

# The Mountain Meadow



A quarterly publication from the Sublette County Conservation District

April 1, 2009



Large amounts of snow have accumulated at the SCCD living snow fence west of Pinedale. The addition of a commercial snow fence on the windward side of the planting caused the large drift which has kept the highway less icy, provided winter cover for the seedling trees beneath, and will provide a source of water for them this spring.

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*"By working with local people who understand local problems,  
the best conservation measures can be accomplished."*

# What we've been up to

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## Anticline Disposal Tour

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Some of the district personnel recently had the opportunity to tour the Anticline Disposal Facility. The water cleaning facility has changed a great deal since that first visit years ago.



Anticline Disposal is a wastewater solutions provider for oilfield production and flow-back water. Industry wastewater goes through an initial cleaning process that allows for reuse during well fracturing. The remaining water undergoes further processing, until a "zero detect" level of contaminants is achieved. The end product is crystal clear water of above drinking quality standards that can be recycled over and over. Anticline Disposal is located within the Pinedale Anticline Project Area. It currently employs 38 people and runs 24 hours a day 7 days a week, all year long. Last year more than 252,000,000 gallons of waste water came in and approximately 216,085,716 gallons of recycled water was transferred back out for reuse.

For further information contact Jesse Eubank 307-360-3390

## PAWTG Meeting

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SCCD staff attended the PAWTG meeting held March 17. Delsa Allen, Ground Water Supervisor, presented an updated Sampling and Analysis Plan (SAP) covering sampling procedures, parameters collected, etc. Kathy Raper, Surface Water Quality Specialist, updated the task group with regard to the addition of a new surface water sampling site.

Geomatrix presented a supplementary monitoring program for the Pinedale Anticline Project Area that will include ground water monitoring wells and surface water sites to measure flows. The SCCD will provide technical expertise and input as to site selection.

*Seedling Tree Distribution Days will be on April 30 and May 1st between 9:00-5:00 pm in the back parking lot at the Sublette County Conservation District. We will be selling a few overstocked seedling trees as well as tree planting aids such as rabbit guard, polymer, weed barrier & fabric staples. Kay Malcowski the "Tree Lady" will be there to answer some of your mature tree questions as well. Refreshments will be on hand.....come on over and see us!*

# Conservation Plantings

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## Don't Forget About Drip Irrigation!

Drip irrigation systems help reduce water use and meet the needs of plants. With these methods, very small amounts of water are supplied to the base of the plants. Since the water is applied directly to the soil, rather than onto the plant, evaporation from leaf surfaces is reduced. The water is also placed where it will do the most good, rather than sprayed over a large area. The basic elements of a drip or trickle system consist of the head, the tubing, and the emitters.

The head is the part of the system that connects to your water supply. The major components of this may include a pressure regulator, a filter, an anti-siphon valve, and an auto-

matic timer. While this may sound complicated and expensive, it is not. Installation of these components will create a better operating system. Plastic tubing is used to get the water from the source to the area. This comes in many sizes. A variety of fittings are available to go around corners and to connect pieces.

Plastic tubing considerations; A general recommendation is that 400 feet is the maximum for 1/2 inch tubing. Consider what you intend to water with the drip system. You may need several different systems to best meet the needs of various plants. Not all plants have the same water requirements, and soil conditions in various parts of your yard may vary.

Emitters deliver the small amounts of water to the plants. Depending on the design, emitters can either be attached directly to the pipe or attached to "spaghetti tube," a very small flexible tube that can be placed next to plants or in pots. Emitters can let water drip out very slowly, or small sprinkler emitters can be installed to provide a spray pattern similar to a lawn sprinkler.

The size of the emitter will influence the amount of water delivered. Some deliver as little as one half gallon of water per hour while others deliver up to 10 gallons per hour. Sprinkler emitters are also available in various flow rates, spray patterns and coverage areas.

