

Summary of Excellent Local Nutrient Management Education Projects Participating In the Wisconsin Multi-Agency Land and Water Education Grant Program

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In Wisconsin, the Multi-Agency Land and Water Education Grant (MALWEG) program provides competitive money for local projects to help farmers and other private landowners adopt or install best management practices that protect the environment. Local projects fall within 3 categories: General Education; Rotational Grazing; and Nutrient Management. The MALWEG program is administered through the University of Wisconsin Extension – Environmental Resources Center.

Since 2000, forty local projects around Wisconsin have participated in the nutrient management component of the MALWEG program by training agricultural producers to develop their own nutrient management plan. Local agencies, technical colleges and private sector agricultural businesses target 15-20 agricultural producers, conduct workshops to teach the UW / UWEX Nutrient Management Farmer Education Curriculum, provide 1:1 on-farm technical assistance, and ultimately assist agricultural producers to develop their own nutrient management plan.

Each local MALWEG Nutrient Management Project conducts the following activities as part of their work with participating students:

- Update soil and water conservation plans
- Soil sample and obtain current soil test results
- Conduct Farm Practices Inventory (FPI)
- Conduct N Workshop
- Conduct P, K, 590 Workshop
- Farm visits: Nutrient crediting assistance
- Complete Nutrient Management Plan (NMP)
- Post-harvest farm visit for follow up

Four local MALWEG Nutrient Management Projects have recently been identified as examples of excellent projects conducted through the past 4 years. These projects are:

- **Fond du Lac County**, managed by Becky Wagner, LCD, and team
- **Barron County**, managed by Pat Richter, LCD, and team
- **Dodge County**, managed by Jim Fanta, UWEX, and team
- **Southwest WI Technical College**, managed by Kevin Raisbeck, SWTC, and team

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These 4 projects were recently recognized at the University of Wisconsin – Extension Best Education Practices for Water Outreach Professionals Symposium, June 3, 2004. Project managers were sent a set of questions to help summarize their work. Common characteristics these 4 local nutrient management projects have are:

- Local definition / ownership / commitment
- Multi-agency cooperation
- Appreciation of ag. contribution to community
- Understanding of local land / water resources
- Quality on-farm technical assistance
- Provided farmer \$\$ incentive
- Evaluated teaching and learning as a process for refinement
- Skilled teaching resulted in change & implementation
- Satisfied farmer students spread the word resulting in new students
- Completed Nutrient Management Plans

A full compilation of questions asked and project manager responses follows:

Project location, title and grant awards

Dodge County: participated in 3 MALWEG projects (\$ 10,000 + \$ 20,000 + \$ 10,000 = \$ 40,000) titled “Nutrient Management Farmer Training Program.”

Barron County: participated in 2 MALWEG projects (\$ 14,950 + \$ 13,890 = \$ 28,840) titled “Barron County Nutrient Management Farmer Education Program.”

Southwest WI Tech. College: participated in 1 MALWEG project (\$ 15,000) titled “Nutrient Management Farmer Education & Certification Program.”

Fond du Lac County: participated in 2 MALWEG projects (\$ 10,000 + \$ 14,920 = \$ 24,920) titled “Nutrient Management Project of Fond du Lac County” and “Comprehensive Nutrient Management Project for Northeast Fond du Lac County.”

General breakout (%) of how projects used grant money:

	Staff	Workshops	Student Reimbursements
Barron (*)	0	1	99
SWTC (**)	85	5	10
Dodge	0	0	100
FDL (***)	0	25	75

(*) Barron Project: Most of the staff and workshops are in-kind contributions. The farmer reimbursement was \$2.00/ac. for soil testing up to 300 ac. We paid for 100% of manure analysis and usually collected the sample ourselves. We are

in the process of setting up side-by-side demonstrations with a \$225 incentive payment. Once an NMP is complete we pay a \$500 incentive payment.

(**) SWTC Project: Small group (workshop) instruction = in kind by Southwest Tech. On farm instruction = 85%. Mileage for instructors = in kind by Southwest Tech. Soil testing = in kind by producers. Conservation update = in kind by conservation staff. Mailing and duplications = in kind by Southwest Tech. Workbooks for producers = 5%. Scholarships for producers = 10%.

(***) FDL Project: Both grants have in-kind funding for staff.

Who were the cooperators in your project and what role did they play?

Dodge County

UWEX - Lead role

LCD - Cooperators, conservation plan writers, meeting assistance

NRCS - Cooperators

Private sector Ag. - Cooperators

DNR - Cooperators, promoted the program

Lake Districts - Cooperators, promoted the program

FSA - Cooperators, promoted the program

Beaver Dam River Watershed (LCD) - Cooperative taught the classroom program, interviewed participants, on farm visits, general program support

Barron County

SWCD (LCD): Patrick Richter applied for the grant, coordinated the program, was involved in all aspects of project including landowner contacts and selection, staff coordination, press releases, facilitating meetings, manure sampling, FPI interviews, developing NMPs, submit reimbursements, spreader calibrations. Kim Collins organized the accounting/reimbursement portion of the project and helped develop press releases and correspondence.

