



# Horizons

Summer 2008

Volume 17 Issue 4

SERVING BENTON COUNTY OREGON SINCE 1956



## Water - Now and Future

### Water Issues in Benton County

Let's face it – the year 2050 A.D. sounds like the distant future. But, consider how the quality of life for generations to come is linked to reliable clean water supplies. From that perspective, decisions made today place the next forty-two years right around the chronological corner. Prudent community collaboration NOW, to develop and implement long-term water management programs, must involve technical water assessments, projected population growth, teamwork across jurisdictions, information from citizens, and education and outreach events to raise the public's water awareness.

That's exactly what is happening in Oregon and right here in Benton County. Regional and local legislators have mandated water policies that are rippling into proactive local programs designed to address current and future water quality and quantity issues. Such programs include the Southern Willamette Valley Groundwater Management Area (<http://gwma.oregonstate.edu>), the Benton County Water Supply Policy and Plan Project (<http://www.co.benton.or.us/boc/water/index.php>) and the National Pollutant Discharge Elimination System, which sets the stage for county and city stormwater protection action

(<http://www.deq.state.or.us/wq/stormwater/stormwater.htm>). For more NPDES information see article on page 4.

From babbling streams to raging oceans, water is one of the most common substances on Earth, but in some places it is becoming priceless.

~ Roland Wall

Officials are recruiting local residents, like YOU, to provide advice on water policy development and to glean from the community's collective experience, knowledge and concerns regarding water resources. Benton County citizens are strongly encouraged to participate in water program public meetings to be better informed on the details behind these programs and to contribute your perspective to the wisdom shaping our community's future.

Also, you can be involved in water-related volunteer activities such as door hanger campaigns, advisory councils, focus groups, district board directors, water quality monitoring programs and working with teachers and students to nurture the next generations' appreciation for water. For more information on your role, please call our office at 541-753-7208.

### Water Conservation

We have all heard the myriad reasons why water is important in our lives. Humans, animals and plants are roughly 70% water. Local native plants and wildlife have adapted to local climatic water cycle fluctuations. Reliable sources of high quality water sources are vital for drinking.

Food and fiber production rely on water. Oregonians work and play in the great outdoors. Many of our activities flow with the waters of the State, such as fishing, farming, ranching, boating, skiing, beachcombing, and gardening. Aesthetically, water is a vital ingredient

in our Benton County landscape. Be it the lush green explosion of spring vegetation, a dry summer wind rustling parched brown grass, fall's drizzling gray overcast sky, or the blue-green saturated soils of winter, the presence or absence of water paints a background for our PNW senses.

Human activities, population growth and changing land use alter demands on water resources and impact water movement through our landscape. As wild, forest or farm land is converted to industrial, commercial or residential areas, water-absorbing soils and erosion-preventing vegetation are replaced by impermeable concrete and asphalt surfaces that channel polluted stormwater directly to creeks and rivers. The responsibility for water resources belongs to every citizen. **Now is the time to practice mindful water use!** We must model it in our lifestyles, teach it in our schools, expect it from our officials and demand it from businesses with our purchasing power. It is time to examine every aspect of water use and realize the true value of this life-sustaining resource.

*Take another step toward water conservation!  
Read about irrigation management ~ page 2*

#### INSIDE THIS ISSUE...

Chintimini Summer Ed	2
Water Conservation with IWM	2
Conservation Calendar	3
Educator Workshops	3
BFPIP Volunteers needed	4
Benton County NPDES	4
Natural Resource Scholarships	4
Plant Alerts!	5
Urban Creek Tour Report	6
More IWM	7&8



## Chintimini Wildlife Center - Summer Education

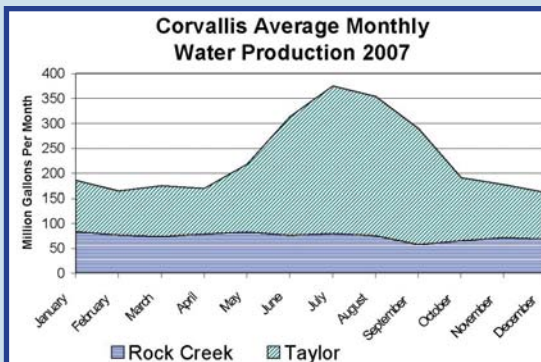
Registration deadline is one week prior to program. All programs are held at 311 NW Lewisburg Rd. Registration form available on-line at [www.chintiminiwildlife.org](http://www.chintiminiwildlife.org)  
 For more information: call Connie Barnes 745-3029 or email [cbarnes\\_cwc@comcast.net](mailto:cbarnes_cwc@comcast.net)  
 Please note: Chintimini Wildlife Center is not open to the general public



