



Nondomestic Wastewater - Subsurface Sewage Disposal Permit Application Supplement

Prior to completing the subsurface sewage disposal permit application supplement for nondomestic wastewater and performing any wastewater analysis, get your proposed wastewater flows and sampling plan approved by the health district and Department of Environmental Quality. It is highly recommended that applicants obtain the services of a Professional Engineer licensed in Idaho with experience in wastewater analysis and treatment system design to aid in completing the application supplement for nondomestic wastewater requirements. Upon review of the final application supplement for nondomestic wastewater, DEQ will provide the applicant and their consultant a final determination on treatment needs for the effluent prior to discharge to the subsurface sewage disposal system.

In addition to the subsurface sewage disposal permit application requirements of IDAPA 58.01.03.005.04 the following items are needed to completely evaluate the application for a subsurface sewage disposal permit (IDAPA 58.01.03.005.04.j and 58.01.03.005.04.o):

Part A

- Proximity to City Sewer or Municipal Wastewater Collection System (provided by closest provider)
- Letter of Intended Use (see Technical Guidance Manual for more information)
- Include a Detailed Description of All Processes that Will Produce Nondomestic Wastewater (include cleaners, additives, byproducts, etc. that will enter the wastewater stream)

Part B

- Peak Average Volume of Wastewater Discharged to System (supported by empirical data, IDAPA 58.01.03.007.08, or literature based sources)
 - Attach Empirical Wastewater Flow Data (see Technical Guidance manual for more information), or
 - Rule Required Wastewater Flow Calculations, or
 - Literature Based Wastewater Flow Values and Source Citations (non-rule specified flows)
- Wastewater Sampling Plan (sampling location, sample collection, sample transportation, wastewater analysis methods, and analyzing laboratory), or
- Literature Based Proposal to Determine the Concentration of Wastewater Constituents of Concern

Part C

- Wastewater Constituent Characteristics
 - Chain of Custody, and
 - Laboratory Analysis Results, or
 - Literature Based Values and Source Citations of Data

Applications that are incomplete, inaccurate, or misleading; or public/central wastewater treatment facilities are reasonably accessible to the proposed property; may have the subsurface sewage disposal permit application denied (IDAPA 58.01.03.005.05)



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Constituent mass loadings and concentrations in typical residential (domestic) wastewater.^a

Constituent	Parameter	
	Mass Loading (grams/person/day)	Concentration (mg/L) ^b
Total solids (TS)	115–200	500–880
Volatile solids	65–85	280–375
Total suspended solids (TSS)	35–75	155–330
Volatile suspended solids	25–60	110–265
Five-day biological oxygen demand (BOD ₅)	35–65	155–286
Chemical oxygen demand (COD)	115–150	500–660
Total nitrogen (TN)	6–17	26–75
Ammonia (NH ₄ ⁺)	1–3	4–13
Nitrite (NO ₂ -N) and nitrate (NO ₃)	<1	<1
Total phosphorus (TP)	1–2	6–12
Fats, oil, and grease (FOG)	12–18	70–105
Volatile organic compounds (VOC)	0.02–0.07	0.1–0.3
Surfactants	2–4	9–18
Total coliforms (TC) ^c	—	10 ⁸ –10 ¹⁰
Fecal coliforms (FC) ^c	—	10 ⁶ –10 ⁸

Source: United States Environmental Protection Agency, *Onsite Wastewater Treatment and Disposal Systems Manual*, 2002, (EPA/625R-00-008), Table 3-7, page 3-11.

a. For typical residential dwellings equipped with standard water-using fixtures and appliances.

b. Milligrams per liter (mg/L); assumed water use of 60 gallons/person/day (227 liters/person/day).

c. Concentrations presented in Most Probable Number (MPN) of organisms per 100 milliliters.

Wastewater analysis shall be performed for the following standard constituents:

- BOD₅
- COD
- pH
- TSS
- FOG
- TN
- TP
- TC
- FC
- NO₂-N
- NO₃

Additional wastewater constituent analysis may be required by the regulatory authority based on existing site conditions, background contamination, or the described commercial/industrial process wastewater that is proposed to be generated.



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