

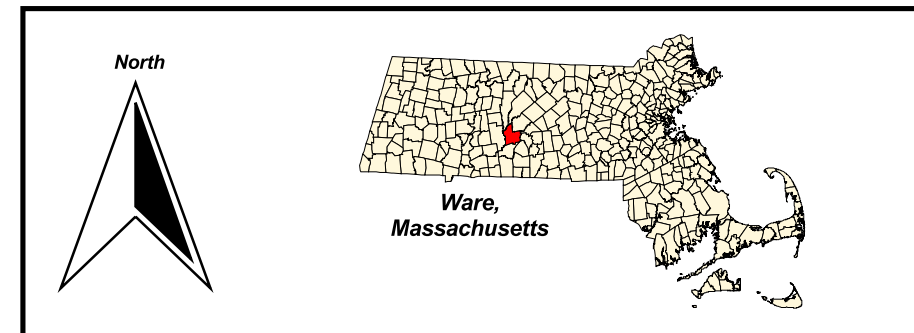
Open Space
and
Recreation Plan
Ware, Massachusetts
Topology, Flood Plain, & Water Supplies

DEP Public Water Supplies

- ★ Public Water Supply
★ Transient Non-Community Water Supply
Interim Well Head Protection Area
DEP Approved Zone II
100 Year Flood Plain
Out Standing Resource Water Shed
Waste Disposal

August 2007

- 15 - 25% Slope
25% + Slope
3 Meter Contours
Wetlands
Ponds
Streams
100 Ft River Protection Area



The Public Water Supply (PWS) datalayer (coverage and layer are named PWS_DEP) contains the locations of public community surface and groundwater supply sources and public non-community supply sources as defined in 310 CMR 22.00. The public water supply systems represented in this datalayer are based primarily on information in the DEP's Water Quality Testing System (WQTS) database. The WQTS database is the Department's central database for tracking water supply data. The PWS datalayer also contains the locations of proposed wells that have a defined DEP approved wellhead protection area (Zone IIa). Proposed sources are not currently tracked in WQTS.

Massachusetts Drinking Water Regulations (310 CMR 22.00)

As stated in 310 CMR 22.02, a Public Water System means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days of the year. Such term includes (1) any collection, treatment, storage and distribution facilities under control of the operator of such a system and used primarily in connection with such system; and (2) any collection or pretreatment storage facilities not under such control which are used primarily in connection with such system. A public water system is either a "community water system" or a "non-community water system."

(a) Community water system means a public water system which serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents.
(b) Non-community water system means a public water system that is not a community water system.

1. Non-transient non-community water system or "NTNC" means a public water systems that is not a community water system and that regularly serves at least 25 of the same persons or more approximately four or more days per week, more than six months or 180 days per year, such as a workplace providing water to it's employees.
2. Transient non-community water system or "TNC" means a public water system that is not a community water system or a non-transient non-community water system but is a public water system which serves water to 25 different persons at least 60 days of the year. Some examples of these types of systems are: restaurants, motels, camp grounds, parks, golf courses, ski areas and community centers.

Approved Wellhead Protection Areas (Zone II)

The statewide ZONE_II datalayer contains DEP Approved Wellhead Protection Areas (Zone II). As stated in 310 CMR 22.02, a Zone II is:
"That area of an aquifer which contributes water to a well under the most severe pumping and recharge conditions that can be realistically anticipated (180 days of pumping at safe yield, with no recharge from precipitation). It is bounded by the groundwater divide which results from pumping the well and by the contact of the aquifer with less permeable materials such as till or bedrock. In some cases, streams or lakes may act as recharge boundaries. In all cases, Zone IIs shall extend to gradient to its point of intersection with prevailing hydrogeologic boundaries to groundwater flow divide, a contact with till or bedrock, or a recharge boundary."

Interim Wellhead Protection Areas (IWPA, IWPA/COM)

In the absence of an approved Zone II, Massachusetts Department of Environmental Protection (DEP) has adopted the Interim Wellhead Protection Area (IWPA) as the primary, protected recharge area for Public Water Supply (PWS) groundwater sources. For PWS sources that pump less than 100,000 gallons per day (GPD), the IWPA radius is proportional to the pumping rate in gallons per minute (GPM). Pumping rate is determined by DEP DWP based on one of the following methods, DWP approved pumping rate, metered data or Title 5 flow rate. The formula used for calculating the PWS well point buffer radius in feet is:

$$\text{Radius} = (32 \times \text{pumping rate in GPM}) + 400$$

The minimum IWPA radius is 400 feet, the maximum (default) radius reached at 100,000 GPD (70 GPM) is 2,640 feet (1 1/2 mile). In instances where DWP pumping rate information is unavailable DWP approved default radius values are assigned based on PWS well classification. The default radius for community class PWS groundwater sources (CW) is 2,640 feet (804.6 meters). The default radius for non-community sources is 750 feet (228.6 meters) for Non Transient (NTNC) wells and 500 feet (152.4 meters) for Transient (TNC) wells.

The **Rivers Protection Act** buffers data was created by buffering the available hydrology data 100 feet and 200 feet. Using the hydrology attribute data originally created by USGS, attempts were made to buffer only stream features that were coded as being perennial streams and is also subject to field verification. It is possible that some perennial streams were not buffered and some intermittent streams were. EOEI MassGIS created the data for the 1999 - 2001 EOEI Buildout projects.

The **Elevation Contours** (1:5,000) datalayer represents 3-meter contours created from Digital Terrain Model (DTM) data points collected during the production of the 1:5,000 **Black and White Digital Orthophoto images**. This datalayer had previously been a mix of data from the DTMs as well as some 1:25,000 Digital Line Graph (DLG) data obtained from the U.S. Geological Society. As of August, 2002, all older USGS data have been replaced by the 1:5,000 product. This data is maintained by Massachusetts Executive Office of Environmental Affairs, MassGIS, Boston.

The **Slopes** data was created by Pioneer Valley Planning Commission, using the 1:5K Elevations Contours. Using ArcInfo GRID module, the contours were converted to an elevation grid with 3 meter cell size and a slope grid generated from that. The slope grid was then resampled to 5 classification ranges: 0 to 3% slope, 3 to 8%, 8 to 15%, 15 to 25% and above 25%. The grid was then converted to a polygon coverage. The Slopes shown on this map are approximate and reflect the best digital data available, but should be subject to field verification and be used for planning purposes only.

1 0 1 Miles

