**Lake Constance**

From Wikipedia, the free encyclopedia

|  |
| --- |
| **Lake ConstanceBodensee** |
| satellite image |
| map |
| **Location** | [Germany](http://en.wikipedia.org/wiki/Germany), [Switzerland](http://en.wikipedia.org/wiki/Switzerland), [Austria](http://en.wikipedia.org/wiki/Austria) |
| **Coordinates** | [47°39′N 9°19′E﻿ / ﻿47.65°N 9.317°E﻿ / 47.65; 9.317](http://stable.toolserver.org/geohack/geohack.php?pagename=Lake_Constance&params=47_39_N_9_19_E_type:waterbody_region:DE/CH/AT)[Coordinates](http://en.wikipedia.org/wiki/Geographic_coordinate_system): [47°39′N 9°19′E﻿ / ﻿47.65°N 9.317°E﻿ / 47.65; 9.317](http://stable.toolserver.org/geohack/geohack.php?pagename=Lake_Constance&params=47_39_N_9_19_E_type:waterbody_region:DE/CH/AT) |
| [**Primary inflows**](http://en.wikipedia.org/wiki/Inflow_%28hydrology%29) | [Rhine](http://en.wikipedia.org/wiki/Rhine) |
| [**Primary outflows**](http://en.wikipedia.org/wiki/Discharge_%28hydrology%29) | [Rhine](http://en.wikipedia.org/wiki/Rhine) |
| [**Catchment area**](http://en.wikipedia.org/wiki/Drainage_basin) | [11500 km²](http://en.wikipedia.org/wiki/1_E10_m%C2%B2) |
| [**Basin**](http://en.wikipedia.org/wiki/Drainage_basin) **countries** | Germany, Switzerland, Austria, Liechtenstein |
|  |
| **Max. length** | 63 km |
| **Max. width** | 14 km |
| **Surface area** | [536 km²](http://en.wikipedia.org/wiki/1_E8_m%C2%B2) |
| **Average depth** | 90 m |
| **Max. depth** | 254 m |
| **Water volume** | [55 km³](http://en.wikipedia.org/wiki/1_E10_m%C2%B3) |
| [**Residence time**](http://en.wikipedia.org/wiki/Lake_retention_time) **(of lake water)** | 4.3 years |
| **Surface elevation** | 395 m |
|  |
| **Frozen** | 1795, 1830, 1880 (partial), 1963 |
| [**Islands**](http://en.wikipedia.org/wiki/Category%3AIslands_in_lakes) | [Mainau](http://en.wikipedia.org/wiki/Mainau_Island), [Reichenau](http://en.wikipedia.org/wiki/Reichenau_Island), [Lindau](http://en.wikipedia.org/wiki/Lindau%2C_Lake_Constance) |
| **Sections/sub-basins** | Obersee, Überlinger See; Untersee, Zeller See, Gnadensee |
| **Settlements** | see [list](http://en.wikipedia.org/wiki/Lake_Constance#Towns_and_cities_at_the_lake#Towns_and_cities_at_the_lake) |

Under the designation **Lake Constance** ([German](http://en.wikipedia.org/wiki/German_language): *Bodensee*) one summarizes the three independent [bodies of water](http://en.wikipedia.org/wiki/Body_of_water) *Obersee* ("Lake Superior"), *Untersee* ("Lake Inferior") and *Seerhein* ("Lake Rhine"), lying in the northern [Alpine](http://en.wikipedia.org/wiki/Alps) foreland. Thus, it concerns *two* independent [lakes](http://en.wikipedia.org/wiki/Lake) (standing waters) and one connecting river ([current water](http://en.wikipedia.org/wiki/Current_%28fluid%29)).

