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Pete Ricketts, Governor

PRIVATE ONSITE WASTEWATER TREATMENT FACILIITY GENERAL CONSTRUCTION and OPERATING PERMIT

PERMIT NUMBER: GHT220000 **Permit Name: Holding Tank**

Project Description: Private Onsite Wastewater Treatment System (Holding Tank)

Revised or Superseded Construction Permits: none

Pursuant to Nebraska Administrative Code Title 124, this general construction permit approves the construction of specific types of onsite wastewater treatment systems. This permit document and the associated onsite wastewater treatment system registration form make up the complete permit for the owner of the dwelling/non-dwelling facility identified in the registration.

Compliance with this permit will not be a defense to any enforcement action resulting from endangering the environment, health and human safety, or violating any State statute, regulation, or local ordinance. The permit holder will assure that the installation, operation, and maintenance of all equipment is in compliance with all of the conditions of this permit.

Pursuant to a Delegation Memorandum dated July 1, 2021, and signed by the Director, the undersigned herby issues this permit on behalf of the Director under the authority of Nebraska Administrative Code Title 124 – On-site Wastewater Treatment Systems.

6/27/2022
Date

Shelley Schneider
Permitting and Engineering Division Administrator

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I. Definitions

"**Baffle**" means a partition installed in a septic tank for proper operation of the tank and to provide maximum retention of solids, and includes sanitary tees.

"**Bedroom**" means any room within a dwelling that might reasonably be used as a sleeping room.

"**Blackwater**" means wastes carried off by toilets, urinals, and kitchen drains. Blackwater is wastewater for the purposes of these regulations.

"**Building drain**" means that portion of the lowest horizontal piping of a drainage system which receives the wastewater discharge from within the walls of the building and conveys it to the building sewer beginning 30 inches outside the building footings.

"**Building sewer**" means that part of the drainage system extending from the end of the building drain to a treatment system or other approved point of disposal.

"**Certified Professional**" means a private onsite wastewater treatment system professional certified under the Private Onsite Wastewater Treatment System Contractors Certification and System Registration Act to perform the tasks for which the certification has been issued.

"**Construction**" means the installation of an onsite wastewater treatment system or the replacement, reconstruction, alteration, modification, expansion, or closure of an existing system including the installation of required wastewater lagoon fencing. Construction includes excavation or similar activity related to the installation, replacement, reconstruction, alteration, modification, or expansion of an onsite system, or closure of an onsite system. For the purposes of subdivision review and approval, "construction" means physical activity on a development area including the building of roads, cut and fill, grading, installation of utilities, construction of any foundations, buildings or structures for the development, and construction work on drainage, piping, trenching, lighting, foundations, or other site activities. Construction does not include siting, soil percolation testing, or soil boring.

"**Department**" means the Nebraska Department of Environment and Energy.

"**Depth marker**" or "**depth gauge**" means a device used to measure the liquid level present in a septic tank, wastewater lagoon, or other onsite wastewater treatment system.

"**Design flow**" means the maximum volume of wastewater estimated to be generated by a dwelling or non-dwelling facility in a twenty-four-hour period. It includes both a typical

operating capacity and a surge capacity for the system during periodic heavy use events. The sizing and design of the onsite wastewater treatment system components are based on the design flow.

"**Direct supervision**" means the person overseeing the work of others is physically present on the site where the work is being done and has control over, responsibility for, and professional knowledge of the work being done.

"**Domestic septage or septage**" means the liquid or solid material removed from a septic tank, holding tank, cesspool, portable toilet, Type III marine sanitation device, or similar treatment works that receives only domestic wastewater. Domestic septage does not include liquid or solid material removed from a septic tank, holding tank, cesspool, portable toilet, or similar treatment works that receives either commercial wastewater or industrial wastewater and does not include grease removed from a grease trap at a restaurant. Domestic septage does not include wastewater containing high strength disinfectants, biological inhibitors, or deodorants or similar chemicals such as those used in camper waste tanks, laboratories, medical or veterinary facilities, or industrial facilities.

