

An aerial photograph of a large, deep blue lake nestled within a rugged, mountainous landscape. The surrounding terrain is covered in dense green forests, with some rocky, brownish patches visible. The lake's shape is irregular, with several smaller inlets and peninsulas. The text 'WASSER' is written in a white, serif font, with two small circles above the 'o's. Below the text is a white, wavy line that mimics the shape of water.

WASSER

WE ARE WATER





# Rural wastewater treatment provided by a water cooperative in Upper Austria

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# STATE OF UPPER AUSTRIA



- 1.46 million inhabitants
- 11,982 km<sup>2</sup>
- capital: Linz
- 15 districts
- 440 communities



# STRUCTURE IN UPPER AUSTRIA



- 440 communities
- 4,000 villages with less than 20 buildings
- Scattered dwellings
- Small agglomeration

# SOLUTION WATER COOPERATIVES



## Members

- user
- owner
- responsible persons

## Principles

- bodies governed by public law
- water right
- common property
- self-determined
- personal responsibility
- state of the art
- self-monitoring
- cost covering
- voluntary service

# WATER COOPERATIVES

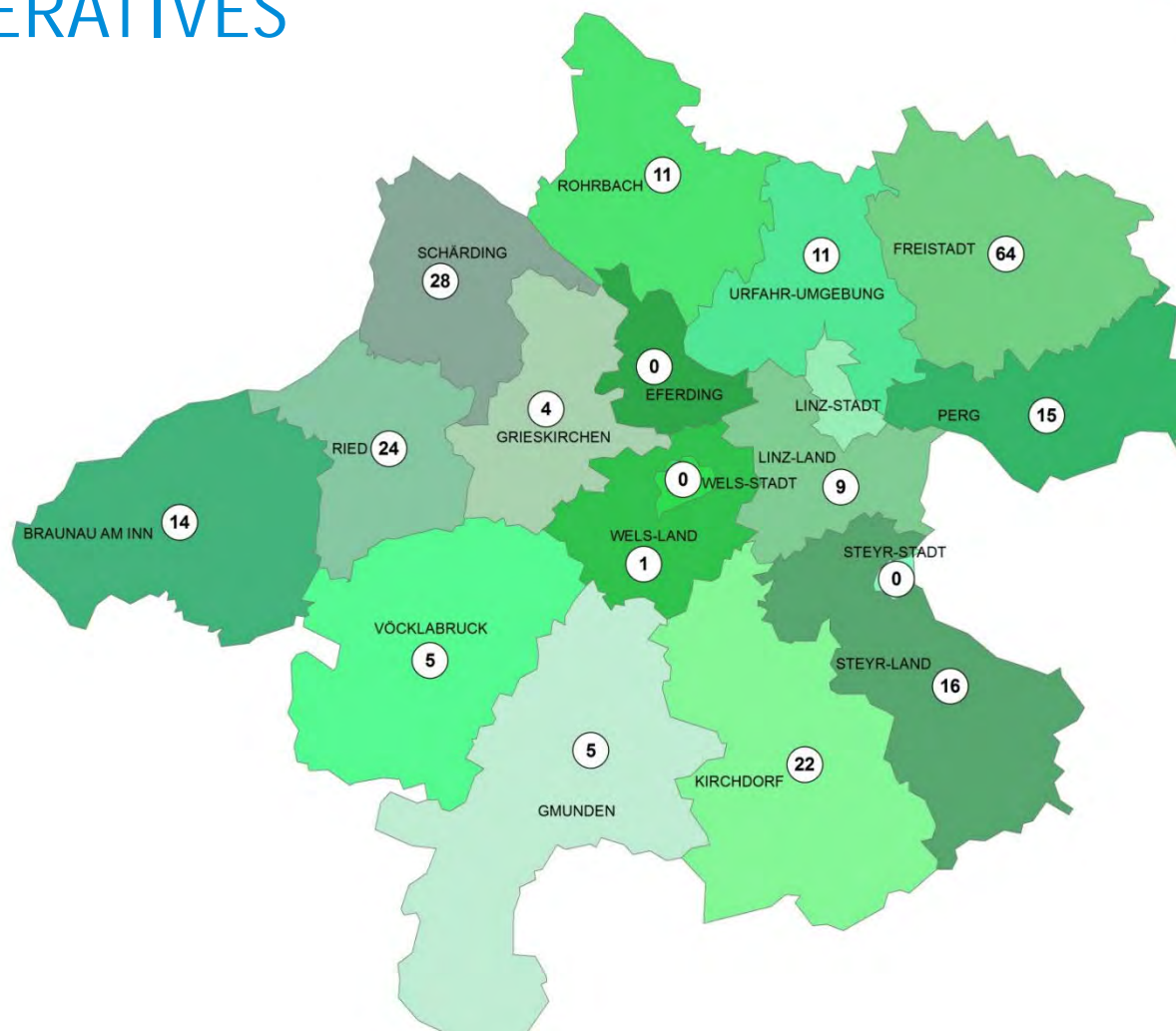


## Financing

- connection fee
- basic charge
- consumption charge
- subsidies
- credits and loans



