

Preliminary Design Report Guidelines for Domestic Wastewater Permitting
From Guide To Permitting Wastewater Facilities Or Activities Under Chapter 62-620,
F.A.C. June 2001

C. An applicant for a permit for a domestic wastewater facility shall provide a preliminary design report containing:

1. Population - current and design year projections for the population to be served;
2. Description and map of service area and land use projections for the current and design years;
3. Forecasts of flow and wastewater characteristics for current and design years of:
 - a) Physical, chemical, and biological characteristics and concentrations,
 - b) Wastewater flow patterns described in terms of maximum monthly average daily flow, three-month average daily flow, annual average daily flow, maximum daily flow, minimum 24-hour flow and peak hourly flow during current and design years, and
 - c) Domestic, industrial, and infiltration/inflow contributions;
4. Site plan showing operations and unit processes; 100-year and 25-year flood elevations; approximate finish elevations for all major treatment units, pumping stations, and sanitary manholes; and a stormwater management plan;
5. An assessment of environmental effects of the project, including odor and noise control, public accessibility, proximity to existing and proposed residential areas, flood protection, lighting, and aerosol drift;
6. Disposal methods or reuse options selected, required levels of treatment, and selected treatment processes;
7. Technical information and design criteria for treatment facilities, including:
 - a) Hydraulic and organic loadings - minimum, average, and maximum quantities for the liquid and solids treatment processes,
 - b) Flow metering and sampling provision,
 - c) Recycle flows within the treatment plant,
 - d) Chemical addition facilities, including disinfection and technical information addressing dechlorination, if applicable,
 - e) Removals, reclaimed water or effluent concentrations with separate tabulation for each unit handling solid and liquid fractions with supporting data including design calculations,
 - f) Documentation supporting chlorine doses and residuals and contact times used as the basis of design, if chlorine is used for disinfection, and
 - g) Residuals treatment, management, and disposal including on-site storage needs or alternate disposal methods;
8. Process diagrams, including:
 - a) Expected dimensions of unit operations and processes, capacities and volumes,

- b) Process configuration,
 - c) Hydraulic profile,
 - d) Organic loading profile,
 - e) Solids profile,
 - f) Solids control system, and
 - g) Flow diagram with capacities;
9. Operation and control strategies included for prevention of upsets, alternate disposal methods, and reliability classification and features;
10. Design information for outfalls discharging to coastal or open ocean waters including:
- a) Bottom profiles of the route selected for the outfall and typical cross-sections for outfall segments, joints, and diffuser, if applicable,
 - b) Description of all materials to be used and an outline of construction procedures as well as design considerations in Rule 62-600.510(6), F.A.C.,
 - c) Description of structural protection for the outfall, and
 - d) Discussion of the disinfection process to be used and the operating criteria proposed to ensure that microbiological requirements will be met; and
11. Design information for all outfalls discharging to surface waters including:
- a) Discussion of the antidegradation requirements of Rule 62-4.242, F.A.C.,
 - b) Discussion of the receiving water body classification and corresponding water quality standards,
 - c) Discussion of any considerations to be given to the receiving water body or contiguous waters such as any designated Outstanding Florida Waters or Outstanding National Resource Waters described in Chapter 62-302, F.A.C., and
 - d) Discussion of the applicable water quality based effluent limitations as determined in accordance with Chapter 62-650, F.A.C.
12. Additional requirements for the preliminary design report are:
- a) For reuse of reclaimed water and land application systems, Chapter 62-610, F.A.C.,
 - b) For new Class I and V underground injection facilities or modification of such facilities, Chapter 62-528, F.A.C.,
 - c) For residuals management and land application, Chapter 62-640, F.A.C., and
 - d) For wetlands treatment and discharge systems, Chapter 62-611, F.A.C.

D. An engineering report or preliminary design report shall be signed and sealed by a professional engineer registered in Florida who is designated by the applicant as the engineer of record.