Event	Age level	Date	Topic
Youth Camps 9 AM - 4 PM Cost: \$155 per student			
Wildlife Rangers Camp	9 - 12 years old	July 28 through August 1	Birds and insect studies
Family Saturdays 9:30 - 11:30 AM Cost \$20/family or \$5 each - 3 and under free			
Raptors of the Sky	fun for the whole family	August 2	Birds of prey presentation; sensory awareness

## Improve Water Conservation through Irrigation Management

The graph to the right shows water production by Corvallis Public Works. "The main thing to note is the change in water production from summer to winter.



"THAT change is due mostly to irrigation", says Mark Taratoot, Corvallis Water Resource Specialist. At the very peak of the summer irrigation season twice as much water goes out from the Corvallis plant compared to the more steady water production during October through April.

Here are additional irrigation tidbits from Mark: 80 to 90% of outdoor water use is for lawns. Programmed landscape irrigation is often used as "set it and forget it". This delivers the same application amount of water, whether it is May, July, or September. Save costly water resources by weekly reprogramming to match actual lawn needs. *For lawn water needs, see Agrimet information and check book method page 7*

### Over-irrigation

- Drowns roots, thus stressing plants
- Encourages root diseases
- Reduces nutrient uptake
- Cools soil, thus reducing root growth
- Leaches costly nutrients and pesticides from the root zone to groundwater
- Reduces crop quality
- Wastes money

Monitor your irrigation and turn it off when water is flowing in the street!!!

- AND -  
 the biggest water waster is LEAKS! Watch for soggy spots!

Take your water conservation commitment to another level by improving irrigation water management (IWM). IWM is defined as applying water according to crop needs in an amount that can be stored in the soil near the plant root zone. See over- and under-irrigation issues in text boxes. Farmers, gardeners and landscapers can use a range of irrigation decision making tools to improve irrigation efficiency instead of haphazardly cranking on sprinklers. This will result in maximum crop benefit from minimal water use.

Improve irrigation efficiency, be your crop lawn or corn, by employing these simple practices: identify soil texture, assess soil moisture content, and use the check book system to track water use: measure effective precipitation and effective irrigation, and apply water based on crop water use information or ET.

**Under-irrigation**

- Reduces crop yield
- Reduces crop quality and size
- Reduces plant growth
- Weakens plants

**Determine soil texture** -The texture of soil is very important in determining the rate and frequency of irrigation. Fine-textured clay soils take up water slowly and hold it tightly while sandy soils drain rapidly. Consider this drip emitter system example: the application of ½ gallon per hour will allow slow infiltration and prevent runoff in a heavy clay soil, whereas some sandy soils can take up 2 gallons per hour. Texture is the percent of sand, silt and clay in the soil. You can texture soil by feel using a NRCS flow chart available at [http://soils.usda.gov/education/resources/k\\_12/lessons/texture](http://soils.usda.gov/education/resources/k_12/lessons/texture). *continued on page 7*

*For a hard copy of a texture flow chart or other assistance with soil texture, contact our office 541-753-7208 or [tmatteson@bentonswcd.org](mailto:tmatteson@bentonswcd.org).*

