

Spreadsheet Explanations

The master spreadsheet used to accumulate information about stormwater BMP effectiveness for the Portland area is Appendix K1 of the Stormwater BMP Effectiveness report. Below are brief explanations of the notes attached to those spreadsheets, and the row and column labels used.

Structural BMP Spreadsheet

The row listings are sorted by BMP Type, and then grouped by contaminant/condition class. Where rows are merged, the description provided applies to all merged rows.

Column Explanations

- **BMP Type** – A general category of BMPs using the same basic mechanisms for stormwater management
- **Specific BMPs Included in Type** – A breakout of all the specific BMP included in the more general BMP type category
- **Contaminant/Condition Class** - A general category of contaminants/conditions with similar characteristics (i.e. nutrients, metals, carbon sequestration)
- **Contaminant/Condition Included in Class** – A breakout of the specific contaminant or conditions included in the more general contaminant/condition class. Contaminants are typically chemical or biological characteristics of stormwater (i.e. total phosphorous, E coli). Conditions are directly or indirectly affected physical properties (i.e. temperature, flow reduction, habitat types)
- **Units** – Units used to quantify the values provided (i.e. mg/L, acre-ft, count/100 mls). In some cases the measures are “unit-less” scales or multiplier (or reciprocal multiplier) factors. A note is provided at the bottom of the spreadsheet with guidance about interpretation of the unit-less values.
- **Information Source** – Origin of the information provided. Some sources are research papers, but may also include estimation based on personal observations.
- **BMP Effectiveness Range** – The range of highest and lowest expected BMP effectiveness for the BMP listed. These are expressed in terms of “positive impacts” to normalize cases where a high number results in the most positive impact (for example, pounds reduced), with cases where a low number results in the most positive impact (for example, effluent concentration).
 - **Low Positive Impacts** – Value with lowest estimated impact
 - **Conditions Favoring Low Positive Impacts** – Condition for application of the listed BMP that will result in the low impact value. For instance, poor soils and steep slopes will generally part of the worst TSS effluent concentrations.
 - **High Positive Impacts** – Value with highest estimated impact
 - **Conditions Favoring High Positive Impacts** - Condition for application of the listed BMP that will result in the high impact value. For instance, high maintenance frequencies and well-drained, deep soils are generally part of greater flow reduction impacts.

- **Default Positive Impact** – A typical value is provided where insufficient information is available to select within the range provided. Single values are needed for some calculations such as in modeling. A default is also useful where the impacts of a number of similar BMPs are being aggregated for estimation purposes.
 - **Qualification** –Special circumstances or assumption about the selection of the default value.
 - **Certainty (H, M, L, or %)** - A subjective rating of the “certainty” of the values provided. A notation at the bottom of the spreadsheet explains the ranges of certainty associated with each designation. This does not represent a statistical confidence, but is instead a guide for qualifying how closely the values represented actual circumstances given the information available and the variability in application of the BMP.
 - **Reasons for Certainty** – Comments regarding the selection of certainty designation.
 - **Default Percent Removal Conversion Method** – Preliminary factors for conversion of effluent concentrations to percent removal values.
 - **Influent Concentration Range for Percent Removal Conversion** – Preliminary range of values within which conversion of effluent concentrations to percent removals is appropriate.
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Non-Structural BMP Spreadsheet

Column Explanations

The column structuring and explanation for the non-structural spreadsheet is the same as that for the structural, with the addition of the flowing column:

- **Conversion Qualification Column** – Discussion or comments on the conversion method and range columns.
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Structural – In-Stream BMP Spreadsheet

Column Explanations

The in-stream spreadsheet columns and explanations are the same as the structural spreadsheet, up to and including the “information source” column. To the right of that the in-stream spreadsheet has the following columns:

- **BMP Effectiveness** - “Positive impacts” estimated as most representative of best available information.
 - **Default Value** – The central-tending value as guidance for estimation in specific applications.
 - **Qualification** – Assumptions and special qualifications used in developing the default value.
 - **Certainty (H, M, L, or %)** – Same as the structural BMP spreadsheet, including the notation used to guide selection of the certainty value.
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