

Tongue River Watershed Management Plan

Animal Feeding Operations Improvements

September 2007

Project Spotlight—Taylor Corral Upgrade and Run-off management Project

In the spring of 2002, the Sheridan County Conservation District (SCCD), in cooperation with the USDA Natural Resources Conservation Service (NRCS), worked with Leroy Taylor and Sean Carroll on a corral upgrade and run-off management for an Animal Feeding Operation (AFO) that runs about 125 head of cattle in the Tongue River Watershed. The corrals are mainly used to isolate sick cows and calves for relatively short periods of time. Some calving is done in the corrals and the corrals are periodically used to work cattle. An ephemeral drainage transported storm run-off and irrigation return flows from ~25 acres through the corrals en route to the Tongue River. The lower end of the corrals were located approximately 40 feet from the Tongue River.

The ephemeral drainage was re-routed into a constructed waterway along the west side of the corrals. The corrals were narrowed about 65 feet from west to east for the relocation. Fill excavated from the waterway was used to grade

the corrals to a small ditch that transports the corral run-off to a 2 acre infiltration area. The native vegetation in the infiltration area is maintained so that 50% of each year forage production remains for nutrient and moisture uptake purposes. A berm north of the corrals directs flows into the waterway to prevent the upslope drainage from entering the corrals. A windbreak was constructed along the north side of the corrals to prevent snow from accumulating to wetness in the corrals. A water well, pipeline and stock tank were installed so that livestock can be watered without direct access to the Tongue River.



" . . . I was very happy with this project. Everything about the process was flexible enough to accommodate my needs. The project not only met the objective of addressing the water quality concerns, but also improved the overall working operation of the corrals. It was definitely a 'win-win' situation. . ." —Leroy Taylor

An Animal Feeding Operation defined. . .

The US Environmental Protection Agency (EPA) defines an Animal Feeding Operation (AFO) as a lot or facility in which animals have been, are, or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12 month period; AND crops, vegetation, or post harvest residue (not weeds) are absent in the normal growing season over any portion of the facility. While facilities with 1000 animal units or more are required to obtain a permit from the Wyoming Department of Environmental Quality (WDEQ), EPA/WDEQ can regulate and require permits from ANY operation determined to have an impact to surface water quality.

The SCCD/NRCS Water Resources Improvements Program

The SCCD/NRCS offers technical and financial assistance for projects benefiting water quality in the Tongue River Watershed. Projects typically include septic system replacements, corral relocations, stockwater developments, riparian fencing/management, and stream restoration. Financial assistance comes from a combination of federal and state grants administered by the SCCD along with USDA program funds. The primary factor determining a project's eligibility is the potential benefit to water quality.



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SCCD is an equal opportunity employer and offers all programs, services, and assistance on a non-discriminatory basis. Funded with a grant from the Wyoming Department of Environmental Quality and the US Environmental Protection Agency.

Winter feeding grounds and small acreage landowners with horses, llamas, or other warm blooded animal (including pets) can impact water quality if waste reaches a waterway. Impacts can be especially serious when a mid-winter thaw melts snow at the surface while the ground beneath is still frozen.

Domestic Animals and The Tongue River Watershed Management Plan

Bacteria contributions from livestock or domestic animals are not limited to corral facilities or large livestock operations. Waste from any warm-blooded animal, including livestock or other domestic animals, pets, wildlife, waterfowl and humans, can impact water quality. This includes situations where storm run-off or irrigation return flows from adjacent pastures passes through a facility on its way to a waterbody. Although EPA/WDEQ can regulate any operation impacting surface water; they are currently targeting a voluntary approach for improvements.

In the updated **Tongue River Watershed Management Plan (May 2007)**; domestic animals (including livestock and pets) are listed as a potential contributor of bacteria to streams in the Tongue River Watershed. The Plan includes action items to address this concern, including technical and financial assistance for animal feeding operation improvements and information and education activities.

We want to hear from you. . .

This is the second in a three-part brochure series highlighting improvement projects in the Tongue River Watershed. Please give us your feedback on whether the information was useful. You can contact us at 672-5820 x. 3 or sccdofwyo.org.

If you manage domestic animals including livestock. . .

- **Conduct a self-assessment** (available at sccdofwyo.org or SCCD/NRCS) to evaluate your impact to water quality. If your operation falls under the high impact category, or if there is any potential to benefit water quality consider upgrading or relocating the facility.
- Where possible, **locate new corrals or feeding grounds away from streams** or flood plains. This can also improve the health and comfort of livestock; uplands are often warmer and drier than valley bottoms.
- Where feedgrounds are located along streams, **maintain a well-vegetated buffer** to filter and infiltrate runoff before it reaches a stream. Buffers should be well vegetated with a mix of perennial grasses, forbs, and woody species of several species and age classes. Fencing can be used to manage grazing in the buffer area to achieve the desired vegetative cover.
- **Monitor the effects of grazing** on upland and riparian areas. Consider **frequency** (the number of times a plant is bitten by a grazing animal), **intensity** (the percent of a plant's green leaves that are removed), and **rest opportunity** (the number of days during the growing season that a plant can grow without being bitten) .

Potential for Water Quality Impact	
Situation	Impact
Located on or has direct discharge of waste to surface water (including ephemeral or intermittent)	High
NO direct contact or discharge, but slope results in run-off from facilities or adjacent areas to surface water (also considers amount of filtering/buffering)	Moderate
NO direct contact or discharge and situation is such that most or all waste is prevented from reaching surface water	Low