Missouri LICA 2019 Conservation Showcase

The third and final phase of the state's first Holistic Drainage Water Recycling Research Project By DEBBIE DICKENS

ven after almost 30 years of working with the Land Improvement Contractors of America (LICA), I am still amazed by our members' dedication, skill, and professionalism. LICA chapters across the country host a variety of field days. Whether it's installing edge-of-field practices in Illinois, assisting research efforts during Ohio's Farm Science Review, revamping a Boy Scout camp in New Jersey, training veterans at Kansas' new Service members' Agricultural Vocation Education (SAVE) farm, or demonstrating the benefits of conservation practices on Iowa LICA's own farm, LICA members have a long history of donating their time and talent to educating both contractors and landowners on the latest industry practices, while benefitting both research facilities and the public.

Project & Site Selection

One of the first, and often most difficult, steps in hosting a field day is the selection of a project and site. The project needs to have a valuable purpose such as educating contractors and landowners on the latest practices and research results or benefitting a civic organization. It has to have an achievable time-frame, as most of our members' own businesses shut down during the event. The site needs to have easy access for machinery and a landowner who is willing for multiple contractors, pieces of equipment, and the public to invade their lives for the entire duration of the project, including the prep and wrap-up activities.

The most recent Missouri LICA Conservation Showcase actually started in 2015 when Ms. Hortense Greenley bequeathed a 240-acre farm to the Lee Greenley Jr. Memorial Research Center, named after Ms. Greenley's father for



This project was much larger in scope and would need to be spread over a three-year period.





During the 2017 Conservation Showcase, Missouri LICA contractors installed one of the state's first bio-reactors and its first saturated buffer.

the family's generous donation of their 700-acre family farm to the University of Missouri. Dr. Kelly Nelson, Research Agronomist for the Greenley Research Center, had a vision for the new Grace Greenley Farm named in honor of Ms. Hortense Greenley's mother. After Dr. Nelson had a conversation with Missouri LICA representatives about the project, it's components and proposed research, the Grace Greenley Farm was selected as the site of our Conservation Showcase. While Missouri LICA has hosted several two-day field days at the University of Missouri's Bradford Farm in central Missouri and Hundley-Whaley Farm in northwest Missouri over the lasts couple of decades, this project was much larger in scope and would need to be spread over a three-year period.

Dr. Nelson wanted to use this farm for research on nutrient loss, soil retention, and crop production as they relate to terracing and cover crops, a variety of drain tile spacings and depths,



(Pictured left to right) Rob Liles, Kevin Waller, and Joey Rosenfelder check the grade on the dam's core, while Mont Gilbert operates Altorfer CAT's 336F Excavator.

a bio-reactor, a saturated buffer, and a retention pond with subirrigation capabilities. The first phase, the installation of six parallel terraces for the terrace and cover crop research, was accomplished in the spring of 2016 by Charles Krumpelman, a Missouri LICA contractor. In the summer of 2017, the Missouri LICA chapter installed the second phase of the project. This six-day event included the installation of a 20-foot by 100-foot bio-reactor and 260-foot saturated buffer, as well as 12.2 acres of drain tile to feed them; and the installation of 33,309 feet of drain tile at varying spacings and depths with three aboveground control structures and nine water gates to form 12 different management zones for the research. During the third and final phase of the project, the Missouri LICA chapter constructed a 700-foot dam for a 12-acre sub-irrigation and retention pond during the week of July 18-26 this year.

One of the next challenges in hosting a field day is to secure funding for the project. The installation of the six parallel terraces in 2016 was funded through one of Greenley Research Center's industry partnerships. In 2017, the University of Missouri Extension partnered with the USDA's Natural Resources Conservation Service (NRCS) for a grant to construct the second phase of the project, the installation of test and control plots for a variety of drain tile spacings and depths, as well as one of the state's first bio-reactors and its first saturated buffer. For the third and final phase of the project, Missouri LICA partnered with the NRCS for a \$79,441 grant with a commitment of \$176,057 in donated services to construct the irrigation and retention lake. While this \$255,498 price tag seems enormous, it did not include the ancillary costs of constructing a low-water crossing, a new road to access the property, or even any payments to Missouri LICA or our members for their time and equipment ... just one example of LICA members' dedication!

