



FAQs about FLEval and MinnFARM models

For 2007

Which model should we be using right now in 2007 to evaluate compliance?

Use the FLEval rating output in the MinnFARM model as a primary indicator of compliance. Also use best professional judgment.

Is the FLEval rating output in MinnFARM the same as the old FLEval spreadsheet rating?

The most recent version (1.08 or higher) of MinnFARM gives a FLEval rating number that can be different from the old FLEval model rating number. It is still based on a 25-year, 24-hour storm event and uses the same modeling approach as the old FLEval model. The differences are described in the Minnesota Extension Service MinnFARM user guide. Key differences relate to buffer flow depth calculations that are affected by buffer width, as well as differences between “point of discharge” in the FLEval model, and “end of treatment” now used in MinnFARM FLEval.

When looking at the MinnFARM spreadsheet outputs, I see three main outputs in a gray-shaded box: 1) MinnFARM FLEval rating, 2) Does the MinnFARM FLEval rating suggest regulatory compliance, and 3) MinnFARM Index. Which of these do I use for evaluating compliance in 2007?

Use the “MinnFARM FLEval rating” result as your main indicator of compliance.

Why can't I get a zero index rating, even with a huge buffer? A zero index is not the goal. The index is an environmental priority ranking scale between 0 and 100. The index is not the same as a FLEval rating. It is not used as the main indicator of compliance, but rather for assessing the relative environmental risk of a given open lot.

What if I am trying to evaluate a 50% reduction for an open lot agreement, which model should I use?

If you were using the old FLEval model in the past on a given farm, then continue to use that model. If you had not based any past decisions or expectations based on the old FLEval model, you may use the BOD and P loading in the MinnFARM model.

What about prioritizing cost share projects, which model should be used?

The NRCS is switching to the MinnFARM FLEval rating results starting in October 2007 (for prioritizing cost share). The “MinnFARM index” part of this model is being tested for future use as the value to assign cost share prioritization.

Why should I use the MinnFARM model now, when all I really need to know is the FLEval rating number which is found in both models?

Three reasons: 1) to test the MinnFARM “index” as a tool for prioritizing projects in the future, 2) to test the new proposed annual loading compliance thresholds, and 3) there are some technical differences between the old FLEval and the MinnFARM FLEval outputs.

**What if I get a FLEval rating above zero, but the site appears to be under the proposed 2008 MinnFARM loading thresholds?**

The MinnFARM loading limits and the FLEval based concentration standard (zero rating) will sometimes be different... in some cases the FLEval model may show a zero rating and the MinnFARM spreadsheet will show loadings much higher than the proposed thresholds (e.g. narrow buffers and/or no clean water diversions and/or large quantities of dilution water). In other cases FLEval will give an above zero rating, yet the BOD loading will be under the proposed thresholds. In the latter case, keep in mind:

- 1) You can still use best professional judgment (BPJ) to determine that the site is in compliance (the modeling is an indicator of compliance, but not the final answer in all cases);
- 2) If BPJ indicates that the site is a pollution hazard, and the site is not in a shoreland area, it is likely not eligible for 75% cost share, and we can only require lower cost fixes at this time.

Starting January 2008**What will we be using to evaluate compliance starting in January 2008?**

We may be using the annual loading thresholds identified in the gray shaded output box as “Does the MinnFARM FLEval rating suggest regulatory compliance?” There is a suggested P loading threshold for discharges into a lake and a BOD loading threshold for other discharges. As always, there is room for best professional judgment, as the modeling is an *indicator* of compliance. (See MPCA guidelines “Treating feedlot runoff for water quality protection”)

Is this for sure? Are we definitely going to be using the proposed annual limits?

No... we are in a testing period to make sure that these thresholds match with best professional judgment of experienced inspectors and that they do not represent a dramatic departure from the types of management and vegetated treatment we have been allowing with FLEval evaluations. We need your feedback sent to David Schmidt (Minn. Extension), and George Schwint and David Wall (MPCA).

Why are we intending to switch to MinnFARM? MinnFARM has several advantages, including that it: 1) includes all seasons, not just summer; 2) includes all storms, not just a 25-year storm; 3) accounts for time livestock are on pasture; 4) accounts for buffer width; 5) uses equations from updated research results; 6) can determine annual loading useful for TMDLs; 7) incorporates a relative risk priority index; 8) does not rely so much on dilution as the solution; and 9) is less influenced by subjective determinations of the discharge point.

What are the new proposed annual loading thresholds based on?

The proposed thresholds are tied to the 25 mg/l BOD average concentration standard in the rules (or 1 mg/l P if discharging into a lake). We determined typical annual runoff volumes for different size feedlots as modeled by MinnFARM, and we multiplied these volumes by the concentration standards. The loading thresholds increase when the feedlot



size increases (i.e. more animals), as the runoff volumes also generally increase with these larger feedlots.

What if a feedlot had a zero rating in the past... does it need to be re-run with MinnFARM? No. Not unless something changes at the farm that affects water quality (i.e. larger feedlot, plowed under buffer, etc.).

What will be used for prioritizing cost share?

The vision and hope is that the MPCA, NRCS, and SWCDs all use the same type of system for prioritizing risk and cost share. The “index” result in the MinnFARM model was established to be a numeric prioritization number that represents the relative threat of a feedlot to water quality. It is based on such factors as BOD and P loading and concentration, distance to waters with aquatic life, and the type of receiving water. We are still testing this new approach at this time.

Where can I find more information on this topic?

U of Minn Extension Service web site for MinnFARM is at:

http://www.manure.umn.edu/applied/open_lots.html