



# Rolling Thunder Review

## Harnessing Sun and Wind

*A Hybrid System Brings Water to a Remote Location*



With help from the Oregon Watershed Enhancement Board, Sherman County SWCD, NRCS's EQIP, and the Pine Hollow/Jackknife Watershed Council, the Black Rock Grazing Association constructed the first solar/wind hybrid off-stream water development in the watershed. Being the first of its kind in the area and for Lexington Pump, the "hybrid" contractor, it has attracted some attention.

A "hybrid" system combines both wind and photovoltaic technologies. This offers several advantages over either single system. Many times wind speeds in the summer are low while the sun shines the brightest and longest. In the winter, when there is less sunlight available, the wind is usually the strongest. A hybrid system takes advantage of the differences in the peak operating times for wind and PV, producing power all year long.

If the sun is shining and the wind is blowing there is an override switch that will shut down the wind turbine to only allow power from the PV system to support the pump.

This not only keeps a consistent supply of power to the pump but keeps the wind turbine components from

wearing out. While the pasture is not in use, the system can be easily shut off with a flip of a switch. The turbine will continue to turn slowly (very slowly) but an internal brake system keeps it from spinning out of control when not in use.

Located in a remote area of the Pine Hollow/Jackknife Watershed, the hybrid system was designed to pump enough water to sustain the Association's 300 head of cattle that rotate through this pasture from May 1 - November 1 each year. Water is pumped to two 1,200 gallon poly-troughs to ensure ample water supply for the herd. Any

overflow from the troughs are channeled outside the watering area to a safe outlet.

For the Black Rock Grazing Association, the hybrid system will be a reliable water source while also reducing environmental impacts on fragile riparian areas. Strategically placing the water source in the uplands has also resulted in more efficient use of the pasture.



The solar/wind hybrid water system draws cattle away from riparian zones. Located in the uplands allows for better distribution of livestock.

<i>Inside this issue:</i>	
<i>Board Highlights . . . . .</i>	<i>2</i>
<i>NRCS Report . . . . .</i>	<i>3</i>
<i>Precision Ag Project . . . . .</i>	<i>4</i>
<i>Experiment Station . . . . .</i>	<i>5</i>

## Sherman SWCD Board Highlights October 9, 2007

### WATERSHED UPDATES

South Sherman - There have been district hours spent doing EQIP and CREP projects in the watershed.

Pine Hollow/Jackknife – Brian commented that the new managers of the Pine Creek Ranch complimented the district on their enthusiastic staff and look forward to working more with the district. Jason reported that BPA cultural resource reviews have been moving quite slowly but he hopes that projects will be approved for implementation by the middle of January.

Assessment – Joli reported that the preliminary inventory is complete. The next step is to set up individual appointments with landowners. She and Brian are currently gathering information for History & Stream Flow and Runoff & Erosion Chapters of the assessment.

Grass Valley Canyon – All monitoring reports are up to date. OWEB Grant 207-323 had one solar water development project completed. An OWEB Small Grant in the watershed completed 4,323 feet of terrace construction.

North Sherman County – All monitoring reports are up to date. Direct Seed grant participants have been contacted. Monitoring will be done in the next two weeks. Three small grants completed a total of 13 water & sediment control basins and 15,274 feet of terrace.

Grant Updates – OWEB funding for both the Restoration Grant and the Technical Assistance Grant was finalized by OWEB and contracts should be here soon.

The OWEB fall deadline for grants is October 22<sup>nd</sup>. Joli is currently working on a *Yield Monitor/Variable Rate Fertilizer Application* proposal. This grant was based off a previous unsuccessful proposal for USDA CIG (Conservation Innovation Grant) funding for yield monitors. Joli asked the board whether she should resubmit using the same landowner participants or if it should be opened back up because of the changes. The board agreed that they would prefer to open it back up and postpone the application until a later date. There are two other possible funding options besides OWEB. One possibility is through DEQ or through a revised USDA CIG program.

Joli has also been working on a *Weed Control grant* application to submit to ODA. This grant was also unsuccessful in the last cycle, but is being revised. The board would like Joli to open up the option for landowners to participate in this grant. Information about both grants will go out in the fall newsletter.