## Conservation Calendar *for* Summer 2008

Date & Time Location	Event/Speaker	For more information contact:
<b>Saturday July 19, 1 - 5 PM</b> <b>Sunday, July 20, 2:30 - 5:30 PM</b> <i>Green Town</i>	<b>daVinci Days Volunteers needed!!!</b> Help Benton SWCD crew at the Soil Tunnel Scavenger Hunt Show kids how to undertake this fun, self-directed quest!	541-753-7208 hkeirstead@bentonswcd.org volunteers receive FREE Day Pass to daVinci Days
<b>Tuesday, July 22</b> <b>2:00-5:00 PM</b> <b>Veggie Potluck 5:00 PM</b> <i>Persephone Farm</i> <i>Lebanon, OR</i>	<b>Farming for Bees, Beetles and (True) Bugs</b> <b>A Farmscaping for Beneficials Farm Walk</b> Innovative farmers, <b>Jeff Falen and Elanor O'Brien</b> , grow certified organic market vegetables amid insectary plantings and Oregon's oldest beetle bank. <b>Matthew Shepherd of the Xerces Society for Invertebrate Conservation</b> will be on-hand to help participants investigate the world of native pollinators.	Please pre-register! Gwendolyn Ellen 541-737-6272 gwendolyn@science.oregonstate.edu  A free BYOB (bring your own bug) event. If some unidentified insect has been pestering you, pop it in a jar and bring it along.
<b>Tuesday, July 29</b> <b>2:00-5:00 P.M.</b> <b>Organic Fruit Tasting 5:00</b> <i>Columbia Blossom Orchards</i> <i>and Clastic Fruit LLC</i> <i>Mosier OR</i>	<b>Predators, Parasitoids and Native Pollinators in the Orchard:</b> <b>A Farmscaping for Beneficials Farm Walk</b> <b>Matthew Shepherd of the Xerces Society for Invertebrate Conservation</b> will teach all about native orchard pollinators. <b>Munk Bergin of Pest Management Systems</b> , will answer questions on biological pest management techniques.	Please pre-register! Gwendolyn Ellen 541-737-6272 gwendolyn@science.oregonstate.edu  A free BYOB (bring your own bug) event. If some unidentified insect has been pestering you, pop it in a jar and bring it along.
<b>6-week course - Tuesdays</b> <b>September 16 - October 21</b> <b>October 25 - design studio</b> <i>Corvallis - TBA</i>	<b>NATURESCAPING IN THE CITY</b> This is a design workshop as well as an educational experience; you will create your own landscape plan for your property. Landscape designer Beth Young will guide you through the design process, week by week. Past students have recommended dedicating 2-6 hours/week to homework in order to get the most out of this class.	Corvallis Environmental Center www.corvallisenvironmentalcenter.org 753-9211. Enrollment begins July 9  Or visit www.bygardendesign.com "Classes and Lectures"
<b>Saturday, September 20</b> <b>8:30 AM - 4 PM</b> <i>Benton County Fairgrounds</i>	<b>6th Annual</b> <b>Kids Day for Conservation</b> FREE family fun!	Non-profit, agency and business professionals provide hands-on conservation activities for all ages.

## Upcoming Educator Workshops in Benton County

Benton SWCD offers quality workshops for Benton County Educators. We work with outstanding natural resources partners such as Benton County OSU Extension 4-H and Oregon Natural Resources Education Program. Check our website at [www.bentonswcd.org](http://www.bentonswcd.org) for updates on the educator workshops below or contact us at 541-753-7208 or email [tmatteson@bentonswcd.org](mailto:tmatteson@bentonswcd.org).

Date	Curriculum	Focus
<b>Friday October 10, 2008</b> <b>9 AM to 4 PM</b> <i>Corvallis High School</i>	<b>Places We Live (PLT*)</b> secondary level <i>ask about the 4-H Wildlife Stewards Hybrid option</i>	Explore environmental issues with place-based education showcasing local Dixon Creek projects
<b>Saturday</b> <b>December 6, 2008</b> <i>Linus Pauling Middle School (tentative)</i>	<b>Energy and Society (PLT)</b> preK-8 level <i>ask about the 4-H Wildlife Stewards Hybrid option</i>	Investigate energy issues and roles in society
<b>Friday March 7, 2009</b> <i>Location TBA</i>	<b>Resource Conservation (PLT)</b> <i>ask about the 4-H Wildlife Stewards Hybrid option</i>	Solid waste reduction and composting
<b>October 2009</b> <i>Location TBA</i>	<b>Flying WILD K-12</b> <i>ask about the 4-H Wildlife Stewards Hybrid option</i>	Celebrate birds!
<b>December 2009</b> <i>Location TBA</i>	<b>Project WET</b> <i>ask about the 4-H Wildlife Stewards Hybrid option</i>	Interdisciplinary activities about important water concepts
<b>March 2010</b> <i>Location TBA</i>	<b>Forest Ecology (PLT)</b> <i>ask about the 4-H Wildlife Stewards Hybrid option</i>	Examine the ecological system of a forest

## Volunteers needed!

Benton Fish Passage Improvement Program (BFPIP)

*Interested in volunteer work that makes a difference?*  
Join the BFPIP today!



