

Figure 2. WIN-PST analysis for fish through the pathway of solution runoff. Georgia NRCS IPM Standard Jobsheet, October 2016. (Source 2011 NRCE Technical Note 9, Pest Management in the Conservation Planning Process, pg.5)

In the example below, there is a solution runoff concern to aquatic habitat. Pesticides X and Y are planned for a field that contains soils A, B, and C.

In this example, the high rating for the combination of soil C with pesticide Y would be selected to plan an appropriate level of mitigation to protect the aquatic habitat.

Soil/Pesticide combination	WIN-PST Fish Hazard Solution rating
Soil A – Pesticide X (20% of the area)	Very low
Soil B – Pesticide X (50% of the area)	Low
Soil C – Pesticide X (25% of the area)	Intermediate
Soil A – Pesticide Y (20% of the area)	Low
Soil B – Pesticide Y (50% of the area)	Intermediate
Soil C – Pesticide Y (25% of the area)	High

Mitigation requirements in the NRCS IPM conservation practice

If a conservation planner identifies natural resource concerns related to pest management activities, NRCS conservation practices can be applied to address those concerns. The NRCS IPM CPS Code 595 has specific mitigation requirements for identified natural resource concerns.

For water quality concerns related to pesticide leaching, solution runoff, and adsorbed runoff, WIN-PST must be used to evaluate potential hazards to humans and/or fish as appropriate for each pesticide to be used. Human hazard is represented by the potential for chronic impacts to drinking water, and aquatic habitat hazard is represented by the potential for chronic impacts to fish. The minimum level of mitigation required for each resource concern is based on the final WIN-PST Soil/Pesticide Interaction Hazard ratings:

WIN-PST identified final hazard rating	Minimum mitigation index score level needed
Low or very low	None
Intermediate	20
High	40
Extra High	60

Mitigation requirements can be met with other conservation practices as well as IPM techniques applied with the NRCS IPM conservation practice. See table 1 at the end of this technical note for mitigation index values for IPM techniques and table 2 for mitigation index values for conservation practices. The index values from table 1 can be added to the index values from table 2 to calculate the total index score for the planned conservation system.

For example, if Fish Hazard Solution is identified as a pathway of concern for an identified water resource and WIN-PST reports an intermediate rating, IPM techniques from table 1 or conservation practices from table 2 that address solution runoff must be applied so that the sum of the index values from either table in the solution runoff column for the selected IPM mitigation techniques and conservation practices will be 20 or more. Similarly, a high rating would require a sum of 40 or more, and an extra high rating would require a sum of 60 or more. This will be the case for all natural resource concerns and all applicable pesticide loss pathways identified by the conservation planner with the aid of WIN-PST. In some cases, mitigation requirements may be met without applying any IPM techniques, so the NRCS IPM conservation practice is technically not required, but it can still be used to document that all identified natural resource concerns are adequately addressed.

As an alternative to mitigation, the conservation planner can also work with Cooperative Extension Service personnel, published Cooperative Extension Service recommendations, the producer, or their crop consultant to see if there are lower risk alternatives that still meet the producer's objectives. A producer can choose to use a pesticide that has risk if they also apply appropriate mitigation, or they can choose a lower risk pesticide that needs less or no mitigation—pesticide choice is the producer's decision.