



Guidelines for Reporting in eLINK4Web MinnFARM Pollution Reduction Estimates

Purpose

The purpose of this document is to provide guidance for reporting the [Minnesota Feedlot Annualized Runoff Model](#) (MinnFARM) pollution reduction estimates in eLINK4Web. The MinnFARM must be used for reporting pollution reduction estimates in eLINK. This document will address only how to enter MinnFARM results in the **Indicators Tab** within the **Land and Water Projects Module** of eLINK4Web reporting program.

Background

The most current version of the model (Excel spreadsheet), the MinnFARM user guide, and a MinnFARM Overview (Narrated PowerPoint) are provided at the following website:

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

NOTE: Before entering information into eLINK, the user must run the MinnFARM feedlot evaluation model twice, representing the project before and after the installation. The difference between those two scenarios is what is reported as the pollution reduction in eLINK4Web. For example:

Before BMP installation:	39 lbs. of (N) Nitrogen	2.3E+14 (cfu) Fecal Coliform
After BMP installation:	12 lbs. of (N) Nitrogen	0.0E+00 (cfu) Fecal Coliform
Change/ pollution reduction	27 lbs. of N	2.3E+14

(Change = Before BMP minus After BMP)

This number is reported in ELINK

Program policies and reporting requirements may vary by grant period. Please see the BWSR website for additional information. www.bwsr.state.mn.us/grantscostshare/FeedlotWQMG.html.

How to Enter Pollution Reduction Estimates in the Indicators Tab of eLINK4Web

To get started click the **Land & Water Projects** module then the **Project Search** link. For projects already entered into eLINK highlight the project row and click the **Edit** button; for new projects select the **New** button. Select the **Indicators** tab of the project you select. Click **Add** to complete indicator information (also known as *benefit calculation* or *pollution reduction*). Feedlot projects will use MinnFARM to estimate reductions in annual pollutant loading.

All five of the indicators reported by MinnFARM must be entered into eLINK: phosphorus, nitrogen, chemical oxygen demand (COD), fecal coliform, and five-day biological oxygen demand (BOD 5) (see Figure 1.1).

- * **Category** = select MinnFARM from the dropdown list, see Figure 1-1.
- * **Indicator** = select the appropriate pollutant from the dropdown list, Figure 1-1.

- * **Indicator Numeric Value** = enter the resulting value from your calculation, which is the pollutant loading before a conservation practice installation minus loading after installation. For a specific example, see Figure 1-5.

NOTE: MinnFARM reports Fecal Coliform Outputs with exponential notation (E). The **Numeric Value Column** in eLINK does not accept exponential notation and is limited to 10 characters. Therefore, list the number reported by MinnFARM in the Numeric Value column **without** the exponential notation. Then in the **Comments Column** copy and/or paste the number as it is reported in MinnFARM. For a specific example, see Figure 1-5.

- * **BMP/Activity** = Select the appropriate BMP/Activity from the dropdown list if the calculation is for a specific BMP rather than the entire project.
- * **Calculation Method** = select the calculation method used to determine the indicator value; for most users this is MinnFARM, see Figure 1-5.
- * **Comments** = enter comments that describe any assumptions used in calculating the indicator information that may be helpful in future analysis.
- * Repeat for each of the indicators reported by MinnFARM (Phosphorus, Nitrogen, COD, Fecal Coliform, BOD 5). Click **Apply** to save your work.
- * Entering information into the remaining fields is optional or not applicable.

Figure 1-1: Entering the Five (5) MinnFARM Indicators into eLINK4Web

Please Note: BMPs/Activities will not be available in drop down lists until after the project has been saved.

Category	Indicator	Numeric Value	Unit	Calculation Method	Add
MinnFARM	BOD 5 (lbs) (est. reduction)		Lbs./Yr	MinnFARM	
MinnFARM	Phosphorus Feedlot (est. reduction)		Lbs./Yr	MinnFARM	
MinnFARM	COD (lbs) (est. reduction)		Lbs./Yr	MinnFARM	
MinnFARM	Fecal Coliform (cfu) (est. reduction)		Cfu./Yr	MinnFARM	
MinnFARM	Nitrogen (est. reduction)		Lbs./Yr	MinnFARM	

