

Water Quality Trading Tools Table - 2014

The following table is an excerpt from the “Water Quality Trading How-To Manual” and “Implementing Water Quality Trading in WPDES permits” guidance documents. The complete guidance documents are available at <http://dnr.wi.gov/topic/SurfaceWater/WaterQualityTrading.html>.

Management Practice	Uncertainty Factor ¹	Applicable Technical Standard	Method for Calculating Pollutant Load Reductions	Notes
Agricultural Practices				
<u>Whole Field Management:</u> Requires an approved nutrient management plan, filter strips/buffer strips, grassed waterways, conservation or no till, and cover crops. Additional practices as deemed by NRCS or County Conservationist may be required to protect against mobilization and delivery of pollutants.	1	NRCS 590, 393, 332, 412, 345 329, 340 and 330	SNAP-Plus or equivalent model results compared to baseline	Requires an approved NRCS 590 nutrient management plan (NMP) that meets both the soil test-P and PI requirements. Requires a draw down strategy for nutrient concentrations that are above University of Wisconsin-Extension soil fertility recommendations. No application of manure, biosolids, or industrial wastes on snow covered or frozen ground or on fields with high groundwater or tile drainage. A crop or livestock producer engaged in a trade agreement must have all fields under an approved NMP, not just fields engaged in the trade.
Companion Crops (perennial vegetation)	1	NRCS 340	SNAP-Plus or equivalent model results compared to baseline Model as perennial cover	Companion crops must be established to provide continuous protection to soil surface and placed in support of Nutrient Management and supporting practices outlined below.
Conservation Easement	1	NRCS 327	SNAP-Plus or equivalent model results compared to baseline	Land in perennial vegetation.

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<u>Nutrient Management and supporting practices:</u> Tillage Options Mulch Till No Till Riparian Filter Strip (edge of field) Grassed Waterway Cover Crop Other practices simulated in SNAP-Plus	2 (3) 2 (3) 2 (3) 2 (3) See Notes 2 (3) 2 (3)	NRCS 590 NRCS 345 NRCS 329 NRCS 393 NRCS 412 NRCS 340	SNAP-Plus or equivalent model results compared to baseline	<p>An approved NMP is required with any of the listed supporting practices. All supporting practices receive the same uncertainty factor as the NMP.</p> <p>An uncertainty factor of 2, instead of (3), may be used when documentation can be provided through historic cropping records or soil testing that nutrient levels are stable or dropping, an indication of adherence to the NMP.</p> <p>An uncertainty factor of (3) is required if fields are not brought into compliance with NR 151.02 and NR 151.04, Wis. Adm. Code.</p> <p>No application of manure, biosolids or industrial wastes allowed on snow-covered or frozen ground or on fields with high groundwater or tile drainage.</p> <p>A crop or livestock producer engaged in a trade agreement must have all fields under an approved NMP, not just fields engaged in the trade.</p> <p>Use of grassed waterways on fields in support of nutrient management and other supporting practices lowers the uncertainty factor to 1.5.</p>
<u>Production Area Practices</u> Diversion Roof Runoff Structure Vegetated Treatment System Constructed Wetland	2 2 4 4	NRCS 362 NRCS 558 NRCS 635 NRCS 656	University of Wisconsin Barnyard Tool APLE or equivalent modeling method	
Sediment Control Basin	2	NRCS 350	RUSLE2	For agricultural runoff control.
<u>Streambank Stabilization and Shoreline Protection</u> Without aquatic habitat restoration With aquatic habitat restoration	3 2	NRCS 580 NRCS 382 NRCS 580 NRCS 395	Contact WDNR to discuss project and develop a method to quantify impact of stabilization. Appropriate methods include NRCS regression calculation.	For livestock producers, streambank stabilization must be accompanied by riparian fencing or other controls to prevent destruction of streambanks.

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Dredging, Lake Treatment and Wetland Restoration				
<u>Lakes and Reservoirs</u> Dredging and removal of in-situ sediment and nutrients or treatment (i.e., alum) Dredging and removal of in-situ sediment and nutrients or treatment accompanied by aquatic habitat restoration.	3 2	 NRCS 395	Load reductions calculated by determining seasonal flux rate of pollutant entering water column	Dredging must remove sediment to the original or native layer. Seasonal flux rate should be calculated based on a calibrated model or monitoring data. Annual load reductions are generated based on the calculated seasonal flux rate. Load reductions are generated on a prorated annual basis until the flux rate returns back to pre-dredging flux rate conditions.
<u>Rivers or Streams</u> Dredging with stable stream banks, installation of appropriately wide buffer strips and supporting upland practices addressing pollutants of concern Dredging without stabilized stream banks or without supporting upland practices	1 3	NRCS 580		
Wetland Restoration	1	NRCS 657 NRCS 658	SNAP-Plus or equivalent model results compared to baseline	Load Reductions are generated for land placed out of production such as the conversion of agricultural land back to wetland. Credits may not be generated by using wetlands to treat runoff.

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Urban Practices				
Bioretention for Infiltration	2	DNR 1004	SLAMM, P8, or Recarga	Urban practices are not to be installed in wetlands, as they will be ineffective in hydric soils with a high water table.
Infiltration Basin	2	DNR 1003	SLAMM, P8, or Recarga	
Infiltration Trench	2	DNR 1007	SLAMM, P8, or Recarga	
Proprietary Storm Water Sedimentation Devices	2	DNR 1006	SLAMM	
Vegetated Infiltration Swales	2	DNR 1005	SLAMM or P8	
Wet Detention Pond	2	DNR 1001	SLAMM or P8	

¹ Uncertainty factors provided in this table are applicable to TP and TSS only.

² When using SNAP-Plus or an equivalent model to calculate load reductions, use the same soil type and field slope when calculating pollutant loads prior to and after installation of the management practice.