"**Domestic waste or domestic wastewater**" means human body waste and household type wastes including bath and toilet wastes, household laundry wastes, household kitchen wastes, and other similar wastes from a dwelling or a non-dwelling facility. Domestic waste or wastewater does not include drainage from roofs; footing or foundation drains; process waste from any industrial, agricultural, or commercial establishment; automotive or industrial chemicals or petroleum products; kitchen waste or wastewater from a restaurant or food preparation facility; water carrying animal waste or commercial process water or wastewater; or similar waste.

"**Dwelling**" means a building, structure, or place used or intended to be used for human occupancy as a single family or multi-family residence and which generates domestic wastewater. If any portion of the wastewater generated at such a building, structure or place is a non-domestic wastewater, the facility shall be considered a non-dwelling facility.

"**Effluent**" means the liquid flowing out of a septic tank or other treatment component of an onsite wastewater treatment system.

"**Encroachment**" means an intrusion on a required setback distance.

"**Fill**" means soil, rock, gravel, or waste material which has been placed over the original soil or bedrock and is characterized by a lack of distinct horizons or color patterns as found in naturally developed, undisturbed soils.

"**Freeboard**" means the vertical distance between the design full liquid level and the level at which liquid will overflow from a lagoon.

"**Graywater**" means all domestic waste excluding blackwater and including bath, lavatory, laundry, and sink waste except kitchen sink waste. Graywater is wastewater for the purposes of these regulations.

"**Grease trap or grease trap tank or grease interceptor**" means a watertight tank designed for the collection and retention of fats, oils, and grease, and which is accessible for periodic removal of the contents.

"**Groundwater**" means water occurring beneath the surface of the ground that fills available openings in rock or soil materials such that they may be considered saturated.

"**Holding tank**" means a tank for the storage of wastewater until it can be transported to a point for proper disposal.

"**Industrial waste**" means wastewater not otherwise defined as domestic wastewater, including the runoff and leachate from areas that receive pollutants associated with industrial or commercial storage, handling, or processing.

"**Influent**" means wastewater flowing into an on-site wastewater treatment system component or device.

"**Layout**" means the practice of determining wastewater design flows and loadings, selecting system type, sizing and selecting system components, or locating system components for the purpose of construction, reconstruction, alteration or modification of an onsite wastewater system.

"**Native soil**" means soil that is naturally occurring, formed by normal geologic and biological processes, which is characterized by the distinct soil horizons or color patterns found in naturally developed, undisturbed soil.

"**Non-dwelling facility**" means a building, structure, place of business, place of gathering, or waste collection system which is not a dwelling and which generates wastewater.

"**Onsite wastewater treatment system**" means any system of piping, treatment devices, or other appurtenances that convey, store, treat, or dispose of domestic or non-domestic wastewater, but not including wastewater from a livestock waste control facility, on the property where it

originates, or on nearby property under the control of the user, which system is not connected to a public sewer system. An onsite wastewater treatment system begins at the end of the building drain. A system using a lagoon is limited to a maximum design flow of 1,000 gallons per day to be considered an onsite wastewater treatment system.

"**Pump tank**" means a watertight container with a capacity over 50 gallons which houses a pump or pump unit and associated appurtenances used to convey effluent or sewage. The capacity of a pump tank is measured at the normal high (pump start) operating level. The capacity of a tank housing a pump or used as a pump tank is not considered part of the treatment volume required for a septic tank for the purposes of these regulations.

"**Pumping**" means the practice of maintaining septic tanks, grease trap tanks, holding tanks, and any other components of onsite wastewater systems through the removal, transportation, and disposal of accumulated liquid and solid wastes.

"**Registered Environmental Health Specialist or REHS**" means a person who has the educational requirements and has had experience in the field of environmental sanitation required by Nebraska Revised Statutes §71-3703 and is registered with the Nebraska Board of Registration for Environmental Health Specialists in accordance with Nebraska Revised Statutes §71-3702 through §71-3715.