Getting Ready

Before I get too far into the particulars of the project, it might help if I explained where the Grace Greenley Farm is located. Novelty, Missouri is in the northeast portion of the



John Deere scrapers and tractors made more than 1,000 passes to build the dam.

state on Missouri Highway 156, isolated from any major city. Novelty itself has a population of 139, no hotel, no grocery store, and one, unmanned MFA fuel station. The Greenley Research Center is located one mile east of Novelty and the Grace Greenley Farm is about four miles south of that. The site for the project on the Grace Greenley Farm was about a quarter of a mile as the crow flies or about a mile if you're driving across the field into the property ... in other words, the middle of nowhere! The nearest large city is Kirksville, Missouri about 30 miles away. A trip for ice could be accomplished with a 10-mile round trip to Leonard, Missouri, but a trip for other supplies or even pizza for lunch meant almost two hours of travel time.

I am not a contractor, but I would like to share with you my perspective of Missouri LICA's 2019 Conservation Showcase and why I find it such an incredible feat. On the morning of



Foley Caterpillar's D8T (foreground) and Crown Equipment's Case finish dozer work in tandem to start stripping the dam site.



Missouri LICA contractors made the entire project look like an orchestrated construction ballet.

Thursday, July 18, a caravan of campers and contractors began arriving at the University of Missouri's Greenley Research Center in Novelty, MO to complete the third and final phase of the state's first holistic drainage water recycling research project. The morning was already steamy with the day's temperatures expected to reach 97°, with a heat index of 110°. But we were prepared. With the help of National LICA's new Associate member, Sunbelt Rentals, we had secured a generator to run the air conditioners in the campers and by the end of the event, we had an unofficial campground established on the Greenley Research Center's yard with about 11 campers, one pop-up camper and one pup-tent. The "camp ground" was buffered from the heat, but what about the job site? Not to worry ... we had a dozen coolers loaded with ice, water and Gatorade; towels to dunk into the coolers, if needed for immediate relief; a misting fan under two large tents which also served as our dining hall; six first-aid kits scattered around the site, and an AED and trauma kit donated by Underground Safety and Supply, LLC. We were ready for the heat!

We were very fortunate to have one of our most dedicated members, Jeff Lance, serve as Field Day Committee Chair. Jeff knew that, for a project of this size, he'd need to assign varying components to his committee members. He asked MLICA President Tom Lawlor to secure all the needed equipment for the project; Rob Liles, Missouri LICA Vice President, to coordinate the GPS system requirements to "talk to" the equipment; Charles Krumpelman to get the geo-fabric needed for the dam; Mont Gilbert to take charge of everything needed for the wet well installation; and Greg Muenks to handle all the rock involved in the construction. Unbeknownst to Greg, he was also tasked with continually re-working the new, unsettled gravel road giving access to the site. As Mont explained to Donnie Hubble, Greenley's new farm superintendent, "Greg's our rock guy!" Greg would dutifully grade the road and then another piece of equipment or heavy truck would tear through it, requiring Greg to repeat the process numerous times throughout the project - all without a complaint or pause.

Tom's task of securing the equipment needed for the project would bring its own set of challenges. It's difficult for an equipment dealer to promise the donation of a piece of equipment in the spring for use that summer. What will be available? When? For how long? But our Associate members stepped up to the plate and made it happen. John Deere Corporate provided an 850L, a new series of dozer which was being "demoed in the dirt" for one of the first times in the world ... on our project! In addition, Martin Equipment of Illinois and Murphy Tractor & Equipment, both John Deere dealers, provided one set of scrapers, and a 9570RX tractor with almost no hours on it. Sydenstricker Implement Company, also a John Deere dealer, provided one set of scrapers and a 9620R tractor ... with only a five-day notice! Foley CAT stepped up with a D8T dozer and, when one of our Associates had to back out of a commitment for another dozer, Jeff Lance stepped in by bringing his own to the site. Bobcat of Columbia provided a wheel loader to place the rip rap, a skid steer for the smaller tasks, and a pad-foot roller to compact the dam. Altorfer CAT let us use a 336F Excavator to set the wet well and pipes, secure the geo-fabric, and provided a service tech when Jeff Lance's dozer needed repair. Crown Power & Equipment supplied a 1650 Case finish grade dozer, helping us with the dam's final grade. SITECH Central LLC provided the GPS equipment installed on Jeff Lance's dozer and Rob Liles supplied his own base station and rover which were used throughout the project. Rob also converted the NRCS GPS files to be machine-control ready.

