

Ice prevention in the pelican basin

Zoo Dählhölzli in Bern, Switzerland

"The city foxes stay away"



Zoo Dählhölzli, Bern
Basin of the Dalmatian pelican

Operation

Natural pool with 1 OLOID Type 400 A

Surface: approx. 400 - 500 m²

Depth: max. 1 m

Period

Since 2014

Success

Ice-free keeping

Natural barrier to the breeding island against city foxes

No foot injuries due to climbing over ice edges

Short description Zoo Bern

(more detailed at www.tierpark-bern.ch)

The Bern Zoo consists of two areas separated by approx. 2 km, the bear park and the Dählhölzli. In the latter, the animals are distributed in different areas: in the zoo, in the forest, in the children's zoo and on the banks of the Aare, always with the intention of creating as much space as possible per animal.

The Aare bank complex was rebuilt after the Aare flood in 1999 as a branch of the river. Here you will find beaver and otter as well as the Dalmatian pelicans. These have been living in the zoo since 1971, but only successfully brooded in 2008 for the first time after a floating breeding island was installed in the pond in 2005.

When the water froze in the winter, which happened for 1 - 2 weeks per year, occasionally city foxes, sometimes dogs reached the island and attacked the pelicans. When only part of the pool was covered with ice, it sometimes happened that the pelicans injured their feet as they climbed up the sharp edges of the ice.

OLOID use in the pond of the Dalmatian pelicans

In 2014, an OLOID Type 400 was installed in the pelican basin to enable ice prevention. The OLOID runs in winter for about 3 months without interruption. If ice has formed before, it disappears within a few days. The OLOID causes fine surface waves that spread all over the basin. In addition, a flow is generated. Thus, the ice formation can be prevented. The power consumption for OLOID use is so low that it is not noticed in the overall operation of the zoo.



The water depth in the Pelican basin varies greatly both locally and seasonally, but at the deepest points it is no more than 1 m, depending on how much sediment is deposited by the Aare, which is directly connected to the basin. These sediments are flushed into the basin during Aare floods (4 - 6 times a year) and remain there. Thus, the positioning of the OLOID is reconsidered year after year, because the surface of the pond floor is very heterogeneous and constantly changing, depending on the type and amount of sediment entering the basin.

Success

The water does not freeze anymore, so the breeding island is always separated from the mainland. As a result, the city foxes are no longer their prey. Without the sharp edges of the ice sheets there is no risk of injury for the pelicans.