UWEX: Barron County Ag. Agent Tim Jergenson helped complete FPIs, taught a portion of the curriculum, and helped develop NMPs. He also played a role in setting up side-by-side demos. UWEX NPM Specialist Paul Kivlin helped teach curriculum, develop NMPs and calibrated manure spreaders. He also helped set up side-by-side demonstrations.

UWEX Basin Educator Darrin Lochner initiated the application process and assisted in writing the grant proposals.

NRCS District Conservationist Gary Schmiedlin was involved in the program until his departure in early 2004. He helped develop NMPs and facilitate meetings.

Private sector Ag: Tim Stearns, Precision Agronomics, has done the bulk of the soil sampling because he is equipped for frozen ground sampling.

Southwest WI Tech. College

Southwest Wisconsin Technical College provided small group instruction and on-farm instruction to each producer that participated in the program.

UW Extension/Discovery Farms provide the WDATCP approved curriculum.

Land Conservation Department from each county updated conservation plans and provided technical assistance throughout the project.

Producers gathered soil sample and constructed their Nutrient Management Plans.

Fond du Lac County

UWEX: Crops & Soils Agent Mike Rankin, and Livestock Agent Irv Possin.

LCD: Fond du Lac County Land Conservation Department Agronomist Becky Wagner and Project Manager Paul Tollard.

NRCS: District Conservationist Erv Lesczynski

NPM: Richard Proost

Private sector Ag: CCA Crop Consultants serving FDL County

Why / how did you decide a nutrient management educational effort was a worthy local need?

Dodge County: The need was identified by the Beaver Dam River Watershed Program and later it was identified by the DNR as a local priority watershed need (Gill & Irish Creek Watersheds).

Barron County: NMP is identified in the Barron County Land and Water Management Plan as a need and one of several priorities in our area. Nearly all of Barron County drains into 303d listed waters. The statewide soil test result map

indicates that Barron Co. has some of the highest P levels in the state. Red Cedar River Basin group leader recognized this as an opportunity to reach out to farmers and approached us to administer this program.

Southwest WI Tech. College: We have had request from producers in the area for nutrient management planning and updates on their role in the big picture. The grant with MALWEG allowed us to pursue this and offer educational opportunities for producers to develop a certified nutrient management plan for their farm.

Fond du Lac County: Due to the diverse landscape that FDL County has, and the amount of water tributaries and the fact that we sit at the foot of Lake Winnebago, I felt it was important to develop a nutrient management education program. The goal of these projects was to benefit landowners through more efficient nutrient distribution for good quality crop production, it would benefit the urban residents who are concerned about water quality, and the project would be a proactive approach to the water quality regulations that are now in place.

How have you evaluated the success & progress of your project?

Dodge County: Through pre test & post test of the educational program, pre and post inventory surveys, and a locally designed survey.

Barron County: The 6 month activity report helps record progress along with a checklist. The success has been evident because of the positive feedback that we've received from participants during and after the programs. They go home feeling that they have learned something useful. Attendance was perfect and the rate of project completion is 95%. Tim Jergenson also compiled some results from the first round of follow-up FPIs that showed most participants had some degree of cost savings.

Southwest WI Tech. College: We know this project was successful because of the completed nutrient management plans producers have turned in to us. Also from talking with producers that participated they feel they have a better understanding of nutrient management in general and especially their certified 590 nutrient management plan.

Fond du Lac County: Every six months we send activity reports to the MALWEG coordinator. The coordinator has copies of these reports, if not, I have all the activity reports if anyone wants a copy to track our progress.

What are your results? Did the nutrient management education get transferred successfully so that farmer students actually learned..... and knew areas within their farm where improved management of crop nutrition - soil fertility - environmental regulation were necessary?

Dodge County: The results have been fantastic. Neighbors have told neighbors and they have signed up for future programs. The program has had 70 farmers go through the training and 69 have completed a plan. The one that did not went with a modification of a nutrient management plan developed by another individual. 24,466 acres were planned with the smallest operation of 66 acres to the largest of over 1,200 acres. The majority of farms were dairy farms but there were beef operations, heifer raising operations, swine, poultry and cash crop farms involved, as well. To this point all participants are following their plans. The majority are updating their plans on paper and the remainder are doing the planning but not putting it on paper. There has been a significant savings for the participants. They either saved money, reinvested saved dollars in other plant nutrients, or raised crop yields because they were properly feeding their crops. The main factor cited by almost all of the participants was that they knew they should credit livestock manure but did not have any idea how much they were applying. Knowing the application rate was the most valuable information gained from the program.

Barron County: Some major eye-opening experiences. In many cases, less commercial fertilizer was purchased. On-farm nutrients were significantly redistributed across more of the farms. Side-by-side demonstrations showed less N needed than previous application rates. Spreader calibrations showed rates that were previously unknown. Manure analysis showed results that varied from book values. When we updated NMPs for the first group this spring, old plans that they brought along for reference were obviously used and tattered.