Our equipment dealers were not alone in their support. Many of our Associate members who weren't directly involved in this phase of the project donated funds for us to help feed the guys during the eight days. Buddy Hostetter, a Missouri LICA member from Waverly, MO had been actively involved in the drain tile installation during the 2017 Conservation Showcase and wanted to contribute to this Showcase, as well. So, he hauled his barbecue grill over 150 miles, "the long way around because of the floods," to provide some great fish and chicken lunches. Jake Gingerich got in on the act for one of the lunches, bringing his own catfish to fry. Buddy had to return to Waverly on Sunday so he could cook for 150 kids at a local church fundraiser on Monday, but headed back to the construction site on Tuesday where he provided us with a shrimp boil. When one of our "chefs" wasn't available, we filled in the gaps with pizza ... lots of pizza. Donnie Hubble and his wife, Tammy, got into the act on Friday, the last day of construction, by volunteering to cook hamburgers and brats, complete with homemade brownies for dessert. We ate like kings!

Our Volunteers

One of the most remarkable components of a LICA field day is our members' ability to work together. Each of the contractor volunteers normally either run their own crews or work by themselves, but during this project, they were able to work with other independent contractors to accomplish a single goal. I'm sure that, behind the scenes, there were discussions about the best way to accomplish a particular task, but from the outside, it looked like a well-orchestrated equipment ballet. The majority of Missouri LICA volunteers came from our northwest district, but we had representatives from all five of our organized districts on hand throughout the project.

Over the course of the nine-day project, our members donated 1,301 hours of labor. The average work day was 12 hours and two of the days were 15-hour shifts. That's the equivalent of more than 162 eight-hour shifts in only nine days. Three of our volunteer contractors, Cody Joesting, Tanton Ray, and Ryan Cronk, have been members for less than a year, while three others, Jim Bledsoe, Ken Balkenbusch, and Gerald Bauer have been members for 32, 42 and 47 years, respectively. This project gave all our members the opportunity to demo new equipment, learn about different installation practices, witness each other's skill levels, and pick up one or two tricks of the trade. At one point, I was standing next to one of our members when he pointed out Gerald Bauer's recent pass with a bulldozer. He said, "You see that? It looks like glass. That's the sign of a great operator!"

As with most LICA events, this year's field day was a family affair. We had many of our members' wives, children and even grandchildren join us. Some came to visit, while others came to work. As an example, Jeff Lance's daughter, Mariah, played an integral part in the production, handling multiple tasks for us during her eight days on site. She kept track of everyone's hours for the grant reports and operated one of the scrapers for hours on end, all while taking pictures and updating our Facebook page. Early on in the week, I had been visiting with Caelene Lance in their trailer when Jeff returned from the field. It was early evening and the contractors, along with Scott Bayless, the John Deere representative, were sitting in a circle, just cracking open the first beer. As Jeff and I headed out of his trailer, Jeff said, "I've got a bone to pick with "that John Deere guy." I was startled and, as I tried to shove Jeff back inside his trailer so "that John Deere guy" wouldn't hear any disparaging remarks, Jeff



David Miguel (in the orange shirt) instructs LICA members on the proper use of shoring equipment.

said, "He broke Mariah." He broke Mariah? Having known Mariah since she was an infant, my "mama bear" instincts took over and I asked rather defensively, "What did he do to Mariah?" Jeff replied, "Now that she's run his new equipment she'll never want to run mine again!"

Safety First

Safety is an important part of any construction project and the Missouri LICA Conservation Showcase was no exception. In addition to the heat related safety measures mentioned above, the crew held safety meetings every day with topics ranging from trench safety to Personal Protection Equipment (PPE) and jobsite awareness to electrical safety. On Saturday night, just three days into construction, it poured, leaving the site a muddy mess on Sunday morning and putting the project about a day behind schedule. It also meant that on Monday, when we had a trench safety class planned, the contractors had to prioritize their activities. Was it more important to hit a construction deadline or make sure everyone was safe? I am so proud to say that the Missouri LICA contractors opted for the trench safety class which was presented by Dave Miguel of Underground Safety and Supply, LLC out of Olathe, KS. Dave's ability to transform the idea of safe construction practices from the classroom into action in the field is a gift and our members took full advantage, stopping the job to learn about or be reminded of the considerations involved in trench safety and the correct usage of shoring. Throughout the field day, our members wore hard hats, either their own or Missouri LICA's, and safety t-shirts, an ample supply of which were provided for the week by Missouri One Call System. These t-shirts were a screaming yellow, proudly displayed the LICA and One Call logos, and immediately identified someone who belonged in the construction zone from a miscellaneous guest who might drop by to see the action.