Soap Creek culvert replacement 2005

The backbone of the BFPIP is made up of teams of volunteers who conduct field work. Volunteers travel to survey sites, access streams, and collect fish passage data using GPS/GIS. Data is submitted to Benton County engineers to aid decision making and the prioritization of culvert replacement projects.

Volunteers attend training sessions to learn culvert survey techniques, data reporting formats and GPS/computer

skills.

Six basic requirements for Fish Passage volunteers:

1. Comfortable with computers.
2. Participate in full-day weekend training session.
3. Commit to 2 volunteer days per month.
4. Participate through the field season, July - September
5. Capable of physical outdoor work.
6. Valid driver's license preferred.

For training information or to learn more about the BFPIP, contact:

Taber Burton, Fish Passage Coordinator  
541-766-6821 x4532  
taber.burton@co.benton.or.us



Visit the BFPIP website at  
<http://www.bentonswcd.org/fishpassage/index.html>

## National Pollutant Discharge Elimination System Projects Underway in Benton County

by Greg Verret, Benton County  
Community Development Director



Stormwater and surface water quality are the focus of two interrelated projects underway in Benton County, and the Benton SWCD is a partner in some of these efforts. The cities of Corvallis and Philomath, as well as Benton County, are reducing the negative impacts of stormwater as required by state and federal mandates (known as NPDES Phase II). These same jurisdictions, along with other cities, counties and management agencies in the Willamette basin, are developing programs to reduce surface water pollution – primarily bacteria, mercury and temperature – in accordance with the state-mandated Total Maximum Daily Load (TMDL) program.

The following are a few of the projects Benton County will be working on in the next few years:

- developing construction site erosion control requirements
- compiling and distributing “best management practices” information to property owners and developers
- adopting residential area riparian vegetation protections
- establishing, receiving and investigating procedures for pollution complaints

A key element of these programs is public involvement.

### Get involved!!!

If you are interested in being involved in education and outreach, or providing input regarding policies, please contact Donna Schmitz at the SWCD (753-7208), Kristin Anderson at Benton County (766-6819), or your city government.

*For more information, visit these additional resources*

National Pollutant Discharge Elimination System which sets the stage for county and city stormwater protection action  
<http://www.deq.state.or.us/wq/stormwater/stormwater.htm>.

US Environmental Protection Agency Introduction to TMDLs <http://www.epa.gov/owow/tmdl/intro.html#definition>

Oregon Department of Environmental Quality  
Erosion & Sediment Control Manual  
<http://www.deq.state.or.us/wq/stormwater/escmanual.htm>

## 2008 Natural Resources Scholarships



Benton SWCD dedicates a share of the proceeds from our annual Native Plant Sale to scholarships to support students pursuing degrees in Natural Resources. The five Benton County students listed below have each been awarded a \$1000 Natural Resources scholarship for tuition and fees during the 2008-2009 academic year.

Name	High School	College	Major
Anna Fausett	Corvallis	U of Idaho	Animal Science
Emma Garner	Philomath	OSU	Fisheries & Wildlife
Alison Priewe	Philomath	U of O	Environmental Studies
Seth Sherry	Crescent Valley	OSU	Crop & Soil Science
Elizabeth Torgerson	Philomath	OSU	Forest Management

Congratulations to these Natural Resources scholars!

Thanks to Benton County citizens for providing our Native Plant Sale proceeds and supporting scholars!

The Good **Plant Alerts!!!** The Bad

The search for the  
**Golden Paintbrush**  
*which hasn't been documented in Oregon since the 1930's*

*Daphne laureola L.*  
 added to Oregon Department of Agriculture  
 Weed Watch List



Golden paintbrush, *Castilleja levisecta*, is a perennial member of the *Scrophulariaceae* that is endemic to the Pacific Northwest in western British Columbia, Washington and Oregon. The species is currently considered extirpated from Oregon. Paintbrush species are hemiparasites, meaning their roots attach to the roots of other plants and draw resources from them. Golden

paintbrush is listed by the U.S. Fish and Wildlife Service as endangered. Is there any more golden paintbrush? This endangered species has dwindled to just a few populations in Washington and is believed to be extinct in Oregon. If biologists could find more populations in the wild conservation of this species could be vastly improved.