All five of the indicators reported by MinnFARM must be entered into eLINK

Figure 1-2: MinnFARM Model Outputs Before BMP Installation

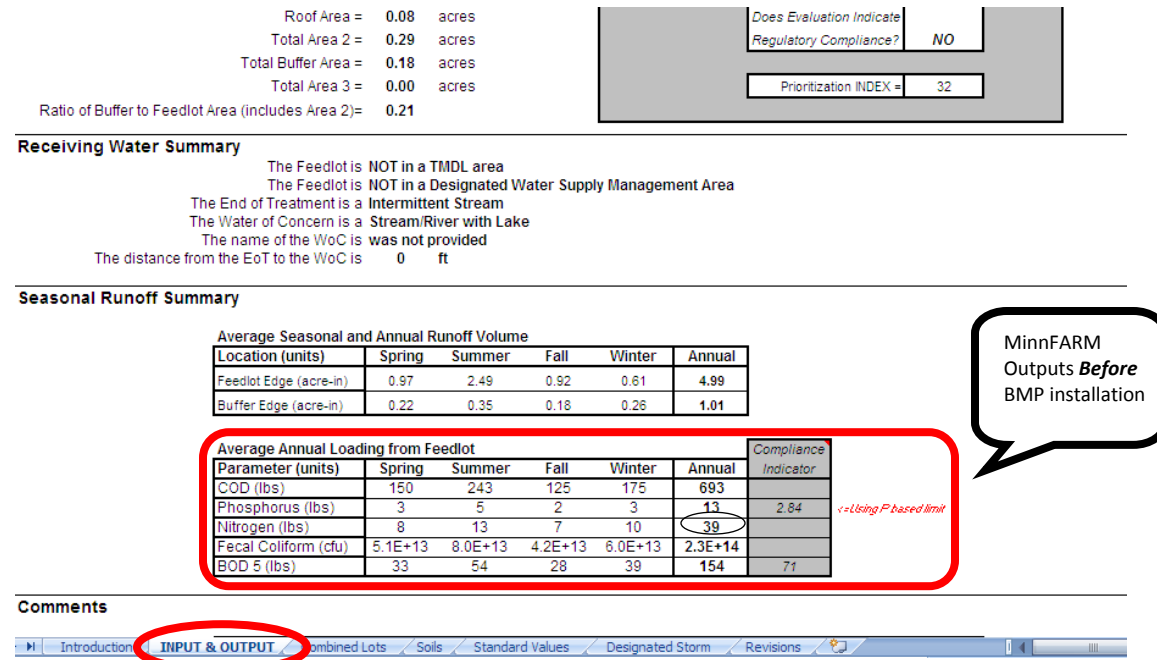


Figure 1-3: MinnFARM Model Outputs After BMP Installation

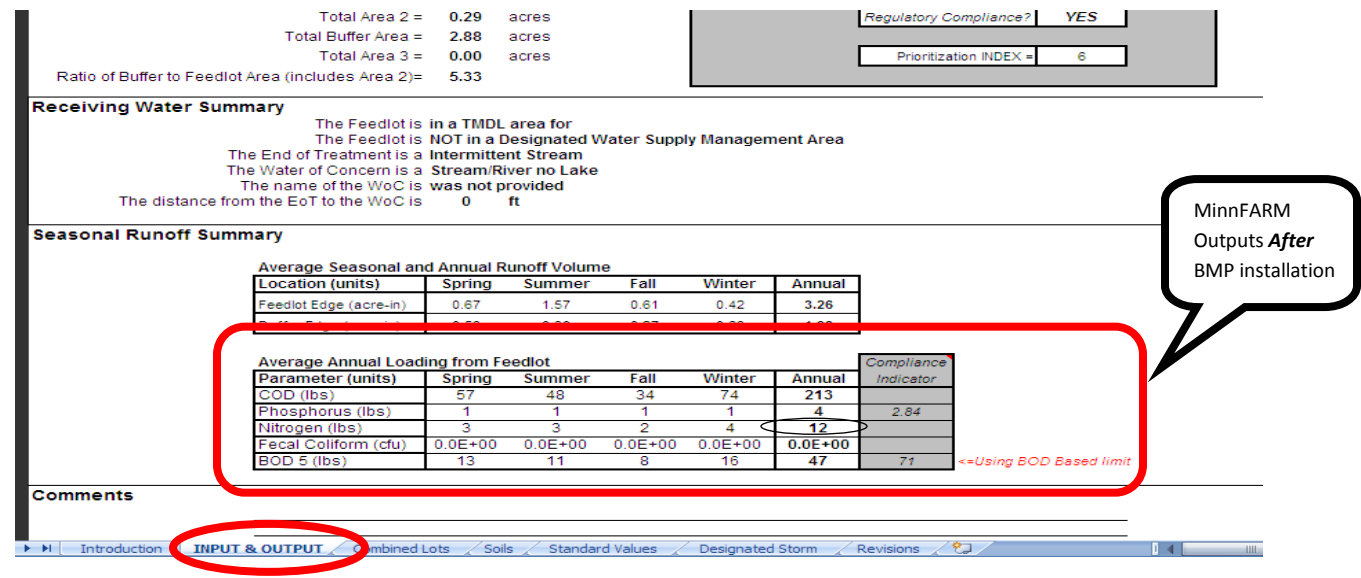


Figure 1-4: Example MinnFARM Pollution Reduction Calculation Derived from Figures 1-2 and 1-3 Data

MinnFARM Indicator	Before BMP Installation (A)	After BMP Installation (B)	Final Annual Pollution Reduction Estimate (A – B)
BOD 5 (lbs/yr)	154	47	106
Phosphorus (lbs/yr)	13	4	9
COD (lbs/yr)	693	213	480
Fecal Coliform (cfu/yr)	2.3E*14	0	2.3E*14
Nitrogen (lbs/yr)	39	12	27

Figure 1-5: Entering the pollution reduction values in eLINK (Fecal Coliform example is highlighted) and identifying MinnFARM as the Calculation Method.

mhiles(Logout) eLINK4Web

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Please Note: New BMPs/Activities will not be available in drop down lists until after the project has been saved.

Category	Indicator	Numeric Value	Unit	Calculation Method	Comments	Bmp/Activi	Add	Delete
MinnFARM	BOD 5 (lbs) (est. reduction)	107	Lbs/Yr	MinnFARM		1 - Waste f		
MinnFARM	Phosphorus Feedlot (est. reduct	9	Lbs/Yr	MinnFARM		1 - Waste f		
MinnFARM	COD (lbs) (est. reduction)	480	Lbs/Yr	MinnFARM		1 - Waste f		
MinnFARM	Fecal Coliform (cfu) (est. reductio	2.3	Cfu/Yr	MinnFARM	2.3E+14	Waste f		
MinnFARM	Nitrogen (est. reduction)	27	Lbs/Yr	MinnFARM		1 - Waste f		

Annotations:

- Red circles highlight: Numeric Value, Calculation Method, and Comments columns.
- Black oval highlights the Fecal Coliform row.
- Red arrow points to the scroll bar at the bottom of the table.
- Red box contains text: "You may need to use the scroll bar to view all the columns in the screen shot".
- Red circle highlights "MinnFARM" in the dropdown menu.