

1.4.2.1.1 Initial Septic Tank Approvals

To obtain initial approval of a septic tank a manufacturer must submit the following information for each individual septic tank model and variations of that model to DEQ. The documentation must be stamped, dated and signed by a PE licensed in Idaho (IDAPA 58.01.03.009.02):

1. Detailed construction drawings, including the rebar or welded-wire mesh rigging details
2. Structural design plans, specifications, and calculations,
3. Capacity calculations,
4. List of construction materials, and
5. The manufacturer's installation and operation and maintenance instructions.

DEQ's Lead Wastewater Program Engineer will review the septic tank submission and any other relevant information deemed necessary for approval. Minimum design standards considered suitable include the General Tank Specifications, listed below, and assume a minimum bury depth of 3 feet. If the tank is designed for a deeper bury depth, the engineering calculations must identify and incorporate the specified depth throughout the calculations.

General Tank Specifications

1. The tank shall meet all of the design and construction standards described in IDAPA 58.01.03.007 (Section 8.1).
2. The tank lid should be capable of supporting a minimum of 375 pounds per square foot.
3. Walls shall be designed to withstand an inside hydrostatic water pressure to the level of the outlet and for an outside earth pressure equivalent to the pressure exerted by a fluid weighing 30 pounds per cubic foot, in accordance with accepted engineering practice. Alternatively, tanks may be designed to anticipated earth and hydrostatic pressures when the tank is either full or empty, if the load is anticipated to exceed the 30 pounds per cubic foot.
4. The tank shall be structurally designed to withstand all anticipated earth or other loads based on the specified bury depth.
5. The tank shall be capable of being filled with water above ground for 24 hours without leaking or a major deflection in shape occurring.
6. The tank's inlet and outlet baffle system shall be included in the design and if constructed of pipe shall meet or exceed the rating of ASTM D3034.

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Concrete Tank Specifications

1. The walls and bottom slab shall be poured monolithically or be constructed with water stops if monolithic pours are not used in the tank construction.
2. Reinforcing steel shall be ASTM A615 Grade 60, yield strength (f_y) = 60,000 pounds per square inch (psi).
 - a. Details and placement shall be in accordance with American Concrete Institute (ACI) 315 and ACI 318 or equivalent.

- b. The certifying engineer shall be experienced in the use of structural reinforcement fibers if reinforced fibers are used.
3. Concrete shall be ready-mix with cement conforming to ASTM C1227-13.
 - a. The concrete shall have a cement content of not less than 5 sacks per cubic yard with a maximum aggregate size of 3/4 inch.
 - b. The water and cement ratio shall be kept low (0.45±).
 - c. The concrete shall achieve a minimum compressive strength of 4,000 psi in 28 days.
4. The form release fluid used on the tank mold shall be compatible with the water-seal method used.
5. Tanks shall not be moved from the manufacturing site to a job site until the tank has cured for 7 days or has reached 2/3 of the design strength.

Polyethylene and Fiberglass Tanks

1. The tank shall meet or exceed Canadian Standard CAN/CSA-B66-M90.
2. Verification of compliance with this standard shall be submitted through a report from an independent testing company certifying that the tank meets this standard.

Plan Submission

1. Upon submission of plans and specifications described above for approval of a septic tank DEQ shall complete a review of those plans within 42 calendar days from the date of submittal.
- If the plans and specification are acceptable and complete, DEQ shall issue a preliminary approval letter to the manufacturer. This preliminary approval letter will specify the tank/model, volume, number of compartments, number of pieces, any special applications for the tank and include any minor deficiencies that must be corrected prior to the test tank construction. This preliminary approval letter will also notify the manufacturer to complete construction of a test tank which will be subjected to a dimensional inspection and leak test prior to receiving final approval.

Construction and Leak Testing

1. Upon preliminary approval the manufacturer shall complete a construction and leak test either through a PE licensed in Idaho or an Environmental Health Specialist (EHS) from one of Idaho's health districts.
2. The PE or EHS shall completely fill out DEQ's septic tank inspection form, available through the DEQ website, and submit the signed document to DEQ's On-Site Wastewater Coordinator.
 - a. Prior to filling the tank to perform the leak test the PE or EHS shall inspect the dimensional elements of the tank listed on the inspection form and note the date and time the tank is filled with water to the bottom of the tank's outlet.
 - b. 24 hours after the tank is filled with water the PE or EHS shall inspect the tank for the presence of any leaks, seeps, and note the difference in elevation of water in the tank.

c. Alternatively, a PE licensed in Idaho may witness a vacuum test, performed as specified in section 9.2.1 of ASTM C1227-13, in place of the water pressure leak test. The tank must be evacuated to 4 inches of mercury vacuum. To pass the test the tank must retain at least 90% of this vacuum (3.6 inches of mercury) after 2 minutes.

1-3. If the construction and leak test documentation are consistent with the plans used for preliminary approval DEQ will issue a final approval letter for the septic tank, place the septic tank on DEQ's approved septic tank list (Section 5.2), and notify the manufacturer and health districts of the approval.

1.4.2.1.2 Transfer of Septic Tank Approvals between Manufacturers

If a manufacturer purchases or obtains another septic tank manufacturer they must obtain approval for the other manufacturer's septic tank configurations from DEQ prior to any installation of the new septic tank models occur. If the manufacturer or any of the septic tank models purchased are not listed on DEQ's approved septic tank list (Section 5.2) the manufacturer seeking approval must submit the information listed in Section 1.4.2.1.1 to obtain approval from DEQ. If the manufacturer and all of the septic tank models purchased are listed on DEQ's approved septic tank list (Section 5.2) then the purchasing manufacturer must submit the following information to DEQ in order to transfer the previous manufacturer's septic tank approvals:

1. A written and signed notification regarding the buyout of the manufacturer and the specific septic tank models that the purchasing manufacturer is seeking approval for. The written notification shall also include:
 - a. Information on which construction plans will be used for each septic tank model.
 - b. A statement regarding whether any of the purchased septic tank models will no longer be manufactured and that they may be removed from the approved septic tank list (Section 5.2).
2. Upon notification DEQ shall review the request and inform the manufacturer if the request is acceptable or if additional information is necessary.
 - a. If the request is acceptable the manufacturer must have a PE or EHS complete the construction and leak test requirements listed in Section 1.4.2.1.1 and the information must be submitted to DEQ for review.
 - a.b. If the construction and leak test information is acceptable DEQ will issue a transfer approval for each septic tank model, place each septic tank model on DEQ's approved septic tank list (Section 5.2) under the new manufacturer's name, remove the model from the purchased manufacturer, and notify the purchasing manufacturer and health districts of the transfer approval.