

Silage Leachate

***Another reason to
walk your ditches***

We are providing this fact sheet to help you understand potential impacts of silage leachate impacts on water quality. Your Nutrient Management Plan includes silage leachate management as required by the Dairy Nutrient Management Act, RCW 90.64.

Silage Leachate in Water is an Environmental and Health Concern

- Leachate contains high concentrations of sugars and nutrients
- Small amounts can deplete oxygen, killing fish and other aquatic organisms.
- Nutrients in surface water can negatively impact recreational use and threaten spawning and rearing habitat for fish.
- Groundwater contaminated by leachate has unpleasant odor. Leachate discharges also result in increased levels of ammonia, nitrates, acidity, and minerals. Wells located nearby a large and poorly managed silage leachate collection system are at high risk for negative impacts.

Watch for Changes on Your Farm

- Your Nutrient Management Plan was developed for your farm by you and your local conservation district, NRCS, or private planner; they can provide technical assistance about implementing your plan.
- NMPs require silage leachate to be contained to storage or directed to a treatment strip.
- Even if your plan has worked in the past, changes in operations or in volume of silage stored can disrupt the leachate handling system, resulting in discharge.

Collection and Containment fails when:

- Leachate's corrosive power widens cracks in the transfer system.
- Construction or settling reroutes leachate away from the collection point.
- Entrance to collection point clogs up or sump quits.
- Leachate enters unprotected tile lines and storm drains.



Photos shown were collected by WSDA inspectors downstream of silage leachate discharges.

Treatment strips fail when:

- Leachate increases due to a larger silage stack or wetter than normal silage.
- Amount of rain water or groundwater directed through treatment strip increases.
- Treatment strip silts up and crusts over with feed solids.
- Concentrated leachate kills grass.
- Dairy rotates strip out of grass to plant corn there.

Has your farm had any changes like these?

Find and Fix a Leachate Problem Now, Don't Wait for an Inspector to Find It

To decrease your risk of discharge:

- Know your leachate system and the location of tile lines.
- Plan ahead for changes on the farm.
- Maintain treatment strips and collection points in good condition.
- Inspect treatment strips and collection points frequently for signs of failure.
- Reduce leachate production by cutting and storing silage at low percent moisture.
- Inspect ditches for signs of change such as unfamiliar color, odor, or growth.



You may find signs of a leachate discharge yourself by taking time to look in the ditch

- Look for gray or white algal or fungal mats near possible points of leachate entry to ditches and streams.
- Look for gray or black color to water accompanied by septic smell further downstream where oxygen has been depleted.
- Just look! If it ever changes you will notice.

The Livestock Nutrient Management Program Team developed this fact sheet to provide operators clear, concise guidance. Contacts include Jason Pentzer, Eric Bair, Cara McKinnon, Ginny Prest and Nora Mena, Washington State Department of Agriculture.

For additional information contact your NMP planner or check out: Cropper, J. B. and C. A DuPoldt. 1995. Silage Leachate & Water Quality. Environmental Tech Note N5, NRCS. Available online along with other resources on the subject at: <http://wmc.ar.nrcs.usda.gov/partnerships/AWMIT/silage.html>.