Bobcat of Columbia's skid steer helps to backfill the wet well.

Our Promotion, Visitors & Partners

We promoted the event through social media, traditional media, and mailed brochures to LICA members, local landowners, industry associations, and local soil & water districts. Dr. Kelly Nelson was interviewed on a local radio station for a ½ hour on Friday, July 19 and this morning, I received a call from a local contractor who had heard that interview and was interested in joining LICA. We never know where the ripples from one of these events will reach or when.

Throughout the event, multiple people took photos and video, including drone footage of the site and time-lapsed photography. This time-lapsed photography was captured from two vantage points on either side of the field. It is fascinating to watch as the sun begins to rise, the dew burns off, a flurry of construction activity ensues during the day ... even with headlights during two nights ... followed by the moon's trek across the sky before the sun rises again on the next day. This footage, combined with drone footage and pictures from both the 2017 and 2019 phases will be edited into a short video of the project for future generations.

In 2017, the Showcase hosted revolving tour wagons throughout one afternoon so that local landowners and interested parties could watch all the activities, as well as see some of Greenley's research projects. In 2019, the public tours were a little different. On three afternoons, we had tour wagons take the public on a two-hour tour across the farm, including stops at the cover crop and terrace project, the bio-reactor and saturated buffer project, the drainage water management options being studied, and the construction of the dam. Derrick Steen, Director of Environmental Programs for the Missouri Soybean Association and the Environmental Consultant for the Missouri Corn Growers Association manned the bio-reactor and saturated buffer stop with Wyatt Miller, a field specialist in agronomy with the University of Missouri Extension. Since the bio-reactor had been constructed in 2017, there was not much to see above ground, except for the monitoring stations. To better describe the bio-reactor process, they set up an aquarium as a miniature bioreactor so visitors could see what was happening below

ground. The tour stop for the terracing and cover crop research project was handled by Dr. Gurbir Singh, Assistant Professor with Mississippi State University. Dr. Singh had been involved with the Greenley Center's research projects for nine months during his post-doctoral work. Dr. Kelly Nelson escorted the public tours through the drainage water management and control structures, informing them of his research projects and the goals for this field day. Missouri NRCS representatives Kevin Waller, the civil engineering technician who designed the dam, Joey Rosenfelder, state geologist, and Troy Chockley, environmental engineer, were on hand to discuss the design and construction considerations for the project.

Traditionally, Greenley Research Center hosts an annual Field Day during which the public is invited to tour the Center and learn the latest results from all the research projects taking place on the Center's 700-acre farm. 2017 marked the 40th Annual Field Day, so Greenley used our second phase of the project as their "Annual Field Day" and hosted about 400 landowners and interested parties during our installation of the drain tile, bio-reactor, and saturated buffer. This year, the emphasis was on getting the dam constructed, so Greenley's annual event was held August 6, just 11 days after we had cleared out. In addition to all the projects at the Greenley Research Center, the public tours for the August 6 event included a tour of the dam after construction. While we had about 100 people take advantage of the public tours we offered this year during construction, including a visit by Illinois LICA President Grant Curtis and his son, Kane, another 60 or so individual landowners stop by for unscheduled, impromptu tours of the site. This definitely kept the Research Center's staff hopping!

A project this size drew attention from not only the public, but from our state agencies and the University, as well. The state's Department of Natural Resources Soil and Water Commission which establishes qualifying practices for the state cost-share program were very interested to see how this new drainage water recycling project worked in the field. The University of Missouri's College of Agriculture, Food, and Natural Resources' (CAFNR) new Vice Chancellor & Dean visited the site in 2017 during his first week in that position. And this year, the new interim Associate Dean in the office of Research and Extension and Director of the Agricultural Experiment Station made the 200-mile round trip to view the project.

By far, our largest partner in the project was the Greenley Research Center's staff, with Dr. Kelly Nelson leading the charge. Simply put, without Kelly's support and encouragement, the Missouri LICA 2017 and 2019 Conservation Showcases wouldn't have happened, much less been such huge successes. By providing a field day site, complete with a supportive staff, he afforded us the opportunity to try new equipment, learn new practices, hone our skills, and help advance Missouri's drainage industry and LICA's role in it.



As contractors spread the geo-fabric, the excavator "tacked" it into place and rip rap was placed.