"**Repair**" means the correction of a mechanical, electrical, or minor structural defect in an existing onsite wastewater system component such as, but not limited to, sealing a crack in a tank lid, repairing or replacing a tank baffle or access manhole riser, repairing or replacing a pump or electrical switch, leveling a distribution box, replacing a building sewer pipe, or replacing a cracked pipe between the septic tank and soil absorption system. Repair does not include replacement, reconstruction or modification of a tank or soil absorption system; extension or enlargement of a soil absorption component and system; replacement of a distribution pipe; or repair or replacement of a metal or concrete block tank.

"**Sewage**" means any water carrying domestic waste exclusive of footing and roof drainage, from any industrial, agricultural, or commercial establishment or any dwelling or any other structures. Domestic waste includes but is not limited to liquid waste produced by bathing, laundry, cooking operations, and liquid waste from toilets and floor drains and specifically excludes animal waste and commercial process water.

"**Site**" means the area bounded by the dimensions required for the proper location of the soil absorption system.

"**Siting**" means the practice of the investigation, examination, and reporting of design-controlling physical characteristics of an area at which an onsite wastewater system is to be constructed, reconstructed, altered, or modified; including, but not limited to topography, drainage, landscape position, soil evaluation, location and type of wells, water lines, property lines, foundations, and surface water features.

"**Sludge**" means the accumulated settled solids deposited from wastewater and containing water to form a semi-liquid mass.

"**Surface waters**" means all waters within the jurisdiction of this state, including all streams, lakes, ponds, impounding reservoirs, marshes, wetlands, watercourses, waterways, springs, canal systems, drainage systems, and all other bodies or accumulations of water, natural or artificial, public or private, situated wholly or partly within or bordering upon the state. Impounded waters in this definition do not include areas designated by the Department as wastewater treatment or wastewater retention facilities or irrigation reuse pits.

"**Tank**" means a watertight structure or container used to hold wastewater for such purposes as aeration, dilution, disinfection, equalization, mixing, sedimentation, storage, collection for transport, treatment, or addition of chemicals.

"**Wastewate**r" means liquid and water borne wastes from a dwelling or non-dwelling facility. Wastewater includes both blackwater and graywater.

"**Wastewater works**" means facilities for collecting, transporting, pumping and treating wastewater and the disposal of treated effluent and sludge.

"**Waters of the state**" means all waters within the jurisdiction of this state, including all streams, lakes, ponds, impounding reservoirs, marshes, wetlands, water courses, waterways, wells, springs, irrigation systems, drainage systems and all other bodies or accumulations of water, surface or underground, natural or artificial, public or private, situated wholly or partly within or bordering upon the state.

II. General Conditions

A. Coverage under this permit is granted to an owner of a dwelling/non-dwelling facility who sites, constructs, reconstructs, alters, or modifies a septic system provided:

1. The system is sited, constructed, reconstructed, altered, or modified according to the standards set forth in the Specific Conditions section;
2. The system is sited, constructed, reconstructed, altered, or modified by a certified professional authorized to perform the work in accordance with Title 124;
3. Within 45 days from the completion of construction, reconstruction, alteration, or modification, the system is registered and applicable fees are paid in accordance with Title 124;
4. A copy of the following information is kept on the premises of the facility using the onsite wastewater treatment system and made available to the Department by the owner or installer upon request:
    a. Certification signed by a professional engineer, registered environmental health specialist, or certified professional of compliance with the requirements found in the Specific Conditions section of this permit. A certification number must accompany the signature;
    b. An appropriately scaled drawing of the onsite wastewater treatment system, which specifies location, setbacks, capacity, materials of construction, and the construction details for all components of the system, including pump and pump tank or pump chamber specifications for any system using a pump. The scaled drawing must be on no less than 8.5 by 11 inch paper and must be neatly drawn with appropriate dimensions and fixed reference point indicated;
    c. Data and results for soil percolation tests or seepage tests performed in accordance with Title 124; and
5. Upon review of the system registration and any additional documentation if requested, the Department determines the system qualifies for coverage under this permit.
6. The system is operated in accordance with the conditions of this permit and Title 124.

B. Coverage under this permit is granted to the owner of the dwelling/non-dwelling facility identified in the registration.

