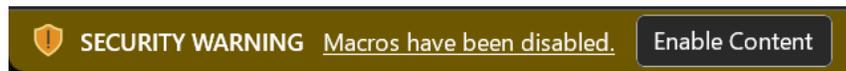


Background: EPA has created a Runoff/Erosion Mitigation Calculator in response to feedback that applicators will need assistance in understanding how mitigation and mitigation relief in and around fields count toward mitigation point totals required on pesticide product labels. The calculator is a tool for informational purposes to assist the user in determining whether the necessary level of mitigation has been met before applying a pesticide product. The calculator can help assess the potential number of points available for the mitigation and mitigation relief measures entered by the user. The actual number of points achieved is dependent on design and implementation of mitigation measures in accordance with their descriptions on EPA’s Mitigation Menu Website (<https://www.epa.gov/pesticides/mitigation-menu>). Note that each measure in the calculator includes a link that directs you to its detailed description on this website.

This quick guide uses an example to demonstrate how users can A) keep track of multiple fields, B) calculate the base mitigation points based primarily on the field’s location, characteristics, and physical features), and C) consider application-specific mitigation points.

Downloading the Calculator: Users are strongly recommended to download a copy of the calculator and work in a version of Excel from 2017 or newer. Some aspects of the calculator may not function properly in an online or browser format, or with Excel versions 2016 or older. After you download the calculator, you may need to “enable macros” (see screenshot below).



The example field: non-irrigated corn and soybeans on flat land, non-sandy soil in Clinton County, Indiana. We will first fill out the calculator without specific application parameter information to calculate the base mitigation points the field can achieve, then we will fill out the application information for a specific hypothetical pesticide.

A) Keeping Track of the Mitigation Points by Field/Management Unit

The calculator can be used to track information at a field level. The “General Field/Management Unit Information” section allows the user to enter basic information about the field (name, date, and farm/operator field identification). If a grower/applicator maintains this information for their field, then this would allow the mitigation tracking point to be applied (see “Conservation Program and Runoff/Erosion Specialists/Mitigation Tracking” below).

General Field/Management Unit Information (Optional Information- Does not Impact Calculation)		
Name:	John Doe	CLEAR ALL USER INPUTS
Date:	1/1/2025	
Field/Management Unit Identification:	Field A	CREATE NEW WORKSHEET FOR ANOTHER FIELD/MANGAMENT UNIT

B) Calculate the “Base Mitigation Points” for a Field

The following portions of the calculator will allow the grower/applicator to calculate the number of points each of their fields achieves based primarily on the field’s location, characteristics, and physical features. Some mitigation measures may be restricted on specific product labels or bulletins, so you need to begin by reviewing your pesticide product label for specific mitigation requirements. If the label indicates that runoff/erosion mitigation points must be achieved, these points may be specified for one or more Pesticide Use Limitation Areas (PULAs), and they may be indicated for areas outside of PULAs as well (e.g., the lower 48 contiguous states). Look for the PULAs that intersect with your intended application area (field) for the month and product you intend to use. Make note of which PULAs are relevant to the field. This guide will now walk through each calculator section to calculate points for the given example field.

“Other Landscape Considerations”: This section asks whether managed areas are the only landscapes at least 1000 ft down-gradient from the application area. The definition of “managed area” is provided in the calculator and is also on

EPA’s Mitigation Menu Website. This field has an unmanaged area 800 ft down-gradient, so we select “no” and continue to the next section.

Other Landscape Considerations			
Category	Hyperlink to EPA Description	Select Value	Number of points
Mitigation Relief if the Area at Least 1000 Feet Down-Gradient from the Treated Farm/Field Contains Only Managed Areas. Managed areas are defined as: <ul style="list-style-type: none"> • Agricultural fields, pastures, forage fields, and private rangelands, including untreated portions of the treated field; • Roads, paved or gravel surfaces, mowed grassy/fallowed areas adjacent to field, and areas of bare ground from recent plowing or grading that are contiguous with the treated area; • Buildings and their perimeters, silos, or other man-made structures with walls and/or roof; • Areas present and/or maintained as a runoff/erosion measure as listed on EPA’s Mitigation Menu website. Examples include vegetative filter strips (VFS), field borders, grassed waterways, vegetated ditches, riparian areas, managed/constructed wetlands, or other areas of intentional habitat improvement; • Areas present and/or maintained as a drift buffer reduction measure as listed on EPA’s Mitigation Menu website. Examples include vegetative windbreaks, hedgerows, shelterbelts, riparian areas, private forests, woodlots, and shrublands; • Conservation Reserve Program (CRP) and Agricultural Conservation Easement Program (ACEP) lands (applicators may need to ensure that pesticide use does not cause degradation of the CRP habitat). • On-farm contained irrigation water resources that are not connected to adjacent water bodies, including on-farm irrigation canals and ditches, water conveyances, managed irrigation/runoff retention basins, farm ponds, and tailwater collection ponds. 	Hyperlink	no	Continue Calculating Mitigation Points

“Systems that Capture Runoff and Discharge”: This example field does not have such a system: select “not applicable”.

