

APPENDIX 400.A - GUIDANCE FOR EVALUATING GSI TO THE MEF

- A. **Purpose:** The purpose of this guidance document is to establish criteria for determining whether the stormwater design for a development project is meeting the requirements to implement GSI to the MEF as outlined in the Standards.
- B. **Applicability:** This guidance document is applicable to all projects that are subject to the stormwater treatment, flow control, and retention requirements defined in the Standards, and is to be used as approval criteria for land divisions, construction plan review, and other decision processes where conformance to stormwater requirements must be demonstrated as a condition of approval.

Due to the unique characteristics of each project site, there will be locations and situations in which not all stormwater runoff impacts can be mitigated exclusively using GSI. In such cases, compliance with the Standards is still required but this document can be used to explore alternatives and determine the extent of MEF that is met in the design. During land use and/or construction plan review and decision processes, conformance with the MEF requirement can be demonstrated by one of three means:

1. Runoff from the new and replaced impervious surfaces flows into one or more locations that have been set aside for installation of GSI and the locations have a total area of at least ten percent of the total new plus replaced impervious surface area; or
 2. GSI is used to mitigate the impacts of stormwater runoff from at least 80 percent of the total new plus replaced impervious surfaces; or
 3. GSI is used to mitigate the impacts of stormwater runoff from less than 80 percent of the total new plus replaced impervious surfaces and the factor(s) limiting implementation are justified and documented per this document and approved by the Director.
- C. **Non-discretionary Approach for Achieving MEF:** A project will be considered to have met the MEF requirement when the stormwater runoff from the total amount of new plus replaced impervious surface flows into an area set aside for GSI that is at least ten percent of the total area of new plus replaced impervious surfaces. For example, a project that includes 20,000 square feet of new and replaced impervious surface shall provide a minimum of 2,000 square feet of area for GSI in a location downstream of the impervious surfaces. Regardless of the degree to which GSI is used, projects must still meet retention, flow control, and treatment performance standards specified in the Standards.
- D. **Discretionary Approach for Achieving MEF:** A project that uses GSI to mitigate the impacts of stormwater runoff from at least 80 percent of the total new plus replaced impervious surfaces shall be considered to have met the MEF requirement. Regardless of the degree to which GSI is used, projects must still meet retention, flow control, and treatment performance standards specified in the Standards.

The submittal requirement to demonstrate compliance with the discretionary approach is a stormwater analysis that describes the quantity and nature of impervious surfaces, the type and location of stormwater facilities being proposed, total contributing areas, and the basis used for determining the proposed location and size of the stormwater facility. If the proposed stormwater facility is shown to reasonably mitigate the impacts of runoff from at least 80 percent or more of the total new plus replaced impervious surfaces using GSI, then no additional documentation is required related to achieving MEF.

- E. Non-financial Factors Limiting Implementation of GSI:** One or more of the following non-financial considerations must be documented to substantiate why GSI cannot be used to mitigate the impacts of runoff from 80 percent or more of the total new plus replaced impervious surfaces:
1. Surface slopes cannot be graded to meet the design criteria required for GSI.
 2. The minimum dimensions of the facility cannot be met due to mandatory setbacks.
 3. Downspout configuration cannot be reasonably modified to convey roof runoff to the facility.
 4. Minimum vertical or horizontal clearance from utilities cannot be achieved as required by the utility owner, or as prescribed in the Keizer Development Code or Design Standards.
 5. The efficient construction of GSI facilities would negatively impact sensitive areas, including wetlands, riparian corridors, and receiving waters.
 6. Implementing GSI will unreasonably restrict safe pedestrian, bicycle, or vehicular access.
 7. Implementing GSI is limited by archaeologic or historic items located on the site.
- F. Financial Factors Limiting Implementation of GSI:** At least one of the following considerations must be documented to substantiate why GSI cannot be used to mitigate the impacts of runoff from 80 percent or more of the total new plus replaced impervious surfaces owing to financial considerations, even when non-financial considerations would allow greater use:
1. Using GSI represents an unreasonably disproportionate increase in total project costs when compared to meeting the requirements of the Standards using other types of stormwater facilities. Life-cycle costs shall be used when comparing costs of stormwater facilities.

- 2.** Implementing GSI will unreasonably and adversely impact planned business practices or other intended use of the property when compared to meeting the requirements of the Standards using other types of stormwater facilities. Factors to be considered include building footprint requirements, parking requirements, and site traffic circulation considerations. In addition to submittal requirements in the Non-discretionary Approach for Achieving MEF and Non-Financial Factors Limiting Implementation of GSI sections above, the following must be provided if financial considerations are used as a factor limiting implementation of GSI:

 - a.** A narrative description and rationale with documentation sufficient to explain and justify the applicant's conclusion that the proposed use of GSI represents the MEF and that additional GSI represents an unreasonable financial hardship.
 - b.** A detailed cost estimate of the storm drainage facilities as proposed, including the level of GSI that is considered feasible. The cost estimate shall include the cost for constructing the storm drainage facilities and an estimate of the costs to operate and maintain the facilities for 25 years.
 - c.** A detailed cost estimate if GSI is to be used to mitigate the impacts of stormwater runoff from 80 percent or more of the total new plus replaced impervious surfaces. The cost estimate shall include the cost for constructing the storm drainage facilities and an estimate of the costs to operate and maintain the facilities for 25 years.
 - d.** A detailed total project estimate, including but not limited to the following costs: construction; architectural and engineering; land acquisition if applicable; and project management.