1. Coverage under this permit will transfer from the owner identified in the registration to any subsequent owner of the facility.
2. Subsequent owners maintaining coverage under this permit are subject to all obligations and conditions described in this permit.

C. Coverage under this permit may be revoked for cause in accordance with Title 124.

D. Coverage under this permit does not relieve an owner or certified professional from the responsibility to comply with all applicable portions of Title 124, *On-site Wastewater Treatment Systems* and any other requirements under local, State, or Federal law.

1. Nothing in this permit will prevent more stringent local requirements from applying.

E. Any permit noncompliance will constitute a violation of the Private Onsite Wastewater Treatment System Contractors Certification and System Registration Act and/or the Nebraska Environmental Protection Act, and is grounds for enforcement action or permit revocation.

F. Any owner or operator who failed to submit any relevant facts or who submitted incorrect information in a general permit application, upon becoming aware of such failure or incorrect submittal, must promptly notify the Department, and if ineligible for coverage under this general permit, must submit a construction permit application under the provisions of Title 124.

G. The owner of a facility must allow a Department representative to enter upon the premises at reasonable times in order to inspect the onsite wastewater treatment system and to sample and monitor any area affected by the system.

H. This permit may be revoked in accordance with Title 124.

III. Specific Conditions

A. **Site Evaluation.** Each proposed site for the location of an onsite wastewater treatment system must be evaluated by a professional engineer, registered environmental health specialist, Journeyman Installer, or Master Installer, and the following information must be recorded and provided to the Department on request.

1. The type, size, location, and elevation of the proposed system, clearly identified on a scaled drawing of sufficient size which will include: the legal description and survey of the lot and immediate vicinity property lines, buildings, water supply wells, buried water pipes and utility lines, the ordinary high water mark of lakes, rivers, streams, and the location and the type of water supply wells within 1000 feet of the proposed onsite wastewater treatment system.
2. Depth to the seasonal highest measured or estimated groundwater table and to the bedrock or other barrier layer surface, if this depth is less than the depth of the seasonal high groundwater table, along with a detailed description of the method used to determine depth. If the depth to seasonal high groundwater or to the bedrock or other barrier layer is less than 10 feet, soil borings or other site specific methods are required to be used
3. Soil conditions, properties, and data.

4. Additional information may be required as part of the application process for a permit or subdivision approval.

B. Design Flow. The design flow for the holding tank must:

1. For a non-dwelling facility, the design flow shall not be less than the highest daily wastewater flow that is calculated to be generated based on the characteristics of the occupancy and use of the facility.
    a. For non-dwelling facilities, the quantity of flow generated for various occupancy and uses must be consistent with nationally recognized data published by the United States Environmental Protection Agency, state onsite wastewater regulatory agencies, or nationally recognized plumbing codes. If use of a non-dwelling facility includes residential occupancy, the estimated flow from the non-residential use must be added to a residential design flow of 100 gallons per day plus 100 gallons per day per bedroom.
2. There is no maximum daily flow for a holding tank.

C. Tank Capacity.

1. A holding tank serving a dwelling must have a minimum capacity of 1,000 gallons for two or fewer bedrooms plus 300 gallons for each additional bedroom.
2. A holding tank serving a non-dwelling facility must have a minimum capacity at least five times the daily flow but not less than 1,000 gallons.
3. The capacity of a holding tank or a pump tank means the interior volume of the tank below the level of the inside bottom of the inlet or influent pipe. The capacity must not include the volume of the air space at the top of the tank.

Table 01 – Single Family Dwelling Holding Tank Capacity

Number of Bedrooms*	1	2	3	4	5	6	7	8	9
Tank Capacity, Gallons	1000	1000	1300	1600	1900	2200	2500	2800	3100

D. Setback Distances. The installation of a holding tank is prohibited within the horizontal setback distances in Table 2.1 in Title 124. See following page.

