

**Baywood Newco, L.P. -Harris County, Texas,**

**Mitigation Plan**

Baywood Newco, L.P. (Applicant) proposes to fill 0.14 acres of Adjacent Wetlands and 0.11 acres of a Jurisdictional Man-Made Pond with earthen and concrete material. Additionally, 22 linear feet of a Water of the U.S. (Armand Bayou) will be filled in with rip rap material for the purpose of constructing commercial development located southeast of Red Bluff and Genoa Red Bluff Road, in Harris County, Texas.

The USGS Quad reference map is *La Porte SW, Texas* and the center of the project area is located approximately at NAD 83 UTM Zone 15N coordinates 296,172.0 E; 3,279,558.2 N.

**1. Goals and Objectives**

In order to compensate for the unavoidable impacts to 0.09 acres of forested wetlands, the applicant is proposing to purchase 0.1 Physical FCUs, 0.1 Biological FCUs, and 0.1 Chemical FCUs; and in order to compensate for the unavoidable impacts to 0.16 herbaceous wetlands (which includes the 0.11 man-made pond), the applicant is proposing to purchase 0.1 Physical FCUs, 0.2 Biological FCUs, and 0.1 Chemical FCUs, all from the Lower Brazos River Mitigation Bank.

According to the Interim Riverine Forested Shrub HGM study conducted by Berg-Oliver Associates, Inc. in March 2020, the forested wetlands proposed to be impacted have a function of 0.039 Physical FCUs, 0.033 Biological FCUs, and 0.041 Chemical FCUs. Furthermore, according to the Interim Riverine Herbaceous Shrub HGM study, the herbaceous wetlands proposed to be impacted have a function of 0.067 Physical FCUs, 0.072 Biological FCUs, and 0.063 Chemical FCUs (See Table 1). The project site is located within the Secondary Service Area of the Lower Brazos River Mitigation Bank. Therefore, the impacted HGM values are multiplied by 1.5 to determine the adjusted amount of FCUs in accordance with the Mitigation Banking Instrument (MBI) (See Tables 1 & 2

Table 1: Credit Determination (Forested Wetlands)

Existing WAA	Acreage	Physical FCU	Biological FCU	Chemical FCU
<b>WAA 1 (Forested)</b>	0.09	0.039	0.033	0.041
<b>Secondary Service Area Multiplier</b>		1.5	1.5	1.5
<b>Proposed FCU's Purchased</b>		<b>0.1</b>	<b>0.1</b>	<b>0.1</b>

Table 2: Credit Determination (Herbaceous Wetlands)

Existing WAA	Acreage	Physical FCU	Biological FCU	Chemical FCU
<b>WAA2 (Herbaceous)</b>	0.16	0.067	0.072	0.063
<b>Secondary Service Area Multiplier</b>		1.5	1.5	1.5
<b>Proposed FCUs Purchased</b>		<b>0.1</b>	<b>0.2</b>	<b>0.1</b>

## **2.) Baseline Information**

The 48-acre project tract consists of 0.25 acres of jurisdictional wetland. In upland areas, the subject property was dominated by Chinese tallow tree (*Triadica sebifera*), eastern false willow (*Baccharis halimifolia*), yaupon (*Ilex vomitoria*), woodrush flatsedge (*Cyperus entrerianus*), tall golden rod (*Solidago altissima*), and southern dewberry (*Rubus trivialis*). In wetland areas, the subject property was dominated by Chinese tallow tree (*Triadica sebifera*), soft rush (*Juncus effusus*), swamp smartweed (*Persicaria hydropiperoides*), sand spikerush (*Eleocharis microcarpa*), and woodrush flatsedge (*Cyperus entrerianus*).

The United States Department of Agriculture (USDA), USDA Web Soil Survey of Harris County was, for the most part, reasonably accurate in identifying the basic soil types on the proposed project area as Dylan clay (DylC), Lake Charles clay (LcA), and Vamont clay (VamA).

