



# UMATILLA COUNTY SWCD e-NOTES

October 2009

Visit us online at: [www.umatillacountyswcd.com](http://www.umatillacountyswcd.com)

## Board of Directors

### **Phil Walehli**

Chairman of the Board  
Zone 1: Hermiston/Stanfield

### **Berk Davis**

Vice Chair  
Zone 2: Helix/Adams

### **Cheri Cospser**

Zone 3: Weston/Tollgate

### **Tom Straughan**

Treasurer  
Zone 4: Reith/Ukiah

### **Chuck Hemphill**

Zone 5: Pilot Rock/Ukiah

### **Louie Dick**

Director At Large

### **Robert Rosselle**

Director At Large

## Associate Directors

### **Dinah Hemphill**

### **Frank Woody**

### **Ray Reser**

### **Tim Spratling**

## SWCD Staff

### **Bey Kopperud**

District Manager

### **Corrie Thorne**

Ag Resource Specialist

### **Heidi Hartman**

Natural Resource Specialist

### **Teresa Walehli**

Clean Water Neighborhood Coordinator

OCTOBER 14<sup>TH</sup> 6-8:30 P.M.

## SWCD BOARD MEETING

PUBLIC WELCOME TO ATTEND

200 SE HAILEY AVENUE

JOHN MURRAY BUILDING

PENDLETON



## UPCOMING EVENTS

- October 19<sup>th</sup> - OWEB grant deadline
- November 4-7<sup>th</sup> - OACD Conference at the Red Lion in Pendleton

## Contents of This Issue

### **Heidi Presents:**

Greywater: a New Low Energy Water Supply.....2

### **Corrie Presents:**

Successful CREP stories .....3

### **Teresa Presents**

What are Nitrates?.....4



**Heidi Hartman**  
*Natural Resource Specialist*

## Greywater: A 'New' Low Energy Water Supply

Many states are turning to greywater - typically defined as the wastewater that comes from clothes washers, showers and bathroom sinks - as an alternative water supply to help them address local water shortages. Using greywater is illegal in many states but lifting these out-dated bans can help communities create 'new,' low energy water supplies that can be used for a variety of purposes.

Over the last couple of years a number of states including Oregon, Texas, New Mexico and Arizona have passed laws allowing residents to apply greywater from their homes to beneficial uses. The most common uses of greywater are for toilet flushing or outdoor irrigation of non-edible plants. California has joined other greywater-using states by adopting new, less stringent regulations that make greywater systems easier and more affordable to install. From a recent article on SFGate.com:

*Whereas California property owners previously were required essentially to install costly mini leach fields (those are usually associated with septic systems) and obtain pricey permits, the new codes allow residents to install basic, relatively inexpensive greywater systems themselves with no permits. Under the old regulations, a greywater system cost as much as \$10,000, versus as little as \$200 now.*

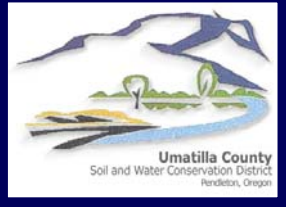
The water savings that can be obtained by using greywater are significant: Doug Hensel from California's Department of Housing and Community Development estimates that a typical household can save 22,000 gallons of water per year from a laundry greywater system alone. The energy benefits of these systems are two-fold since using greywater for outdoor irrigation avoids the energy needed to pump water to the home as well as the energy that would go into treating it at a wastewater treatment plant. Assuming national averages (1,500 kWh/MG for supply and 1,800 kWh/MG for wastewater treatment) and a direct energy savings from avoided wastewater treatment, a typical house beneficially using 22,000 gallons of greywater per year would save about 73 kWh of electricity per year – equivalent to the annual electricity use of a laptop computer. Although this might not seem like a lot of energy savings, the numbers add up quick. If just 1000 homes installed simple greywater systems annual energy savings would be enough to power over 7 households and reduce CO2 emissions by about 52 metric tons.

It is important to keep in mind that actual energy savings and environmental benefits could be even greater. Outdoor irrigation – which takes place primarily in the summer months for much of the country - is a major factor in peak water demand. Peak water demand - like peak energy demand - usually drives the development of new supplies and leveling the peaks can avoid the costs of new dams/diversion, or the development of new energy intensive supplies, such as desalinated seawater or imported water. Furthermore, the marginal water supplies used to meet peak demands are often more energy and carbon intensive than the least cost supplies used throughout the year, therefore, in many communities, saving a gallon of water in the summer saves more energy than a gallon in the winter.

Finally, peak water demand and peak energy demand usually occur at the same time - during extremely hot weather when air conditioners are turned on high, cooling towers are working overdrive, crops and landscapes need irrigation, etc. Saving water can reduce peak energy demand, as evidenced by Idaho Power's partnership with farmers. To add one more twist, power plants get kicked into overdrive to meet peak electricity demand, which means that when you water your lawn on the hottest day of summer, the most carbon intensive energy was likely used to deliver that water from the most energy intensive source.



Article originally by Bevan Griffiths-Sattenspiel in the River Network's *Saving Water, Saving Energy* Newsletter on 9/21/2009



Corrie Thorne  
*Ag Resource Specialist*

## Habitat/Land Management



As we work so hard in being good stewards of our land, I find it nice to read success stories of fellow conservationist so I thought I'd share a couple that I had read recently.