Lake Constance is situated in [Germany](http://en.wikipedia.org/wiki/Germany), [Switzerland](http://en.wikipedia.org/wiki/Switzerland) and [Austria](http://en.wikipedia.org/wiki/Austria) near the base of the alps. Specifically, its shorelines lie in the German federal-states of [Bavaria](http://en.wikipedia.org/wiki/Bavaria) and [Baden-Württemberg](http://en.wikipedia.org/wiki/Baden-W%C3%BCrttemberg), the Austrian federal-state of [Vorarlberg](http://en.wikipedia.org/wiki/Vorarlberg) and the Swiss cantons of [Thurgau](http://en.wikipedia.org/wiki/Thurgau) and [St. Gallen](http://en.wikipedia.org/wiki/St._Gallen). The [Rhine](http://en.wikipedia.org/wiki/Rhine) flows into it from the south. It is approximately located at [47°39′N 9°19′E﻿ / ﻿47.65°N 9.317°E﻿ / 47.65; 9.317](http://stable.toolserver.org/geohack/geohack.php?pagename=Lake_Constance&params=47_39_N_9_19_E_type:waterbody).

Lake Constance was first mentioned by the [Roman](http://en.wikipedia.org/wiki/Roman_Empire) geographer [Pomponius Mela](http://en.wikipedia.org/wiki/Pomponius_Mela) about [AD 43](http://en.wikipedia.org/wiki/43). He noted that the Rhine flows through two lakes, and gave them the [Latin](http://en.wikipedia.org/wiki/Latin_language) names *Lacus Venetus* *(Obersee)* and *Lacus Acronius* *(Untersee)*. [Pliny the Elder](http://en.wikipedia.org/wiki/Pliny_the_Elder) used the name *Lacus Brigantinus*, after the Roman city of Brigantium (today [Bregenz](http://en.wikipedia.org/wiki/Bregenz)). The lake is also colloquially known as the *Swabian Sea* (*das Schwäbische Meer*).

The [freshwater](http://en.wikipedia.org/wiki/Freshwater) lake sits at 395 m above [sea level](http://en.wikipedia.org/wiki/Sea_level) and is [Central Europe](http://en.wikipedia.org/wiki/Central_Europe)'s third largest, after [Lake Balaton](http://en.wikipedia.org/wiki/Lake_Balaton) and [Lake Geneva](http://en.wikipedia.org/wiki/Lake_Geneva). It is 63 km long, and at its widest point, nearly 14 km. It covers approximately [571 km²](http://en.wikipedia.org/wiki/1_E8_m%C2%B2) (208 mi²) of total area. The greatest depth is 252 m in the middle of the eastern part (Obersee). Its volume is approximately [55 km³](http://en.wikipedia.org/wiki/1_E10_m%C2%B3). The lake has four parts: Obersee (main, 476 km²), Überlinger See (north, 61 km²), Untersee (west, 63 km²), and the Zeller See and Gnadensee (northwest). The regulated [Rhine](http://en.wikipedia.org/wiki/Rhine) flows into the lake in the southeast, through the Obersee, the city of [Konstanz](http://en.wikipedia.org/wiki/Konstanz) and the Untersee and flows out near [Stein am Rhein](http://en.wikipedia.org/wiki/Stein_am_Rhein). Lake Constance provides fresh water to many cities in south [Germany](http://en.wikipedia.org/wiki/Germany).

Lake Constance was formed by the [Rhine Glacier](http://en.wikipedia.org/wiki/Rhine_Glacier) during the [ice age](http://en.wikipedia.org/wiki/Ice_age). The Rhine, the [Bregenzer Ache](http://en.wikipedia.org/wiki/Bregenzer_Ache), and the [Dornbirner Ache](http://en.wikipedia.org/wiki/Dornbirner_Ache) carry sediments from the [Alps](http://en.wikipedia.org/wiki/Alps) to the lake, thus gradually decreasing the depth of the lake in the southeast.

The lake was frozen in the years 1077 (?), 1326 (partial), 1378 (partial), 1435, 1465 (partial), 1477 (partial), 1491 (partial?), 1517 (partial), 1571 (partial), 1573, 1600 (partial), 1684, 1695, 1709 (partial), 1795, 1830, 1880 (partial), and 1963.

Approximately 1000 tons of fish were caught by 150 professional fishermen in 2001 which was below the previous ten year average of 1200 tons per year. The Lake Constance [trout](http://en.wikipedia.org/wiki/Brown_trout) (*Salmo trutta*) was almost extinct in the 1980s due to pollution, but thanks to protective measures has made a significant return.

The lake itself is an important drinking water source for south-west Germany called Bodenseewasserversorgung.