# 259 WASTE WATER COOPERATIVES

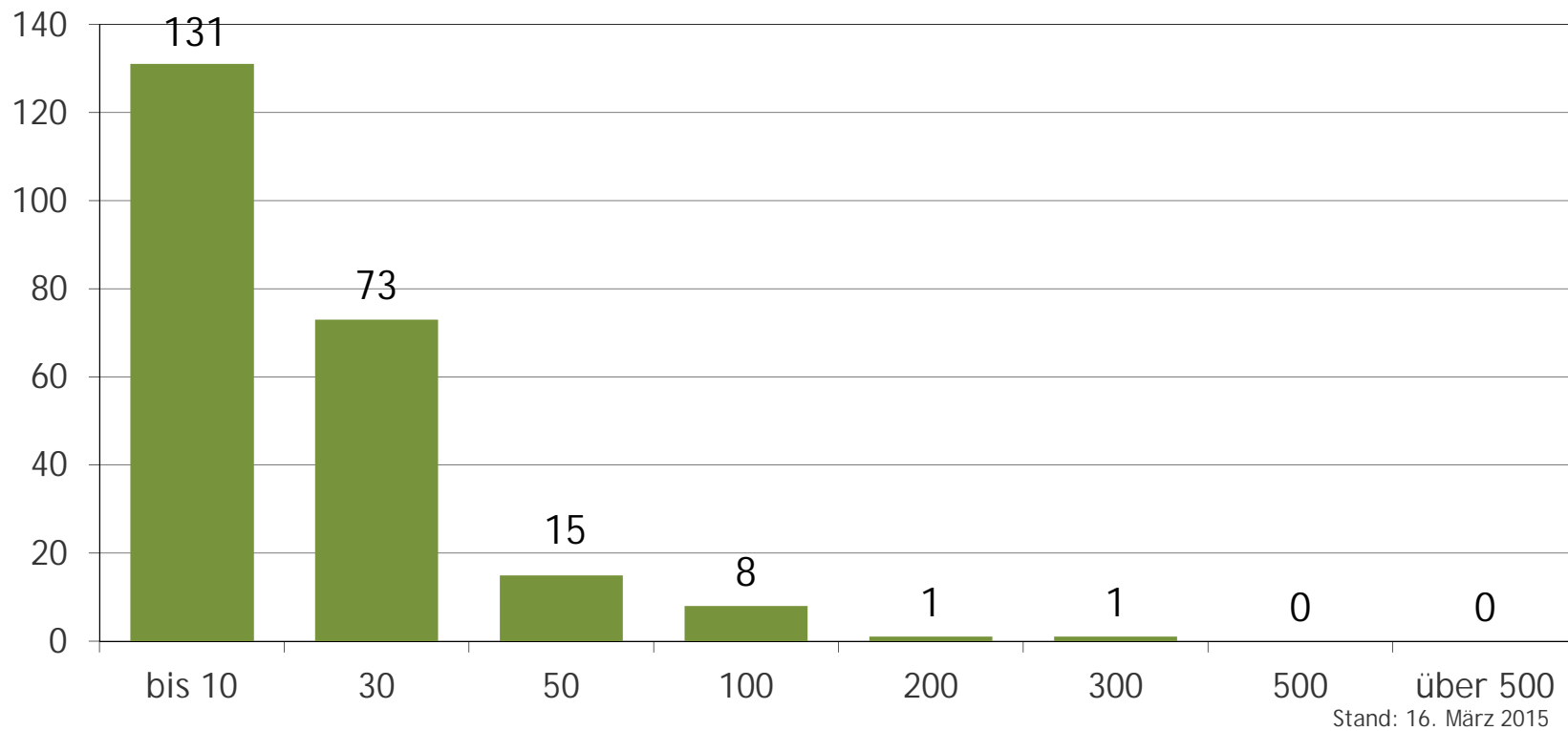


Stand: März 2019

# WATER COOPERATIVES



## Member structure of waste water cooperatives



Members



# WATER COOPERATIVES IN AUSTRIA



- approx. 3,400 water-cooperatives

## Cooperative solutions

- predominant rural areas
- rural communities, villages, settlements
- usually non-economical areas

