

Best Management Practices (BMP) Management and Monitoring (M&M) Guidelines

The Corps permitting program requires an applicant to employ permanent Best Management Practices (BMPs) to protect water quality, preserve natural hydrology and minimize the overall impacts of development on aquatic resources.

1. Organization

- a. The BMP M&M plan should be a single document with a cover page including the title, project name, Corps project number, preparer of the document, and the latest revision date. Include a project location, project description and the goals of the BMPs being implemented.
- b. The document will contain all information detailed in numbers 2-5 below.

2. Minimum Performance Standards and Maintenance Activities

- a. The monitoring period may vary, but must be a minimum of 3 years to ensure establishment of native vegetation.
- b. The planted areas will meet the following annual standards for the presence of native, non-invasive perennial species (as measured by aerial coverage): Year 1 – 10%, Year 2 – 25%, Year – 75%
- c. None of the three most dominant species within the planted areas will be invasive or non-native species. The project manager will determine the appropriate target invasive or non-native species. They will typically include, but are not limited to, the following: Cattail (*Typha spp.*), Reed Canary Grass (*Phalaris arundinacea*), Purple Loosestrife (*Lythrum salicaria*), Common Reed (*Phragmites australis*), Canadian Thistle (*Cirsium arvense*), Sandbar Willow (*Salix interior*), Kentucky Blue Grass (*Poa pratensis*), Yellow Sweet-Clover (*Melilotus officinalis*), Teasel (*Dipsacus spp.*), Japanese-Knotweed (*Reynoutria japonica*), and Asian Bittersweet (*Celastrus orbiculatus*).
- d. No area over the entire mitigation site greater than 1 square meter will be devoid of vegetation, as measured by aerial coverage, unless specified on approved mitigation plans. This standard does not apply to emergent and aquatic communities.
- e. If trees and/or shrubs are part of the BMP plan, 90% of the planted trees and shrubs will be alive, in healthy condition, and representative of the individual species at the end of each growing season.
- f. Additional performance standards may be required on a case-by-case basis.
- g. Specify the maintenance activities to be performed for establishment and weed management and the frequency of each (some form of maintenance required

annually). Typical maintenance activities include: prescribed burning, maintenance mowing, supplemental seeding, and herbicide use.

- h. Soil erosion and sediment control measures shall be regularly maintained.
- i. Identify the long-term manager of the site prior to Corps sign-off.

3. Plans and Seed Lists

- a. The BMP M&M plan shall include a landscaping plan with the M&M boundaries clearly shown.
- b. Provide a cross-section view for bioswales.
- c. The BMP M&M plan shall include the seed lists for all vegetative communities and include the amount of seed per mixture. If referencing an IDOT seed mix, specify the particular species in the specified mix, as modified mixes are often used.
- d. The seed mix shall consist of tolerant native species that are likely to establish and persist. The goal for BMPs is to establish adequate coverage of native vegetation that will require minimal maintenance. Seed mixes that include a more diverse plant assemblage may be approved on a case-by-case basis, but the potential need for additional long-term maintenance should be considered.

4. Annual Reports

- a. Annual reports will be provided to the Corps by January 31st following each year of management.
- b. Annual reports shall be a single document with a cover page including the title, project name, Corps number, preparer of the document, and the latest revision date. Also include an introduction that provides a brief project description, project location, and the goals of the BMPs being implemented.
- c. The report will include the approved landscaping plan, representative photographs, summary of maintenance activities performed, and tabular statistics of the vegetative surveys, and progress towards meeting the annual performance standards.
- d. If performance standards are not met in a given year, a detailed explanation and proposed corrective measures shall be provided. A response from the Corps is required prior to corrective measures being implemented.
- e. Final sign-off may be requested with the final M&M report documenting achievement of the performance standards and designation of a long-term manager for the BMPs.