While these systems need planning, they are neither expensive or difficult to install. In most cases, no special tools or skills are needed. No gluing or soldering is required. Drip systems will require periodic maintenance, but will reward you with healthier and happier plantings.

### **Informative websites:**

<http://www.rainbird.com>

<http://www.dripworksusa.com>

<http://www.irrigationtutorials.com>

<http://www.dripdepot.com>

<http://www.dripirrigation.com>

# What's New

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## Air Quality Program

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Due to Sublette County's ozone standards being exceeded during the winter of 2007/08, and public concern, the Sublette County Commissioners, WY Dept. Environmental Quality and the WY Dept. of Health have chosen to do a Human Health Risk Assessment Air Toxics Inhalation Project for Sublette County. This project will involve a year of monitoring before the Risk Assessment is compiled. The commissioners are funding the Sublette County Conservation District to provide on-the-ground support to the project, by collecting samples and performing minor maintenance. The SCCD is also a part of the Technical Committee and provided assistance in selecting site locations.



Currently, all ten urban stations and three of the six boundary stations are up and running. All stations are equipped with a meteorological station, a HAPs (Hazardous Air Pollutants) sampler, and a formaldehyde sampler. All of the equipment is mounted on a single tripod and the whole system is referred to as a station. The two samplers (HAPS and formaldehyde) are collected every six days for shipment to the lab to be analyzed. Data from the metrological stations and

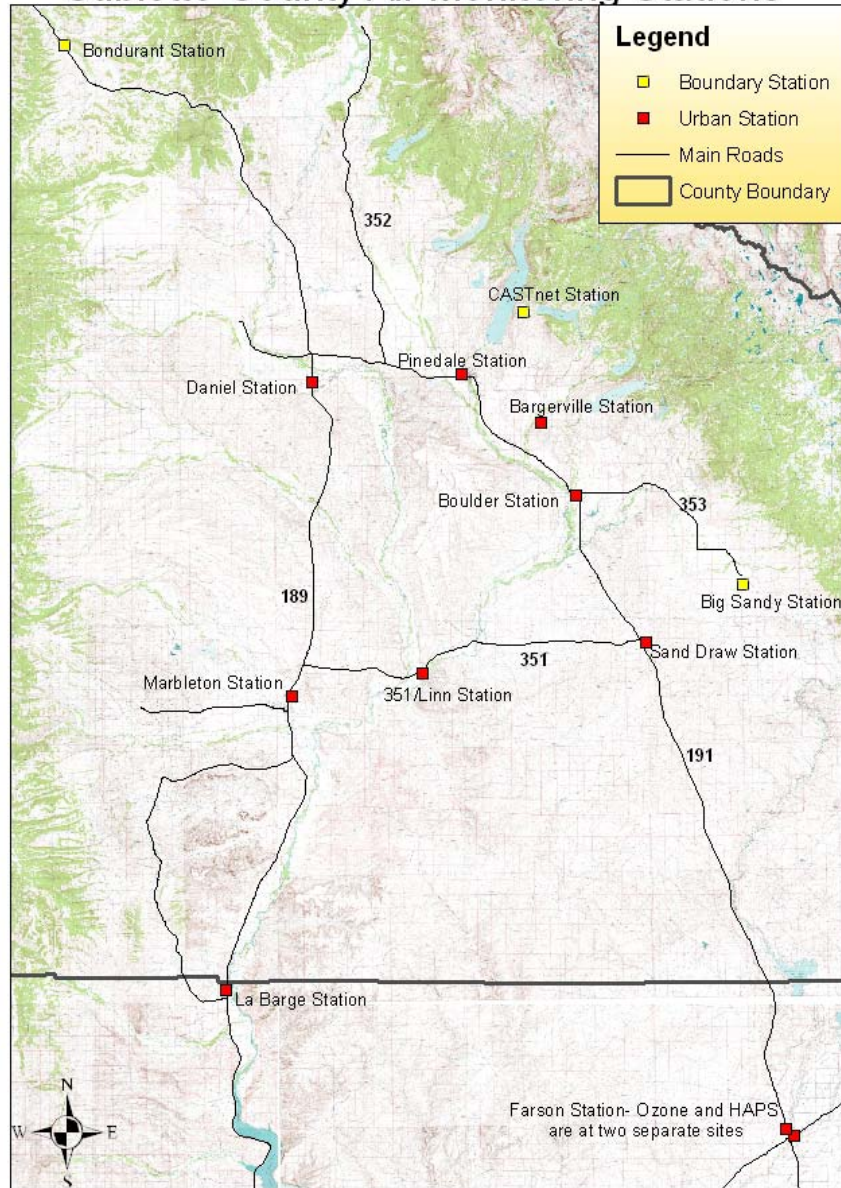
the ozone analyzers are sent via wireless modem, directly to Air Resource Specialist (ARS) who is handling the data analysis.