Building the Dam

Water, whether it's in a stream or in single droplets, always seeks the path of least resistance which means that it is vital to make sure the core of the dam, the entire dam structure, and the spillway pipe are tightly packed to prevent any water seepage. When a dam fails, it often starts around the spillway pipe and you will hear contractors talk about a spillway pipe washing out. The design for the dam on the Grace Greenley Farm employed a few methods of water resistance to stop that from happening. The first was the core of the dam itself. In 2017, while Missouri LICA members were installing the drain tile, bio-reactor, and saturated buffer, NRCS was studying 11 pilot holes, eight along the proposed dam's center line and three in the area from which dirt would be borrowed. These pilot holes averaged 10-12 feet in depth and, as Kevin Waller, the structure's designer said, "along with geology and history," the information gathered from those soil profiles formed the foundation for the dam's design.

The core trench of a dam runs parallel with the dam. Dirt is removed until an impermeable layer is reached with the deepest part of the core spanning the center channel of the future lake. Once the impermeable, clay layer is reached, dirt is moved back into the core and packed tightly with a sheepsfoot or pad-foot roller. As water begins to enter the lake, it will head toward the dam until it hits the tightly packed core at which point the horizontal flow of the water stops and the lake begins to fill.

In this case, the core of the dam was dug to between nine and ten feet deep across 100 feet of the center channel and four to five feet deep for the remaining 600 feet of the dam. At one point, when Mont Gilbert was digging down through layer after layer of clay soils, he asked Kevin if he was sure that a deeper core was really necessary. Kevin explained that, as is typical in Missouri soils, there was a thin layer of gravel below the layers of clay soil they were removing and they had to dig through it to get to the impermeable layer. On the very next shovel full of dirt, Mont hit that gravel strip. "Well, I'll be darned, you're right!" was Mont's only comment.

Another water resistant component of the dam is the spillway pipe itself which provides two forms of controlling the water. First, and most obvious, is the spillway pipe's ability to serve like the "overflow" drain in your bathtub. If the water level in the lake should get too high, the spillway pipe provides an avenue for water to escape before it can cause damage to the structure or overtop it. The second water resistant component of the spillway pipe is the addition of seep collars. The seep collars used on this project were, basically, five foot by five foot steel plates through which the spillway pipe passed. On Tuesday, Matt Beach with Precision Tiling LLC, a Missouri LICA member, volunteered his time to weld three seep collars, spaced at 25-foot intervals across the 135-foot long, 10" in diameter spillway pipe. Tiny droplets of water are inherent in almost all soil types. They move horizontally through the soil of a dam until they hit one of the seep collars. Taking the path of least resistance means the water will move downward until it hits the lower edge of the seep collar at which point it continues its horizontal trek until it hits the next seep collar which, because of the grade of the pipe, will be lower than first seep collar and the water will be forced downward once again. This water resistance method protects the spillway pipe from eventually washing out by preventing any small droplets of water from dislodging the soil around the spillway pipe.

On Wednesday morning, the contractors spent a couple hours digging the trench for the spillway pipe and that afternoon set the spillway pipe with its seep collars and waterpacked it. This water-packing technique is not generally practiced as it can be time-consuming, so it was new to several of our members. Here's how it works: after the spillway pipe is placed on grade in the trench, a block of dirt is packed over the top of the down-slope end of the spillway pipe to serve as a mini-dam. Water is added to the trench, then friable or crumbly clay soil is added which results in a kind of slurry. This slurry is then able to be packed both under and up against the sides of the spillway pipe forming a tighter seal than can be achieved by simply back-filling. The process is repeated as the



Kevin Waller watches as water-packing the spillway begins.

water-packing moves up the length of the pipe until the spillway pipe is sealed about 3/4 of the way up the side of the pipe for the entire length. At that point, normal fill can be place over the pipe to continue building the dam.

On the south side of the dam, we installed a wet well for sub-irrigation of the drainage test plots we installed in 2017, closing the system's recycling loop. Excess water collected in the drainage test plots will travel to the retention pond where harmful nitrogen or phosphorous can settle out without impacting the water quality of nearby streams. The retention pond will also be used to pump water back through the drainage plots for sub-irrigation, using an electric motor at the bottom of the wet well. In order to install the wet well, the side of the hill was peeled away and five, three-foot tall concrete cylinders were placed one on top of the other with a hand-placed sealant between them and then the side of the hill was replaced, essentially burying all but the top ring of the well. On the bottom ring, there was a pipe inserted on the west side to sub-irrigate the drainage test plots using the electric pump and on the east side another pipe was installed to serve as a syphon-irrigation system, in case the pump should fail for any reason in the future.

