

# Big Creek Middle Smoky Hill River NEWSLETTER



## Water..It is Important!

Water is an invaluable resource. The Kanopolis Reservoir Watershed Restoration and Protection Strategies (WRAPS) area is 2,400 mi.<sup>2</sup> reaching into portions of Gove, Trego, Ellis, Russell, Ellsworth, Rush, Barton, and Lincoln counties in West Central Kansas.

A **watershed** is an area of land that drains into a river, stream, or lake. Watersheds are important, natural resources providing residents, businesses, livestock and wildlife with water for drinking, recreation, habitat, agricultural and livestock production, and manufacturing. It is imperative that everyone becomes involved in protecting and improving our local water resources.

The Kanopolis Reservoir Watershed currently has 59 impaired water bodies of those, there are 31 Total Maximum Daily Loads (TMDLs) to include: 9 Chloride; 1 E. coli; 4 Eutrophication; 1 Nitrate, 1 Siltation; 9 Sulfate; 4 Total Phosphorus; and 2 Total Suspended Solids (TSS).

With these impairment issues in mind, the WRAPS group has developed a series of water quality improvement strategies: 1) provide watershed outreach and education; 2) reduce sediment loss and improve soil health; 3) use nutrient management and conservation systems to improve soil health; 4) improve livestock management; and 5) update the watershed's Environmental Protection Agency (EPA) 9-element plan.

## Get in touch

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## WORKING FOR YOU!

**WRAPS Funds will be available in 2026 to implement Best Management Practices (BMPs) for water quality improvement and protection efforts. Funding is available for the following BMPs:**

- **Alternative Water Supplies**
- **Cover Crops &/or Cover Crops for Livestock Grazing**
- **Conversion to Native Vegetation**
- **Conversion to Reduced Tillage, No-Till, &/or Conservation Crop Rotation**
- **Improve Native Vegetation in Rangeland**
- **Nutrient Management & Soil Health (Grid Sampling & Variable Rate Fertilizer Application)**
- **Nutrient Management/Soil Health with Amendments**
- **Riparian Fencing & Livestock Exclusion**

# Timely Topics: Livestock & Winter Water

By Herschel George, Retired K-State Watershed Specialist

For cattlemen, the start of winter adds one more, nasty chore to the daily tasks. Watering livestock is a daily necessity, made more difficult by cold and freezing weather. Those that have electricity close to their livestock can utilize electric heaters to keep the open-top tanks drinkable.

Ranchers that use rural water systems, have the opportunity to use one of the “Super-Insulated tanks” to provide ice-free water for the livestock. One rule to make these super-insulated tanks work well is to use about three volumes of water through the tank. The livestock drinking from the waterer brings in the warmer water from the water lines, which helps keep the waterer free of ice. Cattlemen that have access to well water can have warm ice-free water whenever they pump. What a blessing! Even the wells that are far from electrical power can utilize solar energy to pump the needed water. But the biggest problems for the cattlemen using solar power are short and/or cloudy days. A rule of thumb for livestock producers using solar is to have 3 days of consumption readily available. These low-light conditions do not provide enough solar power, and the producer must be prepared to pump using a backup generator, a battery backup system, or have an extra-large stock tank or storage tank somewhere that will not freeze. Plus, some add a propane water heater to keep an area drinkable for the livestock.

Cattlemen that use streams or ponds for watering livestock face the biggest challenges. The concerns are for the safety of the livestock. It seems that every year we hear of producers losing a group of 5 to 15 head of cattle falling through the ice of a pond. And each year we hear about a cow losing her calf after it falls over a bank into the creek.

Producers that use ponds or streams need to ask about alternate water supplies. One option is putting a livestock water line through a pond dam so we can install a water tank below the pond. This can be done even when the pond is full of water without losing more than 100 gallons of water. Not all ponds are suited to installing a gravity-flow tank below them because they do not have the recommended 6 ft of fall from the pond water level to the stock tank location. If a livestock waterer is installed, we encourage the installation of a fence to exclude the cattle from the pond water surface.

A second option is drilling a well so cattle don't access the stream. The concern is not that the stream water quality is poor for livestock; rather, it is how the livestock degrade the stream bank and contribute manure thus, creating *E.coli* bacteria, nitrates, and sedimentation issues. We are available to assist producers with these types of systems.

Our water quality interest causes us to be concerned with what is happening to the water in the stream. Nearly all the water in streams ends up in a reservoir that is used for recreation, domestic (public water supplies) or livestock use. Encouraging ranchers to utilize a well or public water supply (rural water in many cases) for livestock purposes, or even creating a wet well to pump water from the stream area while the pump is in a protected casing and ice free. If you use a pond or a stream and are in one of our “targeted areas” let us help you find an alternative to improve your livestock operation and the stream water quality.



**Kansas State University Agricultural Experiment Station and Cooperative Extension Service**  
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