At five of the stations there is also an ozone analyzer, which the district monitors as a quality control measure for the lab. The boundary sites, as well as the 351/Linn site, do not have ozone analyzers.

The analysis of the raw data will be given to the commissioners from ARS on a quarterly basis, and distributed to the public from there. If you have more questions about the project please contact the SCCD or the Sublette County Commissioners.



## Sublette County Air Monitoring Stations



Currently, the Sublette County Conservation District collects samples from 10 urban stations and 3 boundary stations. Three more boundary stations are planned to be installed this summer or as soon as weather permits. Samples are collected every six days at each site.

# A word from NRCS

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## soil survey update

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Jennifer Hayward, District Conservationist

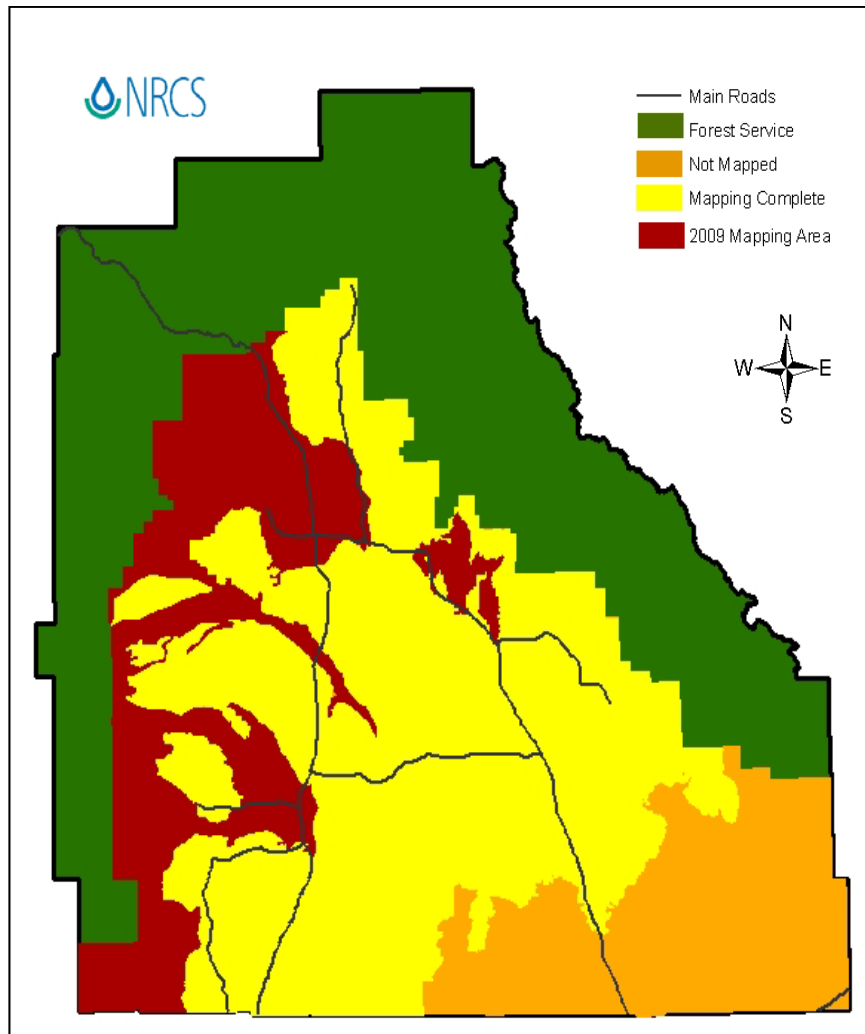
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Since 2004, soil scientists have been in the area classifying and mapping Sublette County Soils. Over 90% of the nation has currently been mapped, Southwest Wyoming is one of the last places to have an initial soil survey completed. Having basic soils information on your property is one of the best ways that NRCS can assist you. Most management and land use changes are based on this very important information that can only be obtained from a knowledgeable soil scientist.

