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State of Wisconsin
Wisconsin Department of Natural Resources
Bureau of Drinking Water & Groundwater - DG/5
PO Box 7921, Madison WI 53707-7921
dnr.wi.gov

Potable Nonpressure Storage Vessel Application

Form 3300-317 (R 07/20)

Notice: Pursuant to §§ NR 812.09(4)(v) and NR 812.33, Wis. Adm. Code, prior Department of Natural Resources (DNR) approval is required for the use of a nonpressure storage vessel. Personally identifiable information collected will be used for administrative purposes and may be provided to requesters to the extent required by Wisconsin's Public Records law (s.19.31-19.39, Wis. Stats.).

Owner Information

Last Name	First	MI

Company

Mailing Address	City	State	ZIP Code

Phone Number (include area code)	Fax Number	Email Address

Agent Information

Name	Company

Street Address	City	State	ZIP Code

Phone Number (include area code)	Fax Number	Email Address

Operator Information (if different than owner)

Name and Title	Company

Street Address	City	State	ZIP Code

Phone Number (include area code)	Fax Number	Email Address

Section 1: If Nonpressure Storage Vessel is an Existing Installation

If this is an existing system, you may skip sections 2 through 10 and sign at section 11. The following should also be included:

- ☐ NR 812 Compliance Inspection Report Form 3300-305 and 3300-305a (Nonpressure Storage Vessel Inspection Report Addendum) completed by a licensed pump installer or licensed well driller.
- ☐ Detailed diagram of your water system and nonpressure storage vessel including distance between source and vessel, distances to potential contaminant sources and locations of inflow/outflow and overflow lines drawn in.
- ☐ Representative pictures of the components of your entire water system including the source, vessel and piping.

Section 1A: If Nonpressure Storage Vessel is a New Installation

- ☐ NR 812 Compliance Inspection Report Form 3300-305 completed by a licensed pump installer or licensed well driller to show you have a compliant water source.
- ☐ This Potable Nonpressure Storage Vessel Application Form 3300-317 must be completed.

Section 2: Storage Vessel Location

Street Address

Gov't Lot #	¼ ¼	¼	Section	Township N	Range ○ E ○ W	○ City ○ Town ○ Village of	County

Physical Location of Storage Vessel:

☐ Elevated in Barn ☐ Elevated in Another Building ☐ Half Buried on a Hillside

☐ Other, explain: _____

Storage Vessel Serves (Examples: home, barn, school, restaurant)

Type of Water Supply System: ☐ Private ☐ Non-community

Type of Water Source:

☐ Drilled Well ☐ Driven Well ☐ Dug Well* ☐ Spring Box* ☐ Other: _____

☐ The vessel is constructed above the groundwater level

*Requires additional DNR approval.

Section 3: Storage Vessel Construction Information

Vessel Material: ☐ Stainless Steel ☐ Steel ☐ Plastic ☐ Poured Concrete ☐ Other: _____

☐ New ☐ Used If used, what was previous contents held in the tank? (Examples: potable water, food)

Vessel Type: ☐ Standpipe ☐ Elevated Storage tank ☐ Reservoir ☐ Other: _____

Vessel Gross Volume: _____ (gallons) ☐ From Supplier ☐ Estimated

Section 4: Water System Specifications - Inflow/Outflow Lines

If you have more than one inflow line, please include the number of inflow lines and flow rate and diameter of each.

_____ **Inflow Lines**

Flow Rate of Inflow Line: _____ / _____ gpm Inside Diameter of Inflow Line: _____ inches

Flow Rate of Inflow Line: _____ / _____ gpm Inside Diameter of Inflow Line: _____ inches

Flow Rate of Inflow Line: _____ / _____ gpm Inside Diameter of Inflow Line: _____ inches

Outflow Lines

Flow Rate of Outflow Line: _____ / _____ gpm Inside Diameter of Outflow Line: _____ inches

Discharge location of inflow line/s: ☐ External ☐ Internal

Location of inflow line/s: ☐ Through Roof ☐ Through Curbing ☐ Side of Vessel ☐ Inflow and Outflow Share the Same Pipe

☐ Other: _____

Vertical length of line in tank: _____ in.

☐ Buried supply pipe is maintained under a continuous pressure head which is greater than the ground surface elevation.

