Filter Strips: Priceless

33’ filter strip along a drainage ditch in rural Nicollet County

Landowners are likely to finance filter strips with cost share programs, not credit cards, but like those credit card commercials say, the benefits are priceless. Not only do filter strips protect water quality by trapping soil particles, nutrients, and pesticides, they can also improve water infiltration and enhance wildlife habitat.

The recommended vegetation and dimensions (33’-120’) vary depending on soils, land uses, and surface water flow (runoff), but filter strips all have the same basic function. Ideally, water runoff spreads out and flows as a thin “sheet” across the filter strip. Vegetation slows the runoff enough to let some suspended soil particles, plant debris, and other contaminants settle out. This reduces sedimentation in streams. Trapping sediments in filter strips can be especially beneficial in streams that provide subsurface drainage outlets, as it can help reduce sediment removal costs associated with drainage maintenance.

Some plant nutrients, such as phosphorus and the ammonium form of nitrogen, bind to soil sediment, so trapping the sediment also traps those nutrients. Certain pesticides are also trapped with soil particles. In the filter strip, those pesticides break down and the nutrients fertilize the vegetation rather than disrupting the balance of life in the water downstream.

Another advantage is that water moving slowly through a filter strip has more time to soak in instead of running off and adding to surface flow. The ground in a filter strip is often more permeable than crop ground, so water soaks in faster, too.

Filter strips offer a variety of other benefits. The setback afforded by filter strips generally assures that less drift from spray and manure applications will reach ditches or streams. This setback also provides a greater measure of safety to farm operators, as machinery can’t operate as close to potentially hazardous stream or ditch banks.

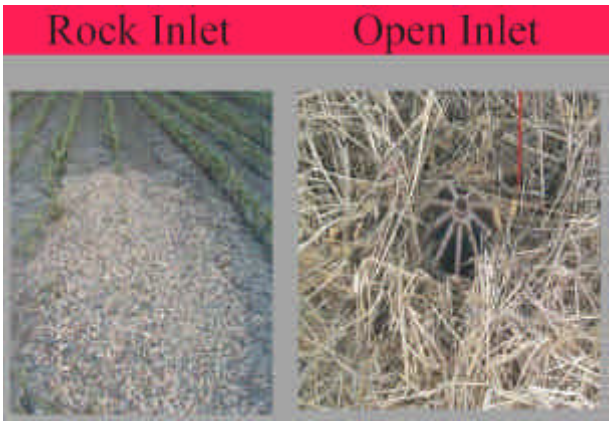
Although filter strips usually aren’t installed primarily to benefit wildlife, the vegetation provides food and cover that is especially attractive to songbirds and small mammals. The strips can also become travel corridors so wildlife can move from one area of habitat to another without the risk of crossing open fields.

Researchers have measured the advantages of filter strips with small-scale studies on individual fields and small watersheds. But showing the benefits in larger watersheds is still a challenge. Even if a filter strip makes a dramatic difference in the quality of water leaving a particular field, the benefit can be hard to measure in water from the whole watershed. That’s why it’s so important for landowners throughout a watershed to install filter strips.

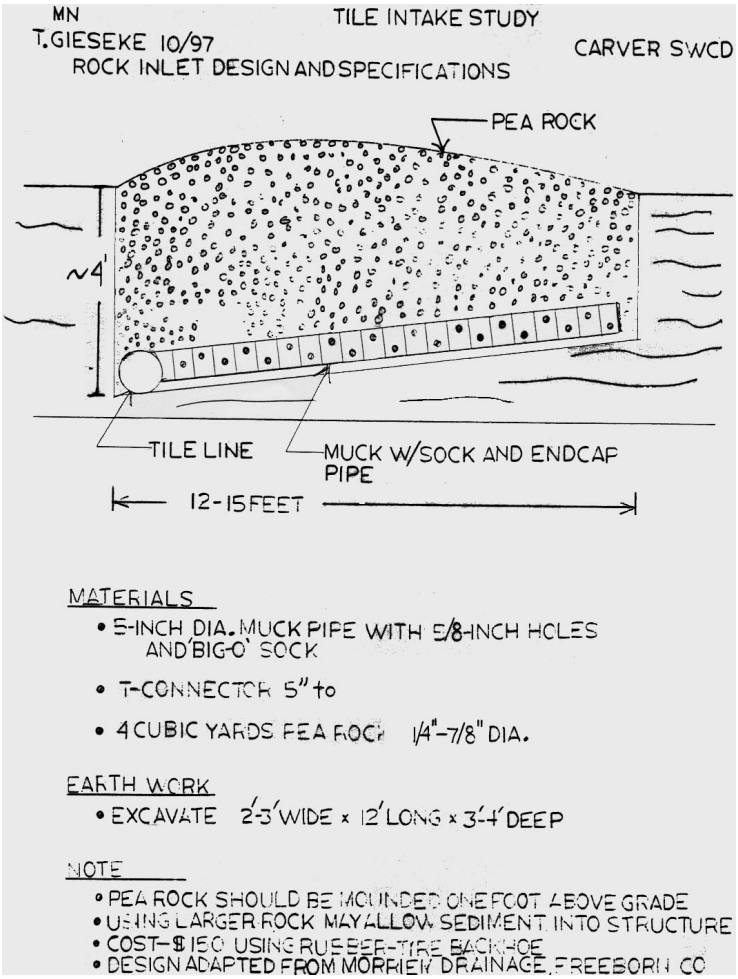
Ask about how filter strips can increase your eligibility for the new Conservation Security Program (CSP). Contact the Nicollet Farm Service Agency office at 507-931-2550 or Farm Bill Assistance Representative at 507-934-4140 for more information.

(Text adopted from Ohio DNR)

Rock Inlet Provides Practical Alternative to Open Intakes



- **Water Quality:** Recent research shows that runoff, sediment, and associated contaminates to sub-surface tile lines can be reduced by 20-30% when an open intake is replaced with a rock filter. On average one rock inlet prevents around 400 lbs. of sediment and 0.5 lbs. of phosphorus from getting into tile lines per year.
- **Cost:** Open intake replacement costs range from $150-$300 per intake.
- **Drainage and Use:** Rock inlets have 10X the porosity of a 4” intake and are much easier to farm around compared to a standpipe or open intake structure. When combined with conservation tillage, they can last more than 10 years.



Contact the Nicollet NRCS/SWCD office at 507-931-2550 or 507-934-4140 for more information.