

**West Fork Des Moines River Watershed
Total Maximum Daily Load Implementation Project
Semi-Annual Meeting
Wednesday, October 24, 2012 – 10:00 a.m.**

1. Welcome and Introductions

Kiel Tschumperlin, Heron Lake Watershed District (HLWD) opened the meeting at 10:05 a.m. Kiel introduced himself and the County Feedlot Officers (CFO) in Nobles, Murray, and Cottonwood Counties. In attendance were Brian Nyborg and Jake Grages, Jackson Soil and Water Conservation District (SWCD); Al Langseth, Kathy Henderscheidt, and Wayne Smith, Nobles County; Ben Crowell and Katherine Pekarek-Scott, Minnesota Pollution Control Agency (MPCA); Randy Markl and Tom Kresko, Department of Natural Resources (DNR); Ross Behrends and Jan Voit, HLWD; Jon Bloemendaal, Murray County; Lloyd Kalfs, Cottonwood SWCD; and Don Louwagie, Minnesota Soybean Growers Association.

2. West Fork Des Moines River (WFDMR) Total Maximum Daily Load (TMDL) Implementation Project PowerPoint Presentation

Kiel Tschumperlin, WFDMR Watershed Coordinator, gave a PowerPoint Presentation that explained his personal background, grant background, partner role, project goals, and feedlot inspection overview. Summary information is included below.

Kiel Tschumperlin is originally from Watkins, Minnesota. He attended Eden Valley-Watkins High School and Gustavus Adolphus College. His hobbies include hunting and fishing. He began working for the HLWD on June 4, 2012.

The WFDMR TMDL Implementation Project was funded through an Environmental Protection Agency (EPA) 319 Grant that is administered by the MPCA. The HLWD is the project sponsor and is responsible for providing office space and equipment for the watershed coordinator. Jan Voit and Kiel Tschumperlin, HLWD, are responsible for reporting to the MPCA. The purpose of the grant is to gather inventory on the feedlots in the watershed, not to enforce any noncompliant sites that may be inspected. If a major issue arises, CFOs are responsible for enforcement.

Kiel explained that the project partners are well known, respected organizations that landowners and farmers seek input and direction from in their everyday operations. Project partners also provide credibility to the implementation project. Without their support, the project would stand alone. The more organizations behind it, the more successful it will be. Kiel emphasized the need for the project partners to promote the project to the general public as well as landowners.

Kiel gave an overview of the project. The first goal of the project is to conduct a Level III Feedlot Inventory on 80% of the feedlots in the WFDMR Watershed while strengthening partnerships between the four core counties and the HLWD. The project is a four year endeavor. The project work plan states that there are 742 feedlots in the watershed. Total number of feedlots to be inspected is 592. Emphasis was placed on the principle of continuity throughout the inspection process. Kiel was hired to ensure that each county is doing things in a similar way so the results are consistent across the four counties.

The second goal of the Implementation Project is to increase the knowledge of 50 feedlot operators through a one-day workshop. This will be done in the form of a manure management workshop. Dates for the manure management workshop are not yet determined but are tentatively planned for July/August 2013. It is undecided as to whether there will be some type of field component or if it will consist of an all presentation format.

The third goal of the Implementation Project is to increase public awareness of the project by developing a brochure and maintaining a website. Both the brochure and website have been completed. The website will be updated periodically and is an ongoing part of the project. Advisory Committee and Technical Committee (AC and TC) members and organizations were encouraged to take as many brochures and distribute them to as many people as possible. Project partners are also encouraged to view the website.

The fourth goal of the project is to seek input and direction from the AC and TC. Kiel is responsible for providing them with project updates and organizing and hosting semi-annual meetings. The goal of the meetings is to update all partners on the progress of the project, receive input and direction for the project, as well as to remind all parties of their commitment to the project.

Feedlot breakdown by county includes 216 sites in Murray County, 190 in Jackson County, 142 in Nobles County, and 44 in Cottonwood County. There is a direct correlation between the percentage of land each county has in the watershed and the number of feedlots to be inspected in that county.

