



**Redington Resource Review**  
**Resource News for the Conservation Minded**  
**Producer and Landowner**  
**A Quarterly Publication of the Redington Natural Resource**  
**Conservation District**  
**Volume 24 No. 3 August 2007**

**CHAIRMAN'S NOTES**

Submitted by Charles Kent  
 Chair, Redington NRCD

The summer growing season is just about over and for a change, our monsoon did not disappoint. What a difference it has made. The drought has been ongoing since I arrived in the San Pedro River Valley. Lately I have noticed that the birds at my wife's feeders have decreased as the summer plants have matured. The deer and javelina have quit relying on the water we have been pumping for them. The springs have started to run a little more. The cows are fat, the calves are getting big and the pastures are green. It's much easier being a good steward on the land when Mother Nature is helping.

What a beautiful and amazing desert this is. Through the achievements of the the Conservation District and past and president residents, this has remained a wonderful place to live. If we keep working as a group we can continue to protect and enjoy our river.



**What's Inside?**

**District News and Announcements .....2**

**Board of Supervisors. ....2**

**Rainfall Measurements .....2**

**Floating Down the Road .....3**

**CVFD News: .....3**

**Sub-Surface Drip Irrigation Systems .....4**

**Education Center Report .....5**

**NRCS News .....5**

**Coronado RC&D News .....6**

**District Meeting Schedule .....6**

**Local Classifieds .....6**

**June Meeting Minutes .....7**

**Local NRCS Contact Info. ....Back Page**



## Redington NRCD News and Announcements

**"A Good Road Lies Easy on the Land..."**

**The Redington Conservation District and Education Center will be hosting a**

**Two Day Road Workshop featuring Bill Zeedyk**

**On Friday, October 26th the focus will be on Cascabel Road.**

**On Saturday October 27th we will work on a rural ranch road.**

**Lunch will be provided.**

**Space is limited for these workshops so please RSVP no later than October 17th by contacting Kim Webb at Coronado RC&D at**

**Telephone: 520-384-2229 x 123  
email: [Kim.Webb@rcdnet.net](mailto:Kim.Webb@rcdnet.net)**

**Please let Kim know which day(s) you plan to attend.**

### **Redington NRCD Board Position**

The vacant Redington NRCD Board of Supervisors' position has been offered to Ruth Dewel. The Board recommended her appointment to the Secretary of State who then have to formally approve and appoint her to the position.

Welcome aboard Ruth!

### **Rainfall Measurements for Area**

#### **Data from M Diamond Headquarters near Redington:**

June -- 0.1"  
July -- 4.28"  
to August 14th -- 3.14"

#### **Data from Cascabel Clayworks, Cascabel**

May -- Trace  
June -- 0.38"  
July -- 2.42"  
to August 14th -- 1.11"

#### **Data from Three Links Farms at Jarvi-Halls**

May -- .03"  
June -- 0.35"  
July -- 1.07"  
to August 14th -- 2.09"

#### **Data from Harold Elliott, Cascabel**

May -- 0.08"  
June -- 0.17"  
July -- 3.01"  
to August 15th --2.19"

### **ADOT Feasibility Study of I-10 Bypass Route through the Valley**

The ADOT feasibility study for a possible route through the Redington District is still ongoing and has been extended to the end of the year. ADOT will be having another series of public meetings in the fall, dates and locations still to be determined. Public comments on the routes are still being accepted by ADOT. Information, proposed routes, and downloadable comment forms can be obtained from ADOT online at:

<http://tpd.azdot.gov/planning/i10bypass.php>

or you can mail comments to:

Sunny Bush

I-10 Phoenix-Tucson Bypass Study Public Involvements Coordinator

URS Corporation

7720 N 16th Street, Suite 100

Phoenix, AZ 85020

### **Redington Natural Resource Conservation District & Conservation Education Center Board of Supervisors:**

Charles Kent, Chair  
[ckent1@starband.net](mailto:ckent1@starband.net)

Judy Dykes, Secretary  
[dykes@rnsmtc.com](mailto:dykes@rnsmtc.com)

Stefanie Smallhouse, Supervisor  
[carlink@hughes.net](mailto:carlink@hughes.net)

Les Helfrich, Supervisor  
[chiefc@rnsmtc.com](mailto:chiefc@rnsmtc.com)

Jacquie Dale, Newsletter Editor, Ed Center Director  
[redingtonnrcdnews@yahoo.com](mailto:redingtonnrcdnews@yahoo.com)

## FLOATING DOWN THE ROAD

Submitted by Stefanie Smallhouse, Director

Portions taken from: Water Harvesting from Low-Standard Rural Roads, 2006. Bill Zeedyk

This is the time of year when we hope and pray for rain. This hope usually includes that the rains come often, in absorbable amounts, and in certain areas (if you're an alfalfa farmer). That's all we ask. Whether we are lucky enough to fall within the rainfall pattern and measure fourteen hundredths or five inches for the summer, we are sure to receive a good chunk of that moisture all at once in a very short amount of time. There are few that would ever utter a complaint with its arrival, but after the clouds clear out and the temperature has dropped we are left with at times A MESS. For some of us this involves broken sprinkler lines and dams that leave fields in disarray and for others it means a treacherous drive to town or just out of the driveway.

"A Good Road Lies Easy on the Land...." as Bill Zeedyk has said. Mr. Zeedyk is a retired U.S. Forest Service biologist that now travels the country doing consulting work and educational workshops. One of his topics and areas of expertise is building and maintaining unpaved rural roads so that they may drain effectively, harvest water in appropriate places, decrease soil erosion and water pollution. Included in his educational materials and workshops is the information to learn strategies, techniques, and practices for dealing with problems frequently encountered by landowners, land managers and maintenance personnel when maintaining roads that alter water movement across the land. This water can concentrate and accelerate, causing soil erosion and gully formation. According to Mr. Zeedyk roads can be managed as tools for saving water, improving vegetative

cover, and increasing forage yields while protecting valuable soils from erosion.

Included in proper road maintenance is assessing the needs and opportunities which exist on-the-ground. What is the purpose of the road? Why is the road where it is? What should be the standards for the road based upon its intended use? What is the legal status of the road? Does the road adversely impact other uses or resources? What are the water harvesting options? Managing a road properly also depends upon recognizing topography, soils, precipitation patterns, and hydrology of the landscape. Following drainage patterns in order to understand the effects the road may be having on soil and water conservation is important. Drainage can be affected by grade, width, cross section, and the presence of berms.

Within the Redington NRCD boundaries we have numerous low standard rural roads with poor drainage that contribute to natural resource problems. This in fact was voiced as a high priority issue for the Conservation District through our community outreach efforts involved with the Lower San Pedro River Watershed Assessment. For this reason the Conservation District/Ed Center will be hosting a **Bill Zeedyk Road Workshop on October 26 and 27 at the Cascabel Community Center**. The workshop will focus on Cascabel Road the first day and a rural "ranch" road the second day. A portion of the workshop is classroom instruction, but the majority of the time will be spent actually in the field with a road maintenance/construction demonstration. This workshop is open to anyone, including agency personnel and county road personnel/officials.

Please be aware that space is limited for this workshop due to the nature of the instruction and you should RSVP to Kim Webb at the Coronado RC&D office (520) 384-2229 x 123 or email: [Kim.Webb@rcdnet.net](mailto:Kim.Webb@rcdnet.net) no later than October 17th.

## Cascabel Volunteer Fire Department News

Les Helfrich, Fire Chief CVFD  
[chiefc@rnsmtc.com](mailto:chiefc@rnsmtc.com)



### Home Safety Tip: Smoke Detectors

According to the U.S. Fire Administration having a working smoke detector is the single most important step a family can take toward surviving a house fire.

#### Location:

- Recommend putting a detector in every sleeping area.
- Mount them 6-8" below the ceiling on a side wall, avoiding an exterior wall, as extreme temperature difference could affect their performance.
- Place detector 3 feet from registers of forced-air heating systems and 3 feet from a door to a kitchen or bathroom with a shower.
- Don't place them in the kitchen or garage.

#### Maintenance:

- Change the batteries twice a year. Tie the changing to a holiday or special event, spring and fall.
- Test monthly.
- To remove dust and debris, eg. spider webs, vacuum around the unit regularly.
- It is recommended smoke alarms be replaced every 10 years.

## Basics and Benefits of Sub-Surface Drip Irrigation Systems

Submitted by: Gordan and Linda Beasley, Mgrs.  
Rogers Heaven Sent Ranch  
4826 N. Cascabel Road  
Benson, AZ 85602

Drip irrigation systems consist of a series of drip tapes injected into the ground. These tapes are manufactured to a variety of specifications to meet soil conditions that exist in a specific area,

and are made with a variety of different sized, and spaced, self draining emitters. The typical system consists of a series of sand filters ( to trap any impurities in the water source to aid in the prevention of blocking of the emitters), main line piping, and header piping, and the drip tape. Field sizing is dependent on the water source and pump capabilities.



Sound easy? Because of all the different soil conditions that exist, an analysis of the soil is needed to determine how far water will migrate laterally to eliminate a dry area in-between the tapes. And, an elevation survey is needed so the tapes are injected with the least amount of fall along their length, to reduce water pooling at the lowest end.

The installation begins with the injection of the tape. A specially designed injector is used to rip the ground and inject the tape in the same operation, much the same as a power or phone line being injected into the ground. The main lines are the next to be installed, followed by the header pipes on each end of each field, to which the drip tape is connected. Typically, the drip tape is placed 30-40 inches apart, so the connecting of the tapes to the header pipes becomes a very labor intensive (and boring) job over a large area.

At this point, a variety of options are available. Depending on the size of operation (and available time), the system may be totally manually operated, or 100% automated, or anywhere in-between. A computer operated system eliminates much of the guess work by automatically turning on and off irrigation water, injecting acids, fertilizer, or other chemicals by continuously monitoring the pH and EC\* of the water. Probes can also be placed in the fields to determine the amount of water and chemicals required for a specific crop.

It is difficult to list all of the benefits that come with the system. The cost of operation is probably the one that gets the most attention. Usually, a reduction of 30 to 50 percent in water usage is realized immediately. That translates to a 30

to 50 percent reduction in electricity consumption. All the water goes exactly where you want it, not on the roads or where you watered yesterday, and it goes straight to the roots, not into the air, where during times of low humidity half of it evaporates. The same goes for fertilizers and other chemicals: they go straight to the roots, reducing the amount required for good crop production. Water-back time is dramatically reduced, also. Typically, it would take about a week to water-back 60 acres of alfalfa. In this operation, I can have ½ an inch of water on all 60 acres in less than 24 hours. And to top it all off, a 25 percent increase in crop production may be realized.

We have this operation to the point of pretty much hands-free irrigation. We use electricity only during off-peak hours, and the computer turns the system on and off accordingly. The computer monitors the pH and EC\*, and automatically adjusts the water going to the fields according to preset parameters, and we don't have to set the alarm to move wheel lines in the middle of the night. HOWEVER, there is one major drawback !! GOPHERS !! Drip tape is like cookies to them. When they find it (and they do) it must be irresistible. Now fixing a leak is really easy to accomplish: cut the tape (under pressure, so as to not get mud and debris in the tape), insert a piece of solid poly pipe, and wire tie the ends. This takes 5 minutes, maybe. But, the water follows these little critter's burrows, so the location of the water on the surface, may not be where the leak is, and finding the actual leak can be a real challenge.

Another problem, which we have NOT encountered, is with roots. The drip tape is designed with self-draining emitters, and is injected with these emitters facing downward to reduce the potential for roots finding a home. Also, mineral build-up can pose a potential risk in reducing water flow. Our emitters inject .25 gallons per hour (1 pint), so minerals reducing the flow can dramatically reduce the flow in a very short time. Typically, sulfuric acid is used to reduce mineral build-up, but, we use citric acid for both this purpose, and to adjust the water pH.

System longevity has been a question that I have encountered, and can only be answered by farmers who have used this type of system over a long period of time. Arizona Drip Systems were the contractors who installed this system. They are located in Coolidge, AZ, and have been using this same system since the mid 60's on approximately 3600 acres. They replace their tape every 10-20 years, however, in some areas, the tape has been used for 30+ years. The main lines, headers, etc. are PVC pipe, and should last 100 years (or so).

OK, we are down to cost. EXPENSIVE. Yep, no other word fits. Assuming no infrastructure exists, except the irrigation well, a drip system will cost 25 to 50 percent MORE than a conventional system, depending on design. However, cost recovery should be relatively fast, with the reduced cost of electricity, man-power, water and fertilizer, increased crop production, etc.

continued on page 5

Stop by and visit. We are always happy to show interested folks around the ranch and explain in detail how our irrigation system functions.

520-212-4772 , Ranch  
520-370-3664 , Cell

\* Editor's note: EC stands for Electrical Conductivity. The Electrical Conductivity of soil is determined by the following properties of soils: porosity, water content, salinity level, cation exchange capacity, temperature.

### Education Center Report

Submitted by Jacquie Dale, Ed Center Director  
Email: [redingtonnrcdnews@yahoo.com](mailto:redingtonnrcdnews@yahoo.com)

Although Ed Center activities have slowed down a bit over the summer, we are making plans for some workshops to be held over the cooler months of the year.

In October, we will be having a second "On the Ranch" field trip for students again. This is turning into an annual event. We had lots of positive feedback from this last year and kids and adults alike seemed to enjoy themselves and learn something about food production and the history of the area. This will take place at the Carlink Ranch again this year. If you are interested in volunteering, please let me know.

Also in October, we will be having a road workshop. For individuals who are not familiar with Bill Z's books, we will hopefully have some to give out prior to the workshop. Contact me if you would like one.. His books are published through the Quivira Coalition, online at <http://www.quivira-coalition.org>

I have been corresponding with the Artificial Roosts Coordinator for Bat Conservation International, on an upcoming workshop on building bat houses. The date is yet to be determined. but will most likely be sometime this winter or spring

In August, I attended a workshop on IMS (Internet Map Services) at the University of Arizona. The workshop was hosted by NEMO whose mission is to help communities protect their natural resources while accommodating growth. NEMO actually stands for Non-point Education for Municipal Officials. According to their website "NEMO recognizes the management of nonpoint source pollutants is inherently spatial, and supports the use of geographical information systems (GIS) to simulate and predict the impact of land-use change." The workshop provided participants with hands-on learning with the ARC/IMS website tools to create GIS style maps of watersheds. The map service uses what they call a "thin client" application,

meaning that you don't need any extra GIS software to work with the database. All the tools you need are integrated into the web site. The site is rather band-width heavy so users are limited by their online access speed. To date, the Agua Fria River and the Upper Gila River Watersheds are the most complete.

You can visit the NEMO website at:

<http://www.srn.arizona.edu/nemo>

Click on Internet Map Services to find the watersheds that are currently available through the GIS/IMS map servers. There is also a tutorial you can go through to see how it all works.

The Arizona Association of Conservation Districts is having a meeting later this month at HonDah. The Ed Center Directors will be getting together to try and finish up our Strategic Plan which will help all the Ed Center's better coordinate with one another in terms of funding possibilities, workshops, and educational materials.

### NRCS News.

Contributed by Dave Matthews, District Conservationist

### UPCOMING DEADLINE FOR 2008 EQIP & WHIP APPLICATIONS

The Natural Resources Conservation Service (NRCS) is accepting applications for the 2008 Environmental Quality Incentives Program (EQIP) and 2008 Wildlife Habitat Incentives Program (WHIP). Even though the programs are subject to change due to development of a new Farm Bill by Congress, landowners who wish to apply should do so as soon as possible. Only applications received by **October 26, 2007** will be initially considered for funding in 2008. If excess funds are available a second evaluation period will be established for applications received after October 26, 2007.

EQIP is a cost share program to help agricultural producers conserve and enhance natural resources. Eligible participants can receive financial and technical assistance to implement approved conservation practices. These practices include high efficiency irrigation systems and other water conservation practices for land currently being irrigated in our area. On rangeland, practices such as water developments, cross fencing, brush clearing, and seeding are eligible for assistance.

WHIP is a voluntary program providing financial and technical assistance to help landowners implement wildlife conservation measures. NRCS provides monies on a cost-share basis for installation of high priority wildlife habitat improvement projects.

Persons interested in participating in EQIP or WHIP can apply at their local NRCS office in Willcox. For more information, call (520) 384-2229 ext. 3 or visit us at 656 N. Bisbee Ave.

## Coronado RC&D News

by Donna Matthews, Coordinator

Who we are: The US Department of Agriculture began the Resource Conservation and Development program in the early 1970's as a tool to help rural people help themselves. RC&D Areas as they are called, were based on similar human and natural resource concerns. Local people in a geographic area, come together and identify their needs and issues and apply to the US Department of Agriculture to become an RC&D Area. Once authorized, federal funding is targeted to the area to assist in meeting the local need. This funding is administered by the Natural Resources Conservation Service (NRCS) and comes in the form of a coordinator, office space, support services and technical assistance.

The Coronado RC&D was formed in 1971 and serves Graham, Greenlee, Cochise, Santa Cruz and Pima Counties. All Counties, Cities, Towns, Conservation Districts and Indian Tribes are eligible to be members of the RC&D and send a delegate to serve on the RC&D Council as the governing board of directors is known. The RC&D Council is a 501 c 3 non profit organization that is eligible to receive and administer grants for the purpose of supporting and enhancing the rural communities in the service area.

Coronado has a federal coordinator, and three staff members employed by the Council. Their priorities have been in providing assistance in land and water management, land conservation and community development. They have been involved in large rangeland reclamation projects, invasive weed control, conservation education, student owned and operated business development and in building a day-care center.

The RC&D works with conservation district partners on a variety of projects. Currently, this partnership is producing two new publications, *Field Guide to Invasive Weeds and Field Guide to Crop Weeds*. Watch your Conservation District newsletter for availability of these two publications.

The RC&D is hosting an animal health and nutrition workshop on September 15, 2007 at the University of Arizona Meat Lab in Tucson. Dr Peder Cuneo, Extension Veterinarian and Dr Gordon Dutt, Ruminant Nutritionist will be presenters. The focus will be maintaining healthy animals on irrigated pasture. On November 17, a workshop on the Economics of Raising and Marketing Grass Fed Meat will be held at the Community Center in Benson. Contact the RC&D office at 520-384-2229 x 123 to receive more information.

The RC&D needs your input. The Council meets bi monthly the second Wednesday of each month. The next meetings are September 12 and November 14- Stop in!

## Redington Natural Resource Conservation District Meeting Schedule

Unless otherwise notified, the Redington NRCD Board meets the 4th Saturday of every month at the Cascabel Community Center.

### Next Meeting Date:

Saturday August 25<sup>th</sup>, 2007 at 9 AM at CCC

All agendas are posted 24 hours in advance at the Game and Fish kiosks along the Cascabel/San Pedro River Rd. If you would like email notification of the agenda please email Stefanie Smallhouse [carlink@hughes.net](mailto:carlink@hughes.net)

## Local Classifieds

### **Saguaro-Juniper Grass Finished Beef**

[jeannine85602@yahoo.com](mailto:jeannine85602@yahoo.com)

(520) 212-7333



CENTER FOR  
DESERT  
ARCHAEOLOGY

*a nonprofit corporation*  
300 E. University Blvd #230  
Tucson, Arizona 85705  
(520) 882-6946  
[www.cdarc.org](http://www.cdarc.org)  
[center@cdarc.org](mailto:center@cdarc.org)

## Preserving the Places of our Shared Past

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winning magazine,  
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The Redington Resource Review accepts ads on a quarterly basis. Ads measuring 4" x 3" cost \$5 per issue. If you are interested in placing an ad please email [redingtonnrcdnews@yahoo.com](mailto:redingtonnrcdnews@yahoo.com). or submit your ad and check to: Redington NRCD, PO Box 232, Pomerene, AZ 85627

**Meeting Minutes**

**Redington Natural Resource Conservation District Meeting  
Board of Supervisors Meeting  
Saturday June 2,2007  
Carlink Ranch, Redington**

1.Call to order 11:30

a.Approval of Financial – Year End Spending Stefanie Smallhouse

Total Expendures for 2006-2007 in the amount of \$8342.63.

