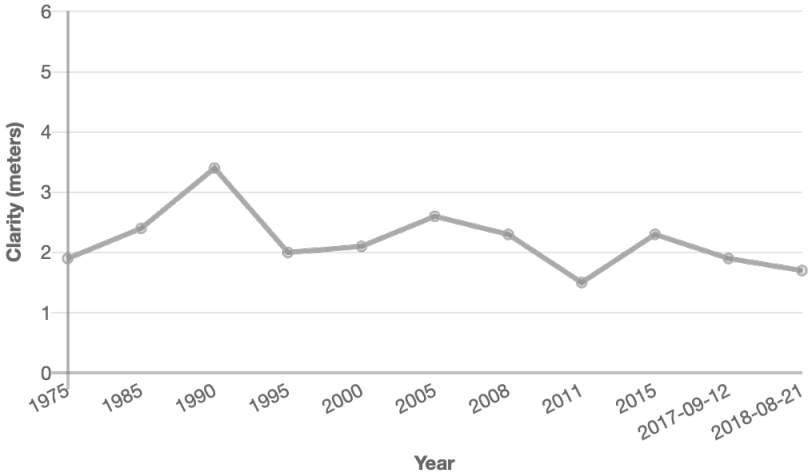
Minnesota LakeBrowser, Lake Water Quality Report
Garfield (Hubbard)

Lake clarity by year/date



Clarity Percentiles by Region

Clarity values from 2015 are compared against the values for other lakes throughout the state, as well as county, ecoregion, and watershed (HUC4 and HUC8). Higher percentile values indicate that a lake has greater clarity than other lakes in the region, e.g. a lake in the 95th percentile in its county has better clarity than 95% of the lakes in the county. Note that some lakes may appear as being in the 100th percentile due to rounding.

Unit Level	Unit Name/ID	Percentile
Statewide		49
County	Hubbard	34
Ecoregion	Northern Lakes and Forests	25
HUC4 Watershed	Mississippi Headwaters (0701)	47
HUC8 Watershed	Leech Lake River (07010102)	18

Colored Dissolved Organic Matter

Colored dissolved organic matter (CDOM) is measured as the light absorption coefficient at 440 nm (a440) and has units of reciprocal meters (m-1). Learn more about CDOM at z.umn.edu/cdom.

2016: 0.6
2015: 0.9

Chlorophyll-a

Chlorophyll-a is measured in micrograms per liter (µg/L). Learn more about Chlorophyll-a at z.umn.edu/chla.

2018-08-21: 9.2
2017-09-12: 7.8

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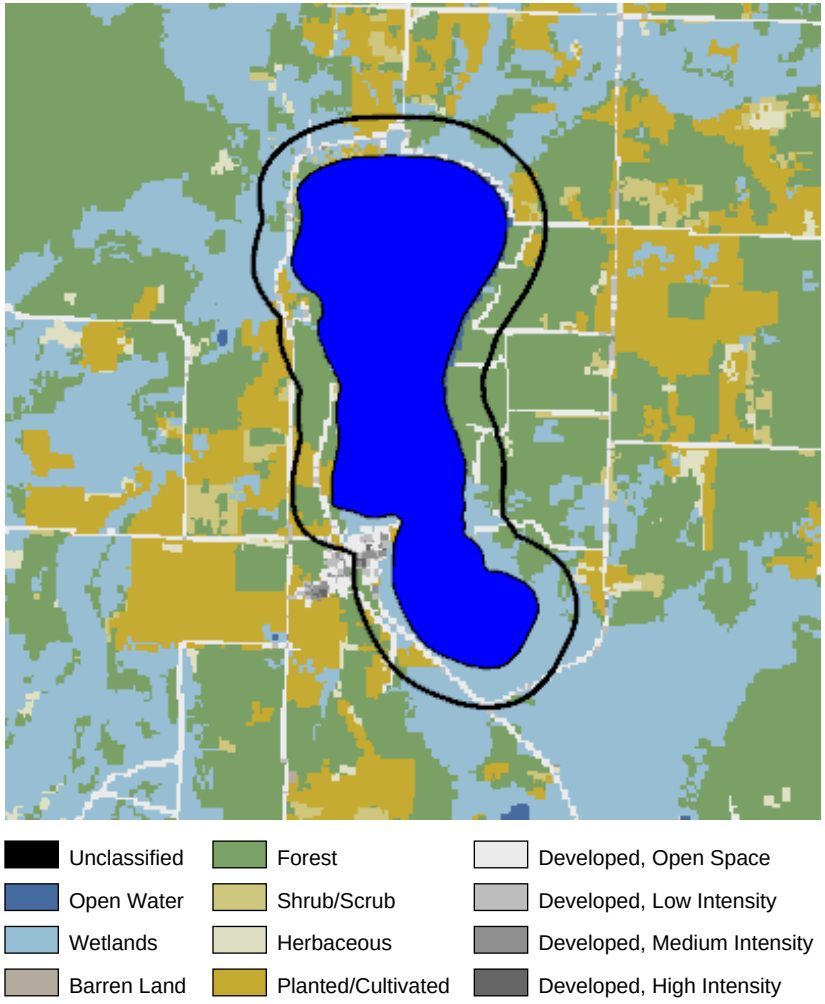
Land Cover

Land cover is calculated for an area within 1000' of the basin (this is considered shoreland) that includes the selected lake feature. Note that the Minnesota LakeBrowser splits some lakes into components. Values are determined using the National Land Cover Database (2016) (NLCD). Additionally, open water within 1000' of the basin is excluded as shorelines change over time. Note that unclassified land cover is common for lakes near the Canadian border as the NLCD does not extend into Canada. In the figure (right) the lake appears as solid blue and dark lines indicate the shoreland buffer.

Level 1 Class (General)	% Level 1 Class	Level 2 Class (Detailed)	% Level 2 Class
Developed	15.4	Developed, Open Space	12
		Developed, Low Intensity	2.6
		Developed, Medium Intensity	0.6
		Developed, High Intensity	0.2
Barren	0.1	Barren Land (Rock/Sand/Clay)	0.1
Forest	34	Deciduous Forest	19.5
		Evergreen Forest	9.2
		Mixed Forest	5.2
Shrubland	0.9	Shrub/Scrub	0.9
Herbaceous	0.3	Grassland/Herbaceous	0.3
Planted/Cultivated	10.9	Pasture/Hay	10.9
		Cultivated Crops	0
Wetlands	38.3	Woody Wetlands	22.6
		Emergent Herbaceous Wetlands	15.7
Unclassified	0	Unclassified	0