OWEB notified the district that they will increase the allocation for the Watershed Council Support grant (208-046) by \$17,000.

Small Grants – There is currently \$6,029.75 available for projects in the Lower Deschutes. There is \$3,780 available in the Lower John Day. Joli presented one small grant application for

funding from the Lower John Day. The board reviewed and approved that grant unanimously.

MCEDD Update – Krista handed out the most recent correspondence and project list from Link Shadley.

DeMoss Springs Water Development – Brian requested the board's permission to assist the county on plan, design and implementation of a spring development at the DeMoss Springs Park. The board concurred that this project fits the district goals for water quality projects in the Grass Valley Canyon Watershed. Brian's time and expertise will be the districts donation to the county park improvement.

### NEW BUSINESS

OACD Convention Nov. 4-7 in Bend – Gary, Jason, and Krista plan to attend the conference.

Personnel Policy Book – Krista handed out copies of Chapter 2 of the current policy book. The board will review the chapter and discuss any needed changes at the next meeting. They will review more chapters in the next few months.

### NRCS REPORT

Kristie recorded Earth Team Hours from the board. Her report for July, August and September was that she was on maternity leave. She returned to work on October 1<sup>st</sup>. The deadline for EQIP sign up is October 31<sup>st</sup>.

Jessa reported on CREP progress and activities. Her report covered July to October. In that time 7 new CREP contracts were completed; she designed and certified one drip irrigation system; certified 1 spring development; wrote 3 riparian forested buffer planting plans that were approved by ODF; completed 5 plan modifications; went on 35 on-site visits; completed 5 status reviews; attended the final session of the Conservation Planner's course; continued planning and inventory on a 2,742 acre RMS plan for her NRCS planner certification; completed reports for OWEB, BPA, ODA NRCS & FSA; and surveyed CREP damaged or destroyed by the Grass Valley Canyon fire. The board asked how the fire damage will be handled. Jessa is waiting for the criteria from the County Committee. They meet on October 18<sup>th</sup>.

### AGENCY REPORTS

ODA – Tom Straughan talked about the CREP Technician funding. We are currently budgeted to receive \$15,000 next year but this is not secured yet.

### NEXT MEETING

The next meeting will be held on November 13, 2007 at 8:30 AM.

### ADJOURNMENT

The meeting was adjourned at 9:10 PM.



### ***EQIP Application Deadline***

Sherman County farmers and ranchers interested in financial and technical assistance for conservation measures on their working lands have until **October 31, 2007** to apply for Environmental Quality Incentives Program (EQIP) funding for federal fiscal year 2008.

EQIP is a voluntary conservation program to help farmers and ranchers improve and enhance the condition of water, soil, and other natural resources on private working lands. The program is designed to help producers protect the resources that support their operations and contribute to environmental quality for overall community.

Conservation practices eligible for funding in Sherman County include:

- Erosion Control
- Irrigation Efficiency Improvements

- Livestock Waste Management
- Grazing Management Practices
- Wildlife Habitat Enhancements

### ***CSP Update***

Landowners who currently have a Conservation Security Program (CSP) Contract will be receiving a letter informing them that it is time for annual certifications/payments.

NRCS will need to see records for each enhancement and landowners will be certifying that they are currently complying with their existing contract.

### ***HEL Plans***

Please remember to report clean tillage to the NRCS office. If you are unfamiliar with what your Highly Erodible Land (HEL) Plan requires for residue amounts, please contact Kristie at the NRCS office.



## **Helping People Help the Land**

### ***NRCS Accepting Applications for College Student Trainees***

NRCS is now accepting applications for a Student Trainee, GS-499-2, 3, 4 (Student Employment Experience Program). The closing date for the position is January 25, 2008. College Freshman and Sophomores are urged to apply. There is a two-work period program requirement for successful applicants, with assignments in two different watershed basins in Oregon, generally one on the east side of the state and one on the west side.

#### ***ELEGIBILITY:***

College students who are majoring in Civil Engineering, Forestry, Soil Science, Agronomy, Crop Science or Natural Resources with a hydrology, wildlife, fisheries, or GIS minor focus are encouraged to apply. All students of biologic disciplines are intended for Soil Conservationist positions, using their unique backgrounds to bring an added dimension to the position.