The survey crew hopes to map the rest of the private land this coming summer. Approximately 60 landowners will receive a letter in the mail requesting access to their land and then will have a follow up phone call to obtain permission. Please consider this request. The survey is non-invasive, will not disturb your haylands and is done at no charge to you. You have a choice as to when the staff are onsite and can also request how they access your lands. Often times, if they have seen enough of the soil and landforms around your property, they won't have to dig many holes. Once the soils staff has moved on to map other areas after this year, this request



will be very difficult to fill. Soils information assists you in knowing the capability of your land, the water holding capacity for irrigation projects, depth of soil and suitability of soil for other land uses. If you choose in the future to subdivide a portion of your land, a soil survey is required for the Conservation District to complete a



## Sublette County Soil Survey Progress

subdivision review. Also, with carbon credits being discussed so often, if a landowner wishes to participate in any carbon programs, knowing your soil resource will be a must! We appreciate your willingness to assist in getting the best soil survey for our county! While Iowa and other states have been mapped and re-mapped, I personally don't envision our county, with so much public land, to be mapped again. Please contact me here at the office or call Dan Mattke, Soil Survey Party Leader at 367-2257 extension 114 if you have any questions about the program.

# Range Plant Spotlight

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## Wyoming Big Sagebrush

Karen J. Clause, Rangeland Management Specialist USDA-NRCS

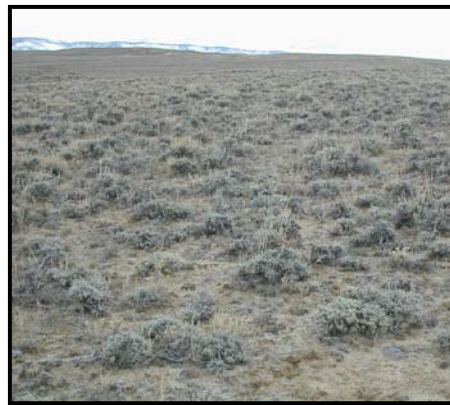
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*Artemisia tridentata ssp. Wyomingensis*

Plant Symbol = ARTRW8

Wyoming big sagebrush is an evergreen shrub native to Sublette County. It occurs throughout 13 states in the western US, and is part of a complex of 6 subspecies of big sagebrush (*Artemisia tridentata*), 4 of which occur in Sublette County.

These include subalpine or spiked big sage (*A. tridentata ssp. spiciformis*) found in high elevations, mountain big sage (*A. tridentata ssp. vaseyana*) found in foothills and mountains, basin big sage (*A. tridentata ssp. tridentata*) found in very sandy soils and ephemeral drainages, and Wyoming big sage (*A. tridentata ssp. wyomingensis*) which dominates from Pinedale south to the county line in the more xeric “desert” country. There are other subspecies proposed or regionally recognized, but they are not taxonomically recognized by the National Plant Data Center.



**Description:** Wyoming big sage is most easily recognized from other big sagebrushes by its location on the landscape. It is the more drought tolerant of the big sagebrushes, occurring in the lower elevations of the county in areas receiving 8 to 12 inches of precipitation. It is typically 1 to 3 feet tall with gray-green, bell-shaped 3-lobed leaves. It has an irregular shaped crown, often referred to as “mushroom-shaped”, with clusters of seedheads scattered throughout the crown.

