#	Decision Point	Decision	Implications	Thief River 1W1P Recommendation
1	Run PTMApp or Implementation Scenario	Method used to estimate practice costs. Options include the use of annual life cycle cost, EQIP cost, or some other cost.	Costs can represent the "cost" share or total cost. For example, EQIP is the government cost share.	Use INRS 2016 estimated annual life cycle costs. Better identifies the "true" cost. Requires in some cases a representative cost be identified for a group of similar practices.
2	Implementation Scenario	How to use planning regions within the watershed for the purposes of developing the Implementation Scenario.	In the Thief River plan measurable goals, load reduction goals will be established for each planning region. The types, numbers, and processes for selecting conservation practices can vary across planning regions. The use of planning regions allows more "tailoring" of the plan regionally.	Recommend spreading practices out according to area in each planning region.
3	Implementation Scenario	Which PTMApp treatment groups to include in the Implementation Scenario. The primary reason for eliminating one or more treatment groups could be a low likelihood of use as a conservation practice. (For example, in the past, infiltration practices have not been considered because it is unlikely they will use it).	Primarily affects the shape of the cost-effectiveness curves and potentially the estimated ability to achieve load reduction goals using structural conservation practices.	Include all PTMApp treatment groups and evaluate the preliminary results for modification of the approach prior to final plan assembly. A decision can be made once the cost-effectiveness curves are developed.
4	Implementation Scenario	Percent annual average load reduction used to establish the water quality goals for the Implementation Scenario.	Affects the number and types of practices selected as "best."	Recommend using sediment and total phosphorus load reduction goals for each planning region, as defined in the plan measurable goals.
5	Implementation Scenario	The spatial scale for the load goal and selecting the most cost-effective practices. Options include edge of field (flowline), catchment outlet, first downstream priority resource point, 12-digit HUC, 10-digit-HUC or 8-digit HUC.	The decision reflects the spatial scale for application of the load reduction goals. (Note: rarely is this identified from a policy perspective). For example, will the ability of the proposed BMPs to achieve the sediment	Recommend setting goals at the HUC10 planning region scale in order to identify best practices that meet planning region load reduction goals.

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			and TP load reduction goal be assessed at the field edge or some other spatial scale? This decision also affects which BMPs are "selected" as best. The "best" practice locations tend to be near the location where the load reduction is desired. Using the edge of field will tend to "spread" practices more evenly across the landscape. Use of a planning region outlet will tend to concentrate the practices upstream of that location.	
6	Implementation Scenario	Parameters and method used to "rank" the "best" conservation practices. Options are one or more of the following: total phosphorus, total nitrogen, and sediment. These parameters can also be weighted when selecting the practices (e.g., equal weight for total phosphorus and sediment reduction).	The "best" conservation practices will differ depending on which parameters are used, and whether they are weighted. Weighting can exclude some practices that largely remove a single parameter (e.g., woodchip bioreactors tend to remove nitrate-N but not P).	Recommend using sediment and TP to rank the "best" practices, using resource goals to guide weighting (i.e. rank best practices for treating TP and sediment).
7	Implementation Scenario	Process for identifying the number of practices which will be included in the Implementation Scenario. Options include: 1) achieving the water quality reduction goal (load); 2) dollars available to implement; 3) capacity to implement; and 4) reasonable practice cost range.	Decision ultimately affects the "cost(s)" of the Implementation Scenario and ability to achieve the load reduction goals.	Recommend beginning by number of practices needed to meet load reduction goals set at HUC10 outlets. These may be the practices run through treatment trains (see decision point #18). Then, use efficiency frontier curves for load reduction goals applied at the 10-digit HUC scale (Planning

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				Regions) to estimate the implementation cost of achieving sediment and TP goals with structural practices.
8	Implementation Scenario	The target for the percentage of cropland acres placed into non-structural practices (cover crop, conservation tillage, permanent cover) and whether the percentage should vary across the watershed (e.g., by planning region).	Experience shows that the source reduction practices tend to be most cost-effective. Affects the "mix" of non-structural and structural practices within the Implementation Scenario. Although these are often most cost-effective, they can also be hardest to sell landowners on, so you may not want to put all eggs in this basket.	Recommend evaluating after rural stewardship analysis (and measurable goal) has been set.
9	Implementation Scenario	Analysis of combined water quality benefits of the conservation practices (i.e., run treatment trains).	The cost-effectiveness curves assume the conservation practices function independently, so the reduction in load is overestimated.	Run treatment trains to better reflect effectiveness of the combined practices. Summarize cumulative benefits in the Plan and include treatment train results in a separate deliverable (or Plan appendix / addendum).
10	Implementation Scenario	Modify load delivered to biofiltration treatment group to represent subsurface flow of water.	Load reduction estimates are based on surface runoff. This will reduce the load reaching a bioreactor or saturated buffer (but increase % removal).	Update the PTMApp results to better reflect sediment and TP loads that are actually delivered to biofiltration BMPs.