

# SPRING DEVELOPMENTS

## HANDY HINTS

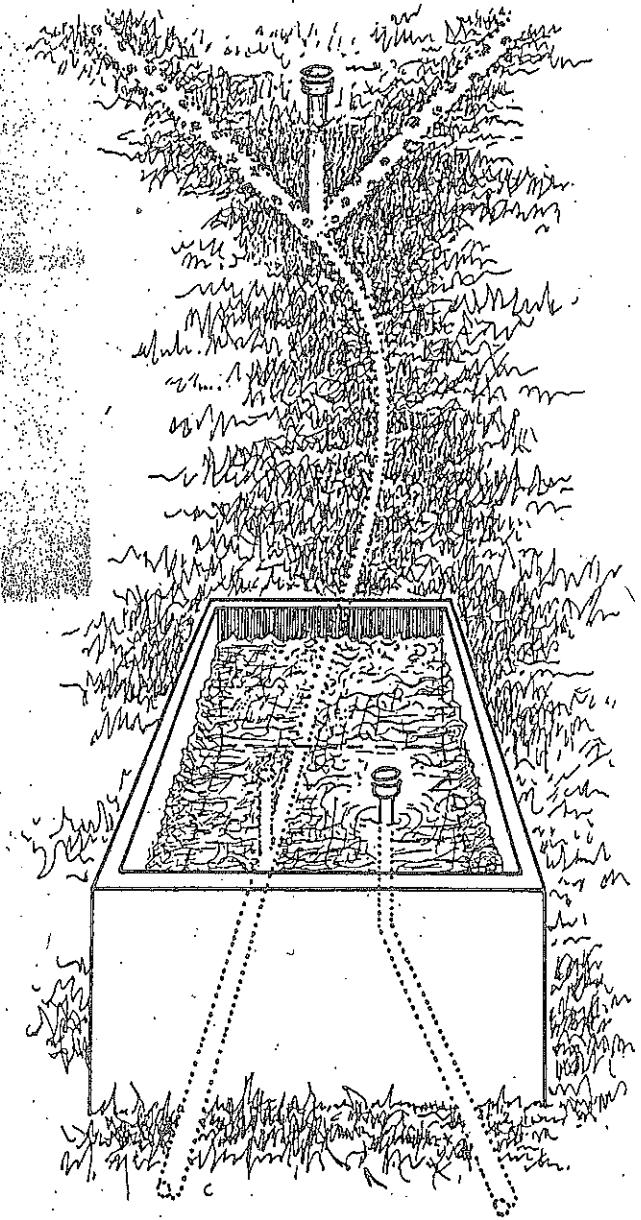
The growth of moss in tanks can be controlled with crystallized copper sulfate. These crystals should be placed in a bottle with a small notch in the cork. The bottle will be submerged in the spring box or tank depending on how much of the system needs treatment.

Tanks should be equipped with a floating board or plank, secured at one end to the top rim of the tank or to a post adjacent to the tank. This plank should extend well across the tank to provide a platform from which birds and rodents may drink. A pole or plank with one end submerged and the other secured to the top of the tank will often prevent the tank from bursting due to freezing.

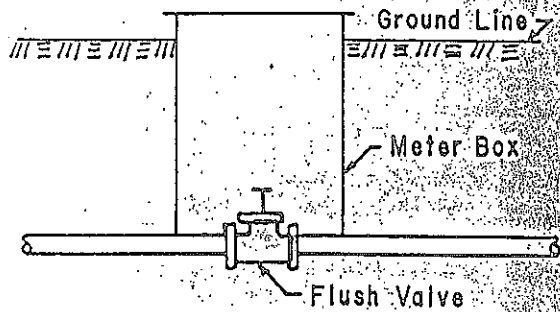
Steel tanks with concrete bottoms when not in use should be drained down until there are 6 to 8 inches of water in them. This will help prevent concrete from weathering and the tank from freezing damage.

### Daily consumption of water (gallons):

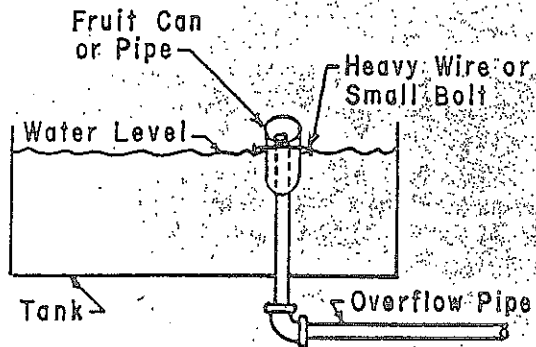
Beef cattle and horses	12 - 15
Dairy cows (drinking + barn needs)	25
Hogs	3
Sheep	1½
Elk	2 - 3
Deer	1
Antelope	1