Kiel explained the process developed for feedlot inspections. It was determined that the Monday prior to the inspection week would be the planning day to determine what sites are going to be inspected. Protocol for Mondays usually involves printing Delta Detailed Reports and giving them to Kiel so he can prepare the customizable feedlot inspection form for the inspection. An aerial image of the site, preferably with LiDAR, is printed so watercourses and feedlot areas can be seen and documented when on site. Roof and buffer areas are also marked on the aerials during the inspection.

A universal producer letter was created. The document is customized for each county and mailed to the producer(s) each Monday with the inspection date and time. If the producer would like to reschedule it is their responsibility to call the office and reschedule a different time and/or date. In some cases, a preliminary drive by of the sites to be inspected is conducted to gather a general overview of the site prior to inspection. This can be useful in observing watercourses near the feedlot or for determining if the site has livestock. Producer files are also gathered prior to inspections in case a question is raised.

Following each inspection with an open lot, the Minnesota Feedlot Annualized Runoff Model (MinnFARM) program is run. The MinnFARMS are run by Kiel to ensure consistency across the four counties. A MinnFARM assigns each feedlot with an index rating and is recorded into a master feedlot list. It will be used to sort according to index number at the conclusion of the grant. The higher the rating, the higher the pollution potential is for a given feedlot. Feedlots located near surface water, road ditches, or property boundaries tend to have higher indexes because less treatment can occur before the manure leaves the property or enters surface water. In some instances, a MinnFARM is run to simulate what the feedlot operator would have to change in order to be compliant. Some fixes can be as simple as moving a fence, adding buffer, or diverting water away from the feedlot to prevent runoff.

As of October 16, 2012, seventy nine feedlots have been inspected. This leaves a total of 513 feedlots to be inspected. The breakdown for the 79 inspected feedlots is as follows: 59 open lots, 12 total confinements or no discharge open lots, and 8 deactivated sites, sites with no lots remaining, or sites with less than 10 animal units (AU) and not in shoreland. Shoreland is defined as less than 1,000 feet from a lake, pond, or public wetland or less than 300 feet from a public drainage ditch, stream, or river. These watercourses can be found on the Public Waters Inventory (PWI) Map.

Of the 71 sites that are active, meaning they have lots and are not deactivated, 52 are deemed compliant by MinnFARM standards and 19 are non-compliant. The ratio of compliance to non-compliance is roughly 3:1. Of the 71 active sites, 23 have surface water within 1,000 feet. The compliance to non-compliance total on these sites is 18 compliant sites to 5 non-compliant sites. Of the 23 sites with surface water within 1,000 feet, 10 are located in shoreland with eight sites being compliant and two being non-compliant. The average MinnFARM rating for the 10 sites in shoreland is 6.3.

The highest index achieved on a MinnFARM run in the watershed is 28. The second highest is 26. Neither of these sites are located in shoreland. The lowest index recorded is a zero. All total confinements are zero. Open lots have also scored zero predominantly because of the number of animal units (AUs) at the

site or their proximity to surface water. The average index across all feedlots with a MinnFARM is 6.1.

A major factor that influences a MinnFARM rating is the feedlot's proximity to a lake. There is a dropdown menu on a MinnFARM sheet asking what the "water of concern" is. This dropdown menu has several options to choose from such as drainage ditch with or without a lake, stream/river with or without a lake, sinkhole, tile intake with or without a lake, public wetland, or a non-public wetland. For this project, a system has been developed so that if a feedlot is discharging into a river and there is not a lake within one mile of the discharge point, the stream or drainage ditch "without a lake" tab is selected. This system was agreed upon by Ben Crowell, MPCA; and David Schmidt, University of Minnesota. This is significant because selecting a drainage ditch or stream without a lake versus selecting them with a lake has a large impact on the outcome of the MinnFARM. Kiel projects that if the "with a lake" option would be checked regardless of distance to the lake from the discharge point, the compliance to non-compliance ratio would most likely be reversed to 1:3 against compliance instead of 3:1 in favor of compliance. When a lake is involved, compliance is much harder to achieve because phosphorus output is taken into account where it is not so relevant in determining compliance when a lake is not involved.

Challenges faced throughout the inspection process include: reduced animal numbers and a reduction in the total number of feedlots because of the high commodity prices. Another factor that has made the inspection process increasingly difficult is the unseasonably dry year. Feedlots appear to have very little pollution potential because they are so dry. MinnFARM does an excellent job of telling what the pollution potential of the site is even when it may look good at the time of inspection.

