

**Description** A level spreader receives concentrated flow from channels, outlet structures, or other conveyance structures and converts them to sheet flow. Although a level spreader by itself is not considered a pollutant reduction device, it improves the efficiency of other facilities, such as vegetated swales, filter strips, or infiltration devices, which are dependent on sheet flow to operate properly.

**Applications** Level spreaders are used in wide, level areas where concentrated runoff occurs. The site should be undisturbed soil stabilized by vegetation. Disturbed soil is subject to more erosion and may settle. If the spreader is not absolutely level, flows will concentrate at the low point and may make cause more problems than if no level spreader were used. Flows to the spreader should be relatively free of sediment or the spreader will be quickly overwhelmed by sediment and lose its effectiveness.

**Limitations**

Drainage area – 5 ac.	Max slope – 1%
Minimum bedrock depth - N/A	Minimum water table – N/A
NRCS soil type – A, B, C, D	Freeze/thaw – fair
Drainage/flood control – no	

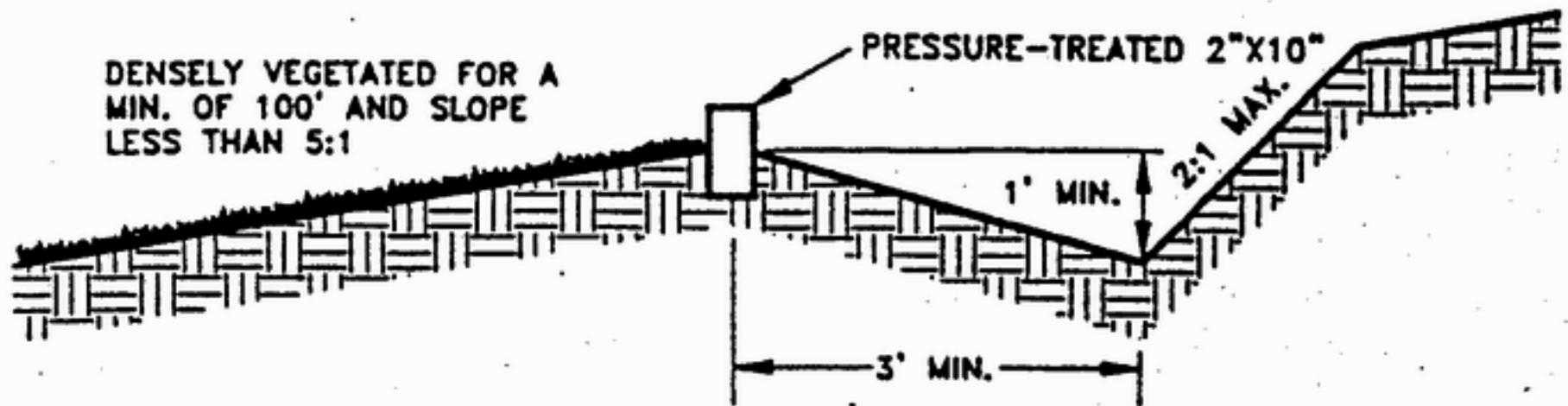
**Targeted Pollutants** N/A

**Design Parameters** The spreader should be constructed absolutely level. Height of the spreader is based on depth of design flow, allowing for sediment and debris deposition. The length of the spreader is based on the 10-year design flow for the site, as follows:

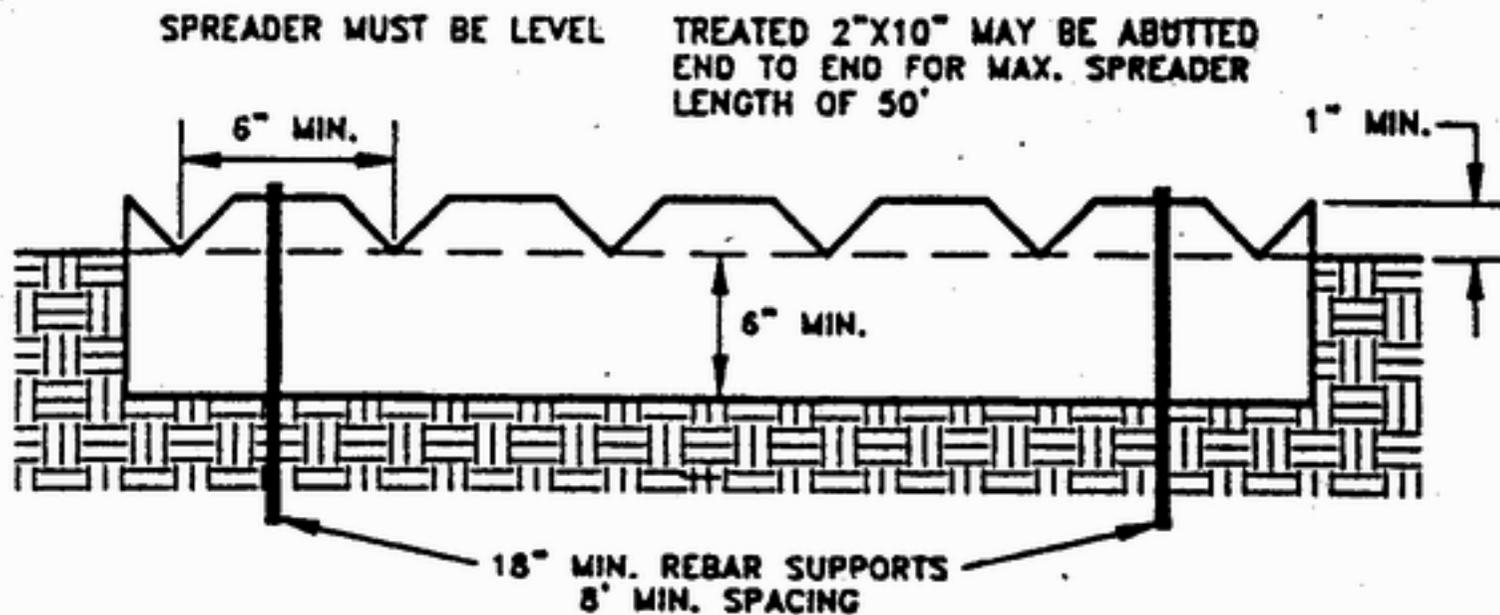
Drainage Area, acres	Minimum Spreader Length, ft
1	10
2	10
3	15
4	18
5	20

The slope leading to the level spreader should be less than 1% for at least 20 feet immediately upstream in order to keep velocities less than 2 feet per second at the spreader during the 10-year storm event. Slope of the outlet from the spreader should be 6% or less.

**Maintenance** The level spreader should be regularly inspected, including after large rainfall events. Inspection should note and repair any erosion and low spots in spreader. Sediment should be removed from behind spreader.



## CROSS SECTION



ALTERNATIVELY, 6" DIA. CMP MAY BE USED AS A SPREADER.  
THE PIPE SHALL BE BURIED SO THAT ONLY 1" EXTENDS ABOVE GROUND.

## DETAIL OF SPREADER