

Runoff Risk Advisory Forecast

Wisconsin Manure Management Advisory System

I need to spread manure...but am not sure about runoff.

Is the local weather the best source for information?

No, there is a better source. The Runoff Risk Advisory Forecast (RRAF) is a tool built by the National Weather Service, the Wisconsin Department of Agriculture, Trade and Consumer Protection and UW-Madison to predict manure runoff potential and present it in a user-friendly map. The RRAF shows day-to-day risk of runoff occurring across Wisconsin using data that includes not only the precipitation and temperature forecast, but also soil moisture, snow cover, predicted snowmelt and individual basin characteristics (216 across the state). Updated 3x per day, it captures the most current data possible and adjusts the predictions based on actual runoff data.

The purpose of this tool is to help manage risk. While the predictions are as accurate as possible, local field conditions still need to be considered. *The RRAF is simply another tool to help you make the most informed nutrient application decision possible.*

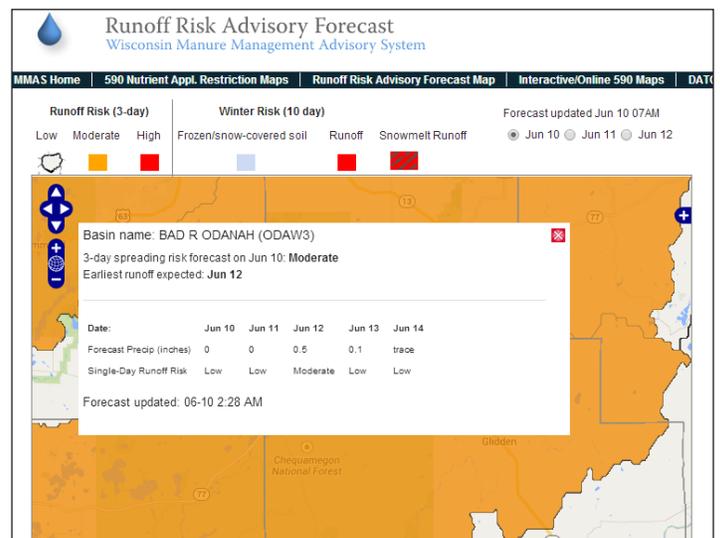
How to Use the Map (www.manureadvisorysystem.wi.gov)

1. Zoom into your area by using the plus sign on the left side of the map. Move around the map by using the navigation tools in the upper left corner or by clicking and dragging directly on the map.

HINT: If you have a hard time locating your farm or field area, click on the plus sign in the upper right corner of the map, and choose "Google hybrid" to turn on an aerial photo with roads marked.

2. Click on your location, a pop-up box will appear showing the name of your basin along with risk potential for each day listed.
3. The RRAF forecasts multiple risks not just for today but up to 10 days in the future. You can plan the days you spread to minimize the risk of runoff from your fields.

TIP: You can view future maps (up to 2 days) using the radio buttons above the map on the far right. However, the same information is also viewable in the pop-up box.



What the Colors Mean

Runoff Risk (3-day)

- Low** - no runoff predicted within the basin.
- Moderate** - low volumes of runoff predicted for some areas within the basin.
- High** - runoff very likely to occur within the basin.

Winter Runoff Risk (10-day)

- Frozen/snow covered soil** - runoff is not yet in the forecast but applications should be made with caution due to limited soil contact and infiltration.
- Runoff** - runoff is in the forecast within the next 10 days (most likely because of rain), with no snowmelt alert.
- Snowmelt runoff** - snowmelt is predicted within 10 days leading to runoff within the basin. Rain may also be in the forecast. Consult the pop-up box for the basin for more details.

What to do if spreading is necessary when conditions are not favorable?

First consider

- ☑ **Use neighboring or other available manure storage facilities.**
- ☑ **Create in-field stacking sites in areas that pose the least environmental runoff risk.**

Contact your local land conservation office for assistance in locating a safe stacking area.

Additional factors to consider before spreading:

- ☑ Increased soil moisture = increased risk of runoff.
Maps are based off of the entire basin condition, if your farm received more rain than the rest of the basin, your fields may be at an increased risk for runoff even if the map does not show this.
- ☑ Even if the map shows low risk for runoff, your fields may not be dry enough to spread.
Make sure your fields are dry enough to accept additional moisture without leading to runoff.
- ☑ Liquid manure applications increase the soil moisture.
An application of 13,500 gallons of liquid manure is equivalent to adding half an inch of water to your fields.
- ☑ Snow-covered and frozen fields are high risk.
If you have snow cover on your fields but the majority of the basin does not, your fields may be at a greater risk for runoff even if the map does not show this.
- ☑ Some fields are always higher risk areas.
These areas of concern may include fields with higher slopes, heavy soils, poor drainage, or they may be near ponds, streams, lakes, wetlands, or sinkholes.

If spreading is unavoidable

- ☑ Apply to your driest fields.
- ☑ Apply to fields with the most surface roughness.
- ☑ Use your nutrient management plan or conservation plan to find fields with:
 - Low slope, low erosion, and low nutrient delivery potential.
 - Apply to flatter fields that do not have channelized flow.
- ☑ Apply to fields farthest from surface water, conduits to groundwater, and areas of concentrated flow.
- ☑ Use the 590 restriction maps to identify lower risk areas.
Available from the manure advisory system website or your local land conservation office.

The Runoff Risk Advisory Forecast is available as a mobile app!

www.manureadvisorysystem.wi.gov/app/mobile_rraf



This publication is available from the Nutrient and Pest Management Program, please contact us by phone: (608) 265-2660, email: npm@hort.wisc.edu or visit our website at ipcm.wisc.edu