### Successful CREP in Jackson County Oregon

John and Gayle Hart have Jackson County, Oregon, property sandwiched between the Applegate River and Upper Applegate Road . In 2004, they enrolled five acres in the Oregon Conservation Reserve Enhancement Program (CREP). Their hope was to exclude open range livestock from grazing, which created sediment runoff, and to develop their riparian area specifically for wildlife foraging and aesthetics.

The dense brush and blackberries were cleared with slash buster equipment called "Lightfoot." The goal was to maintain as many native plants and trees as possible in the droughty soils. Inter-plantings of hardwood and softwood trees, conifers, and shrubs have been planted to establish a better canopy of shade adjacent to the river.

The Harts say they have greatly appreciated the CREP assistance in creating both a sustainable wildlife habitat and magnificent river views.

### CREP Tames Invasive Blackberries

A 30-foot thick wall of Himalayan blackberries once choked a section of Fernhollow Farm. The monstrous stand of an invasive species hindered access to 15 acres of pasture and a nearby stream. Oregon Conservation Reserve Enhancement Program veterans Jim and Bobbi Smith knew that CREP was a perfect fit to upgrade this newly acquired part of their property.

With funds from CREP and the Coos Watershed Association, the Smiths removed the encroaching blackberry tide and created a more suitable riparian buffer. The buffer's diverse plant species are boosting water quality and habitat for Coho salmon and other wildlife. The Smiths also replaced damaged culverts that endangered cattle and impeded fish passage. The Smiths' property is once again a productive pasture, exemplifying the Oregon CREP's goal of helping farmers make the best use of their land while improving critical fish habitat.

Replacing an invasive blackberry stand at the right of the stream with a diverse riparian buffer improves habitat for Coho salmon.

[FSA Home](#) / [Conservation Programs](#) / [Conservation Reserve Programs](#) / [Conservation Success Stories](#) / [State Offices](#) / Oregon



## CLEAN WATER NEIGHBORHOOD NEWSLETTER

October 2009

Volume 1, Issue 3



### What are Nitrates?

Hello, this month feature topic in CWN newsletter is NITRATE? The what, where, when, who, and whys of Nitrates. I have received a lot of calls and emails this month about Nitrate because of different things happen around the Hermiston area. So I want to help everyone understand Nitrates.

**First, what are Nitrates?** Nitrate is the primary source of nitrogen for plants, and it occurs naturally in soil and water.

**Secondly, where do Nitrates come from?** The principle source of nitrate contamination are fertilizers, animal waste, particularly from feed lots and septic tank waste, industrial wastes and food processing waste, wastewater treatment lagoons.

**Thirdly, when does Nitrate become a problem?** A nitrate level of up to 3 parts per-million in well water is generally believed to be naturally-occurring and safe for drinking.

**Fourthly, who does Nitrate affect most?** Infants and pregnant or nursing women are vulnerable to health problems from drinking water with nitrate levels above 10ppm. A major concern is that nitrate can interfere with the ability of the blood to carry oxygen to vital tissues of the body in infants of six months old and younger; the result is called methemoglobinemia or blue baby syndrome. Significantly higher nitrate levels may be harmful to people and animals when found in a drinking water supply.

**And Why,** High levels of nitrate in your well indicate that shallow groundwater drawn by your well may be vulnerable to other types of contaminants moving through the soil, including pesticides. Examine your property and the surrounding area for sources of other contaminants. Consider testing for these chemicals if you think your water may be at risk.

Another thing to think about is that the EPA's minimum limit for nitrate in drinking water is 10 parts per million. The amount of nitrate in ground water is closely related to the land use activities in the upstream watershed or on the land over the aquifer that serves your well. If the initial test reflects nitrate levels of more than 5 parts or million, the EPA recommends that you test again in a few months to see if the level if the level is increasing.

Three treatments to reduce nitrates include ion exchange, electro dialysis and reverse osmosis processes. Commercial line pressure and pump driven reverse osmosis membranes can reduce nitrate in water by 60 to 95 percent. These technologies may have a wide range of effectiveness based on the amount of nitrate in the water supply and the balance of other ions in the water. A well professional can help you select the right treatment.

I hope that this helps answers some of the question you may have about nitrates. If you have any request on something you would like me to cover next month or the months to follow please email me or call me,

Thanks,  
Teresa

### 12 Simple Things you can do to Protest your WELL WATER!

1. Locate your well
  2. Locate your septic tank.
  3. Locate your drain field.
  4. Have your water tested.
  5. Have your septic tank pumped.
  6. Use less water.
  7. Remove any chemicals stored in your well house.
  8. Ensure that a sanitary seal caps your well.
  9. Install backflow protectors on all outdoor faucets.
  10. Limit your use of lawn and garden chemicals.
  11. Protect the soil from contamination by oil, gasoline and household chemicals.
  12. Shield animal waste from rain.
- For more details about these 12 simple things go to Oregon State University Extension Service and ask for EM8651 of June 1996 or call 541-737-6294