Systems that Capture Runoff and Discharge			
Category	Hyperlink to EPA Description	Select Value	Number of points
Systems that Capture Runoff and Discharge (water retention pond, sediment control basin, irrigation tailwater return system, perimeter berm system (present at the time of application and throughout the cropping season), subsurface or tile drainage with a controlled outlet or without a controlled outlet)	Hyperlink	not applicable	0

“Pesticide Runoff Vulnerability”: If you are in the lower 48 contiguous states, enter your state and then your county here to calculate points achieved based on the runoff vulnerability of your field’s geographic location. If you are not within the lower 48 contiguous states, pesticide runoff vulnerability mitigation relief points are not currently available. For this example, the field is in Clinton County, Indiana and achieves 2 points.

Pesticide Runoff Vulnerability			
Select State	Select County	Hyperlink to EPA Description	Number of points
Indiana	Clinton County	Hyperlink	2

“Conservation Program and Runoff/Erosion Specialists/Mitigation Tracking”: For this example, we are doing mitigation tracking by filling out the “General Field/Management Unit Information” section, so we select “yes”. It is ok to be non-responsive and leave “make selection” as the response.

Conservation Program and Runoff/Erosion Specialists/Mitigation Tracking			
Category	Hyperlink to EPA Description	Select Value	Number of points
Mitigation Tracking	Hyperlink	yes	1
Follow Recommendations from a Runoff/Erosion Specialist or Participate in a Qualifying Conservation Program	Hyperlink	make selection	0

“Field Characteristics”: Select whether your field is flat (less than or equal to 3% slope) or has predominantly sandy soils without hard pan. For this example, the field is flat, so we select “yes” in the “Field with ≤3% Slope” row.

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Field Characteristics			
Category	Hyperlink to EPA Description	Select Value	Number of points
Field with Slope $\leq 3\%$ (naturally low slope or flat fields; flat laser leveled fields)	Hyperlink	yes	2
Predominantly Sandy Soils (fields with 10-20% clay and 50-90% sand [includes loam, silt loam, or silt soil] without a restrictive layer that impedes the movement of water through the soil [also described as Hydrologic Soil Group B]). This option can only be used if the product label does not prohibit application on sandy soils.	Hyperlink	make selection	0

“In-Field Mitigation Measures”: Mitigation measures that are implemented in fields. This example field is not irrigated, so we select “non-irrigated lands” from the drop-down menu in the irrigation water management row.

In-Field Mitigation Measures			
Category	Hyperlink to EPA Description	Select Value	Number of points
Conservation Tillage (no-till, perennial crop (e.g., orchards that are not tilled), reduced tillage, strip tillage, ridge tillage, mulch tillage)	Hyperlink	make selection	0
Reservoir Tillage (reservoir tillage, furrow diking, basin tillage)	Hyperlink	make selection	0
Contour Farming (contour farming, contour tillage, contour orchard and perennial crops)	Hyperlink	make selection	0
Vegetative Strips – In-Field (inter-row vegetated strips, strip cropping or intercropping, alley cropping, prairie strips, contour buffer strips, contour strip cropping, vegetative barrier (occurring in a contoured field))	Hyperlink	make selection	0
Terrace Farming (terrace farming, terracing, field terracing)	Hyperlink	make selection	0
Cover Crop or Continuous Ground Cover (cover crop, double cropping, relay cropping)	Hyperlink	make selection	0
Irrigation Water Management (use of soil moisture sensors/evapotranspiration meters with center pivots & sprinklers, above ground drip tape, drip emitters, micro-sprinklers, use of below tarp irrigation, below ground drip tape, flood or furrow irrigation with computerized hole selection and/or surge valves, dry farming, non-irrigated lands)	Hyperlink	non-irrigated lands	3
Mulching with Natural and Artificial Materials (mulching with permeable artificial materials (i.e., landscape fabrics, synthetic mulches), mulching with natural materials)	Hyperlink	make selection	0
Anionic Polyacrylamide (PAM)	Hyperlink	make selection	0
Erosion Barriers (wattles, silt fences)	Hyperlink	make selection	0

“Field-adjacent Mitigation Measures”: Mitigation measures that are implemented adjacent to the field. This example field does not have any field-adjacent mitigation measures.