Car [ferries](http://en.wikipedia.org/wiki/Ferry) link [Romanshorn](http://en.wikipedia.org/wiki/Romanshorn), Switzerland to [Friedrichshafen](http://en.wikipedia.org/wiki/Friedrichshafen), and [Konstanz](http://en.wikipedia.org/wiki/Konstanz) to [Meersburg](http://en.wikipedia.org/wiki/Meersburg).

**Geographic oddity**

There is no legally binding agreement as to where the boundaries lie between Switzerland, Germany and Austria where these three countries meet in Lake Constance. While Switzerland holds the view that the border runs through the middle of the lake, Austria is of the opinion that the lake stands in [condominium](http://en.wikipedia.org/wiki/Condominium_%28international_law%29) of all the states on its banks. Germany holds no unambiguous opinion. Legal questions pertaining to ship transport and fishing are regulated in separate treaties.

Naturally disputes arise. One concerns a [houseboat](http://en.wikipedia.org/wiki/Houseboat) which was moored in two states, another concerns the rights to fish in the Bay of Bregenz. In relation to the latter, an Austrian family was of the opinion that it alone had the right to fish in broad portions of the bay. However, this was accepted neither by the Austrian courts nor by the organs and courts of the other states.

**Recent floods**

* A [100-year flood](http://en.wikipedia.org/wiki/100-year_flood) around [June 1999](http://en.wikipedia.org/wiki/June_1999) ([Pfingsthochwasser 1999](http://en.wikipedia.org/wiki/Pfingsthochwasser_1999)) raised the level about 2 meters above normal, flooding harbors and many shoreline buildings and hotels.
* In late [August 2005](http://en.wikipedia.org/wiki/August_2005), heavy rains raised the level by more than 70 cm in a few days. The rains caused widespread flooding and washed out highways and railroads.

**Islands in the lake**

The three major islands are:

* [Mainau Island](http://en.wikipedia.org/wiki/Mainau_Island)
* [Reichenau Island](http://en.wikipedia.org/wiki/Reichenau_Island)
* [Lindau](http://en.wikipedia.org/wiki/Lindau%2C_Lake_Constance)

