

FACT SHEET:

Maintaining Surface Water Drainage Ditches

Save yourself time & money, stabilize the raw earth in your ditches the right way, the first time!

This fact sheet is designed to provide helpful do's and don'ts when you are maintaining existing ditches. Allowing dirty water with sediment & excess nutrients to enter streams, rivers, lakes, ponds or wetlands is considered a violation of state regulations! Following these guidelines will help keep the State's waterways (streams, rivers, lakes, ponds and wetlands) clean for you and your neighbors.

The information presented here is not intended as guidance for building new ditches or to compensate for other regulatory requirements and/or exemptions. If you're planning new ditch construction, please contact the Vermont Clean Water Initiative for appropriate technical assistance.

TECHNICAL ASSISTANCE
*For help designing or maintaining ditches, please contact the **Vermont Clean Water Initiative** at 802-828-1535.*



Stone check dams slow the flow of water.

Below are things to review before you clean out your ditches.

<p style="text-align: center;">How close are waterways or wetlands?</p> <p style="text-align: center;"><u>Do ✓</u></p> <ul style="list-style-type: none"> - Check resource maps such as Vermont's Natural Resources Atlas at: http://anrmaps.vermont.gov/websites/anra5/ for Waters of the State (streams, rivers, wetlands, ponds, etc.) - Contact technical assistance if you are unsure of local resources. <p style="text-align: center;"><u>Don't ☹</u></p> <ul style="list-style-type: none"> - Don't begin work until you know where the Waters of the State are located on your land. 	<p style="text-align: center;">Will a contractor do the work?</p> <p style="text-align: center;"><u>Do ✓</u></p> <ul style="list-style-type: none"> - Meet with your contractor to explain the details of the job. - Explain to the contractor what is and isn't allowed and provide a copy of this fact sheet. <p style="text-align: center;"><u>Don't ☹</u></p> <ul style="list-style-type: none"> - Don't allow the contractor to begin work before you discuss the details of the work. 	<p style="text-align: center;">Are the fields and ditches dry?</p> <p style="text-align: center;"><u>Do ✓</u></p> <ul style="list-style-type: none"> - Work between June and September to allow vegetation to regrow. - Always check the weather forecast to operate in dry weather. <p style="text-align: center;"><u>Don't ☹</u></p> <ul style="list-style-type: none"> - Don't work if water is standing in your fields or in your ditches. - Don't work if rain is predicted.
<p style="text-align: center;">Where will the dirty water go?</p> <ul style="list-style-type: none"> - Check <u>Vermont's</u> Natural Resources Atlas - Take responsibility for your runoff. - Construct check dams in your ditch to slow water flow and allow settling before it leaves the ditch (see photo on this page). <p style="text-align: center;"><u>Don't ☹</u></p> <ul style="list-style-type: none"> - Don't flood your neighbors by altering your ditch's capacity or outlet location. - Don't let dirty drainage water enter Waters of the State. 	<p style="text-align: center;">Where will the excavated dirt go?</p> <p style="text-align: center;"><u>Do ✓</u></p> <ul style="list-style-type: none"> - Spread the excavated soil from the ditch on fields at least 50 feet from ditches, other waterways or wetlands. - Clean out and stabilize ditches by the end of the day. <p style="text-align: center;"><u>Don't ☹</u></p> <ul style="list-style-type: none"> - Don't place remaining debris or sediment in wetlands. - Don't allow soil to erode back into the ditch. - Don't build berms or stockpiles alongside your ditch. 	

What shape should the ditch be?