Another definitive way to distinguish Wyoming big sage from mountain big sage or the Gosiute hybrid is to use a UV-light test.

**Uses:** Wyoming big sagebrush is perhaps the most important shrub on western rangelands. It is the most palatable of the big sagebrushes and provides an excellent winter food source to numerous wildlife species. It can also be used by sheep when other more desirable species, such as desert salt shrubs, are not present. It maintains high levels of most nutrients, including crude protein levels of 12%, in the winter. The volatile oils deter consumption by some species, while other animals, such as mule deer and antelope, have adapted to overcome the grazing deterrent. In addition to providing food and cover for numerous sagebrush obligate species, its presence fulfills



Season↓	Species→	Cattle	Horses	Sheep	Elk	Deer	Antelope
Spring		U	U	U	U	D	D
Summer		U	U	U	U	D	D
Fall		U	U	U	D	D	P
Winter		U	U	D	D	P	P

P= Preferred; D=Desirable; U=Undesirable

an essential role to other plant species that occur in these plant communities.

Wyoming big sagebrush is an essential component in the reclamation of native rangelands because of its unique adaptations to survive the local climate as well as the food and cover provided to wildlife. In addition, it performs important hydrologic functions on the landscape, such as moisture distribution in the soil profile, capturing snow, providing micro-climates for seedling establishment and escape cover for plants from excessive herbivory. It is adapted to dry, well-drained soil conditions, and withstands grazing pressure well. The only known improved varieties of seed on the market are Gordon Creek, originally collected from Carbon County, UT and Caballo, available through Wind River Seed Company and originating from the Greybull-Basin area in Wyoming.

The majority of seed on the market is from wildland seed collections from Utah and Southwest Wyoming (Kemmerer area).

**Management:** Wyoming big sagebrush will withstand heavy grazing, and is considered an increaser with grazing pressure. At one time it was considered an invader until its importance on the landscape was recognized. In a native rangeland situation, it should comprise a major part of the plant community, although a variety of canopy coverage is desired across the landscape. Fire historically played a role in the ecology of big sagebrush species, and the periodic treatment of sagebrush may be necessary if the fire regime has been removed from the landscape to both optimize the ecological function and support the variety of uses on the landscape. The importance of this plant to wildlife, in addition to the presence of invasive plants after treatments, has resulted in much more scrutiny to the application of these treatments. However, if done properly in the right locations, sagebrush treatment can result in more plant diversity, rejuvenated sagebrush communities, and increased herbaceous forage for livestock and wildlife.



Sage leaf

References:

USDA-NRCS Idaho State Office & National Plant Data Center  
 PLANTS database, <http://plants.usda.gov>  
 NRCS eFOTG, Ecological Site Descriptions <http://esis.sc.egov.usda.gov/>  
 USDA-Forest Service Fire Effects Information System (FEIS)  
<http://www.fs.fed.us/database/feis/>  
 Rosentreter, Roger. 2005. Sagebrush Identification, Ecology, and Palatability Relative to Sage-Grouse. USDA Forest Service Proceedings RMRS-P-38.  
 Winward, Alma H. 2004. Sagebrush of Colorado: Taxonomy, Distribution, Ecology & Management.

# What we've been up to

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## Bug Day at the Big Piney Center

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The kids learned about body shape and color, how to tell if it's a spider or a bug, what bugs eat and where they live. The kids chose their favorite bug and then "flew or crawled" to see how fast these bugs were. Finally each child created their own unique bug to take home.



## Ag in the Classroom

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The Ag In The Classroom Tool Chest spent a month on display in the SCCD office. Homeschoolers, Teachers & Scout Leaders came in to view the items available for checkout. Items are always available for checkout to anyone needing some outdoor educational tools and there are plenty of books for children and adults. The Tool Chest was purchased by EnCana and donated to the SCCD for the

public. You can get a closer look at the learning tools available by going to our website and clicking on the "Ag In The Classroom" page.