#### ***DUTIES:***

The trainee position provides intensive and specialized training in all phases of soil and water conservation work and qualifying experience for a professional position upon graduation from college. Students will work with trainers in the application of conservation practices and Farm Bill programs on private lands, in cooperation with landowners.

#### ***WORK SCHEDULE:***

Students selected under this announcement will work full time during the summer of 2008. Natural resource-related majors will work in a county-based Service Center Field Office, assigned to a principle trainer. Students will be doing developmental tasks to ground them in the work of the agency. Students hired from this announcement will be hired into temporary student positions the first summer with the potential to convert to the Student Career Experience Program thereafter. Part time employment during subsequent school terms may be possible, but is not guaranteed.

#### ***HOW TO APPLY:***

Students interested in Career Experience positions with NRCS should contact the NRCS personnel office (1202 NE Lloyd Blvd, Suite 900, Portland, 97232; Phone: 503-414-3223) about openings. Students can apply through their school's Student Experience Coordinator or directly with the Agency.

## SWCD Seeking Funding for Precision Agriculture Demonstration Project

The first things to entice a producer to investigate precision agriculture (PA) methods might be economic and production considerations. However, the Sherman County SWCD's assistance in developing a plan to use precision agriculture to address a resource concern could be the incentive a producer needs to invest in the information management and equipment required for PA. The SWCD is developing a PA demonstration grant that will address resource concerns, specifically high nitrate levels in the county's groundwater. The grant, if successful, would offer an incentive payment for producers willing to adopt PA and who are willing to share their experiences at user group meetings, Ag Day Workshops, and future conservation tours.

For those producers interested in applying PA methods to their operation there are a few things to consider. To be successful with PA from both an economic and an environmental perspective, a producer should have the following basic components included in their plan:

**Background data:** This is spatial information about crop production fields that is used to make decisions. Sources of background data include grid soil samples, detailed soil mapping, aerial photography, topographic maps, yield maps, environmentally sensitive areas, etc. Background data needs to be georeferenced or tied to an identified location in the field.

**A recordkeeping system:** This is essential for successful implementation of PA. PA can produce large amounts of data and if the farmer does not have a way to organize and process that data, it will become overwhelming and meaningless.

**An analysis and decision making process:** As a crucial step in developing a precision agriculture plan, data is meaningless unless it is properly analyzed and the results applied to solve a problem or meet farm goals. A qualified crop consultant may be needed to analyze the data and make recommendations to achieve the desired outcome.

**Specialized implementation equipment:** GPS guidance systems, variable rate application equipment, and yield monitors are examples of the type of equipment that will be needed for data collection and to help develop the PA plan.

**Evaluation and revision:** The data gathered after each cropping season needs to be evaluated to help further refine the PA plan for the particular field.

Producers involved in the demonstration grant will be required to incorporate these basic components in an effort to reduce the potential risk of pollutants such as sediment and nutrients from running off and/or leaching into waterways from agricultural fields. Specifically, producers will be required to submit the following paperwork and follow these requirements:

1. Historical fertilizer application data of tract/field(s) enrolled in the program (fertilizer rates you were applying before enrollment in the PA program).
2. At least three separate zonal soil samples taken by a certified professional and separately analyzed based on a yield, electrical conductivity, or infrared map.
3. Site-specific fertilizer recommendations based on the three separate zonal soil samples.
4. Fertilizer treatment using a variable rate applicator that applies the separate rates (developed in the site-specific fertilizer recommendations) with placement based on the soil samples and maps developed.
5. Final yield data (can be a final yield map or read off the combine during harvest).
6. Meet at user group meetings on at least a quarterly basis or as indicated by the SWCD and Watershed Councils.
7. Participation in at least two of the following:
  - a. Ag Day Workshops
  - b. Conservation Tours
  - c. Newsletter Article

All data gathered for the grant will be public information and may be used in future grant applications, newsletter articles, and posted on the SWCD's website.

For those interested in participating in the demonstration project, please fill out the Sign-Up Sheet included with this newsletter and return it to the SWCD office by **November 8, 2007**. The Sign-Up Sheet will be used to rank your application and determine your participation in the demonstration project.

