Kendrick Watershed Plan Project Update Winter 2010

NATRONA COUNTY CONSERVATION DISTRICT

Wyoming Use Attainability Analysis

Forty rural Natrona County landowners recently participated in the Wyoming Department of Environmental Quality (WDEQ) surface water Use Attainability Analysis (UAA). Working in partnership with the Wyoming Association of Conservation Districts (WACD), the UAA was conducted throughout the state during August and September, by the staff and volunteers of the 34 local conservation district offices.

WDEQ is responsible for the application of the U. S. Environmental Protection Agency (EPA) Clean Water Act within the state, and therefore is responsible for maintaining data on the uses and quality of Wyoming's water. The majority of Wyoming's rivers, lakes, streams, creeks and tributaries are currently designated for recreational use (*Primary contact recreation*), and therefore must be protected and maintained at a water quality level safe for swimming or other activity where full body contact, immersion, and/or ingestion might occur.

Secondary contact recreation is a designation that could apply to much of Wyoming's water. This designation is for water where immersion types of activities do not occur. The water quality standard for this designation is less stringent as the risk for human illness due to ingestion or immersion is significantly reduced. Changing the designation of a water site, from primary use to secondary use has required a WDEQ petitioning process that was time consuming and costly for landowners and taxpayers.

The objective of the statewide UAA project was to gather real-time data on 1,000 randomly selected water sites throughout the state to physically identify their characteristics and use. The selected sites were identified using Geographic Information System (GIS) technology, then the site characteristics and use were identified through landowner interviews, site visitations and photographs.

The data generated for each of the 1,000 Wyoming water sites will be compared to the predictions of a GIS based Recreational Use Model currently being developed by WDEQ. The scientific model is designed to sort primary use waters and secondary use waters. If the accuracy of the model proves to be valid, the designated use of a majority of the state's water could change to more accurately reflect its uses and characteristics.

If the UAA data validates the accuracy of the Recreational Use Model the result will be a more accurate characterization of water uses and a one-time "global" change in the designation of much of Wyoming's water from primary recreational use to secondary recreational use.

UAA In Natrona County

Of the 1,000 statewide randomly selected water sites identified for real-time characterization, 40 sites were in Natrona County. The Natrona County Conservation District (NCCD) coordinated the local project bringing together the resources of local agencies, volunteers and landowners. Mary Schraeder, Natural Resource Conservation Service (NRCS) mapped the GIS water sites. The Farm Services Agency (FSA) and NRCS assisted NCCD to identify water site landowners. Lisa Ogden, NCCD District Manager and Anita Bartlett, District Manager, Powder River Conservation District (PRCD) contacted the Natrona County water site landowners to introduce the UAA. Bartlett kindly volunteered to visit seven of the Natrona County water site landowners near the Johnson County border.

In September, Ogden and NCCD Supervisor Richard Hallingstad, traveled more than 1,500 miles across Natrona County, on back roads, off-road and sometime on foot, using a hand-held GPS unit to physically identify the selected sites. They conducted landowner interviews to determine the characteristics of each site relative to public and/or recreational use, flow patterns, accessibility, and proximity to high density populations. Photographs were taken of each site to validate the landowner questionnaire data. Stock ponds and irrigation ponds, less than 1 square acre, were excluded from UAA.

"Nearly 80% of the 33 water sites we observed were either seasonal dry creeks or draws. Our findings confirmed the importance of an accurate method to determine the characteristics and use of waterways," said Ogden. "WDEQ's Recreational Use Model will be beneficial to landowners, both private and public, with a designated waterway on or adjacent to their land."

"When the WDEQ model is validated and accepted by the EPA, re-designation, without petition, of identified waterways will be included in the Wyoming's 305(b) State Water Quality Assessment Report, published every two years," said Nephi J. Cole, NRCS/WACD Watershed Coordinator.

NCCD extends a special thank you to the Natrona County landowners, NRCS, FSA and Anita Bartlett from PRCD for their support and assistance in conducting this UAA.

