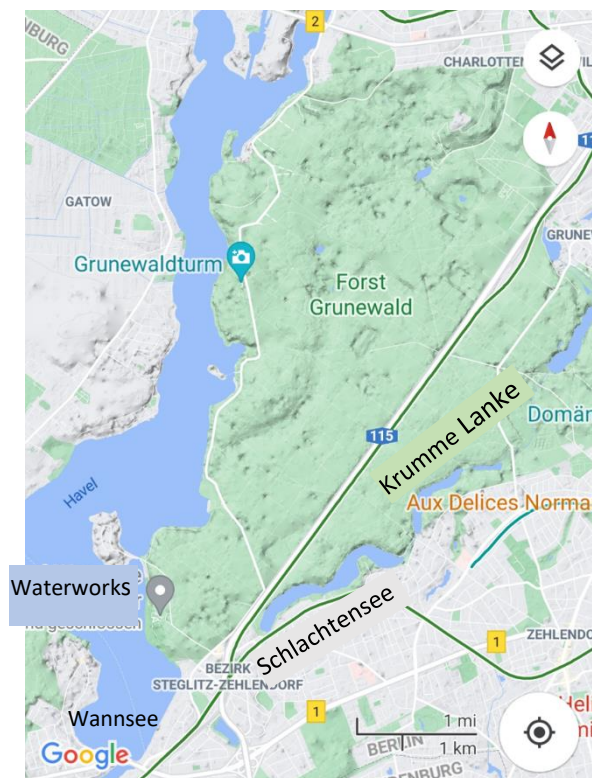


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## Managing the water cycle in Berlin: multiple pressures and multiple uses



*Waterworks Beelitzhof*



*Schlachtensee*

Antje Köhler and Ingrid Chorus

On average, each one of the 4 million Berliners uses about 120 liters of water per person and day, and as most everybody is connected to the sewage system, they discharge almost as much to the 4 wastewater treatment plants which, in turn, discharge to the Rivers Spree and Havel. Nonetheless, the Havel River is intensively used, for boat traffic, for recreation and as source for drinking water which is abstracted via bank filtration – i.e. it is filtered through the fine sandy underground for several weeks before it reaches the wells. How does a lowland city in an area with  $< 600 \text{ L/m}^2$  annual precipitation manage its share of the water cycle and yet target nature conservation?

A specific aspect is that Havel water also feeds 2 chains of smaller peri-urban lakes, one of which is Schlachtensee. Eutrophication has been a problem for recreational use and a concern for potential deterioration of drinking water quality since the mid 1960's. While today the Havel River and its lakes are still eutrophic, P and N concentrations are declining, the duration and



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intensity of cyanobacterial blooms has decreased and macrophytes are returning. For 2 lakes, Schlachtensee and Lake Tegel, phosphorus stripping at their main inflow has achieved a clearly mesotrophic status.

Scientific morning program: This excursion will demonstrate water cycle management in a densely populated urban area for the targets of both environmental protection and safe human use. We will visit the SW of Berlin, including Wannsee, a lake of the Havel River, from which the Berlin Waterworks abstract bank filtrate. There we will receive an introduction to the water management approach for the SW part of the city, see the lake shore, some of the abstraction wells and the sandy substrate. Provided the Covid situation allows being indoors, we will also see the (quite minimal) treatment needed for the production of drinking water. Between these waterworks and Schlachtensee we will follow the path of the water (10-minute walk) to the P stripping facility that treats Wannsee water before it flows into Schlachtensee. We will visit this facility and understand the treatment target for Schlachtensee.

Lunch (at your own costs) will be at a lakeside beer garden/restaurant.

A leisurely afternoon will include options for swimming, stand-up paddling, boating (rowing or canoe) or a lakeside stroll, all in close proximity so that the group can stay in contact even if people choose different activities (the decision whether this will be at Schlachtensee or at Wannsee will follow in spring, as enterprises for planning this are not yet open). Alternatively, you can book the Havel River Canoe trip (separate excursion, starting at 2 p.m.).

**Date:** Thursday, 11 August 2022

**Duration:** 10:00 am – 16:00 pm (approximate return time)

**Number of participants:** 10-25 participants max. In case we do not gather the minimum of 10 participants until June 15<sup>th</sup>, the tour will be cancelled.

**Meeting point:** Waterworks Beelitzhof, Kronprinzessinnenweg 23, 14109 Berlin

**Getting there and back:** Berlin city train system (S-Bahn) to the nearest station (Nikolassee) and walk 15 minutes to Berlin Waterworks (if you have difficulties walking, please let us know so that we can organise a shuttle). Unless you choose to walk on to Krumme Lanke, you can take the same trainline back, now from the station called "Schlachtensee".

**For further questions** about the trip, please contact the trip organizer Ingrid Chorus; Email: [Ingrid.chorus@gmail.com](mailto:Ingrid.chorus@gmail.com)



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**Registration Costs:** 0.00 €

**Not included:** Berlin public transportation ticket, i.e. twice 3.20 €, whatever you choose to buy or bring for lunch and 20.00 € for boat rental, to be collected on site.

**Registration deadline:** 15 June 2022

The excursion organizer will contact all registered participants after the registration deadline to clarify if the participant prefers to take part in the morning and/or in the afternoon program.