## Science Fair project—Water, Water

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Eighth grader, Thomas Shaffer presented his Science Fair Project during our board meeting on January 13th, "Water Water Everywhere, year two". The project consists of studying the return flow of irrigation water once the soil is saturated. Thomas worked closely with the State Engineers Office using data from Boulder Lake in order to help determine the return. In Pinedale the experiment earned "Best of Show", then it was onto Regionals for a 3rd place finish then later taking 2nd in the state. NRCS's Jennifer Hayward & Dan Murdock assisted Thomas as well. Thomas is hoping he can take his project to the State Fair, if he qualifies then it will be onto Nationals . . . . . Well Done Thomas And Good Luck!



# Kid's corner

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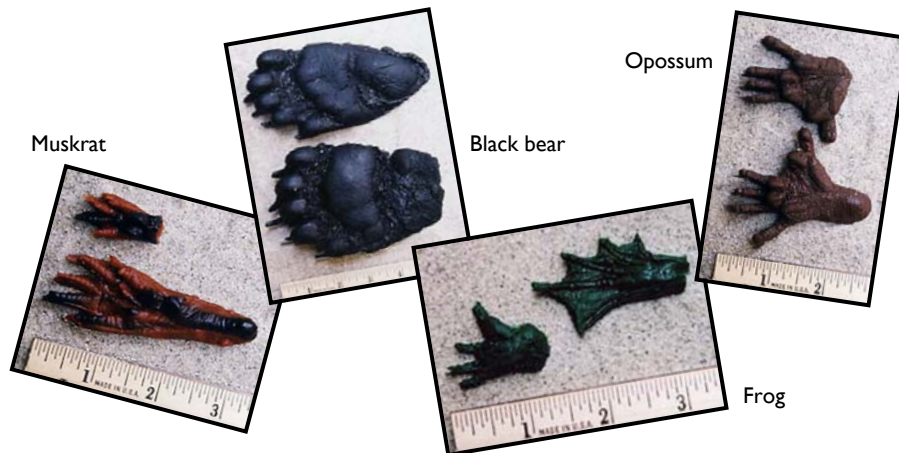
In recognition of Ag Week, the SCCD held a contest for kids and adults using the wildlife tracks from the Ag In The Classroom Tool-chest. The contest ran about a month. Animal tracks were numbered and placed on the floor. Of the 25 possible answers the most anyone was able to determine correctly was 15. It was harder than it looked!



We decided everyone who played was a winner! Depending upon the age of the participant, awards ranged from SCCD hats to earth bracelets, and kits to make adorable frog/flower hats.

The hardest to identify was the Muskrat. The two easiest tracks to identify were the Black Bear and the frog. Many players had a hard time identifying the hoofed animals: antelope, domestic calf, domestic sheep, mule deer, elk & moose. They are similar until you put them all together, then you see how different they really are.

One of the tracks has opposing thumbs. Almost everyone guessed it to be the raccoon, only two players were able to identify the Opossum tracks correctly.



# Who are we?

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## Sublette County Conservation District Board of Supervisors

Darrell Walker, Chairman  
Brad Bousman, Vice Chairman  
Dan Stroud, Treasurer  
Colin Barney, Member  
Chad Espenscheid, Member

## Sublette County Conservation District Associate Supervisors

Lee Shafer  
Jim Bousman  
Les Burrough

## Sublette County Conservation District Staff

Sno Ann Engler, Administrative District Coordinator  
Kathy Raper, Surface Water Quality Specialist  
Delsa Allen, Ground Water Quality Specialist  
Melanie Purcell, Natural Resource Specialist  
Meghann Durbrow, Air Quality Program/Field Technician

## Partners: USDA / NRCS Staff

Jennifer Hayward, District Conservationist

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