

Water's Cost

Adopting a water-quality plan will become part of agriculture's future.

by *Corinne Blender*

Water may be one of the most freely flowing resources on earth, but it does not escape all costs. The costs run high when water quality is at stake. For that reason, beef producers must be some of the best water, land and resource managers.

"In agriculture, we use the land more intensively than would occur under natural evolution," Morgan Powell, Kansas State University professor and Extension water-quality engineer, says. Their knowledge of and care for the land allows farmers and ranchers to do that.

"To counteract possible negative impacts, producers must assist nature by implementing practices that give the natural cleansing process the best chance to work," Powell says.

One way producers can do this effectively is by addressing water flow and by studying the structure of the watershed in which they live.

Management practices can include things like grazing-land management, controlled stream access, buffer strip maintenance, wellhead and water source protection, and manure management, Powell says. "Each of these should create a healthy production system, not only for water quality and watershed quality, but for cattle health and productivity," he adds.

Self-monitored

Implementing a self-monitoring process is the key to ranchers and farmers setting personal guidelines and developing their own water-quality plans. Some may think that regulations are an

unnecessary evil, but producers can maintain freedom by using their knowledge of the land and by setting standards for themselves.

"I think that one of the biggest concerns is that producers are fearful of regulations. In reality, EPA (Environmental Protection Agency) and the states have very little regulatory authority over nonpoint-source pollution at the present time," Powell points out.

That means producers should protect their land by developing their own plans of action that will implement best management practices (BMPs) as they can be worked into the ranch management and the budget.

"A good plan should not detract from a producer's livestock operation but, rather, should help producers reach

goals while protecting water quality," Powell acknowledges.

Ducks in a row

Jim Moore, Montana State University Extension agent for Judith Basin County, says the ranchers in his area are making plans. "These guys are not stupid," he says. "They know they are going to have to have their ducks in a row."

Moore says the Extension service is a good source for education and an avenue for producers to begin their own water testing and monitoring. He provides workshops to help them see what they are facing and to help them develop and implement management practices on their operations.

"We have a lot of very intelligent, bright, articulate farmers out there. They are businessmen. They aren't the good old boys anymore," Moore says. "Unfortunately, those guys probably spend as much or more time at their computers doing books, if they are going to succeed, than they are actually out there on their land."

That is not the only change Moore has observed in the ranching industry. "If I have a meeting, for example, of 50 people, they are all my age or older. I mean 50 plus. There are no young faces down there," he says.

The workshops provide ranchers with vital information about the health of streams flowing through their lands. Moore says that he helps producers evaluate stream flow, pH, aquatic life and basic

Checklist

Morgan Powell, Kansas State University professor and Extension water-quality engineer, offers some tips for developing management practices to improve water quality:

- ▶ Identify physical factors of the watershed, including the water flow through the property and surrounding areas. Consider all of the natural resources.
- ▶ Determine the effects of grazing management or feeding and watering on water and natural resources. Identifying both the strengths and weaknesses helps you to understand how to eliminate any problems.
- ▶ Develop a written water-quality plan.
- ▶ Begin to prioritize. Address the problems one at a time, in order, so implementing a new practice can be done fairly easily and at a relatively low cost. Begin implementing best management practices (BMPs) according to those needs.
- ▶ Evaluate and record the effects of the management practices. Use those records to maintain annual maintenance, evaluation and testing.
- ▶ Begin implementing long-term water-quality management practices. Long-term projects generally require more expense and more time to implement.



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► Edwards Angus Ranch, Denton, Mont., continually monitors the quality of water in streams and holding areas (see “Freedom’s Harmony,” page 113). This tube allows water aeration, which helps maintain quality in a pond on the property.

overall stream health. Photos and tests provide that information.

Stepping stones

Powell advises producers to become familiar with the problems in their watersheds so they know why streams and lakes in their areas may not meet the state water-quality standards. “Ranchers should inventory the resources, such as soil, water supplies, streams, livestock, riparian vegetation and grass,” he says. “The second step is to set goals for protection of water quality and the resources.”

Weaknesses can be found in management practices, but they also can be observed in the lay of the land and areas beyond the producers’ control. Observe the weaknesses and make those areas stepping stones for beginning a water-quality plan.

“Look at the soil survey and topographic maps and do field

evaluations to understand where water comes from that enters your property and where water goes that flows off of your property,” Powell says. “At any given point in a stream or other water body, look upstream and evaluate the area that drains to that location. This is a watershed.”

Protecting the entire watershed is the key to water quality.

Ranchers should “evaluate their operation and the things that they are doing. Ask yourself, ‘What am I embarrassed to show visitors?’” Powell says. “These are likely associated with weaknesses that need improvements.”

Powell says producers should try to avoid watering or feeding in draws or areas adjacent to streams or other water. Areas where vegetation no longer grows can cause water-quality problems.

“After evaluating your

operation for water-quality issues, make a list of things that need to be improved. Study the list and then prioritize the list according to need,” he recommends. “Finally, identify what can be done to resolve each situation. Begin implementing one project at a time, starting with those that are high-priority and low-cost and low-effort to implement.”

Value added

“No one wants regulations of privately owned land,” Powell says. “Many producers have an unwritten plan in their heads about protection of resources and water quality.”

Using a written plan probably has not been a common practice for many ranchers, Powell notes.

Even so, water-quality issues are not going away, Moore says. Farmers and ranchers will be forced to consider their practices and to adapt water-quality plans.

“If owners approach this, as often happens, asking ‘What is in it for me?’ the result may well be declining quality, decreased productivity of land, lower property values and degraded communities,” Powell says.

The water-quality issue has to be addressed, and that could prove to be a responsible activity in many communities.

“They will gain community respect, improve the value of their property, and be an example and force for improvement of their community,” Powell says. “All people would like to live in better and improved communities, but that simply cannot happen without people in the community taking action to help bring this about.”

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