# WATER COOPERATIVE DINGDORF

January 2021

Rural wastewater treatment provided by a water cooperative – Aichlseder/Wesely

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# WATER COOPERATIVES

## DINGDORF WASSER & DINGDORF ABWASSER



October 2006: Foundation of water cooperatives-23 members  
June 2009: Construction of the plants  
June 2010: Commissioning of both plants





# WATER COOPERATIVES

## DINGDORF - MOTIVATION



- Extreme drought summer 2003
- The community supplied the inhabitants whose housewells were dry
- But 2 km distance to the nearest public water supply
- Test drilling and pumping test 2006 and 2007
- Sinks and septic tanks in a village are not state of the art



# WATER COOPERATIVES

## DINGDORF - REALISATION



- Planning: Experienced consulting engineer
- Tendered constructing works: Construction company
- Building costs ~990,000 EUR
  - Wastewater: 660,000 EUR
  - Water: 330,000 EUR
  - Financed by connection fees, credit and subsidies
- Working costs per year
  - Wastewater: ~18,000 EUR
  - Water: ~14,000 EUR

# WATER SUPPLY

## Water extraction - drill well

- construction of the drill well in June 2006
- possible flow rate 25.9 m<sup>3</sup> per day (0.3 l/s)
- total depth 61.5 meters





# WATER SUPPLY



## cistern

- 2x20 m<sup>3</sup> water tank
- space for technology
- deacidification (+calcium)
- 2,460 meters of water pipes
- terrain is cleverly used;
- cistern is located above the village
- supplying all users without pumps (pressure reducing is necessary)



# WATER SUPPLY



Cistern / space for technology





## SEWER SYSTEM - DISPOSAL

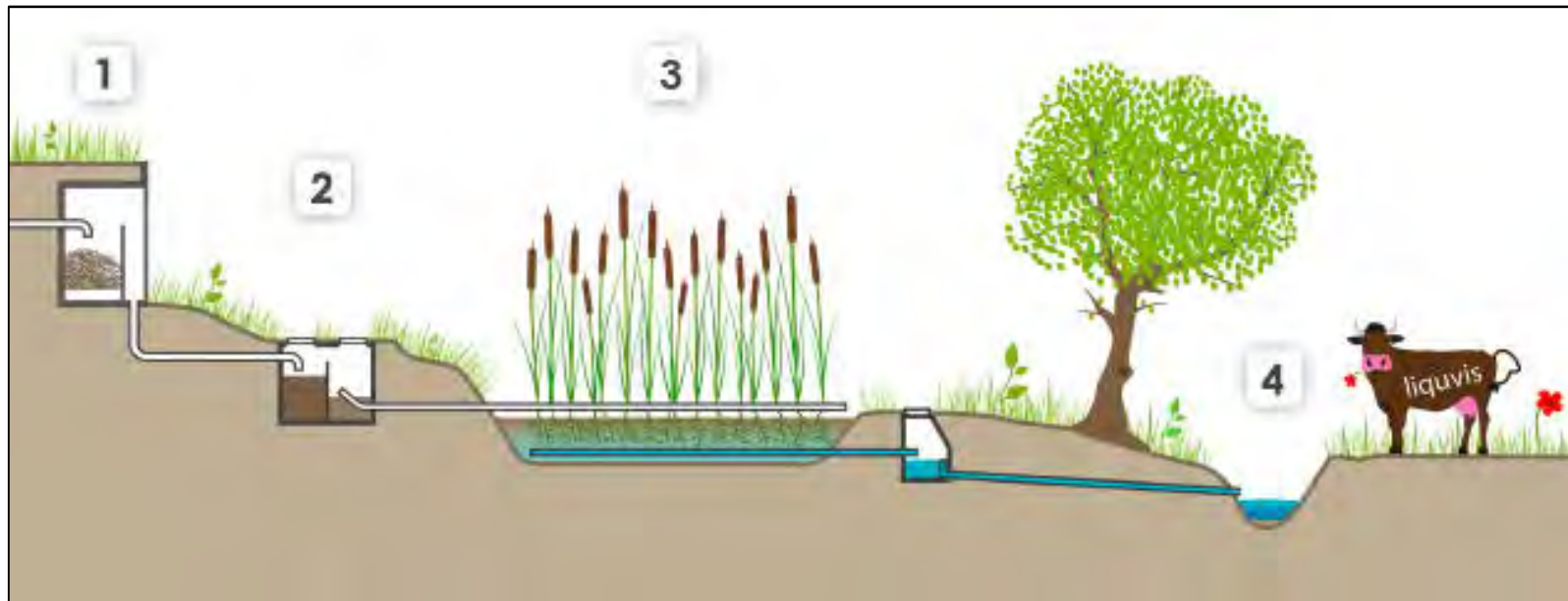
- 2,200 m PE-sewer installed
- terrain is cleverly used (the village is located on a hillside)
- the plant is below the village
- pumping stations are not necessary





