

# Removal of micropollutants in the Immendingen-Geisingen WWTP

## Specification of the plant:

|                            |                     |           |
|----------------------------|---------------------|-----------|
| Treatment capacity         | [PE]                | 25,500    |
| Load                       | [PE]                | 17,000    |
| Inflow volumes:            |                     |           |
| ▪ Dry weather flow         | [l/s]               | 134       |
| ▪ Max. wet weather flow    | [l/s]               | 236       |
| ▪ Annual wastewater volume | [m <sup>3</sup> /a] | 2,711,946 |



## Process technology:

|                                |                                                      |
|--------------------------------|------------------------------------------------------|
| Mechanical treatment           | Fine screen, sand and grease trap, primary clarifier |
| Biological treatment           | Pre-denitrification, nitrification, 3 lanes          |
| Chemical treatment             | Phosphate precipitation: simultaneous                |
| Elimination of micropollutants | Granular activated carbon filter (GAC)               |
| Filter                         | Single layer GAC-filter (GAC 280 cm)                 |

### Gemeindeverwaltungsverband



Immendingen / Geisingen



Verbandskläranlage  
Immendingen-Geisingen  
Unterer Ösch 16  
78194 Immendingen

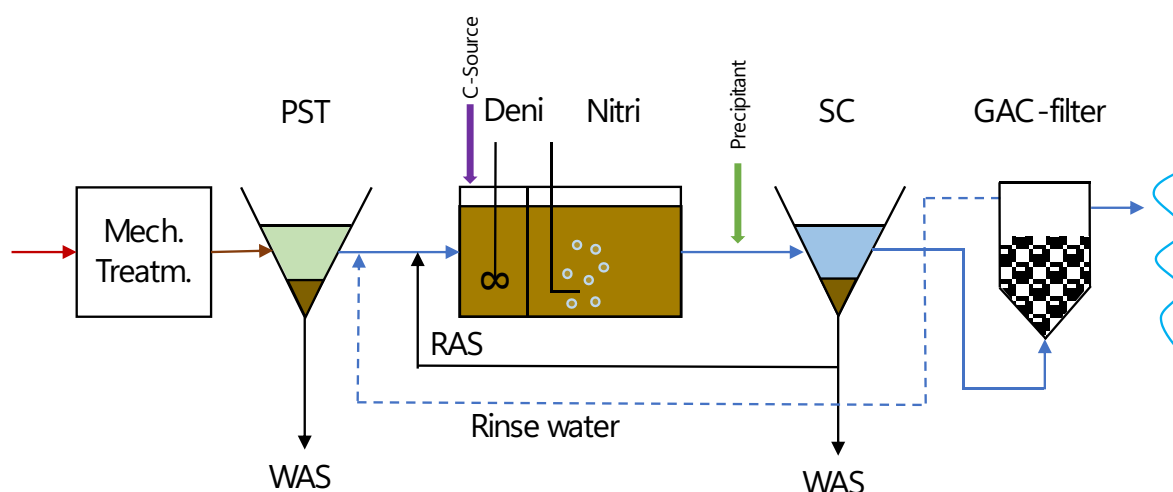


Fig. 1: Process diagram of the Immendingen-Geisingen wastewater treatment plant

## Design of micropollutant removal:

|                                                       |                   |      |
|-------------------------------------------------------|-------------------|------|
| Year of commissioning of the advanced treatment stage | 05/2021           |      |
| Activated carbon filter                               |                   |      |
| ▪ Max. treatable volume                               | [l/s]             | 150  |
| ▪ Number of filter cells                              |                   | 6    |
| ▪ Total surface area of the filter cells              | [m <sup>2</sup> ] | 81   |
| ▪ Total volume of the filter cells                    | [m <sup>3</sup> ] | 225  |
| ▪ Volume of the activated carbon bed per cell         | [m <sup>3</sup> ] | 37.5 |
| ▪ Surface area of the activated carbon bed per cell   | [m <sup>2</sup> ] | 13.5 |
| ▪ Max. filter velocity                                | [m/h]             | 8    |
| ▪ Min. empty bed contact time (EBCT)                  | [min]             | 25   |