

Maintaining our way of life through conservation, protection, and preservation of our groundwater resources.

VOLUME 65, NO. 1

A publication of the North Plains Groundwater Conservation District

Spring 2019

2019 Master Irrigators Complete Training

North Plains GCD has just completed the fourth year of its award-winning Master Irrigator program. The 2019 class consisted of 22 producers from the eight-county service area, representing over 110,000 acres of irrigated agricultural land. After their graduation on April 10, 2019, the Master Irrigator family grew to nearly 100 strong, representing more than 20 percent of the district's irrigated acres, and conserving and protecting one of the area's most valuable resources.

Master Irrigator offers local growers a wealth of information to guide them toward increasing water efficiency and pumping less groundwater while maintaining or increasing their yields. Participants meet at the North Plains Water Conservation Center for four consecutive Wednesdays to receive 24 hours of intensive irrigation education from experts in agronomy and irrigation.

After a welcome from North Plains GCD General Manager, Steve Walthour, the first session of Master Irrigator's 2019 class covered soil health, irrigation water quality, fertility management, plant stress, cover crops, and the economics of soil health and residue management. Each instructional day ends with a producer panel, where local farmers discuss their experience with some of the strategies addressed by the speakers. Two panelists, Ronald Meyer and Kelly Kettner, also brought along some visual aids to show the benefits of conservation tillage and proper soil health management.

Irrigation scheduling was the topic of the second session. Jourdan Bell, Pat Scarth, David Sloane, Scott Strawn, and Steve Amosson gave presentations on optimizing irrigation timing, and Keith Sides from the United States Department of Agriculture - Natural Resources Conservation Service told Master Irrigators how they can apply for the special pool of federal funding that is available to them from the Environmental Quality Incentive Program.

Session three and four focused on systems, including center pivot management, variable rate irrigation, remote monitoring, and subsurface drip irrigation. Special topics were also explored - participants heard about remote sensing, profitability analysis, drones, and energy considerations such as variable (continued on page 2)

New Board Officers Sworn In

The North Plains GCD Board of Directors changes leadership every two years with the new rotation of President, Vice President, and Secretary. The officers inducted in January are very experienced in board leadership and well-prepared to guide the district toward continued success.

Danny Krienke is the new board president, though he is no stranger to the role. He has been a director since 2000 and has served previously as the North Plains GCD board president. Krienke also participates on boards for the Texas Grain Sorohum Association. Panhandle-Plains Land Bank Audit Committee, and the USDA Natural Resource Conservation Service's Texas State Technical Committee. Krienke lives and farms in his native Ochiltree County, where he has over 40 years of experience



using dryland and efficient irrigation techniques. He has been involved in water issues and water planning for most of that time, including representing North Plains GCD in regional and national arenas.

Bob Zimmer has been on the board since 2004 and served as a county committeeman for many years before that. He is a past board president and vice president and is now serving Hansford and Hutchinson counties again as the vice president of the North Plains GCD board of directors. A Stratford native, Zimmer went on to Texas Christian University to receive a degree in ranch management. His operation includes dryland and irrigated farming as well as raising cattle. For 14 years he grew food corn for FritoLay and is also experienced as an electric



Board President Danny Krienke

tion costs.

(continued on page 2)



Master Irrigator Class of 2019 graduates: Shane Anderson, Tim Ballinger, John Baxa, Suzanne Bellsnyder, Brian Bezner, Caylen Boyles, William Darcy, Marci Darcy, Evan Dewey, Paul Dyck, David Ford, Jose Gonzalez, Jay Goodwin, Heath Hill, Ryan Imler, Trent Koehn, Chase Lee, Clarence Meiners, Frank Mininger, Lem Russell, Brent Thurman, Matthew Wagoner.

WCC to Demonstrate Conservation Practices

North Plains Groundwater Conservation District has several demonstrations planned for the 2019 growing season to gather important data for local growers. The North Plains Water Conservation Center (WCC) serves the farming community by showcasing new technologies and conservation techniques. The district then shares the processes and results with area farmers, so they can evaluate what strategies and equipment may help them be more efficient on their operations.

Much of the 320-acre WCC farm will be involved in the demonstrations. Both pivot fields (88 acres on the West pivot and 110 acres on the East field) and about 19 acres of subsurface drip irrigation (SDI) will be used. The district's agricultural engineer, Nicholas Kenny, will direct the following demonstrations with daily operations conducted by farm operator Stan Spain and Natural Resource Specialist Curtis Schwertner.

Population studies in corn and cotton begun in 2018 will continue in 2019. Cotton will be planted from 45,000 seeds/acre (45K) up to 110K, while corn will be planted from 28K-40K. Using actual seed costs, yields will be analyzed in order to determine the most profitable planting population. A corn-versus-cotton comparison will also be analyzed in accordance with prevailing market rates and produc-

One of the SDI fields will be irrigated at 3 gallons per minute per acre (GPM) and will be a site for the Replicated Agronomic Cotton Evaluations (RACE) Trials directed by Dr. Jourdan Bell of Texas A&M AgriLife Extension. The district will cooperate in documenting the water use efficiency of the RACE Trial at the WCC, as well as at several other on-farm trial sites throughout the Texas Panhandle. Bell's RACE Trial sites within North Plains GCD will be documented with weekly videos throughout the growing season, thanks to an educational partnership between the district and extension staff. More information about this partner-(continued on page 2)

North Plains Water News

Demonstrations (continued from page 1)

ship (and the videos once they are available) can be seen at <u>www.northplainsgcd.org/cotton</u>.