# WASTEWATER TREATMENT PLANT

1. Rotting station
2. Pump shaft
3. Reed bed - Inspection shaft
4. After inspection - piping into public water



# WASTEWATER TREATMENT PLANT

Commissioning distribution device - reed bed



# FINAL EFFLUENT TEST

## 3.2. Grenzwerte (maximale Konzentrationen) im Kläranlagenablauf

		measured value	limit value determined by authority
Parameter		Messwert (mg/l)	Grenzwert (mg/l)
BSB <sub>5</sub>	BOD <sub>5</sub>	0,9	25
CSB	COD	22,4	90
NH <sub>4</sub> -N		0,079	*10
TOC		7,89	30

\* bei Ablauftemperaturen > 12° C

BOD<sub>5</sub> Biological Oxygen Demand → pollutant parameter of wastewater

COD Chemical Oxygen Demand → parameter for pollutants released into the wastewater

NH<sub>4</sub>-N Ammonium nitrogen in the wastewater is degraded by microorganisms to nitrate

TOC Total Organic Carbon → load parameter of the wastewater



# OPERATION AND MAINTENANCE

- Village community cares for soil filters
- Lawn care and straw management of the rotting station by all members (by an annual list)



# WATER COOPERATIVES „DINGDORF WASSER“ AND „DINGDORF ABWASSER“

They like to present this special kind of decentralized water supply and sanitation



# THE UMBRELLA ORGANISATION



- 1946
- "Foundation of an umbrella organisation for common guidance and support"  
by an unanimous resolution of the Upper Austrian Parliament
- one-stop-shop of consulting, supporting and representing to the members



# UMBRELLA OBJECTIVES



- Teamwork **with one voice**, pool of ideas and resources for sustainability (technical and economic)
- Support foundation of water coops
- Help in procuring spare parts and equipment - **pooling**
- Organise and maintain **training courses** and **facilities for instruction**
- Act as an advocate **representing the interests** of members

# EDUCATION PROGRAMME



Courses for

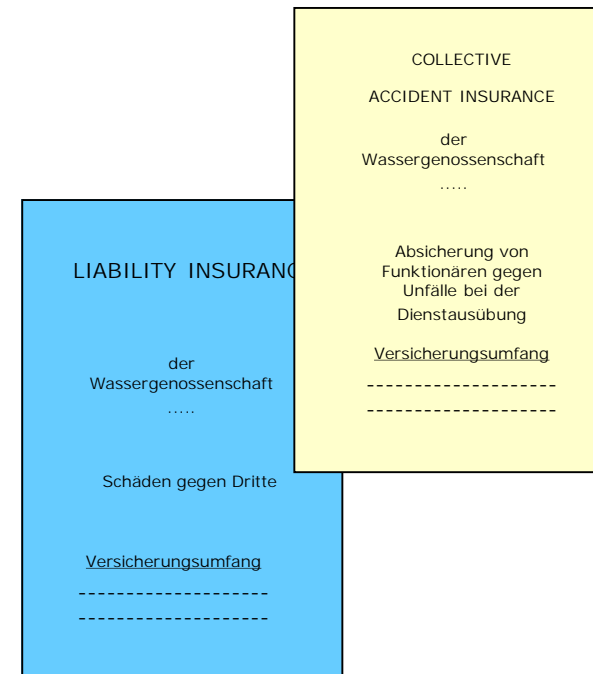
- chairpersons
- cashiers
- controllers
- water managers
- scheme operators
- tap attendants
- public relation



# GROUP INSURANCE



- Group third-party insurance
- Collective functionary accident insurance
- Claims processing
- Questionnaire library





# WEBSITE



NEWS | LOGIN | DOWNLOADS

Service Bildung Genossenschaften Trinkwasser Abwasser Be-/Entwässerung Über uns

Suchbegriff eingeben



## OÖ WASSER - Wir sind Wasser.

Unser Dachverband präsentiert die OÖ WASSER - Idee mit unseren Aktivitäten und bietet Ihnen auf dieser Website umfangreiche Informationen zum Thema Wassergenossenschaften.

Mehr über 70 Jahre OÖ Wasser erfahren Sie in unserer [Broschüre](#).

## Informationen zum Corona-Virus

# WEBSITE





# SUCCESSFUL SOLUTION IAS





# UPPER AUSTRIA WATER



- water treatment state of the art
- self determinate
- cost effective
- local-based, independent, crises proofed
- adapted solutions, economy of scale
- long-time experience shows a sustainable model fit for the future







THANK YOU!

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