

Common Errors on Wastewater Permit-to-Install Applications

Ohio EPA, Division of Surface Water
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The following items are considered errors for the purpose of the staff review of a permit-to-install (PTI) application. The Division of Surface Water recommends conformance with *Recommended Standards for Wastewater Facilities* by the Great Lakes-Upper Mississippi River Board of State and Provincial Public Health and Environmental Managers (a.k.a. Ten States Standards) for large systems and the Ohio EPA document *Sewage: Collection, Treatment & Disposal Where Public Sewers Are Not Available* for systems less than 100,000 gallons per day. Projects deviating from those standards will take longer to process if adequate justification is not provided with the original submittal.

It should be noted that some of the most common “errors” are missing or inconsistent information. Please check the forms and plans before you submit them to avoid delays caused by simple oversights.

General Application Form Errors

1. Incorrect person signs Form A (please refer to the first page of the instructions).
2. Not all the forms are submitted. Complete applications are to contain the following forms: Form A, a Form B, an Antidegradation Addendum, and a Stream Evaluation Addendum if projects have streams crossings.
3. For PTI applications submitted by the developer, no documentation is provided that public utility will accept the wastewater and assume ownership of the sewers.
4. Form A Part 5 not filled out to show whom the final owner will be when the applicant is not final owner.
5. Estimated Project Schedule is not updated prior to submitting the application.
6. Information is inconsistent between plans and the application forms.
7. Average daily design flow and peak design flow is inconsistent with Ten State Standards, and no supporting information is submitted for justification.
8. Projects with multiple stream crossings do not submit additional information to demonstrate measures that will be taken to reduce the impact to the stream.

9. When Ten State Standards not used, no additional information is provided to justify design when sewers are in or near public water supply well fields.

Areas Where Information is Frequently Not Supplied:

1. ASTM or applicable AWWA specifications for the material specifications section are not supplied.
2. Question 5c and 5d in Form B1 skipped.
3. Question 8b in Form B1 skipped.
4. Question 12 in Form B1 not filled out completely with page numbers.
5. Question 20 in Form B1 not filled out completely with elevations.
6. Force main specifications are not listed on Form B1.
7. Concrete manhole construction specifications ASTM C-443 and C-478 not on Form B1.
8. Septic tank detail and tank size not listed on Form B3.
9. Grease trap detail and tank size not listed on Form B3.

General Errors on Detailed Plans

1. Original PE stamp, signature and date do not appear on all 4 copies.
2. "Roof drain, foundation drains, or any other clean water connection to the sewer system is prohibited" statement does not appear on plans.
3. Drawings stamped "not for construction".
4. Vicinity map not on title sheet.
5. Compass not on plan view and profile.
6. Scale not on plan view and profile.
7. Sanitary sewers above storm sewers or water lines without adequate protection.
8. Detail plans are not of sufficiently quality to be scanned and archived and still be able to read the details.
9. County name not on title sheet.
10. Name of project not on title sheet.
11. Bedding specifications not listed, are incomplete or do not meet minimum standards.

Errors on Detail Plans for Onsite Systems

1. Reserve Area for leach fields not specified on plans.
2. Location of well (if applicable) not shown on plans.
3. Profile of septic system not on plans.
4. When filter attached to septic tank, specifications on filter not provided.
5. Risers not extended above final grade (lift stations and septic tanks).
6. Means to divert flow in distribution boxes not show on plans.
7. Site-specific soil characteristics not provided.
8. Size of tile field incorrect or not filled in properly.
9. Plans do not show all inlet, outlet, and leaching line elevations in hydraulic profile.
10. Plans do not show finished grade elevation above leach field.
11. When a pump station is before the septic tank, valves are in wet well.

Errors on Detail Plans for Sewer Extensions

1. Not clear on plans that there will be an 18" vertical separation and 10 ft horizontal separation between the sanitary sewers and the storm or water lines.
2. Incorrect signatures from applicant city and/or satellite cities.
3. Manhole spacing and total length of pipe on plans inconsistent with Form B1.
4. Slope on plans inconsistent with Form B1.
5. Manholes or clean-outs not provided on all stubs greater than 20 ft.
6. Lack of drop inlets into manholes when inlet >2' above manhole invert.
7. PVC deflection testing statement and/or specification not included.
8. Concrete manhole air testing spec. ASTM C-1244 or equivalent does not appear on plans.
9. PVC sanitary sewer air testing spec. ASTM F-1417 or equivalent does not appear on plans.
10. Infiltration/Exfiltration rate limit of 100 gallons per inch diameter per mile per day does not appear on plans.
11. Manholes not provided at all changes in size, direction and slope.
12. No information about flow channels, material and joint specifications, gasketed-flexible pipe connections, drop pipe connections for manholes.

13. Material other than precast concrete adjusting collars are used to adjust manhole covers to grade.
14. Insufficient documentation that point of connection can handle the increased flow including peak flow rate from pump station.
15. Details of stream crossings not shown and no specifications for stream bank protection are shown.
16. Profile views do not show grade (% slope), elevations, lengths, and depth of sewer.
17. For deep sewers, no documentation that bedding and pipe material is suitable to handle loading on sewer.
18. Manholes that aren't watertight in areas subject to flooding
19. Sewers with 208 issues not addressed.
20. Oversized sewers do not meet minimum slopes.
21. Sewer alignments within 50 feet of the outside bend of streams not shown.
22. Clean outs at building and at changes in pipe direction not shown on plans.
23. Pipes not adequately protected if within 50 feet of a well or if it runs under a driveway or parking lot.
24. Public sewers tributary to private lift stations not shown on plans.

Errors on Detail Plans for Pump Stations

1. Wet well floor not sloped to pump inlet.
2. Gas tight wall between wet & dry well needed.
3. Bar screen not provided on inlets > 30".
4. Elapse time meter is not provided for flow monitoring when flow is <1200 g.p.m. peak, or a totalizer/recorder is not provided when flow is >1200 g.p.m.
5. Permanent back-up power not provided where flow is >40,000 g.p.d.
6. Explosion proof electrical fixtures not provided.
7. Lines running out of the pump station not arranged so water will flow back into wet well and not pool in the line anywhere.
8. Improper float switch order for alarms. Alarm should activate before standby pump is called into service. Many still set alarm if there is high water, meaning both pumps may have failed.

9. Estimated peak flow rates are incorrect.
10. High water alarm float elevation is not below pump #2 float elevation.
11. External pump station valve pit does not have bypass connection before valve so force main can be isolated. Valve arrangement, bypass pumps connection, pit drains to wet well in valve pit not per standards.
12. Details about pump station accessibility/security lacking.
13. Flood elevation/protection details lacking.
14. Pumps are not sized to pump peak flow with largest unit out of service.
15. The Check valve is not located between shut off valve and pump.
16. Valve box replaces dry well.
17. Valve box does not have drain to wet well.
18. Rails, chain and quick disconnection to allow pump removal w/o entering lift station not provided.
19. Motors and controls not on outside wet well.
20. Discharge lines do not have 3" diameter minimum (except for grinder).