

**ERIE COUNTY DEPARTMENT OF HEALTH
ONSITE WASTEWATER TREATMENT SYSTEM
DESIGN AND PLAN REVIEW REQUIREMENTS
FOR DESIGN PROFESSIONALS**

As of July 1, 2012, all new construction residential Onsite Wastewater Treatment Systems (OWTS) in Erie County must be designed by a licensed design professional (i.e. a licensed professional engineer, a registered architect, or a licensed land surveyor with an exemption certificate (Section 7208n of New York State Education Law)) hired by the applicant. The plans must then be submitted to the Erie County Department of Health for review and approval.

The Erie County Department of Health (ECDOH) is responsible for the review and approval of individual onsite wastewater treatment systems where the design flow is less than 10,000 gallons per day, the flow does not contain industrial wastes, and the basic treatment is not a full package (mechanical) treatment plant. All other systems are approved by the New York State Department of Environmental Conservation (NYSDEC).

If the design flows exceed 1,000 gallons per day, an approved discharge permit (SPDES) from the NYSDEC must be obtained as part of the approval process.

ECDOH Application and Fee – See attached application:

An ECDOH review fee of \$300.00 is required. Checks should be made payable to the Erie County Department of Health. **Please note that review of the submittal will not start until an application and fee are both received. Also, the review can not be started unless all components of the plan submittal are received as listed below.**

Engineers Report Requirements:

1. Indicate the proposed use of the premises to be served by the system.
2. Indicate and justify flow estimates based on the flows listed in the New York State Department of Health and New York State DEC publications or based on water use records from the existing facility or a facility with a similar usage.
3. A soil profile based on one deep hole per system (minimum of 6 feet deep) must be performed under the supervision of the design professional. It must define the soil types, bedrock and seasonally high ground water (mottling must be documented if seasonally high groundwater is not present). At least two percolation tests must be completed in the area of the proposed private sewage disposal system. The results of all percolation tests run on the property must be included in the engineers report. At the time of application or during the design it may be required that some or all of the soil and percolation tests be witnessed by the Erie County Department of Health. Soil tests for subdivision development must also be witnessed by the Erie County Department of Health.

4. Design Criteria:

- a. New York State Sanitary Code Part 75-A (Wastewater Treatment Standards) and Residential Onsite Wastewater Treatment Systems Design Handbook for flows less than 1,000 gpd or New York State Department of Environmental Conservation Design Standards for Wastewater Treatment Works for Intermediate Sized Sewerage Facilities for flows greater than or equal to 1,000 gpd, and any other applicable standards of the Commissioner of Health.
- b. Minimum residential tank size is 1,500 gallons. Add 250 gallons of additional capacity for every bedroom over four. Commercial septic tank size is based on flows and shall be at least equal to 1.5 times a day's estimated flow.
- c. Septic tanks shall be dual compartment or single compartment tanks in series.
- d. If mechanical dosing or pumping is required the dose volume shall be 75% of the total hydraulic volume of the tile lines.
- e. The following must be installed:
 - i. An outlet filter such as a Zabel or O.S.I. filter in the septic tank.
 - ii. Speed levelers in the distribution boxes. (gravity systems only)
 - iii. An audible/visual alarm inside the home or business on a separate electric circuit for all pump facilities.

Plans and Specification Requirements:

1. One set of plans for the initial review and four sets signed and stamped by the NYS design professional for final approval.
2. A site plan detailing the location of all existing and proposed buildings, existing and proposed onsite wastewater treatment system components (with adequate offsets to the septic tank, distribution box, and any pump tanks per NYS regulations), deep test hole, percolation tests, any new or existing private wells within 200 feet of the proposed sewage system, utilities, water service, driveway, pools, sheds, road right of ways and easements, property lines, wetlands, ponds, drainage ways, streams, ten year and 100 year floodplains, and any other significant construction or obstructions which may impact the location of the onsite wastewater treatment system.
3. Show all required separation distances as listed in the applicable references listed above under "Engineers Report Requirements".
4. Show the specifications and details for all system components such as septic tanks, distribution boxes, pump tanks, etc. All pipe sizes and slopes must be shown.
5. Show the pump on/off and alarm levels on the pump tank detail.
6. Show the well locations for the property and all neighboring properties.
7. Indicate slope and drainage patterns or contours at site of proposed system. Indicate method of diverting surface run-off away from the onsite wastewater treatment system.
8. Include specifications for filter sand and that it must come from an approved source.
9. Include specifications and testing requirements for compacted fill.
10. Include a table listing the finished elevations for each component of the onsite wastewater treatment system.