The U.S. Fish and Wildlife Service, Washington Natural Heritage Program, the Oregon Natural Heritage Information Center and many others are calling attention to Golden Paintbrush. The Institute for Applied Ecology has volunteered to coordinate a reward for the discovery of new populations of Golden Paintbrush. For more information on collecting the reward or donating to the cause, visit <http://www.appliedeco.org>. Click Conservation Research then click Golden Paintbrush.

*Daphne laureola*, also known as daphne, daphne-spurge, daphne-laurel and spurge laurel, has captured the attention of many urban park managers in large metropolitan areas of the Pacific Northwest and especially on Vancouver Island for several years. Originally planted as a landscape shrub, this toxic ornamental has escaped urban plantings and established itself as a significant invader of oak woodlands and deciduous/coniferous forests in the western halves of the Pacific Northwest coastal states.

The shrub has demonstrated an ability to spread rapidly, form monoculture stands, exclude many forest understory species and alter natural forest plant succession. In addition to the environmental problems, the berries, leaves and bark are poisonous to humans, cats and dogs. Skin contact with the sap can result in a dermatitis-like rash.



Spurge laurel is a slow-growing, shade-tolerant, long-lived evergreen shrub from Europe and the Mediterranean region that has escaped from gardens and naturalized in woodlands and other shady places. Spurge laurel can grow in a wide range of conditions, but it thrives in full to partial shade and well-drained soils. It prefers better drained clay loams and forest loams with neutral to acidic soils. Its primary means of spread is by birds and rodents eating the berries although it can also spread vegetatively by root sprouts. Once established, this plant is very difficult to eradicate.

For more information about Spurge Laurel visit <http://www.kingcounty.gov/environment/animalsandplants/noxious-weeds/weed-identification/spurge-laurel.aspx>

FREE

**GardenSmart Oregon: a guide to non-invasive plants**  
 a booklet on alternatives to invasives  
 available at our office - call 753-7208 before dropping in.

**Have you seen me?  
 \$100 REWARD!!!**

Missing from  
 the Willamette  
 Valley since  
 1939!

In 1999, a new population was discovered in north Puget Sound. Please help find more plants!

Name: Golden paintbrush, *Castilleja levisecta*

Description: Can grow up to 12" high with multiple yellow or golden flower stems from one plant.

Blooms April through June.

Habitat: Known to grow in grasslands with few or no trees or shrubs.

# Urban Creek Tour 2008



If you missed the June 1 Dixon Creek event, take a self-guided tour with the brochure available at the Benton SWCD office or on our web site at <http://www.bentonswcd.org/publications/#Brochures>.



Call 753-7208 before you stop by our office to be sure we are in.

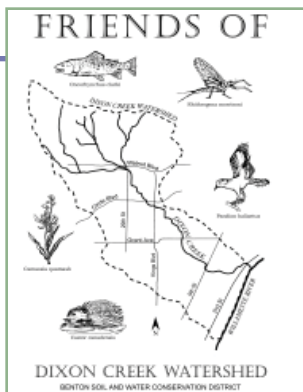
As Dixon Creek flows, from headwaters to mouth, so traveled the first Annual Urban Creek Tour. Two waves of participants swept down the watershed via autos, carpool and bicycle caravan on June 1. The event was orchestrated by Taylor Bortz, Urban Creek Collaborative Restoration Coordinator.



Based on tour evaluations, participants improved their understanding of watershed concepts (73%), increased their knowledge of the ecological functions of creeks (68%); and gained a better idea of how to get involved in Dixon Creek stewardship (74%).

The Urban Creek Tour was so popular that we are making it an annual event featuring Oak Creek in spring 2009.

Dixon Creek t-shirts are available for \$15. Call us!



T-shirt logo by Elizabeth Allen

Eight tour stops showcased various creek concepts and site-based programs. The tour stops and June 1 presenters (19 youth and 12 adult awesome volunteers) are described below. Special thanks to Dave Eckert and Tim Dehne for leading the bicycle caravans.