Lagoon, Tank and Soil Absorption System Setbacks (Ref. Title 124, Table 2.1)

	Minimum Setback Distance feet (meters)		
Item	Tanks	Absorption, Infiltrative, and Evaporative Systems	Lagoons
Surface Water	50 ft. (15.2 m)	50 ft. (15.2 m)	50 ft. (15.2 m)
Private Drinking Water Wells	50 ft. (15.2 m)	100 ft. (30.5 m)	100 ft. (30.5 m)
Public Drinking Water Supply Wells:			
Non-Community System*	50 ft. (15.2 m)	100 ft. (30.5 m)	100 ft. (30.5 m)
Community System	500 ft. (152.4 m)	500 ft. (152.4 m)	1000 ft. (304.8 m)
Community System when a septic system or soil absorption system of > 1000 gpd is installed	500 ft. (152.4 m)	1000 ft. (304.8 m)	N/A
Horizontal Closed Loop Geothermal Wells (trenched or dug and above the ground water table)	25 ft. (15.2m)	25 ft. (15.2m)	25 ft. (15.2m)
All Other Water Wells	50 ft. (15.2 m)	100 ft. (30.5 m)	100 ft. (152.4 m)
Water Lines:			
Pressure Main/Service Connection/Suction Lines	10 ft. (3.1 m)	25 ft. (7.6 m)	25 ft. (7.6 m)
Property Lines	5 ft. (1.5 m)	5 ft. (1.5 m)	50 ft. (15.2 m)
Trees	NA	NA	50 ft. (15.2 m)
Parking area, driveway, sidewalk, or other impermeable surface or cover	5 ft. (1.5 m)	5 ft. (1.5 m)	50 ft. (15.2 m)
Foundation:			
Class 1	15 ft. (4.6 m)	30 ft. (9.1 m)	100 ft. (30.5 m)
Class 2	10 ft. (3.1 m)	10 ft. (3.1 m)	100 ft. (30.5 m)
Class 3	7 ft. (2.1 m)	10 ft. (3.1 m)	50 ft. (15.2 m)
Neighbor's Foundation:			
Class 1	25 ft. (7.6 m)	40 ft. (12.2 m)	200 ft. (61.0 m)
Class 2	20 ft. (6.1 m)	30 ft. (9.1 m)	200 ft. (61.0 m)
Class 3	15 ft. (4.6 m)	20 ft. (6.1 m)	100 ft. (30.5 m)
*See NAC Title 179 – Public Water Supply Systems, 7-010, for a complete definition for Non-community systems. It should be noted that some non-community systems may have more stringent setback requirements, per Title 179. * Class 1 means a basement, a non-basement footing, swimming pool, or slab-on-grade living quarters where any portion of the living quarters basement, footing, or slab is lower in elevation than the onsite wastewater treatment system component.			
* Class 2 means a basement, a non-basement footing foundation, trailer house, swimming pool, or slab-on-grade living quarters higher in elevation than the on-site wastewater treatment system. Any other foundation that is not a Class 1 or Class 3 is a Class 2 Foundation			
* Class 3 means slab-on-grade construction that is not used as living quarters.			

E. Tank Construction.

1. A holding tank must be constructed of materials not subject to excessive corrosion or decay and must be watertight. Acceptable tank construction materials are concrete, fiber reinforced plastic, high density plastic, and fiberglass.
2. When precast and cast in place reinforced concrete tanks are used they must be properly cured and of watertight construction.
3. All concrete interior surfaces of a tank that are exposed to air must be coated with a bitumastic or similar protective compound beginning at an elevation 3 inches below the normal effluent operating level to minimize corrosion and degradation of the concrete.
4. Concrete block, brick and metal are not acceptable materials for new tank construction. When an existing system is being replaced, reconstructed, altered, or modified and there is an existing concrete block or metal tank that is part of the system, the tank must be inspected. The existing tank must be replaced with a tank meeting current requirements unless the existing tank is determined to be structurally sound and watertight.
5. The tank must be designed to withstand soil pressures when empty and not collapse or undergo excessive deflection which would prevent the proper operation of the system, crack or distort components of the system such as the baffles, prevent proper sealing of lids over manholes and inspection ports, reduce capacity below the required minimum tank design capacity, or reduce the design working volume of the system.
6. All tanks must be permanently marked to specify the capacity in gallons, manufacturer, and the manufacturer's address. The gallon and manufacturing identification label must be located next to the manhole towards the inlet side.
7. For non-domestic wastewater flows the installer must ensure the tank construction materials are compatible with the wastewater characteristics.