Section 5: Water System Specifications – Attachment of Service Lines

Method of attaching and sealing inflow line/s to storage vessel: (check all that apply)

☐ Welded ☐ Welded with Flange ☐ Threaded ☐ Clamp and Gasket ☐ Sealed in a Sleeve ☐ Other: _____

Section 6: Water System Specifications – Elevation/Head Determination

The vertical distance in feet from the discharge point of the well or spring* to the discharge point of the inflow line/s. If the discharge of the inflow line is lower in elevation then the discharge point of the well, report as a negative number. If you have more than one inflow line, please include the number of inflow lines and the elevation for each.

_____ **Inflow Lines** Elevation Difference: _____ ft. Elevation Difference: _____ ft. Elevation Difference: _____ ft.

☐ Well is located lower in elevation than the NPSV ☐ Well is located higher in elevation than the NPSV

☐ Spring is higher in elevation than the NPSV ☐ Spring is lower in elevation than the NPSV

☐ Other: _____

Section 7: Water System Specifications – Overflow Pipe and Discharge Location

Distance from top of storage vessel to bottom of overflow pipe. _____ inches (for top discharging inflow pipe type)

Discharge point shall be no less than 12 inches above ground surface. _____ inches

Discharge point shall be no less than 8 feet from storage vessel. _____ feet

Overflow pipe diameter (id) _____ inches

Discharge point shall have a down turned elbow with a screen. The Department recommends no finer or courser then 24 mesh screen when the vertical drop is 30 feet or less, and the screen securely attached to the end of the discharge pipe.

Section 8: Water System Specifications – Maintenance

Dimensions: Access shall be no less than 20 inches in diameter or square. _____ inches. Vessel shall be designed with access for cleaning and maintenance.

Describe how the cover is secured and fitted.

_____

_____

Drain:

Will the storage vessel have a drain port? Yes ◯ No ◯ If yes location: side of vessel _____ bottom _____

Section 9: Vessel Separation Distances

☐ The vessel meets the distance separation requirements from potential contamination sources as specified in s. NR 812.08.

Identify contamination sources and indicate distance to vessel in feet. See Table A in NR812.08 to ensure minimum separation distances are met. If it is not feasible to meet a separation distance requirement, the Department will evaluate system to determine if adequate protection is present to all. Attach an illustration of your water system including the water source (well or spring) and include water supply lines and distances between source and discharge point to vessel as well as distances to potential contaminant sources

_____

_____

_____

Section 10: Nonpressure Storage Vessel Requirements for Steel or Concrete Construction

The following checklist contains the requirements of NR 812.33, Wis. Adm. Code for nonpressure storage vessels that are constructed of steel, other than stainless steel, or vessels constructed on site of poured concrete. If you do not have a steel or poured concrete vessel check the not applicable box(s). If you do, check all requirements that your vessel will meet. If any items are unchecked, describe the items that cannot be met below, and provide an explanation of why it is not feasible to meet them

☐ Steel construction specifications. If the vessel is made of steel, the vessel meets the requirements of AWWA D100-84 for welded construction or AWWA D103-80 for bolted construction.

☐ Painting and cathodic protection. For metal surfaces that aren't protected by stainless steel, the surfaces of the vessel in contact with potable water are protected by paints, other protective coatings, or by cathodic protection except when documentation is provided that the source water will not be aggressive or corrosive to the metal surfaces. Paint or coating systems shall conform with AWWA standard D102, and shall be NSF approved for use with potable water. When cathodic protection is provided, it shall be designed and installed by competent technical personnel.

☐ Not applicable; vessel is not steel construction.

☐ Concrete construction specifications. If the vessel is constructed of concrete, the vessel meets the following specifications:

- ☐ The supply pipe and overflow pipe extends through the structure.
- ☐ A width of 4 feet, with a 24−square foot cross section.
- ☐ An impervious flexible water stop strip for wall construction joint and a vessel drain facility shall be installed before the concrete is poured.
- ☐ The floor of the vessel is reinforced poured concrete with a thickness of at least 6 inches and has a curbing wall 6 inches high and 6 inches thick having a keyway or a flexible water stop strip for a construction joint with the walls.
- ☐ The walls of the vessel are reinforced poured concrete at least 6 inches thick and terminate above the established ground grade.
- ☐ The roof is reinforced poured concrete at least 6 inches thick and extends at least 12 inches above established ground grade. An access manhole at least 20 inches in diameter or 20 inches square is constructed as an integral part of the roof. The manhole has a curbing wall extending at least 12 inches above the roof. The curbing has a snug fitting, overlapping cover with a minimum of 3-inch wide skirted sides.