Cyclists made the alternative transportation statement during the Dixon Creek Tour

1. Timberhill Greenway - Kim Carson, Oregon Trout, demonstrated the Salmon Watch macroinvertebrate and water quality curricula.

2. Hoover Elementary School - the 4-H Wildlife Stewards Habitat Heroes, leaders and students, boosted hands-on science and nature-based learning in their schoolyard habitat, which features almost 2000 feet of Dixon Creek.

3. NW Hills Community Church - OSU Bioresource Engineering professor, Desiree Tullos, discussed the importance of urban stream structure as flood plains and for flood storage.

4. Jefferson Elementary School - 4-H Wildlife Stewards Keepers of the Creek past and present members showcased their award-winning creek restoration program, which integrates this outdoor classroom at various grade levels.



Jefferson Elementary students' displays

5. Porter Park - the Cleaning Crawdads of Dixon Creek, a 4-H Wildlife Stewards club that has adopted this site, discussed invasive and native species and surveyed tour participants to prioritize their action plan.

6. At the Corvallis High School campus, CHS Green Club member, Thomas Merlin, joined Sally Boyer, Americorps member, and Joe Percival, landscape architect, to discuss how the site bioswale improves stormwater quality before it enters Dixon Creek.



At the mouth of Dixon Creek

7. 9th Street crossing - a stellar example of community collaboration, work at this site involves commercial property owners, Corvallis Public Works, Oregon Department of Fish and Wildlife, Benton SWCD, Corvallis High School and Oregon State University. CHS students, Bryant Beck, Miguel Camacho and John McDonnell, discussed creek restoration and research enhanced by GPS mapping with help from OSU Geosciences graduate student, Michelle Kinzel.

8. Willamette River Confluence - Diana Sharps of Corvallis Public Works, schooled urbanites with best management practices for protecting stormwater. A raccoon waddling through the blackberries drove home a wildlife theme as Karen Hans of Oregon Department of Fish & Wildlife recounted tales of threatened & endangered species. The final treat was a poised walk on the herringbone fish ladder where Dixon Creek spills into the mighty Willamette River.

**Assessment of soil moisture** - The oldest and most commonly used irrigation management method involves taking a soil sample in hand and squeezing it into a ball, observing the appearance of the ball and creating a ribbon of soil between the thumb and forefinger to estimate the soil moisture content. This "feel method" is popular because it can be combined with other field activities such as scouting for insects or soil sampling for nitrogen.



For each sample the "feel and appearance method" for soil moisture and texture involves the following steps:

1. Obtain a soil sample at the selected depth using a probe, auger, or shovel.
2. Squeeze the soil sample firmly in your hand several times to form an irregularly shaped "ball".
3. Squeeze the soil sample out of your hand between thumb and forefinger to form a ribbon.
4. Observe soil texture, ability to ribbon, firmness and surface roughness of ball, water glistening, loose soil particles, soil/water staining on fingers, and soil color.
5. Compare observations with online photographs and/or charts to estimate percent soil water available and the inches depleted below field capacity.

**Use the check book system to track IWM** - Like a check book, this method tracks water inputs and crop water use for irrigation decision-making based on facts.

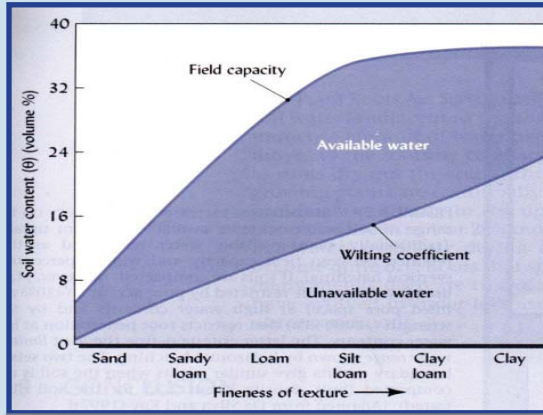
**Inputs** - *measure effective precipitation and irrigation*

Use a rain gauge to determine precipitation inputs at your site. To estimate irrigation applications, place an empty tuna can in the irrigation zone. Run the irrigation for a given length of time and measure the level of water

in the can. Divide the depth of water in the can (inches) by the amount

of time (minutes) to calculate your irrigation application rate (inches per minute). Use of this information in the check book system will reduce wasteful over-irrigating and risky under-irrigating.

