**APPENDIX A – Maryland IRT**

**Mitigation Monitoring and Performance Standards Summary Table Template**

Mitigation Project or Bank Name:

Monitoring Date(s):

Monitoring Year (e.g., Year 2 of 10):

This monitoring measurements summary sheet must be filled out in its entirety and attached to the monitoring report for the monitoring report to be considered complete. Refer to the documents entitled “Ecological Performance Standards and Monitoring Protocol for Permittee-Responsible Nontidal Wetland Mitigation Sites in Maryland” and “Ecological Performance Standards and Monitoring Protocol for Nontidal Wetland Mitigation Banks and In-Lieu Fee Sites in Maryland”, as applicable, for additional information on the required measurements. The tables below may need to be revised based upon the approved site-specific performance standards.

**Wetland**

|  |  |
| --- | --- |
| Plot, field, or cell | Vegetation – Biotic Structure |
| % dominant plant species across all strata that are OBL, FACW, or FAC | % vegetated by native wetland (FAC or wetter) species | % relative cover that is non-native or invasive species[[1]](#footnote-1) | # native wetland (FAC or wetter) trees and/or shrub species[[2]](#footnote-2) | % relative cover of most dominant tree/shrub species. Include species name1  | Is relative cover Loblolly Pine > 35%?1  | # native wetland (FAC or wetter) trees/ shrubs per acre with height > 10” | Average height of tallest five native wetland (FAC or wetter) trees | % canopy cover of native wetland (FAC or wetter) trees/ shrubs |
|  | % | % | % | N/A |  | % |  | ft. | % |
|  | % | % | % | N/A |  | % |  | ft. | % |
|  | % | % | % | N/A |  | % |  | ft. | % |
|  | % | % | % | N/A |  | % |  | ft. | % |
|  | % | % | % | N/A |  | % |  | ft. | % |
|  | % | % | % | N/A |  | % |  | ft. | % |
|  | % | % | % | N/A |  | % |  | ft. | % |
|  | % | % | % | N/A |  | % |  | ft. | % |
|  | % | % | % | N/A |  | % |  | ft. | % |
|  | % | % | % | N/A |  | % |  | ft. | % |
|  | % | % | % | N/A |  | % |  | ft. | % |
|  | % | % | % | N/A |  | % |  | ft. | % |
| Entiree site | % | % | % |  |  | Y/N |  | ft. | % |

|  |  |  |  |
| --- | --- | --- | --- |
| Plot, well, field, or cell | Hydrology | Soils | Overall |
| % inundated or saturated to surface on dates of site visit(s) | % wetland restoration/ creation with wetland hydrology (based on well data) | % wetland restoration/ creation that meets Hydric Soil Technical Standard (Tech. Note 11) for saturated conditions: has free water within 10” of ground surface for > 14 consecutive day | % wetland restoration/ creation that meets Hydric Soil Technical Standard (Technical Note 11) for anaerobic conditions: anaerobic conditions exist within 10” of the ground surface for > 14 consecutive days, as determined by IRT-approved methods (e.g., reaction to alpha-alpha dipyridyl, IRIS technology, platinum electrodes) | % establishing into wetland (based on vegetation, hydrology, and soils) and the type of wetland (e.g., forested, scrub-shrub, emergent) |
|  | % | % | % | % | % |
|  | % | % | % | % | % |
|  | % | % | % | % | % |
|  | % | % | % | % | % |
|  | % | % | % | % | % |
|  | % | % | % | % | % |
|  | % | % | % | % | % |
|  | % | % | % | % | % |
|  | % | % | % | % | % |
|  | % | % | % | % | % |
|  | % | % | % | % | % |
|  | % | % | % | % | % |
| Entire site | % | % | % | % | % |

|  |  |  |  |
| --- | --- | --- | --- |
| Plot, well, field, or cell | Soil Modifications | Physical Structure | Delineation at mid-term and final year of monitoring consistent with approved mitigation plan? |
| Topsoil: Depth and % organic soil matter | Bulk Density: by Subsoil texture (lbs/cubic foot) | Microtopography -% microtopography (i.e., 3-6 inch increase | Woody Debris- present at density and type approved in mitigation plan |  |
|  | % | lbs/ft3 | % | Y/N |  |
|  | % | lbs/ft3 | % | Y/N |  |
|  | % | lbs/ft3 | % | Y/N |  |
|  | % | lbs/ft3 | % | Y/N |  |
|  | % | lbs/ft3 | % | Y/N |  |
|  | % | lbs/ft3 | % | Y/N |  |
|  | % | lbs/ft3 | % | Y/N |  |
|  | % | lbs/ft3 | % | Y/N |  |
|  | % | lbs/ft3 | % | Y/N |  |
|  | % | lbs/ft3 | % | Y/N |  |
|  | % | lbs/ft3 | % | Y/N |  |
|  | % | lbs/ft3 | % | Y/N |  |
| Entire site | % | lbs/ft3 | % |  |

|  |
| --- |
| Y/N |
| Y/N |
| Y/N |
| Y/N |
| Y/N |
| Y/N |
| Y/N |
| Y/N |
| Y/N |
| Y/N |
| Y/N |
| Y/N |

 |

**Wetland Buffer**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Plot, field, or cell | % vegetated by native species | % relative cover that is non-native or invasive species[[3]](#footnote-3) | # native trees/ shrubs per acre with height > 10 inches | Average height of tallest five native trees | % canopy cover of native trees and shrubs | % establishing into forest  |
|  | % | % |  |  |  | % |
|  | % | % |  |  |  | % |
|  | % | % |  |  |  | % |
|  | % | % |  |  |  | % |
|  | % | % |  |  |  | % |
|  | % | % |  |  |  | % |
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|  | % | % |  |  |  | % |
|  | % | % |  |  |  | % |
|  | % | % |  |  |  | % |
|  | % | % |  |  |  | % |
|  | % | % |  |  |  | % |
|  | % | % |  |  |  | % |
|  | % | % |  |  |  | % |
| Entire site | % | % |  |  |  | % |

**Hydrographs of Measured Depth to Water Table Showing Well Data:**

**(Example Hydrograph shown below)**

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1. This performance standard does not need to be met for each plot, field, or cell, but instead for the entire site. It should be based on averages of plot, field, or cell data, with potential consideration of visual estimates from the overall site. [↑](#footnote-ref-1)
2. Performance standard success should be determined for the entire site, not by individual plot, field, or cell. [↑](#footnote-ref-2)
3. This performance standard does not need to be met for each plot, field, or cell, but instead for the entire site. It should be based on averages of plot, field, or cell data, with potential consideration of visual estimates from the overall site. [↑](#footnote-ref-3)