1.1 INTRODUCTION

The proposed Permittee Responsible Mitigation (PRM) site for the Metro Park Square Project (SWG-2016-00264) consists of approximately 16 acres located within a 3,500-acre tract owned by Forestar (USA) Real Estate Group, Inc. The site is located within the same parent tract as the approved Houston-Conroe Mitigation Bank (SWG-2013-00141), and the pending Tarkington Bayou Mitigation Bank (SWG-2015-00169) (Exhibit 1). The PRM site is located directly adjacent to the Tarkington Bayou Mitigation Bank.

The Metro Park Square Project is located in the West Fork San Jacinto 8-digit Hydrologic Unit Code (HUC) (12040101). The proposed PRM site is located within the 8-digit HUC directly adjacent, East Fork San Jacinto (12040103) (Exhibit 2. Although the proposed PRM site is not in the same 8-digit HUC as the impact site, significant hydrologic connectivity has been demonstrated between these two HUCs, and the primary service area for the Houston-Conroe Mitigation Bank overlaps both.

1.2 GOALS AND OBJECTIVES

The objectives of this PRM site are to:

- Enhance approximately 15 acres of herbaceous wetland by removing invasive species and providing a protected buffer.
- Enhance approximately 1 acre of previously forested, recently harvested wetland by re-planting with a mix of desirable tree species.
- Protect the approximately 16-acre wetland area by placing it under a perpetual conservation easement.

1.3 SITE PROTECTION INSTRUMENT

A conservation easement will act as a real estate instrument to ensure the land will remain in a state of conservation in perpetuity. The proposed conservation easement holder is Bayou Land Conservancy. Bayou Land Conservancy is an Accredited Land Trust by the Land Trust Accreditation Commission, which is a national accreditation organization.

1.4 BASELINE INFORMATION

A preliminary ecological assessment and herpetological survey of the entire parent tract was conducted in 2009 and can be provided upon request. Unique plant and animal assemblages were identified within the entire parent tract, including the proposed PRM site.

The proposed PRM site consists of an approximately 15-acre herbaceous wetland area named Dina Pond on the U.S. Geological Survey (USGS) topographic map, as well as an approximately 1-acre area of previously forested wetland that was recently harvested (Exhibits 3 and 4).

The vegetation within the herbaceous wetland was dominated by hairy primrose-willow (*Ludwigia pilosa*), sticky hedgehyssop (*Gratiola brevifolia*), maidencane (*Panicum hemitomon*), pickerelweed (*Pontederia cordata*), and combleaf mermaidweed (*Proserpinaca pectinate*). Woody species encroachment, primarily

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consisting of Chinese tallow (*Triadica sebifera*) and green ash (*Fraxinus pennsylvanica*), was located within and surrounding the herbaceous wetland.

The vegetation within the recently harvested, previously forested wetland area consisted of sticky hedgehyssop, hairy primrose-willow, manyhead rush (*Juncus polycephalus*), common rush (*Juncus effuses*), and green flatsedge (*Cyperus virens*).

The hydrology within the proposed PRM site and vicinity is primarily driven by precipitation and groundwater influxes from the surrounding area. The site is situated in a depression but is surrounded by a mosaic of "flat" wetlands that connect with verified jurisdictional wetlands associated with the Tarkington Bayou Mitigation Bank (Exhibit 5). Wetlands within the proposed PRM site experience inundation/ponding up to 18 inches deep for long portions of the year.

Soils within the site are mapped as the *Lelavale silt loam, 0 to 1 percent slopes, ponded*, which is classified as a hydric soil. Preliminary field surveys revealed the presence of hydric soils that appeared to closely match the Lelavele soil series.

1.5 MITIGATION WORK PLAN

The mitigation work plan will hinge on enhancing wetland functions that have been impacted by drought, invasive species encroachment, and silvicultural activities.

The interior of the herbaceous wetland area is an intact and high-quality wetland. However, woody species, predominately Chinese tallow, have begun encroaching from the edges. This encroachment was likely exacerbated by the severe drought that occurred in 2011. The primary management plan within the herbaceous wetland area is to eliminate woody species encroachment by mechanical or chemical eradication.

The area of previous forested wetland that was recently harvested will be re-planted with a mix of native, desirable tree species at a rate of approximately 400 stems per acre to re-establish a high-quality forested wetland system.

1.6 MAINTENANCE PLAN

Once initial planting / invasive species eradication is completed, the site is expected to require little maintenance. Where applicable, plantings will be native species from local stocks, and it is anticipated that natural regeneration will contribute heavily to the re-establishment of a forested system. The vegetative community will be monitored on a yearly basis, and should survivorship and/or species composition requirements not meet the criteria outlined in the performance standards, the steps outlined in the Adaptive Management Plan will be utilized.