**Crop water use or ET via AgriMet** - Brainy math and science wizards have created complex formulas documenting how crops use water. Also called evapotranspiration or ET, crop water use is an estimate of the amount of water transpired by the plants and the amount of evaporation from



*Field capacity and available water for various soil textures (Brady & Weil, 1999)*

the soil surface around the plants. Plants require varied amounts of water throughout the growing season, so the formulas incorporate three important dates in the plant's annual growing cycle - defined as start, cover and terminate. With the inclusion of Corvallis weather station data, a handy report is made, titled AgriMet Crop Water Use Chart. Use AgriMet information in the check book irrigation water management system. Access the report

online for twelve locally grown crops (alfalfa, lawn, grass seed, blueberry, winter grain, spring grain, trailing berries, potatoes, field corn, wine grapes, apples, strawberries) via The Pacific Northwest Cooperative Agricultural Weather Network at <http://www.usbr.gov/pn/agrimet/chart/crvoch.txt>.

The AgriMet report lists daily crop water use (inches), the daily ET forecast (average of last 3 days), sum ET (total ET to date from crop start date) and the total ET for the last 7 and 14 day periods.

*See the check book example shown at the bottom of this page*

**The Natural Resources Conservation Service**

(NRCS) can help agricultural producers improve IWM. They provide technical and financial assistance for updating irrigation systems to improve efficiency and help implement irrigation water management plans. October 1, 2008 is the deadline to take advantage of NRCS assistance through the Environmental Quality Incentive Program. For more information call Tom Snyder, the NRCS Benton County District Conservationist, at 967-5925 ext.118.

**Benton SWCD's Conservation Incentive Program** will match 50% to help you increase irrigation efficiency on smaller scale properties. Call 753-7208.

**Checkbook method** - This lawn example starts with 100% available water (known as field capacity - see graph above) for loamy fine sand based on the feel methods for soil moisture and texture. Crop water use (AgriMet), water inputs (rain gauge or tuna can) and remaining water are tracked over 4 days. **Rule of thumb: remaining water less than 50% field capacity (or .6 for loamy fine sand) risks plant stress.** An application of .76 inches of irrigation on July 7 returns the soil available water to 100% (1.2 inches). This simple example does not consider root depth, irrigation inefficiencies or soil stratification. Water units are inches/foot.

date	available water	crop water use (ET) for lawn	rain or irrigation inputs	remaining water
July 4	1.2	0.18	0	1.02
July 5	1.02	0.11	0	.91
July 6	.91	0.22	0	.69
July 7	.69	0.25	.76	1.2



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## November 2008 SWCD Director Elections Join the BSWCD 7-Director Board

We are recruiting At-large Director candidates to fill an elected volunteer position for a four-year term beginning January 2009.

At-large Director eligibility requirements:

- reside within Benton County boundaries
- be a registered voter

The election process includes the collection of 10 or more signatures on a Petition for Nomination Sheet - filing date Aug 26.

Recruitment Packets with election details and forms are available at our office.

Please call before you visit the office.  
541-753-7208

*THE BENTON SWCD MISSION is to provide leadership to Benton County residents through education and technical assistance for conservation and responsible use of soil, water and related resources through a balanced, cooperative program that protects, restores, and improves these resources.*

### BOARD OF DIRECTORS

#### DIRECTORS (ZONE)

Cliff Hall, Treasurer (1)  
Anne Rigor (2)  
Tom Bedell, Chair (3)  
Joe Hinds (4)  
Frank Nusbaum (5)  
Tim Dehne, Vice Chair (At Large)  
Nick Chambers (At Large)

#### ASSOCIATE DIRECTORS

Rana Foster  
Mark Taratoot

#### AMERICORPS LINKS INTERN

Taylor Bortz

### EMPLOYEES

Jennifer Floro, Office Manager  
Jennifer Ayotte, District Manager  
Donna Schmitz, Resource Conservationist  
Taber Burton, Fish Passage Program Coordinator  
Heath Keirstead, Education and Outreach Coordinator  
Alice Fairfield, Native Tree and Shrub Sale Coordinator  
Teresa Matteson, Education and Outreach Director & Horizons Editor

*The Benton SWCD is an equal opportunity employer, providing services to the public without regard to race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or family status.*