



811.363

Chapter 2.2: Legislation in Austria



**Universität für Bodenkultur Wien
University of Natural Resources
and Applied Life Sciences, Vienna**

Department für Wasser-Atmosphäre-
Umwelt
Department of Water, Atmosphere
and Environment

Water management act (Wasserrechtsgesetz 1959)

Superior law laying down regulations on water resource protection, use of water, protection against flooding, organisation of water management.

- § 2 Public Water Bodies (Appendix A)
- § 3 Private Water Bodies (groundwater)
- § 8 Public use of private and public water
bathing, washing, drinking, soaking,
- § 10 Use of groundwater
- § 12a Best available technologies
- § 30 Purpose of water protection
no hazard for men and animals, groundwater for drinking, surface water for public use

<http://www.lebensministerium.at/>

Water management act (Wasserrechtsgesetz 1959)

- § 31a Environmental goals for surface- and groundwaters
- § 32 regulates potential impacts on (ground) water quality in general (see WFD)
- § 32b Indirect discharge (announce, permittance, limits..)
- § 33 The obligatory protection of aquifers
- § 33b,d Emission-, Immission-Regulations
- § 34 Protection of drinking water supply systems
- § 53 Water provision plan
- § 55 Water managemental planning
 - Basics, river basins, water management plan, measures, programmes of measures...
 - Public participation

Water management act (Wasserrechtsgesetz 1959)

Special regulations concerning the protection of aquifers against adverse impacts from agriculture

A proper land utilisation is given, if this use complies to all regarding regulations (esp. those for chemicals, plant protection, fertilizers, sewage sludge, soil protection).

For example: An additional permission is needed if

- manuring on agricultural area without greenery $> 175 \text{ kg N}/(\text{ha} \cdot \text{a})$
and with greenery $> 210 \text{ kg N}/(\text{ha} \cdot \text{a})$
- breeding of animals > 3.5 manure-livestock-units per one hectare self- farmed area (e.g. 1 manure-livestock-unit is equivalent to 1 cattle > 2 years old)

Wastewater emission ordinances (Abwasseremissionsverordnungen)

Laying down restrictions for wastewater emission to the recipients/sewer lines from i.e. households, food production trade and industry, infrastructure, solid waste, livestock breeding, ...

One Superior Emission Ordinance (General restriction of waste water emissions to the recipients/sewer lines) regulates the principle emission standards for a wide range of water pollution parameters (~40). Direct/ indirect discharge. It also lists about 70 specific ordinances for different waste types, which contain emission limits and a lot of specific internal measures for each wastewater type.

1. Emission ordinance for domestic wastewater

Emission standards and treatment efficiency demands

Parameter	1. AEVka - AUSTRIA				91/271/EWG - EU	
	50-500	500-5.000	5.000-50.000	>50.000	others than vulnerable areas and Areas > 1500m	Vulnerable areas
BOD ₅ (mg/l)	25	20	20	15	25	25
COD (mg/l)	90	75	75	75	125	125
NH ₄ -N (mg/l)	10	5	5	5	-	-
N _{tot}	-	-	70% (>12°C)	70% (>12°C)	-	15mg/l ¹⁾ 10mg/l ²⁾ 70-80% ³⁾
P _{tot} (mg/l)	-	2 (>1.000 PE)	1	1	-	2 ¹⁾ 1 ²⁾

¹⁾... for plants 10.000-100.000 PE

²⁾... for Plants >100.000 PE

³⁾... average of all efficiency data during one year

Specific wastewater emission ordinances - example (**Abwasseremissionsverordnungen**)

Restriction of waste water emissions originated from slaughtering and meat processing (**AEV Fleischwirtschaft**)

Restriction of waste water emissions originated from intensive animal husbandry (**AEV Massentierhaltung**)

Restriction of waste water emissions originated from milk processing and milk converting (**AEV Milchwirtschaft**)

Emissionsbegrenzungen gemäß § 1

	I. Anforderungen an Einleitungen in ein Fließgewässer	II. Anforderung an Einleitungen in eine öffentliche Kanalisation
A.1 Allgemeine Parameter		
1. Temperatur	30 °C	35 °C
2. Toxizität		
2.1 Algentoxizität G_A	2	a)
2.2 Bakterientoxizität G_L	2	a)
2.3 Daphnientoxizität G_D	2	a)
2.4 Fischttoxizität G_F	2	a)
	b)	
3. Abfiltrierbare Stoffe c)	30 mg/l	150 mg/l
4. pH-Wert	6,5–8,5	6,5–9,5
A.2 Anorganische Parameter		
5. Kupfer ber. als Cu d)	0,5 mg/l	0,5 mg/l
6. Mangan ber. als Mn d)	1,0 mg/l	1,0 mg/l
7. Zink ber. als Zn d)	1,0 mg/l	1,0 mg/l
8. Freies Chlor ber. als Cl_2 f)	e)	0,2 mg/l
9. Ammonium ber. als N g)	10 mg/l	h)
10. Ges. geb. Stickstoff, TN_b ber. als N i)	j)	–
11. Nitrit ber. als N	1,0 mg/l	10 mg/l
12. Gesamt-Phosphor ber. als P	2,0 mg/l	–
13. Sulfid ber. als S	0,1 mg/l	1,0 mg/l
A.3 Organische Parameter		
14. Ges. org. geb. Kohlenstoff, TOC ber. als C k)	30 mg/l	–
15. Chem. Sauerstoffbedarf, CSB ber. als O_2 l)	90 mg/l	–
16. Biochem. Sauerstoffbedarf, BSB ₅ ber. als O_2	25 mg/l	–
17. Adsorb. org. geb. Halogene, (AOX) ber. als Cl m)	0,1 mg/l	0,1 mg/l

