Facts and Figures
2017
CONTENT

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Who are the StEB?

The Cologne Drainage Utility (Stadtentwässerungsbetriebe Köln, AöR “StEB Köln”) is a water management service provider and therefore a key component of public services. It was established in May 2001 as a municipal company of the City of Cologne and is continuing the long-standing successful work of the former waste water authority (Amt für Stadtentwässerung) of the City of Cologne. Its primary objective is waste water disposal, but new tasks have been added to the StEB Köln’s portfolio in recent years. This currently involves responsibility for construction-related measures for structural flood protection and preventive flood protection as well as maintaining streams and ponds in the City of Cologne.

With the exception of drinking water supply, all key water management tasks of the City of Cologne are pooled at StEB Köln. This creates synergies and allows StEB Köln to adopt a sustainable and holistic approach as well as to assume responsibility for integrating the developed solutions into a wider range of tasks.
StEB Köln also offers its extensive, all-encompassing expertise on its entire scope of activities to other municipalities, communities and private individuals within its legal capabilities. These services include consulting, implementing specific measures and waste water disposal.

For all its activities, the emphasis is on quality, overall efficiency and sustainability. In a capacity that reaches beyond fulfilling its core tasks, StEB Köln sees itself as an entity that helps to shape Cologne’s urban environment. A pioneering human resources policy is an important foundation for its work.

The figures given here refer to the reporting date, 31 December 2016. These figures and other information are available on the StEB website (www.steb-koeln.de).
EMPLOYEES 641
Men: 484
Women: 157
of whom 25 are apprentices

Average AGE of employees 45.6 years

WASTE WATER CHARGES

SEWAGE 1.54 EUR/m³

RAINWATER 1.27 EUR/m²
Area connected to drainage network
Development of WASTE WATER CHARGES

Sewage connected surface area in EUR/m²

<table>
<thead>
<tr>
<th>Year</th>
<th>Value EUR/m²</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995</td>
<td>1.43</td>
</tr>
<tr>
<td>2003</td>
<td>1.20</td>
</tr>
<tr>
<td>2012</td>
<td>1.10</td>
</tr>
<tr>
<td>2017</td>
<td>1.27</td>
</tr>
</tbody>
</table>

LOAD OF HOUSEHOLDS price index
Cologne by national comparison

<table>
<thead>
<tr>
<th>Year</th>
<th>Waste water charge index Cologne</th>
<th>Waste water price index Germany</th>
<th>Consumer price index Germany</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>2000</td>
<td>82.7</td>
<td>114.3</td>
<td>106.4</td>
</tr>
<tr>
<td>2010</td>
<td>96.4</td>
<td>133.8</td>
<td>124.2</td>
</tr>
<tr>
<td>2016</td>
<td>99.9</td>
<td>139.4</td>
<td>132.8</td>
</tr>
</tbody>
</table>

Targeted figure 2017 96.2
**Area of City of Cologne**

- **405 km²**

**Proportion of Water Conservation Zones within city limits**

- **49.8%**

**Catchment area of Sewage System**

- **155 km²**

**Connected Inhabitants**

- **1,060,891**

**Connected Properties**

- **133,080**

**Properties NOT connected to sewage system** (small-scale dischargers)

- **457**
  - of which small-scale sewage treatment units **214**
  - of which pits with no outflow **243**
**TASKS**

**Waste water disposal and road drainage**
- **Collection**, waste water **disposal** in sewage treatment plants using a mixed system
- Differentiated **collection**, **disposal** and **treatment** of rain water
- **Purification** of waste water in sewage treatment plants
- **Returning** purified waste water into water bodies
- **Disposal** or recycling of residues of waste water and sewage system cleaning
- **Disposal** of faeces from sewage treatment plants, septic tanks and chemical toilets
- **Operation** and **maintenance** of street drainage facilities

**SEWER NETWORK LENGTH** (Gravity sewage)  

walkable | not walkable
---|---
605 km | 1,768 km
(profile height ≥1,200 mm) | (profile height <1,200 mm)

2,373 km
5 SEWER CLEANING VEHICLES
Annual cleaning capacity
250 km

PRESSURE LINES
41.8 km

MANHOLES
58,054

PUMPING STATIONS
149

PURIFICATION BASINS for rainwater
199 of which 84 rainwater retention basins

OPERATING SLIDES
260

FLOOD WATER SLIDES
834

ROAD GULLIES
97,071

4 GULLY CLEANING VEHICLES
Annual cleaning capacity
88,062 gullies
## TASKS

By providing waste water disposal, we also ensure:

- the **construction, expansion, maintenance** and **refurbishment** of drainage systems and sewage treatment plants while optimising facilities from an ecological, technical and economic perspective
- the **implementation** indirect discharger monitoring
- the **sampling** and **analysis** of waste water and residual substances from the cleaning process