Plant a Windbreak or Snow Fence

With careful planning, and a little patience, creating a living snow fence can result in numerous benefits for rural landowners. When properly located, a living snow fence can keep snow from drifting over a road or around barns and livestock areas, reduce the effects of wind and soil (and selenium) erosion on buildings, livestock and crops, and provide natural habitat for wildlife, small animals and birds.

Whether referred to as a living windbreak, snow fence or shelterbelt, the technique and materials used are basically the same; rows of native or naturalized trees and shrubs that interrupt the air flow by creating an eddy current. This forces the air flow (wind) downward causing the snow to drift on the windward side of the fence. These vegetative barriers can also be strategically placed to create snow drifts in areas where additional water from snow melt would be beneficial.

Living windbreaks and snow fences are less expensive to construct, require less long-term maintenance and last nearly three times longer than traditional wooden snow fencing. The challenge is to ensure the trees receive special attention until they are established. Newly planted trees and shrubs must be protected from grazing and have an adequate supply of water. The ground underneath should be free of grass, weeds and other vegetation that will compete for water and nutrients.

This means that for the first three years, the trees and shrubs will require watering and tending before they can survive on their own. Using this planting and tending practice, the Wyoming Department of Transportation (WYDOT) estimates a tree and shrub survival rate is more than 80%.

Seedling Tree Program Order Information

The NCCD supports the planting of effective windbreaks, erosion control barriers and snow fences in rural areas and on small acreages through the annual Seedling Tree Program. Natrona County residents can order trees through NCCD at a nominal cost, beginning **NOW** through April 15, 2011, with delivery in early May just in time for spring planting. The stock is limited and orders are filled on a first-order basis; orders should be placed as soon as possible.

NCCD plants come from the Lincoln Oakes Nursery in North Dakota and are native or naturalized to the region. There are more than 80 selections to choose from, including shrubs, deciduous trees, and evergreens. Many of the shrubs have edible berries for wildlife consumption, and if harvested promptly, some of the berries can be made into delicious jams and jellies.

There are many species to choose from when planning a windbreak or snow fence. Some of the more popular choices used in Natrona County include Golden Currant, Sumac, Chokecherry, Serviceberry, Bur Oak, Colorado Blue Spruce and Black Hills Spruce.

NRCS and University of Wyoming Cooperative Extension Service offer online publications with helpful information to plan, plant and maintain a living windbreak, erosion control barrier or snow fence, and guidelines for plant selection. For information or to receive a Seedling Tree Program order form, contact the NCCD office at 307-234-4022.

NCCD Hosts Annual Legislative Breakfast

The NCCD District Board of Supervisors recently hosted their annual Appreciation Breakfast for city, county, state and federal elected officials, and representatives from cooperating agencies. The breakfast featured a review of current NCCD programs, 2009-2010 accomplishments, and an overview of upcoming projects targeting issues of concern to rural landowners and small acreage residents.

Picture, beginning on the left: Lisa Ogden, NCCD District Manager; Tom Walters, Chairman NCCD Board of Supervisors; Tyrone Fittje, NCCD Supervisor; John Bentley, NCCD Supervisor; Kelly Burch, NCCD Supervisor; not pictured, Richard Hallingstad, NCCD Supervisor.

A project that impacts all Natrona County residents was the completion of the Central Wyoming Fairgrounds Animal Waste Management Improvement Project. Under the leadership of NCCD; NRCS, Central Wyoming Fairgrounds Staff and Fair Board, Casper College, Natrona County, City of Casper, and Historic Trails RC&D worked together to address the issues and concerns impacting both the fairgrounds and the North Platte River. The project resulted in fairground facilities improvements to eliminate potential migration of nutrient and pathogen contamination to the North Platte River, implementation of Best Management Practices (BMP's) for animal waste and a comprehensive Storm Water Management Plan.