This is a complete list of the islands in Lake Constance, listed from east to west:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Nr.** | **Island** | **Area (m²)** | **Population** | **Municipality** | **Coordinates** |
| 1 | Galgeninsel | nowadays a [peninsula](http://en.wikipedia.org/wiki/Peninsula) | - | [Lindau](http://en.wikipedia.org/wiki/Lindau%2C_Lake_Constance) ([Reutin](http://en.wikipedia.org/w/index.php?title=Reutin&action=edit&redlink=1) district) | [47°33′00″N 09°42′14″E﻿ / ﻿47.55°N 9.70389°E﻿ / 47.55; 9.70389﻿ (Galgeninsel)](http://stable.toolserver.org/geohack/geohack.php?pagename=Lake_Constance&params=47_33_00_N_09_42_14_E_type:isle_region:DE-BY&title=Galgeninsel) |
| 2 | Hoy | 53 | - | [Lindau](http://en.wikipedia.org/wiki/Lindau%2C_Lake_Constance) ([Reutin](http://en.wikipedia.org/w/index.php?title=Reutin&action=edit&redlink=1) district) | [47°32′57.35″N 09°41′48″E﻿ / ﻿47.5492639°N 9.69667°E﻿ / 47.5492639; 9.69667﻿ (Hoy)](http://stable.toolserver.org/geohack/geohack.php?pagename=Lake_Constance&params=47_32_57.35_N_09_41_48_E_type:isle_region:DE-BY&title=Hoy) |
| 3 | Lindau | 680,000 | 3,000 | [Lindau](http://en.wikipedia.org/wiki/Lindau%2C_Lake_Constance) (Island district) | [47°32′47″N 09°41′00″E﻿ / ﻿47.54639°N 9.683333°E﻿ / 47.54639; 9.683333﻿ (Lindau)](http://stable.toolserver.org/geohack/geohack.php?pagename=Lake_Constance&params=47_32_47_N_09_41_00_E_type:isle_region:DE-BY&title=Lindau) |
| 4 | Wasserburg | since 1720 [peninsula](http://en.wikipedia.org/wiki/Peninsula) | 27 | [Wasserburg](http://en.wikipedia.org/wiki/Wasserburg_%28Bodensee%29) (Island district) | [47°34′02″N 09°37′46″E﻿ / ﻿47.56722°N 9.62944°E﻿ / 47.56722; 9.62944﻿ (Wasserburg)](http://stable.toolserver.org/geohack/geohack.php?pagename=Lake_Constance&params=47_34_02_N_09_37_46_E_type:isle_region:DE-BY&title=Wasserburg) |
| 5 | [Mainau](http://en.wikipedia.org/wiki/Mainau_Island) | 450,000 | 28 | [Konstanz](http://en.wikipedia.org/wiki/Konstanz) ([Litzelstetten](http://en.wikipedia.org/w/index.php?title=Litzelstetten&action=edit&redlink=1) district) | [47°42′18″N 09°11′46″E﻿ / ﻿47.705°N 9.19611°E﻿ / 47.705; 9.19611﻿ (Mainau)](http://stable.toolserver.org/geohack/geohack.php?pagename=Lake_Constance&params=47_42_18_N_09_11_46_E_type:isle_region:DE-BW&title=Mainau) |
| 6 | Dominikanerinsel | 30,000 | 21 | [Konstanz](http://en.wikipedia.org/wiki/Konstanz) (Altstadt district) | [47°39′51″N 09°10′42″E﻿ / ﻿47.66417°N 9.17833°E﻿ / 47.66417; 9.17833﻿ (Dominikanerinsel)](http://stable.toolserver.org/geohack/geohack.php?pagename=Lake_Constance&params=47_39_51_N_09_10_42_E_type:isle_region:DE-BW&title=Dominikanerinsel) |
| 7 | Mittlerer Langbohl | 30,000 | - | [Konstanz](http://en.wikipedia.org/wiki/Konstanz) (Industriegebiet district) | [47°40′18″N 09°07′32″E﻿ / ﻿47.67167°N 9.12556°E﻿ / 47.67167; 9.12556﻿ (Mittlerer Langbohl)](http://stable.toolserver.org/geohack/geohack.php?pagename=Lake_Constance&params=47_40_18_N_09_07_32_E_type:isle_region:DE-BW&title=Mittlerer+Langbohl) |
| 8 | Triboldingerbohl | 120,000 | - | [Konstanz](http://en.wikipedia.org/wiki/Konstanz) (Industriegebiet district) | [47°40′20″N 09°07′22″E﻿ / ﻿47.67222°N 9.12278°E﻿ / 47.67222; 9.12278﻿ (Triboldingerbohl)](http://stable.toolserver.org/geohack/geohack.php?pagename=Lake_Constance&params=47_40_20_N_09_07_22_E_type:isle_region:DE-BW&title=Triboldingerbohl) |
| 9 | [Reichenau](http://en.wikipedia.org/wiki/Reichenau_Island) | 4,300,000 | 3.300 | [Reichenau](http://en.wikipedia.org/wiki/Reichenau) (Unterzell|Mittelzell|Oberzell) | [47°41′40″N 09°03′48″E﻿ / ﻿47.69444°N 9.06333°E﻿ / 47.69444; 9.06333﻿ (Reichenau)](http://stable.toolserver.org/geohack/geohack.php?pagename=Lake_Constance&params=47_41_40_N_09_03_48_E_type:isle_region:DE-BW&title=Reichenau) |
| 10 | Liebesinsel | 300 | - | [Radolfzell](http://en.wikipedia.org/wiki/Radolfzell) ([Mettnau](http://en.wikipedia.org/w/index.php?title=Mettnau&action=edit&redlink=1) district) | [47°43′18″N 09°00′19″E﻿ / ﻿47.72167°N 9.00528°E﻿ / 47.72167; 9.00528﻿ (Liebesinsel)](http://stable.toolserver.org/geohack/geohack.php?pagename=Lake_Constance&params=47_43_18_N_09_00_19_E_type:isle_region:DE-BW&title=Liebesinsel) |
| 11 | Werd | 14,000 | 9 | [Eschenz](http://en.wikipedia.org/wiki/Eschenz) (Untereschenz district) | [47°39′19″N 08°52′00″E﻿ / ﻿47.65528°N 8.866667°E﻿ / 47.65528; 8.866667﻿ (Werd)](http://stable.toolserver.org/geohack/geohack.php?pagename=Lake_Constance&params=47_39_19_N_08_52_00_E_type:isle_region:CH-TG&title=Werd) |
| 12 | Mittleres Werdli | 4,000 | - | [Stein am Rhein](http://en.wikipedia.org/wiki/Stein_am_Rhein) | [47°39′24″N 08°51′57″E﻿ / ﻿47.65667°N 8.86583°E﻿ / 47.65667; 8.86583﻿ (Mittleres Werdli)](http://stable.toolserver.org/geohack/geohack.php?pagename=Lake_Constance&params=47_39_24_N_08_51_57_E_type:isle_region:CH-SH&title=Mittleres+Werdli) |
| 13 | Unteres Werdli | 6,000 | - | [Stein am Rhein](http://en.wikipedia.org/wiki/Stein_am_Rhein) | [47°39′25″N 08°51′50″E﻿ / ﻿47.65694°N 8.86389°E﻿ / 47.65694; 8.86389﻿ (Unteres Werdli)](http://stable.toolserver.org/geohack/geohack.php?pagename=Lake_Constance&params=47_39_25_N_08_51_50_E_type:isle_region:CH-SH&title=Unteres+Werdli) |
|   | Lake Constance Islands | 5,634,353 | - | 6 municipalities |   |