The West pivot will be planted in cotton and irrigated at 3GPM. The West half of the field is part of a cover crop study that started last winter and will be planted at a 65K population as a control. The other half will have four replications of four different planting populations – 45K, 65K, 90K, and 110K.

Strip-tilled and receiving 4 GPM, the East pivot will show four popular corn hybrids planted at 32K. Fertility management will be demonstrated on the North and South halves in attempts to unlock higher yields – the goals are 240 and 260 bushels per acre, respectively. Fertility supplements will be applied automatically with the new Injecto-Trac system that can be controlled through the PivoTrac Monitoring controller.

Other technologies that will be demonstrated at the WCC are soil mapping, drone evaluations, and pivot monitoring. Soil moisture will be monitored at a variety of sites throughout the farm using AquaSpy, GroGuru, and Trellis systems, as well as gravimetric sampling and gypsum blocks. At least three root digs are planned to give more insight into the soil and root structure.

All data from the fields will be monitored throughout the season and analyzed by Nicholas Kenny. The district will have a field day at the end of the season to present the results of the demonstrations. Stay up to date on demonstration progress and grower meetings by following North Plains GCD on Twitter, Facebook, and Instagram. You can also text "WCC" to 313131 for text updates when new information is available. You will receive no more than one text message per week.



Board Officers (continued from page 1)





Vice President Bob Zimmer

Secretary Mark Howard

sprinkler technician. Zimmer has been very active in his community, serving on the Morse School Board, Sunray Co-Op, and others.

Mark Howard joined the North Plains GCD board in 2014 to represent Hartley County and is the new secretary of the board. Many corn farmers may know him from involvement with the Texas Corn Producers Board. Howard has represented fellow corn growers to the Texas Water Conservation Association and several agricultural workgroups.

Krienke, Zimmer and Howard will all serve the interests of the district and their constituents as they work to maintain our way of life through conservation, protection, and preservation of our groundwater resources.



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Master Irrigator (continued from page 1)

frequency drives and genset. Master Irrigator graduates Justin Garrett, Braden Gibson, and Casey Kimbrell joined other area producers in the discussion panels for these sessions.

The most recent State Water Plan for Texas calls for irrigation conservation of 113,984 acre-feet in the district's eight service counties in the 2020 planning decade. By learning about tools and technologies that save water, Master Irrigators are doing their part to conserve our most precious natural resource and maintain our way of life here in the northern Panhandle.

Welcoming Lew Orthman

Lewis "Lew" Orthman joined the district in January after serving 21 years in the US Navy and working 20 years at Detyens Shipyard in South Carolina. Now he travels within the district learning how to gauge wells, conducting pre-drill inspections, and learning the GPS system, among many other tasks. Lew says the research and hands-on work with wells is similar to what he did in the Navy, making those some of his favorite activities.

Lew applied for the position upon finding the job listing and noting the similarities between the job at the district and the work he performed in the Navy. Water chemistry and testing were part of his previous work and are important to his responsibilities with the district.



The portion of the work Lew most looks forward to is simply enjoying the countryside and getting to know more people in the area. Born in Pampa and raised in Amarillo, Lewis is undoubtedly a Panhandle native.

Lew's unique skill set will enable the district to do a better job of serving the needs of our stakeholders.

North Plains Water News

New Partners and Activities at Annual Water Festivals

Fourth grade students in the North Plains GCD had a blast at the end of April when they attended the 13th annual Save the Planet's Water Festivals! North Plains GCD staff and partners were in Dumas on April 24, Dalhart on April 25, and Perryton on April 26 to provide a variety of interactive experiences and share the importance of water with students. In addition to classic activities like Aquatic Art, We All Live Downstream, and the grand finale Green Earth Magic Show, the district announced some new presentations that students enjoyed this year!

To enhance students' appreciation for agricultural uses of water, each festival had an activity presented by a local commodity group partner. Texas Corn Producers Board presented at the Moore County Community Building, Hilmar Cheese presented at the Rita Blanca Coliseum in Dalhart, and Plains Cotton presented at Frank Phillips College in Perryton. Although students attending the water festivals are surrounded by agriculture, they often do not fully understand what happens to the plants that are harvested or cows that are raised in this area. By bringing in these organizations, students were able to enhance their agricultural as well as environmental literacy in one day!

Another new activity was inspired by Lotería, a popular Mexican game that is similar to bingo. Adding an aquatic twist to this classic game, the district was excited to offer "Watería" to fourth graders this year and hopes to have the lesson available for download on our website soon. Each square on the playing cards contains a picture of a water-related object or concept, along with its name in both Spanish and English. The instructor for Watería defines the water term, or describes the relation of the concept to groundwater, and students place a marker if they have that term on their individual playing card. Watería helps students of any background learn about water resources and have fun doing it!