Invasive species will also be monitored on a yearly basis. Additional management/maintenance steps will be taken if the criteria outlined in the performance standards are not being met.

Signage will be placed along the periphery of the site to discourage trespassing. Should any trespass or property damage occur, steps will be taken by the Sponsor or their agent to mitigate any damage and to prevent further trespass in the future. Signage will be inspected and maintained on a yearly basis.

1.7 ECOLOGICAL PERFORMANCE STANDARDS

The focus of the wetland enhancement at the PRM site is to reverse the trends of invasive species encroachment into the herbaceous wetland areas, and to re-establish a forested wetland community where previously harvested. Performance standards will consider the following parameters:

Table 1. Performance Standards.

	<u>Parameter</u>	Measurement Method	<u>Year 0 - 1</u>	Year 2	Year 3	<u>Year 5</u>
Herbaceous Wetland	Invasive Species Encroachment	Percent Cover	Removal / eradication of Noxious and Invasive Species	< 2% coverage of Chinese Tallow or other Noxious Species		
Harvested Forested Wetland	Canopy Development (Forested Riparian Only)	% Canopy Cover	400 Stems / Acre of desired tree species.	> 350 Stems / Acre of desired tree species.	> 300 Stems / Acre of desired tree species.	> 250 Stems / Acre of desired tree species.
	Noxious Species*	Stems/Acre with Visual Assessment	Removal / eradication of Noxious and Invasive Species	< 5% coverage of Chinese Tallow or other Noxious Species		
All Wetland Areas	Wetland Hydrology and Hydric Soils	Delineation Data Points	Delineation data points, recording wetland hydrology and hydric soil indicators, will be documented within monitoring plots occurring within previously delineated wetlands. Performance standard will be met if there is not an apparent reduction in wetland area.			

^{*}Noxious and Invasive species as defined by the Texas Department of Agriculture (Texas Department of Agriculture, 2015)

1.8 MONITORING REQUIREMENTS

In order to provide documentation of success of the restorative efforts, the Sponsor will perform routine monitoring of the ecological conditions of the proposed PRM Site. Monitoring reports will clearly demonstrate whether performance standards are being met. The monitoring schedule and frequency proposed for the PRM site will include annual assessments for a minimum of 5 years per the criteria

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established in the USACE Guidance Letter (08-03), Minimum Requirements for Compensatory Mitigation Projects Involving the Restoration, Establishment, and/or Enhancement of Aquatic Resources (USACE, 2008). Yearly monitoring reports will be submitted on or before December 1st of the monitoring year.

1.9 LONG-TERM MANAGEMENT PLAN

After performance standards have been achieved, minimal long-term management may be required to ensure the sustainability of the site as a high-quality wetland area. Forester (USA) Real Estate Group, Inc. will serve as the long-term manager for the site. The site will be managed concurrently with other conservation/mitigation areas, including Houston-Conroe Mitigation Bank and Tarkington Bayou Mitigation Bank. Anticipated long-term management activities include restricting access to the site by posting signage and/or fencing, maintaining signage and/or fencing, on-going monitoring, and control of invasive species.

1.10 ADAPTIVE MANAGEMENT PLAN

Adaptive management is a strategy to address unforeseen changes in site conditions or other components of the compensatory mitigation project. If the compensatory mitigation project cannot be constructed in accordance with the approved Compensatory Mitigation Plan, or if performance standards are not being met as anticipated, the permittee must notify the USACE, with approval required for any significant modification of the Compensatory Mitigation Plan. Performance standards may be revised in accordance with adaptive management to account for measures taken to address deficiencies in the mitigation project.

For the proposed mitigation areas, adaptive management may include the following measures:

- Plant additional wetland vegetation species in areas where new growth is inadequate
- Adjust site conditions to improve hydrologic conditions
- Improve or enhance erosion control measures
- Provide for additional access restrictions if human/domestic animal disturbance is impacting the site

1.11 MINERAL MANAGEMENT PLAN

Forestar does not own the subsurface mineral resources (e.g. oil, natural gas, etc.) that may be situated beneath the proposed PRM site. In the State of Texas, surface owners cannot control a mineral owner's access to subsurface minerals. It is unlikely that any drilling will occur within the site because the site is relatively small and drilling on it can be avoided by utilization of horizontal drilling or other techniques.

1.12 FINANCIAL ASSURANCES

To be developed following consultation with the USACE.