**Towns and cities at the lake**

Lake Constance seen from Spot satellite.

Bodensee Steamboat *Hohentwiel*.

View from mount Pfänder of Bregenz and the lake (with Lindau in the background).

[Reichenau](http://en.wikipedia.org/wiki/Reichenau_island) seen from the German shore.

Twilight near Arbon.

The Lower Lake (*Untersee*).

**Austria**

* [Hard](http://en.wikipedia.org/wiki/Hard%2C_Austria)
* [Hörbranz](http://en.wikipedia.org/wiki/H%C3%B6rbranz)
* [Bregenz](http://en.wikipedia.org/wiki/Bregenz)
* [Lochau](http://en.wikipedia.org/wiki/Lochau)
* [Höchst](http://en.wikipedia.org/wiki/H%C3%B6chst%2C_Austria)
* [Fussach](http://en.wikipedia.org/wiki/Fussach)
* [Gaissau](http://en.wikipedia.org/wiki/Gaissau)

**Germany**

From the entry of the Rhine, on the northern or right shore:

* On the Upper Lake (*Obersee*) and *Überlinger See*
	+ [Lindau](http://en.wikipedia.org/wiki/Lindau%2C_Lake_Constance) (in [Bavaria](http://en.wikipedia.org/wiki/Bavaria))
	+ [Wasserburg](http://en.wikipedia.org/wiki/Wasserburg_am_Bodensee)
	+ [Nonnenhorn](http://en.wikipedia.org/wiki/Nonnenhorn)
	+ [Kressbronn](http://en.wikipedia.org/w/index.php?title=Kressbronn_(Bodensee)&action=edit&redlink=1) (in [Baden-Württemberg](http://en.wikipedia.org/wiki/Baden-W%C3%BCrttemberg))
	+ [Langenargen](http://en.wikipedia.org/wiki/Langenargen)
	+ [Eriskirch](http://en.wikipedia.org/wiki/Eriskirch)
	+ [Friedrichshafen](http://en.wikipedia.org/wiki/Friedrichshafen)
	+ [Immenstaad](http://en.wikipedia.org/wiki/Immenstaad)
	+ [Hagnau](http://en.wikipedia.org/w/index.php?title=Hagnau_(Bodensee)&action=edit&redlink=1)
	+ [Stetten](http://en.wikipedia.org/w/index.php?title=Stetten_(Bodensee)&action=edit&redlink=1)
	+ [Meersburg](http://en.wikipedia.org/wiki/Meersburg)
	+ [Uhldingen-Mühlhofen](http://en.wikipedia.org/wiki/Uhldingen-M%C3%BChlhofen) (on *Überlinger See*)
	+ [Überlingen](http://en.wikipedia.org/wiki/%C3%9Cberlingen)
	+ [Sipplingen](http://en.wikipedia.org/wiki/Sipplingen)
	+ [Bodman-Ludwigshafen](http://en.wikipedia.org/wiki/Bodman-Ludwigshafen)
* [Konstanz](http://en.wikipedia.org/wiki/Konstanz) with suburbs
	+ [Wallhausen](http://en.wikipedia.org/w/index.php?title=Wallhausen_(Bodensee)&action=edit&redlink=1)
	+ [Dingelsdorf](http://en.wikipedia.org/w/index.php?title=Dingelsdorf&action=edit&redlink=1)
	+ [Litzelstetten](http://en.wikipedia.org/w/index.php?title=Litzelstetten&action=edit&redlink=1)
* On the lower lake (*Untersee*)
	+ [Reichenau](http://en.wikipedia.org/wiki/Reichenau_island) (including the island with same name)
	+ [Allensbach](http://en.wikipedia.org/wiki/Allensbach) (on *Gnadensee*)
	+ [Radolfzell](http://en.wikipedia.org/wiki/Radolfzell) (on *Zellersee*)
	+ [Moos](http://en.wikipedia.org/wiki/Moos)
	+ [Gaienhofen](http://en.wikipedia.org/wiki/Gaienhofen)
	+ [Öhningen](http://en.wikipedia.org/wiki/%C3%96hningen)

