT HILL
PINE HILL
KENDALL HILL
TURKEY HILL
BRIGHAM HILL
BLACK HILL
LITTLE ASNEBUMSKIT HILL
DAVIS HILL
MELLEN HILL
FOUND HILL
CROCKER HILL
BROOKS
TURKEY HILL SHORES
SANDY BEACH
OAKHAM
SPENCER
NORTH SPENCER
PAXTON
RUTLAND
HOLDEN
JEFFERSON
PRINCETON
BARRE
HUBBARDSTON
OLD BOSTON TURNPIKE
HUBBARDSTON ROAD
PRINCETON ROAD
BARRE PAXTON ROAD
MAIN STREET
PAXTON ROAD
HOLDEN ROAD
STREETER ROAD
SOUTH ROAD
WORCESTER ROAD
BARRE ROAD
RUTLAND STATE PARK ROAD
CRAWFORD STREET
RUTLAND ROAD
OAKHAM ROAD
BROWNING POND ROAD
NORTH SPENCER ROAD
PAXTON STREET
PAXTON ROAD
ASNEBUMSKIT ROAD
RESERVOIR ROAD
HIGH STREET
BALL HILL ROAD
BROOKS STATION ROAD
OLD BROOK STATION ROAD
MUSCHOPAUGE ROAD
EAST COUNTY ROAD
OVERLOOK ROAD
CAUSEWAY STREET
KENDALL ROAD
MIXTER ROAD
SOUTH ROAD
PAXTON ROAD
HOLDEN ROAD
STREETER ROAD
BELLARBOR DRIVE
RESERVOIR STREET
BAILEY ROAD
ASNEBUMSKIT ROAD
MAPLE STREET
GROVE STREET
ORCHARD DRIVE
WEST STREET
MILL STREET
BLACKHILL ROAD
DAVIS ROAD
FOX HILL
BRIGHAM ROAD
PLEASANT STREET
BROOKS ROAD
RICHARDS AVENUE
PAXTON STREET
SOUTH STREET
SUOMI STREET
KEEP AVENUE
WILDEWOOD DRIVE
HOLBROOK LANE
SHANANDOAH DRIVE
NORTH SPENCER ROAD
BROWNING POND ROAD
PAXTON ROAD
NANIGIAN ROAD
BLACKHILL ROAD
FLINT ROAD
SOUTH ROAD
PAXTON ROAD
NORTH BROOKFIELD ROAD
LINCOLN ROAD
SPENCER ROAD
EAST HILL ROAD
PLEASANTDALE ROAD
PAXTON ROAD
BECHAN ROAD
EAST HILL STREET
SARGENT LANE
WARE CORNER ROAD
RUTLAND ROAD
HAPGOOD ROAD
BARRE ROAD
MAPLE STREET
NORTH BROOKFIELD ROAD
CRAWFORD ROAD
WARE ROAD
PLEASANT STREET
PLEASANTDALE ROAD
BARRE PAXTON ROAD
PRINCETON STREET
PRINCETON ROAD
BOYLSTON AVENUE
BROOKS STATION ROAD
MATTHEWS LANE
BIRCHWOOD DRIVE
WORCESTER ROAD
BALL HILL ROAD
RESERVOIR ROAD
JEFFERSON ROAD
HIGH