## FLUSH VALVE INSTALLATION

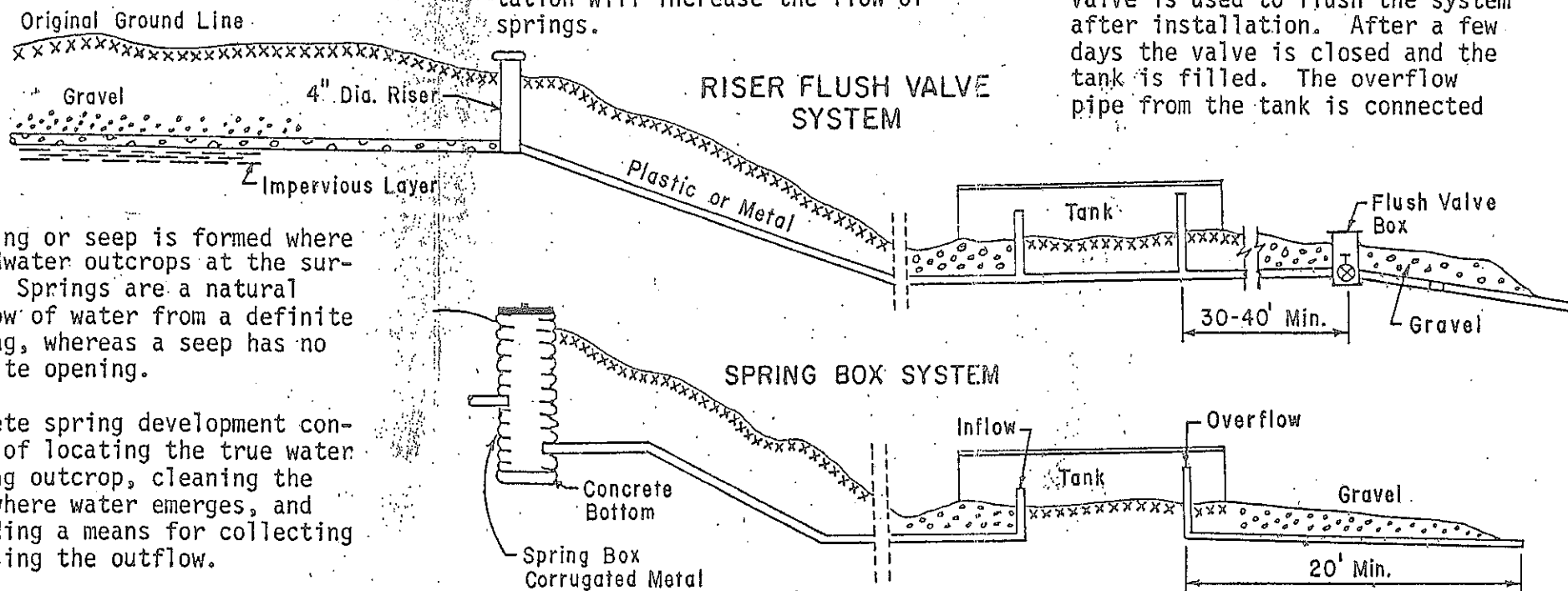


## PREVENT OVERFLOW PIPES FROM CLOGGING



The U.S. Department of Agriculture (USDA) prohibits discrimination against its customers, employees, and applicants for employment on the bases of race, color, national origin, age, disability, sex, gender identity, religion, reprisal, and where applicable, political beliefs, marital status, familial or parental status, sexual orientation, or all or part of an individual's income is derived from any public assistance program, or protected genetic information in employment or in any program or activity conducted or funded by the Department.

# SPRING DEVELOPMENT



A spring or seep is formed where groundwater outcrops at the surface. Springs are a natural outflow of water from a definite opening, whereas a seep has no definite opening.

Complete spring development consists of locating the true water bearing outcrop, cleaning the area where water emerges, and providing a means for collecting and using the outflow.

Locating active springs during a dry season will provide a more reliable water source than wet weather springs common to the area. Springs and seeps can be located by looking for water tolerant plants along draws and ravines. Bogs and small pockets of surface water may also be an indication of spring activity.

Obstructions to the flow need to be removed. This could be fine material brought to the outlet by spring flow or material washed down the slope above the opening.

Water tolerant vegetation growing near the outlet may obstruct flow and will consume water which would otherwise go to spring flow. Usually the removal of such vegetation will increase the flow of springs.

to the tank or point of delivery. From this point the line is extended 20 to 30 feet to a flushing valve. This extra line is used for sediment storage. The valve is used to flush the system after installation. After a few days the valve is closed and the tank is filled. The overflow pipe from the tank is connected

At some locations collecting the flow from several openings or seeps is the only means of development. The collection system usually consists of one or more perforated pipes (4 in. dia.) laid in a gravel filled trench. The trench is graded as uniformly as possible to a vertical pipe riser (4 in. dia.) or a spring box.

If a pipe riser is used, the outflow pipe from the riser is laid

below the flushing valve and excess water is drained away from the site.

If a spring box is used, the outflow pipe is installed 6 inches above the floor of the box to provide a sediment trap.

On both types of installations the outflow pipe is brought under and up through the bottom of the tank to protect from freezing weather.

Do NOT attempt to create the spring development without the help of NRCS.