F. Tank Design and Placement. For coverage under this permit, all holding tanks regardless of material or method of construction will conform to the following criteria.

1. Sanitary tees must be affixed to the inlet with a permanent waterproof adhesive. In no case shall the baffles or tees extend less than six inches above the liquid surface. Sanitary tees must be at least four inches in diameter
2. There must be at least one inch between the underside of the top of the holding tank and the highest point of the inlet.
3. There must be one or more access manholes at least 12 inches in diameter and located within six feet of all walls of the tank. Each access manhole must have a properly secured cover.
    a. The manhole must extend through the top of the tank to a point within 12 inches but at least six inches below grade for a tank with no manhole riser.

The manhole cover must be covered with at least six inches of soil unless otherwise properly secured to prevent unwarranted access.

b. For a tank with a manhole riser, the riser must be sufficiently large to allow for access and removal of the manhole cover. The manhole riser may extend to or above the ground surface. The manhole riser must have a properly secured cover to prevent unwarranted access.

c. Each holding tank must have an inspection pipe at least six inches in diameter over the inlet device. The inspection pipe must extend to or above the ground surface and be capped flush or above finished grade. The inspection pipe cap must be properly secured to prevent unwarranted access. A manhole access riser that meets the requirements of this permit may be used over both the inlet and outlet devices to satisfy the inspection pipe requirement.

4. Single Tank
   a. Where a septic system has a single septic tank larger than 3,000 gallons that is fabricated as a single unit, the tank must be divided into two or more compartments.
   b. When a septic tank is divided into two compartments, the volume in the first compartment in the direction of flow shall not be less than one-half or more than two-thirds of the total volume of the tank.
   c. When a septic tank is divided into three or more compartments, one-half of the total volume must be in the first compartment and the other half equally divided in the other compartments.
   d. Connections between compartments must be baffled so as to obtain effective retention of scum and sludge.
   e. Adequate venting must be provided between compartments by baffles or by an opening of at least 50 square inches near the top of the compartment wall.
   f. Adequate access to each compartment must be provided by one or more manholes.
5. A holding tank must be equipped with an alarm or visible float that indicates when the tank is 90 percent or more full, except that an alarm or visible float is not required for an outdoor style toilet facility holding tank where no water supply is used.
6. Holding tanks must be bedded with at least six inches of sand or fine gravel where rock or other undesirable conditions are encountered. The tank must be placed level. Backfilling the excavation for the tank must be done in layers with sufficient compaction to avoid settling. Backfill material must be free of large stones and debris.

7. A tank subject to flotation, such as one located in an area where the seasonal high water table may be higher than the bottom of the tank, must be properly secured or ballasted to prevent flotation.

G. Floor Drains.

1. A floor drain in a dwelling garage may be connected to an onsite wastewater treatment system provided the drain does not receive petroleum products, paint, organic solvents, antifreeze, or hazardous materials and meets design requirements of this section. These drains are designed to handle snow and ice melt along with occasional exterior vehicle washing.
2. A floor drain in a dwelling garage that is connected to an onsite wastewater treatment must meet the following design requirements:
    a. The floor drain shall must an integral mud trap and oil separator; and
    b. The floor drain must be equipped with a watertight cap or a valve shall be located immediately following the drain. The cap must normally be left secured on the drain or the valve must normally be left closed.
3. The design flow of the onsite wastewater treatment system must be increased at least 100 gallons to account for a dwelling garage floor drain connection to the system.
4. A permanent sign must be placed within view of the drain in accordance with Title 124.
5. The discharge of motor vehicle wastes or maintenance shop wastes to a holding tank is prohibited. The connection of a floor drain from a maintenance shop to a holding tank is prohibited.