## **3.) Site Selection**

In order to comply with the Final Compensatory Mitigation Rule (2008) the Applicant is proposing to purchase the appropriate number of mitigation credits through an approved mitigation bank that has credits available for sale. The project site is located within the Secondary Service Area of the Lower Brazos River Mitigation Bank within the West Galveston Bay, Hydrologic Unit Code (HUC) (12040204).

**ATTACHMENT A**  
**HGM DATA SHEETS**

**Interim Riverine Forested Shrub Hydrogeomorphic Analysis Worksheet**  
(Project# 11112)

**WAA 1 - Pre-Project Year "0"**  
**Natural Conditions - Existing Site**

**Acreage= 0.09**

<b>Variable</b>	<b>Sub-Index</b>	<b>Notes</b>
Vdur	0.50	In an average year at 50-79% of the WAA either floods and/or ponds for at least 7 consecutive days
Vrreq	0.50	Floods or ponds 2 out of 5 years (100- year floodplain)
Vtopo	0.40	Less than 15% of the WAA is represented by dips, hummocks, channel sloughs and/or other topographic features
Vcwd	0.30	Less than 3 pieces of cwd greater than 3" diameter along 100' transect
Vwood	0.25	11 to 33% of the WAA is covered with woody vegetation
Vtree	0.30	Less than 20% of the stand is oak, hickory, cypress, maple and/or elm.
Vrich	0.40	One-two tree species present
Vbasal	0.40	The average basal area of the WAA is less than 60 square ft /acre
Vdensity	1.00	The WAA averages a tree density of 100-250 trees/acre
Vmid	0.50	Midstory coverage of the WAA is between 11-30%
Vherb	0.30	Herbaceous cover in the WAA is less than 5% or greater than 50%
Vdetritus	0.50	From 11-84% of the area possesses an O or A horizon
Vredox	0.10	Redox features less than 20%
Vsorp	1.00	The WAA is dominated by montmorillonitic clayey soils (clay, clay loams, silty clay loams) or soils with high organic /2/1, 2/2, or 3/1\
Vconnect	0.75	Wetland plus two or more habitat type (other than forested) OR three or more habitat types

**Functional Capacity Index (FCI)**

<b>Physical</b>	0.433
<b>Biological</b>	0.367
<b>Chemical</b>	0.457

**Functional Capacity Units (FCU)**

<b>Physical</b>	0.039
<b>Biological</b>	0.033
<b>Chemical</b>	0.041

**Interim Riverine/Herbaceous Shrub Hydrogeomorphic Analysis Worksheet**  
(Project# 11112)

**WAA 2 - Pre-Project Year 'O'**  
**Natural Conditions - Existing Site**

**Acreage = 0.16**

<b>Variable</b>	<b>Sub-Index</b>	<b>Notes</b>
Vdur	0.50	In an average year 50-79% of the WAA either floods and/or ponds for at least 7 consecutive days
Vfreq	0.50	Floods or ponds 2 out of 5 years (100 yr floodplain)
Vtopo	<b>0.40</b>	Less than 15% of the WAA is represented by dips, hummocks, channel sloughs and/or other topographic features
Vwood	0.10	Less than 10% of the WAA is covered with woody vegetation
Vmid	0.10	MidstorY coverage of the WAA is less than 1%
Vherb	0.50	Herbaceous cover in the WAA averages between 25-50%
Vconnect	0.75	Wetland plus two or more habitat types (other than forested) or three or more habitat types
Vdetritus	0.50	From 11-84% of the area possesses an O or A horizon
Vredox	0.10	Redox features less than 20%
Vsorpt	1.00	The WAA is dominated by montmorillonitic clayey soils (clay, clay loams, silty clay loams) or soils with high organic (2/1, 2/2, 3/1)

**Functional Capacity Index (FCI)**

<b>Physical</b>	0.418
<b>Biological</b>	0.450
<b>Chemical</b>	0.393

**Functional Capacity Units (FCU)**

<b>Physical</b>	0.067
<b>Biological</b>	0.072
<b>Chemical</b>	0.063