Bonnie Pendleton, entomology professor at West Texas A&M University, returned to the Dumas water festival to teach students about aquatic insects and how they can indicate water quality. Kevin Pshigoda from Ochiltree County Soil & Water Conservation District and Sonia Burgos from Natural Resources Conservation Service presented Water Bingo at the Perryton festival. We are so appreciative of their support each year!

The district is blessed with amazing partners that volunteer their time and expertise to help the Save the Planet's Water Festivals go off without a hitch: Amarillo College - Moore County Campus Lions, Dumas High School Leo Club, Frank Phillips College - Allen Campus staff and students, Texas Master Naturalists - Panhandle Chapter, Dalhart High School - Mrs. Holden's students, and several individual volunteers.

Thanks to volunteers, partners, and dedicated staff, fourth grade students learned about water conservation, pollution prevention, aquifers, water user groups, and more.





Page 3

Above: Shelley Haller, AgriLife Extension program assistant for Ochiltree County, teaches students about cotton. Below: Students at the Dumas water festival play Watería, a game of chance that reinforces water concepts.





Entries Accepted for Art Contest and Yard Recognition

Each year the North Plains Groundwater Conservation District invites 4th-6th grade students in the district to submit their best artwork on the subject of water conservation during the Water Conservation Calendar Contest. The competition is held in order to select the 13 winners to be included in the following year's calendar, produced by the North Plains Groundwater Conservation District. Students are asked to draw a picture showing a way to conserve water and to be as creative as they like. First place will be awarded a \$50 prize and the winning artwork will be featured on the cover of the calendar. There will also be 12 monthly winners, each monthly winner will receive \$25 and their drawing will be featured on one month of the calendar. For the entry form and more details, visit www.northplainsgcd.org/ calendar.

A xeriscape is a landscape design that does not require much water, usually utilizing native or drought-tolerant plants and hardscape elements such as rocks or pavers. If you know of a business or residence that uses any water-friendly landscaping practices, please send us a tip to info@northplainsgcd.org or fill out the nomination form found at www.northplainsgcd.org/xericzone. We'll get in touch with the home or business owner and adorn their landscape with a special Xeric Zone sign. They'll also receive a deluxe rain gauge and a gardening gift card! Feel free to nominate your own xeriscape, or any that you see!

USGS Tests Water Quality in the North Plains

While the North Plains Groundwater Conservation District is extremely involved in protecting water *quantity*, poor *quality* water is no longer suitable for many uses and therefore, wasted. That is why the district has also made water quality a focus through its in-house water quality program. Although samples are taken throughout the district on an annual basis for water quality testing, local laboratories don't provide the level of precision desired by the district's management and board. Consequently, the district has contracted with the United States Geological Survey (USGS) to get a comprehensive, highly accurate picture of the chemical and physical properties of the water in the aquifer. You can view the last report from 2014 on our website at www.northplainsgcd.org/waterquality.

The USGS team completed half of the sampling in early March. The remaining wells will be sampled early next year and a full report will be delivered in 2021. All samples come from the Ogallala aquifer formation. USGS staff test for a multitude of parameters such as pH, conductivity, temperature, major ions, dissolved oxygen, turbidity, alkalinity, nutrients, metals, and inorganic compounds. Six of the 30 samples will be analyzed for pesticides. All samples collected will go to either the National Water Quality Laboratory in Denver, CO, or the Organic Geochemistry Research Laboratory in Lawrence, KS.



P.O. BOX 795 603 E. 1ST ST. DUMAS, TX 79029



Mike Neiman mans the well pump while Craig Mobley works inside a mobile lab to prepare water samples.



Wanted: Teen Water Ambassadors

The Texas 4-H Water Ambassadors Program provides a select group of high school youth an opportunity to gain advanced knowledge and develop leadership skills related to the science, technology, engineering, and management of water in Texas. Since its debut in 2017, 42 youth representing 37 counties have participated in the program, which includes an 8-day 4-H2O Leadership Academy, taking place July 13-20, 2019 and community service through water education.

The summer academy exposes ambassadors to a wide range of water issues, provides a unique perspective of the many challenges faced by local communities, and offers a behind-the-scenes look into water planning. Tour stops and presentations address water law, policy, and management as well as hydrogeology, water treatment, and emerging technologies in irrigation management, reuse, desalination, and aquifer storage and recovery. This year, the ambassador group will visit North Plains GCD!

Online applications for the 2018-2019 class of 4-H Water Ambassadors are now open and will be accepted through May 15. More details about the program and application instructions are available online at <u>www.texas4-h.</u> <u>tamu.edu/projects/water/</u>. To be eligible, youth must be entering the 9th, 10th, or 11th grades for the 2019-2020 school year.

Please contact David Smith, 4-H2O Program Coordinator, at davidsmith@tamu.edu with any questions.



The 2018 Class of 4-H Water Ambassadors gets behind the scenes tour of the Lake Buchanan Dam during the summer 4-H2O Leadership Academy.