☐ Not applicable; vessel is not poured concrete construction.

If any of the above requirements are not met, please describe which requirements are not met and why it is not feasible to meet them.

Section 11: Signature

I understand that DNR personnel may inspect this property to verify information provided and evaluate this application.

I attest to the best of my knowledge the information provided in this application is true, complete, and correct. I understand that the information I provide will be used by the Department to determine if an approval can be granted and what construction specifications may be required.

Signature of: ◯ Owner ◯ Owner's Agent	Date Signed (mm/dd/yyyy)

Printed Name

MAIL THIS APPLICATION TO:

Instructions for Completing of an Application for a Potable Non-pressure Storage Vessel

Fill out the application completely and accurately. An incomplete or inaccurate application will not be evaluated. Submit any additional information requested by the DNR (for example; water sample test results, well construction reports, site maps) with the application.

Owner/Agent Information: The application must be completed by the owner or by an owner's agent. If the address is different from the address for the owner or agent, complete both addresses.

Operator Information: The operator may at times be different than the property owner. A company or person may be renting the property or renting a facility on the property and using the water supply as part of their business operations. If the owner is the operator, then write "same" in the name and title box. Otherwise, provide information about the operator.

Section 1: If Nonpressure Storage Vessel is an Existing Installation

For existing installations, skip Sections 2-10 and sign in Section 11. Include required documents from Section1.

Section 2: Storage Vessel Location

- Provide Global Position System (GPS) coordinates for proposed or existing vessel. If any wells exist on the property provide locational information (GPS) and well construction report(s) if available. If a well construction report is not available, report this on the application. Provide the Public Land Survey System (PLSS) information.
- Type of Water Supply System: Check whether the water supply system is a private water supply or a public non-community water supply. A non-community water supply serves 25 or more people.
- Water Source: Indicate water source. Note a separate approval is required for a spring box.

Section 3: Vessel Construction Information:

- Vessel Material: Check one. If "other" please describe. Check "new" if vessel is previously unused and coming directly from a fabricator or supplier. Check "used" if the vessel is not new, and describe previous contents.

  Special note for used vessels: Additional information is required if the used vessel is to be repaired. Explain all areas or openings of the tank of that will be repaired and the reason for the repair. Like material and material thickness shall be used for the repaired areas of the tank.

- Vessel Type: Check one. A "standpipe" is a vertical standing vessel taller than it is wide. A standpipe can be located outdoors or indoors and it rests on a ground supported foundation or pedestal. An "elevated storage tank" has the tank elevated on top of a legged structural support system or center supported system and is outdoors, as is used by many city water supplies. An elevated storage tank can also be an indoor or outdoor horizontally fixed or vertically fixed vessel, supported in an elevated location in a building or other structure or outdoors. A "reservoir" is an on-site constructed facility for the storage of water. It can be on the ground surface or partially below the ground surface.
- Vessel Gross Volume: Provide the gross volume as obtained from the fabricator or supplier. If a used vessel without specifications available, provide an estimate of the gross volume.

Section 4: Water System Specifications - Inflow/Outflow Lines

- Inflow lines means the water supply piping from the water source(s). At times, multiple wells can have separate water supply lines going to the vessel. Provide the total number of inflow line(s). Use additional lines where applicable. If more than one inflow line, provide a number identifier and the gallons per minute flow rate for each inflow line. If multiple water supply lines combine into one line upstream of the vessel report as one line and report the total gallons per minute from all incoming sources. Using the number identifier provide the diameter(s) of the inflow lines(s).
- Discharge location of inflow line(s): Check one. External means the inflow line rises outside of the tank and enters the vessel through the top or side of the vessel. A short stub of inflow line into the tank is allowed. Internal means the inflow line enters through the bottom of the tank and usually a longer section of the inflow line extends into the vessel.

Section 5: Water System Specifications - Attachment of Service Lines

Check the inflow pipe attachment system(s) that will be used. The requirement is a solid water tight connection.