The loss of the Jackson CFO in June has also been a minor setback to the project. The progress of Jackson County is lagging behind the others, but a new CFO has been hired.

When non-compliant feedlots are found, they are ranked according to pollution potential. The objective of the MinnFARM index is to rank each site in hopes of achieving cost share to fix the highest priority sites. Applying for grants in the future to implement fixes is a main objective and priority of the Implementation Project.

3. CFO Perspectives

The CFOs working in the watershed gave their perspective on the Implementation Project and a general overview of what they have been seeing in their respective counties.

Jake Grages, Jackson CFO, provided background information about himself and expressed his interest in getting started on the Implementation Project. He began his job a couple weeks ago. He has been working with Lloyd Kalfs, Cottonwood CFO; Ben Crowell, MPCA; and Doug Bos, Rock SWCD. He previously worked at South Dakota Game Fish and Parks as a Resource Conservationist. He graduated college in December, 2011.

Lloyd Kalfs, Cottonwood CFO, stressed the usefulness of the project in that it allowed Cottonwood County to update their feedlot inventory. He also thought it was a good way to review manure management plans and to help feedlot operators better manage their nutrients. Since the beginning of the inspection process, Lloyd and Kiel have also inspected two unregistered sites in the county. Lloyd mentioned that Cottonwood County has expressed interest in conducting a Level III Feedlot Inventory on a county-wide scale to obtain updated feedlot information across the entire county.

Jon Bloemendaal, Murray CFO, said the inventory is a good way to get to every site. He also emphasized that working with landowners to fix portions of their feedlot at a time has been successful in the past. Jon and Al Langseth, Nobles CFO, are aware of many of the problem sites because of their experience on the job. The inventory provides a concrete method to inform operators where work needs to be done. Jon also said that the reception from landowners and feedlot operators has been good throughout the process.

Al Langseth, Nobles CFO, agreed that reception from feedlot operators has been positive in Nobles County. Landowners have been willing to work with Al and Kiel and many of them see the pollution potential of their feedlots. Al agreed that a MinnFARM is beneficial in that it has the ability to foresee if a site will be compliant if variables such as buffers, lot sizes, and animal numbers are manipulated. Al also stressed the importance of getting out to the different sites and interacting with landowners while working with them.

All CFOs and Kiel have agreed that most of the pollution is most likely from improper manure application and not as much from the feedlots themselves.

4. Questions

Ben Crowell asked if having a MinnFARM makes it easier to make a compliance determination. Kiel said that this year with the dry conditions having a MinnFARM sometimes makes it more difficult in determining compliance because the site appears compliant, but after running a MinnFARM it may not show compliance. Al Langseth commented that a MinnFARM is a good tool for evaluating runoff potential and that information can be relayed to operators based on what the MinnFARM shows. The ability to manipulate variables in

MinnFARM is useful in helping landowners make simple fixes to improve their feedlots. Al also said that an inspection is only a snapshot of what the site looks like at that time.

Tom Kresko asked if Kiel has LiDAR data for all four counties. He stated that it would be more accurate and convenient when estimating slopes of buffers and feedlots. Kiel said that he has access to LiDAR in all four counties, but it is used intermittently or only when needed.

Kiel stated that some sites may need another inspection as the grant progresses because of a change in animal numbers or to confirm that feedlot runoff is present. Another MinnFARM may be run at that time to observe any changes in pollution potential.

Randy Markl asked if tile was a factor in determining compliance for feedlots. Kiel responded by saying that tile intakes are a factor, but tile itself has not. Jon Bloemendaal stated that many times it is not known where the tile lines run. Producers are asked if there are any tile intakes around their feedlots, but this is difficult to prove because they are often not visible. It is usually assumed that most ground is tiled because it is a common practice in the watershed.

Jon Bloemendaal was surprised that a site with 15 cows can be a pollution problem. This usually only happens if there is a large volume of clean water entering the feedlot or if the buffer has C or D type soils. This is because the rate of infiltration is low and treatment is reduced and as a result more runoff occurs when these types of soils are present.

5. Adjourn

The meeting adjourned at 10:55 a.m.