Other NCCD 2009-2010 projects include participation in Rural Living workshops, attended by more than 200 Natrona County residents. The no-cost work shops, sponsored by the Rural Living Team, featured topics such as weed identification and control, irrigation management, Pine Bark beetle recognition and control, subdivision issues, and solar energy. NCCD is also working with NRCS, City of Casper, and local farmers and ranchers to monitor and evaluate the outcomes of a joint bio-solids project.

NCCD coordinates the Rangeland Management project to control Prairie Dog infestations, which began in 2009 and will continue into 2011. To date, approximately 40,000 acres have been treated/retreated. NCCD continues to monitor Selenium migration and management practices through its water quality testing in the Kendrick Watershed. NCCD serves on the Inter-Agency Scoping Commitee for the North Platte River Total Maximum Daily Load (TMDL) Project to establish selenium TMDL's through the analysis of historic water quality testing data.

For information on other programs and projects, contact Lisa Ogden, District Manager, 5880 Enterprise Drive Suite 100, Casper, WY 82609, phone: 307-234-4022.

Fun & Games for Watershed Wonks

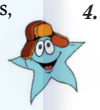
What Does A Tree Really Do?

Trees are an important part of a healthy watershed - often we take them for granted. When we start adding it up, the gifts we receive from trees are amazing! Solve these problems to see the benefits from one tree.
For these problems, assume that this tree will live 50 years.

1. Trees transform carbon dioxide into oxygen that we need to breath. If one tree makes enough oxygen each day to fill two houses that measure 1,800 sq. ft. , how many houses full of oxygen will it produce over its lifetime? _____ Houses full

2. Trees add water vapor to the air through transpiration. If an acre of trees can transpire 600 tons of water per day, and there are 40 trees per acre, how many tons of water will one tree transpire during the months of May, June, July and August? _____ Tons

3. This tree adds 400 pounds of leaves to the soil each year. By holding the soil with its roots and slowing the fall of rain with its leaves, the tree also prevents 100 pounds of soil from eroding each year. After 12 years, how many tons of soil has this tree enriched at this location? _____ Tons



Answers: 1. 36,500 houses 2. 1845 tons 3. 3 tons

Wonk High Energy Wintertime Treats

These easy-to-make, treats will give you plenty of energy to work and play when it's cold outside!

You'll Need:

- 1/2 cup peanut butter (smooth or crunchy)
- 1/4 cup honey
- 1 1/2 cup rolled oats
- 1/3 cup dried fruit cut in small pieces (raisins, pineapple, mixed fruit, berries, etc.)
- Cooking spray or butter

Step 1: Blend the peanut butter and honey in a mixing bowl

Step 2: Mix in the oats and fruit. Stir until all the dry ingredients are evenly coated with the peanut butter mixture.

Step 3: Spray a baking pan with cooking spray or coat with butter. Press the mixture evenly into the pan, making it about one-half inch thick overall. Put the pan in the refrigerator of about two hours.

Step 4: Cut the mixture into two-inch squares or interesting shapes, and serve to the whole family!

Test Your Groundwater Watershed IQ

Groundwater is the water that saturates the tiny spaces between gravel, sand, silt and clay particles or the fractures in rocks. We depend on its good quality and quantity for drinking and growing crops. Groundwater is a hidden resource and often forgotten, primarily because we can't see it.

1. Which way(s) can groundwater move?
A. Up B. Down C. Sideways D. All of the above

2. How is the speed of groundwater movement measured?
A. Feet/day B. Feet/week C. Feet/month D. Feet/year

3. What determines how fast groundwater moves?
A. Temperature B. Air pressure C. Water table depth D. Material it flows through

4. What is an aquifer?
A. The subsurface area surrounding a well that supplies a public water system
B. The water that public utility systems pump and treat from sources open to the atmosphere
C. A layer of underground sand, gravel or spongy rock that contains water
D. An area where runoff water collects

Answers: 1: D, 2: D, 3: D, 4: C

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Happy Holidays!

Natrona County Conservation District
5880 Enterprise Drive Suite 100
Casper, WY 82609