



## **Board Fall Quarterly Meeting**

Thursday October 15, 2015

1:30-4:00PM

Ames City Hall, Room 135

### **Board Members:**

Present: Paul Toot, Erv Klaas, Bob Kindred, Tom Foster, Kevin Griggs

Absent: Leah Maass, Sonia Dodd, Suzie Moore, Travis Sonksen, Ann Campbell

Quorum present: No

Others present: Penny Brown Huber, Executive Director Prairie Rivers of Iowa

Hanna Bates, Watershed Coordinator Prairie Rivers of Iowa

Annie Glawe, Natural Resources Educator Prairie Rivers of Iowa

Matthew Helmers, ISU Professor, Agricultural and Biosystems Engineering

### **Proceedings:**

- Meeting called to order at 1:35p.m. by Chair, Paul Toot
- Update from the Watershed Coordinator
  - Bates updated the board on administrative and education/outreach activities from the previous quarter. The first was setting up a booth at the Boone County and Story County Fair. This included displays, brochures, videos, and activities. She then explained her experiences at the Soil and Water Conservation Society Conference. The Iowa Legislative Soil Health and Water Quality Tour was a way to get legislators out in the watershed and explaining issues to them. She has been attending the Ames Farmers Market and setting up a booth including a water testing game. Hanna then went into detail about the PRI Cost-Share Program. The available conservation strategies are cover crops, no till/strip till, saturated buffers, bioreactors, and perennials. PRI coordinates the technical and financial

services in effort to make it easy on the farmers. The review and approval of the proposals is performed by a PRI practice review committee.

- Griggs asked who provides the technical services and Hanna responded that she reaches out to many local group including ISU and the Iowa Soybean Association. She also has a list of providers she gives to the farmers. Griggs commented that he knows some providers that can be added to the list.
- Bates continued the presentation by listing the conservation projects she is currently working on with farmers. There is a bioreactor in Boone County, cover crops in Hamilton County, blind inlet conservation project in Boone County, 32 acres in cover crops planted this fall in Boone County. Then Bates showed pictures of the cover crop being planted.
- Foster mentioned that Boone County Conservation has a no-till seeder available. The idea of drones was brought up as a possible useful tool. Toot mentioned that the FFA advisor in Nevada has a drone. Griggs mentioned that he also has a drone in repair. Klaas mentioned a DSM Register article about no-till practices in Africa including funding from Warren Buffet.
- Bates next topic was the Nutrients in November Workshop Series. This includes 3 workshops. The first being People in Ecosystems Watershed Integration led by Lisa Schulte Moore and Carrie Chennault from ISU. It takes place on November 2 from 6-8PM at the DMACC Boone Campus Room 218. The participants will have access to the digital tool they created to simulate conservation farming practices. The second workshop is focused on Saturated Buffers led by Dan Jaynes from USDA and Tom Isenhardt from ISU. It takes place November 9, from 6-8PM at the Ames Public Library, Danfoss Room. The last workshop is about the Retain Iowa: On Farm Nitrate Testing Kits program. It is led by Jamie Benning of ISU Extension and takes place on November 17 from 6-8PM at Gilbert City Hall in the community room.
- The 2015 Prairie Rivers of Iowa Field Day and Celebration: Cover Crops and Perennials will take place on November 7 from 1-5PM at the Prairie Hill Farm in Hamilton County (3926 Hammond Ave. Stratford, Iowa)
- Bates asked if Toot could give the opening remarks at the field day and he agreed.
- Brown Huber asked if the board could promote the event. The board members came up with a few ideas including; Ames Tribune, Community Radio (Ames), Boone radio, Farm News, Farm Bureau, and Griggs mentioned contacting Jayne to get an interview with Hanna on KWWBG.
- Updates from Penny Brown Huber
  - Brown Huber introduced Annie Glawe, the Natural Resources Educator at PRI.
  - Brown Huber mentioned at contract in progress in EOR and John Dunn for monitoring.

- The ISU Water and Climate Change Program is underway. We are helping them recruit to create a citizen-scientist team. The team will assess how communication can improve on water quality issues between scientists and citizens.
- The Water Quality Initiative is asking for new proposals. The pre-proposal would be due December 11. She wants to create a watershed plan for a stream adjacent to the Squaw Creek Watershed. She asks how big or small can we go? Toot mentioned issues with a business quorum and crossing county lines.
- Brown Huber mentioned she would like to develop informational sessions to present to the Iowa legislature. She asked the WMA to provide support for this effort. The members agreed it would be a good idea.
- Brown Huber also mentioned the Soil health conference at Drake coming up and the one at ISU in February.
- Research and Development Presentation
  - Matthew Helmers an Iowa State University Professor in Agricultural and Biosystems Engineering gave a presentation on Nutrient Reduction: What is the Scale of Implementation Needed. The presentation included data explaining how successful certain conservation practices are at removing nitrates and looking at different ways to define what is causing the high nitrate levels. For testing his team replicated subsurface drainage plots to evaluate the performance of in-field management practices. Helmers posed the question, Is this a fertilizer problem? He explained the variability in drainage changes the nitrate concentration and loss. Also concentration is influenced by application. This making application timing important and including annual drainage as part of the equation. He also posed, Is this a natural process? He showed a graph comparing nitrate availability to when corn is consuming the nitrates. It showed that the peak of availability does not match the peak of uptake thus causing the run-off of excessive nitrates. With the addition of cover crops before and after corn he found a 25% reduction in nitrates and helps with above ground biomass. The last question he posed was is this a tile drainage problem? He then showed a water flow diagram comparing natural drainage to tile drainage. In the diagram it shows how the tile replaces the natural lateral drainage which occurs. With the tile in place you control the lateral drainage and can treat it.
  - Helmers then asks, what can we do? His preference was on cover crops, timing of application and planting and application rate as well as adding perennial cover including grasses or bio-energy crops, wetlands, bioreactors, buffers, and saturated buffers. Other options he mentioned were nitrification inhibitors, extended rotations, controlled drainage, and shallow drainage.
  - Helmers presented information to understand the scale of change needed to make a difference in excess nitrates. Brown Huber mentioned the importance of looking at it in amount of acres and percentage of acres.

- Discussion continued on what we should prioritize. Education was a big thing to consider. Also mentioned were cover crops which are affordable and can be implemented as an on-going land treatment in rotation. A wetland makes a huge impact for long term benefits, but has a bigger upfront cost. It also includes societal and other environmental benefits. Buffers provide a smaller % of nitrate removal, but are helpful in other ways. Helmers mentioned legislative fixes and wonders if they fix the problem. He was in support of moving to pasture and rotational grazing to get more acres in perennial cover. He also mentioned growing alfalfa to feed Dairy Cattle nationwide. He also mentioned the importance of the alluvial floodplain acting as a filter and deep groundwater. How do we deliver technical services to farmers on the scale needed? Can we re-organize soil and water districts according to watersheds? How can this effect drainage district laws? We need to look further into biorenewables. Haggie manufacturing was mentioned because they have been developing a high-boy cover crop machine. ISU Outlying Farms has one talk to Mark Honeyman. Helmers mentioned they have a prairie strip site along Worle Creek.
- Adjournment
  - The meeting adjourned at 3:30PM
  - Next meeting scheduled for January 21, 2016 1:30-4PM location undecided
  - Iowa Water Conference – 1<sup>st</sup> Week of March
  - Minutes submitted by Annie Glawe