Field-adjacent Mitigation Measures			
Category	Hyperlink to EPA Description	Select Value	Number of points
Grassed Waterway	Hyperlink	make selection	0
Vegetative Filter Strips or Field Border adjacent to field	Hyperlink	make selection	0
Vegetated Ditch	Hyperlink	make selection	0
Riparian Forest Buffer; Riparian Herbaceous Cover	Hyperlink	make selection	0
Constructed and Natural Wetlands (constructed and natural wetlands, wetland and riparian landscape/habitat improvement)	Hyperlink	make selection	0
Terrestrial Habitat Landscape Improvement (critical area planting, cross wind trap strips, hedgerow planting, herbaceous wind barriers, windbreak-shelterbelt establishment and renovation, tree shrub planting, forest stand improvement, upland wildlife habitat management)	Hyperlink	make selection	0
Filtering Devices (filters, sleeves, socks, or filtration units containing activated carbon or compost amendments)	Hyperlink	make selection	0

“Other Mitigation Measures”: Automatically populates “yes” if you select mitigation measures from more than one category of in-field measures, field-adjacent measures, or systems that capture runoff and discharge sections. This example field only has an in-field mitigation measure (non-irrigated), so does not achieve a point for this section.

Other Mitigation Measures			
Category	Hyperlink to EPA Description	Response based on selections above	Number of points
Using mitigation measures from multiple categories (practices from at least two of the following categories: in-field, field-adjacent, or systems that capture runoff and discharge)	Hyperlink	no	0

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The total number of points achieved for this field, regardless of specific pesticide product application parameters, is shown in green. This example field achieves 8 points.

Resulting Mitigation Points for the Field will be Provided in Green Cells	
Does field/management unit need runoff/erosion mitigation?	Compare Total Field/Management Unit Points (Green Cell below) to Label Required Points
Total mitigation points for field/management unit	8

Repeat the above process for each field as needed. The calculator includes a “Clear All User Inputs” button to reset the calculator, or the “Create New Worksheet for Another Field/Management Unit” button to create a new separate tab for each field. You can also save or print the filled-out calculator to aid in mitigation tracking.

C) Consider Application-Specific Mitigation Points

Once the “Base Mitigation Points” have been calculated, the “Application Parameters” section would be filled out for each application. This section is only necessary if a product label requires more mitigation points than the base mitigation points identified for the field. Using the same example field as above, we will now consider an application of a hypothetical pesticide product requiring 9 points for fields not in a PULA. The field achieves 8 base mitigation points (green cell above), so the application parameters can be adjusted to achieve the additional required point. In this example, we will reduce the annual application rate from 1.0 lbs a.i. per acre to 0.9 lbs a.i. per acre (a 10% reduction from the maximum annual labeled rate) to achieve the remaining required point.

Application Parameters			
Category	Hyperlink to EPA Description	Enter or Select Value	Number of points
Is the planned application a: soil injection; tree injection; chemigation applied subsurface or under impermeable plastic mulch; spot treatment (<1,000 square feet being treated); treatment of the farm/field less than 1/10th of an acre?	Hyperlink	make selection	0
Enter Maximum Labeled Annual Application Rate for the Active Ingredient and Planned Use (keep units of application the same; e.g., oz product/A; maximum annual application rate could be different for the active ingredients in each product, use the highest annual application rate for each active ingredient across all products planned for application)	Hyperlink	1.000	
Enter Planned Annual Application Rate for all Applications of this Active Ingredient (keep units of application the same; e.g., oz product/A; annual application rate = the total amount of active ingredient applied to this field)	Hyperlink	0.900	Maintain an efficacious rate, see product label
Calculated percent reduction based on information provided in cells B63 and B64		10%	1
Reduction in the proportion of field treated (enter % field area treated using banded application, partial field treatment, ground precision sprayer, smart sprayer, or other specialized method)	Hyperlink	0%	0
Soil incorporation (watering-in or mechanical incorporation before a runoff producing event; a runoff producing event is considered as follows: - A 50% or greater chance of rainfall of 1 inch or more is expected to occur within 48 hours of the application as predicted by the NOAA/National Weather Service, AND - The precipitation potential is 50% or greater at any point during the 48-hr period)	Hyperlink	make selection	0

The total points achieved for this pesticide application to this field is 9, which meets the required number of points specified on the pesticide product label for non-PULA fields.

Resulting Mitigation Points for the Field and Application Parameters will be Provided in Blue Cells	
Does field/management unit need runoff/erosion mitigation?	No Additional Runoff/Erosion Mitigation Needed - Field/Management Unit Meets Runoff/Erosion Mitigation Requirements
Total mitigation points for product or chemical and field/management unit mitigation points	9

Repeat the above process for each planned application as needed. The calculator includes a “Clear All User Inputs” button, or the “Create New Worksheet for Another Field/Management Unit” button to create a new separate tab for each field. You can also save or print the filled-out calculator to aid in mitigation tracking.