

## Six Ways to Use the Kalamazoo River BMP Screening Tool

1. To calculate general stormwater treatment costs in your township:
  - Tab A: Select your township or city, enter entire township or city acreage per land use (refer to LOOKUP Tables)
  - Tab B: Select appropriate BMPs for all areas/acres generating urban stormwater in your township or city
  - Tab C: Review & print summary of BMP cost estimates
2. To selectively calculate TP loading from specific portions of your township and estimate BMP implementation costs:
  - Tab A: Select your township or city, enter acreage per land use for the specific area in your township or city you are interested in treating stormwater
  - Tab B: Select BMPs you are interested in implementing to treat stormwater in that specific area
  - Tab C: Review & print summary of site-specific BMP cost estimates\*
3. To compare and select the most cost effective reductions by selecting different BMPs:
  - Tab A: Select your township or city, enter acreage per land use for the area of interest
  - Tab B: Select one set of BMPs to determine cost estimates and reduction efficiency
  - Open and save a second workbook, under Tab B select a different set of BMPs to compare cost estimates and reduction efficiencies
  - Tab C: Review & print summary of estimated costs for each workbook/set of BMPs
4. To track progress toward TMDL NPS load allocation goals using installed BMPs in your township:
  - Open and save two separate workbooks
  - Tab A: For both workbooks, select your township and city, enter entire township or city acreage per land use (refer to LOOKUP Table)
  - Tab B: In workbook one, enter the BMPs (or equivalent stormwater treatment by area) that were present in your township or city in 1998; in workbook two, enter all current BMPs that are presently implemented in your township or city
  - Tab C: Review & print both summary sheets to compare “future load with BMP application” for workbook one and “future load with BMP application” for workbook two (these figures will show 1998 “baseline” TP load in lbs/yr and 2010 “current” TP load in lbs/yr\*\*)
5. To calculate BMP costs to reduce current TP load in order to comply with TMDL NPS load allocation:
  - Using workbook one created in Step #4, divide the “future load with BMP application” TP value in half to get your TMDL goal allocation
  - Subtract this TP load value from the 2010 “future load with BMP application” TP value in workbook two created in #4, this is the remaining TP load that must be offset to comply with the TMDL

- Open and save a third workbook, under Tab A enter the area of all untreated acreage generating urban stormwater (you can use information from workbook two, Tab B, column J “Area Not Treated by BMPs”)
- Tab B: Enter a variety of appropriate BMPs for areas that generate stormwater until the “total load reduction” cell (L32) equals the number of pounds of TP required for TMDL compliance calculated above

6. To estimate the potential pollutant loading “prevention” from areas in the township that are permanently protected from development:

- Open and save a new workbook, under Tab A/Step 1 select the appropriate township or municipality
- Enter in the appropriate acreage for each land use in the area of interest (or area where permanent protection is being considered) and record the current loading in row 34
- Open and save a second workbook, under Tab A/Step 1 select the appropriate township or municipality
- Enter the identical number of acres from the first workbook, but place these under the low density, medium density or high density residential land use categories instead of the current land use
- Record the current load from this new land use category and compare to the loading calculated in the first workbook (where the current existing land use category was used)

\*The BMP Screening Tool should be used for screening purposes only. For more accurate BMP design and cost estimates, a user should consult an environmental engineering firm.

\*\*These figures are gross estimates of 1998 baseline loading and 2010 current loading to provide a general trend of whether TP loading is increasing, decreasing or remaining the same over time, depending on land use changes over time and stormwater BMPs employed for new or existing development. Variability is introduced by accuracy of acreages associated with each land use, location to surface waters, efficiencies of BMPs, annual average rainfall, and other general assumptions used in the BMP Screening Tool.