A special Thank You is extended to Umatilla County in their cooperation and sharing of information on PA practices.

*Sherman County Experiment**Station Weather Statistics***AUGUST WEATHER STATS**

- Total precipitation for August was .45" which is .16" above normal.
- The precipitation for the crop year is 11.06" which is .16" below normal.
- The highest air temperatures was 95° on the 16<sup>th</sup>.
- The lowest air temperature was 43° on the 27<sup>th</sup>.
- Long time air temperature averages indicate we can expect 97° and 41°.
- The average air temperature for the month was 66.2°.
- 4" soil temperature ranged from 65° to 92°.
- The average windspeed of 4.7 MPH is .2 above normal.

**SEPTEMBER WEATHER STATS**

- Precipitation for September was .24" which is .25" below normal.
- The highest air temperature was 89° on the 12<sup>th</sup>.
- The lowest air temperature was 32° on the 29<sup>th</sup>.
- Long time air temperature averages indicate we could expect 91° and 33°.
- The average air temperature for the month was 59.6°.
- 4" soil temperature ranged from 86° to 56°.
- The average windspeed of 5.0 mph is 1.3 above normal.
- Total monthly evaporation was 8.79" which is 1.64" above normal.

**Odds –N– Ends****The OSU Extension Office Update**

Nov 8 - Statewide wheat marketing. A class offered at the Sherman County Extension office that joins with others at 7-10 locations for an in-depth analysis of what is floating wheat prices and strategies to take advantage of these prices. The class begins at 7 am every second Thursday.

Nov 16 - Immediately following the regular wheat marketing meeting, a meeting will be held featuring available local marketing options and using them to protect strong prices. These local marketing meetings are different than the state-wide meeting. The Sherman County Wheat Growers and the Sherman County Farm Bureau will host their annual meeting covering many issues of interest to farmers. Be sure to attend. Meeting begins with breakfast at 7 am at the Senior Center in Moro.

In general news, the Extension Office is collecting data for a new cost of production sheet and will be seeking volunteers willing to share their practices and analyze what work we need to keep the study accurate and to serve the largest number of growers.

**SWCD Tree Sale**

If anyone is interested in ordering trees or shrubs for landscaping or restoration projects please contact the Moro SWCD office at your earliest convenience. Orders must be made in bulk (no less than 5 per species) and will be delivered in the spring. Stop by the office to look through the order book. If you are not sure what to get, the SWCD staff can help you decide which trees or shrubs would work best for your project. Call and place your order with Krista, 565-3551, ext. 101, by January 31, 2008.

**Pine Hollow/Jackknife Watershed Assessment**

The Pine Hollow/Jackknife Watershed Assessment is well under way. As with the Grass Valley Canyon Watershed Assessment, the SWCD will be conducting an inventory of conservation practices completed within the watershed. The assistance of land operators will be needed to accurately complete this inventory. We plan to collect data on a variety of practices including terraces, rangeland water and sediment control basins, fencing, water developments, and many more. Aside from the type of practice and location we also hope to gather dates when the practices were put into use, their functionality, as well as any funding sources—so have your records ready!

## CALENDAR OF EVENTS



### *October*

31 EQIP Application Cutoff

### *November*

4 Daylight Savings Time Ends

4-7 OACD Convention, Bend

12 Veterans Day, Office Closed

13 SWCD Board Meeting, 8:30 AM

13-16 Network of Watershed Councils Gathering

22 Thanksgiving, Office Closed

### *December*

11 SWCD Board Meeting, Time TBA

25 Christmas Day, Office Closed

### Sherman County SWCD Board of Directors

Bill Martin, Chairman  
Kyle Blagg, Vice Chair  
Brad Eakin, Secretary  
Tracy Fields, Treasurer  
Gary Irzyk, Member

### SWCD Staff

Krista Coelsch, District Coordinator  
Joli Munkers, Watershed Council Coordinator  
Brian Stradley, District Technician  
Jason Faucera, District Technician  
Jessa Irzyk, CRP Technician

### NRCS Staff

Krisitie Coelsch, District Conservationist  
Mary Beth Smith, Basin Resource Conservationist

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### *Rolling Thunder Review*

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