Do ✓

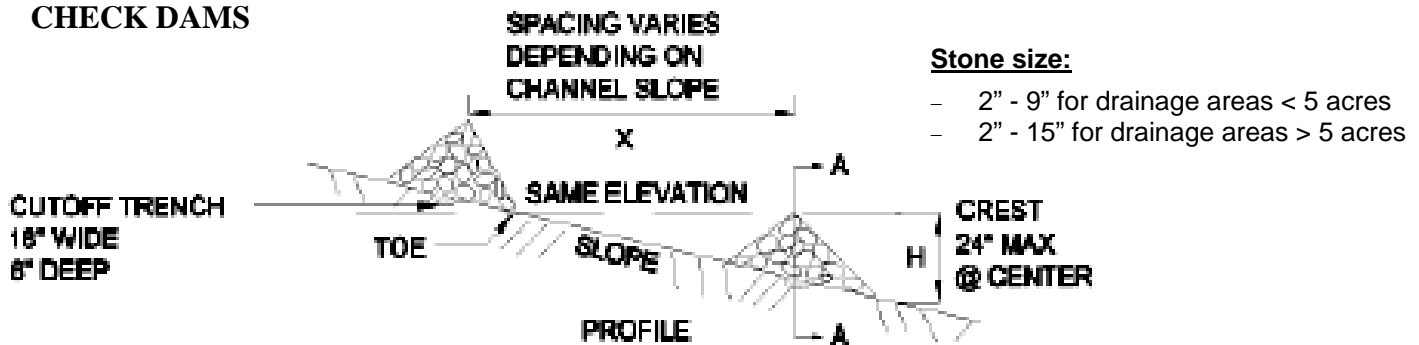
- Slope the sides gently— 2:1 (h:v) or flatter.
- Build ditch bottoms that are flat or slightly rounded.

Don't ☹

- Don't build vertical sidewalls or sharp "V" bottoms.

Below are things to review as you are maintaining your ditches.

CHECK DAMS



Stone check dams serve to slow down water and allow sediment to settle. Sediment that has collected upstream of the check dam should be removed when it reaches 1/2 the total height of the check dam. Ideally a series of check dams should be installed along the length of the ditch. At *minimum*, a check dam at the downstream end of the ditch will prevent sediment from leaving the ditch.

What are the original ditch dimensions?

Do ✓

- Maintain original length, width and depth of the ditch.

Don't ☹

- Don't make your ditch wider, deeper or longer than it was originally (call for assistance if the original dimensions are no longer sufficient for your drainage needs).

NOTE: Check your new construction regularly after every rainstorm and every 2 weeks, for 8 weeks, to ensure your ditch maintenance efforts were successful and no erosion is occurring!

Is the bottom of my ditch stable?

Do ✓

- Leave grass and plants on the sideslopes if possible.
- Mitigate the effects of sediment entering surface waters by adding seed and mulch or attaching matting on excavated areas by the end of each day.
- Properly spread soil immediately following excavation.
- Use erosion control matting on the bottom of the channel (consider using bio-friendly matting).

Don't ☹

- Don't remove established grass and plants from alongside ditches.
- Don't leave disturbed earth exposed without a cover such as mulch & seed, stone or erosion control matting.

How do I make sure my ditch doesn't erode?

Do ✓

- Ditches need to be planted with grass seed or lined with stone (depending on the slope) to hold the soil in place:

Slope	Material in the Ditch
0-5%	Grass
> 5%	Stone lined or stone check dams

- Hay mulch, hydro-mulch or erosion control matting will improve the probability of grass seed germination. 2" of mulch should be placed on the side slopes of the ditch. Hydro-mulching or erosion control matting can be used to ensure greater erosion control.
- Erosion control matting should be used in the bottom of the ditch and installed according to the manufacturer's specifications. Consider "bio-friendly" matting to provide safe habitat for snakes, birds and other animals.
- For slopes > 5%, the use of stone will be necessary. Please call technical assistance for guidance.

Review these questions after you have finished maintaining your ditches.

Is the grass growth healthy?

Do ✓

- Re-seed the entire area if grass has not sprouted within 14 days during the growing season.

Don't ☹

- Don't remove temporary check dams until vegetation is established in over 80% of the ditch.

Is erosion occurring in the ditch?

Do ✓

- Investigate the reasons why erosion is occurring and fix them or ask for technical assistance.

Don't ☹

- Don't allow erosion to continue — erosion increases maintenance requirements and causes nutrients, silt and organic matter to enter nearby waterways.