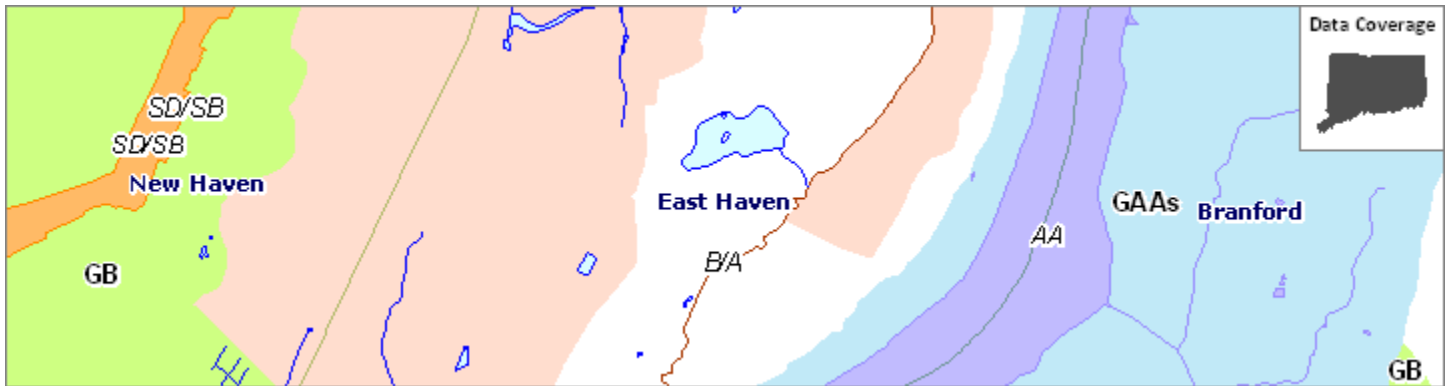


Water Quality Classifications



Description

Surface water quality and ground water quality classifications are depicted throughout the state for selected waterbodies and areas. The ground water quality classifications and the surface water quality classifications are usually presented together as a depiction of overall water quality goals.

Surface water means rivers and streams, brooks, waterways, lakes, ponds, marshes, swamps, bogs, federal jurisdictional wetlands; the waters of Long Island Sound, its harbors, embayments, tidal wetlands and creeks; and other natural or artificial, public or private, vernal or intermittent bodies of water, excluding groundwater.

Ground water means water flowing through earth materials beneath the ground surface, excluding surface waters.

Water quality class defines the quality of the water. There are five classes for inland surface waters (AA, A, B, C, and D), four classes for coastal/marine surface waters (SA, SB, SC, and SD), and four classes for ground water (GAA, GA, GB, and GC). The [Connecticut Water Quality Standards and Classifications](#) (WQS) describe these classes and also establish the overall policy and management structure to protect the water quality of Connecticut. In addition, an [explanation of each class](#) in table form is provided at the end of this document.

There are three elements that make up the Water Quality Standards:

- 1) The “*Standards*” describe water quality goals and policies. They also establish the allowable discharges, principles of waste assimilation, and anti-degradation policy.
- 2) The “*Classifications and Criteria*” establish the water quality classes, their designated uses, and specify the water quality criteria (chemical, physical, or bacterial concentrations or levels) to be met for each classification.

The “*Classification Maps*” show the classification assigned to specific surface and ground water resources based on their designated use goals.

Ground water quality changes to Class GB can occur outside of the full revision and adoption cycle and are added to the digital data twice yearly as they are approved. See [Guidance for the Submission of Applications to Lower Ground Water Quality Classifications to Class GB](#) for explanation.

Both the surface water and ground water classification data were originally compiled in 1980 from information collected for each major drainage basin. The data are updated on a rotating schedule by major basin. The most recent basin-wide updates were adopted as follows:

Housatonic and Southwest Basins – March, 1999
Connecticut and South Central Basins – February, 1993
Thames and Southeast Basins – December, 1986

Purpose

The management of water quality in Connecticut is guided by Section 22a-426 of the Connecticut General Statutes. In simple terms the policies can be summarized by saying that the Department of Environmental Protection shall:

- Protect surface and ground waters from degradation.
- Segregate waters used for drinking from those that play a role in waste assimilation.
- Restore surface waters that have been used for waste assimilation to conditions suitable for fishing and swimming.
- Restore degraded ground water to protect existing and designated uses.
- Provide a framework for establishing priorities for pollution abatement and State funding for cleanup.
- Adopt standards that promote the State's economy in harmony with the environment.

To implement these policies, identification and mapping of water quality is essential. The data included here are intended to be used to show ground and surface water quality in Connecticut on a map preferably at 1:24,000 scale (1 inch = 2,000 feet). Use this information with any other 1:24,000 scale layer.

Because water quality affects many other natural and man-made resources, there are many uses for displaying this data. For example, you might view these layers with:







- aquifer protection areas
- manufacturing sites that may pollute ground or surface water
- open space such as parks, forests and swimming areas,
- Long Island Sound layers such as eelgrass beds, shellfish classifications, tidal wetlands, channels, basins, coastal access sites
- geologic features
- soils, including farmland soils or wetland soils
- hurricane inundation zones and flood zones

To better locate the features in these layers, use any base map layer of the same scale such as streets, town lines, railroads, airports, USGS topographic quadrangles, and digital orthophotos.





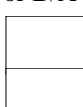
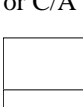

Legend Description

The legend for these layers consists of the water quality classifications for ground water and surface water. The ground water quality classes denote areas of ground water. For surface water, the lines denote rivers, streams and other linear waterways and areas denote lakes, ponds, and other waterbodies. The colors in the table below comprise the legend for the water quality classifications.