Section 6: Water System Specifications – Elevation/Head Determination

A buried inflow line from the water source is required to be full of water and under-pressure due to elevation, or due to the use of a pressure tank. Examples of a buried pressurized line would be a spring box with a continuous water level above the inflow pipe or continuously moving water between the spring and storage vessel, or well with jack pump with a foot check valve. Check the box for the scenario that best fits your water system.

Section 7: Water System Specifications – Overflow Pipe and Discharge Location

- Location of overflow pipe connection on vessel: An overflow pipe is required for all non-pressurized storage vessels. Provide location of overflow pipe connection.
- Discharge point height: The point where overflow pipe ends and water discharges from the overflow pipe. The minimum height above the ground surface is 12 inches. Greater heights are allowed but could result in soil erosion and run off concerns. Therefore, it is recommended that discharges be onto a solid surface.
- Discharge point horizontal location: Required to be a minimum of eight feet away from the vessel. This distance is needed especially for vessels located on or partially into the ground surface, or for vessels on support systems on or into the ground surface. The concern is discharge water softening the soil support system for the vessel and thus the 8-foot requirement.
- Overflow pipe diameter: The diameter of the overflow pipe shall be large enough to permit the wasting of water at a rate more than the total inflow rate. For very low inflow rates, with one inflow pipe, the overflow pipe can be the same diameter as the inflow pipe. For systems with multiple inflow pipes and hundreds of gallons per minute flowing in, a design analysis needs to be conducted by the applicant to ensure the diameter of the overflow is large enough to waste water at a rate greater than the maximum inflow rate.
- Down turned elbow with a screen: This is a requirement. The water from the overflow pipe shall discharge vertically to the ground onto a solid surface to lessen erosional forces. The 24-mesh screen needs to be solidly sealed and either slightly inserted into the elbow or the face of the elbow with no gaps allowed.

Section 8: Water System Specifications –Maintenance

- Access Hatch Description: An access hatch is required for inspection cleaning and maintenance. If for some reason a full-sized access hatch is not provided, explain how inspection, cleaning and maintenance work will be conducted.
- Drain: For inspection, cleaning and maintenance the vessel should have a drain port that is separate from the outflow line.

Section 9: Separation Distances

Review the information in s. NR 812.08, Wis. Adm. Code and see table below which gives a partial listing of the required separation distances. See Figures 1 and 2 for sample diagrams.

Section 10: Nonpressure Storage Vessel Requirement for Steel or Concrete Construction

- Includes requirements for steel construction other than stainless steel.
- Includes requirements for painting and cathodic protection.
- Includes requirements for vessels constructed on site of poured concrete.

Section 11: Applicant Signature

The application must be signed by the owner or owner's agent.

Partial List of Separation Distances Required in s. NR 812.08

Septic or Holding Tank, 25 ft.
Soil Absorption Unit or Mound < 12,000 gal/day, 50 ft.
Privy — pit, 50 ft.
Privy — vault, 25 ft.
Pressurized Building Sewer, 25 ft.
Collector Sewer, 25 ft.
Building Sewer, 8 ft.
Manure Storage Structure — non-liquid tight, 250 ft.
Temporary Manure Stack, 150 ft.
Animal Barn/Pen, Yard or Shelter, 50 ft.
Silage Storage Tube, 50 ft.
Silo, 50 ft.
Kennel ≤ 5 pets, 8 ft.; > 5 pets, 50 ft.
Salt, Deicing Storage, 250 ft.
Buried Home Heating Oil Tank, 25 ft.
Buried Petroleum Tank, 100 ft.
Surface Fuel Oil Tank ≥ 1,500 gal, 100 ft.
Surface or basement liquid petroleum tank < 1,500 gal., 25 ft.
Swimming Pool — Above or Inground, 8 ft.
Shoreline; Lake, Stream or River, 25 ft.
Wastewater Sump — Watertight, 8 ft.
Ditch or Culvert, 8 ft.
Grease Trap, 25 ft.
Landfill, 1200 ft.

NON-PRESSURE STORAGE VESSEL DIAGRAM

Figure 1. Example of one type of non-pressure storage vessel. Include a diagram of how your non-pressure storage vessel is designed with dimensions, distances to contaminants sources and location within the water system defined.

Figure 2. Example of a water system diagram. Diagram should include distances to potential contaminant sources and location of each component in reference to the entire system.