### 4 WASTE WATER TREATMENT PLANTS

<table>
<thead>
<tr>
<th>Waste water treatment plant (WWTP)</th>
<th>PT*</th>
<th>Max. rainwater inflow in m³/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large WWTP Stammheim</td>
<td>1,570,000</td>
<td>9.2</td>
</tr>
<tr>
<td>WWTP treatment plant Rodenkirchen</td>
<td>88,000</td>
<td>0.59</td>
</tr>
<tr>
<td>WWTP Weiden</td>
<td>80,000</td>
<td>0.64</td>
</tr>
<tr>
<td>WWTP Langel</td>
<td>130,000</td>
<td>0.70</td>
</tr>
<tr>
<td>WWTP Wahn <em>(operated by StEB)</em></td>
<td>92,000</td>
<td>0.80</td>
</tr>
</tbody>
</table>
CAPACITY
Total treatment plants

1.96 mil.

Development of ELECTRICITY CONSUMPTION at Cologne’s treatment plants

- Power purchased from utilities
- Self-generated power

<table>
<thead>
<tr>
<th>Year</th>
<th>Power purchased from utilities</th>
<th>Self-generated power</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>25 Million KWh/a</td>
<td>34 Million KWh/a</td>
</tr>
<tr>
<td>2013</td>
<td>8 Million KWh/a</td>
<td>38 Million KWh/a</td>
</tr>
<tr>
<td>2016</td>
<td>8 Million KWh/a</td>
<td>35 Million KWh/a</td>
</tr>
<tr>
<td>2020</td>
<td>4 Million KWh/a</td>
<td>36 Million KWh/a</td>
</tr>
<tr>
<td>2025</td>
<td>2 Million KWh/a</td>
<td>37 Million KWh/a</td>
</tr>
<tr>
<td>2030</td>
<td>0 Million KWh/a</td>
<td>37 Million KWh/a</td>
</tr>
</tbody>
</table>

Reduction of total power consumption by 20%
No power purchases
Increase in self-generated power to 100%

Indirect discharger MONITORING DATA

<table>
<thead>
<tr>
<th>Category</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of recorded measuring stations for indirect discharger monitoring</td>
<td>2,732</td>
</tr>
<tr>
<td>Inspections carried out as part of indirect discharger monitoring</td>
<td>2,688</td>
</tr>
<tr>
<td>Measuring stations with regular inspections</td>
<td>1,319</td>
</tr>
</tbody>
</table>

*PT = sum of population and population equivalent
Flood protection

TASKS

- **Structural and preventive flood protection** underground (adjustments to sewage system) and above ground (building and maintaining walls, dykes, flood protection gates, protective walls, bulkheads and movable elements, pumping stations)

- **Flood management** with implementation of a flood protection centre comprising representatives of StEB, road construction, the professional fire department, the police force, the armed forces and non-public service providers such as THW and DLRG etc.

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**FLOOD PROTECTION FACILITIES ON THE RHINE**

Total length of bank of Rhine: **69.91 km**

- **0.32 km**: Up to **10.70 m** Cologne gauge protected riverbank
- **32.24 km**: Up to **11.30 m** Cologne gauge protected riverbank
- **Implementation of flood protection concept**
- **Raising awareness** among the population through
  - precautionary land use
  - building precautions
  - behavioural precautions
  - Risk prevention
- **Information** using flood hazard maps
  (depth and extent of flooding)

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total length of mobile flood protection elements</td>
<td><strong>10.27 km</strong></td>
</tr>
<tr>
<td>Up to Cologne gauge protected riverbank</td>
<td><strong>37.35 km</strong></td>
</tr>
<tr>
<td>Length of flood crossings</td>
<td><strong>2 km</strong> approx.</td>
</tr>
</tbody>
</table>
## TASKS

- **Care and maintenance** of Cologne’s streams (flowing water with exception of the Rhine)
- **Construction works** related to water bodies and naturalised development of water bodies in relation to Cologne’s streams
- **Operating** technical facilities related to Cologne’s streams
- **Maintaining** Cologne’s ponds and protecting the fish population
- **Ensuring** sufficient water quality and quantity of ponds
- **Operating** technical equipment of the ponds and ensuring traffic safety of waterfront structures and ice free surfaces

## WATERWAYS and PONDS in the City of Cologne

**OPEN** streams

![Image of OPEN streams](image)

**CANALISED** streams

![Image of CANALISED streams](image)

**PONDS**

![Image of PONDS](image)

- OPEN streams: 70.7 km
- CANALISED streams: 19.7 km
- PONDS: 15
Do you have any questions?
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