Animal husbandry

Internal measures

(front – of – pipe technology)

- liquid – solid – separation
(separate excrements, residues of fodder, bedding from wastewater, stormwater or combined flow);
- recycling to agricultural land
- (as far as possible) avoid application of fodder additives, drugs (antibiotics, zytostatics,...) having negative influence on treatment plants and water bodies.
- avoid disinfectants containing halogens.
- application of cleaning techniques with low water consumption (high pressure)
- installation of storage tanks

Milk processing

Internal measures

- Separation wastewater-surface runoff**
- Indirect cooling**
- Reduction of waste heat**
- Reduction water use by reuse**
- 3/4/5 m³ per T processed milk**
- Reuse of recyclable resources**
- Low use of disinfectants (esp. Containing halogenic compounds)**
- Application of equalisation tanks**

Hydrography act (Hydrographiegesetz)

Regulation on investigations on and monitoring of water resources and water quality in surface waters and groundwater.

Monitoring of water quality ordinance (Wassergütererhebungsverordnung)

Regulation on regular monitoring of surface waters and ground water bodies (parameters, intervals, etc.).

Groundwater quality threshold value ordinance (Qualitätszielverordnung Chemie Grundwasser)

Regulation on good status of groundwater and definition of rehabilitation areas.

- Threshold values for groundwater parameters are given for inorganic and organic substances
- Appointing rehabilitation areas if some threshold values exceed defined limits
- defining accompanying measures for such areas for rehabilitation like restriction of exploitation or actions against pollution

Groundwater quality threshold value ordinance (Qualitätszielverordnung Chemie Grundwasser)

Examples of accompanying measures for rehabilitation areas:

- abundance of given fertilizer instructions
- nutrient balancing of internal farming data
- no nitrogen-fertilizer application on agricultural areas in winter
- greening of agricultural areas in autumn and winter
- one person of the farm should have the know-how of water protection fertilizing
- sub-dividing the fertilizer applications
- tight fertilizer application on the soil
- measures of soil erosion

Groundwater quality threshold value ordinance (Qualitätszielverordnung Chemie Grundwasser)

Examples of threshold values for inorganic and organic substances

	threshold values	
As	9 µg/l	
Cu	1.8 mg/l	
NH ₄	0,45mg/l	
NO ₃	45 mg/l	
PO ₄	0.3 mg/l	
Pestizide	0.1 µg/l	
tetrachlorethen und trichlorethen	9 µg/l	
Aldrin	0.03 µg/l	

Water protection areas

The legal base this areas are regulations in the Water Management Act.

Water protection areas are assigned by the local authorities (district, local government according to the guideline W 72 of the Austrian Waterworks Association (OeVGW, 1995). In general the areas for zone I and II are regulated in the direction given by the local water authority for the corresponding water work. The shed of zone III is regulated by an ordinance given by the local government.

Water protection areas

The guideline W72 (OeVGW, 1995) comprises 3 different zones for water protection areas:

- Zone I: area surrounding wells and springs which usually is owned by the water supply company.
- Zone II: area corresponding to the retention time of about 60 days for the groundwater, acquisition of the area by the water supply company is recommended.
- Zone III: referring to the water shed of the well and to the prevention of the impact of persistent substances on groundwater quality.

Drinking water ordinance

(Trinkwasserverordnung 2001)

lays down composition, surveillance, self-checking and preparation of drinking water (quality standards) by specifying minimum requirements for

- microbiological parameters
- chemical parameters

and

- parameters acting as indicators (indicator-parameters)

Drinking water ordinance (Trinkwasserverordnung)

Microbiological parameters

	not disinfected water	disinfected water (after disinfection)
e.g.	[unit / 100 ml]	[unit / 250 ml]
E. coli	0	0
Enterococcus	0	0
Pseudomonas aeruginosa	0	0

Chemical parameters

e.g.	
Cu	2.0 mg/l
NO ₃	50.0 mg/l
pesticides (collective)	0.5 µg/l

Indicator-parameters

above all chemically, physically and microbiologically

Fertilizer law 1994 (Düngemittelgesetz 1994)

licensing of fertilizers, import, quality monitoring

Fertilizer ordinance 2004 (Düngemittelverordnung 2004)

lays down quality parameters for fertilizers

Plant protection products act (Pflanzenschutzmittelgesetz 1997)

lays down testing, licensing, marketing and import of plant protection products