**Switzerland**

From the entry of the Rhine, on the southern or left shore:

* On the Upper Lake (*Obersee*)
	+ [Altenrhein](http://en.wikipedia.org/w/index.php?title=Altenrhein&action=edit&redlink=1), [St. Gallen](http://en.wikipedia.org/wiki/Canton_of_St._Gallen)
	+ [Rorschach](http://en.wikipedia.org/wiki/Rorschach), St. Gallen
	+ [Horn](http://en.wikipedia.org/wiki/Horn%2C_Switzerland), [Thurgau](http://en.wikipedia.org/wiki/Thurgau)
	+ [Steinach](http://en.wikipedia.org/wiki/Steinach%2C_St._Gallen), [St. Gallen](http://en.wikipedia.org/wiki/Canton_of_St._Gallen)
	+ [Arbon](http://en.wikipedia.org/wiki/Arbon%2C_Switzerland), [Thurgau](http://en.wikipedia.org/wiki/Thurgau) (as all the following)
	+ [Frasnacht](http://en.wikipedia.org/w/index.php?title=Frasnacht&action=edit&redlink=1)
	+ [Egnach](http://en.wikipedia.org/wiki/Egnach)
	+ [Romanshorn](http://en.wikipedia.org/wiki/Romanshorn)
	+ [Uttwil](http://en.wikipedia.org/wiki/Uttwil)
	+ [Kesswil](http://en.wikipedia.org/wiki/Kesswil)
	+ [Güttingen](http://en.wikipedia.org/wiki/G%C3%BCttingen)
	+ [Altnau](http://en.wikipedia.org/wiki/Altnau)
	+ [Landschlacht](http://en.wikipedia.org/w/index.php?title=Landschlacht&action=edit&redlink=1)
	+ [Münsterlingen](http://en.wikipedia.org/wiki/M%C3%BCnsterlingen)
	+ [Bottighofen](http://en.wikipedia.org/wiki/Bottighofen)
	+ [Kreuzlingen](http://en.wikipedia.org/wiki/Kreuzlingen) (and [Konstanz](http://en.wikipedia.org/wiki/Konstanz), Germany)
* On the Rhine
	+ [Gottlieben](http://en.wikipedia.org/wiki/Gottlieben)
* On the Lower Lake (*Untersee*)
	+ [Ermatingen](http://en.wikipedia.org/wiki/Ermatingen)
	+ [Mannenbach](http://en.wikipedia.org/wiki/Mannenbach)
	+ [Berlingen](http://en.wikipedia.org/wiki/Berlingen)
	+ [Steckborn](http://en.wikipedia.org/wiki/Steckborn)
	+ [Mammern](http://en.wikipedia.org/wiki/Mammern)
	+ [Eschenz](http://en.wikipedia.org/wiki/Eschenz)
	+ [Stein am Rhein](http://en.wikipedia.org/wiki/Stein_am_Rhein), [Schaffhausen](http://en.wikipedia.org/wiki/Schaffhausen)

**See also**

* [2002 Überlingen Mid-Air Collision](http://en.wikipedia.org/wiki/2002_%C3%9Cberlingen_Mid-Air_Collision)