

Watering Facility *Including Pipeline (516) Requirements*

Vermont Conservation Practice Job Sheet

614



SPECIFICATIONS

Site-specific requirements are listed on the following page(s) of this job sheet. Specifications are prepared in accordance with the Watering Facility 614 practice standard found in the Vermont NRCS Field Office Technical Guide. Information contained in this document is considered part of the conservation plan.

Client Name:		Town:	
Farm:		Tract:	
Designed By:		Date:	
Total Number of Water Facilities Planned:			
Total Feet of Pipeline To Be Installed:			

Purpose: *Check all that apply*

This practice will provide access to drinking water for:	livestock	wildlife	in order to:
Meet daily water requirements	Improve animal distribution		

If you have questions about this planned **Water Facility** practice contact:

Name:		Tel:		Email:	
-------	--	------	--	--------	--

Estimated Total Maximum Daily Water Requirements:

Type of Livestock:	Number Planned:	Estimated Gallons Per Day Per Head	Gallons Needed:
Dairy Cattle		25	
Beef Cattle		20	
Horses		12	
Sheep		3	
Goats		3	
Other:			
Estimated Total Gallons of Water Needed Daily:			

MATERIALS NEEDED	TYPE	SIZE	QUANTITY
Tubs / Troughs			
Float Valve Assembly			
Frost-Free Valve			
Pipeline			
Pipeline (Buried)			
Male Coupler			
Female Coupler			
Shutoff Valve			
Excavation			
Gravel Pad			
Reinforced Concrete			
Other:			

The United States Department of Agriculture (USDA) prohibits discrimination in its programs on the basis of race, color, national origin, sex, religion, age, disability, political beliefs and marital or familial status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication program information (Braille, large print, audiotape, etc.) should contact the USDA Office of Communications (202) 720-2791. To file a complaint of discrimination write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice or TDD). USDA is an equal opportunity provider and employer.

Watering Facility – Job Sheet

GENERAL SPECIFICATIONS

- The trough, tank or system shall have capacity to meet the water requirements of the livestock. This will include the storage volume necessary to carry over between periods of replenishment.
- The site should be well drained, or if not, drainage measures will be provided. Areas adjacent to the trough or tank that will be trampled by livestock shall be graveled, paved, or otherwise treated to provide firm footing and to reduce erosion.
- Design and install watering facilities to prevent overturning by wind and animals.
- Automatic water level control and/or overflow facilities shall be provided as appropriate. Valves or pipes shall be protected by shields or covers to prevent damage by livestock.
- Overflow shall be piped to a desirable and stable point of release. The trough and outlet pipes will be protected from freezing and ice damage if this is a potential problem. Freeze-proof troughs or electric heaters may be used at some sites.

The quality and durability of all materials shall be in keeping with the planned useful life of the installation. Consider the following guidelines for materials commonly used for watering facilities:

Galvanized Steel	- 20 Gauge Thickness	Concrete	- 3000 psi compressive strength
Plastic	- Ultraviolet Resistance	Fiberglass	- Ultraviolet Resistance

OPERATION / MANAGEMENT AND MAINTENANCE:

The following O&M activities will be planned and applied as needed:

- Make sure all valves, floats, overflows and drains are in good working condition. Repair damaged components as necessary.
- Check for and repair leaks to pipelines, joints and fittings.
- Install and maintain fences as needed to prevent livestock damage to the system and appurtenances.
- Maintain the area adjacent to the tank in a stable, well-drained condition to prevent rutting, ponding and erosion from livestock use. Maintain surface treatment for livestock footing.
- Maintain a minimum cover over all pipelines and drain lines in heavy traffic areas.
- Remove debris and silt accumulation as needed.
- Immediately repair any vandalism, vehicular or livestock damage to the system and appurtenances.
- Install small mammal escape ramps as needed in larger water tanks.

Specific Additional Requirements for Your Practice:

WATERING SYSTEM TIPS

- Allow slack when laying out the waterline on top of the ground during summer months. Lay it out straight during cold weather months. Poly pipe contracts as it becomes cooler. (maximum 4 feet per 1000 feet of run.)
- Use shutoff valves so that portions of the watering system can be shut off without shutting off the whole system.
- Consider installing simple pressure gauges in main lines of the water system to help detect problems.
- System design usually consists of a large main trunk line, and smaller branch lines called laterals.
- Lay out paddock system in such a way so that a hydrant or spigot on the pipeline can supply water to multiple paddocks. Placing pipelines under fence lines will allow for this option.
- Pressure loss due to elevation equals approximately .43 pounds per foot of rise. Pressure gains about .43 pounds for every foot of fall in the system.
- Pipelines should be drained in the fall. Either install drain plugs in strategic locations (low points), or use compressed air to force water out of the lines.
- If water is not constantly replenished to the facility, the tank size should be large enough to hold 100% of a one-day requirement for the herd.
- Tank perimeter should be a minimum of 1.5 inches per head.

Watering Facility – Job Sheet

If needed, an aerial view or a side view of the practice can be shown below. Other relevant information, complementary practices and measures, and additional specifications may be included.

Recommendation: Import digital photographs to indicate practice before and after effects. For instructions regarding graphics to importing this document go to: ftp://ftp-fc.sc.egov.usda.gov/VT/Technical/Help/Adobe_PDF_Help_1.pdf

↑N



ADDITIONAL NOTES OR INSTRUCTIONS:

