

Water Supply Reserve Account: Progress Report – 2nd year

June 23, 2014

Author: John Rizza (on behalf of Joyce Foraker and Mesa Conservation District).

<i>Contract Summary</i>

Applicant: Mesa Conservation District

Water Activity Name: Small Acreage Irrigation Audit Program – Grand Valley

Water Activity Purpose: Non-Structural Water Activity

County: Mesa

Drainage Basin: Colorado

Water Source: Colorado River

Amount Requested: \$18,273

Source of Funds: Colorado Basin Account

Matching Funds: \$8,000 (Grand River Mosquito Control District, Grand Valley Irrigation Company, Grand Valley Water Users Association)

Water Activity Summary:

The natural resource concern that the *Small Acreage Irrigation Audit Program* is proposing to address is that of (irrigation) water and its management among small acreage owners. During the 1990s and 2000s The Grand Valley experienced unprecedented population growth. One of the more obvious impacts of this growth has been the sale and subdivision of larger commercial farms, particularly in the Grand Valley area. These smaller parcels of agricultural land – usually 40 acres or less in size – have often been purchased by individuals not familiar with western states irrigation. Many of these new irrigators have struggled with the subtleties inherent in the art of setting gates or moving a side-roll. Their irrigation efforts can create problems for themselves and their community, often without their knowledge. This program is designed to close that knowledge gap for small acreage irrigators and improve irrigation water management among this growing demographic.

Excess irrigation is also the primary cause of mosquito outbreaks with the Mesa district and each year the local Mosquito Control District is dedicated to preventative and reactive measures to control mosquitoes that spawn in irrigation water. Eliminating water ponding in fields goes a long way towards reducing mosquito breeding grounds and the ensuing outbreaks.

The proposed project has the following objectives:

1. Reduction or elimination of water waste;
2. Improved quality of life within the Grand Valley due to the reduction in mosquito breeding sites; and
3. To eliminate this group's contribution to local water quality concerns such as weeds, nutrient loading to waterways, and salt and selenium percolation.

Threshold and Evaluation Criteria

The application meets all four Threshold Criteria.

Final Summary

The three years of the program started with the hiring and training of Mr. Darrell Rule as the Small Acreage Irrigation Ambassador. Mr. Rule completed 139 visits over 1034.2 acres.

Assisting the program was the CSU Extension Small Acreage Specialist and project partners: the Grand River Mosquito Control District (GRMCD) and the Mesa Conservation District; with outreach is the promotional video that was posted online in April of 2012. Some of the larger realtor companies were also supplied with DVD copies of the video and brochures.

Other highlights for 2012 so far were: an interview with Denis Reich and Zane McCallister (GRMCD) by Brian Allmer of BARN Media Colorado Ag News Network; and a Success Story bulletin published by CSU Extension. Other materials were also produced including newspaper advertisements, and a news story in the local paper. Finally, the local community radio station hosted a 15 minute segment on the program to help promote across new audiences.

The promotional video, radio interview, and bulletin can all be accessed at:
http://www.ext.colostate.edu/irr_assess/sm_acre.html

Additional materials from local publications are attached at the end of this report.

Final Plan of Work Review

There are five tasks in the revised Plan of Work for the Small Acreage Irrigation Audit program.

Progress on the task list detailed in Exhibit A of the September change-order is:

1. *Hiring and training small acreage irrigation auditor*

Complete. Mr. Darrell Rule hired as a contract employee of Mesa Conservation District March 2011.

2. *Advertising small acreage irrigation audits program*

Complete. Advertising continued throughout the 2013 season, see examples attached.

3. *Performing small acreage irrigation audits*

Complete. Mr. Rule performed 139 visits and 121 complete audits during the project. See Table 1 through 3 for a complete breakdown of his time and expenditures for each year of the project.

Many callers continue to enquire about irrigation issues unrelated to water management, such as administration of ditch shares or neighbor water disputes. These folks were referred to the appropriate contact. Table 1 details 2011 season time and travel, table 2 for the 2012 season, and table 3 for the 2013 season seen below.

Table 1: Small Acreage Irrigation Ambassador **2011** Labor and Mileage Expenditure.

Month	Visits	Audits	Acres	Total Miles	Total Hours	Total Cost
APRIL	9	4	29.7	160	21.0	\$584.00
MAY	12	8	37.3	205.8	24.5	\$716.00
JUNE	10	9	13.3	219	36.5	\$940.00
JULY	8	8	91.9	222	31.5	\$804.00
AUGUST	9	8	23.6	173	28.5	\$780.00
SEPT	5	3	6.0	138	14.5	\$348.00
OCTOBER	4	4	31.0	80	14.5	\$444.00
2011 TOTALS	57	44	276.8	1197.8	171	\$4616.00

2011 Notes: Mr. Rule also facilitated drainage of two that had been flagged as problem mosquito breeding sites. The elimination of standing water in these fields provided not only a quality of life benefit to surrounding residents but a cost saving to the local Mosquito Control District.

Table 2: Small Acreage Irrigation Ambassador **2012** Labor and Mileage Expenditure.

Month	Visits	Audits	Acres	Total Miles	Total Hours	Total Cost
APRIL	10	8	53	281	34.5	\$908.00
MAY	10	8	34	179	28.5	\$732.00
JUNE	7	7	79.5	116	25.5	\$628.00
JULY	7	7	49	180	28	\$720.00
AUGUST	5	5	37	91	16.5	\$396.00
SEPT	5	5	29	106	19	\$456.00
OCTOBER	2	2	12	28	8	\$180.00
2012 TOTALS	46	42	293.5	981	160	\$4020.00

2012 Notes: Mesa County had an outbreak of West Nile in 2012, drawing more attention than usual. Mr. Rule assisted GRMCD with another severe mosquito problem related to drainage in an irrigator's field.

Table 3: Small Acreage Irrigation Ambassador **2013** Labor and Mileage Expenditure.

Month	Visits	Audits	Acres	Total Miles	Total Hours	Total Cost
APRIL	7	7	111	138	26.5	689
MAY	8	8	115	168	28	728
JUNE	7	7	87.4	119	26	708
JULY	8	7	83.5	192	30	844
AUGUST	3	3	22	55	11	302
SEPT	3	3	45	86	12.5	396
OCTOBER	1	1	3	8	3	72
2013 TOTALS	36	35	463.9	758	134	\$3739.00

2013 Notes: Mr. Rule visited several sites where he referred the landowner to programming more applicable for their situation. Nine Soil samples were collected and analyzed as part of the project, 13 flow tests were conducted, and 1 water sample was collected to help folks gain a better understanding of their system.

4. Outreach Video for the Small Acreage Irrigation Ambassador Program

Complete. Video is available for viewing on the Small Acreage Irrigation Ambassador Website:
http://www.ext.colostate.edu/irr_assess/sm_acre.html

5. Evaluation of impacts

Complete. Follow up calls with irrigators will begin in the late fall for visits in 2011 and 2012. Calls will be asking for feedback on the program and looking for change-in-behavior and impact indicators related to irrigation water management. Please see attached document following on some feedback from participants.

<i>Program Contacts</i>

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Small Acreage Specialist
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Joyce Foraker
General Manager
Mesa Conservation District
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Advertising Example 1

Small Acreage Irrigators
Protect your property value and Quality of life with a **FREE Consultation**
Call your **Small Acreage Irrigation Ambassador** for a **free** irrigation consultation visit



Benefits of a FREE visit include:

- Tips for irrigating to the best effect under Grand Valley conditions.
- Preventing Mosquito outbreaks around irrigation ponding.
- Improving stand health and controlling weeds with an efficient irrigation schedule.

For a limited time we are conducting free visits. Soil test included!

Call Darrell Rule: 970-270-2161
Email: therules@q.com




Advertising Example 2

FREE Consultation Visits
for **Small Acreage Irrigators**

Benefits of this FREE service include:

- Tips for irrigating to the best effect under Grand Valley conditions
- Preventing mosquito outbreaks around irrigation ponding.
- Improving stand health and controlling weeds with an efficient irrigation schedule.

Call Darrell Rule: 970-270-2161





Newspaper Article

The Daily Sentinel • Friday, July 12, 2013 3A

Free irrigation advice offered for small acreage farms

By SAM WATERS
Sam.Waters@gsentinel.com

Across the Grand Valley, many farms have been divided into small acreage portions of land, which residents looking for a more rural lifestyle have purchased. Irrigation management may not always be a top priority for some landowners and that can lead to inefficient irrigation practices.

The Small Acreage Irrigation Ambassador program, offered through the Colorado State University Extension office, hopes to help improve those irrigation practices.

The free service educates residents with 100 acres or fewer of land about precisely how much water is necessary.

"We're trying to give them a hand in figuring out how to efficiently water," said John Rizza, small acreage management specialist with CSU Extension.

Many small acreage owners have a tendency to overwater, which can lead to excessive soil saturation and runoff or unwanted ponding, and mosquito breeding grounds.

Soils in the Grand Valley also tend to have a high salt content, and overwatering can cause that salt to leach into the rivers, Rizza said.

"If we apply water effectively, we're helping keep that salt where it needs to be. That way, we're protecting that soil, the environment and water in the river," he said.

In partnership with the Mesa County Conservation District, Grand Valley Irrigators, the Grand River Mosquito Control District and other agencies, CSU Extension launched the program in 2010.

"It's kind of a pilot program and we're trying to expand if possible. It's just a matter of if we can get funding," Rizza said.

The goal is to expand to neighboring Delta and Montrose counties and maybe even the Front Range.

Interested landowners can contact the extension office and make an appointment with the ambassador, Darrell Rule.

"It's good to have someone who knows what they're doing to go out and help those folks," Rizza said.

Having previously farmed and ranched in Steamboat Springs, Rule and his wife moved to Grand Junction several years ago and now own Willow Bend Iris Farm at 2331 J Road. In 2011, CSU Extension hired him for the part-time ambassador job.

Rule visits each location and assesses watering practices and systems, examines soils and looks for opportunities to improve plant health and reduce costs and labor needs. So far, he has made 15 to 20 visits a month during irrigation season.

"Some people are surprised to learn how much water they are using," Rule said. "When we can help them maximize their experience, then that's good for everyone."

To set up an appointment or for information, contact Rule: therules@q.com or at 270-2161, or contact CSU Extension at 221-3346.

Evaluation of impacts

Contact	Audit Experience?	Adopting Recommendations?	How Can We Improve?	Would You Recommend Us?
Dana Hobika Fruita	Very Helpful-appreciated the time spent and info sent	Started on recommendations-improving drainage/furrows	Program OK	Yes-already have
Carey Cox Grand Junction	Very Helpful-appreciated the time spent and info sent	Watching set times and water use. Improving field conditions	Program OK	Yes-already have
Eli Fresquez Kannah Creek	Soil samples very helpful-liked soil map	Yes	Will call for flow test this spring	Yes-already have
Dick Hane Fruita	Very Helpful-appreciated the time spent and grade assessment	Started on recommendations-improved drainage/furrows, able to reduce water applied	Soil sample interpretation needed	Yes-already have
John Woodling Grand Junction	Very Helpful-appreciated the time spent and moisture assessment with ball probe	Trying surge application-watching flow rates and time closer-wants ball probe!	Better information for utilizing soil sample results	Indeed
Abdul Basti Grand Junction	Helpful with the watering hints	Will set pipe and gates better next time	Program OK	Yes
Rich Johnson Grand Junction	Flow tests very informative, quite helpful	Will pay more attention to advance time and reduce flow rates accordingly	Good program	Yes-already have
Wayne Kennedy East Orchard Mesa	Very helpful	Will try less water at faster rate instead of long soaking	Good program	Yes
Robert Hill Grand Junction	Very helpful	Will change flow rates to help reduce runoff-will build ball-probe to improve watering	Good program	Yes-thinks irrigators are looking for this type of info
Bob Phillips Grand Junction	Very helpful	Has automatic surge system he will return to service-didn't think it was necessary	Would like to see hay sampling	Yes-already have neighbors interested
Warren Petersen East Orchard Mesa	Very helpful and informative	Will make sure system is not leaking-try to use less water	Good program	Yes
Bill Martin Grand Junction	Very helpful-soil sample results quite helpful	May abandon sprinkler system plans-soil too saline	Good program	Yes
Kim Mariner Clifton	Quite helpful-probe tests an eye-opener!	Will call for flow test this spring	Good program-need more of it!	Yes
Wendy Gist Fruita	Helpful-soil samples are great tool	Trying a surge method to improve coverage without excessive runoff	Better sample-to-crop recommendations would be helpful	Yes-already have
Kenton Page Redlands	Wasn't information he was looking for. Needs system improvement money!	Didn't address his problems	Doesn't know how	Yes-thinks it's good for what we are trying to accomplish