System Options Acceptable in Erie County:

1. Conventional tile field in natural soil. Soils must have a percolation rate between 1 and 60 minutes, however systems in soils having percolation rates less than 5 minutes must be designed for a 5 minute rate (the minimum allowable design rate). Systems may be allowed with rates of less than one minute if Erie County Department of Health specified special provisions are constructed. Gravel in this system may be replaced with tire chip aggregate with Erie County Department of Health approval.
2. Gravel-less trench systems may be used in place of conventional tile field in natural soil systems with a 25 % reduction in required trench length.
3. Conventional system – shallow absorption trenches. Minimum of two feet of percable soil on the site, acceptable fill and trench bottoms must be at least two feet above groundwater or any impermeable layer.
4. Conventional system – deep absorption trenches.
5. Sand filter with downstream modified shallow absorption trench system. Allowed only if a conventional system is not feasible or natural soil percolation rates are greater than 60 min/in. The downstream shallow trench system must be placed parallel to a water or drainage course. An inspection port with a child proof lockable cover located at the discharge end of the sand filter is required. May not be used in new subdivisions.
6. Sand filter with downstream absorption mound. Allowed only if a conventional system is not feasible or natural soil percolation rates are greater than 60 min/in. The downstream mound is used for systems that a downstream shallow trench is not feasible. An inspection port with a child proof lockable cover located at the discharge end of the sand filter is required. May not be used in new subdivisions.
7. Seepage pits will be considered if no other system is feasible for the property.
8. Tile field in fill systems will be permitted only when conventional in ground systems cannot be used. There must be less than 24 inches of percable soil on site, but a minimum of 12 inches. Fill that is brought on site must be naturally stabilized for six months or mechanically stabilized and retested under the supervision of a licensed professional. May not be used in new subdivisions.
9. Other alternative systems may be considered for lots that are difficult to fit any of the above systems. For consideration of an alternative system please submit all documentation in regards to the system with your package (include specification sheets, research, test project information, etc.) May not be used in new subdivisions.

Lot Size:

All installations must meet the minimum separation requirements contained in the New York State Department of Health's Residential Onsite Wastewater Treatment Handbook. The minimum lot size required for alternative treatment systems (items 5, 6 and 8 above) is 32,000 square feet, if the lot was created after December 1988.

Construction Inspection:

1. A design professional must certify the construction of all systems except for modifications of existing systems designed by the Erie County Department of Health. A contractor's sketch of the system and location with dimensions and offsets to permanent structures, the sand receipts or percolation test results for fill systems, and a signed copy of the Construction Compliance (see attached) must be submitted to this Department prior to issuance of a Completed Works Approval by this Department.
2. Record (as-built) drawings must be submitted for any project with modifications or offsets that vary greater than three feet from the approved plans.
3. The Erie County Department of Health will collect a bacteriological sample from all newly constructed wells. This must be completed prior to a Completed Works Approval will be issued for the onsite wastewater treatment system.
4. For newly installed wells the well log must also be included with the Construction Compliance.
5. If a system requires the use of fill this must be thoroughly tested by the design professional to ensure it is satisfactory and the results submitted upon completion of the system.

Permit Duration:

The approval and permit issued by the Erie County Department of Health will expire three years from the date issued. Please note, if the project is for the replacement of an existing failed system the permit will be valid for 90 days. A new application, fee and review package may be required for an expired permit.