Southwest WI Tech. College: The results of the project were success. The producers enrolled in the program now have a better understanding of nutrient management and understand what their plan is telling them. Producers feel that they have had complete say in the decision making process of their plan and feel that they will utilize their plans. The first class was interesting because many producers thought they were attending just to meet the needs of regulation coming down the road. After the first class they understood why they were really there. They wanted what was best for their farms which includes conservation, water quality, crop planning and nutrient placement and especially to utilize the nutrients that are available on farm and save money.

Fond du Lac County: We trained 23 farmers total with both projects. To date we have calibrated all but three manure spreaders, I have received 16 completed nutrient management plans. We have also received manure analysis and soil test reports from 19 farms. This fall I plan to have a follow up meeting to discuss the farmer's plans, make sure they understand how to follow their plan and answer any questions they may have going into the future with the phosphorus based regulations that the state will require for FDL County.

How many certified nutrient management plans were developed?

Dodge County: 69 plans for 70 participants

Barron County: 21 plans for 22 participants over a 2 year period. One participant dropped out due to time constraints on his part.

Southwest WI Tech. College: 21 plans were completely finished. 6 plans have a couple of items to finish. Southwest Tech staff is following up to make sure they get completed. Five producers went through the classroom training and decided to wait on writing a plan or hire someone to write the plan for them.

Fond du Lac County: 16 plans for 23 participants. Follow up is occurring to get the remaining plans completed.

Knowing that "all is never a complete bed of roses," what areas within this educational process were challenging?

Dodge County: It really was not too difficult to do in Dodge County. Cooperation between agencies was fantastic. Everyone promoted the program, NRCS & mostly LCD developed conservation plans and farm maps, UWEX, LCD and BD Watershed staff did inventories, calibrated spreaders and had a hand in teaching the program. Everyone did their job and it went very smoothly. I did develop an Excel spreadsheet that made plan development for the farmers easier. Almost all had a home computer and with the spreadsheet they were able to update their plans from year to year very easily. I am afraid that new regulations may make this program not suitable for "official" nutrient management plans.

Barron County: One challenge seems to be finding time to set up side-by-side demonstrations in the spring when normal workload is enormous. In many cases we've simply told the farmer to set it up and given guidelines. Most of this is for the farmers anyway, so why not let them have most of the say. Let them determine what will convince them of the legitimacy of NMPs and guide them on how to achieve accurate results. The biggest challenge however, is the timing of funding. Learning that funding is available in November and trying to get soils sampled when the ground is frozen or when snow is waist-deep is tough. Luckily, there is a local agronomy firm (Precision Agronomics, Tim Stearns) that is willing to take care of this for most of our participants. If we had to wait until spring thaw to cover all sampling and NMP building, we would not have had as much success fulfilling our grant requirements.

Southwest WI Tech. College: I would say one of the biggest challenges we faced was keeping the producer motivated. When it comes to writing a nutrient management plan producers realized that it can be a very time consuming process. Producers are very busy and the biggest struggle that we had was getting them to soil sample in a timely manner. Next time we do this program we will partner with an agronomy center to assist producers in the soil sampling process.

Fond du Lac County: I found that it takes a lot of dedication by us as educators to get the message out. Farmers have a million tasks to do on a daily basis, their consultants don't necessarily put nutrient management and water quality on the top of their priority list. Let's face it, water quality and soil health is difficult to put a monetary value on that can relate back to the producer. The producer has a business to run, and if the equity of a resource is not clearly defined, they have a hard time buying into it. It takes a long time to see the value in a land management practice such as nutrient management. It takes at least 4 years to see if a difference has been made because that is the timeline for soil sampling. Once you have had two soil sampling events, then a comparison can be made, and a strategy can then be implemented. Also, it takes a long time to modify behavior, if it has already been shaped a certain way. Then when we do get the farmers to follow their nutrient management and conservation plans, the weather can take all the hard work and wash it away as was the case this year. Timing is everything, and being a patient educator is a quality we must possess, especially when the fruits of our labor are not instantly visible. As I tell the landowners I work with on nutrient distribution and soil quality, it does not happen over night. After all, we did not go from kindergarten to the 12th grade in one year.

Any additional thoughts to tell a room full of Water Outreach Professionals who are contemplating Best Education Practices?

Dodge County: Agency cooperation is the key to making it a successful and easy program. The agency professionals in Dodge County were wonderful to work with and by everyone doing their part and sharing the load no one was overloaded. I think it was a unique situation.

Barron County: Let farmers have major input on NMP building and side-by-side demonstrations. Keep it as informal as you can so that farmers feel more comfortable providing input and participating in discussions. Set the timing of workshops to accommodate the audience. Finish what you've started and don't leave the farmers hanging. They will lose interest if their time is not generating any output. Keep the process simple!

Fond du Lac County: We can do all the right things and then we get 9.9 inches of rain in a two week period and one wants to cry, because as I said before, it is all in the timing. The farmers had just started doing their spring tillage passes to loosen up the soil, and then heavy rains came. So it is like falling off a bike, we get back up and start all over. In a way, the events of this spring may be a blessing in disguise to get landowners to implement new practices to keep soil (dollar signs) from eroding away. This time they visually saw what a waterway, buffer strips, residue, proper nutrient applications saved them.