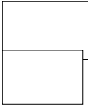
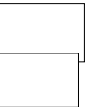
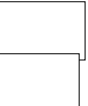
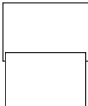
Ground Water Quality Classes

Class	General Condition	Designated Use	Resource Type	Allowable Wastewater Discharges
GA 	Natural quality, or suitable for drinking	Existing private supply, potential private or public supply, stream base flow, industrial & misc	Area of private drinking water supply wells	Same as the above & certain waste of natural origin
GAA 	Natural quality, or suitable for drinking	Existing or potential public supply, stream base flow, industrial & misc	Public drinking water supply well recharge (GAA), Public drinking water supply reservoir watershed (GAAs)	Domestic sewage, agriculture, water treatment, clean water discharges
GAAs 	Natural quality, or suitable for drinking	Existing or potential public supply, stream base flow, industrial & misc, tributary to a public reservoir	Public drinking water supply well recharge (GAA), Public drinking water supply reservoir watershed (GAAs)	Domestic sewage, agriculture, water treatment, clean water discharges
GB 	Assumed to have some degradation and not suitable for drinking without treatment	Industrial & misc., non-drinking supply, stream base flow.	Groundwater in urbanized areas, not used for drinking water supply	Same as above & certain other biodegradable and soil treatable wastewaters
GC 	Quality altered by wastewater discharges	Areas of permitted waste disposal (i.e. landfill), not suitable for drinking.	Ground waters within waste disposal areas	Same as above & certain permitted waste facilities.
GA* & GAA* 	Water quality is threatened, or may be impaired	Groundwater quality goal and designated use is Class GA or GAA, however there may be a known or potential impairment sources.		

Inland Surface Water Quality Classes

Class	General Condition	Designated Use	Resource Type	Allowable Wastewater Discharges
AA 	Uniformly good to excellent, natural quality	Public water supply and all uses below	Public water supply tributaries and reservoirs	None other than clean water, drinking water treatment, dredging & dewatering
A 	Uniformly good to excellent, natural quality	Potential public supply and all uses below	Generally all high quality streams and rivers, with no point wastewater discharges	None other than clean water, drinking water treatment, dredging & dewatering
B 	Fishable and swimmable conditions, may be good to excellent quality	Fishing, swimming & recreation, healthy aquatic habitat, industrial supply, agricultural use	Generally rivers and large streams, with point wastewater discharges	Treated wastewater and above discharges
B* 	Currently not fully meeting goal of Class B			
B/AA or B/A 	Water quality is threatened	Water quality goal is Class AA or A		
C/AA or C/A 	Water quality is impaired	Water quality goal is Class AA or A		
C/B or D/B 	Water quality is impaired	Water quality goal is Class B		

Coastal/Marine Surface Water Quality Classes

Class	General Condition	Designated Use	Allowable Wastewater Discharges
SA 	Uniformly good to excellent, natural quality	Fishing, swimming & recreation, healthy marine habitat, direct shellfish consumption, industrial supply	None other than clean water, drinking water treatment, dredging & dewatering
SB 	Uniformly good quality	Fishing, swimming & recreation, healthy marine habitat, commercial shellfish harvesting (requires purification), industrial supply	Same as above & treated wastewater
SB/SA, SC/SA 	Water quality is impaired	Water quality goal is Class SA	
SC/SB, SD/SB 	Water quality is impaired	Water quality goal is Class SB	

Use Limitations

The USGS Topographic Quadrangle maps were used as a base for the mapping of this layer. As a result, overlaying this layer onto more accurate, recent spatial data such as the 2004 digital orthophotography may result in locational differences and inaccuracies.

These data should be used with other GIS data of the same source map scale.

Related Information

[Department of Energy and Environmental Protection Water Home Page](#)

[Department of Energy and Environmental Protection Water Quality Home Page](#)

[Aquifer Protection Areas](#) – CT ECO Complete Resource Guide

Data Collection Date

The most recent basin-wide updates were adopted as follows:

Housatonic and Southwest Basins – March, 1999

Connecticut and South Central Basins – February, 1993

Document last revised February 2010

Status

Water quality classifications are current to the adoption date listed on the map. Changes to the Ground Water Quality GB areas may occur twice yearly. A full revision and adoption process is required to update the data and occurs infrequently.

Map Scale

The information meets horizontal National Map Accuracy Standards for 1:24,000-scale mapping (1 inch = 2,000 feet).

Contact

For more on water quality classification mapping, contact [Corinne Fitting](#), Connecticut Department of Energy and Environmental Protection, Water Planning and Standards Division, (860) 424-3020.

Additional Documentation

[Surface Water Quality Classification Line Feature GIS Metadata](#) – Contains technical documentation describing the Surface Water Quality Classification Line feature data and the data sources, process steps, and standards used to collect, digitize, and store this information in a geographic information system (GIS).

[Surface Water Quality Classification Polygon Feature GIS Metadata](#) – Contains technical documentation describing the Surface Water Quality Classification Polygon feature data and the data sources, process steps, and standards used to collect, digitize, and store this information in a geographic information system (GIS).

[Ground Water Quality Classification Polygon Feature GIS Metadata](#) – Contains technical documentation describing the Ground Water Quality Classification Polygon feature data and the data sources, process steps, and standards used to collect, digitize, and store this information in a geographic information system (GIS).

Originators

[Connecticut Department of Energy and Environmental Protection](#)

GIS Data Download

Water quality classifications data is downloadable from [DEEP GIS Data](#).

Connect GIS and AutoCAD software to this information online using the Water Resource Management [CT ECO Map Service](#).