U of A Extension Service, Backyard and Beyond Publication \$500.00

Resource Conservation and Development Dues, Plant Books \$650.00

RC&D Student Farmers Market \$500.00

Cascabel Volunteer Fire Dept. \$800.00

Cascabel Community Center \$400.00

District Equipment Laptop, Software \$1500.00

2007 Road Wkshp \$3992.63

b. Redington Conservation Education Center State Account Expenditures in the amount of \$5248.24

N. R. Conservation for AZ Youth Student Camp \$300.00

Director (4th quarter) \$600.00

Transfer to local acct. Ranch Field Day \$500.00

Road Workshop \$3848.24

b.Reimbursements Expenses for Charles Kent in the amount of \$123.82

Approve \$25.00 for Jacque Dale to attend Grant Writing workshop

Motion to approve Expenditures and Expenses Judy Dykes  
Second Les Helfrich

Motion Passed

c.Cooperator Agreement for Rita Cruz  
Motion to approve Stefanie Smallhouse  
Second Les Helfrich  
Motion Passed

d.Next Meeting Schedule July 28, 2007  
Motion to adjourn Judy Dykes  
Second Stefanie Smallhouse  
Meeting adjourned 12.00

**Redington NRCD Annual Meeting  
Saturday June 2, 2007  
Carlink Ranch, Redington**

1.Call to order 9:17

2.Introduction of guests Dave Matthews NRCS Donna Matthews NRCS

3.Reports

a.Dave Matthews NRCS

1. Recently completed activities,
2. 2008 Farm Bill Program applicants
- 3.EQIP program
- 4.Whip program

5.Other items of interest included Field Office Staffing, TSP agreement, Farm Bill, Soil survey and the Annual Highlights

b. Donna Matthews NRCS

1.There will be a Grant writing workshop 9-2 June 19, 2007 at the Valley Telecom Building in Willcox

2.Forage Production on Irrigated Pasture July 21,2007 9am-12 Community Center in Willcox

3.RC&D Annual Meeting July 25,2007 Mt Lemmon

4.Reported also was a proposed Road Workshop with Bill Zeedyk

c. Annual Report Stefanie Smallhouse

1.Lower San Pedro Watershed Assessment Project is now available but cost of copies will be determined.

2.Andy Smallhouse demonstrated the process for making Bio-Diesel

3.Stefanie and Andy Reported on the Water Conservation Practices, Pivot Sprinklers vs Side Roll and Flood irrigation.

4.Meeting Adjourned at 11:30

Lunch was provided. Thanks to Mary Smallhouse for the preparation.

17 Members and guests attended.

**MISSION STATEMENT**

**The legislation establishing the Conservation Districts in Arizona described their mission as follows: ARS Title 37, Chapter 6 37-1001**

It is declared that the policy of the legislature to provide for the restoration and conservation of lands and soil resources of the state, the preservation of water rights and the control and prevention of soil erosion, and thereby to conserve natural resources, conserve wildlife, protect the tax base, protect public lands and protect and restore this state's rivers and streams and associated riparian habitats, including fish and wildlife resources that are dependent on those habitats, and in such a manner to protect and promote the public health, safety and general welfare of the people.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or family status. Persons with disabilities who require alternative means for communication of program information should contact USDA's Target Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write USDA Director, Office of Civil Rights, Room 326 W. Whitten Bldg., 14th and Independence Ave. SW, Washington, DC 20250-9410, or call (202) 720-5964. USDA is an equal opportunity provider and employer.

**Redington Natural Resource Conservation**

**District and Natural Resource  
Conservation Service**

656 N. Bisbee Ave., Willcox, AZ 85643

(520) 384-2229 ext.3 (phone)

(520) 384-2735 (fax)

[david.matthews@az.usda.gov](mailto:david.matthews@az.usda.gov) (email)

[www.az.nrcs.usda.gov](http://www.az.nrcs.usda.gov) (website)

**NRCS Willcox Office Staff (Team)**

Dave Matthews, District Conservationist

Wilma Renken, Rangeland Management Specialist

Matt Roberts, Rangeland Management Specialist

Christo Visser, Soil Conservation Technician

Donna Matthews, Coronado RC&D Coordinator

**Redington Natural Resource Conservation District**

**P.O. Box 232**

**Pomerene, Arizona 85627**

**Web Site: [www.redingtonnrzd.org](http://www.redingtonnrzd.org)**