By Thursday afternoon, the basic form of the dam was complete and it was time to start installing the geo-fabric and rip rap. Rob and Jamison Liles stretched the geo-fabric across the face of the dam, as Jake Gingerich secured the top of the fabric with excavated dirt and Greg Muenks began placing tons of rip rap. As I watched this process I was reminded, once again, of how well synchronized our members efforts were throughout the project. As they moved across the face of the dam, I watched two men stretch a new sheet of geo-fabric, followed by the excavator securing the piece behind them, and the wheel loader dumping load after load of rip rap along the first, already-secured sheet. They made it appear effortless.



Contractors lower the last section of the wet well into place.

The Challenges

In my own daily work, I run into challenges but I was so very impressed with the manner in which our members faced the multi-faceted and numerous challenges of this project. It would have been easy to throw up their hands and say, "It's too hard; forget it," but they didn't. Instead, they doubled their efforts and when I asked about all the glitches, I was told, "It's all just a part of any construction job." One interesting fact I hadn't ever heard before was the contractor superstition that it's bad luck to start a job on a Friday. Of course, no one would admit to believing in the superstition, but just in case ... the Missouri LICA contractors went to the farm, after setting up their campers, and put in a few hours on Thursday late afternoon to get the project started.

Each day seemed to bring its own set of challenges, but a few of them are worth noting. For example, two days before the equipment was to arrive, two of our Associates reported that they would not be able to provide the equipment they had promised. The solution? Jeff hauled his own dozer across the state for the project and through the network of LICA contacts, Tom discovered that one Associate was about to get a piece of equipment returned from being rented by a LICA member, so the Associate swapped out that one for the one promised.

As work started on Saturday morning, we discovered that the fuel delivery on Friday hadn't filled all the equipment and, to make matters worse, the fuel company doesn't make deliveries on the weekend. Not to worry. The Research Center's kind staff took their two, smaller fuel trucks and began hauling fuel from the unmanned MFA fuel station in Novelty to the equipment, 100 gallons per truck per 12-mile round trip.

On Saturday night, the site got 1.4 inches of rain, turning everything into mud on Sunday morning and making it impossible to scrape any more top soil off the site. The contractors didn't bat an eye. Instead, they took Sunday morning to review the plans and then started working in the afternoon,



A drone shot taken six days into construction, with remnants of the rain storm still visible



An aerial view of the completed project, with the 700-foot dam in the top left corner

getting the site ready for the scrapers to work until after dark on Monday. One advantage of Saturday's rain was that it dropped the temperatures for the rest of the week into the mid to upper 80s, a much more pleasant zone.

On Tuesday morning, they woke up to no water at the Research Station, the unofficial campground. Evidently, a water main had broken somewhere in the county which left the entire Research Center without water and, eventually, under

a 36-hour boil notice. Once again, the contractors took it all in stride, although our runs for ice, water and Gatorade sure increased.

On Thursday morning, the nearest quarry, 15 miles away in Edina, MO began delivering the 875 tons of rip rap for the dam, using a four-truck rotation with each truck holding about 25 tons of rock. That is, until the quarry called to say we'd run them out of all their available crushed rock. Being a great problem-solver and quick on his feet, Donnie Hubble was able to find another quarry, only about five miles further away in Bethel, MO which was able to provide the rest of the rock, using the same rotation, and we never missed a beat! On Friday, July 26, we were like "horses to the barn," anxious to get back home. However, before we could leave, we needed to make sure all the equipment was fueled and cleaned before it was returned to our generous Associate members. That's when the Greenley staff stepped up, once again, and power-washed the equipment for us. My only regret is that I didn't get a picture of Brad Moore, one of the research staff, covered from head to toe in mud after powerwashing. I don't think he could have fallen into a mud pit and gotten more mud on him!

In Summary

It should be obvious by now that I am extremely proud of the Missouri LICA chapter and what it accomplished during this year's Conservation Showcase. But the truth is that every year, across the country, LICA chapters are hosting a variety of field day projects with the same level of professionalism. If you are a contractor, I would encourage you to participate in as many of these events as possible. They are unique opportunities to learn new practices and techniques, share solutions to common problems, and contribute to the future of your industry. If you are a LICA chapter, I would encourage you to "blow your own horn" and send an article in to the *LICA Contractor* magazine, so we can share in your experience. Thank you for letting me share ours.